SUPER SOURCEBOOK

SPEARS® MANUFACTURING COMPANY
Since 1969
SYLMAR, CALIFORNIA

LIST PRICE & TECHNICAL INFORMATION CATALOG

PLASTIC FITTINGS, VALVES, PIPE & CEMENT

MADE IN THE U.S.A. WITH PRIDE

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ALL PRODUCTS MADE BY SPEARS® MANUFACTURING COMPANY IN THE U.S.A. FOR ALL YOUR PLASTIC PIPING NEEDS

SSB-1-0812

Spears® Super Sourcebook

Your One-Stop Source For Plastic Fittings, Valves, Pipe & Cement

Welcome to…

Spears® SUPER SOURCEBOOK List Price & Technical Information Catalog for Plastic Fittings, Valves, Pipe & Cement - a comprehensive pricing and technical information listing of all Spears® Plastic Fittings, Valves , Pipe & Cement catalogued product for all your plastic piping needs. This catalog is divided into two (2) Parts:

Part I: List Prices

This part groups common categories of product and related accessories for convenient use and versatility in finding the products you need. As a result, certain products may appear in multiple categories. For example, various PVC Valves grouped with Schedule 80 PVC Fittings, CPVC Valves grouped with Schedule 80 CPVC Fittings, and both PVC and CPVC Valves being separately listed under Thermoplastic Valves. Take a few minutes to peruse the Table of Contents for an overview of organization and content. Applicable Discounts are available to Spears® qualified stocking wholesale distributors. Products are sold only through authorized distributors. Appendix G provides applicable Discount Codes in numerical order for product included in this catalog. A blank space is provided after each for recording applicable discounts. Contact your servicing Spears® Regional Distribution Center for applicable discounts.

Part I "Tab Locator" page lets you quickly thumb to each category by matching shaded tabs in the outer margin of each page.

Spears® Part Number Index allows quick page number location for pricing of Spears® standard catalogued parts. Simply look up known part number in the numerical index to find designated page on which the part can be found. Please note, certain special and custom parts are not catalogued.

See also **Spears® On-line Catalog** that is updated daily and can be accessed to verify pricing and check for any changes or adjustments that may occur between catalog publications. Spears® On-line Catalog can be downloaded to your personal computer for added convenience at www.spearsmfg.com

PART II: Technical Information

This part provides essential Weights & Dimensions and other Technical Information on a host of Spears® product lines Products are grouped according to common types, such as Schedule 40 Fittings, Barbed Inserts, Schedule 80 Fittings, Flanges, Valves, plus various Specialty Product Lines and more.

Part II "Tab Locator" page lets you quickly thumb to each information section by matching shaded tabs in the outer margin of each page.

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Spears® Regional Distribution Centers

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Understanding Column Header & Configuration Information

A variety of Column Header layouts are used to list product part numbers, options, discount codes, and list price. The following are the most typical used:

Typical Fitting Column Header label identifies the following product particulars:

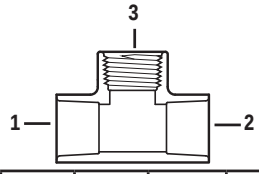
Part Number	The number used to order the part.
Size	Nominal diameter of pipe with which the fitting is to be used. NOTE: Fittings may be same size (only one size designation) or reducing (multiple sizes designated).
Standard Pack (Std Pk)	The quantity of parts packaged in an individual box or bag.
Master Carton (Mstr Ctn)	The total quantity of parts contained in individual boxes or bags which are packaged together.
Discount Code (Disc Code)	Identification code for applicable discount to the list price of the product. NOTE: This is a Product Group code and is not a calculation of discount. Discount codes are not the same for all products contained in this price schedule.
Price Each	The designated list price of the product.

Fitting Configuration Drawings are accompanied by the product's name and an abbreviated configuration description of the fitting outlet connections. Line drawing illustrations are general representations of the fittings in the group, but may not be an exact depiction of all configurations listed. Line drawings are correlated to the configuration description. The drawing is read left to right for Elbow and Adapter configurations. Tees have an additional outlet branch and are read left to right (run) then top (branch). Drawings for Wyes and Crosses are read top to bottom then left to right and bushings drawings are read as outside x inside configuration. The configuration description also correlates to the size designation. As with the nominal size designations, only one description is given when all outlets are the same. Reducing sizes list run configuration x branch configuration.

Example

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
402-003	3/8	50	200	040	.97
402-005	1/2	50	300	040	1.01
402-007	3/4	50	0	040	1.58

Product Name — Tee
Abbreviated Configuration Description — Soc x Fipt



In this example, outlet description is "Soc x Fipt" which indicates:
1. Socket x
2. Socket x
3. Female Iron Pipe Thread

Typical Valve Column Header label identifies the following product particulars. Headers are generally preceded by identification of material type and configuration descriptions. Again, variations exist according to product type and configurations.

Size	The nominal diameter of the pipe with which the valve is to be used.
Seal Type (i.e., EPDM, FKM)	Designated elastomer seal (O-ring, Seat, Diaphragm, etc.) NOTE: Part Number and List Price are typically specified under the seal type columns. Certain products may have other column header designations under which part number and pricing are specified in a similar manner.
Standard Pack (Std Pk)	The quantity of parts packaged in an individual box or bag.
Master Pack (Mstr Pk)	The total quantity of parts contained in a single packaging of multiple Standard Packs.
Discount Code (Disc Code)	Identification code for applicable discount to the list price of the product. NOTE: This is a Product Group code and is not a calculation of discount. Discount codes are not the same for all products contained in this price schedule.

Valve Illustrations may be as photos or line drawings. Illustrations are general representations of the valve or product specified, but may not depict all configurations listed.

Example

Product Type (Page Heading)

True Union 2000 Industrial Ball Valves

Typical Presentation Photo



Material — **PVC Industrial**

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1829-005 XX.XX	1829-005 XX.XX	1	18	101

End Connector — **Socket Ends**

Part Number

Price

Technical Data

Socket Style

Pressure Rating @ 73°F (23°C) Water

1/2" - 4"	235 psi
6" - 8"	150 psi
Flanged	150 psi

Maximum Service Temperature
PVC=140°F (60°C)
CPVC=200°F (93°C)

Temperature/Pressure De-ratings Apply

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Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Schedule 40 Pipe Plain End

20' Lengths, Price Per Foot



List Price Per Foot

PD-400-005	**1/2**	20	0	947	1.12
PD-400-007	**3/4**	20	0	947	1.37
PD-400-010	**1**	20	0	947	2.18
PD-400-012	**1-1/4**	20	0	947	2.90
PD-400-015	**1-1/2**	20	0	947	3.29
PD-400-020	**2**	20	0	947	4.52
PD-400-025	**2-1/2**	20	0	947	7.62
PD-400-030	**3**	20	0	947	8.90
PD-400-040	**4**	20	0	947	12.46
PD-400-050	**5**	20	0	947	20.45
PD-400-060	**6**	20	0	947	22.53
PD-400-080	**8**	20	0	947	39.95
PD-400-100	**10**	20	0	947	54.37
PD-400-120	**12**	20	0	947	78.75
PD-400-140	**14**	20	0	947	99.58
PD-400-160	**16**	20	0	947	105.07

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Professional grade solvent cements developed for contractors' essential needs in joining PVC, CPVC and ABS pipe and fittings.

- NSF® Certified & Listed for use in piping applications such as potable water, turf, irrigation, pool & spa, industrial, plumbing, DWV, and/or sewer, plus special applications including fire protection, chemical waste, and ultra-pure water.
- Meets ASTM Standards for solvent cements and primers used for plastic pipe installation.
- Environmentally friendly. LEED® Compliant (Leadership in Energy and Environmental Design). Credit can be gained through the use of Spears® Low VOC products. This program, developed by the US Green Building Council, uses SCAQMD Rule 1168 as a benchmark to qualify one credit toward LEED® certification for green building.

PVC Low VOC Cements

Low VOC PVC Cements

Regular, Medium, heavy and extra heavy bodied cements are specifically formulated for PVC pipe in virtually every schedule and in sizes with interference fit to 30" diameter.

- Low VOC emissions comply with *SCAQMD Rule 1168/316A*
- 3-Year Shelf Life

PVC-00 CLEAR: Regular bodied, fast setting PVC cement for all classes and schedules (except Schedule 80) with interference fit through 4". Excellent for plumbing, DWV, irrigation, electrical conduit, pool & spa and PVC foam core pipe. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-00 Clear Regular Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC00C-005	**1/4 Pint**	24	0	705	6.55
PVC00C-010	**1/2 Pint**	24	0	705	9.52
PVC00C-020	**Pint**	12	0	705	14.67
PVC00C-030	**Quart**	12	0	705	24.75
PVC00C-040	**Gallon**	6	0	705	80.35

PVC-02 CLEAR: Regular bodied, fast setting PVC cement for all classes and schedules (except Schedule 80) with interference fit through 4" diameter. Goes on clear, dries clearest and is slightly thicker than PVC-00. Excellent for plumbing, DWV, irrigation, electrical conduit, pool & spa and PVC foam core pipe. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-02 Clear Regular Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC02C-005	**1/4 Pint**	24	0	705	7.27
PVC02C-010	**1/2 Pint**	24	0	705	10.58
PVC02C-020	**Pint**	12	0	705	16.29
PVC02C-030	**Quart**	12	0	705	27.49
PVC02C-040	**Gallon**	6	0	705	89.19

PVC-05 CLEAR: Medium bodied, fast setting, PVC cement for all classes and schedules with interference fit through 6" diameter and Schedule 80 through 4" diameter in industrial, plumbing, DWV, irrigation, electrical conduit, pool & spa and PVC foam core pipe. Can be used without primer on non-pressure systems if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-05 Clear Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC05C-005	**1/4 Pint**	24	0	705	7.39
PVC05C-010	**1/2 Pint**	24	0	705	10.69
PVC05C-020	**Pint**	12	0	705	18.76
PVC05C-030	**Quart**	12	0	705	29.84
PVC05C-040	**Gallon**	6	0	705	101.68

PVC-21 BLUE: Medium bodied, fast setting, high strength PVC cement. It is suitable for use on rigid PVC with interference fit Schedule 40 thru 6" and Schedule 80 thru 4". Can be used without primer on PVC Schedule 40 and SDR pressure water piping systems through 4" if local code permits. Do not use PVC-21 without primer in any other application, schedule, or size such as Schedule 80 industrial applications. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-21 Blue Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC21B-005	**1/4 Pint**	24	0	705	7.89
PVC21B-010	**1/2 Pint**	24	0	705	12.99
PVC21B-020	**Pint**	12	0	705	22.23
PVC21B-030	**Quart**	12	0	705	37.35
PVC21B-040	**Gallon**	6	0	705	128.39

PVC-25 AQUA BLUE WET-N-DRY: (will fade to CLEAR in sunlight) Medium bodied, very fast setting PVC cement for all classes and schedules with interference fit through 6" diameter and Schedule 80 through 4" diameter. Formulated for wet conditions and quick pressurization. Designed for irrigation, plumbing, and pool & spa applications. Can be used without primer on non-pressure systems if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-25 Aqua Blue Wet-N-Dry Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC25B-005	**1/4 Pint**	24	0	705	7.89
PVC25B-010	**1/2 Pint**	24	0	705	12.82
PVC25B-020	**Pint**	12	0	705	21.83
PVC25B-030	**Quart**	12	0	705	36.56
PVC25B-040	**Gallon**	6	0	705	126.09

PVC-26 BLUE POOL-PRO™: (will fade to CLEAR in sunlight) Medium bodied, very fast setting PVC cement for all classes and schedules with interference fit through 6" diameter and Schedule 80 through 4" diameter. Specially formulated for pool maintenance and repair - wet or quick pressurization conditions. Can be used without primer on non-pressure systems if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-26 Blue POOL-PRO™ Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC26B-005	**1/4 Pint**	24	0	705	7.89
PVC26B-010	**1/2 Pint**	24	0	705	12.82
PVC26B-020	**Pint**	12	0	705	21.83
PVC26B-030	**Quart**	12	0	705	36.56
PVC26B-040	**Gallon**	6	0	705	126.09

PVC-27 CLEAR COLD-N-HOT: Medium bodied, very fast setting, PVC cement for all classes and schedules with interference fit through 6" diameter, Schedule 80 through 4" diameter. Formulated for -15°F to 110°F (-26°C to 43°C) weather conditions. Designed for industrial, plumbing, irrigation, pool & spa, electrical conduit and PVC foam core pipe. Can be used without primer on non-pressure systems if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-27 Clear Cold-N-Hot Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC27C-020	**Pint**	12	0	705	22.79
PVC27C-030	**Quart**	12	0	705	38.36
PVC27C-040	**Gallon**	6	0	705	133.09

PVC-50 HOT BLUE: Medium bodied, very fast setting, high strength PVC cement. Can be used on PVC with interference fit for Schedule 40 thru 6" and Schedule 80 thru 4". Hot Blue premium all-weather formulation is excellent for use in challenging conditions including wet, damp or cold temperatures in irrigation, plumbing DWV, pool & spa, and non-pressure applications. PVC-50 may be used without primer on Schedule 40 pipe and fittings if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-50 HOT BLUE Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC50B-005	**1/4 Pint**	24	0	705	7.12
PVC50B-010	**1/2 Pint**	24	0	705	11.71
PVC50B-020	**Pint**	12	0	705	20.04
PVC50B-030	**Quart**	12	0	705	33.65
PVC50B-040	**Gallon**	6	0	705	115.67

PVC-95 CLEAR/BLUE Flexible: Medium bodied, fast setting PVC cement specially formulated for use on flex-to-flex and flex-to-rigid PVC connections with interference fit through 6" and Schedule 80 through 3". Maintains high-strength, flexible joints. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-95 Clear Medium Body Flexible PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC95C-005	**1/4 Pint**	24	0	705	8.96
PVC95C-010	**1/2 Pint**	24	0	705	13.33
PVC95C-020	**Pint**	12	0	705	22.79
PVC95C-030	**Quart**	12	0	705	38.46
PVC95C-040	**Gallon**	6	0	705	133.09



PVC-95 Blue Medium Body Flexible PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC95B-030	**Quart**	12	0	705	38.36
PVC95B-040	**Gallon**	6	0	705	133.09

PVC-11 GRAY: Heavy bodied, medium setting PVC cement for all classes and schedules with interference fit through 12" diameter. Medium set allows more working time in warm weather and has good gap filling properties. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code, CSA B137.3, B181.2.



PVC-11 Gray Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC11G-010	**1/2 Pint**	24	0	706	17.47
PVC11G-020	**Pint**	12	0	706	23.29
PVC11G-030	**Quart**	12	0	706	39.19
PVC11G-040	**Gallon**	6	0	706	132.53

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PVC-17 CLEAR/GRAY: Heavy bodied, medium setting PVC cement for all classes and schedules with interference fit through 12" diameter (non-pressure applications only up to 18"). Medium set allows more working time in warm weather and has good gap filling properties. Designed for plumbing, industrial, pool, irrigation and electrical piping systems. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P.Code (Clear/Gray); CSA B137.3, B181.2 (Gray only).



PVC-17 Gray Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC17G-010	**1/2 Pint**	24	0	706	13.11
PVC17G-020	**Pint**	12	0	706	23.01
PVC17G-030	**Quart**	12	0	706	38.85
PVC17G-040	**Gallon**	6	0	706	130.91



PVC-17 Clear Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC17C-010	**1/2 Pint**	24	0	706	13.11
PVC17C-020	**Pint**	12	0	706	23.01
PVC17C-030	**Quart**	12	0	706	38.85
PVC17C-040	**Gallon**	6	0	706	130.91

PVC-19 WHITE/GRAY: Extra heavy bodied, slow setting PVC cement for all classes and schedules with interference fit through 30" diameter. Designed for large size piping systems requiring high gap filling properties such as industrial piping and fitting fabrication in pressure and non-pressure applications. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code, CSA (Gray Only) B137.3, B181.2.



PVC-19 White Extra-Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC19W-020	**Pint**	12	0	706	35.20
PVC19W-030	**Quart**	12	0	706	46.92
PVC19W-040	**Gallon**	4	0	706	154.71
PVC19W-040-F*	**Gallon**	6	0	706	154.71
PVC19W-050	**5 Gallon**	1	0	706	668.81

* PVC-19 Cement in 1-Gallon size is offered in both round Paint Type can or rectangular F-Type can which has part number ending in "-F"



PVC-19 Gray Extra-Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC19G-020	**Pint**	12	0	706	35.20
PVC19G-030	**Quart**	12	0	706	46.92
PVC19G-040	**Gallon**	4	0	706	154.71

PVC-19 Gray Extra-Heavy Body PVC Cement (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC19G-040-F*	**Gallon**	6	0	706	154.71
PVC19G-050	**5 Gallon**	1	0	706	668.81

* PVC-19 Cement in 1-Gallon size is offered in both round Paint Type can or rectangular F-Type can which has part number ending in "-F"

Primers are used for the surface preparation of plastic pipe and fittings, which is necessary for the proper solvent welding of these materials. Cleaner aids in pre-cleaning to remove oil and grease.

- All Spears® Primers and Cleaners are low VOC products, which are environmentally friendly with lower emissions and reduced odor, surpassing the most stringent regulations and comply with *SCAQMD Rule 1168/316A*.
- Spears® Primers are certified for use with potable water by NSF® International.
- 3-Year Shelf Life

PRIMER-68 PURPLE/CLEAR: Essential for proper softening and preparation of PVC and CPVC pipe and fitting surfaces. Choose from Clear or Purple color which provides positive identification that a primer was used (check local code requirements). Listings: ASTM F656, NSF®-PW, DWV, SW, U.P. Code (Purple Only).



PRIMER-68 Clear Primer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PRIM68C-005	**1/4 Pint**	24	0	709	7.27
PRIM68C-010	**1/2 Pint**	24	0	709	9.85
PRIM68C-020	**Pint**	12	0	709	18.25
PRIM68C-030	**Quart**	12	0	709	30.46
PRIM68C-040	**Gallon**	6	0	709	91.82



PRIMER-68 Purple Primer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PRIM68P-005	**1/4 Pint**	24	0	709	7.27
PRIM68P-010	**1/2 Pint**	24	0	709	9.85
PRIM68P-020	**Pint**	12	0	709	18.25
PRIM68P-030	**Quart**	12	0	709	30.46
PRIM68P-040	**Gallon**	6	0	709	91.82

PRIMER-70 INDUSTRIAL GRADE PURPLE/CLEAR: Premium, industrial strength primer essential for proper softening and preparation of PVC and CPVC pipe and fitting surfaces. Specially recommended for use on Schedule 80 (150 psi and higher) and large size pipe. Excellent for cold weather applications. Listings: ASTM F656, NSF®-PW, DWV, SW, U.P. Code (Purple Only).



PRIMER-70 Clear Industrial Strength Primer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PRIM70C-005	**1/4 Pint**	24	0	709	7.89
PRIM70C-010	**1/2 Pint**	24	0	709	10.75
PRIM70C-020	**Pint**	12	0	709	21.51
PRIM70C-030	**Quart**	12	0	709	34.83
PRIM70C-040	**Gallon**	6	0	709	114.44



PRIMER-70 Purple Industrial Strength Primer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PRIM70P-005	**1/4 Pint**	24	0	709	7.89
PRIM70P-010	**1/2 Pint**	24	0	709	10.75
PRIM70P-020	**Pint**	12	0	709	21.51
PRIM70P-030	**Quart**	12	0	709	34.83
PRIM70P-040	**Gallon**	6	0	709	114.44

CLEANER-65 CLEAR CLEANER: Water-thin cleaner recommended for use before priming of pipe and fittings to remove dirt, oil and grease from the bonding surfaces of PVC, CPVC, ABS and Styrene.



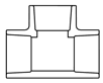
CLEANER-65 Clear Cleaner

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CLEAN65-005	**1/4 Pint**	24	0	709	5.82
CLEAN65-010	**1/2 Pint**	24	0	709	8.67
CLEAN65-020	**Pint**	12	0	709	15.06
CLEAN65-030	**Quart**	12	0	709	22.12
CLEAN65-040	**Gallon**	6	0	709	70.83

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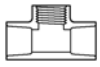
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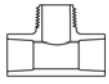
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
401-003	**3/8**	50	400	040	2.48
401-005	**1/2**	50	300	040	.80
401-007	**3/4**	50	0	040	.92
401-010	**1**	50	0	040	1.72
401-012	**1-1/4**	25	0	040	2.68
401-015	**1-1/2**	25	0	040	3.26
401-020	**2**	25	0	040	4.75
401-025	**2-1/2**	10	0	040	15.67
401-030	**3**	10	0	040	20.59
401-040	**4**	6	0	040	37.25
401-050	**5**	5	0	040	89.96
401-060	**6**	4	0	040	125.37
401-080	**8**	2	0	040	290.76
401-100	**10**	1	0	041	963.41
401-100F	**10**	1	0	047	712.86
401-120	**12**	1	0	041	1423.49
401-120F	**12**	1	0	047	1004.45
401-140F	**14**	1	0	047	1564.14
401-160F	**16**	1	0	047	2264.16
401-180F	**18**	1	0	047	2750.32
401-200F	**20**	1	0	047	3351.79
401-240F	**24**	1	0	047	4556.13

Tee
Soc x Fipt



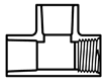
402-003	**3/8**	50	200	040	2.51
402-005	**1/2**	50	300	040	1.06
402-007	**3/4**	50	0	040	1.64
402-010	**1**	50	0	040	3.04
402-012	**1-1/4**	25	0	040	4.85
402-015	**1-1/2**	25	0	040	6.31
402-020	**2**	10	0	040	8.00
402-025	**2-1/2**	10	0	040	24.32
402-030	**3**	10	0	040	30.99
402-040	**4**	6	0	040	47.37

Tee
Soc x Mipt



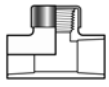
402B-010	**1**	50	0	040	3.46

Tee
Soc x Fipt x Soc



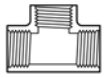
403-007	**3/4**	50	0	040	1.80

Special Reinforced Tee
Soc x SR Fipt - Stainless Steel Collar



402-005SR	**1/2**	25	200	046	8.06
402-012SR	**1-1/4**	25	0	046	15.85

Tee
Fipt



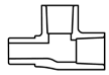
405-005	**1/2**	50	0	040	2.94
405-007	**3/4**	50	0	040	4.61
405-010	**1**	50	0	040	6.38
405-012	**1-1/4**	25	0	040	8.83
405-015	**1-1/2**	25	0	040	9.11
405-020	**2**	10	0	040	12.06

Tee (continued)
Fipt

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
405-025[1]	**2-1/2**	5	0	040	42.94

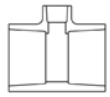
[1]Outlet sized with Bushing

Street Tee
Spig x Soc x Soc



444-005	**1/2**	25	200	040	4.14
444-007	**3/4**	15	120	040	5.52
444-010	**1**	15	0	040	7.13
444-012	**1-1/4**	10	0	040	11.46
444-015	**1-1/2**	10	0	040	15.83
444-020	**2**	10	0	040	27.54

Reducing Tee
Soc



401-053	**3/8X1/2**	50	0	040	2.20
401-074	**1/2X3/4**	50	0	040	1.71
401-075	**1/2X1**	50	0	040	3.17
401-094	**3/4X1/2X1/2**	50	0	040	1.55
401-095	**3/4X1/2X3/4**	50	0	040	1.55
401-101	**3/4X1/2**	50	0	040	1.06
D401-101	**3/4X1/2**	50	0	040	1.47
401-102	**3/4X1**	50	0	040	3.04
401-122	**1X1/2X1**	50	0	040	3.04
401-124	**1X3/4X1/2**	50	0	040	3.04
401-125	**1X3/4X3/4**	50	0	040	3.04
401-126	**1X3/4X1**	50	0	040	3.04
401-130	**1X1/2**	50	0	040	1.81
D401-130	**1X1/2**	50	0	040	2.96
401-131	**1X3/4**	50	0	040	1.98
401-132	**1X1-1/4**	25	0	040	4.07
401-133	**1X1-1/2**	25	0	040	5.26
401-134	**1X2**	25	0	040	7.39
401-156	**1-1/4X1X1/2**	25	0	040	4.15
401-157	**1-1/4X1X3/4**	25	0	040	4.15
401-158	**1-1/4X1X1**	25	0	040	4.15
401-166	**1-1/4X1/2**	25	0	040	2.95
D401-166	**1-1/4X1/2**	25	0	040	2.95
401-167	**1-1/4X3/4**	25	0	040	2.95
401-168	**1-1/4X1**	25	0	040	2.95
401-169	**1-1/4X1-1/2**	25	0	040	5.39
401-170	**1-1/4X2**	25	0	040	7.39
401-199	**1-1/2X1-1/4X1/2**	25	0	040	5.17
401-201	**1-1/2X1-1/4X3/4**	25	0	040	5.17
401-202	**1-1/2X1-1/4X1**	25	0	040	5.17
401-209	**1-1/2X1/2**	25	0	040	5.17
D401-209	**1-1/2X1/2**	25	0	040	5.31
401-210	**1-1/2X3/4**	25	0	040	5.17
401-211	**1-1/2X1**	25	0	040	5.17
401-212	**1-1/2X1-1/4**	25	0	040	5.17
401-213	**1-1/2X2**	25	0	040	7.39
401-214	**1-1/2X2-1/2**	25	0	040	16.28
401-233	**2X1X2**	10	0	040	7.39
401-238	**2X1-1/2X3/4**	10	0	040	7.39
401-239	**2X1-1/2X1**	10	0	040	7.39
401-241	**2X1-1/2X1-1/2**	10	0	040	7.39
401-247	**2X1/2**	10	0	040	5.08
D401-247	**2X1/2**	10	0	040	7.39
401-248	**2X3/4**	10	0	040	5.08
401-249	**2X1**	10	0	040	5.08
401-250	**2X1-1/4**	10	0	040	5.08
401-251	**2X1-1/2**	10	0	040	5.08
401-253[1]	**2X3**	10	0	040	34.19
401-254[1]	**2X4**	6	0	040	67.67

Reducing Tee (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
401-287	**2-1/2X1/2**	10	0	040	15.63
401-288	**2-1/2X3/4**	10	0	040	15.63
401-289	**2-1/2X1**	10	0	040	15.63
401-290	**2-1/2X1-1/4**	10	0	040	15.63
401-291	**2-1/2X1-1/2**	10	0	040	15.63
401-292	**2-1/2X2**	10	0	040	15.63
401-293[1]	**2-1/2X3**	10	0	040	34.93
401-294[1]	**2-1/2X4**	6	0	040	67.67
401-333	**3X1/2**	10	0	040	22.40
401-334	**3X3/4**	10	0	040	22.40
401-335	**3X1**	10	0	040	22.40
401-336	**3X1-1/4**	10	0	040	22.40
401-337	**3X1-1/2**	10	0	040	22.40
401-338	**3X2**	6	0	040	22.36
401-339	**3X2-1/2**	6	0	040	27.97
401-342	**3X4**	6	0	040	38.48
401-344[1]	**3X6**	4	0	040	200.62
401-415[1]	**4X1/2**	6	0	040	38.69
401-416	**4X3/4**	6	0	040	37.25
401-417	**4X1**	6	0	040	37.25
401-418	**4X1-1/4**	10	0	040	37.25
401-419	**4X1-1/2**	10	0	040	37.25
401-420	**4X2**	10	0	040	37.25
401-421[1]	**4X2-1/2**	6	0	040	43.17
401-422	**4X3**	6	0	040	37.25
401-426[1]	**4X6**	4	0	040	200.62
401-428[1]	**4X8**	2	0	040	553.74
401-486[1]	**5X2**	5	0	040	87.34
401-487[1]	**5X2-1/2**	4	0	040	96.09
401-488	**5X3**	4	0	040	87.34
401-490	**5X4**	3	0	040	87.34
401-492[1]	**5X6**	4	0	040	204.87
401-494[1]	**5X8**	1	2	040	704.86
401-526[1]	**6X1-1/4**	4	0	040	128.23
401-527[1]	**6X1-1/2**	5	0	040	128.23
401-528	**6X2**	3	0	040	125.37
401-529[1]	**6X2-1/2**	5	0	040	134.88
401-530	**6X3**	5	0	040	125.37
401-532	**6X4**	2	0	040	125.37
401-533[1]	**6X5**	4	0	040	166.41
401-535[1]	**6X8**	2	0	040	553.74
401-537[1]	**6X10**	1	0	041	1589.98
401-578[1]	**8X2**	2	0	040	303.64
401-579[1]	**8X2-1/2**	4	0	040	303.64
401-580	**8X3**	1	0	040	290.76
401-582	**8X4**	2	0	040	290.76
401-583[1]	**8X5**	2	0	040	335.16
401-585	**8X6**	2	0	040	290.76
401-589[1]	**8X10**	1	0	041	1589.98
401-621[1]	**10X2**	1	0	041	863.35
401-621F	**10X2**	1	0	047	566.63
401-622F	**10X2-1/2**	1	2	047	597.93
401-623[1]	**10X3**	1	0	041	863.35
401-623F	**10X3**	1	0	047	607.77
401-624[1]	**10X4**	1	0	041	863.35
401-624F	**10X4**	1	0	047	629.60
401-625[1]	**10X5**	1	0	041	863.35
401-625F	**10X5**	1	0	047	738.67
401-626	**10X6**	1	0	041	825.62
401-626F	**10X6**	1	0	047	711.99
401-628[1]	**10X8**	1	0	041	1057.06
401-628F	**10X8**	1	0	047	798.78
401-632[1]	**10X12**	1	0	041	1759.45
401-634F	**10X14**	1	0	047	1804.71
401-636F	**10X16**	1	0	047	2247.38

Reducing Tee (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
401-661F	**12X2**	1	0	047	732.69
401-662F	**12X2-1/2**	1	0	047	773.08
401-663F	**12X3**	1	0	047	789.23
401-664[1]	**12X4**	1	0	041	1351.39
401-664F	**12X4**	1	0	047	837.26
401-665F	**12X5**	1	0	047	993.12
401-666[1]	**12X6**	1	0	041	1351.39
401-666F	**12X6**	1	0	047	890.59
401-668	**12X8**	1	0	041	1192.86
401-668F	**12X8**	1	0	047	991.93
401-670[1]	**12X10**	1	0	041	1858.69
401-670F	**12X10**	1	0	047	1102.17
401-674F	**12X14**	1	0	047	2083.20
401-676F	**12X16**	1	0	047	2515.47
401-678F	**12X18**	1	0	047	4467.56
401-691F	**14X2**	1	0	047	918.09
401-693F	**14X3**	1	0	047	1000.22
401-694F	**14X4**	1	0	047	1063.72
401-695F	**14X5**	1	0	047	1110.13
401-696F	**14X6**	1	0	047	1127.21
401-698F	**14X8**	1	0	047	1187.92
401-700F	**14X10**	1	0	047	1390.32
401-702F	**14X12**	1	0	047	1579.24
401-706F	**14X16**	1	0	047	3051.73
401-751F	**16X2**	1	0	047	1020.12
401-753F	**16X3**	1	0	047	1075.91
401-754F	**16X4**	1	0	047	1141.00
401-756F	**16X6**	1	0	047	1216.69
401-758F	**16X8**	1	0	047	1337.32
401-760F	**16X10**	1	0	047	1457.80
401-762F	**16X12**	1	0	047	1698.32
401-764F	**16X14**	1	0	047	2030.45
401-768F	**16X18**	1	0	047	4545.36
401-781F	**18X2**	1	0	047	1133.67
401-783F	**18X3**	1	0	047	1162.85
401-784F	**18X4**	1	0	047	1176.16
401-786F	**18X6**	1	0	047	1348.82
401-788F	**18X8**	1	0	047	1479.98
401-790F	**18X10**	1	0	047	1759.27
401-792F	**18X12**	1	0	047	1824.32
401-794F	**18X14**	1	0	047	2406.14
401-796F	**18X16**	1	0	047	2762.14
401-811F	**20X2**	1	0	047	1435.19
401-813F	**20X3**	1	0	047	1462.59
401-814F	**20X4**	1	0	047	1484.69
401-816F	**20X6**	1	0	047	1508.23
401-818F	**20X8**	1	0	047	1568.46
401-820F	**20X10**	1	0	047	1943.21
401-822F	**20X12**	1	0	047	2115.47
401-824F	**20X14**	1	0	047	2673.49
401-826F	**20X16**	1	0	047	3156.02
401-828F	**20X18**	1	0	047	3507.78
401-901F	**24X2**	1	0	047	2372.20
401-903F	**24X3**	1	0	047	2467.92
401-904F	**24X4**	1	0	047	2953.34
401-906F	**24X6**	1	0	047	3033.57
401-908F	**24X8**	1	0	047	3167.79
401-910F	**24X10**	1	0	047	3237.25
401-912F	**24X12**	1	0	047	3328.96
401-914F	**24X14**	1	0	047	3573.79
401-916F	**24X16**	1	0	047	3754.69
401-918F	**24X18**	1	0	047	4102.93
401-920F	**24X20**	1	0	047	4406.42

[1]Outlet sized with Bushing

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Reducing Tee
Soc x Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
402-071	1/2X1/8	50	300	040	2.28
402-072	1/2X1/4	50	200	040	2.28
402-074	1/2X3/4	50	0	040	2.28
402-094	3/4X1/2X1/2	50	0	040	1.60
402-095	3/4X1/2X3/4	50	0	040	1.60
402-097	3/4X1/8	50	0	040	9.92
402-101	3/4X1/2	50	0	040	1.41
402-124	1X3/4X1/2	50	0	040	3.04
402-125	1X3/4X3/4	50	0	040	3.04
402-130	1X1/2	50	0	040	2.13
402-131	1X3/4	50	0	040	3.04
402-156	1-1/4X1X1/2	25	0	040	4.85
402-157	1-1/4X1X3/4	25	0	040	4.85
402-158	1-1/4X1X1	25	0	040	4.85
402-166	1-1/4X1/2	25	0	040	5.08
402-167	1-1/4X3/4	25	0	040	5.08
402-168	1-1/4X1	25	0	040	5.08
402-199	1-1/2X1-1/4X1/2	25	0	040	6.31
402-201	1-1/2X1-1/4X3/4	25	0	040	6.31
402-202	1-1/2X1-1/4X1	25	0	040	6.31
402-209	1-1/2X1/2	25	0	040	6.31
402-210	1-1/2X3/4	25	0	040	6.31
402-211	1-1/2X1	25	0	040	6.31
402-212	1-1/2X1-1/4	25	0	040	6.31
402-238	2X1-1/2X3/4	10	0	040	7.94
402-239	2X1-1/2X1	10	0	040	7.94
402-247	2X1/2	10	0	040	7.94
402-248	2X3/4	10	0	040	7.94
402-249	2X1	10	0	040	7.94
402-250	2X1-1/4	10	0	040	7.94
402-251	2X1-1/2	10	0	040	7.94
402-287	2-1/2X1/2	10	0	040	17.18
402-288	2-1/2X3/4	10	0	040	17.18
402-289	2-1/2X1	10	0	040	17.18
402-290	2-1/2X1-1/4	10	0	040	17.18
402-291	2-1/2X1-1/2	10	0	040	17.18
402-292	2-1/2X2	10	0	040	17.18
402-333	3X1/2	10	0	040	24.54
402-334	3X3/4	10	0	040	24.54
402-335	3X1	10	0	040	24.54
402-336	3X1-1/4	10	0	040	24.54
402-337	3X1-1/2	10	0	040	24.54
402-338	3X2	6	0	040	24.54
402-417	4X1	6	0	040	41.01
402-419	4X1-1/2	10	0	040	41.01
402-420	4X2	10	0	040	41.01
402-422	4X3	6	0	040	41.01
402-490	5X4	3	0	040	107.13
402-525[1]	6X1	3	0	040	139.00
402-528	6X2	3	0	040	139.00
402-530	6X3	5	0	040	139.00
402-532	6X4	2	0	040	139.00
402-578[1]	8X2	3	0	040	300.60
402-580[1]	8X3	2	0	040	300.60
402-582[1]	8X4	2	0	040	300.60
402-621F	10X2	1	0	047	584.85
402-622F	10X2-1/2	1	0	047	588.97
402-623F	10X3	1	0	047	625.91
402-624F	10X4	1	0	047	678.69
402-661F	12X2	1	0	047	750.88
402-663F	12X3	1	0	047	809.00
402-664F	12X4	1	0	047	875.84

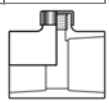
[1]Outlet-sized with Bushing

Reducing Tee
Soc x Fipt x Soc



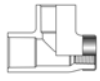
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
403-095	3/4X1/2X3/4	50	0	040	4.31

Special Reinforced Reducing Tee
Soc x SR Fipt - Stainless Steel Collar



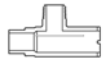
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
402-072SR	1/2X1/4	25	150	046	8.06
402-098SR	3/4X1/4	25	100	046	10.47
402-101SR	3/4X1/2	50	0	046	10.47
402-166SR	1-1/4X1/2	15	0	046	17.52
402-168SR	1-1/4X1	10	0	046	17.87
402-212SR	1-1/2X1-1/4	10	0	046	19.35
402-287SR	2-1/2X1/2	10	0	046	23.55
402-288SR	2-1/2X3/4	10	0	046	24.88
402-289SR	2-1/2X1	10	0	046	25.13
402-290SR	2-1/2X1-1/4	10	0	046	24.74
402-291SR	2-1/2X1-1/2	10	0	046	25.72
402-292SR	2-1/2X2	10	0	046	25.93
402-333SR	3X1/2	10	0	046	31.40
402-334SR	3X3/4	10	0	046	31.40
402-335SR	3X1	10	0	046	32.03
402-336SR	3X1-1/4	10	0	046	32.78
402-337SR	3X1-1/2	10	0	046	32.49
402-338SR	3X2	6	0	046	34.42
402-417SR	4X1	6	0	046	41.59
402-419SR	4X1-1/2	10	0	046	45.68
402-420SR	4X2	10	0	046	47.17
402-422SR	4X3	6	0	046	74.11

Special Reinforced Reducing Tee
Soc x SR Fipt-Stainless Steel Collar x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
403-095SR	3/4X1/2X3/4	50	0	046	2.73

Manifold Tee
Spig x Soc x Mipt



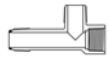
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
476-010	1	20	0	020	5.98

Manifold Tee
Spig x Soc x Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
477-010	1	25	0	020	5.98

O-ring Sealed Manifold Tee
O-ring Sealed MIPT x Fipt x MIPT

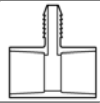


EPDM O-ring Seal on Tee run

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
451A-010	1	50	0	019	4.49

O-ring end MIPT is designed to assemble to corresponding Manifold Tee FIPT Only. Multiple Mainifold Tee-to-Maniffold Tee assemblies can be made with NO Thread Sealant required. Branch MIPT and Terminal MIPT in manifilold assembly can be joined without O-ring to standard FIPT using thread sealant.

Transition Tee for P.E. Hose Laterals
Soc x Insert (.580 I.D.)



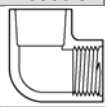
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
1102-007	3/4	50	0	040	3.22
1102-130	1X1/2	200	0	040	3.61
1102-248	2X2X3/4	10	0	040	5.08
1102-250	2X1-1/4	10	0	040	5.08

90° Ell
Soc



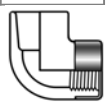
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
406-003	**3/8**	50	600	040	3.23
406-005	**1/2**	50	400	040	.64
406-007	**3/4**	50	300	040	.72
406-010	**1**	50	0	040	1.29
406-012	**1-1/4**	25	0	040	2.28
406-015	**1-1/2**	25	0	040	2.46
406-020	**2**	25	0	040	3.85
406-025	**2-1/2**	10	0	040	11.73
406-030	**3**	10	0	040	14.03
406-040	**4**	8	0	040	25.09
406-045F	**4-1/2**	1	5	047	178.54
406-050	**5**	4	0	040	64.84
406-060	**6**	4	0	040	79.80
406-080	**8**	2	0	040	205.47
406-100	**10**	1	0	041	773.92
406-100F	**10**	1	0	047	412.87
406-120	**12**	1	0	041	1037.97
406-120F	**12**	1	0	047	674.80
406-140F	**14**	1	0	047	972.61
406-160F	**16**	1	0	047	1391.76
406-180F	**18**	1	0	047	1494.04
406-200F	**20**	1	0	047	2260.04
406-240F	**24**	1	0	047	3386.87

90° Ell
Soc x Fipt



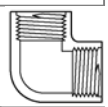
407-005	**1/2**	50	400	040	.80
407-007	**3/4**	50	300	040	.92
407-010	**1**	50	0	040	1.72
407-012	**1-1/4**	25	0	040	2.87
407-015	**1-1/2**	25	0	040	3.19
407-020	**2**	10	0	040	8.24
407-025	**2-1/2**	10	0	040	20.37
407-030	**3**	8	0	040	30.54
407-040	**4**	8	0	040	46.29

Special Reinforced 90° Ell & Reducing 90° Ell
Soc x SR Fipt - Stainless Steel Collar



407-005SR	**1/2**	50	400	046	7.15
407-007SR	**3/4**	75	0	046	9.18
407-010SR	**1**	50	0	046	9.28
407-012SR	**1-1/4**	25	0	046	11.22
407-131SR	**1X3/4**	50	0	046	3.94
407-168SR[1]	**1-1/4X1**	25	0	046	15.55
407-249SR	**2X1**	10	0	046	17.68
407-251SR	**2X1-1/2**	10	0	046	18.65
Sized with SR Adapter					

90° Ell
Fipt



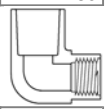
408-005	**1/2**	50	400	040	1.55
408-007	**3/4**	50	0	040	2.29
408-010	**1**	50	0	040	4.91
408-012	**1-1/4**	25	0	040	5.25
408-015	**1-1/2**	25	0	040	6.64
408-020	**2**	10	0	040	10.07

Reducing 90° Ell
Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
406-053	**3/8X1/2**	50	0	040	1.88
406-101	**3/4X1/2**	50	0	040	1.29
D406-101	**3/4X1/2**	50	0	040	1.57
406-130	**1X1/2**	50	0	040	1.93
D406-130	**1X1/2**	50	0	040	2.76
406-131	**1X3/4**	50	0	040	2.29
406-166	**1-1/4X1/2**	25	0	040	3.67
D406-166	**1-1/4X1/2**	25	0	040	4.21
406-167	**1-1/4X3/4**	25	0	040	3.67
406-168	**1-1/4X1**	25	0	040	3.67
406-209	**1-1/2X1/2**	25	0	040	5.80
406-211	**1-1/2X1**	25	0	040	5.80
406-212	**1-1/2X1-1/4**	25	0	040	5.80
406-249	**2X1**	10	0	040	7.15
406-250	**2X1-1/4**	10	0	040	7.15
406-251	**2X1-1/2**	10	0	040	9.89
406-251N	**2X1-1/2**	10	0	015	9.89
406-292	**2-1/2X2**	10	0	040	11.59
406-292N	2-1/2X2 (2-1/2 Spigot)	10	0	040	11.59

Reducing 90° Ell
Soc x Fipt



407-053	**3/8X1/2**	50	600	040	2.20
407-074	**1/2X3/4**	50	0	040	1.72
407-101	**3/4X1/2**	50	300	040	.95
407-130	**1X1/2**	50	0	040	2.64
407-131	**1X3/4**	50	0	040	2.64
407-168	**1-1/4X1**	25	0	040	3.85
407-211	**1-1/2X1**	25	0	040	6.39
407-212	**1-1/2X1-1/4**	20	0	040	6.65
407-249	**2X1**	10	0	040	11.06
407-250	**2X1-1/4**	10	0	040	11.06
407-251	**2X1-1/2**	10	0	040	11.06

90° Sweep Ell
Soc



406-005S	**1/2**	25	300	040	4.92
406-007S	**3/4**	25	100	040	5.63
406-010S	**1**	25	0	040	9.22
406-012S	**1-1/4**	25	0	040	12.16
406-015S	**1-1/2**	25	0	040	13.14
406-020S	**2**	25	0	040	15.84
406-025S	**2-1/2**	20	0	040	18.53

Long Sweep 90° Ell
Soc



406-025LSF	**2-1/2**	1	7	047	53.27
406-030LSF	**3**	1	5	047	75.03
406-040LSF	**4**	1	4	047	97.68
406-060LSF	**6**	1	2	047	151.04
406-080LSF	**8**	1	0	047	300.71

90° Street Ell
Spig x Soc



409-005	**1/2**	50	400	040	1.81
409-007	**3/4**	50	0	040	2.23
409-010	**1**	50	0	040	3.85
409-012	**1-1/4**	25	0	040	4.61

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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

90° Street Ell (continued)

Spig x Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
409-015	1-1/2	25	0	040	5.08
409-020	2	10	0	040	9.81
409-025	2-1/2	10	0	040	17.59
409-030	3	5	0	040	21.72
409-040	4	6	0	040	40.39
409-050	5	2	0	040	96.62
409-060	6	2	0	040	122.09
409-080	8	2	0	040	312.31
409-100	10	1	0	041	1153.13
409-120	12	1	0	041	1276.99
409-140F	14	1	0	047	1343.31
409-160F	16	1	0	047	1411.15
409-180F	18	1	0	047	1765.28
409-200F	20	1	0	047	2510.82
409-240F	24	1	0	047	3882.56

90° Street Ell

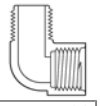
Mipt x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
410-005	1/2	50	750	040	1.41
410-007	3/4	50	0	040	1.64
410-010	1	50	0	040	2.76
410-012	1-1/4	25	0	040	3.85
410-015	1-1/2	25	0	040	4.03
410-020	2	10	0	040	9.91
410-030	3	10	0	040	35.40
410-101	3/4X1/2	50	400	040	2.01
410-102	3/4X1	50	0	040	3.41

90° Street Ell

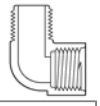
Mipt x Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
412-005	1/2	50	600	040	1.88
412-007	3/4	50	0	040	2.29
412-010	1	50	0	040	3.96
412-012	1-1/4	25	0	040	4.91
412-015	1-1/2	25	0	040	5.33
412-020	2	10	0	040	10.16
412-030	3	8	0	040	36.29

HDPE 90° Street Ell

Mipt x Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
M412-005	1/2	50	450	040	1.75
M412-007	3/4	50	0	040	2.12
M412-010	1	50	0	040	3.69
M412-012	1-1/4	25	0	040	4.87
M412-015	1-1/2	25	0	040	5.52

High Density Polyethylene - Not NSF-listed - Not pressure rated. For use on open ended irrigation systems.

HDPE 90° Street Ell

Mipt x Fipt (Short Pattern)

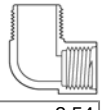


Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MS412-005	1/2	50	700	040	1.57
MS412-007	3/4	50	400	040	1.89
MS412-010	1	50	0	040	3.32

High Density Polyethylene - Not NSF-listed - Not pressure rated. For use on open ended irrigation systems.

HDPE Reducing 90° Street Ell

Mipt x Fipt (Short Pattern)



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MS412-101	3/4X1/2	50	400	040	2.54

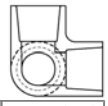
HDPE Reducing 90° Street Ell (continued)

Mipt x Fipt (Short Pattern)

High Density Polyethylene - Not NSF-listed - Not pressure rated. For use on open ended irrigation systems.

Side Outlet Ell

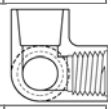
Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
413-005	1/2	50	0	040	3.49
413-007	3/4	50	0	040	4.75
413-010	1	25	0	040	6.08
413-015	1-1/2	10	0	040	6.67
413-020	2	10	0	040	9.26

Side Outlet Ell

Soc x Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
414-005	1/2	50	0	040	3.40
414-007	3/4	50	0	040	5.22
414-101	3/4X1/2	50	0	040	4.40
414-130	1X1/2	50	0	040	5.77

60° Ell

Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
424-005F	1/2	7	0	047	69.87
424-007F	3/4	6	0	047	77.68
424-010F	1	1	3	047	78.89
424-012F	1-1/4	16	0	047	84.12
424-015F	1-1/2	1	16	047	97.06
424-020F	2	1	16	047	127.54
424-025F	2-1/2	10	0	047	139.81
424-030F	3	8	0	047	159.40
424-040F	4	1	4	047	187.15
424-045F	4-1/2	1	4	047	209.64
424-050F	5	1	4	047	215.51
424-060F	6	1	4	047	262.04
424-080F	8	1	2	047	348.46
424-100F	10	1	2	047	715.66
424-120F	12	1	0	047	911.02
424-140F	14	1	0	047	962.79
424-160F	16	1	0	047	1158.63
424-180F	18	1	0	047	1718.01
424-240F	24	1	0	047	2895.78

45° Ell

Soc

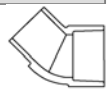


Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
417-005	1/2	50	600	040	1.06
417-007	3/4	50	300	040	1.64
417-010	1	50	0	040	1.98
417-012	1-1/4	25	0	040	2.76
417-015	1-1/2	25	0	040	3.46
417-020	2	25	0	040	4.51
417-025	2-1/2	10	0	040	11.75
417-030	3	10	0	040	18.23
417-040	4	5	0	040	32.68
417-045F	4-1/2	1	15	047	67.15
417-050	5	5	0	040	64.84
417-050F	5	1	2	047	87.00
417-060	6	8	0	040	80.76
417-080	8	3	0	040	194.22
417-080F	8	1	4	047	183.81
417-100	10	1	0	041	505.60
417-100F	10	1	2	047	290.39
417-120	12	1	0	041	749.24
417-120F	12	1	2	047	307.99

45° Ell (continued)
Soc

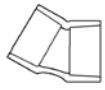
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
417-140F	**14**	1	0	047	646.07
417-160F	**16**	1	0	047	853.85
417-180F	**18**	1	0	047	902.80
417-200F	**20**	1	0	047	1169.47
417-240F	**24**	1	0	047	1881.75

45° Street Ell
Spig x Soc



427-005	**1/2**	50	400	040	1.06
427-007	**3/4**	50	0	040	1.64
427-010	**1**	50	0	040	1.98
427-012	**1-1/4**	25	0	040	2.76
427-015	**1-1/2**	25	0	040	3.46
427-020	**2**	25	0	040	4.51
427-025	**2-1/2**	10	0	040	14.68
427-030	**3**	10	0	040	18.23
427-040	**4**	5	0	040	32.68
427-050	**5**	4	0	040	98.27
427-060	**6**	4	0	040	100.94
427-080	**8**	2	0	040	242.78
427-100	**10**	1	0	041	638.82
427-120	**12**	1	0	041	936.57
427-140F	**14**	1	0	047	697.99
427-160F	**16**	1	0	047	948.73
427-180F	**18**	1	0	047	1035.62
427-200F	**20**	1	0	047	1314.52
427-240F	**24**	1	0	047	2070.62

30° Ell
Soc



415-005F	**1/2**	1	25	047	21.59
415-007F	**3/4**	25	0	047	21.73
415-010F	**1**	1	25	047	23.78
415-012F	**1-1/4**	1	15	047	25.74
415-015F	**1-1/2**	1	25	047	26.11
415-020F	**2**	1	25	047	27.07
415-025F	**2-1/2**	25	0	047	31.93
415-030F	**3**	1	20	047	34.15
415-040F	**4**	1	6	047	41.13
415-045F	**4-1/2**	1	15	047	65.07
415-050F	**5**	1	6	047	57.03
415-060F	**6**	1	10	047	66.07
415-080F	**8**	1	4	047	111.69
415-100F	**10**	1	2	047	168.54
415-120F	**12**	1	0	047	266.62
415-140F	**14**	1	0	047	419.17
415-160F	**16**	1	0	047	571.40
415-180F	**18**	1	0	047	686.21
415-200F	**20**	1	0	047	848.25
415-240F	**24**	1	0	047	1689.55

22-1/2° Ell
Soc

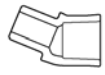


416-005	**1/2**	20	240	040	1.51
416-007	**3/4**	20	240	040	2.35
416-010	**1**	20	160	040	2.81
416-012	**1-1/4**	20	0	040	3.93
416-015	**1-1/2**	20	0	040	4.93
416-015F	**1-1/2**	1	25	047	26.11
416-020	**2**	20	0	040	6.45
416-025	**2-1/2**	5	0	040	16.77
416-025F	**2-1/2**	25	0	047	31.93

22-1/2° Ell (continued)
Soc

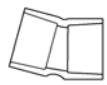
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
416-030	**3**	5	0	040	26.01
416-040	**4**	4	0	040	46.72
416-045F	**4-1/2**	1	15	047	65.07
416-050F	**5**	1	10	047	57.03
416-060	**6**	4	0	040	115.34
416-060F	**6**	1	5	047	66.07
416-080	**8**	4	0	040	277.46
416-080F	**8**	1	4	047	111.69
416-100F	**10**	1	0	047	168.54
416-120F	**12**	1	0	047	266.62
416-140F	**14**	1	0	047	419.17
416-160F	**16**	1	0	047	571.40
416-180F	**18**	1	0	047	686.21
416-200F	**20**	1	0	047	848.25
416-240F	**24**	1	0	047	1689.55

22-1/2° Street Ell
Spig x Soc



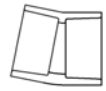
442-005	**1/2**	50	400	040	1.51
442-007	**3/4**	50	0	040	2.35
442-010	**1**	50	0	040	2.81
442-012	**1-1/4**	20	0	040	3.93
442-015	**1-1/2**	25	0	040	4.93
442-020	**2**	20	0	040	6.45
442-025	**2-1/2**	5	0	080	24.35
442-025F	**2-1/2**	1	18	047	36.53
442-030	**3**	5	0	040	37.68
442-040	**4**	4	0	040	58.15
442-060	**6**	4	0	040	143.56
442-060F	**6**	1	5	047	84.72
442-080	**8**	1	4	040	345.31
442-080F	**8**	1	4	047	127.60
442-100F	**10**	1	0	047	197.47
442-120F	**12**	1	0	047	296.41

15° Ell
Soc



418-005F	**1/2**	1	25	047	21.59
418-007F	**3/4**	23	0	047	21.73
418-010F	**1**	20	0	047	23.78
418-012F	**1-1/4**	15	0	047	25.74
418-015F	**1-1/2**	25	0	047	26.11
418-020F	**2**	1	25	047	27.07
418-025F	**2-1/2**	18	0	047	31.93
418-030F	**3**	1	35	047	34.15
418-040F	**4**	1	20	047	41.13
418-045F	**4-1/2**	1	15	047	65.07
418-050F	**5**	1	15	047	57.03
418-060F	**6**	1	10	047	66.07
418-080F	**8**	1	4	047	111.69
418-100F	**10**	1	2	047	168.54
418-120F	**12**	1	2	047	266.62
418-140F	**14**	1	0	047	419.17
418-160F	**16**	1	0	047	571.40
418-180F	**18**	1	0	047	686.21
418-200F	**20**	1	0	047	848.25
418-240F	**24**	1	0	047	1689.55

11-1/4° Ell
Soc



411-005F	**1/2**	52	0	047	21.59
411-007F	**3/4**	52	0	047	21.73

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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

11-1/4° Ell (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
411-010F	1	52	0	047	23.78
411-012F	1-1/4	25	0	047	25.74
411-015	1-1/2	25	0	040	5.57
411-015F	1-1/2	25	0	047	26.11
411-020	2	10	0	040	6.45
411-025F	2-1/2	1	25	047	31.93
411-030	3	10	0	040	26.01
411-040	4	4	0	040	46.72
411-045F	4-1/2	1	15	047	65.07
411-050F	5	1	15	047	57.03
411-060F	6	1	10	047	66.07
411-080F	8	1	4	047	111.69
411-100F	10	1	2	047	168.54
411-120F	12	1	2	047	266.62
411-140F	14	1	0	047	419.17
411-160F	16	1	0	047	571.40
411-180F	18	1	0	047	686.21
411-200F	20	1	0	047	848.25
411-240F	24	1	0	047	1689.55

Wye

Soc



1/2" - 2" - 235 psi Maximum Internal Pressure Rating @ 73°F (23°C)
2-1/2" - 6" - 150 psi Maximum Internal Pressure Rating @ 73°F (23°C)
8" - Larger & All Fabricated Sizes- 100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

475-005	1/2	25	100	040	2.76
475-007	3/4	20	0	040	4.33
475-010	1	25	0	040	6.06
475-012	1-1/4	20	0	040	9.32
475-015	1-1/2	20	0	040	11.95
475-020	2	10	0	040	35.85
475-025[1]	2-1/2	8	0	040	81.96
475-030	3	5	0	040	60.40
475-040	4	4	0	040	113.92
475-050F	5	1	3	047	444.56
475-060	6	3	0	040	241.02
475-080	8	1	0	040	387.67
475-100	10	1	0	041	1284.57
475-100F*	10	1	0	047	1077.91
475-120	12	1	0	041	1898.02
475-120F*	12	1	0	047	1465.32
475-140F*	14	1	0	047	2075.98
475-160F*	16	1	0	047	2683.45
475-180F*	18	1	0	047	3435.76
475-200F*	20	1	0	047	4062.04
475-240F*	24	1	0	047	5051.87

[1] Sized with Bushing

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

Reducing Wye

Soc



1/2" - 2" - 235 psi Maximum Internal Pressure Rating @ 73°F (23°C)
2-1/2" - 6" - 150 psi Maximum Internal Pressure Rating @ 73°F (23°C)
8" - Larger & All Fabricated Sizes - 100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

475-101[1]	3/4X1/2	20	0	040	8.54
475-130[1]	1X1/2	20	0	040	10.86
475-131[1]	1X3/4	20	0	040	10.86
475-166[1]	1-1/4X1/2	20	0	040	14.61
475-167[1]	1-1/4X3/4	20	0	040	14.61

Reducing Wye (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
475-168[1]	1-1/4X1	20	0	040	14.61
475-209[1]	1-1/2X1/2	20	0	040	17.39
475-210[1]	1-1/2X3/4	20	0	040	17.39
475-211[1]	1-1/2X1	20	0	040	17.39
475-212[1]	1-1/2X1-1/4	20	0	040	17.39
475-247[1]	2X1/2	10	0	040	39.51
475-248[1]	2X3/4	10	0	040	39.51
475-249[1]	2X1	10	0	040	39.51
475-250[1]	2X1-1/4	10	0	040	39.51
475-251[1]	2X1-1/2	10	0	040	39.51
475-292[1]	2-1/2X2	4	0	040	88.03
475-334[1]	3X3/4	5	0	040	68.60
475-335[1]	3X1	5	0	040	68.60
475-336[1]	3X1-1/4	5	0	040	68.60
475-337[1]	3X1-1/2	5	0	040	68.60
475-338[1]	3X2	5	0	040	68.60
475-339[1]	3X2-1/2	5	0	040	68.60
475-420	4X2	4	0	040	131.78
475-421[1]	4X2-1/2	4	0	040	131.78
475-422[1]	4X3	4	0	040	131.78
475-488F*	5X3	1	4	047	353.59
475-490F*	5X4	1	4	047	368.20
475-528[1]	6X2	4	0	040	284.43
475-529[1]	6X2-1/2	5	0	040	284.43
475-530[1]	6X3	5	0	040	284.43
475-532	6X4	5	0	040	309.89
475-578F*	8X2	1	2	047	532.21
475-579F*	8X2-1/2	1	0	047	564.77
475-580F*	8X3	1	2	047	578.25
475-582F*	8X4	1	2	047	596.45
475-585F*	8X6	1	0	047	614.53
475-621F*	10X2	1	0	047	639.77
475-622F*	10X2-1/2	1	0	047	650.77
475-623F*	10X3	1	0	047	685.51
475-624F*	10X4	1	0	047	725.43
475-626	10X6	1	0	041	1100.84
475-626F*	10X6	1	0	047	801.01
475-628	10X8	1	0	041	1223.16
475-628F*	10X8	1	0	047	857.09
475-661F*	12X2	1	0	047	868.42
475-663F*	12X3	1	0	047	889.14
475-664F*	12X4	1	0	047	930.55
475-666F*	12X6	1	0	047	935.02
475-668F*	12X8	1	0	047	1084.33
475-670F*	12X10	1	0	047	1239.80
475-691F*	14X2	1	0	047	1032.35
475-693F*	14X3	1	0	047	1117.36
475-694F*	14X4	1	0	047	1171.81
475-696F*	14X6	1	0	047	1320.22
475-698F*	14X8	1	0	047	1512.75
475-700F*	14X10	1	0	047	1689.82
475-702F*	14X12	1	0	047	1893.25
475-751F*	16X2	1	0	047	1199.41
475-753F*	16X3	1	0	047	1296.59
475-754F*	16X4	1	0	047	1348.37
475-756F*	16X6	1	0	047	1517.35
475-758F*	16X8	1	0	047	1727.99
475-760F*	16X10	1	0	047	1923.22
475-762F*	16X12	1	0	047	2143.16
475-764F*	16X14	1	0	047	2425.75
475-781F*	18X2	1	0	047	1308.67
475-783F*	18X3	1	0	047	1368.57
475-784F*	18X4	1	0	047	1388.89
475-786F*	18X6	1	0	047	2661.03
475-788F*	18X8	1	0	047	1985.98

Reducing Wye (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
475-790F*	**18X10**	1	0	047	2209.00
475-792F*	**18X12**	1	0	047	2562.64
475-794F*	**18X14**	1	0	047	2813.63
475-796F*	**18X16**	1	0	047	2950.83
475-811F*	**20X2**	1	0	047	1376.09
475-813F*	**20X3**	1	0	047	1491.22
475-814F*	**20X4**	1	0	047	1510.54
475-816F*	**20X6**	1	0	047	1538.88
475-818F*	**20X8**	1	0	047	2080.20
475-820F*	**20X10**	1	0	047	2312.57
475-822F*	**20X12**	1	0	047	2787.00
475-824F*	**20X14**	1	0	047	3118.99
475-826F*	**20X16**	1	0	047	3457.07
475-828F*	**20X18**	1	0	047	3710.88
475-901F*	**24X2**	1	0	047	1737.02
475-903F*	**24X3**	1	0	047	1775.23
475-904F*	**24X4**	1	0	047	1824.16
475-906F*	**24X6**	1	0	047	3210.71
475-908F*	**24X8**	1	0	047	3502.38
475-910F*	**24X10**	1	0	047	3539.38
475-912F*	**24X12**	1	0	047	3746.56
475-914F*	**24X14**	1	0	047	3875.11
475-916F*	**24X16**	1	0	047	4058.18
475-918F*	**24X18**	1	0	047	4411.72
475-920F*	**24X20**	1	0	047	4822.38

[1] Sized with Bushing

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

Double Wye



Soc

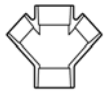
100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

476-020F*	**2**	1	4	047	278.43
476-030F*	**3**	1	3	047	458.60
476-040F*	**4**	1	2	047	510.84
476-060F*	**6**	1	0	047	581.76
476-080F*	**8**	1	0	047	708.48
476-100F*	**10**	1	0	047	1299.16
476-120F*	**12**	1	0	047	1546.67

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

For larger sizes please contact your Regional Spears® Distribution Center.

Reducing Double Wye



Soc

Size 3" is 150 psi, all Fabricated Sizes- 100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

476-338	**3X2**	5	0	040	100.68
476-420F*	**4X2**	1	4	047	452.25
476-421F*	**4X2-1/2**	1	2	047	471.85
476-422F*	**4X3**	1	3	047	485.42
476-528F*	**6X2**	1	2	047	455.41
476-529F*	**6X2-1/2**	1	2	047	495.79
476-530F*	**6X3**	1	2	047	515.27
476-532F*	**6X4**	1	0	047	523.33
476-578F*	**8X2**	1	2	047	555.58
476-579F*	**8X2-1/2**	1	2	047	577.67
476-580F*	**8X3**	1	0	047	621.64
476-582F*	**8X4**	1	0	047	629.64
476-585F*	**8X6**	1	0	047	660.09
476-621F*	**10X2**	1	0	047	827.76
476-622F*	**10X2-1/2**	1	0	047	877.01

Reducing Double Wye (continued)

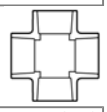
Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
476-623F*	**10X3**	1	0	047	902.16
476-624F*	**10X4**	1	0	047	991.25
476-626F*	**10X6**	1	0	047	1111.88
476-628F*	**10X8**	1	0	047	1159.46
476-661F*	**12X2**	1	0	047	1180.96
476-662F*	**12X2 1/2**	1	0	047	1194.37
476-663F*	**12X3**	1	0	047	1258.47
476-664F*	**12X4**	1	0	047	1283.05
476-666F*	**12X6**	1	0	047	1355.85
476-668F*	**12X8**	1	0	047	1390.63
476-670F*	**12X10**	1	0	047	1473.23

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

For larger sizes please contact your Regional Spears® Distribution Center.

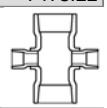
Cross



Soc

420-005	**1/2**	50	0	040	2.46
420-007	**3/4**	50	0	040	4.08
420-010	**1**	50	0	040	5.08
420-012	**1-1/4**	25	0	040	6.72
420-015	**1-1/2**	25	0	040	7.62
420-020	**2**	10	0	040	11.23
420-025	**2-1/2**	10	0	040	23.82
420-030	**3**	5	0	040	29.22
420-040	**4**	4	0	040	43.28
420-050F	**5**	1	3	047	618.29
420-060F	**6**	1	0	047	609.52
420-080F	**8**	1	0	047	785.12
420-100F	**10**	1	0	047	950.24
420-120F	**12**	1	0	047	1339.13
420-140F	**14**	1	0	047	2381.20
420-160F	**16**	1	0	047	3018.71
420-180F	**18**	1	0	047	3435.15
420-200F	**20**	1	0	047	5123.86
420-240F	**24**	1	0	047	7473.22

Reducing Cross



Soc

420-101[1]	**3/4X1/2**	50	0	040	9.48
420-130[1]	**1X1/2**	25	0	040	11.13
420-131	**1X3/4**	20	0	040	11.13
420-166[1]	**1-1/4X1/2**	4	0	040	13.63
420-167[1]	**1-1/4X3/4**	25	0	040	13.63
420-168[1]	**1-1/4X1**	4	32	040	13.63
420-209[1]	**1-1/2X1/2**	20	0	040	14.75
420-210[1]	**1-1/2X3/4**	4	0	040	14.75
420-211[1]	**1-1/2X1**	4	0	040	14.75
420-212[1]	**1-1/2X1-1/4**	4	0	040	14.75
420-247[1]	**2X1/2**	4	0	040	17.33
420-248[1]	**2X3/4**	10	0	040	17.33
420-249	**2X1**	25	0	040	17.33
420-250[1]	**2X1-1/4**	10	0	040	17.33
420-251[1]	**2X1-1/2**	10	0	040	17.33
420-287[1]	**2-1/2X1/2**	4	0	040	33.63
420-288[1]	**2-1/2X3/4**	4	0	040	33.63
420-289[1]	**2-1/2X1**	15	0	040	33.63
420-290	**2-1/2X1-1/4**	5	0	040	33.63
420-291[1]	**2-1/2X1-1/2**	10	0	040	33.63
420-292[1]	**2-1/2X2**	10	0	040	33.63
420-334[1]	**3X3/4**	5	0	040	43.71
420-335[1]	**3X1**	5	0	040	43.71

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Reducing Cross (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
420-336[1]	**3X1-1/4**	4	0	040	43.71
420-337[1]	**3X1-1/2**	5	0	040	43.71
420-338[1]	**3X2**	5	0	040	43.71
420-339[1]	**3X2-1/2**	4	0	040	43.71
420-420[1]	**4X2**	3	0	040	75.22
420-421[1]	**4X2-1/2**	3	0	040	75.22
420-422[1]	**4X3**	3	0	040	75.22
420-528F	**6X2**	1	2	047	402.74
420-529F	**6X2 1/2**	1	2	047	411.83
420-530F	**6X3**	1	2	047	418.88
420-532F	**6X4**	1	2	047	480.94
420-578F	**8X2**	1	2	047	527.62
420-579F	**8X2 1/2**	1	0	047	542.39
420-580F	**8X3**	1	0	047	549.62
420-582F	**8X4**	1	0	047	577.57
420-585F	**8X6**	1	0	047	657.53
420-621F	**10X2**	1	0	047	666.75
420-622F	**10X2-1/2**	1	0	047	682.88
420-623F	**10X3**	1	0	047	718.69
420-624F	**10X4**	1	0	047	744.78
420-626F	**10X6**	1	0	047	798.31
420-628F	**10X8**	1	0	047	848.22
420-661F	**12X2**	1	0	047	749.45
420-662F	**12X2-1/2**	1	0	047	776.75
420-663F	**12X3**	1	0	047	804.25
420-664F	**12X4**	1	0	047	842.49
420-666F	**12X6**	1	0	047	886.04
420-668F	**12X8**	1	0	047	955.88
420-670F	**12X10**	1	0	047	1089.28
420-691F	**14X2**	1	0	047	1035.99
420-693F	**14X3**	1	0	047	1110.64
420-694F	**14X4**	1	0	047	1134.75
420-696F	**14X6**	1	0	047	1331.76
420-698F	**14X8**	1	0	047	1482.95
420-700F	**14X10**	1	0	047	1685.44
420-702F	**14X12**	1	0	047	1914.46
420-751F	**16X2**	1	0	047	1265.98
420-753F	**16X3**	1	0	047	1361.63
420-754F	**16X4**	1	0	047	1407.23
420-756F	**16X6**	1	0	047	1522.20
420-758F	**16X8**	1	0	047	1783.02
420-760F	**16X10**	1	0	047	1921.55
420-762F	**16X12**	1	0	047	2168.38
420-764F	**16X14**	1	0	047	2399.26
420-781F	**18X2**	1	0	047	1423.39
420-783F	**18X3**	1	0	047	1509.00
420-784F	**18X4**	1	0	047	1524.42
420-786F	**18X6**	1	0	047	1628.94
420-788F	**18X8**	1	0	047	1890.39
420-790F	**18X10**	1	0	047	2403.94
420-792F	**18X12**	1	0	047	2581.58
420-794F	**18X14**	1	0	047	2986.72
420-796F	**18X16**	1	0	047	3076.73
420-811F	**20X2**	1	0	047	1505.92
420-813F	**20X3**	1	0	047	1607.46
420-814F	**20X4**	1	0	047	1701.97
420-816F	**20X6**	1	0	047	1821.69
420-818F	**20X8**	1	0	047	1994.57
420-820F	**20X10**	1	0	047	3397.94
420-822F	**20X12**	1	0	047	3597.97
420-824F	**20X14**	1	0	047	3814.86
420-826F	**20X16**	1	0	047	4450.96
420-828F	**20X18**	1	0	047	4964.02
420-901F	**24X2**	1	0	047	2509.01
420-903F	**24X3**	1	0	047	2583.73

Reducing Cross (continued)

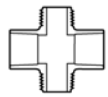
Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
420-904F	**24X4**	1	0	047	2671.00
420-906F	**24X6**	1	0	047	2823.59
420-908F	**24X8**	1	0	047	3039.72
420-910F	**24X10**	1	0	047	4364.01
420-912F	**24X12**	1	0	047	4449.71
420-914F	**24X14**	1	0	047	4604.69
420-916F	**24X16**	1	0	047	5705.99
420-918F	**24X18**	1	0	047	6274.36
420-920F	**24X20**	1	0	047	7294.55

[1]Outlet sized with Bushing

Cross

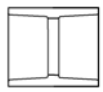
Soc x Mipt



421A-010	**1**	50	0	040	5.98

Coupling

Soc



429-003	**3/8**	50	300	040	1.16
429-005	**1/2**	50	600	040	.42
429-005N	**1/2**	50	300	040	.42
429-007	**3/4**	50	400	040	.58
429-007N	**3/4**	50	400	040	.58
429-010	**1**	50	0	040	1.02
429-010N	**1**	50	0	040	1.02
429-012	**1-1/4**	25	150	040	1.41
429-015	**1-1/2**	25	0	040	1.51
429-020	**2**	25	0	040	2.29
429-025	**2-1/2**	12	0	040	5.08
429-030	**3**	10	0	040	7.96
429-040	**4**	6	0	040	11.52
429-045F	**4-1/2**	1	10	047	51.25
429-050	**5**	5	0	040	21.08
429-060	**6**	5	0	040	36.41
429-080	**8**	8	0	040	67.99
429-100	**10**	1	0	041	198.15
429-100F	**10**	1	0	047	123.99
429-120	**12**	1	0	041	394.79
429-120F	**12**	1	0	047	131.99
429-140	**14**	1	0	041	577.23
429-140F	**14**	1	0	047	214.37
429-160F	**16**	1	0	047	239.05
429-180F	**18**	1	0	047	407.66
429-200F	**20**	1	0	047	711.17
429-240F	**24**	1	0	047	987.67

Coupling

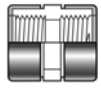
Fipt



430-005	**1/2**	50	600	040	.81
430-005G	**1/2**	50	300	043	.92
430-007	**3/4**	50	400	040	1.51
430-010	**1**	50	0	040	1.98
430-012	**1-1/4**	10	120	040	6.66

Special Reinforced Coupling

SR Fipt - Stainless Steel Collar



430-005SR	**1/2**	25	300	046	3.69
430-007SR	**3/4**	25	300	046	5.25
430-010SR	**1**	25	200	046	5.61
430-012SR	**1-1/4**	10	120	046	6.99
430-015SR	**1-1/2**	10	60	046	15.47

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

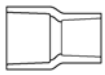
Special Reinforced Coupling (continued)

SR Fipt - Stainless Steel Collar

430-020SR	**2**	10	0	046	16.22

Reducer Coupling

Soc



429-101	**3/4X1/2**	50	200	040	1.06
429-130[1]	**1X1/2**	25	200	040	2.53
429-131	**1X3/4**	50	0	040	1.81
429-166[1]	**1-1/4X1/2**	25	0	040	4.78
429-167	**1-1/4X3/4**	25	0	040	4.78
429-168	**1-1/4X1**	25	0	040	3.04
429-209[1]	**1-1/2X1/2**	8	48	040	3.98
429-210	**1-1/2X3/4**	25	0	040	3.22
429-211[1]	**1-1/2X1**	25	0	040	4.98
429-212	**1-1/2X1-1/4**	25	0	040	3.22
429-247[1]	**2X1/2**	10	0	040	7.02
429-248[1]	**2X3/4**	10	0	040	7.02
429-249[1]	**2X1**	25	0	040	7.39
429-250	**2X1-1/4**	10	40	040	7.02
429-251	**2X1-1/2**	10	40	040	5.14
429-291[1]	**2-1/2X1-1/2**	10	0	040	13.73
429-292	**2-1/2X2**	10	0	040	10.57
429-335[1]	**3X1**	10	0	040	31.12
429-337[1]	**3X1-1/2**	8	0	040	31.12
429-338	**3X2**	8	0	040	27.62
429-339[1]	**3X2-1/2**	8	0	040	23.44
429-340F	**3X2-1/2**	1	10	047	29.54
429-416[1]	**4X3/4**	10	0	040	36.13
429-417[1]	**4X1**	8	0	040	57.37
429-420	**4X2**	4	0	040	33.45
429-421[1]	**4X2-1/2**	6	0	040	42.14
429-422	**4X3**	4	0	040	34.51
429-460F	**4-1/2X4**	1	4	047	55.02
429-486F	**5X2**	1	4	047	121.98
429-487F	**5X2-1/2**	1	10	047	105.52
429-488F	**5X3**	1	6	047	93.89
429-490F	**5X4**	1	6	047	60.63
429-491F	**5X4-1/2**	1	15	047	58.18
429-528F	**6X2**	1	4	047	89.85
429-530F	**6X3**	1	15	047	78.78
429-532	**6X4**	1	4	040	45.54
429-533F	**6X5**	1	15	047	69.46
429-534F	**6X4-1/2**	1	15	047	83.94
429-578F	**8X2**	1	4	047	200.02
429-580F	**8X3**	1	4	047	178.97
429-582	**8X4**	2	0	040	105.60
429-583F	**8X5**	1	4	047	135.08
429-585	**8X6**	2	0	040	116.62
429-621F	**10X2**	1	2	047	285.19
429-623F	**10X3**	1	2	047	253.38
429-624	**10X4**	1	2	041	559.34
429-624F	**10X4**	1	2	047	211.83
429-626	**10X6**	1	0	041	559.34
429-626F	**10X6**	1	4	047	197.41
429-628	**10X8**	1	0	041	559.34
429-628F	**10X8**	1	2	047	138.17
429-664F	**12X4**	1	2	047	376.89
429-666	**12X6**	1	0	041	636.86
429-666F	**12X6**	1	2	047	347.27
429-668	**12X8**	1	0	041	636.86
429-668F	**12X8**	1	0	047	336.73
429-670F	**12X10**	1	0	047	201.13
429-693F	**14X3**	1	0	047	716.46
429-694F	**14X4**	1	0	047	627.97
429-696F	**14X6**	1	0	047	570.42

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Reducer Coupling (continued)

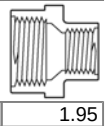
Soc

429-698F	**14X8**	1	0	047	565.27
429-700F	**14X10**	1	0	047	447.31
429-702F	**14X12**	1	0	047	336.89
429-751F	**16X2**	1	0	047	792.14
429-754F	**16X4**	1	0	047	734.99
429-756F	**16X6**	1	0	047	727.75
429-758F	**16X8**	1	0	047	558.99
429-760F	**16X10**	1	0	047	518.37
429-762F	**16X12**	1	0	047	424.02
429-764F	**16X14**	1	0	047	404.32
429-786F	**18X6**	1	0	047	1067.38
429-788F	**18X8**	1	0	047	1000.17
429-790F	**18X10**	1	0	047	894.44
429-792F	**18X12**	1	0	047	711.55
429-794F	**18X14**	1	0	047	660.40
429-796F	**18X16**	1	0	047	597.87
429-814F	**20X4**	1	0	047	1718.56
429-816F	**20X6**	1	0	047	1430.35
429-818F	**20X8**	1	0	047	1404.92
429-820F	**20X10**	1	0	047	1350.91
429-822F	**20X12**	1	0	047	1299.23
429-824F	**20X14**	1	0	047	1217.75
429-826F	**20X16**	1	0	047	1116.02
429-828F	**20X18**	1	0	047	1014.77
429-906F	**24X6**	1	0	047	2546.73
429-908F	**24X8**	1	0	047	2343.18
429-910F	**24X10**	1	0	047	2137.31
429-912F	**24X12**	1	0	047	2103.63
429-914F	**24X14**	1	0	047	2022.61
429-916F	**24X16**	1	0	047	1945.19
429-918F	**24X18**	1	0	047	1722.47
429-920F	**24X20**	1	0	047	1549.42

[1]Outlet sized with Bushing

Reducer Coupling

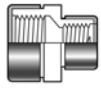
Fipt



430-101	**3/4X1/2**	50	200	040	1.95

Special Reinforced Reducer Coupling

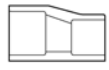
SR Fipt - Stainless Steel Collar



430-101SR	**3/4X1/2**	50	200	046	7.96

Eccentric Reducer Coupling

Soc



429-131FE	**1X3/4**	1	15	047	29.54
429-168FE	**1-1/4X1**	1	12	047	26.81
429-212FE	**1-1/2X1-1/4**	1	25	047	27.78
429-249FE	**2X1**	1	25	047	43.57
429-250FE	**2X1-1/4**	1	25	047	38.18
429-251FE	**2X1-1/2**	1	20	047	36.89
429-290FE[2]	**2-1/2X1-1/4**	1	25	047	56.21
429-291FE[2]	**2-1/2X1-1/2**	1	10	047	56.14
429-292FE	**2-1/2X2**	1	10	047	43.62
429-335FE[3]	**3X1**	1	10	047	60.78
429-336FE[2]	**3X1-1/4**	1	10	047	59.40
429-337FE[2]	**3X1-1/2**	1	20	047	54.85
429-338E	**3X2**	20	0	040	35.05
429-338FE	**3X2**	1	20	047	33.63
429-339FE	**3X2-1/2**	1	24	047	31.96
429-417FE[3]	**4X1**	1	10	047	92.09
429-418FE[3]	**4X1-1/4**	1	12	047	88.96
429-419FE[3]	**4X1-1/2**	1	10	047	84.92

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

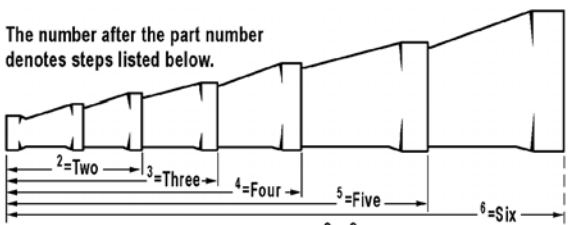
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Eccentric Reducer Coupling (continued)
Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
429-420E	4X2	15	0	040	50.83
429-420FE[2]	4X2	1	6	047	45.67
429-421FE[2]	4X2-1/2	1	5	047	44.93
429-422FE	4X3	1	10	047	42.21
429-490FE	5X4	1	6	047	68.26
429-528FE[2]	6X2	1	4	047	148.53
429-529FE[3]	6X2-1/2	1	4	047	135.58
429-530FE[2]	6X3	1	6	047	94.96
429-532E	6X4	10	0	040	60.53
429-532FE	6X4	1	6	047	47.48
429-533FE	6X5	1	10	047	47.06
429-578FE[4]	8X2	1	3	047	207.95
429-580FE[3]	8X3	1	2	047	195.86
429-582FE[2]	8X4	1	2	047	97.80
429-583FE[2]	8X5	1	2	047	92.65
429-585FE	8X6	1	4	047	79.06
429-624FE[2]	10X4	1	2	047	223.63
429-626FE	10X6	1	2	047	205.62
429-628FE	10X8	1	2	047	193.86
429-664FE[3]	12X4	1	0	047	417.24
429-666FE[2]	12X6	1	0	047	342.84
429-668FE[2]	12X8	1	0	047	227.35
429-670FE	12X10	1	0	047	197.12
429-696FE[2]	14X6	1	0	047	696.46
429-698FE[2]	14X8	1	0	047	570.52
429-700FE	14X10	1	0	047	517.91
429-702FE	14X12	1	0	047	285.47
429-756FE[3]	16X6	1	0	047	679.37
429-758FE[3]	16X8	1	0	047	566.96
429-760FE[2]	16X10	1	0	047	510.12
429-762FE[1]	16X12	1	0	047	478.42
429-764FE	16X14	1	0	047	448.63
429-786FE[4]	18X6	1	0	047	1074.09
429-788FE[4]	18X8	1	0	047	1058.79
429-790FE[3]	18X10	1	0	047	946.11
429-792FE[2]	18X12	1	0	047	853.85
429-794FE[2]	18X14	1	0	047	754.93
429-796FE	18X16	1	0	047	608.98

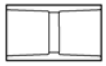
Eccentric Reducer Coupling Footnotes
Multi-Step Configurations

The number after the part number denotes steps listed below.



Example: 429-582 FE[2] ([2]= 2 Step)

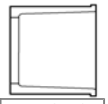
Deep Socket Coupling
Soc



479-005N	1/2	50	400	040	.82
479-007	3/4	50	0	040	1.99
479-010	1	50	0	040	2.84
479-015	1-1/2	50	0	040	3.93
479-020	2	60	0	040	6.51
479-025	2-1/2	25	0	040	8.37
479-030	3	15	0	040	12.61
479-040	4	8	0	040	25.33
479-050F	5	1	4	047	85.56

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

IPS to PIP Adapter
Spig x Soc



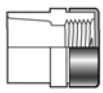
431-060	6	5	0	040	27.67
431-080	8	10	0	040	34.09
431-100F	10	1	10	047	46.57
431-120F	12	1	8	047	71.11

Female Adapter
Soc x Fipt



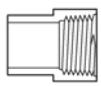
435-003	3/8	50	600	040	2.36
435-005	1/2	50	600	040	.72
D435-005	1/2	50	400	040	1.05
435-007	3/4	50	400	040	.92
D435-007	3/4	50	0	040	1.41
435-010	1	50	0	040	1.06
435-012	1-1/4	25	0	040	1.64
435-015	1-1/2	25	0	040	1.88
435-020	2	10	80	040	2.53
435-025	2-1/2	10	0	040	6.39
435-030	3	5	0	040	8.60
435-040	4	6	0	040	14.25
435-050	5	5	0	040	36.91
435-060	6	5	0	040	52.44
435-080	8	2	0	040	98.88
435-100F	10	1	2	047	185.75
435-120F	12	1	0	047	276.77

Special Reinforced Female Adapter
Soc x SR Fipt - Stainless Steel Collar



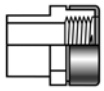
435-002SR	1/4	25	450	046	5.59
435-003SR	3/8	25	300	046	5.59
435-005SR	1/2	25	300	046	3.11
435-007SR	3/4	25	300	046	4.52
435-010SR	1	25	200	046	6.72
435-012SR	1-1/4	10	60	046	10.86
435-015SR	1-1/2	10	80	046	13.37
435-020SR	2	10	0	046	23.32
435-025SR	2-1/2	5	0	046	36.79
435-030SR	3	10	0	046	41.45
435-040SR	4	5	0	046	71.24

Spigot Female Adapter
Spig x Fipt



478-005	1/2	50	600	040	.81
478-007	3/4	25	300	040	.95
478-010	1	50	0	040	1.52
478-012	1-1/4	25	0	040	2.12
478-015	1-1/2	20	0	040	2.62
478-020	2	20	0	040	3.85
478-030	3	10	0	040	13.05
478-040	4	5	0	040	21.67

Special Reinforced Spigot Female Adapter
Spig x SR Fipt - Stainless Steel Collar

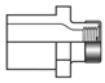


478-005SR	1/2	50	600	046	4.08
478-007SR	3/4	25	300	046	4.81
478-010SR	1	50	0	046	7.41
478-012SR	1-1/4	25	0	046	11.80
478-015SR	1-1/2	25	0	046	14.15
478-020SR	2	15	0	046	23.55

Special Reinforced Spigot Female Adapter (continued)
Spig x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
478-030SR	3	5	0	046	43.28
478-040SR	4	5	0	046	66.85

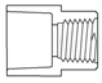
Special Reinforced Reducing Spigot Female Adapter
Spig x SR Fipt - Stainless Steel Collar



478-072SR	1/2X1/4	25	450	046	11.35
478-098SR	3/4X1/4	50	300	046	16.53
478-128SR	1X1/4	50	400	046	17.04

Spears® SR Series reinforced spigot adapters can be user-installed in a variety of socket type tees, elbows and reducer bushings for superior thread reinforcement demanding applications.

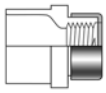
Reducing Female Adapter
Soc x Fipt



435-072	1/2X1/4	50	300	040	1.29
435-073	1/2X3/8	50	300	040	1.29
435-074	1/2X3/4	50	400	040	1.29
435-101	3/4X1/2	50	400	040	1.29
435-102	3/4X1	50	0	040	1.72
435-130	1X1/2	50	0	040	1.72
435-131	1X3/4	50	0	040	1.72
435-133	1X1-1/2	25	0	040	3.46
435-168	1-1/4X1	25	0	040	4.44
435-247	2X1/2	25	0	040	5.97
435-460F[1]	4-1/2X4	1	8	047	58.26
435-532[1]	6X4	4	0	040	76.39
435-578F[1]	8X2	1	8	047	153.18
435-582F[1]	8X4	1	8	047	176.63
435-628F	10X8	1	2	047	193.32

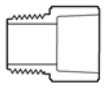
[1]Outlet sizes with Threaded Adapter

Special Reinforced Reducing Female Adapter
Soc x SR Fipt - Stainless Steel Collar



435-072SR	1/2X1/4	50	600	046	4.06
435-074SR	1/2X3/4	50	400	046	4.52
435-101SR	3/4X1/2	50	400	046	4.52
435-102SR	3/4X1	50	0	046	6.72
435-130SR	1X1/2	50	0	046	6.72
435-131SR	1X3/4	25	200	046	6.72

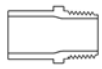
Male Adapter
Mipt x Soc



436-003	3/8	50	300	040	2.20
436-005	1/2	50	300	040	.58
436-007	3/4	50	400	040	.64
436-010	1	50	300	040	1.16
436-012	1-1/4	25	0	040	1.41
436-015	1-1/2	25	0	040	1.88
436-020	2	25	0	040	2.47
436-025	2-1/2	10	0	040	7.29
436-030	3	10	0	040	10.67
436-040	4	5	0	040	13.61
436-050	5	5	0	040	22.42
436-060	6	7	0	040	35.48
436-080	8	3	0	040	161.27
436-100F	10	1	2	047	208.56
436-120F	12	1	0	047	309.94

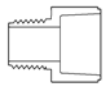
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Male Adapter
Spig x Mipt



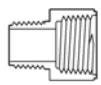
461-005	1/2	50	300	040	1.02
461-007	3/4	50	400	040	1.16
461-010	1	50	0	040	2.00
461-131	1X3/4	50	200	040	5.91
461-012	1-1/4	25	100	040	2.47
461-015	1-1/2	25	0	040	3.31
461-020	2	25	0	040	4.07

Reducing Male Adapter
Mipt x Soc



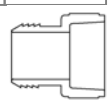
436-053	3/8X1/2	50	300	040	1.16
436-073	1/2X3/8	50	300	040	1.16
436-074	1/2X3/4	50	200	040	1.16
436-075	1/2X1	50	200	040	1.56
436-101	3/4X1/2	50	300	040	1.06
436-102	3/4X1	50	0	040	1.64
436-131	1X3/4	50	400	040	3.54
436-132	1X1-1/4	50	0	040	3.85
436-133	1X1-1/2	50	0	040	4.34
436-168	1-1/4X1	25	200	040	4.34
436-169	1-1/4X1-1/2	25	0	040	4.34
436-212	1-1/2X1-1/4	25	0	040	5.24
436-213	1-1/2X2	25	0	040	5.24
436-251	2X1-1/2	10	80	040	5.98
436-252	2X2-1/2	10	0	040	9.31
436-253	2X3	10	0	040	10.46
436-294	2-1/2X3	10	0	040	11.26
436-296	2-1/2X4	10	0	040	17.29
436-342	3X4	5	0	040	18.02
436-492F	5X6	1	15	047	98.40
436-535F	6X8	1	2	047	130.80
436-537F	6X10	1	2	047	254.94

IPT Adapter
Mipt x Fipt



446-003	3/8	50	300	040	1.98
446-012	1-1/4	25	100	040	4.51
446-053	3/8X1/2	50	300	040	1.98
446-074	1/2X3/4	50	300	040	2.47

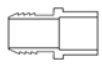
Insert Adapter (White PVC)
Insert x Soc



474-005	1/2	50	600	040	2.06
474-007	3/4	50	400	040	2.47
474-010	1	50	0	040	2.62
474-012	1-1/4	25	0	040	4.16
474-015	1-1/2	25	0	040	4.61
474-020	2	25	0	040	8.54
474-030	3	15	0	040	25.45
474-040	4	15	0	040	29.09
474-060F	6	1	4	047	150.35
474-080F	8	1	4	047	238.85

ASTM D 2609 Plastic Insert Fittings for Polyethylene (PE) pipe

Insert Adapter (White PVC)
Insert x I.P.S. Spigot



460-005	1/2	50	300	040	2.26
460-007	3/4	50	200	040	2.97
460-010	1	50	0	040	3.11

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Insert Adapter (White PVC) (continued)

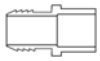
Insert x I.P.S. Spigot

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
460-012	**1-1/4**	20	160	040	3.20
460-015	**1-1/2**	25	0	040	3.44
460-020	**2**	10	0	040	5.72
460-030	**3**	25	0	040	19.31
460-040	**4**	10	0	040	22.24
1432-060	**6**	8	0	140	95.61
1432-080*	**8**	4	0	140	189.82

ASTM D 2609 - Plastic Insert Fitting for Polyethylene (PE) pipe
*Fabricated

Insert Adapter (White PVC)

Insert x I.P.S. Spigot x I.P.S. Socket



460-007N	**3/4X3/4X1/2**	50	200	040	2.97
460-012N	**1-1/4X1-1/4X1**	20	160	040	3.20
460-131N	**3/4X1X3/4**	20	160	040	3.46
460-132N	**1X1-1/4X1**	20	160	040	3.74

ASTM D 2609 - Plastic Insert Fitting for Polyethylene (PE) pipe
N=Nesting

Riser Extension

Fipt x Mipt

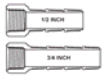


(See also Polyethylene Cut-Off Riser Extensions in this catalog)

434-005	**1/2**	50	300	040	1.18
434-007	**3/4**	50	300	040	1.98
434-010	**1**	50	0	040	2.47

Polyethylene Cut-Off Riser Extension

Fipt x Mipt



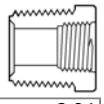
(1/2" = 3-Section Cut-Off; 3/4" = 4-Section Cut-Off)

M434-005-3	**1/2X3**	50	600	120	1.42
M434-007-4	**3/4X4**	50	0	120	1.88

High Density Polyethylene - Not NSF-listed - Not pressure rated. For use on open ended irrigation systems.

Reducer (T.T.) Bushing

Mipt x Fipt



439-052	**3/8X1/4**	50	450	040	3.04
439-071	**1/2X1/8**	50	300	040	3.04
439-072	**1/2X1/4**	50	300	040	3.04
439-073	**1/2X3/8**	50	300	040	3.04
439-098	**3/4X1/4**	50	300	040	1.88
439-099	**3/4X3/8**	50	300	040	1.88
439-101	**3/4X1/2**	50	300	040	1.88
439-128	**1X1/4**	25	150	040	2.64
439-130	**1X1/2**	50	300	040	2.64
439-131	**1X3/4**	50	800	040	2.64
439-166	**1-1/4X1/2**	25	150	040	3.93
439-167	**1-1/4X3/4**	25	150	040	3.93
439-168	**1-1/4X1**	25	150	040	3.93
439-209	**1-1/2X1/2**	25	300	040	4.75
439-210	**1-1/2X3/4**	25	300	040	4.75
439-211	**1-1/2X1**	25	300	040	4.75
439-212	**1-1/2X1-1/4**	25	300	040	4.75
439-247	**2X1/2**	10	60	040	5.08
439-248	**2X3/4**	10	60	040	5.08
439-249	**2X1**	10	60	040	5.08
439-250	**2X1-1/4**	10	60	040	5.08
439-251	**2X1-1/2**	10	60	040	5.08
439-292	**2-1/2X2**	10	80	040	17.77
439-337	**3X1-1/2**	10	0	040	21.02
439-338	**3X2**	10	0	040	21.02

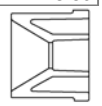
Reducer (T.T.) Bushing (continued)

Mipt x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
439-339	**3X2-1/2**	10	0	040	21.02
439-420	**4X2**	6	0	040	62.83
439-422	**4X3**	6	0	040	48.59

Reducer Bushing Flush Style

Spig x Soc



437-072	**1/2X1/4**	50	300	040	1.22
437-073	**1/2X3/8**	50	300	040	1.22
437-101	**3/4X1/2**	50	350	040	.67
437-130	**1X1/2**	50	300	040	1.22
437-131	**1X3/4**	50	300	040	1.22
437-166	**1-1/4X1/2**	25	300	040	1.64
437-167	**1-1/4X3/4**	25	300	040	1.64
437-168	**1-1/4X1**	25	300	040	1.64
437-209	**1-1/2X1/2**	25	200	040	1.74
437-210	**1-1/2X3/4**	25	200	040	1.74
437-211	**1-1/2X1**	25	200	040	1.74
437-212	**1-1/2X1-1/4**	25	200	040	1.74
437-247	**2X1/2**	10	120	040	2.87
437-248	**2X3/4**	10	60	040	2.87
437-249	**2X1**	10	60	040	2.87
437-250	**2X1-1/4**	10	120	040	2.87
437-251	**2X1-1/2**	25	0	040	2.87
437-287	**2-1/2X1/2**	10	80	040	4.62
437-288	**2-1/2X3/4**	10	0	040	4.62
437-289	**2-1/2X1**	10	40	040	4.62
437-290	**2-1/2X1-1/4**	10	40	040	4.62
437-291	**2-1/2X1-1/2**	10	80	040	4.62
437-292	**2-1/2X2**	10	80	040	4.62
437-333[1]	**3X1/2**	10	0	040	9.09
437-334	**3X3/4**	10	0	040	6.80
437-335	**3X1**	10	0	040	6.80
437-336	**3X1-1/4**	10	0	040	6.80
437-337	**3X1-1/2**	10	0	040	6.80
437-338	**3X2**	10	0	040	6.80
437-339	**3X2-1/2**	15	0	040	6.80
437-420	**4X2**	6	0	040	15.23
437-421	**4X2-1/2**	6	0	040	15.23
437-422	**4X3**	6	0	040	15.23
437-486	**5X2**	5	0	040	21.41
437-488	**5X3**	5	0	040	21.41
437-490	**5X4**	4	0	040	21.41
437-528	**6X2**	5	0	040	37.72
437-530	**6X3**	5	0	040	37.72
437-532	**6X4**	5	0	040	37.72
437-534	**6X5**	5	0	040	37.72
437-578[1]	**8X2**	4	0	040	148.75
437-580[1]	**8X3**	4	0	040	148.75
437-582	**8X4**	4	0	040	131.47
437-583[1]	**8X5**	4	0	040	171.79
437-585	**8X6**	4	0	040	131.47
437-623[1]	**10X3**	2	0	041	394.56
437-624[1]	**10X4**	2	0	041	394.56
437-626	**10X6**	1	2	041	357.89
437-628	**10X8**	1	4	041	357.89
437-664[1]	**12X4**	2	0	041	532.94
437-666[1]	**12X6**	2	0	041	532.94
437-666F	**12X6**	1	2	047	393.51
437-668	**12X8**	1	2	041	398.02
437-670	**12X10**	1	2	041	398.02
437-696F	**14X6**	1	3	047	965.78
437-698F	**14X8**	1	3	047	691.95
437-700F	**14X10**	1	3	047	461.60
437-702F	**14X12**	1	3	047	161.11

Reducer Bushing Flush Style (continued)

Spig x Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
437-756F	16X6	1	0	047	1150.64
437-758F	16X8	1	2	047	907.41
437-760F	16X10	1	0	047	651.96
437-762F	16X12	1	2	047	376.62
437-764F	16X14	1	2	047	394.17
437-786F	18X6	1	0	047	1931.96
437-788F	18X8	1	0	047	1774.75
437-790F	18X10	1	0	047	1451.53
437-792F	18X12	1	0	047	934.35
437-794F	18X14	1	0	047	910.41
437-796F	18X16	1	0	047	429.23
437-816F	20X6	1	0	047	2674.61
437-818F	20X8	1	0	047	2513.74
437-820F	20X10	1	0	047	2329.65
437-822F	20X12	1	0	047	2034.75
437-824F	20X14	1	0	047	1667.55
437-826F	20X16	1	0	047	1332.84
437-828F	20X18	1	0	047	664.62
437-906F	24X6	1	0	047	4259.46
437-908F	24X8	1	0	047	4082.60
437-910F	24X10	1	0	047	3594.11
437-912F	24X12	1	0	047	3284.87
437-914F	24X14	1	0	047	3029.82
437-916F	24X16	1	0	047	2536.46
437-918F	24X18	1	0	047	2522.54
437-920F	24X20	1	0	047	2053.58

[1] Sized with Bushing

Reducer Bushing Flush Style

Spig x Fipt



438-071	1/2X1/8	50	350	040	1.41
438-072	1/2X1/4	50	350	040	1.41
438-073	1/2X3/8	50	350	040	1.41
438-098	3/4X1/4	50	300	040	1.41
438-101	3/4X1/2	50	300	040	1.06
438-127	1X1/8	25	150	040	1.72
438-128	1X1/4	50	200	040	1.72
438-129	1X3/8	50	200	040	1.72
438-130	1X1/2	50	300	040	1.72
438-131	1X3/4	50	300	040	1.72
438-166	1-1/4X1/2	25	150	040	2.64
438-167	1-1/4X3/4	25	150	040	2.64
438-168	1-1/4X1	25	100	040	2.64
438-206	1-1/2X1/8	25	100	040	3.04
438-207	1-1/2X1/4	25	200	040	3.04
438-209	1-1/2X1/2	25	100	040	3.04
438-210	1-1/2X3/4	25	100	040	3.04
438-211	1-1/2X1	25	100	040	3.04
438-212	1-1/2X1-1/4	25	100	040	3.04
438-245	2X1/4	10	60	040	4.08
438-247	2X1/2	10	120	040	4.08
438-248	2X3/4	10	60	040	4.08
438-249	2X1	10	120	040	4.08
438-250	2X1-1/4	10	120	040	4.08
438-251	2X1-1/2	10	120	040	4.08
438-287	2-1/2X1/2	10	0	040	5.92
438-288	2-1/2X3/4	10	40	040	5.92
438-289	2-1/2X1	10	40	040	5.92
438-290	2-1/2X1-1/4	10	40	040	5.92
438-291	2-1/2X1-1/2	10	40	040	5.92
438-292	2-1/2X2	10	40	040	5.92
438-334	3X3/4	10	0	040	6.80
438-335	3X1	10	0	040	6.80
438-336	3X1-1/4	10	0	040	6.80

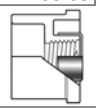
Reducer Bushing Flush Style (continued)

Spig x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
438-337	3X1-1/2	10	0	040	6.80
438-338	3X2	10	0	040	6.80
438-339	3X2-1/2	10	0	040	6.80
438-420	4X2	6	0	040	15.20
438-421	4X2-1/2	6	0	040	15.20
438-422	4X3	6	0	040	15.20
438-488	5X3	5	0	040	29.64
438-490	5X4	6	0	040	29.64
438-528	6X2	5	0	040	55.63
438-530	6X3	5	0	040	55.63
438-532	6X4	5	0	040	55.63
438-534	6X5	5	0	040	55.63

Special Reinforced Reducer Bushing Flush Style

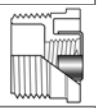
Spig x SR Fipt - Stainless Steel Collar



438-128SR	1X1/4	25	150	046	3.31
438-166SR	1-1/4X1/2	25	100	046	6.04
438-207SR	1-1/2X1/4	25	100	046	8.43
438-209SR	1-1/2X1/2	25	100	046	8.43
438-210SR	1-1/2X3/4	25	100	046	8.43
438-247SR	2X1/2	10	80	046	10.32
438-248SR	2X3/4	10	80	046	10.32
438-249SR	2X1	10	80	046	10.32
438-334SR	3X3/4	10	0	046	40.38
438-335SR	3X1	10	0	046	40.38
438-336SR	3X1-1/4	10	0	046	40.38
438-337SR	3X1-1/2	10	0	046	40.38
438-420SR	4X2	6	0	046	62.07
438-421SR	4X2-1/2	6	0	046	69.86
438-528SR	6X2	5	0	046	71.48
438-530SR	6X3	5	0	046	64.35
438-532SR	6X4	5	0	046	71.48

Special Reinforced Reducer Bushing Flush Style

Mipt X SR Fipt - Stainless Steel Collar



439-209SR	1-1/2X1/2	25	300	046	8.74
439-248SR	2X3/4	10	60	046	7.91
439-249SR	2X1	10	120	046	12.83
439-420SR	4X2	6	0	046	48.59

Cap

Soc



447-003	3/8	50	1000	040	1.64
447-005	1/2	50	600	040	.58
447-007	3/4	50	300	040	.67
447-010	1	50	200	040	1.06
447-012	1-1/4	25	100	040	1.51
447-015	1-1/2	25	0	040	1.64
447-020	2	25	0	040	1.98
447-025	2-1/2	10	0	040	6.31
447-030	3	10	0	040	6.89
447-040	4	6	0	040	15.67
447-045F	4-1/2	10	0	047	50.37
447-050	5	5	0	040	26.32
447-060	6	4	0	040	37.57
447-080	8	3	0	040	94.38
447-100F	10	1	5	047	210.39
447-120F	12	1	5	047	305.66
447-140F	14	1	2	047	383.61
447-160F	16	1	2	047	457.86
447-180F	18	1	2	047	806.80
447-200F	20	1	0	047	1225.11

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Spears® Manufacturing Company
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Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Cap (continued)
Soc

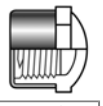
447-240F	**24**	1	0	047	1949.91

Cap
Fipt



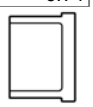
448-003	**3/8**	50	1000	040	2.21
448-005	**1/2**	50	600	040	1.22
448-007	**3/4**	50	300	040	1.41
448-010	**1**	50	200	040	2.13
448-012	**1-1/4**	25	100	040	2.53
448-015	**1-1/2**	25	100	040	2.64
448-020	**2**	10	120	040	4.67
448-025	**2-1/2**	10	0	040	6.89
448-030	**3**	10	0	040	9.01
448-040	**4**	6	0	040	15.81
448-050	**5**	5	0	040	30.63
448-060	**6**	8	0	040	37.37
448-080F	**8**	1	2	047	182.38
448-100F	**10**	1	2	047	370.62
448-120F	**12**	1	0	047	740.53

Special Reinforced Cap
SR Fipt - Stainless Steel Collar



448-012SR	**1-1/4**	25	100	046	6.74

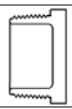
Plug
Spig



449-003	**3/8**	50	700	040	1.74
449-005	**1/2**	50	1000	040	1.41
449-007	**3/4**	50	300	040	1.64
449-010	**1**	50	200	040	1.98
449-012	**1-1/4**	25	150	040	2.64
449-015	**1-1/2**	25	100	040	3.36
449-020	**2**	10	120	040	4.16
449-025	**2-1/2**	10	0	040	7.13
449-030	**3**	10	0	040	9.41
449-040	**4**	6	0	040	21.31
449-060	**6**	6	0	040	28.85
449-060F[4]	**6**	1	6	047	73.00
449-080F[4]	**8**	1	6	047	112.39
449-100F[4]	**10**	1	0	047	258.01
449-120F[4]	**12**	1	0	047	421.87
449-140F[4]	**14**	1	2	047	462.49
449-160F[4]	**16**	1	0	047	511.44
449-180F[4]	**18**	1	0	047	912.68
449-200F[4]	**20**	1	0	047	1669.72
449-240F[4]	**24**	1	0	047	2222.62

[4] Plug fabricated using Cap and pipe spigot.

Plug
Mipt



450-003	**3/8**	50	700	040	1.89
450-005	**1/2**	50	500	040	1.74
450-007	**3/4**	50	300	040	1.87
450-010	**1**	50	400	040	3.04
450-012	**1-1/4**	25	300	040	3.20
450-015	**1-1/2**	25	150	040	3.44
450-020	**2**	10	120	040	4.44
450-025	**2-1/2**	10	80	040	6.17
450-030	**3**	10	0	040	9.34
450-040	**4**	6	0	040	21.07

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Plug (continued)
Mipt

450-060	**6**	6	0	040	61.78
450-080F[4]	**8**	1	4	047	234.89
450-100F[4]	**10**	1	3	047	376.41
450-120F[4]	**12**	1	0	047	455.63

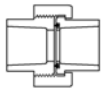
[4] Plug fabricated using Cap and threaded pipe.

Counter Sunk Plug
Spig



449-007CS	**3/4**	50	300	040	1.64
449-010CS	**1**	50	300	040	1.98

Union
Soc with Buna-N O-ring Seal



150 psi @ 73°F (23°C)

457-005	**1/2**	20	120	040	6.31
457-007	**3/4**	15	90	040	7.17
457-010	**1**	10	60	040	7.39
457-012	**1-1/4**	5	30	040	23.81
457-015	**1-1/2**	5	20	040	24.79
457-020	**2**	5	0	040	33.45
457-025	**2-1/2**	5	0	040	46.82
457-030	**3**	5	0	040	74.77
457-040	**4**	4	0	040	103.53
457-060	**6**	1	0	040	230.05

Union
Soc with EPDM O-ring Seal



150 psi @ 73°F (23°C)

497-005	**1/2**	20	120	040	6.94
497-007	**3/4**	15	90	040	7.94
497-010	**1**	10	60	040	8.11
497-012	**1-1/4**	5	30	040	26.18
497-015	**1-1/2**	5	20	040	27.29
497-020	**2**	5	0	040	36.80
497-025	**2-1/2**	5	0	040	51.52
497-030	**3**	5	0	040	82.17
497-040	**4**	4	0	040	110.54
497-060	**6**	1	0	040	245.64

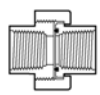
Union
Fipt with Buna O-ring Seal



150 psi 73°F (23°C)

458-005	**1/2**	20	120	040	7.06
458-007	**3/4**	15	90	040	11.80
458-010	**1**	10	60	040	16.12
458-012	**1-1/4**	5	30	040	27.67
458-015	**1-1/2**	5	30	040	28.28
458-020	**2**	5	20	040	34.72
458-025	**2-1/2**	5	0	040	49.45
458-030	**3**	5	0	040	79.37
458-040	**4**	4	0	040	105.33
458-060	**6**	1	0	040	234.09

Union
Fipt with EPDM O-ring Seal



150 psi @ 73°F (23°C)

498-005	**1/2**	10	60	040	7.78
498-007	**3/4**	15	90	040	13.00

Union (continued)

Fipt with EPDM O-ring Seal

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
498-010	1	10	60	040	17.71
498-012	1-1/4	5	20	040	30.40
498-015	1-1/2	5	30	040	31.13
498-020	2	5	20	040	38.23
498-025	2-1/2	5	0	040	53.53
498-030	3	5	0	040	86.27
498-040	4	4	0	040	116.26
498-060	6	1	0	040	258.37

Special Reinforced Union

Soc x SR Fipt with Buna O-ring Seal - Stainless Steel Collar



235 psi @ 73°F (23°C)

459-002SR	1/4	25	150	046	15.32
459-003SR	3/8	25	100	046	15.32
459-005SR	1/2	10	60	046	8.32
459-007SR	3/4	10	60	046	11.45
459-010SR	1	10	40	046	15.24
459-012SR	1-1/4	5	20	046	29.09
459-015SR	1-1/2	5	0	046	36.01
459-020SR	2	5	0	046	55.46
459-030SR	3	5	0	046	130.95
459-040SR	4	4	0	046	150.35
459-060SR	6	1	0	046	334.11

Special Reinforced Union

Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar

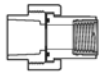


235 psi @ 73°F (23°C)

499-002SR	1/4	25	150	046	16.82
499-003SR	3/8	25	100	046	16.82
499-005SR	1/2	10	60	046	9.14
499-007SR	3/4	10	40	046	12.59
499-010SR	1	10	40	046	16.73
499-012SR	1-1/4	5	20	046	31.97
499-015SR	1-1/2	5	0	046	39.58
499-020SR	2	5	0	046	60.95
499-030SR	3	5	0	046	143.91
499-040SR	4	4	0	046	165.21
499-060SR	6	1	0	046	367.16

Transition Union

Soc x Fipt with Brass Thread Insert & Buna-N O-ring Seal



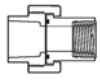
235 psi @ 73°F (23°C)

459-010BR	1	10	0	046	64.74
459-012BR	1-1/4	5	20	046	108.76
459-015BR	1-1/2	5	0	046	143.89
459-020BR	2	5	0	046	191.94

Not intended to convey or dispense water for human consumption through drinking or cooking

Transition Union

Soc x Fipt with Brass Thread Insert & EPDM O-ring Seal



235 psi @ 73°F (23°C)

499-010BR	1	10	0	046	64.74
499-012BR	1-1/4	5	20	046	108.76
499-015BR	1-1/2	5	0	046	143.89
499-020BR	2	5	0	046	191.94

Not intended to convey or dispense water for human consumption through drinking or cooking

Saddle

IPS O.D. x Soc



NSF-61

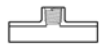
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
463-288	2-1/2X3/4	10	0	040	27.57
463-333[1]	3X1/2	10	0	040	30.21
463-335[1]	3X1	10	0	040	30.21
463-336[1]	3X1-1/4	10	0	040	30.21
463-337	3X1-1/2	10	0	040	27.57
463-338[2]	3X2	10	0	040	30.21
463-415[1]	4X1/2	10	0	040	40.32
463-416[1]	4X3/4	10	0	040	49.59
463-417[1]	4X1	10	0	040	40.32
463-418[1]	4X1-1/4	10	0	040	40.32
463-419	4X1-1/2	10	0	040	36.83
463-420[2]	4X2	10	0	040	40.32
463-485[1]	5X1-1/2	6	0	040	50.35
463-486	5X2	6	0	040	45.97
463-523[1]	6X1/2	5	0	040	60.48
463-525[1]	6X1	10	0	040	60.48
463-526[1]	6X1-1/4	5	0	040	60.48
463-527	6X1-1/2	5	0	040	55.27
463-528[2]	6X2	5	0	040	60.48
463-530[1]	6X3	5	0	040	86.33
463-532	6X4	5	0	040	69.54
463-573[1]	8X1/2	5	0	040	90.19
463-575[1]	8X1	5	0	040	90.19
463-576[1]	8X1-1/4	5	0	040	90.19
463-577	8X1-1/2	5	0	040	82.36
463-578[2]	8X2	5	0	040	90.19
463-580[1]	8X3	5	0	040	104.59
463-582	8X4	5	0	040	88.29
463-624	10X4	5	0	041	101.23

[1] Outlet-sized with Bushing
[2] Outlet-sized with Coupling

Note: See following Installation Instructions

Saddle

IPS O.D. x Fipt



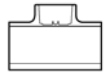
NSF-61

464-288	2-1/2X3/4	10	0	040	27.57
464-337	3X1-1/2	10	0	040	27.57
464-419	4X1-1/2	10	0	040	36.83
464-486	5X2	6	0	040	45.97
464-527	6X1-1/2	5	0	040	55.24
464-532	6X4	5	0	040	69.54
464-577	8X1-1/2	5	0	040	82.36
464-582	8X4	5	0	040	88.29
464-624	10X4	5	0	041	101.23

Saddle Installation Instructions:
When Assembling Spears® Saddles to PVC pipe, Spears® Manufacturing Company recommends Industrial Polychemical Service (IPS) #719 Solvent Cement and #P-68 Primer, or equivalent. Although good connections may be accomplished without saddle straps, Spears® Manufacturing Company recommends the use of clamp or strap device during the assembly step to ensure good compression between the pipe and fitting surfaces as the solvent cures. Solvent cemented saddles are non pressure rated. For additional information, contact Spears® Technical Service.

Snap-On Saddle

IPS O.D. x Soc



NSF-61

463-005	1/2	25	300	040	1.44
463-007	3/4	25	200	040	1.60
463-010	1	50	0	040	3.05
463-012	1-1/4	50	0	040	4.75

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Snap-On Saddle (continued)
IPS O.D. x Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
463-015	1-1/2	25	0	040	5.77
463-020	2	20	0	040	8.43
463-101	3/4X1/2	25	300	040	1.87
463-130	1X1/2	50	0	040	3.05

Note: See following installation instructions

Snap-On Saddle
IPS O.D. x Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
464-005	1/2	25	300	040	1.87
464-007	3/4	25	200	040	2.94
464-010	1	50	0	040	5.39
464-071	1/2X1/8	50	300	040	1.87
464-097	3/4X1/8	50	200	040	2.47
464-101	3/4X1/2	25	300	040	2.47
464-130	1X1/2	50	0	040	4.45
464-131	1X3/4	50	0	040	4.45
464-210	1-1/2X3/4	25	0	040	11.21

Snap-On Saddle Installation Instructions
- The surface to be joined must be wiped clean.
- Using an appropriate applicator, apply a coat of primer to the fitting and pipe.
- While the primer is still wet, apply a generous coat of medium bodied cement first to the pipe, then to the fitting and then to the pipe again, covering an area of the pipe slightly larger than the saddle.
- Without delay, push the saddle onto the pipe and rotate the fitting approximately 15° in each direction to evenly distribute the cement.
- Allow cement to cure.
- Drill fitting and pipe with the recommended size hole saw.
- Remove debris from the line.
- Follow all safe handling precautions.

Solvent cemented saddles are non pressure rated. For additional information, contact Spears® Technical Service.

Saddle
IPS O.D.x Socket Schedule 40



Non Pressure Rated

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3763-528	6X2	1	10	390	35.83
3763-530	6X3	1	10	390	36.68
3763-532	6X4	1	10	390	38.15
3763-578	8X2	1	10	390	52.81
3763-580	8X3	1	10	390	53.33
3763-582	8X4	1	10	390	53.98
3763-585	8X6	1	10	390	55.51
3763-621	10X2	1	5	390	66.74
3763-623	10X3	1	10	390	67.67
3763-624	10X4	1	8	390	67.95
3763-626	10X6	1	5	390	79.52
3763-628	10X8	1	5	390	127.61
3763-661	12X2	1	5	390	78.93
3763-663	12X3	1	10	390	80.39
3763-664	12X4	1	10	390	82.11
3763-666	12X6	1	4	390	95.22
3763-668	12X8	1	5	390	151.80
3763-670	12X10	1	4	390	219.51
3763-691	14X2	1	10	390	101.16
3763-693	14X3	1	8	390	168.11
3763-694	14X4	1	5	390	115.48
3763-696	14X6	1	10	390	117.80
3763-698	14X8	1	4	390	180.77
3763-700	14X10	1	3	390	232.54
3763-702	14X12	1	4	390	256.32
3763-751	16X2	1	5	390	107.66
3763-753	16X3	1	5	390	109.14
3763-754	16X4	1	10	390	110.80
3763-756	16X6	1	3	390	126.94

Saddle (continued)
IPS O.D.x Socket Schedule 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3763-758	16X8	1	3	390	188.67
3763-760	16X10	1	0	390	239.80
3763-762	16X12	1	0	390	265.75
3763-764	16X14	1	0	390	276.25
3763-781	18X2	1	5	390	157.82
3763-783	18X3	1	5	390	160.89
3763-784	18X4	1	10	390	163.35
3763-786	18X6	1	4	390	173.93
3763-788	18X8	1	0	390	253.79
3763-790	18X10	1	0	390	281.34
3763-792	18X12	1	0	390	289.11
3763-794	18X14	1	0	390	436.77
3763-796	18X16	1	0	390	570.18
3763-811	20X2	1	8	390	158.19
3763-813	20X3	1	4	390	160.36
3763-814	20X4	1	4	390	168.19
3763-816	20X6	1	0	390	175.66
3763-818	20X8	1	5	390	253.46
3763-820	20X10	1	0	390	281.35
3763-822	20X12	1	0	390	401.12
3763-824	20X14	1	0	390	437.67
3763-826	20X16	1	0	390	572.27
3763-828	20X18	1	0	390	648.56
3763-901	24X2	1	5	390	150.91
3763-903	24X3	1	5	390	166.80
3763-904	24X4	1	5	390	168.65
3763-906	24X6	1	5	390	178.92
3763-908	24X8	1	5	390	255.81
3763-910	24X10	1	0	390	284.56
3763-912	24X12	1	0	390	402.54
3763-914	24X14	1	0	390	450.77
3763-916	24X16	1	0	390	506.61
3763-918	24X18	1	0	390	682.74
3763-920	24X20	1	0	390	764.43

Stub Saddle
IPS O.D x Socket Schedule 40



Non Pressure Rated

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3765-528	6X2	1	8	390	38.53
3765-530	6X3	1	4	390	39.44
3765-532	6X4	1	10	390	41.03
3765-578	8X2	1	10	390	56.79
3765-580	8X3	1	4	390	57.34
3765-582	8X4	1	8	390	58.04
3765-585	8X6	1	4	390	59.69
3765-621	10X2	1	5	390	71.75
3765-623	10X3	1	5	390	72.77
3765-624	10X4	1	4	390	92.22
3765-626	10X6	1	2	390	85.51
3765-628	10X8	1	2	390	137.21
3765-661	12X2	1	6	390	84.86
3765-663	12X3	1	5	390	86.44
3765-664	12X4	1	2	390	88.28
3765-666	12X6	1	2	390	102.32
3765-668	12X8	1	2	390	163.23
3765-670	12X10	1	2	390	236.03
3765-691	14X2	1	10	390	108.77
3765-693	14X3	1	2	390	110.00
3765-694	14X4	1	5	390	111.38
3765-696	14X6	1	3	390	126.67
3765-698	14X8	1	0	390	193.11
3765-700	14X10	1	0	390	250.04
3765-702	14X12	1	0	390	275.62
3765-751	16X2	1	4	390	115.76

Stub Saddle (continued)

IPS O.D x Socket Schedule 40

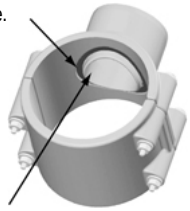
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3765-753	**16X3**	1	5	390	117.35
3765-754	**16X4**	1	5	390	119.13
3765-756	**16X6**	1	2	390	136.48
3765-758	**16X8**	1	0	390	202.87
3765-760	**16X10**	1	0	390	257.85
3765-762	**16X12**	1	0	390	285.75
3765-764	**16X14**	1	0	390	297.04
3765-781	**18X2**	1	4	390	169.68
3765-783	**18X3**	1	10	390	133.45
3765-784	**18X4**	1	10	390	175.64
3765-786	**18X6**	1	2	390	187.02
3765-788	**18X8**	1	0	390	272.88
3765-790	**18X10**	1	0	390	302.51
3765-792	**18X12**	1	0	390	310.86
3765-794	**18X14**	1	0	390	469.63
3765-796	**18X16**	1	0	390	612.58
3765-811	**20X2**	1	0	390	170.09
3765-813	**20X3**	1	2	390	172.43
3765-814	**20X4**	1	2	390	180.85
3765-816	**20X6**	1	0	390	188.89
3765-818	**20X8**	1	0	390	272.54
3765-820	**20X10**	1	0	390	302.52
3765-822	**20X12**	1	0	390	431.33
3765-824	**20X14**	1	0	390	470.62
3765-826	**20X16**	1	0	390	615.34
3765-828	**20X18**	1	0	390	697.38
3765-901	**24X2**	1	4	390	162.25
3765-903	**24X3**	1	2	390	179.34
3765-904	**24X4**	1	4	390	181.35
3765-906	**24X6**	1	3	390	192.39
3765-908	**24X8**	1	0	390	275.06
3765-910	**24X10**	1	0	390	305.96
3765-912	**24X12**	1	0	390	432.83
3765-914	**24X14**	1	0	390	484.71
3765-916	**24X16**	1	0	390	544.75
3765-918	**24X18**	1	0	390	734.11
3765-920	**24X20**	1	0	390	821.97

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

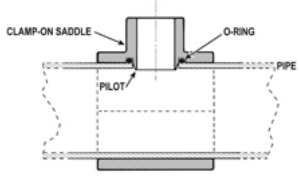
Spears® Two-Piece Clamp-On Saddle Design Clamps onto Pipe for Quick and Easy Installation



O-ring seal provides positive, trouble-free sealing to pipe.

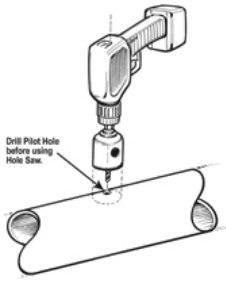


Special pilot engages with hole in pipe to prevent saddle dislocation.



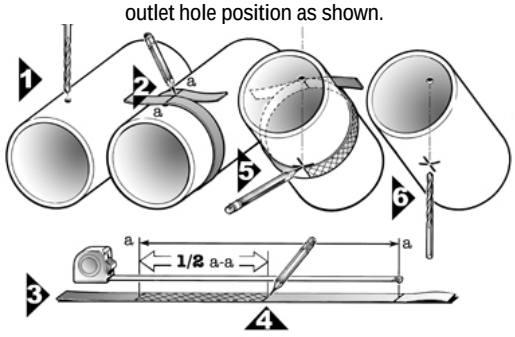
Clamp-On Saddle Installation Instructions

1. Using a standard industrial grade hole-saw, cut specified hole in desired position on pipe according to recommended hole saw size engraved on the saddle. Note: Care must be taken to deburr hole and remove all residue from hole area to assure tight fit and avoid leakage.
2. Fully seat O-ring in groove on underside of saddle outlet component. Position over hole and fully seat saddle onto pipe. Note: Certain saddle outlets are piloted. Be sure pilot lip fully engages with hole in pipe.
3. Place strap component opposite outlet and secure with bolts (4), nuts (4) and washers (8). Important: Washers MUST be placed under each bolt head (1) and under each nut (1) to avoid damage to saddle.
4. Tighten bolts to specified torque.



Saddle Size	2	3	4	6 & up
Recommended Bolt-Torque - ft/lb	8	8	8	10

For Double Outlet Saddle Installation — Determine second outlet hole position as shown.



Spears® Hot-Tap Saddles Designed for Adding Branch Connections to Piping Systems Under Live ("Hot") Pressure

Hot-Tap Saddle branch outlets are either 3/4" socket (with 1" Spigot O.D.) or 1-1/2" socket (with 2" Spigot O.D.) in saddle sizes 2" through 6" to fit IPS pipe using a built-in O-ring seal. Internal cutter is operated using conventional ratchet and drive extension and permanently retains coupon cut from pipe. Maximum operating pressure at 73°F (23°C) is 235 psi for saddle sizes 2" - 4", 200 psi for 6" saddles and 150 psi for 8" saddles. See packaged Installation Instructions for details.

PVC White Clamp-On Saddle x Soc Single Outlet



with Buna-N O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
466-247	2X1/2	3/4	1	10	046	28.43
466-248	2X3/4	7/8	1	10	046	28.43
466-249	2X1	1-1/8	1	10	046	28.43
466-250	2X1-1/4	1-1/2	1	10	046	28.43
466-251	2X1-1/2	1-1/2	1	10	046	28.43
466-291	2-1/2X1-1/2	1-3/4	1	10	046	38.57
466-333[1]	3X1/2	7/8	1	10	046	38.57
466-334	3X3/4	7/8	1	10	046	38.57
466-335	3X1	1-1/8	1	10	046	38.57
466-336[1]	3X1-1/4	2-1/4	1	10	046	38.57
466-337[1]	3X1-1/2	2-1/4	1	10	046	38.57
466-338	3X2	2-1/4	1	10	046	38.57

PVC White Clamp-On Saddle x Soc Single Outlet (continued)

with Buna-N O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
466-415[1]	4X1/2	1-1/8	1	10	046	49.42
466-416[1]	4X3/4	1-1/8	1	10	046	49.42
466-417	4X1	1-1/8	1	8	046	49.42
466-418[1]	4X1-1/4	1-3/4	1	8	046	49.42
466-419	4X1-1/2	1-3/4	1	8	046	49.42
466-420	4X2	2-1/4	1	8	046	49.42
466-421[1]	4X2-1/2	3	1	4	046	55.92
466-422	4X3	3	1	4	046	61.42
466-523[1]	6X1/2	1-1/8	1	4	046	85.03
466-524[1]	6X3/4	1-1/8	1	4	046	85.03
466-525	6X1	1-1/8	1	4	046	85.03
466-526[1]	6X1-1/4	2-1/4	1	4	046	85.03
466-527[1]	6X1-1/2	2-1/4	1	4	046	85.03
466-528	6X2	2-1/4	1	4	046	85.03

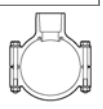
PVC White Clamp-On Saddle x Soc Single Outlet (continued)

with Buna-N O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
466-529[1]	6X2-1/2	3	1	4	046	93.48
466-530	6X3	3	1	4	046	97.40
466-532	6X4	4	1	4	046	102.54
466-573[1]	8X1/2	4	1	0	046	132.20
466-574[1]	8X3/4	4	1	0	046	132.20
466-575[1]	8X1	4	1	0	046	132.20
466-576[1]	8X1-1/4	4	1	0	046	132.20
466-577[1]	8X1-1/2	4	1	0	046	132.20
466-578[1]	8 X 2	4	1	0	046	132.20
466-579[1]	8X2-1/2	4	1	0	046	145.36
466-580[1]	8X3	4	1	0	046	154.14
466-582	8X4	4	1	0	046	163.23
466-585	8X6	6	1	0	046	181.28
466-620[1]	10X1-1/2	4	1	0	046	215.72
466-624	10X4	4	1	0	046	215.72
466-626	10X6	6	1	0	046	248.04
466-660[1]	12X1-1/2	4	1	0	046	270.41
466-664	12X4	4	1	0	046	270.41
466-666	12X6	6	1	0	046	313.58

[1]Outlet-sized with Bushing

PVC White Clamp-On Saddle x Soc Single Outlet



with Buna-N O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
466S-247	2X1/2	3/4	1	10	046	46.74
466S-248	2X3/4	7/8	1	10	046	46.74
466S-249	2X1	1-1/8	1	10	046	46.74
466S-250	2X1-1/4	1-1/2	1	10	046	46.74
466S-251	2X1-1/2	1-1/2	1	10	046	46.74
466S-291	2-1/2X1-1/2	1-3/4	1	10	046	62.88
466S-333[1]	3X1/2	7/8	1	10	046	62.88
466S-334	3X3/4	7/8	1	10	046	62.88
466S-335	3X1	1-1/8	1	10	046	62.88
466S-336[1]	3X1-1/4	2-1/4	1	10	046	62.88
466S-337[1]	3X1-1/2	2-1/4	1	10	046	62.88
466S-338	3X2	2-1/4	1	10	046	62.88
466S-415[1]	4X1/2	1-1/8	1	10	046	79.12
466S-416[1]	4X3/4	1-1/8	1	10	046	79.12
466S-417	4X1	1-1/8	1	10	046	79.12
466S-418[1]	4X1-1/4	1-3/4	1	8	046	79.12
466S-419	4X1-1/2	1-3/4	1	8	046	79.12
466S-420	4X2	2-1/4	1	8	046	79.12
466S-421[1]	4X2-1/2	3	1	4	046	86.45
466S-422	4X3	3	1	4	046	89.93
466S-523[1]	6X1/2	1-1/8	1	4	046	129.59
466S-524[1]	6X3/4	1-1/8	1	4	046	129.59
466S-525	6X1	1-1/8	1	4	046	129.59
466S-526[1]	6X1-1/4	2-1/4	1	4	046	129.59
466S-527[1]	6X1-1/2	2-1/4	1	4	046	129.59
466S-528	6X2	2-1/4	1	4	046	129.59
466S-529[1]	6X2-1/2	3	1	4	046	133.85
466S-530	6X3	3	1	4	046	136.61
466S-532	6X4	4	1	4	046	142.69
466S-573[1]	8X1/2	4	1	0	046	189.20
466S-574[1]	8X3/4	4	1	0	046	189.20
466S-575[1]	8X1	4	1	0	046	189.20
466S-576[1]	8X1-1/4	4	1	0	046	189.20
466S-577[1]	8X1-1/2	4	1	0	046	189.20
466S-578[1]	8 X 2	4	1	0	046	189.20
466S-579[1]	8X2-1/2	4	1	0	046	208.13
466S-580[1]	8X3	4	1	0	046	218.56
466S-582	8X4	4	1	0	046	231.73
466S-585	8X6	6	1	0	046	257.17

PVC White Clamp-On Saddle x Soc Single Outlet (continued)

with Buna-N O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
466S-620[1]	10X1-1/2	4	1	0	046	306.02
466S-624	10X4	4	1	0	046	306.02
466S-626	10X6	6	1	0	046	351.94
466S-664	12X4	4	1	0	046	383.59
466S-666	12X6	6	1	0	046	444.99

[1]Outlet-sized with Bushing

PVC White Clamp-On Saddle x Soc Single Outlet



with EPDM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
466E-247	2X1/2	3/4	1	10	046	30.63
466E-248	2X3/4	7/8	1	10	046	30.63
466E-249	2X1	1-1/8	1	10	046	30.63
466E-250	2X1-1/4	1-1/2	1	10	046	30.63
466E-251	2X1-1/2	1-1/2	1	10	046	30.63
466E-291	2-1/2X1-1/2	1-3/4	1	10	046	39.58
466E-333[1]	3X1/2	7/8	1	10	046	39.58
466E-334	3X3/4	7/8	1	10	046	39.58
466E-335	3X1	1-1/8	1	10	046	39.58
466E-336[1]	3X1-1/4	2-1/4	1	10	046	39.58
466E-337[1]	3X1-1/2	2-1/4	1	10	046	39.58
466E-338	3X2	2-1/4	1	10	046	39.58
466E-415[1]	4X1/2	1-1/8	1	10	046	50.68
466E-416[1]	4X3/4	1-1/8	1	10	046	50.68
466E-417	4X1	1-1/8	1	8	046	50.68
466E-418[1]	4X1-1/4	1-3/4	1	8	046	50.68
466E-419	4X1-1/2	1-3/4	1	8	046	50.68
466E-420	4X2	2-1/4	1	8	046	50.68
466E-421[1]	4X2-1/2	3	1	4	046	61.67
466E-422	4X3	3	1	4	046	68.99
466E-523[1]	6X1/2	1-1/8	1	4	046	90.93
466E-524[1]	6X3/4	1-1/8	1	4	046	90.93
466E-525	6X1	1-1/8	1	4	046	90.93
466E-526[1]	6X1-1/4	2-1/4	1	4	046	90.93
466E-527[1]	6X1-1/2	1-1/8	1	4	046	90.93
466E-528	6X2	2-1/4	1	4	046	90.93
466E-529[1]	6X2-1/2	3	1	4	046	101.12
466E-530	6X3	3	1	4	046	106.82
466E-532	6X4	4	1	4	046	112.56
466E-573	8X1/2	4	1	0	046	139.77
466E-574	8X3/4	4	1	0	046	139.77
466E-575	8X1	4	1	0	046	139.77
466E-576[1]	8X1-1/4	4	1	0	046	139.77
466E-577[1]	8X1-1/2	4	1	0	046	139.77
466E-578[1]	8 X 2	4	1	0	046	139.77
466E-579	8X2-1/2	4	1	0	046	153.79
466E-580[1]	8X3	4	1	0	046	161.36
466E-582	8X4	4	1	0	046	171.17
466E-585	8X6	6	1	0	046	189.93
466E-624	10X4	4	1	0	046	226.02
466E-626	10X6	6	1	0	046	259.94
466E-664	12X4	4	1	0	046	283.31
466E-666	12X6	6	1	0	046	334.75

[1]Outlet-sized with Bushing

PVC White Clamp-On Saddle x Soc Single Outlet



with EPDM O-ring & Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
466SE-247	2X1/2	3/4	1	10	046	48.21
466SE-248	2X3/4	7/8	1	10	046	48.21
466SE-249	2X1	1-1/8	1	10	046	48.21
466SE-250	2X1-1/4	1-1/2	1	10	046	48.21

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

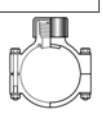
PVC White Clamp-On Saddle x Soc Single Outlet (continued)

with EPDM O-ring & Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
466SE-251	2X1-1/2	1-1/2	1	10	046	48.21
466SE-291	2-1/2X1-1/2	1-3/4	1	10	046	64.84
466SE-333[1]	3X1/2	7/8	1	10	046	64.84
466SE-334	3X3/4	7/8	1	10	046	64.84
466SE-335	3X1	1-1/8	1	10	046	64.84
466SE-336[1]	3X1-1/4	2-1/4	1	10	046	64.84
466SE-337[1]	3X1-1/2	2-1/4	1	10	046	64.84
466SE-338	3X2	2-1/4	1	10	046	64.84
466SE-415[1]	4X1/2	1-1/8	1	10	046	80.05
466SE-416[1]	4X3/4	1-1/8	1	10	046	80.05
466SE-417	4X1	1-1/8	1	8	046	80.05
466SE-418[1]	4X1-1/4	1-3/4	1	8	046	80.05
466SE-419	4X1-1/2	1-3/4	1	8	046	80.05
466SE-420	4X2	2-1/4	1	8	046	80.05
466SE-421[1]	4X2-1/2	3	1	4	046	86.56
466SE-422	4X3	3	1	4	046	95.89
466SE-523[1]	6X1/2	1-1/8	1	4	046	136.20
466SE-524[1]	6X3/4	1-1/8	1	4	046	136.20
466SE-525	6X1	1-1/8	1	4	046	136.20
466SE-526[1]	6X1-1/4	2-1/4	1	4	046	136.20
466SE-527[1]	6X1-1/2	2-1/4	1	4	046	136.20
466SE-528	6X2	2-1/4	1	4	046	136.20
466SE-529[1]	6X2-1/2	3	1	4	046	143.06
466SE-530	6X3	3	1	4	046	147.56
466SE-532	6X4	4	1	4	046	154.76
466SE-573	8X1/2	4	1	0	046	197.84
466SE-574[1]	8X3/4	4	1	0	046	197.84
466SE-575[1]	8X1	4	1	0	046	197.84
466SE-576	8X1-1/4	4	1	0	046	197.84
466SE-577[1]	8X1-1/2	4	1	0	046	197.84
466SE-578[1]	8X2	4	1	0	046	197.84
466SE-579[1]	8X2-1/2	4	1	0	046	217.61
466SE-580[1]	8X3	4	1	0	046	228.45
466SE-582	8X4	4	1	0	046	242.11
466SE-585	8X6	6	1	0	046	268.78
466SE-624	10X4	4	1	0	046	319.78
466SE-626	10X6	6	1	0	046	367.76
466SE-664	12X4	4	1	0	046	400.80
466SE-666	12X6	4	1	0	046	464.96

[1]Outlet-sized with Bushing

PVC White Clamp-On Saddle x SR Thread Single Outlet



with Buna-N O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
467-247SR	2X1/2	3/4	1	10	046	31.77
467-248SR	2X3/4	7/8	1	10	046	31.77
467-249SR	2X1	1-1/8	1	10	046	31.77
467-250SR	2X1-1/4	1-1/2	1	10	046	31.77
467-251SR	2X1-1/2	1-1/2	1	10	046	31.77
467-291SR	2-1/2X1-1/2	1-3/4	1	10	046	43.45
467-333SR[1]	3X1/2	7/8	1	10	046	43.45
467-334SR	3X3/4	7/8	1	10	046	43.45
467-335SR	3X1	1-1/8	1	10	046	43.45
467-336SR[1]	3X1-1/4	2-1/4	1	10	046	43.45
467-337SR[1]	3X1-1/2	2-1/4	1	10	046	43.45
467-338SR	3X2	2-1/4	1	10	046	43.45
467-415SR[1]	4X1/2	1-1/8	1	10	046	54.71
467-416SR[1]	4X3/4	1-1/8	1	10	046	54.71
467-417SR	4X1	1-1/8	1	8	046	54.71
467-418SR[1]	4X1-1/4	1-3/4	1	8	046	54.71
467-419SR	4X1-1/2	1-3/4	1	8	046	54.71
467-420SR	4X2	2-1/4	1	8	046	54.71
467-421SR[1]	4X2-1/2	3	1	4	046	59.18

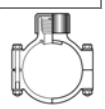
PVC White Clamp-On Saddle x SR Thread Single Outlet (continued)

with Buna-N O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
467-422SR	4X3	3	1	4	046	64.53
467-523SR[1]	6X1/2	1-1/8	1	4	046	95.54
467-524SR[1]	6X3/4	1-1/8	1	4	046	95.54
467-525SR	6X1	1-1/8	1	4	046	95.54
467-526SR[1]	6X1-1/4	2-1/4	1	4	046	95.54
467-527SR[1]	6X1-1/2	2-1/4	1	4	046	95.54
467-528SR	6X2	2-1/4	1	4	046	95.54
467-529SR[1]	6X2-1/2	3	1	4	046	112.74
467-530SR	6X3	3	1	4	046	119.95
467-532SR	6X4	4	1	4	046	124.87
467-573SR[1]	8X1/2	4	1	0	046	145.61
467-574SR[1]	8X3/4	4	1	0	046	145.61
467-575SR[1]	8X1	4	1	0	046	145.61
467-576SR[1]	8X1-1/4	4	1	0	046	145.61
467-577SR[1]	8X1-1/2	4	1	0	046	145.61
467-578SR[1]	8X2	4	1	0	046	145.61
467-579SR[1]	8X2-1/2	4	1	0	046	160.14
467-580SR[1]	8X3	4	1	0	046	168.23
467-582SR	8X4	4	1	0	046	178.29
467-585SR	8X6	6	1	0	046	196.12
467-624SR	10X4	4	1	0	046	233.45
467-626SR	10X6	6	1	0	046	268.33
467-664SR	12X4	4	1	0	046	292.43
467-666SR	12X6	6	1	0	046	339.20

[1] Outlet-sized with Bushing

PVC White Clamp-On Saddle x SR Thread Single Outlet



with Buna-N O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
467S-247SR	2X1/2	3/4	1	10	046	51.96
467S-248SR	2X3/4	7/8	1	10	046	51.96
467S-249SR	2X1	1-1/8	1	10	046	51.96
467S-250SR	2X1-1/4	1-1/2	1	10	046	51.96
467S-251SR	2X1-1/2	1-1/2	1	10	046	51.96
467S-291SR	2-1/2X1-1/2	1-3/4	1	10	046	69.87
467S-333SR[1]	3X1/2	7/8	1	10	046	69.87
467S-334SR	3X3/4	7/8	1	10	046	69.87
467S-335SR	3X1	1-1/8	1	10	046	69.87
467S-336SR[1]	3X1-1/4	2-1/4	1	10	046	69.87
467S-337SR[1]	3X1-1/2	2-1/4	1	10	046	69.87
467S-338SR	3X2	2-1/4	1	10	046	69.87
467S-415SR[1]	4X1/2	1-1/8	1	10	046	87.91
467S-416SR[1]	4X3/4	1-1/8	1	10	046	87.91
467S-417SR	4X1	1-1/8	1	8	046	87.91
467S-418SR[1]	4X1-1/4	1-3/4	1	8	046	87.91
467S-419SR	4X1-1/2	1-3/4	1	8	046	87.91
467S-420SR	4X2	2-1/4	1	8	046	87.91
467S-421SR[1]	4X2-1/2	3	1	4	046	93.48
467S-422SR	4X3	3	1	4	046	98.73
467S-523SR[1]	6X1/2	1-1/8	1	4	046	146.49
467S-524SR[1]	6X3/4	1-1/8	1	4	046	146.49
467S-525SR	6X1	1-1/8	1	4	046	146.49
467S-526SR[1]	6X1-1/4	2-1/4	1	4	046	146.49
467S-527SR[1]	6X1-1/2	2-1/4	1	4	046	146.49
467S-528SR	6X2	2-1/4	1	4	046	146.49
467S-529SR[1]	6X2-1/2	3	1	4	046	157.65
467S-530SR	6X3	3	1	4	046	162.26
467S-532SR	6X4	4	1	4	046	168.55
467S-573SR[1]	8X1/2	4	1	0	046	210.98
467S-574SR[1]	8X3/4	4	1	0	046	210.98
467S-575SR[1]	8X1	4	1	0	046	210.98
467S-576SR[1]	8X1-1/4	4	1	0	046	210.98
467S-577SR[1]	8X1-1/2	4	1	0	046	210.98

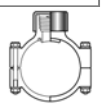
PVC White Clamp-On Saddle x SR Thread Single Outlet (continued)

with Buna-N O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
467S-578SR[1]	8X2	4	1	0	046	210.98
467S-579SR[1]	8X2-1/2	4	1	0	046	229.13
467S-580SR[1]	8X3	4	1	0	046	240.56
467S-582SR	8X4	4	1	0	046	255.02
467S-585SR	8X6	6	1	0	046	280.38
467S-624SR	10X4	4	1	0	046	333.72
467S-626SR	10X6	6	1	0	046	383.76
467S-664SR	12X4	4	1	0	046	418.33
467S-666SR	12X6	6	1	0	046	485.08

[1]Outlet-sized with Bushing

PVC White Clamp-On Saddle x SR Thread Single Outlet



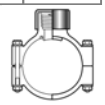
with EPDM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
467E-247SR	2X1/2	3/4	1	10	046	34.19
467E-248SR	2X3/4	7/8	1	10	046	34.19
467E-249SR	2X1	1-1/8	1	10	046	34.19
467E-250SR	2X1-1/4	1-1/2	1	10	046	34.19
467E-251SR	2X1-1/2	1-1/2	1	10	046	34.19
467E-291SR	2-1/2X1-1/2	1-3/4	1	10	046	47.67
467E-333SR[1]	3X1/2	7/8	1	10	046	47.67
467E-334SR	3X3/4	7/8	1	10	046	47.67
467E-335SR	3X1	1-1/8	1	10	046	47.67
467E-336SR[1]	3X1-1/4	2-1/4	1	10	046	47.67
467E-337SR[1]	3X1-1/2	2-1/4	1	10	046	47.67
467E-338SR	3X2	2-1/4	1	10	046	47.67
467E-415SR[1]	4X1/2	1-1/8	1	10	046	59.60
467E-416SR[1]	4X3/4	1-1/8	1	10	046	59.60
467E-417SR	4X1	1-1/8	1	8	046	59.60
467E-418SR[1]	4X1-1/4	1-3/4	1	8	046	59.60
467E-419SR	4X1-1/2	1-3/4	1	8	046	59.60
467E-420SR	4X2	2-1/4	1	8	046	59.60
467E-421SR[1]	4X2-1/2	3	1	4	046	63.87
467E-422SR	4X3	3	1	4	046	68.47
467E-523SR[1]	6X1/2	1-1/8	1	4	046	99.45
467E-524SR[1]	6X3/4	1-1/8	1	4	046	99.45
467E-525SR	6X1	1-1/8	1	4	046	99.45
467E-526SR[1]	6X1-1/4	2-1/4	1	4	046	99.45
467E-527SR[1]	6X1-1/2	2-1/4	1	4	046	99.45
467E-528SR	6X2	2-1/4	1	4	046	99.45
467E-529SR[1]	6X2-1/2	3	1	4	046	123.19
467E-530SR	6X3	3	1	4	046	129.60
467E-532SR	6X4	4	1	4	046	136.13
467E-573SR[1]	8X1/2	4	1	0	046	150.67
467E-574SR[1]	8X3/4	4	1	0	046	150.67
467E-575SR[1]	8X1	4	1	0	046	150.67
467E-576SR[1]	8X1-1/4	4	1	0	046	150.67
467E-577SR[1]	8X1-1/2	4	1	0	046	150.67
467E-578SR[1]	8X2	4	1	0	046	150.67
467E-579SR[1]	8X2-1/2	4	1	0	046	165.74
467E-580SR[1]	8X3	4	1	0	046	174.07
467E-582SR	8X4	4	1	0	046	184.51
467E-585SR	8X6	6	1	0	046	204.69
467E-624SR	10X4	4	1	0	046	243.57
467E-626SR	10X6	6	1	0	046	280.05
467E-664SR	12X4	4	1	0	046	305.33
467E-666SR	12X6	6	1	0	046	354.19

[1]Outlet-sized with Bushing

PVC White Clamp-On Saddle x SR Thread Single Outlet



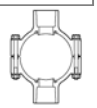
with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
467SE-247SR	2X1/2	3/4	1	10	046	53.52
467SE-248SR	2X3/4	7/8	1	10	046	53.52
467SE-249SR	2X1	1-1/8	1	10	046	53.52
467SE-250SR	2X1-1/4	1-1/2	1	10	046	53.52
467SE-251SR	2X1-1/2	1-1/2	1	10	046	53.52
467SE-291SR	2-1/2X1-1/2	1-3/4	1	10	046	71.82
467SE-333SR[1]	3X1/2	7/8	1	10	046	71.82
467SE-334SR	3X3/4	7/8	1	10	046	71.82
467SE-335SR	3X1	1-1/8	1	10	046	71.82
467SE-336SR[1]	3X1-1/4	2-1/4	1	10	046	71.82
467SE-337SR[1]	3X1-1/2	2-1/4	1	10	046	71.82
467SE-338SR	3X2	2-1/4	1	10	046	71.82
467SE-415SR[1]	4X1/2	1-1/8	1	10	046	90.12
467SE-416SR[1]	4X3/4	1-1/8	1	10	046	90.12
467SE-417SR	4X1	1-1/8	1	8	046	90.12
467SE-418SR[1]	4X1-1/4	1-3/4	1	8	046	90.12
467SE-419SR	4X1-1/2	1-3//4	1	8	046	90.12
467SE-420SR	4X2	2-1/4	1	8	046	90.12
467SE-421SR[1]	4X2-1/2	3	1	4	046	93.96
467SE-422SR	4X3	3	1	4	046	99.18
467SE-523SR[1]	6X1/2	1-1/8	1	4	046	151.43
467SE-524SR[1]	6X3/4	1-1/8	1	4	046	151.43
467SE-525SR	6X1	1-1/8	1	4	046	151.43
467SE-526SR[1]	6X1-1/4	2-1/4	1	4	046	151.43
467SE-527SR[1]	6X1-1/2	2-1/4	1	4	046	151.43
467SE-528SR	6X2	2-1/4	1	4	046	151.43
467SE-529SR[1]	6X2-1/2	3	1	4	046	164.37
467SE-530SR	6X3	3	1	4	046	170.51
467SE-532SR	6X4	4	1	4	046	173.58
467SE-573SR[1]	8X1/2	4	1	0	046	217.25
467SE-574SR[1]	8X3/4	4	1	0	046	217.25
467SE-575SR[1]	8X1	4	1	0	046	217.25
467SE-576SR[1]	8X1-1/4	4	1	0	046	217.25
467SE-577SR[1]	8X1-1/2	4	1	0	046	217.25
467SE-578SR[1]	8X2	4	1	0	046	217.25
467SE-579SR[1]	8X2-1/2	4	1	0	046	239.09
467SE-580SR[1]	8X3	4	1	0	046	250.98
467SE-582SR	8X4	4	1	0	046	266.12
467SE-585SR	8X6	6	1	0	046	292.68
467SE-624SR	10X4	4	1	0	046	348.17
467SE-626SR	10X6	6	1	0	046	400.64
467SE-666SR	12X6	6	1	0	046	506.42

[1]Outlet-sized with Bushing

PVC White Clamp-On Saddle x Soc Double Outlet



with Buna-N O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
468-247	2X1/2	3/4	1	10	046	34.34
468-248	2X3/4	7/8	1	10	046	34.34
468-249	2X1	1-1/8	1	10	046	34.34
468-250	2X1-1/4	1-1/2	1	10	046	34.34
468-251	2X1-1/2	1-1/2	1	10	046	34.34
468-291	2-1/2X1-1/2	1-3/4	1	10	046	45.84
468-333[1]	3X1/2	7/8	1	10	046	45.84
468-334	3X3/4	7/8	1	10	046	45.84
468-335	3X1	1-1/8	1	10	046	45.84
468-336[1]	3X1-1/4	2-1/4	1	10	046	45.84
468-337[1]	3X1-1/2	2-1/4	1	10	046	45.84
468-338	3X2	2-1/4	1	10	046	45.84
468-415[1]	4X1/2	1-1/8	1	10	046	58.08
468-416[1]	4X3/4	1-1/8	1	10	046	58.08

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

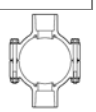
PVC White Clamp-On Saddle x Soc Double Outlet (continued)

with Buna-N O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
468-417	4X1	1-1/8	1	8	046	58.08
468-418[1]	4X1-1/4	1-3/4	1	8	046	58.08
468-419	4X1-1/2	1-3/4	1	8	046	58.08
468-420	4X2	2-1/4	1	8	046	58.08
468-421[1]	4X2-1/2	3	1	4	046	60.80
468-422	4X3	3	1	4	046	68.64
468-523[1]	6X1/2	1-1/8	1	4	046	95.64
468-524[1]	6X3/4	1-1/8	1	4	046	95.64
468-525	6X1	1-1/8	1	4	046	95.64
468-526[1]	6X1-1/4	2-1/4	1	4	046	95.64
468-527[1]	6X1-1/2	2-1/4	1	4	046	95.64
468-528	6X2	2-1/4	1	4	046	95.64
468-529[1]	6X2-1/2	3	1	4	046	108.85
468-530	6X3	3	1	4	046	113.80
468-532	6X4	4	1	4	046	122.33
468-573[1]	8X1/2	4	1	0	046	137.27
468-574[1]	8X3/4	4	1	0	046	137.27
468-575[1]	8X1	4	1	0	046	137.27
468-576[1]	8X1-1/4	4	1	0	046	137.27
468-577[1]	8X1-1/2	4	1	0	046	137.27
468-578[1]	8X2	4	1	0	046	137.27
468-579[1]	8X2-1/2	4	1	0	046	150.94
468-580[1]	8X3	4	1	0	046	158.53
468-582	8X4	4	1	0	046	168.07
468-585	8X6	6	1	0	046	186.46
468-624	10X4	4	1	0	046	221.89
468-626	10X6	6	1	0	046	255.09
468-664	12X4	4	1	0	046	278.15
468-666	12X6	6	1	0	046	322.69

[1]Outlet-sized with Bushing

PVC White Clamp-On Saddle x Soc Double Outlet



with Buna-N O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
468S-247	2X1/2	3/4	1	10	046	55.11
468S-248	2X3/4	7/8	1	10	046	55.11
468S-249	2X1	1-1/8	1	10	046	55.11
468S-250	2X1-1/4	1-1/2	1	10	046	55.11
468S-251	2X1-1/2	1-1/2	1	10	046	55.11
468S-291	2-1/2X1-1/2	1-3/4	1	10	046	73.57
468S-333[1]	3X1/2	7/8	1	10	046	73.57
468S-334	3X3/4	7/8	1	10	046	73.57
468S-335	3X1	1-1/8	1	10	046	73.57
468S-336[1]	3X1-1/4	2-1/4	1	10	046	73.57
468S-337[1]	3X1-1/2	2-1/4	1	10	046	73.57
468S-338	3X2	2-1/4	1	10	046	73.57
468S-415[1]	4X1/2	1-1/8	1	10	046	91.82
468S-416[1]	4X3/4	1-1/8	1	10	046	91.82
468S-417	4X1	1-1/8	1	8	046	91.82
468S-418[1]	4X1-1/4	1-3/4	1	8	046	91.82
468S-419	4X1-1/2	1-3/4	1	8	046	91.82
468S-420	4X2	2-1/4	1	8	046	91.82
468S-421[1]	4X2-1/2	3	1	4	046	96.49
468S-422	4X3	3	1	4	046	105.88
468S-523[1]	6X1/2	1-1/8	1	4	046	151.67
468S-524[1]	6X3/4	1-1/8	1	4	046	151.67
468S-525	6X1	1-1/8	1	4	046	151.67
468S-526[1]	6X1-1/4	2-1/4	1	4	046	151.67
468S-527[1]	6X1-1/2	2-1/4	1	4	046	151.67
468S-528	6X2	2-1/4	1	4	046	151.67
468S-529[1]	6X2-1/2	3	1	4	046	158.47
468S-530	6X3	3	1	4	046	161.20
468S-532	6X4	4	1	4	046	166.43

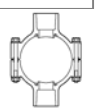
PVC White Clamp-On Saddle x Soc Double Outlet (continued)

with Buna-N O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
468S-573[1]	8X1/2	4	1	0	046	204.02
468S-574[1]	8X3/4	4	1	0	046	204.02
468S-575[1]	8X1	4	1	0	046	204.02
468S-576[1]	8X1-1/4	4	1	0	046	204.02
468S-577[1]	8X1-1/2	4	1	0	046	204.02
468S-578[1]	8X2	4	1	0	046	204.02
468S-579[1]	8X2-1/2	4	1	0	046	224.39
468S-580[1]	8X3	4	1	0	046	235.75
468S-582	8X4	4	1	0	046	249.77
468S-585	8X6	6	1	0	046	274.71
468S-624	10X4	4	1	0	046	326.82
468S-626	10X6	6	1	0	046	375.94
468S-664	12X4	4	1	0	046	409.76
468S-666	12X6	6	1	0	046	475.29

[1]Outlet-sized with Bushing.

PVC White Clamp-On Saddle x Soc Double Outlet



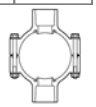
with EPDM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
468E-247	2X1/2	3/4	1	10	046	36.11
468E-248	2X3/4	7/8	1	10	046	36.11
468E-249	2X1	1-1/8	1	10	046	36.11
468E-250	2X1-1/4	1-1/2	1	10	046	36.11
468E-251	2X1-1/2	1-1/2	1	10	046	36.11
468E-291	2-1/2X1-1/2	1-3/4	1	10	046	49.87
468E-333[1]	3X1/2	7/8	1	10	046	49.87
468E-334	3X3/4	7/8	1	10	046	49.87
468E-335	3X1	1-1/8	1	10	046	49.87
468E-336[1]	3X1-1/4	2-1/4	1	10	046	49.87
468E-337[1]	3X1-1/2	2-1/4	1	10	046	49.87
468E-338	3X2	2-1/4	1	10	046	49.87
468E-415[1]	4X1/2	1-1/8	1	10	046	60.64
468E-416[1]	4X3/4	1-1/8	1	10	046	60.64
468E-417	4X1	1-1/8	1	8	046	60.64
468E-418[1]	4X1-1/4	1-3/4	1	8	046	60.64
468E-419	4X1-1/2	1-3/4	1	8	046	60.64
468E-420	4X2	2-1/4	1	8	046	60.64
468E-421[1]	4X2-1/2	3	1	4	046	65.03
468E-422	4X3	3	4	0	046	72.47
468E-523[1]	6X1/2	1-1/8	1	4	046	101.80
468E-524[1]	6X3/4	1-1/8	1	4	046	101.80
468E-525	6X1	1-1/8	1	4	046	101.80
468E-526[1]	6X1-1/4	2-1/4	1	4	046	101.80
468E-527[1]	6X1-1/2	2-1/4	1	4	046	101.80
468E-528	6X2	2-1/4	1	4	046	101.80
468E-529[1]	6X2-1/2	3	1	4	046	113.85
468E-530	6X3	3	1	4	046	122.48
468E-532	6X4	4	1	4	046	129.05
468E-573[1]	8X1/2	4	1	0	046	153.59
468E-574[1]	8X3/4	4	1	0	046	153.59
468E-575[1]	8X1	4	1	0	046	153.59
468E-576[1]	8X1-1/4	4	1	0	046	153.59
468E-577[1]	8X1-1/2	4	1	0	046	153.59
468E-578[1]	8X2	4	1	0	046	153.59
468E-579[1]	8X2-1/2	4	1	0	046	169.02
468E-580[1]	8X3	4	1	0	046	177.53
468E-582	8X4	4	1	0	046	188.20
468E-585	8X6	6	1	0	046	206.95
468E-624	10X4	4	1	0	046	246.33
468E-626	10X6	6	1	0	046	283.15
468E-664	12X4	4	1	0	046	308.77
468E-666	12X6	6	1	0	046	358.05

[1]Outlet-sized with Bushing

PVC White Clamp-On Saddle x Soc Double Outlet



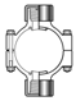
with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
468SE-247	2X1/2	3/4	1	10	046	58.93
468SE-248	2X3/4	7/8	1	10	046	58.93
468SE-249	2X1	1-1/8	1	10	046	58.93
468SE-250	2X1-1/4	1-1/2	1	10	046	58.93
468SE-251	2X1-1/2	1-1/2	1	10	046	58.93
468SE-291	2-1/2X1-1/2	1-3/4	1	10	046	77.93
468SE-333[1]	3X1/2	7/8	1	10	046	77.93
468SE-334	3X3/4	7/8	1	10	046	77.93
468SE-335	3X1	1-1/8	1	10	046	77.93
468SE-336[1]	3X1-1/4	2-1/4	1	10	046	77.93
468SE-337[1]	3X1-1/2	2-1/4	1	10	046	77.93
468SE-338	3X2	2-1/4	1	10	046	77.93
468SE-415[1]	4X1/2	1-1/8	1	10	046	97.27
468SE-416[1]	4X3/4	1-1/8	1	10	046	97.27
468SE-417	4X1	1-1/8	1	8	046	97.27
468SE-418[1]	4X1-1/4	1-3/4	1	8	046	97.27
468SE-419	4X1-1/2	1-3/4	1	8	046	97.27
468SE-420	4X2	2-1/4	1	8	046	97.27
468SE-421[1]	4X2-1/2	3	1	4	046	106.18
468SE-422	4X3	3	4	0	046	113.18
468SE-523[1]	6X1/2	1-1/8	1	4	046	162.15
468SE-524[1]	6X3/4	1-1/8	1	4	046	162.15
468SE-525	6X1	1-1/8	1	4	046	162.15
468SE-526[1]	6X1-1/4	2-1/4	1	4	046	162.15
468SE-527[1]	6X1-1/2	2-1/4	1	4	046	162.15
468SE-528	6X2	2-1/4	1	4	046	162.15
468SE-529[1]	6X2-1/2	3	1	4	046	166.53
468SE-530	6X3	3	1	4	046	172.31
468SE-532	6X4	4	1	4	046	182.24
468SE-573[1]	8X1/2	4	1	0	046	231.01
468SE-574[1]	8X3/4	4	1	0	046	231.01
468SE-575[1]	8X1	4	1	0	046	231.01
468SE-576[1]	8X1-1/4	4	1	0	046	231.01
468SE-577[1]	8X1-1/2	4	1	0	046	231.01
468SE-578[1]	8X2	4	1	0	046	231.01
468SE-579[1]	8X2-1/2	4	1	0	046	254.16
468SE-580[1]	8X3	4	1	0	046	262.84
468SE-582	8X4	4	1	0	046	283.21
468SE-585	8X6	6	1	0	046	313.93
468SE-624	10X4	4	1	0	046	373.54
468SE-626	10X6	6	1	0	046	429.51
468SE-664	12X4	4	1	0	046	468.41
468SE-666	12X6	6	1	0	046	543.23

[1]Outlet-sized with Bushing

PVC White Clamp-On Saddle x SR Thread Double Outlet



with Buna-N O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
469-247SR	2X1/2	3/4	1	10	046	38.82
469-248SR	2X3/4	7/8	1	10	046	38.82
469-249SR	2X1	1-1/8	1	10	046	38.82
469-250SR	2X1-1/4	1-1/2	1	10	046	38.82
469-251SR	2X1-1/2	1-1/2	1	10	046	38.82
469-291SR	2-1/2X1-1/2	1-3/4	1	10	046	51.55
469-333SR[1]	3X1/2	7/8	1	10	046	51.55
469-334SR	3X3/4	7/8	1	10	046	51.55
469-335SR	3X1	1-1/8	1	10	046	51.55
469-336SR[1]	3X1-1/4	2-1/4	1	10	046	51.55
469-337SR[1]	3X1-1/2	2-1/4	1	10	046	51.55
469-338SR	3X2	2-1/4	1	10	046	51.55
469-415SR[1]	4X1/2	1-1/8	1	10	046	77.39

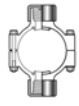
PVC White Clamp-On Saddle x SR Thread Double Outlet (continued)

with Buna-N O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
469-416SR[1]	4X3/4	1-1/8	1	10	046	77.39
469-417SR	4X1	1-1/8	1	8	046	77.39
469-418SR[1]	4X1-1/4	1-3/4	1	8	046	77.39
469-419SR	4X1-1/2	1-3/4	1	8	046	77.39
469-420SR	4X2	2-1/4	1	8	046	77.39
469-421SR[1]	4X2-1/2	3	1	4	046	83.14
469-422SR	4X3	3	1	4	046	198.35
469-523SR[1]	6X1/2	1-1/8	1	4	046	126.16
469-524SR[1]	6X3/4	1-1/8	1	4	046	126.16
469-525SR	6X1	1-1/8	1	4	046	126.16
469-526SR[1]	6X1-1/4	2-1/4	1	4	046	126.16
469-527SR[1]	6X1-1/2	2-1/4	1	4	046	126.16
469-528SR	6X2	2-1/4	1	4	046	126.16
469-529SR[1]	6X2-1/2	3	1	4	046	151.31
469-530SR	6X3	3	1	4	046	158.84
469-532SR	6X4	4	1	4	046	166.33
469-573SR[1]	8X1/2	4	1	0	046	184.92
469-574SR[1]	8X3/4	4	1	0	046	184.92
469-575SR[1]	8X1	4	1	0	046	184.92
469-576SR[1]	8X1-1/4	4	1	0	046	184.92
469-577SR[1]	8X1-1/2	4	1	0	046	184.92
469-578SR[1]	8X2	4	1	0	046	184.92
469-579SR[1]	8X2-1/2	4	1	0	046	204.69
469-580SR[1]	8X3	4	1	0	046	214.59
469-582SR	8X4	4	1	0	046	227.57
469-585SR	8X6	6	1	0	046	250.29
469-624SR	10X4	4	1	0	046	297.85
469-626SR	10X6	6	1	0	046	342.31
469-666SR	12X6	6	1	0	046	433.04

[1]Outlet-sized with Bushing

PVC White Clamp-On Saddle x SR Thread Double Outlet



with Buna-N O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
469S-247SR	2X1/2	3/4	1	10	046	61.25
469S-248SR	2X3/4	7/8	1	10	046	61.25
469S-249SR	2X1	1-1/8	1	10	046	61.25
469S-250SR	2X1-1/4	1-1/2	1	10	046	61.25
469S-251SR	2X1-1/2	1-1/2	1	10	046	61.25
469S-291SR	2-1/2X1-1/2	1-3/4	1	10	046	81.73
469S-333SR[1]	3X1/2	7/8	1	10	046	81.73
469S-334SR	3X3/4	7/8	1	10	046	81.73
469S-335SR	3X1	1-1/8	1	10	046	81.73
469S-336SR[1]	3X1-1/4	2-1/4	1	10	046	81.73
469S-337SR[1]	3X1-1/2	2-1/4	1	10	046	81.73
469S-338SR	3X2	2-1/4	1	10	046	81.73
469S-415SR[1]	4X1/2	1-1/8	1	10	046	103.85
469S-416SR[1]	4X3/4	1-1/8	1	10	046	103.85
469S-417SR	4X1	1-1/8	1	8	046	103.85
469S-418SR[1]	4X1-1/4	1-3/4	1	8	046	103.85
469S-419SR	4X1-1/2	1-3/4	1	8	046	103.85
469S-420SR	4X2	2-1/4	1	8	046	103.85
469S-421SR[1]	4X2-1/2	3	1	4	046	109.55
469S-422SR	4X3	3	4	0	046	119.95
469S-523SR[1]	6X1/2	1-1/8	1	4	046	170.62
469S-524SR[1]	6X3/4	1-1/8	1	4	046	170.62
469S-525SR	6X1	1-1/8	1	4	046	170.62
469S-526SR[1]	6X1-1/4	2-1/4	1	4	046	170.62
469S-527SR[1]	6X1-1/2	2-1/4	1	4	046	170.62
469S-528SR	6X2	2-1/4	1	4	046	170.62
469S-529SR[1]	6X2-1/2	3	1	4	046	178.60
469S-530SR	6X3	3	1	4	046	188.92
469S-532SR	6X4	4	1	4	046	197.27

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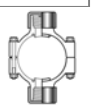
PVC White Clamp-On Saddle x SR Thread Double Outlet (continued)

with Buna-N O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
469S-573SR[1]	8X1/2	4	1	0	046	241.95
469S-574SR[1]	8X3/4	4	1	0	046	241.95
469S-575SR[1]	8X1	4	1	0	046	241.95
469S-576SR[1]	8X1-1/4	4	1	0	046	241.95
469S-577SR[1]	8X1-1/2	4	1	0	046	241.95
469S-578SR[1]	8X2	4	1	0	046	241.95
469S-579SR[1]	8X2-1/2	4	1	0	046	266.12
469S-580SR[1]	8X3	4	1	0	046	279.35
469S-582SR	8X4	4	1	0	046	295.86
469S-585SR	8X6	6	1	0	046	328.55
469S-624SR	10X4	4	1	0	046	391.00
469S-626SR	10X6	6	1	0	046	449.64
469S-664SR	12X4	4	1	0	046	490.07
469S-666SR	12X6	6	1	0	046	568.35

[1]Outlet-sized with Bushing

PVC White Clamp-On Saddle x SR Thread Double Outlet



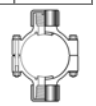
with EPDM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
469E-247SR	2X1/2	3/4	1	10	046	42.67
469E-248SR	2X3/4	7/8	1	10	046	42.67
469E-249SR	2X1	1-1/8	1	10	046	42.67
469E-250SR	2X1-1/4	1-1/2	1	10	046	42.67
469E-251SR	2X1-1/2	1-1/2	1	10	046	42.67
469E-291SR	2-1/2X1-1/2	1-3/4	1	10	046	57.86
469E-333SR[1]	3X1/2	7/8	1	10	046	57.86
469E-334SR	3X3/4	7/8	1	10	046	57.86
469E-335SR	3X1	1-1/8	1	10	046	57.86
469E-336SR[1]	3X1-1/4	2-1/4	1	10	046	57.86
469E-337SR[1]	3X1-1/2	2-1/4	1	10	046	57.86
469E-338SR	3X2	2-1/4	1	16	046	57.86
469E-415SR[1]	4X1/2	1-1/8	1	10	046	90.19
469E-416SR[1]	4X3/4	1-1/8	1	10	046	90.19
469E-417SR	4X1	1-1/8	1	8	046	90.19
469E-418SR[1]	4X1-1/4	1-3/4	1	8	046	90.19
469E-419SR	4X1-1/2	1-3/4	1	8	046	90.19
469E-420SR	4X2	2-1/4	1	8	046	90.19
469E-421SR[1]	4X2-1/2	3	1	4	046	91.98
469E-422SR	4X3	3	4	0	046	117.47
469E-523SR[1]	6X1/2	1-1/8	1	4	046	138.29
469E-524SR[1]	6X3/4	1-1/8	1	4	046	138.29
469E-525SR	6X1	1-1/8	1	4	046	138.29
469E-526SR[1]	6X1-1/4	2-1/4	1	4	046	138.29
469E-527SR[1]	6X1-1/2	2-1/4	1	4	046	138.29
469E-528SR	6X2	2-1/4	1	4	046	138.29
469E-529SR[1]	6X2-1/2	3	1	4	046	154.78
469E-530SR	6X3	3	1	4	046	167.41
469E-532SR	6X4	4	1	4	046	178.02
469E-573SR[1]	8X1/2	4	1	0	046	200.39
469E-574SR[1]	8X3/4	4	1	0	046	200.39
469E-575SR[1]	8X1	4	1	0	046	200.39
469E-576SR[1]	8X1-1/4	4	1	0	046	200.39
469E-577SR[1]	8X1-1/2	4	1	0	046	200.39
469E-578SR	8X2	4	1	0	046	200.39
469E-579SR[1]	8X2-1/2	4	1	0	046	220.53
469E-580SR[1]	8X3	4	1	0	046	231.55
469E-582SR	8X4	4	1	0	046	245.48
469E-585SR	8X6	6	1	0	046	272.46
469E-624SR	10X4	4	1	0	046	324.24
469E-626SR	10X6	6	1	0	046	372.76
469E-666SR	12X6	6	1	0	046	471.51

[1]Outlet-sized with Bushing

PVC White Clamp-On Saddle x SR Thread Double Outlet



with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
469SE-247SR	2X1/2	3/4	1	10	046	65.17
469SE-248SR	2X3/4	7/8	1	10	046	65.17
469SE-249SR	2X1	1-1/8	1	10	046	65.17
469SE-250SR	2X1-1/4	1-1/2	1	10	046	65.17
469SE-251SR	2X1-1/2	1-1/2	1	10	046	65.17
469SE-291SR	2-1/2X1-1/2	1-3/4	1	10	046	86.80
469SE-333SR[1]	3X1/2	7/8	1	10	046	86.80
469SE-334SR	3X3/4	7/8	1	10	046	86.80
469SE-335SR	3X1	1-1/8	1	10	046	86.80
469SE-336SR[1]	3X1-1/4	2-1/4	1	10	046	86.80
469SE-337SR[1]	3X1-1/2	2-1/4	1	10	046	86.80
469SE-338SR	3X2	2-1/4	1	10	046	86.80
469SE-415SR[1]	4X1/2	1-1/8	1	10	046	111.98
469SE-416SR[1]	4X3/4	1-1/8	1	10	046	111.98
469SE-417SR	4X1	1-1/8	1	8	046	111.98
469SE-418SR[1]	4X1-1/4	1-3/4	1	8	046	111.98
469SE-419SR	4X1-1/2	1-3/4	1	8	046	111.98
469SE-420SR	4X2	2-1/4	1	8	046	111.98
469SE-421SR[1]	4X2-1/2	3	1	4	046	116.16
469SE-422SR	4X3	3	4	0	046	127.12
469SE-523SR[1]	6X1/2	1-1/8	1	4	046	174.99
469SE-524SR[1]	6X3/4	1-1/8	1	4	046	174.99
469SE-525SR	6X1	1-1/8	1	4	046	174.99
469SE-526SR[1]	6X1-1/4	2-1/4	1	4	046	174.99
469SE-527SR[1]	6X1-1/2	2-1/4	1	4	046	174.99
469SE-528SR	6X2	2-1/4	1	4	046	174.99
469SE-529SR[1]	6X2-1/2	3	1	4	046	187.18
469SE-530SR	6X3	3	1	4	046	197.64
469SE-532SR	6X4	4	1	4	046	209.36
469SE-573SR[1]	8X1/2	4	1	0	046	247.54
469SE-574SR[1]	8X3/4	4	1	0	046	247.54
469SE-575SR[1]	8X1	4	1	0	046	247.54
469SE-576SR[1]	8X1-1/4	4	1	0	046	247.54
469SE-577SR[1]	8X1-1/2	4	1	0	046	247.54
469SE-578SR[1]	8X2	4	1	0	046	247.54
469SE-579SR[1]	8X2-1/2	4	1	0	046	272.31
469SE-580SR[1]	8X3	4	1	0	046	285.91
469SE-582SR	8X4	4	1	0	046	297.93
469SE-585SR	8X6	6	1	0	046	336.29
469SE-624SR	10X4	4	1	0	046	400.12
469SE-626SR	10X6	6	1	0	046	460.13
469SE-664SR	12X4	4	1	0	046	500.57
469SE-666SR	12X6	6	1	0	046	581.43

[1]Outlet-sized with Bushing

PVC White Hot-Tap Saddle



EPDM Saddle x Soc (Spigot) Zinc Plated Bolts

2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

HT2-248W	**2X3/4 (1)**	1	5	049	51.19
HT2-251W	**2X1-1/2 (2)**	1	5	049	105.76
HT2-288W	**2-1/2X3/4 (1)**	1	5	049	54.71
HT2-291W	**2-1/2x1-1/2 (2)**	1	5	049	109.28
HT2-334W	**3X3/4 (1)**	1	5	049	62.65
HT2-337W	**3X1-1/2 (2)**	1	5	049	120.45
HT2-416W	**4X3/4 (1)**	1	0	049	72.36
HT2-419W	**4X1-1/2 (2)**	1	0	049	127.36
HT2-524W	**6X3/4 (1)**	1	0	049	81.34
HT2-527W	**6X1-1/2 (2)**	1	0	049	135.60
HT2-574W	**8X3/4 (1)**	1	0	049	90.01
HT2-577W	**8X1-1/2 (2)**	1	0	049	144.58

Clamp-On & Hot-Tap Saddles

PVC White Hot-Tap Saddles
EPDM Saddle x Soc (Spigot) SS316 Bolts



2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HT2S-248W	**2X3/4 (1)**	1	5	049	79.71
HT2S-251W	**2X1-1/2 (2)**	1	5	049	164.57
HT2S-288W	**2-1/2X3/4 (1)**	1	5	049	85.15
HT2S-291W	**2-1/2X1-1/2 (2)**	1	5	049	170.01
HT2S-334W	**3X3/4 (1)**	1	5	049	97.53
HT2S-337W	**3X1-1/2 (2)**	1	5	049	187.53

PVC White Hot-Tap Saddles (continued)
EPDM Saddle x Soc (Spigot) SS316 Bolts

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HT2S-416W	**4X3/4 (1)**	1	5	049	112.66
HT2S-419W	**4X1-1/2 (2)**	1	0	049	198.25
HT2S-524W	**6X3/4 (1)**	1	5	049	126.49
HT2S-527W	**6X1-1/2 (2)**	1	0	049	210.89
HT2S-574W	**8X3/4 (1)**	1	0	049	139.42
HT2S-577W	**8X1-1/2 (2)**	1	0	049	224.14

Mechanical Clamp-On Transition Saddles

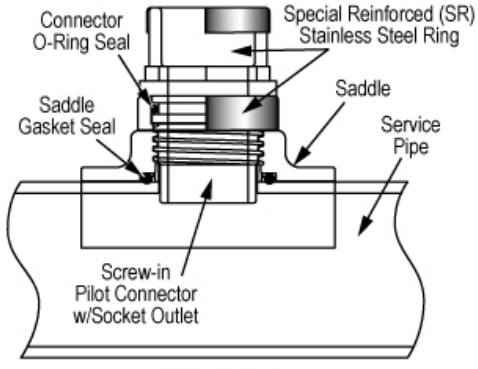
Designed for HDPE-to-PVC pipe transition to provide HDPE mainline take-off for PVC irrigation laterals and irrigation extensions, but fully suitable for any IPS pipe (metal or plastic) transition to PVC. Eliminates costly and cumbersome HDPE fusion process, which is generally cost prohibitive. Depending on the region and location, it has been found that the installed cost of HDPE laterals can be 25% higher than PVC laterals!

Pilot on lateral connector prevents saddle movement on pipe. Exceptionally strong Special Reinforced (SR) outlet on both Saddle outlet and Pilot Connector socket provide unparalleled strength. Injection molded in distinct blue EverTUFF® PVC proprietary material. Pilot Connectors are replaceable and interchangeable with any size EverTUFF® Mechanical Saddle for greater versatility.

Easy Installation - Clamp saddle to pipe, drill hole, install screw-in Pilot Connector with socket outlet. Available for a variety of mainline sizes and can be easily bushed for reduced lateral take-off sizes or special connections.



- Socket Outlet
- 315 psi Pressure Rating @ 73° F
- Stainless Steel Mechanical Clamp
- Elastomer Gasket & O-ring Seals
- Interchangeable 1-1/2" & 2" Lateral Connector Sizes
- Stainless Steel Reinforcing Rings for Extra Strength



Note: Mechanical Clamp Not Shown

Mechanical Clamp-on Transition Saddles
Pipe O.D. x Socket

For Polyethylene (or any IPS pipe, metal or plastic) - To - PVC Transitions

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
865-419	**4X1-1/2**	2	0	086	733.37
865-420	**4X2**	1	0	086	743.42
865-527	**6X1-1/2**	1	0	086	804.53
865-528	**6X2**	1	0	086	838.42
865-577	**8X1-1/2**	1	0	086	941.68
865-578	**8X2**	1	0	086	978.32

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Schedule 40 Tank Adapters with EPDM Gasket



Socket(Male Pipe Thread)

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

4170E-005	**1/2 Soc(1 MPT)**	25	0	029	31.05
4170E-007	3/4 Soc(1-1/4 MPT)	25	0	029	36.49
4170E-010	**1 Soc(1-1/2 MPT)**	25	0	029	42.27
4170E-012	**1-1/4 Soc(2 MPT)**	20	0	029	52.42
4170E-015	**1-1/2 Soc(2 MPT)**	30	0	029	58.68
4170E-020	**2 Soc(2-1/2 MPT)**	10	0	029	75.77
4170E-025	**2-1/2 Soc(3 MPT)**	4	0	029	126.11

Note: These tank adapters have both Socket and size larger Male Pipe Thread connection on external end. Adapter Nut has left hand thread to prevent loosening when installing threaded connection. End lugs allow holding body when tightening Adapter Nut.

All Pool & Spa Specialty Fittings have a maximum use service pressure of 150 psi @ 73° F (22° C). Standard pressure de-ratings must be applied for use at elevated temperatures with a maximum service temperature of 140°F (60° C).

Short Socket Tees

Socket Style Sch 40



Special short-socket end allows close connection at pumps, filters and other areas with minimum available space.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S401-249	**2X2X1**	25	0	015	7.88
S401-251	**2x2x1-1/2**	25	0	015	7.88

2" Spigot Tee

Spigot x Spigot x Spigot Sch 40



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
404A-020	**2**	30	0	015	8.22

Male Thread Tee (Branch)

Socket x Socket x Mipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
402B-010	**1**	50	0	040	3.46

2"x1-1/2" Reducing 90° Ell, Socket Style Sch 40

2"x2" 90° Street Ell, Socket x Spigot Sch 40



Handy dual-purpose configuration is 2"x1-1/2" Socket Reducing 90° Ell and also a 2" Socket x 2" Spigot 90° Street Ell.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
406-251N	**2X1-1/2**	10	0	015	9.89

1-1/2" 90° Spigot Elbow

Spigot x Spigot Sch 40



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
422-015	**1-1/2**	25	0	015	7.94

2-1/2"x2" Reducing 90° Ell, Socket Style Sch 40

2-1/2"x2-1/2" 90° Street Ell, Socket x Spigot Sch 40



Handy dual-purpose configuration is 2-1/2" x 2" Socket Reducing 90° Ell and also a 2-1/2" Socket x 2-1/2" Spigot 90° Street Ell.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
406-292N	2-1/2X2 (2-1/2 Spigot)	10	0	040	11.59

2" Short Spigot 45° Street Ell

Spigot x Socket Sch 40

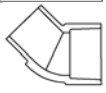


Special short-spigot end allows close connection in extra-tight spaces.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S427-020	**2**	10	0	015	7.01

45° Street Ell

Spig x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
427-005	**1/2**	50	400	040	1.06
427-007	**3/4**	50	0	040	1.64
427-010	**1**	50	0	040	1.98
427-012	**1-1/4**	25	0	040	2.76
427-015	**1-1/2**	25	0	040	3.46
427-020	**2**	25	0	040	4.51
427-025	**2-1/2**	10	0	040	14.68
427-030	**3**	10	0	040	18.23
427-040	**4**	5	0	040	32.68
427-050	**5**	4	0	040	98.27
427-060	**6**	4	0	040	100.94
427-080	**8**	2	0	040	242.78
427-100	**10**	1	0	041	638.82
427-120	**12**	1	0	041	936.57

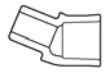
45° Street Ell (continued)

Spig x Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
427-140F	**14**	1	0	047	697.99
427-160F	**16**	1	0	047	948.73
427-180F	**18**	1	0	047	1035.62
427-200F	**20**	1	0	047	1314.52
427-240F	**24**	1	0	047	2070.62

22-1/2° Street Ell

Spig x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
442-005	**1/2**	50	400	040	1.51
442-007	**3/4**	50	0	040	2.35
442-010	**1**	50	0	040	2.81
442-012	**1-1/4**	20	0	040	3.93
442-015	**1-1/2**	25	0	040	4.93
442-020	**2**	20	0	040	6.45
442-025F	**2-1/2**	1	18	047	36.53
442-030	**3**	5	0	040	37.68
442-040	**4**	4	0	040	58.15
442-060	**6**	4	0	040	143.56
442-060F	**6**	1	5	047	84.72
442-080	**8**	1	4	040	345.31
442-080F	**8**	1	4	047	127.60
442-100F	**10**	1	0	047	197.47
442-120F	**12**	1	0	047	296.41

2" Sch 40 Grated Coupling

Socket Style Sch 40



Specially designed internal grate at pipe stop gives extra protection to pumps, filters and equipment from damaging gravel and debris.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
429GR-020	**2**	25	0	015	4.33

1-1/2"x1"x1" 120° Wye

Spigot x Socket x Socket Sch 40



Unique spigot end take off with 120° branched wye pattern for special distribution connections.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
475-21131T	**1-1/2X1X1**	25	0	015	11.12

2" 120° Wye

Socket



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
475-020120	**2**	10	0	015	13.06

Multi Configuration Venturied Tee - Socket Style Sch 40

1-1/2" Socket (2" Spigot) x 1-1/2" Socket x 3/4" Socket (1" Spigot)



Special spa jet fitting with standard 7/16" nozzle plus optional 3/8" or 1/4".

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
473-210	**with 7/16" Nozzle**	25	0	015	7.82
473-210-3/8	**with 3/8" Nozzle**	25	0	015	7.82
473-210-1/4	**with 1/4" Nozzle**	25	0	015	7.82

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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Pool & Spa Fittings

Multi Configuration Venturied Tee - Socket Style Sch 40



1" Socket x 3/4" Socket (1" Spigot) x 3/4" Socket (1" Spigot)

Special spa jet fitting with standard 7/16" nozzle plus optional 3/8" or 1/4".

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
473-825	**with 7/16" Nozzle**	50	0	015	6.39
473-825-3/8	**with 3/8" Nozzle**	50	0	015	6.39
473-825-1/4	**with 1/4" Nozzle**	50	0	015	6.39

Multi Configuration Venturied Tee - Socket Style Sch 40



Individual Nozzles Only

Special spa jet fitting with standard 7/16" nozzle plus optional 3/8" or 1/4".

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
473-1	**7/16" Nozzle**	100	600	015	2.06
473-2	**1/4" Nozzle**	100	600	015	2.06
473-3	**3/8" Nozzle**	100	600	015	2.06

Smooth Barb Adapter



1/2" Smooth Barb x 3/4" Spigot

Special adapter for making connections to 1/2" Vinyl Hose

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
432-007525	**3/4X1/2**	100	600	015	1.86

Nesting Union



2" Socket x 1-1/2" Socket (2" Spigot) Buna-N O-ring

235 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8057-251W	**2X1-1/2 (2)**	5	0	080	61.99

Nesting Union



2" Socket x 1-1/2" Socket (2" Spigot) EPDM O-ring

235 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8097-251W	**2X1-1/2 (2)**	5	0	080	72.95

True Union 2000 Standard Ball Valve - PVC White

PVC White True Union 2000 Standard Ball Valve



Socket Ends - EPDM O-rings

Pressure Rating @73° F (23° C) = 235 psi
Maximum Service Pressure = 140° F (60° C)
Temperature/Pressure De-ratings Apply

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3622-015W	**1-1/2**	1	8	608	93.35
3622-020W	**2**	1	8	608	123.18

Check with Spears® for additional size availability

PVC White True Union 2000 Standard Ball Valves



SR Threaded Ends - EPDM O-rings

Pressure Rating @73° F (23° C) = 235 psi
Maximum Service Pressure = 140° F (60° C)
Temperature/Pressure De-ratings Apply

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3621-015WSR	**1-1/2**	1	8	608	99.98
3621-020WSR	**2**	1	8	608	130.35

Check with Spears® for additional size availability

PVC White Butterfly Valve Lever Handle EPDM Seats



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
682311-015	**1-1/2**	1	0	260	163.68
682311-020	**2**	1	0	260	169.38
682311-025	**2-1/2**	1	0	260	175.07
682311-030	**3**	1	0	260	185.02
682311-040	**4**	1	0	260	206.37
682311-060	**6**	1	0	260	306.01
682311-080	**8**	1	0	260	540.85

PVC White Butterfly Valve Gear Operated EPDM Seats



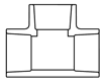
682321-015	**1-1/2**	1	0	261	546.54
682321-020	**2**	1	0	261	596.36
682321-025	**2-1/2**	1	0	261	639.06
682321-030	**3**	1	0	261	644.76
682321-040	**4**	1	0	261	676.06
682321-060	**6**	1	0	261	724.45
682321-080	**8**	1	0	261	1000.82
682321-100	**10**	1	0	261	1201.26
682321-120	**12**	1	0	261	1458.88

Pressure Rating @ 73°F (23°C), Water 1-1/2" - 12" 150 psi
Maximum Service Temperature PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply

Ultra Violet Resistant (UVR) Fittings

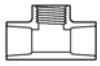


Tee
Soc x Soc x Soc



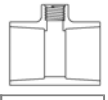
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
401-005UV	**1/2**	50	300	042	2.65
401-007UV	**3/4**	50	0	042	3.13
401-010UV	**1**	50	0	042	6.20
401-012UV	**1-1/4**	25	0	042	8.57
401-015UV	**1-1/2**	25	0	042	12.26
401-020UV	**2**	25	0	042	16.24
401-025UV	**2-1/2**	10	0	042	41.34
401-030UV	**3**	10	0	042	53.16
401-040UV	**4**	6	0	042	143.12

Tee
Soc x Soc x Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
402-005UV	**1/2**	50	300	042	2.95
402-007UV	**3/4**	50	0	042	3.36

Reducing Tee
Soc x Soc x Fipt



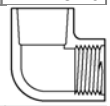
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
402-101UV	**3/4X1/2**	50	0	042	3.84
402-130UV	**1X1/2**	50	0	042	6.48
402-131UV	**1X3/4**	50	0	042	6.48
402-166UV	**1-1/4X1/2**	25	0	042	10.33
402-167UV	**1-1/4X3/4**	25	0	042	10.33
402-209UV	**1-1/2X1/2**	25	0	042	15.51
402-210UV	**1-1/2X3/4**	25	0	042	15.51
402-247UV	**2X1/2**	10	0	042	17.72
402-248UV	**2X3/4**	10	0	042	17.72

90° Ell
Soc x Soc



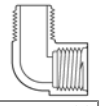
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
406-005UV	**1/2**	50	400	042	2.12
406-007UV	**3/4**	50	300	042	2.65
406-010UV	**1**	50	0	042	4.42
406-012UV	**1-1/4**	25	0	042	6.35
406-015UV	**1-1/2**	25	0	042	9.58
406-020UV	**2**	25	0	042	13.27
406-025UV	**2-1/2**	10	0	042	30.98
406-030UV	**3**	10	0	042	48.72
406-040UV	**4**	8	0	042	125.40

90° Ell
Soc x Fipt



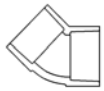
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
407-005UV	**1/2**	50	400	042	2.78
407-007UV	**3/4**	50	300	042	3.13
407-101UV	**3/4X1/2**	50	300	042	4.08
407-131UV	**1X3/4**	50	0	042	5.60

90° Street Ell
Mipt x Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
412-005UV	**1/2**	50	300	042	4.28
412-007UV	**3/4**	50	0	042	5.28

45° Ell
Soc x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
417-005UV	**1/2**	50	400	042	2.95
417-007UV	**3/4**	50	300	042	3.84
417-010UV	**1**	50	0	042	4.61
417-012UV	**1-1/4**	25	0	042	7.46
417-015UV	**1-1/2**	25	0	042	9.01

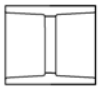
45° Ell (continued)

Soc x Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
417-020UV	**2**	25	0	042	12.85
417-025UV	**2-1/2**	10	0	042	35.42
417-030UV	**3**	10	0	042	54.58
417-040UV	**4**	5	0	042	123.93

Coupling

Soc x Soc



429-005UV	**1/2**	50	600	042	2.20
429-007UV	**3/4**	50	400	042	2.95
429-010UV	**1**	50	0	042	4.42
429-012UV	**1-1/4**	25	150	042	5.93
429-015UV	**1-1/2**	25	0	042	6.79
429-020UV	**2**	25	0	042	10.33
429-025UV	**2-1/2**	12	0	042	23.58
429-030UV	**3**	10	0	042	32.45
429-040UV	**4**	6	0	042	84.81

Coupling

Fipt x Fipt



430-005UV	**1/2**	50	600	042	3.36
430-007UV	**3/4**	50	400	042	5.93

Female Adapter

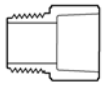
Soc x Fipt



435-005UV	**1/2**	50	600	042	2.65
435-007UV	**3/4**	50	400	042	3.34

Male Adapter

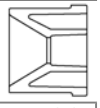
Mipt x Soc



436-074UV	**1/2X3/4**	50	200	042	5.76
436-005UV	**1/2**	50	300	042	2.00
436-007UV	**3/4**	50	400	042	2.34
436-010UV	**1**	50	300	042	2.95
436-012UV	**1-1/4**	25	0	042	4.14
436-015UV	**1-1/2**	25	0	042	5.02
436-020UV	**2**	25	0	042	8.11
436-025UV	**2-1/2**	10	0	042	20.65
436-030UV	**3**	10	0	042	26.53

Reducer Bushing

Spig x Soc Flush Style



437-101UV	**3/4X1/2**	50	300	042	2.34
437-130UV	**1X1/2**	50	200	042	3.36
437-131UV	**1X3/4**	50	300	042	3.36
437-167UV	**1-1/4X3/4**	25	300	042	4.87
437-168UV	**1-1/4X1**	25	300	042	4.87
437-210UV	**1-1/2X3/4**	25	200	042	5.77
437-211UV	**1-1/2X1**	25	200	042	5.77
437-212UV	**1-1/2X1-1/4**	25	200	042	5.77
437-249UV	**2X1**	10	80	042	7.09
437-250UV	**2X1-1/4**	10	120	042	7.09
437-251UV	**2X1-1/2**	25	0	042	7.09
437-288UV	**2-1/2X3/4**	10	0	042	13.27
437-289UV	**2-1/2X1**	10	0	042	13.27
437-290UV	**2-1/2X1-1/4**	10	40	042	13.27
437-292UV	**2-1/2X2**	10	0	042	13.27
437-335UV	**3X1**	10	0	042	16.97
437-336UV	**3X1-1/4**	10	0	042	16.97
437-337UV	**3X1-1/2**	10	0	042	16.97

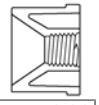
Reducer Bushing (continued)

Spig x Soc Flush Style

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
437-338UV	**3X2**	10	0	042	16.97
437-339UV	**3X2-1/2**	15	0	042	16.97
437-422UV	**4X3**	6	0	042	73.02

Reducer Bushing

Spig x Fipt Flush Style



438-130UV	**1X1/2**	50	200	042	3.36
438-131UV	**1X3/4**	50	200	042	3.36



Schedule 80 Nipple

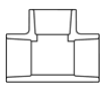
882-060UV	**1/2X6**	25	300	042	2.62
882-080UV	**1/2X8**	25	0	042	3.34
882-100UV	**1/2X10**	25	0	042	4.05
882-120UV	**1/2X12**	25	0	042	5.11
883-060UV	**3/4X6**	25	200	042	3.58
883-080UV	**3/4X8**	25	0	042	4.05
883-100UV	**3/4X10**	25	0	042	4.85
883-120UV	**3/4X12**	25	0	042	5.80

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

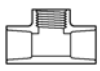


Tee
Soc



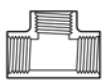
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
401-005G	**1/2**	50	300	043	.91
401-007G	**3/4**	50	0	043	1.02
401-010G	**1**	50	0	043	1.89
401-012G	**1-1/4**	25	0	043	2.99
401-015G	**1-1/2**	25	0	043	3.66
401-020G	**2**	25	0	043	5.26
401-025G	**2-1/2**	10	0	043	17.42
401-030G	**3**	10	0	043	22.85
401-040G	**4**	6	0	043	41.36
401-050G	**5**	5	0	043	99.96
401-060G	**6**	4	0	043	139.29
401-080G	**8**	2	0	043	323.08
401-100G	**10**	1	0	044	1070.48
401-120G	**12**	1	0	044	1581.68

Tee
Soc x Fipt



402-005G	**1/2**	50	300	043	1.18
402-007G	**3/4**	50	0	043	1.81
402-010G	**1**	50	0	043	3.40
402-012G	**1-1/4**	25	0	043	5.40

Tee
Fipt



405-005G	**1/2**	50	0	043	3.25
405-007G	**3/4**	50	0	043	5.11
405-010G	**1**	50	0	043	7.09
405-012G	**1-1/4**	25	0	043	9.81
405-015G	**1-1/2**	25	0	043	10.09
405-020G	**2**	10	0	043	13.37

Reducing Tee
Soc



401-101G	**3/4X1/2**	50	0	043	1.18
401-130G	**1X1/2**	50	0	043	2.00

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Reducing Tee (continued)
Soc

401-131G	**1X3/4**	50	0	043	2.17
401-166G	**1-1/4X1/2**	25	0	043	3.26
401-167G	**1-1/4X3/4**	25	0	043	3.26
401-168G	**1-1/4X1**	25	0	043	3.26
401-209G	**1-1/2X1/2**	25	0	043	5.77
401-210G	**1-1/2X3/4**	25	0	043	5.77
401-211G	**1-1/2X1**	25	0	043	5.77
401-212G	**1-1/2X1-1/4**	25	0	043	5.77
401-247G	**2X1/2**	10	0	043	5.63
D401-247G	**2X1/2**	10	0	043	8.20
401-248G	**2X3/4**	10	0	043	5.63
401-249G	**2X1**	10	0	043	5.63
401-250G	**2X1-1/4**	10	0	043	5.63
401-251G	**2X1-1/2**	10	0	043	5.63
401-337G	**3X1-1/2**	10	0	043	24.88
401-338G	**3X2**	6	0	043	24.87
401-420G	**4X2**	10	0	043	41.36
401-422G	**4X3**	6	0	043	41.36
401-532G	**6X4**	2	0	043	139.29
401-585G	**8X6**	2	0	043	323.06

Reducing Tee
Soc x Fipt



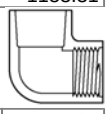
402-101G	**3/4X1/2**	50	0	043	1.54
402-130G	**1X1/2**	50	0	043	2.36
402-131G	**1X3/4**	50	0	043	3.40
402-166G	**1-1/4X1/2**	25	0	043	5.63
402-167G	**1-1/4X3/4**	25	0	043	5.63
402-168G	**1-1/4X1**	25	0	043	5.63
402-199G	**1-1/2X1-1/4X1/2**	25	0	043	6.99
402-209G	**1-1/2X1/2**	25	0	043	6.99
402-210G	**1-1/2X3/4**	25	0	043	6.99
402-211G	**1-1/2X1-1/2X1**	25	0	043	6.99
402-212G	**1-1/2X1-1/4**	25	0	043	6.99
402-247G	**2X1/2**	10	0	043	8.82
402-248G	**2X3/4**	10	0	043	8.82
402-249G	**2X1**	10	0	043	8.82
402-250G	**2X1-1/4**	10	0	043	8.82
402-251G	**2X1-1/2**	10	0	043	8.82

90° Ell
Soc



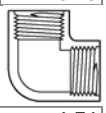
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
406-003G	3/8	50	600	043	3.58
406-005G	1/2	50	400	043	.72
406-007G	3/4	50	300	043	.80
406-010G	1	50	0	043	1.44
406-012G	1-1/4	25	0	043	2.54
406-015G	1-1/2	25	0	043	2.68
406-020G	2	25	0	043	4.33
406-025G	2-1/2	10	0	043	13.00
406-030G	3	10	0	043	15.58
406-040G	4	8	0	043	27.87
406-050G	5	4	0	043	72.05
406-060G	6	4	0	043	88.66
406-080G	8	2	0	043	228.33
406-100G	10	1	0	044	859.88
406-120G	12	1	0	044	1153.31

90° Ell
Soc x Fipt



407-005G	1/2	50	400	043	.91
407-007G	3/4	50	300	043	1.02
407-010G	1	50	0	043	1.89
407-012G	1-1/4	25	0	043	3.19
407-015G	1-1/2	25	0	043	3.54
407-020G	2	10	0	043	9.16

90° Ell
Fipt



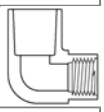
408-005G	1/2	50	400	043	1.74
408-007G	3/4	50	0	043	2.58
408-010G	1	50	0	043	5.45
408-012G	1-1/4	25	0	043	5.84
408-015G	1-1/2	25	0	043	7.38
408-020G	2	10	0	043	11.21

Reducing 90° Ell
Soc



406-101G	3/4X1/2	50	0	043	1.44
406-130G	1X1/2	50	0	043	2.14

Reducing 90° Ell
Soc x Fipt



407-101G	3/4X1/2	50	300	043	1.07

90° Street Ell
Spig x Soc



409-005G	1/2	50	400	043	2.00
409-007G	3/4	50	0	043	2.47
409-010G	1	50	0	043	4.28
409-012G	1-1/4	25	0	043	5.11
409-015G	1-1/2	25	0	043	5.63

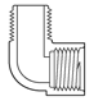
90° Street Ell
Mipt x Soc



410-005G	1/2	50	400	043	1.54
410-007G	3/4	50	0	043	1.81

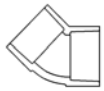
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

90° Street Ell
Mipt x Fipt



412-005G	1/2	50	400	043	2.12
412-007G	3/4	50	0	043	2.58
412-010G	1	50	0	043	4.40
412-015G	1-1/2	25	0	043	5.93

45° Ell
Soc



417-005G	1/2	50	400	043	1.19
417-007G	3/4	50	300	043	1.81
417-010G	1	50	0	043	2.17
417-012G	1-1/4	25	0	043	3.11
417-015G	1-1/2	25	0	043	3.85
417-020G	2	25	0	043	5.02
417-025G	2-1/2	10	0	043	13.01
417-030G	3	10	0	043	20.23
417-040G	4	5	0	043	36.35
417-050G	5	5	0	043	72.05
417-060G	6	8	0	043	89.73
417-080G	8	3	0	043	215.79

22-1/2° Ell
Soc



416-060GF	6	1	5	045	92.25
416-120GF	12	1	2	045	296.38

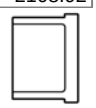
Wye
Soc



100 psi maximum internal pressure rating @ 73°F (23°C)

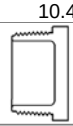
475-100G	10	1	0	044	1427.27
475-120G	12	1	0	044	2108.92

Plug
Spig



449-005G	1/2	50	300	043	1.54
449-007G	3/4	50	300	043	1.81
449-010G	1	50	200	043	2.17
449-012G	1-1/4	25	150	043	2.95
449-015G	1-1/2	25	100	043	3.73
449-020G	2	10	120	043	4.64
449-030G	3	10	0	043	10.48

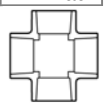
Plug
Mipt



450-003G	3/8	50	300	043	1.99
450-005G	1/2	50	400	043	1.93
450-007G	3/4	50	300	043	2.11
450-010G	1	50	400	043	3.40
450-012G	1-1/4	25	300	043	3.55
450-015G	1-1/2	25	100	043	3.84
450-020G	2	10	120	043	4.92
450-025G	2-1/2	10	0	043	6.83
450-030G	3	10	0	043	10.37
450-040G	4	6	0	043	23.39

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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Cross
Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
420-005G	1/2	50	0	043	2.74
420-007G	3/4	50	0	043	4.52
420-010G	1	50	0	043	5.63
420-012G	1-1/4	25	0	043	7.46
420-015G	1-1/2	25	0	043	8.45
420-020G	2	10	0	043	12.48
420-025G	2-1/2	10	0	043	26.47
420-030G	3	5	0	043	32.45
420-040G	4	4	0	043	48.11

Cap
Soc



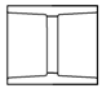
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
447-003G	3/8	50	300	043	1.81
447-005G	1/2	50	300	043	.67
447-007G	3/4	50	300	043	.76
447-010G	1	50	200	043	1.19
447-012G	1-1/4	25	100	043	1.67
447-015G	1-1/2	25	0	043	1.81
447-020G	2	10	80	043	2.20
447-025G	2-1/2	10	0	043	7.02
447-030G	3	10	0	043	7.65
447-040G	4	6	0	043	17.42
447-050G	5	5	0	043	29.24
447-060G	6	4	0	043	41.75
447-080G	8	3	0	043	104.85

Cap
Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
448-003G	3/8	50	300	043	2.47
448-005G	1/2	50	300	043	1.38
448-007G	3/4	50	300	043	1.55
448-010G	1	50	200	043	2.36
448-012G	1-1/4	25	100	043	2.81
448-015G	1-1/2	25	100	043	2.95
448-020G	2	10	120	043	5.21
448-030G	3	10	0	043	10.02
448-040G	4	6	0	043	17.55

Coupling
Soc



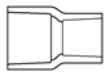
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
429-005G	1/2	50	600	043	.48
429-007G	3/4	50	400	043	.67
429-010G	1	50	0	043	1.15
429-012G	1-1/4	25	150	043	1.54
429-015G	1-1/2	25	0	043	1.67
429-020G	2	25	0	043	2.61
429-025G	2-1/2	12	0	043	5.63
429-030G	3	10	0	043	8.84
429-040G	4	6	0	043	12.78
429-050G	5	5	0	043	23.41
429-060G	6	5	0	043	40.47
429-080G	8	8	0	043	75.54

Coupling
Fipt



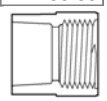
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
430-005G	1/2	50	300	043	.92
430-007G	3/4	50	400	043	1.69
430-010G	1	50	0	043	2.17

Reducer Coupling
Soc



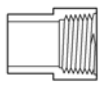
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
429-101G	3/4X1/2	50	200	043	1.18
429-131G	1X3/4	50	0	043	2.00
429-168G	1-1/4X1	25	0	043	3.40
429-212G	1-1/2X1-1/4	25	0	043	3.58
429-251G	2X1-1/2	10	80	043	5.69
429-338G	3X2	8	0	043	29.09
429-422G	4X3	4	0	043	38.35

Female Adapter
Soc x Fipt



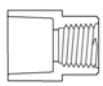
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
435-005G	1/2	50	600	043	.80
435-007G	3/4	50	400	043	1.02
435-010G	1	50	0	043	1.19
435-012G	1-1/4	25	0	043	1.81
435-015G	1-1/2	25	0	043	2.12
435-020G	2	10	80	043	2.83
435-025G	2-1/2	10	0	043	7.13
435-030G	3	5	0	043	9.57
435-040G	4	6	0	043	15.85
435-050G	5	5	0	043	41.02
435-060G	6	5	0	043	58.26

Spigot Female Adapter
Spig x Fipt



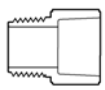
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
478-005G	1/2	50	600	043	.92
478-007G	3/4	25	300	043	1.06
478-010G	1	50	0	043	1.71
478-012G	1-1/4	25	0	043	2.34
478-015G	1-1/2	20	0	043	2.92
478-020G	2	20	0	043	4.28
478-030G	3	10	0	043	14.53
478-040G	4	5	0	043	24.06

Reducing Female Adapter
Soc x Fipt



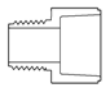
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
435-073G	1/2X3/8	50	600	043	1.44
435-101G	3/4X1/2	50	400	043	1.44
435-131G	1X3/4	50	0	043	1.89

Male Adapter
Mipt x Soc



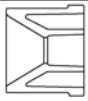
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
436-005G	1/2	50	300	043	.63
436-007G	3/4	50	400	043	.72
436-010G	1	50	300	043	1.27
436-012G	1-1/4	25	200	043	1.54
436-015G	1-1/2	25	0	043	2.12
436-020G	2	25	0	043	2.74
436-025G	2-1/2	10	0	043	8.09
436-030G	3	10	0	043	11.87
436-040G	4	5	0	043	15.11
436-050G	5	5	0	043	24.91
436-060G	6	5	0	043	39.45

Reducing Male Adapter
Mipt x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
436-074G	1/2X3/4	50	200	043	1.27
436-101G	3/4X1/2	50	300	043	1.18

Reducer Bushing Flush Style
Spig x Soc



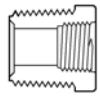
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
437-101G	3/4X1/2	50	300	043	.75
437-130G	1X1/2	50	200	043	1.38
437-131G	1X3/4	50	300	043	1.38
437-166G	1-1/4X1/2	25	300	043	1.81
437-167G	1-1/4X3/4	25	300	043	1.81
437-168G	1-1/4X1	25	300	043	1.81
437-209G	1-1/2X1/2	25	200	043	1.93
437-210G	1-1/2X3/4	25	200	043	1.93
437-211G	1-1/2X1	25	200	043	1.93
437-212G	1-1/2X1-1/4	25	200	043	1.93
437-247G	2X1/2	10	120	043	3.19
437-248G	2X3/4	10	120	043	3.19
437-249G	2X1	10	80	043	3.19
437-250G	2X1-1/4	10	120	043	3.19
437-251G	2X1-1/2	25	0	043	3.19
437-290G	2-1/2X1-1/4	10	40	043	5.12
437-291G	2-1/2X1-1/2	10	0	043	5.12
437-292G	2-1/2X2	10	80	043	5.12
437-334G	3X3/4	10	0	043	7.58
437-335G	3X1	10	0	043	7.58
437-336G	3X1-1/4	10	0	043	7.58
437-337G	3X1-1/2	10	0	043	7.58
437-338G	3X2	10	0	043	7.58
437-339G	3X2-1/2	10	0	043	7.58
437-420G	4X2	6	0	043	16.94
437-421G	4X2-1/2	6	0	043	16.94
437-422G	4X3	6	0	043	16.94
437-490G	5X4	5	0	043	23.79
437-532G	6X4	5	0	043	41.88
437-534G	6X5	5	0	043	41.94
437-582G	8X4	4	0	043	146.13
437-585G	8X6	4	0	043	146.13

Reducer Bushing Flush Style
Spig x Fipt



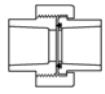
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
438-072G	1/2X1/4	50	300	043	1.54
438-073G	1/2X3/8	50	300	043	1.54
438-098G	3/4X1/4	50	300	043	1.54
438-101G	3/4X1/2	50	300	043	1.18
438-130G	1X1/2	50	200	043	1.89
438-131G	1X3/4	50	300	043	1.89
438-166G	1-1/4X1/2	25	100	043	2.95
438-167G	1-1/4X3/4	25	100	043	2.95
438-168G	1-1/4X1	25	100	043	2.95
438-209G	1-1/2X1/2	25	100	043	3.40
438-210G	1-1/2X3/4	25	100	043	3.40
438-211G	1-1/2X1	25	100	043	3.40
438-212G	1-1/2X1-1/4	25	100	043	3.40
438-247G	2X1/2	10	80	043	4.52
438-248G	2X3/4	10	80	043	4.52
438-249G	2X1	10	80	043	4.52
438-250G	2X1-1/4	10	120	043	4.52
438-251G	2X1-1/2	10	120	043	4.52
438-291G	2-1/2X1-1/2	10	0	043	6.56
438-292G	2-1/2X2	10	40	043	6.56
438-338G	3X2	10	0	043	7.58
438-420G	4X2	6	0	043	16.89
438-422G	4X3	6	0	043	16.89
438-490G	5X4	4	0	043	32.93
438-532G	6X4	5	0	043	61.85

T.T. Bushing
Mipt x Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
439-101G	3/4X1/2	50	300	043	2.12
439-130G	1X1/2	50	300	043	2.95
439-131G	1X3/4	50	200	043	2.95
439-166G	1-1/4X1/2	25	300	043	4.37
439-167G	1-1/4X3/4	25	300	043	4.37
439-168G	1-1/4X1	25	150	043	4.37
439-210G	1-1/2X3/4	25	100	043	5.26
439-211G	1-1/2X1	25	100	043	5.26
439-212G	1-1/2X1-1/4	25	100	043	5.26
439-249G	2X1	10	120	043	5.63
439-250G	2X1-1/4	10	120	043	5.63
439-251G	2X1-1/2	10	60	043	5.63

Union
Soc with Buna-N O-ring Seal



150 psi @ 73°F (23°C)

457-005G	1/2	20	120	043	6.99
457-007G	3/4	15	90	043	8.02
457-010G	1	10	60	043	8.20
457-012G	1-1/4	5	20	043	26.45
457-015G	1-1/2	5	20	043	27.57
457-020G	2	5	0	043	37.16

Union
Soc with EPDM O-ring Seal



150 psi @ 73°F (23°C)

497-005G	1/2	20	120	043	7.71
497-007G	3/4	15	90	043	8.82
497-010G	1	10	60	043	9.01
497-012G	1-1/4	5	30	043	29.08
497-015G	1-1/2	5	20	043	30.34
497-020G	2	5	0	043	40.88

Union
Fipt with Buna-N O-ring Seal



150 psi @ 73°F (23°C)

458-005G	1/2	20	120	043	7.85
458-007G	3/4	15	90	043	13.12
458-010G	1	10	60	043	17.89
458-012G	1-1/4	5	20	043	30.75
458-015G	1-1/2	5	30	043	31.42
458-020G	2	5	0	043	38.58

Union
Fipt with EPDM O-ring Seal



150 psi @ 73°F (23°C)

498-005G	1/2	10	60	043	8.62
498-007G	3/4	15	90	043	14.43
498-010G	1	10	60	043	19.66
498-012G	1-1/4	5	20	043	33.73
498-015G	1-1/2	5	30	043	34.63
498-020G	2	5	0	043	42.45

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PVC Black Schedule 40 Pipe

20' Lengths, Price Per Foot

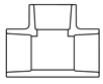


List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PD-400-005B	**1/2**	20	0	744	1.78
PD-400-007B	**3/4**	20	0	744	2.37
PD-400-010B	**1**	20	0	744	3.46

Tee

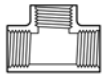
Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
401-005B	**1/2**	50	300	011	.85
401-007B	**3/4**	50	0	011	.96
401-010B	**1**	50	0	011	1.82
401-012B	**1-1/4**	25	0	011	2.84
401-015B	**1-1/2**	25	0	011	3.46
401-020B	**2**	25	0	011	5.03
401-030B	**3**	10	0	011	22.88

Tee

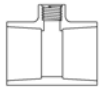
Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
405-005B	**1/2**	50	0	011	3.11
405-007B	**3/4**	50	0	011	4.87
405-010B	**1**	50	0	011	6.77
405-012B	**1-1/4**	25	0	011	9.36
405-015B	**1-1/2**	25	0	011	9.64
405-020B	**2**	10	0	011	12.77

Reducing Tee

Soc x Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
402-101B	**3/4X1/2**	50	0	011	1.47

90° Ell

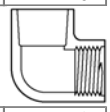
Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
406-005B	**1/2**	50	400	011	.69
406-007B	**3/4**	50	300	011	.76
406-010B	**1**	50	0	011	1.38
406-012B	**1-1/4**	25	0	011	2.43
406-015B	**1-1/2**	25	0	011	2.60
406-020B	**2**	25	0	011	4.07

90° Ell

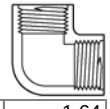
Soc x Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
407-005B	**1/2**	50	400	011	.85
407-007B	**3/4**	50	300	011	.96
407-010B	**1**	50	0	011	1.82
407-012B	**1-1/4**	25	0	011	3.05
407-015B	**1-1/2**	25	0	011	3.37
407-020B	**2**	10	0	011	8.74

90° Ell

Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
408-005B	**1/2**	50	400	011	1.64
408-007B	**3/4**	50	0	011	2.45
408-010B	**1**	50	0	011	5.21

90° Street Ell

Spig x Soc



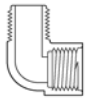
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
409-015B	**1-1/2**	25	0	011	5.39
409-020B	**2**	10	0	011	10.39

90° Street Ell
Mipt x Soc



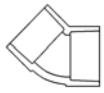
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
410-005B	1/2	50	400	011	1.47
410-007B	3/4	50	0	011	1.75
410-010B	1	50	0	011	2.92
410-012B	1-1/4	25	0	011	4.07
410-015B	1-1/2	25	0	011	4.26
410-020B	2	10	0	011	10.49

90° Street Ell
Mipt x Fipt



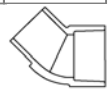
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
412-005B	1/2	50	400	011	2.00

45° Ell
Soc



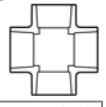
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
417-005B	1/2	50	400	011	1.12
417-007B	3/4	50	300	011	1.75
417-010B	1	50	0	011	2.09
417-012B	1-1/4	25	0	011	2.92
417-015B	1-1/2	25	0	011	3.66
417-020B	2	25	0	011	4.77

45° Street Ell
Spig x Soc



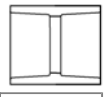
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
427-020B	2	25	0	011	4.77

Cross
Soc



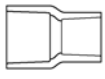
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
420-015B	1-1/2	25	0	011	8.06
420-020B	2	10	0	011	11.91

Coupling
Soc



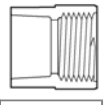
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
429-005B	1/2	50	600	011	.45
429-007B	3/4	50	400	011	.62
429-010B	1	50	0	011	1.07
429-012B	1-1/4	25	150	011	1.47
429-015B	1-1/2	25	0	011	1.58
429-020B	2	25	0	011	2.45

Reducer Coupling
Soc



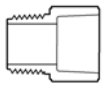
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
429-422B	4X3	4	0	011	36.53

Female Adapter
Soc x Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
435-005B	1/2	50	600	011	.76
435-007B	3/4	50	400	011	.96
435-010B	1	50	0	011	1.12
435-012B	1-1/4	25	0	011	1.75
435-015B	1-1/2	25	0	011	2.00
435-020B	2	10	80	011	2.66

Male Adapter
Mipt x Soc

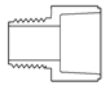


Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
436-005B	1/2	50	300	011	.62

Male Adapter (continued)
Mipt x Soc

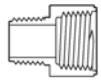
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
436-007B	3/4	50	400	011	.69
436-010B	1	50	300	011	1.22
436-012B	1-1/4	25	0	011	1.47
436-015B	1-1/2	25	0	011	2.00
436-020B	2	25	0	011	2.62
436-030B	3	10	0	011	11.29

Reducing Male Adapter
Mipt x Soc



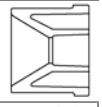
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
436-101B	3/4X1/2	50	300	011	1.12
436-251B	2X1-1/2	10	80	011	6.34

IPT Adapter
Mipt x Fipt



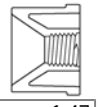
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
446-074B	1/2X3/4	50	200	011	2.62

Reducer Bushing
Spig x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
437-251B	2X1-1/2	25	0	011	3.05
437-335B	3X1	10	0	011	7.22
437-337B	3X1-1/2	10	0	011	7.22

Reducer Bushing
Spig x Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
438-072B	1/2X1/4	50	350	011	1.47

Cap
Soc



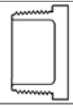
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
447-005B	1/2	50	300	011	.62
447-007B	3/4	50	300	011	.71
447-010B	1	50	200	011	1.12
447-012B	1-1/4	25	100	011	1.58
447-015B	1-1/2	25	0	011	1.75
447-020B	2	10	80	011	2.09
447-040B	4	6	0	011	16.60
447-060B	6	4	0	011	39.79

Cap
Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
448-005B	1/2	50	300	011	1.29
448-007B	3/4	50	300	011	1.52

Plug
Mipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
450-005B	1/2	50	300	011	1.83
450-007B	3/4	50	300	011	1.98
450-010B	1	50	400	011	3.22
450-012B	1-1/4	25	300	011	3.38

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com



PIPE SPECIFICATIONS Standard Length of pipe is 10 Feet. Custom lengths and sizes are available on special order from the pipe manufacturer. All pipe is packed in poly bags and boxed. This material complies with the provisions of Title 21 of the United States FDA Code of Federal Regulations, and is safe for use in food contact applications. Pipe has a UL 94 V-0 rating. Standard threading or grooving of Schedule 40 Clear pipe is not recommended due to insufficient wall thickness. Use specialty clear transition fittings for threaded assemblies or standard PVC transition fittings where applicable.

Part Number	Size	Avg. O.D.	Avg. I.D.	Min. Wall	Max. W.P. psi*	Lbs./Ft.
PL-002	1/4	.540	.354	.088	390	.081
PL-003	3/8	.675	.483	.091	310	.109
PL-005	1/2	.840	.608	.109	300	.161
PL-007	3/4	1.050	.810	.113	240	.214
PL-010	1	1.315	1.033	.133	220	.315
PL-012	1-1/4	1.660	1.364	.140	180	.426
PL-015	1-1/2	1.900	1.592	.145	170	.509
PL-020	2	2.375	2.049	.154	140	.682
PL-025	2-1/2	2.875	2.445	.203	150	1.076
PL-030	3	3.500	3.042	.216	130	1.409
PL-040	4	4.500	3.998	.237	110	2.006
PL-060	6	6.625	6.031	.280	90	3.535
PL-080	8	8.625	7.943	.322	80	5.305

* For water at 73.4°F with solvent welded joints.

PVC Clear Schedule 40 Pipe

10' Lengths, Price Per Foot

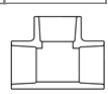


List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PL-002	**1/4**	190	0	742	1.02
PL-003	**3/8**	100	0	742	1.38
PL-005	**1/2**	420	0	742	2.06
PL-007	**3/4**	360	0	742	2.77
PL-010	**1**	360	0	742	4.09
PL-012	**1-1/4**	360	0	742	5.55
PL-015	**1-1/2**	160	0	742	6.64
PL-020	**2**	180	0	742	8.95
PL-025	**2-1/2**	40	0	742	14.14
PL-030	**3**	80	0	742	18.46
PL-040	**4**	40	0	742	27.80
PL-060	**6**	10	0	038	50.82
PL-080	**8**	10	0	038	76.21
PL-100	**10**	10	0	038	122.68
PL-120	**12**	10	0	038	162.05

Tee

Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
401-002L	**1/4**	25	150	039	11.29
401-003L	**3/8**	50	200	039	7.27
401-005L	**1/2**	50	300	039	8.52
401-007L	**3/4**	50	0	039	9.71
401-010L	**1**	50	0	039	18.17
401-012L	**1-1/4**	25	0	039	28.56
401-015L	**1-1/2**	25	0	039	34.63
401-020L	**2**	10	0	039	50.33
401-025L	**2-1/2**	10	0	039	165.89
401-030L	**3**	10	0	039	217.58
401-040L	**4**	6	0	039	393.88
401-060L	**6**	4	0	039	709.01
401-080L	**8**	2	0	039	1276.20

90° Ell

Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
406-002L	**1/4**	25	150	039	9.19
406-003L	**3/8**	50	300	039	9.19
406-005L	**1/2**	50	200	039	6.94

90° Ell (continued)
Soc

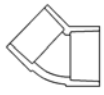
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
406-007L	3/4	50	300	039	7.59
406-010L	1	50	0	039	13.78
406-012L	1-1/4	25	0	039	24.26
406-015L	1-1/2	25	0	039	25.77
406-020L	2	25	0	039	40.84
406-025L	2-1/2	10	0	039	123.92
406-030L	3	10	0	039	148.26
406-040L	4	8	0	039	265.47
406-060L	6	5	0	039	477.86
406-080L	8	2	0	039	860.15

90° Street Ell
Spig x Soc



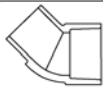
409-005L	1/2	50	400	039	6.94
409-007L	3/4	50	0	039	7.59
409-010L	1	50	0	039	13.78
409-012L	1-1/4	25	0	039	24.26
409-015L	1-1/2	25	0	039	25.77
409-020L	2	10	0	039	40.84
409-025L	2-1/2	10	0	039	123.92

45° Ell
Soc



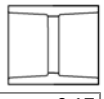
417-002L	1/4	25	150	039	14.75
417-003L	3/8	25	150	039	14.75
417-005L	1/2	50	400	039	11.20
417-007L	3/4	50	300	039	17.29
417-010L	1	50	0	039	20.77
417-012L	1-1/4	25	0	039	29.37
417-015L	1-1/2	25	0	039	36.63
417-020L	2	10	0	039	47.75
417-025L	2-1/2	10	0	039	124.09
417-030L	3	10	0	039	192.64
417-040L	4	5	0	039	346.01
417-060L	6	8	0	039	622.81
417-080L	8	3	0	039	1121.06

45° Street Ell
Spig x Soc



427-005L	1/2	50	400	039	11.20
427-007L	3/4	50	0	039	17.29
427-010L	1	50	0	039	20.77
427-012L	1-1/4	25	0	039	29.37
427-015L	1-1/2	25	0	039	36.63
427-020L	2	25	0	039	47.75
427-025L	2-1/2	10	0	039	124.09
427-030L	3	10	0	039	192.64
427-040L	4	5	0	039	346.01

Coupling
Soc

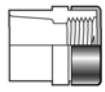


429-002L	1/4	25	150	039	6.17
429-003L	3/8	50	300	039	6.17
429-005L	1/2	50	300	039	4.59
429-007L	3/4	50	200	039	6.18
429-010L	1	50	0	039	10.74
429-012L	1-1/4	25	150	039	14.62
429-015L	1-1/2	25	0	039	15.74
429-020L	2	10	60	039	24.53
429-025L	2-1/2	10	0	039	53.75

Coupling (continued)
Soc

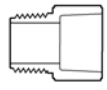
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
429-030L	3	10	0	039	84.33
429-040L	4	6	0	039	121.74
429-060L	6	5	0	039	219.15
429-080L	8	6	0	039	394.44

Female Adapter
Soc x SR Fipt



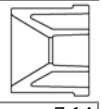
435-002SRL	1/4	25	450	039	12.95
435-003SRL	3/8	25	300	039	12.95
435-005SRL	1/2	25	300	039	7.67
435-007SRL	3/4	25	300	039	9.60
435-010SRL	1	25	200	039	11.09
435-012SRL	1-1/4	10	80	039	17.04
435-015SRL	1-1/2	10	80	039	19.99
435-020SRL	2	10	0	039	26.92
435-025SRL	2-1/2	5	0	039	55.95
435-030SRL	3	10	0	039	91.33
435-040SRL	4	6	0	039	151.06

Male Adapter
Mipt x Soc



436-003L	3/8	50	300	039	8.28
436-005L	1/2	50	300	039	6.18
436-007L	3/4	50	400	039	6.94
436-010L	1	50	300	039	12.18
436-012L	1-1/4	25	0	039	14.71
436-015L	1-1/2	25	0	039	19.97
436-020L	2	25	0	039	26.04
436-025L	2-1/2	10	0	039	77.24
436-030L	3	10	0	039	112.84
436-040L	4	5	0	039	143.91

Reducer Bushing
Spig x Soc



437-101L	3/4X1/2	50	300	039	7.14
437-131L	1X3/4	50	200	039	13.13
437-168L	1-1/4X1	25	150	039	17.29
437-211L	1-1/2X1	25	100	039	18.26
437-212L	1-1/2X1-1/4	25	100	039	18.26
437-251L	2X1-1/2	10	80	039	30.24
437-292L	2-1/2X2	10	40	039	48.64
437-338L	3X2	10	0	039	72.17
437-339L	3X2-1/2	10	0	039	72.17
437-422L	4X3	6	0	039	161.25
437-532L	6X4	5	0	039	324.51
437-585L	8X6	4	0	039	522.47

Cap
Soc



447-002L	1/4	25	150	039	8.28
447-003L	3/8	50	300	039	8.28
447-005L	1/2	50	300	039	6.18
447-007L	3/4	50	300	039	7.14
447-010L	1	50	200	039	11.31
447-012L	1-1/4	25	100	039	15.74
447-015L	1-1/2	25	0	039	17.29
447-020L	2	10	80	039	20.84
447-025L	2-1/2	10	0	039	66.68
447-030L	3	10	0	039	65.65
447-040L	4	6	0	039	149.31

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Cap (continued)					
Soc					
447-060L	**6**	4	0	039	268.76
447-080L	**8**	3	0	039	483.75
Wyes & Reducing Wyes					
Soc					
1/2" - 2" - 235 psi Maximum Internal Pressure Rating @ 73°F (23°C)					
2-1/2" - 6" - 150 psi Maximum Internal Pressure Rating @ 73°F (23°C)					
475-015L	**1-1/2**	20	0	039	45.67
475-020L	**2**	10	0	039	67.23
475-030L	**3**	4	0	039	280.03
475-040L	**4**	4	0	039	509.85
475-060L	**6**	3	0	039	871.62
475-532L	**6X4**	5	0	039	871.62



Designed to Promote Algae Growth in Bioreactor, Biofuel, Bioremediation, Research and Aquaculture Applications

Spears® Clear UV Resistant (UVR) PVC piping is suitable for use where exposure to sunlight is desired. The modified clear PVC material allows light in but blocks the harmful wavelengths that damage the plastic pipe. This specialty pipe can be joined with Spears® PVC Clear solvent cements and primers using standard solvent cement welding practices.

Produced in both Thin Walled UVR pipe down to 0.091" and Schedule 40 UVR pipe to allow rapid growth of algae and provide pressure ratings needed for circulation. Use Spears® PVC Clear Solvent Cements and Primers for joining.

UV Resistant Clear Pipe Dimensions & Pressure Ratings

Thin Walled UVR Pipe

Pipe Size	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.	Max. W.P. PSI*
2"	2.375	2.173	0.091	0.456	80
3"	3.500	3.210	0.135	0.966	80
4"	4.500	4.134	0.172	1.569	80
6"	6.625	6.251	0.172	2.391	70
8"	8.625	8.251	0.172	3.134	53
10"	10.750	10.376	0.172	3.923	43
12"	12.750	12.376	0.172	4.666	36

De-rating Factors @ Elevated Temperature	
Operating Temp °F	De-rating Factor
73	1.00
80	0.88
90	0.75
100	0.62
110	0.51
120	0.40
130	0.31
140	0.22

Schedule 40 UVR Pipe

Pipe Size	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.	Max. W.P. PSI*
1/2"	0.840	0.602	0.109	0.170	300
3/4"	1.050	0.804	0.113	0.226	240
1"	1.315	1.029	0.133	0.333	220
1-1/4"	1.660	1.360	0.140	0.450	180
1-1/2"	1.900	1.590	0.145	0.537	170
2	2.375	2.047	0.154	0.720	140
2-1/2"	2.875	2.445	0.203	1.136	150
3	3.500	3.042	0.216	1.488	130
3-1/2"	4.000	3.521	0.226	1.789	120
4"	4.500	3.998	0.237	2.118	110
6"	6.625	6.031	0.280	3.733	90

Maximum Service Temperature = 140 °F

The temperature de-rating factors shown in table at left can be multiplied by the pressure ratings listed for each pipe size to determine the maximum pressure rating of the pipe at the specified elevated Operating temperatures.

* Pressure Rating @ 73 °F

Thin Walled Clear UVR PVC Pipe

10' Lengths, Price Per Foot



List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PL091-020UVR-10	**2**	10	0	038	4.75
PL135-030UVR-10	**3**	10	0	038	10.06
PL172-040UVR-10	**4**	40	0	038	17.38
PL172-060UVR-10	**6**	10	0	038	27.45
PL172-080UVR-10	**8**	10	0	038	35.96
PL172-100UVR-10	**10**	10	0	038	51.04
PL172-120UVR-10	**12**	10	0	038	60.71

See application information above
Custom lengths available, contact Spears®

Schedule 40 Clear UVR PVC Pipe

10' Lengths, Price Per Foot



List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PL400-005UVR-10	**1/2**	90	0	038	1.73
PL400-007UVR-10	**3/4**	360	0	038	2.32
PL400-010UVR-10	**1**	90	0	038	2.44
PL400-012UVR-10	**1-1/4**	360	0	038	4.66
PL400-015UVR-10	**1-1/2**	50	0	038	5.58
PL400-020UVR-10	**2**	180	0	038	7.51
PL400-025UVR-10	**2-1/2**	40	0	038	11.86
PL400-030UVR-10	**3**	10	0	038	15.50
PL400-035UVR-10	**3-1/2**	10	0	038	19.69

Schedule 40 Clear UVR PVC Pipe (continued)

10' Lengths, Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PL400-040UVR-10	**4**	40	0	038	23.33
PL400-060UVR-10	**6**	10	0	038	42.66

See application information above
Custom lengths available, contact Spears®

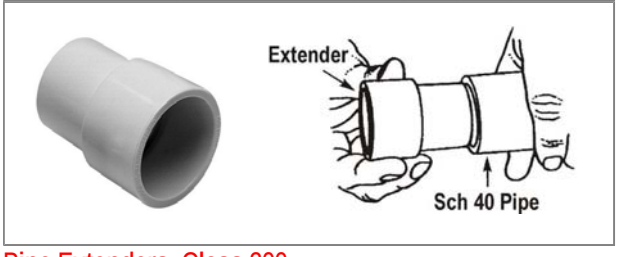
NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Schedule 40 Pipe Repair Fittings
Allows Difficult Broken Pipe Repair To Be Made Easily

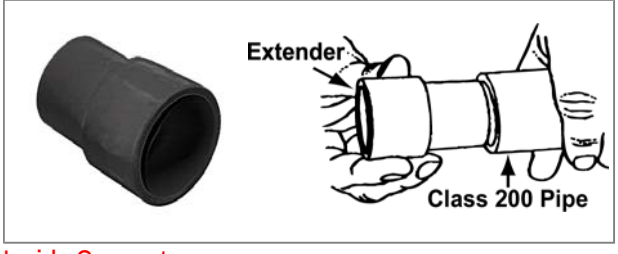
Pipe Extenders

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Pipe O.D. Spigot x Pipe I.D. Spigot					
* Fabricated, Non-Pressure Rated					
S0301-05	**1/2**	100	600	894	1.63
S0301-07	**3/4**	50	300	894	2.68
S0301-10	**1**	50	200	894	3.40
S0301-12	**1-1/4**	50	0	894	4.07
S0301-15	**1-1/2**	50	0	894	4.64
S0301-20	**2**	25	0	894	5.14
S0301-25	**2-1/2**	25	0	894	6.12
S0301-30	**3**	25	0	894	14.31
S0301-40	**4**	20	0	894	16.86
S0301-60F*	**6**	1	10	392	69.63
S0301-80F*	**8**	1	2	392	139.88
S0301-100F*	**10**	1	0	392	217.07
S0301-120F*	**12**	1	0	392	314.77



Pipe Extenders, Class 200

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Pipe O.D. Spigot x Pipe I.D. Spigot					
Fits Class 200 Pipe I.D.					
S0304-10	**1**	25	150	894	3.76
S0304-12	**1-1/4**	48	0	894	4.12
S0304-15	**1-1/2**	48	0	894	4.48
S0304-20	**2**	25	0	894	5.02

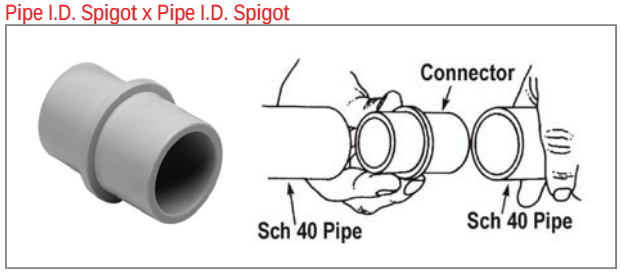


Inside Connectors

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Pipe I.D. Spigot x Pipe I.D. Spigot					
S0302-10	**1**	50	300	894	3.40
S0302-15	**1-1/2**	50	0	894	4.64
S0302-20	**2**	20	0	894	5.14
S0302-30	**3**	25	0	894	16.13
S0302-40	**4**	5	0	894	19.15

Inside Connectors (continued)

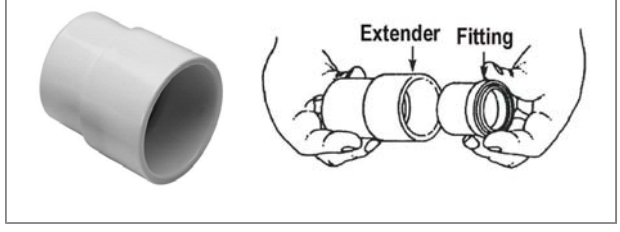
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Pipe I.D. Spigot x Pipe I.D. Spigot					



Schedule 40 Fitting Extender

Extender Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Soc O.D. x Soc					
Spigot End also functions as next size down Socket					
S0303-15	**1-1/2**	25	0	894	6.45
S0303-20	**2**	25	0	894	7.99



Repair Couplings

(S119) Socket x Socket

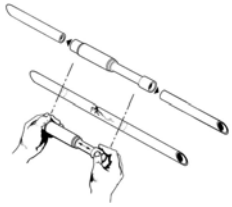


(S118) Spigot x Socket

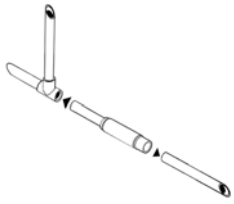
- Multi-function Telescoping Design
- Socket x Socket Configuration for Pipe Repair or Use as a Short-Stroke Expansion Joint
- Spigot x Socket Configuration for Replacing Damaged Fittings
- Both Configurations can be Easily Modified for Opposite Use
- Available in PVC White and PVC Gray
- Double O-ring Seal in EPDM or high-grade FKM
- 1/2" - 2" Pressure Rated to 235 PSI @ 73°F (23°C)
- 2-1/2" - 4" Pressure Rated to 200 PSI @ 73°F (23°C)
- 6" Pressure Rated to 150 PSI @ 73°F (23°C)
- NSF® Certified for Potable Water Use

Versatile Repair Capability

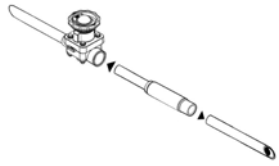
Spears® Repair Couplings provide a variety of system repair and alteration solutions. Use Socket x Socket configurations for quick pipe damage repair - can also be used as a short-stroke expansion joint to compensate for thermal expansion & contraction. Spigot x Socket configurations are excellent for lateral and riser add-ons, damaged fitting replacement, or for installing valves in existing piping systems. Order the wrong configuration? Simply cut coupling from Socket shaft end to function as a spigot or add a coupling to Spigot shaft end for Socket connections.



Pipe Damage Repair
Or Use as Expansion Joint



Lateral Add-on Or Fitting Replacement



Valve Retrofit Installation

PVC - Spig x Soc

PVC White with EPDM O-ring



Can be used as short-stroke Expansion Joint

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S118-05	**1/2**	25	0	025	5.56
S118-07	**3/4**	30	0	025	6.32
S118-10	**1**	15	0	025	7.29
S118-12	**1-1/4**	25	0	025	13.74
S118-15	**1-1/2**	25	0	025	14.96
S118-20	**2**	12	0	025	23.14
S118-25	**2-1/2**	5	0	025	33.57
S118-30	**3**	4	0	025	41.94
S118-40	**4**	2	0	025	73.40
S118-60	**6**	1	0	025	179.60

PVC - Soc x Soc

PVC White with EPDM O-ring



Can be used as short-stroke Expansion Joint

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S119-05	**1/2**	30	0	025	5.56
S119-07	**3/4**	24	0	025	6.32
S119-10	**1**	20	0	025	7.29
S119-12	**1-1/4**	10	0	025	13.74
S119-15	**1-1/2**	16	0	025	14.96
S119-20	**2**	10	0	025	23.14
S119-25	**2-1/2**	5	0	025	33.57
S119-30	**3**	4	0	025	41.94
S119-40	**4**	2	0	025	73.40
S119-60	**6**	1	0	025	179.60

Fabricated Repair Coupling

Gasket x Gasket



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
428-020F	**2**	1	10	047	62.31
428-030F	**3**	1	8	047	80.73
428-040F	**4**	1	4	047	93.48
428-060F	**6**	1	3	047	126.72
428-080F	**8**	1	2	047	173.78
428-100F	**10**	1	0	047	260.34
428-120F	**12**	1	0	047	338.97

Fabricated Repair Coupling (continued)

Gasket x Gasket

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
428-140F	**14**	1	0	047	663.36
428-160F	**16**	1	0	047	928.27
428-180F	**18**	1	0	047	1428.76
428-200F	**20**	1	0	047	1705.29
428-240F	**24**	1	0	047	2380.68

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

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Space Saving, Compact Version of Standard Repair Coupling
Requires 1/3 less Space

(SH119) Socket x Socket



(SH118) Spigot x Socket

- Compact Telescoping Design
- Socket x Socket Configuration for Pipe Repair or Use as a Short-Stroke Expansion Joint
- Spigot x Socket Configuration for Replacing Damaged Fittings
- Both Configurations can be Easily Modified for Opposite Use
- Available in PVC White, Sizes 1/2" - 2"
- EPDM Double O-ring Seal
- Pressure Rated to 235 PSI @ 73°F (23°C)
- NSF® Certified for Potable Water Use

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

PVC - Spig x Soc



PVC White with EPDM O-ring

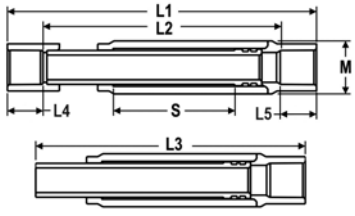
SH118-05	**1/2**	36	0	025	5.56
SH118-07	**3/4**	30	0	025	6.32
SH118-10	**1**	35	0	025	7.29
SH118-12	**1-1/4**	25	0	025	13.74
SH118-15	**1-1/2**	32	0	025	14.96
SH118-20	**2**	15	0	025	23.14

PVC - Soc x Soc



PVC White with EPDM O-ring

SH119-05	**1/2**	40	0	025	5.56
SH119-07	**3/4**	30	0	025	6.32
SH119-10	**1**	30	0	025	7.29
SH119-12	**1-1/4**	20	0	025	13.74
SH119-15	**1-1/2**	21	0	025	14.96
SH119-20	**2**	12	0	025	23.14



Size	L1	L2	L3	L4	L5	S	M
1/2	5-7/8	4-5/16	5-3/32	7/8	11/16	1-13/16	1-7/16
3/4	6-9/16	4-3/4	5-1/2	1	23/32	2-1/8	1-23/32
1	6-13/16	4-3/4	5-23/32	1-1/8	15/16	1-31/32	2-1/16
1-1/4	7-15/16	5-11/16	6-9/16	1-1/4	31/32	2-1/2	2-7/16
1-1/2	8-1/4	5-13/16	6-13/16	1-3/8	1-1/16	2-7/8	2-21/32
2	10-1/16	7-3/8	8-5/16	1-1/2	1-3/16	3-3/16	3-3/16

INSTALLATION NOTE: For expansion joint applications, install with unit 1/2 extended. System must be supported and blocked against thrusts and movement under pressure. May be installed with flow in either direction.

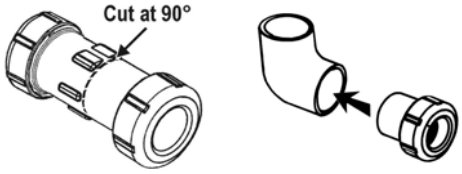
Compression Couplings



- Designed for Quick Connections, System Modifications or Repairs
- Completely Redesigned for Improved Versatility
- PVC White plus New Industrial PVC Gray
- Easy-Thread Compression Nut
- New Spigot Conversion Capability
- Full Service 200 PSI Pressure Rating
- NSF® Certified for Potable Water Use

Option: Convert Fittings to Compression Outlet

Socket-type fittings 3/4" through 3" can be easily converted to compression outlet sizes 1/2" through 2-1/2" by simply cutting the Compression Coupling at the center holding ribs and solvent welding the spigot body into a fitting socket.



Compression Coupling Size (in.)	Body Spigot Size (in.)
1/2	3/4
3/4	1
1	1-1/4
1-1/4	1-1/2
1-1/2	2
2	2-1/2
2-1/2	3

PVC White

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Buna-N Gasket					
S110-05	**1/2**	28	0	024	3.86
S110-07	**3/4**	24	0	024	5.22
S110-10	**1**	20	0	024	6.77
S110-12	**1-1/4**	10	0	024	10.38
S110-15	**1-1/2**	16	0	024	10.72
S110-20	**2**	12	0	024	13.94
S110-25	**2-1/2**	6	0	024	26.21
S110-30	**3**	4	0	024	34.32
S110-40	**4**	4	0	024	56.44
S110-60	**6**	1	0	024	128.36

PVC White

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
EPDM Gasket					
S110E-05	**1/2**	28	0	024	4.51
S110E-07	**3/4**	24	0	024	5.86
S110E-10	**1**	20	0	024	7.78
S110E-12	**1-1/4**	10	0	024	12.01
S110E-15	**1-1/2**	16	0	024	12.50
S110E-20	**2**	12	0	024	15.61

PVC White (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
EPDM Gasket					
S110E-25	**2-1/2**	6	0	024	29.21
S110E-30	**3**	4	0	024	38.19
S110E-40	**4**	4	0	024	62.44
S110E-60	**6**	1	0	024	148.40

PVC Gray

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
EPDM Gasket					
S110E-05G	**1/2**	28	0	024	4.60
S110E-07G	**3/4**	24	0	024	6.17
S110E-10G	**1**	15	0	024	7.96
S110E-12G	**1-1/4**	10	0	024	12.27
S110E-15G	**1-1/2**	16	0	024	12.67
S110E-20G	**2**	12	0	024	16.44
S110E-25G	**2-1/2**	6	0	024	30.96
S110E-30G	**3**	4	0	024	40.48
S110E-40G	**4**	4	0	024	66.60
S110E-60G	**6**	1	0	024	151.46

GripLoc™ Compression Coupling

PVC White GripLoc™

EPDM Gasket



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S112-05	**1/2**	28	0	024	18.37
S112-07	**3/4**	24	0	024	20.30
S112-10	**1**	20	0	024	25.48
S112-12	**1-1/4**	10	0	024	31.07
S112-15	**1-1/2**	16	0	024	37.63
S112-20	**2**	12	0	024	44.35

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Compression Coupling Nut Wrenches

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Compression Coupling Nut Wrenches



CCW-005	**1/2**	1	50	299	11.93
CCW-007	**3/4**	1	50	299	12.14
CCW-010	**1**	1	50	299	12.65
CCW-012	**1-1/4**	1	50	299	14.32
CCW-015	**1-1/2**	1	50	299	15.44
CCW-020*	**2**	1	50	299	17.25
CCW-030**	**3**	1	25	299	21.22
CCW-060	**6**	8	0	299	31.92

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Compression Coupling Nut Wrenches (continued)

* CCW-20 - Wrench also fits 2-1/2" Coupling Body
**CCW-30 - Wrench also fits 4" Coupling Body

Compression Coupling Nut Wrench Set

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CCW-000	**Set**	1	25	299	99.68
Complete Set of Wrenches, Sizes 1/2 - 3					

Compression Male Adapters



- Quickly Adapts Pipe to MIPT Thread
- Easy-Thread Compression Nut
- PVC White with Buna-N or EPDM Gasket
- 200 psi Pressure Rating
- NSF® Certified for Potable Water Use

Uses same Nut Wrench sets available for Compression Couplings

PVC Compression Male Adapters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Buna-N Gasket					
S130-05	**1/2**	25	150	024	3.14
S130-07	**3/4**	25	200	024	3.79
S130-10	**1**	25	0	024	4.81
S130-12	**1-1/4**	25	0	024	7.39
S130-15	**1-1/2**	25	0	024	7.58
S130-20	**2**	25	0	024	9.45

PVC Compression Male Adapters

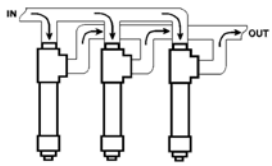
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
EPDM Gaskets					
S130E-05	**1/2**	25	150	024	6.67
S130E-07	**3/4**	25	200	024	7.65
S130E-10	**1**	25	0	024	10.32
S130E-12	**1-1/4**	25	0	024	13.06
S130E-15	**1-1/2**	25	0	024	13.68
S130E-20	**2**	25	0	024	16.01

Specially designed for agricultural and irrigation applications. Suitable for any application where cool, filtered water is required. Standard units utilize an internal-to-external filter cartridge. See following page for reverse flow (external to internal) filters.



- 200 psi Working Pressure Non-Shock @ 73°F (23°C)
- Filter Body is made from NSF®-PW Approved PVC Material
- Optional Screen Meshes
- Compact Design, Easy to Clean
- Lightweight, Easy to Install
- Filter Screens are designed using a standard perforated Stainless Steel Screen
- Mesh Sizes include an inner Stainless Steel Cloth with Spring Support (external cloth on reverse flow filters)
- Pressure loss: 100 GPM – 3 psi 50 GPM – 1.25 psi
- May be bushed to required pipe size

- When more than 100 gpm is required, filters may be installed in parallel
- When installing filter, allow space for removing filter screen for cleaning
- Remove stainless steel filter screen before solvent welding filter to pipe manifold
- When filters are installed in the direct sun, it is suggested the filter body be coated with a water-base latex paint having a high reflectance
- Installation in a shaded area is preferred



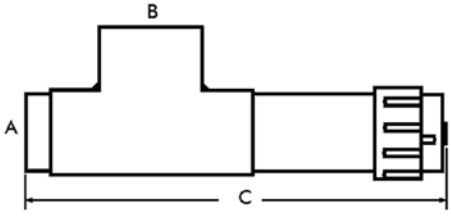
—CAUTION—

- WATER HAMMER MAY CAUSE SEVERE DAMAGE TO THE FILTER ASSEMBLY.
- BACK FLUSHING IS NOT RECOMMENDED.
- QUALITY GRADE THREAD SEALANT IS RECOMMENDED FOR ALL THREADED PVC CONNECTIONS.

Mesh Size	Hole Size (in.)	Part Number Extension
1/16" Holes	.0625	-16
1/32" Holes	.0312	-32
50 Mesh	.0117	-50
76 Mesh	.0095	-76
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.

Filter Dimensions & Weights



Series	A Inlet		B Outlet	C Overall Length	Screen Length	Filter Approx. Weight
	Socket	Spigot				
FLR	2-1/2	3	4	28	24	8
MFLR	2-1/2	3	4	16	12	4-3/4

Filter Assembly with Stainless Steel Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
100 GPM					
FL-16*	**2-1/2 /3 x 4**	1	0	020	555.11
FL-32*	**2-1/2 /3 x 4**	1	0	020	567.73
FL-50	**2-1/2 /3 x 4**	1	0	020	643.40
FL-76	**2-1/2 /3 x 4**	1	0	020	777.14
FL-100	**2-1/2 /3 x 4**	1	0	020	706.48
FL-150	**2-1/2 /3 x 4**	1	0	020	731.74
FL-200	**2-1/2 /3 x 4**	1	0	020	794.81
*Standard FL-16 and FL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet. NOTE: Filter Assemblies are furnished standard with a 1-1/4" IPS tapped cap (FL4a) for use with a valve, or may be plugged off (plug not furnished). Optional cap available with 1/4" IPS tapping for use with a pressure gauge — specify FL-5a when ordering.					
50 GPM					
MFL-16*	**2-1/2 /3 x 2**	1	0	020	466.82
MFL-32*	**2-1/2 /3 x 2**	1	0	020	474.37
MFL-50	**2-1/2 /3 x 2**	1	0	020	489.48
MFL-76	**2-1/2 /3 x 2**	1	0	020	592.98
MFL-100	**2-1/2 /3 x 2**	1	0	020	517.27
MFL-150	**2-1/2 /3 x 2**	1	0	020	542.49
MFL-200	**2-1/2 /3 x 2**	1	0	020	605.57
*Standard FL-16 and FL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet. NOTE: Filter Assemblies are furnished standard with a 1-1/4" IPS tapped cap (FL4a) for use with a valve, or may be plugged off (plug not furnished). Optional cap available with 1/4" IPS tapping for use with a pressure gauge — specify FL-5a when ordering.					

Filter Replacement Screens

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
100 GPM (24" Length)					
FL-16-1	**1/16" Holes**	3	0	020	222.04
FL-32-1	**1/32" Holes**	3	0	020	242.22
FL-50-1	**50 Mesh**	3	0	020	479.42

Filter Replacement Screens (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
100 GPM (24" Length)					
FL-76-1	**76 Mesh**	3	0	020	474.37
FL-100-1	**100 Mesh**	3	0	020	373.45
FL-150-1	**150 Mesh**	3	0	020	403.71
FL-200-1	**200 Mesh**	3	0	020	499.60
NOTE: When ordering replacement screens for FL and MFL Series Filters, please provide exact length of old screen within 1/64" to ensure proper fit of new screen in your filter body.					
50 GPM (12" Length)					
MFL-16-1	**1/16" Holes**	3	0	020	222.04
MFL-32-1	**1/32" Holes**	3	0	020	232.14
MFL-50-1	**50 Mesh**	3	0	020	252.33
MFL-76-1	**76 Mesh**	3	0	020	358.29
MFL-100-1	**100 Mesh**	3	0	020	277.57
MFL-150-1	**150 Mesh**	3	0	020	307.85
MFL-200-1	**200 Mesh**	3	0	020	378.46
NOTE: When ordering replacement screens for FL and MFL Series Filters, please provide exact length of old screen within 1/64" to ensure proper fit of new screen in your filter body.					

Filter Replacement Components

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
100 GPM Filter Body					
FL-11	**2-1/2 /3 X 4**	1	0	020	378.46
50 GPM Filter Body					
MFL-11	**2-1/2 /3 X 2**	1	0	020	290.17

Components for Old-Style Filters w/3" Bottom Cap

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Filter Cap w/Gasket					
FL-4A	**3X1-1/4**	70	0	020	31.55
FL-5A	**3X1/4**	70	0	020	31.55

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Filters

Components for Old-Style Filters w/3" Bottom Cap

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Cap Gasket Only					
FCG-5	**3**	2	0	020	10.04

Components for New-Style Filters w/4" Bottom Cap

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Filter Cap w/O-rings					
FL-4B	**4X1-1/4**	25	0	020	57.97

Components for New-Style Filters w/4" Bottom Cap (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Filter Cap w/O-rings					
FL-5B	**4X1/4**	1	0	020	93.78
Includes Cap with Cap O-ring (1) and bottom Filter Bushing O-ring (1)					
Cap O-Ring Only					
B-242	**- - -**	100	0	901	.83
Filter Bushing O-Rings					
B-335-60	**- - -**	100	0	901	3.66
Each filter uses two (2) Filter Bushing O-rings for top and bottom screen seals					

Reverse Flow Filters



100 GPM



50 GPM

- Filter cartridge specially designed for external-to-internal filtration
- Traps sediment and debris on outside of filter (standard filters use internal-to-external flow)
- 100 GPM and 50 GPM styles available

100 GPM Reverse Flow Filter Assembly with Stainless Steel Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Socket x Socket/Spigot					
FLR-16*	**4X2-1/2 /3**	1	0	020	555.11
FLR-32*	**4X2-1/2 /3**	1	0	020	567.73
FLR-50	**4X2-1/2 /3**	1	0	020	643.40
FLR-76	**4X2-1/2 /3**	1	0	020	777.14
FLR-100	**4X2-1/2 /3**	1	0	020	706.48
FLR-150	**4X2-1/2 /3**	1	0	020	731.74
FLR-200	**4X2-1/2 /3**	1	0	020	794.81
*Standard FL-16 and FL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.					

50 GPM Filter Assembly with Stainless Steel Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Socket x Socket/Spigot					
MFLR-16*	**2X2-1/2 /3**	1	0	020	466.82
MFLR-32*	**2X2-1/2 /3**	1	0	020	474.37
MFLR-50	**2X2-1/2 /3**	1	0	020	489.48
MFLR-76	**2X2-1/2 /3**	1	0	020	592.98
MFLR-100	**2X2-1/2 /3**	1	0	020	517.27
MFLR-150	**2X2-1/2 /3**	1	0	020	542.49
MFLR-200	**2X2-1/2 /3**	1	0	020	605.57
*Standard MFL-16 and MFL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.					

100 GPM Reverse Flow Filter Replacement Screens (24" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-16-1	**1/16" Holes**	3	0	020	222.04
FL-32-1	**1/32" Holes**	3	0	020	242.22
FLR-50-1	**50 Mesh**	3	0	020	243.39
FLR-76-1	**76 Mesh**	3	0	020	474.37
FLR-100-1	**100 Mesh**	3	0	020	337.02

100 GPM Reverse Flow Filter Replacement Screens (24" Length) (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FLR-150-1	**150 Mesh**	3	0	020	383.52
FLR-200-1	**200 Mesh**	3	0	020	474.62

50 GPM Reverse Flow Filter Replacement Screens (12" Length)

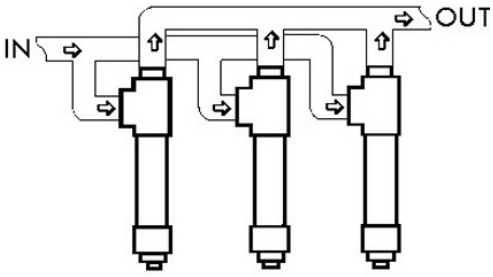
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-16-1	**1/16" Holes**	3	0	020	222.04
MFL-32-1	**1/32" Holes**	3	0	020	232.14
MFLR-50-1	**50 Mesh**	3	0	020	256.21
MFLR-76-1	**76 Mesh**	3	0	020	358.29
MFLR-100-1	**100 Mesh**	3	0	020	263.67
MFLR-150-1	**150 Mesh**	3	0	020	292.44
MFLR-200-1	**200 Mesh**	3	0	020	359.53

Reverse Flow Filters

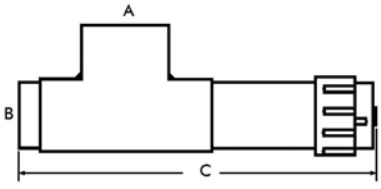
Mesh Size	Hole Size (in.)	Part Number Extension
1/16" Holes	.0625	-16
1/32" Holes	.0312	-32
50 Mesh	.0117	-50
76 Mesh	.0095	-76
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.
Example: FLR-50 = 50 Mesh

Typical Reverse Flow Application



- When more than 100 gpm is required, filters may be installed in parallel
- When installing filter, allow space for removing filter screen for cleaning
- Remove stainless steel filter screen before solvent welding filter to pipe manifold
- When filters are installed in direct sunlight, it is suggested the filter body be coated with a water-base latex paint having a high reflectance
- Installation in a shaded area is preferred



Series	A Inlet	B Outlet		C Overall Length	Screen Length	Filter Approx. Weight
		Socket	Spigot			
FLR	4	2-1/2	3	28	24	8
MFLR	4	2-1/2	3	16	12	4-3/4

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Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

100 GPM and 50 GPM • PVC White • Buna O-ring Seal



100 GPM 50 GPM

- In-line Design Simplifies Installation.
- Allows Easy Parallel Filter Configuration for Increased Flow and Filtration.
- Removable Type 304 Stainless Steel Filter Cartridges in Assorted Perforations and Screen Mesh.
- Standard Flow Filter (Internal-to-External) Traps Sediment on Inside of Cartridge, Reverse Flow Filter (External-to-Internal) Traps Sediment on Outside of Cartridge.
- Convenient Bottom Drain with 1-1/4" NPT Stainless Steel Reinforced Plastic Thread and Plug. Optional Cap with 1/4" Outlet Available.
- 200 psi Working Pressure for Water @ 73°F (23°C).
- Manufactured from NSF® Certified PVC Material.

Mesh Size	Hole Size (in.)	Part Number Extension
1/16" Holes	.0625	-16
1/32" Holes	.0312	-32
50 Mesh	.0117	-50
76 Mesh	.0095	-76
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.
Example: TF-50 = 50 Mesh

100 GPM PVC White Tee Filter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Buna-N O-ring Seal with Stainless Steel Screen					
TF-16*	2-1/2 /3 x 2-1/2 /3	1	0	020	555.11
TF-32*	2-1/2 /3 x 2-1/2 /3	1	0	020	567.73
TF-50	2-1/2 /3 x 2-1/2 /3	1	0	020	643.40
TF-76	2-1/2 /3 x 2-1/2 /3	1	0	020	777.14
TF-100	2-1/2 /3 x 2-1/2 /3	1	0	020	706.48
TF-150	2-1/2 /3 x 2-1/2 /3	1	0	020	731.74
TF-200	2-1/2 /3 x 2-1/2 /3	1	0	020	794.81

50 GPM PVC White Tee Filter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Buna-N O-ring Seal with Stainless Steel Screen					
MTF-16*	2-1/2 /3 x 2-1/2 /3	1	0	020	466.82
MTF-32*	2-1/2 /3 x 2-1/2 /3	1	0	020	474.37
MTF-50	2-1/2 /3 x 2-1/2 /3	1	0	020	489.48
MTF-76	2-1/2 /3 x 2-1/2 /3	1	0	020	592.98
MTF-100	2-1/2 /3 x 2-1/2 /3	1	0	020	517.27
MTF-150	2-1/2 /3 x 2-1/2 /3	1	0	020	542.49
MTF-200	2-1/2 /3 x 2-1/2 /3	1	0	020	605.57

100 GPM PVC White Reverse Tee Filter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Buna-N O-ring Seal with Stainless Steel Screen					
TF-16*	2-1/2 /3 x 2-1/2 /3	1	0	020	555.11
TF-32*	2-1/2 /3 x 2-1/2 /3	1	0	020	567.73
TFR-50	2-1/2 /3 x 2-1/2 /3	1	0	020	643.40
TFR-76	2-1/2 /3 x 2-1/2 /3	1	0	020	777.14
TFR-100	2-1/2 /3 x 2-1/2 /3	1	0	020	706.48
TFR-150	2-1/2 /3 x 2-1/2 /3	1	0	020	731.74
TFR-200	2-1/2 /3 x 2-1/2 /3	1	0	020	794.81

50 GPM PVC White Reverse Tee Filter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Buna-N O-ring Seal with Stainless Steel Screen					
MTF-16*	2-1/2 /3 x 2-1/2 /3	1	0	020	466.82
MTF-32*	2-1/2 /3 x 2-1/2 /3	1	0	020	474.37
MTFR-50	2-1/2 /3 x 2-1/2 /3	1	0	020	489.48
MTFR-76	2-1/2 /3 x 2-1/2 /3	1	0	020	592.98
MTFR-100	2-1/2 /3 x 2-1/2 /3	1	0	020	517.27
MTFR-150	2-1/2 /3 x 2-1/2 /3	1	0	020	542.49
MTFR-200	2-1/2 /3 x 2-1/2 /3	1	0	020	605.57

*Standard TF-16, TF-32, MTF-16 & MTF-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

100 GPM Filter Replacement Screens for TF Filters (24" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-16-1	**1/16" Holes**	3	0	020	222.04
FL-32-1	**1/32" Holes**	3	0	020	242.22
FL-50-1	**50 Mesh**	3	0	020	479.42

100 GPM Filter Replacement Screens for TF Filters (24" Length) (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-76-1	**76 Mesh**	3	0	020	474.37
FL-100-1	**100 Mesh**	3	0	020	373.45
FL-150-1	**150 Mesh**	3	0	020	403.71
FL-200-1	**200 Mesh**	3	0	020	499.60

NOTE: When ordering replacement screens for TF and MTF Series Filters, please provide exact length of old screen within 1/64" to insure proper fit of new screen in your filter body.

50 GPM Filter Replacement Screens for MTF Filters (12" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-16-1	**1/16" Holes**	3	0	020	222.04
MFL-32-1	**1/32" Holes**	3	0	020	232.14
MFL-50-1	**50 Mesh**	3	0	020	252.33
MFL-76-1	**76 Mesh**	3	0	020	358.29
MFL-100-1	**100 Mesh**	3	0	020	277.57
MFL-150-1	**150 Mesh**	3	0	020	307.85
MFL-200-1	**200 Mesh**	3	0	020	378.46

NOTE: When ordering replacement screens for TF and MTF Series Filters, please provide exact length of old screen within 1/64" to insure proper fit of new screen in your filter body.

100 GPM Reverse Flow Filter Replacement Screens for TFR Filters (24" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-16-1	**1/16" Holes**	3	0	020	222.04
FL-32-1	**1/32" Holes**	3	0	020	242.22
FLR-50-1	**50 Mesh**	3	0	020	243.39
FLR-76-1	**76 Mesh**	3	0	020	474.37
FLR-100-1	**100 Mesh**	3	0	020	337.02
FLR-150-1	**150 Mesh**	3	0	020	383.52
FLR-200-1	**200 Mesh**	3	0	020	474.62

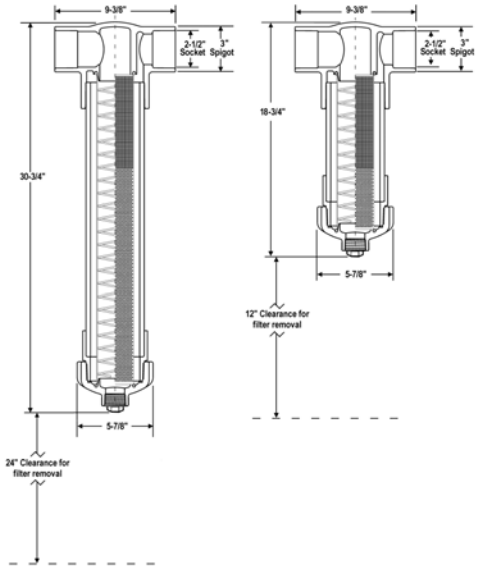
50 GPM Reverse Flow Filter Replacement Screens for MTFR Filters (12" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-16-1	**1/16" Holes**	3	0	020	222.04
MFL-32-1	**1/32" Holes**	3	0	020	232.14
MFLR-50-1	**50 Mesh**	3	0	020	256.21
MFLR-76-1	**76 Mesh**	3	0	020	358.29
MFLR-100-1	**100 Mesh**	3	0	020	263.67
MFLR-150-1	**150 Mesh**	3	0	020	292.44
MFLR-200-1	**200 Mesh**	3	0	020	359.53

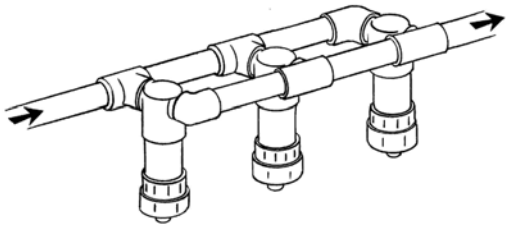
IN-LINE TECHNICAL INFORMATION

Dimensions

Filter includes drain plug for 1-1/4" NPT outlet. Optional valve for blow-out or filter cap with 1/4" NPT outlet can be purchased separately.

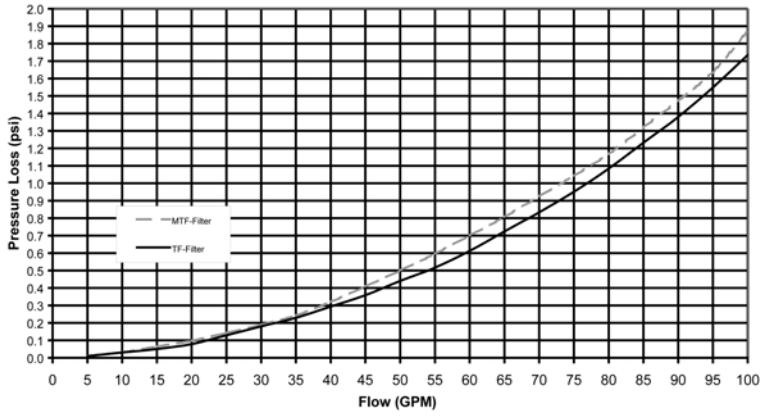


Parallel Filter Installation



- When more than 100 gpm is required, filters may be installed in parallel.
- When installing filter, allow space for removing filter screen for cleaning.
- Remove stainless steel filter screen before solvent welding filter to pipe manifold to avoid cement contact with screen.
- When filters are installed in the direct sun, it is suggested the filter body be coated with a water-base latex paint having a high reflectance.
- Installation in a shaded area is preferred.

Pressure Loss



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Hose Filters



7 GPM Steel



7 GPM Plastic/Nylon

NOTE: It is recommended to connect the inlet of the Hose Filter to the system with a swivel adapter such as Spears® AP Series, to facilitate servicing of the filter element (refer to Hose Fittings).

Mesh Size	Hole Size (in.)	Part Number Extension
20 Mesh	.0331	-20
30 Mesh	.0232	-30
50 Mesh	.0117	-50
80 Mesh	.0070	-80
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.
Example: HF-50 = 50 Mesh

7 GPM Hose Filter Assembly

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
with Stainless Steel Screen					
HF-20	**3/4**	10	60	020	18.71
HF-30	**3/4**	10	60	020	18.71
HF-50	**3/4**	10	60	020	18.71
HF-80	**3/4**	10	60	020	18.71
HF-100	**3/4**	10	60	020	19.43
HF-150	**3/4**	10	60	020	19.67
HF-200	**3/4**	10	60	020	20.20
with Plastic/Nylon Screen					
HF-150N	**3/4**	10	60	020	19.67

Hose Filter Replacement Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Stainless Steel Screen					
HF-20-1W	**5**	25	150	020	6.84
HF-30-1W	**5**	25	150	020	6.84
HF-50-1W	**5**	25	150	020	6.84
HF-80-1W	**5**	25	150	020	6.84
HF-100-1W	**5**	25	150	020	10.11
HF-150-1W	**5**	25	150	020	10.11
HF-200-1W	**5**	25	150	020	10.11
Plastic/Nylon Screen					
HF-150-1NW	**4-3/4**	25	150	020	10.11

7 GPM Hose Filter Body Components

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Hose Filter Body w/o screen					
HF	**3/4**	10	60	020	14.07
Hose Washer					
W-100	**3/4**	50	1500	020	.04
Screen Washer					
S-W	**- - -**	600	0	901	.21

• Hose Fittings • Solvent Weld For Flexible PVC Hose

FHT = Female Hose Thread
Fipt = Female Iron Pipe Thread
HS = Hose Socket
Ins = Male Insert Barb

MHT = Male Hose Thread
Mipt = Male Iron Pipe Thread
Soc = IPS Solvent Weld Socket

Hose Coupling



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
C-44	**1/2**	200	0	020	.93
C-55	**5/8**	100	0	020	1.23
C-66	**3/4**	100	0	020	2.35

90° Ell

MHT x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
EHP-007	**3/4**	50	0	020	2.62
EHP-101	**3/4X1/2**	50	0	020	2.24

Hose Tee

MHT x MHT x FHT Swivel with Washer



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
AP-101	**3/4**	50	0	020	4.54



W-100



W-101

Hose Washer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Washer Only					
W-100	**3/4**	50	1500	020	.04
W-101	**3/4**	400	2400	020	1.21

Swivel Adapter

Fipt x FHT Swivel with Washer



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
AP-105	**1/2X3/4**	50	200	020	2.95
AP-106	**3/4**	50	200	020	2.95

Swivel Adapter

Mipt x FHT Swivel with Washer



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
AP-109	**3/4**	50	200	020	2.95
AP-112	**1/2X3/4**	50	200	020	2.95

Swivel Adapter

FHT Swivel x FHT Swivel with Washer



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
AP-110	**3/4**	50	200	020	2.95

Female Adapter

FHT Swivel x HS with Washer



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
F-64	**3/4X1/2**	100	0	020	2.28
F-65	**3/4X5/8**	100	0	020	2.43
F-66	**3/4**	100	0	020	2.51
FHT Swivel x Soc					
F-64-P	**3/4X1/2**	100	0	020	2.28
F-66-P	**3/4**	100	0	020	2.51

Male Adapter

Mipt x HS



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
M-44	**1/2X1/2**	50	300	020	1.27
MHT x HS					
M-64	**3/4X1/2**	50	300	020	1.29
M-65	**3/4X5/8**	50	200	020	2.06
M-66	**3/4**	50	200	020	2.39
MHT x Soc					
M-64-P	**3/4X1/2**	50	200	020	1.27
M-66-P	**3/4**	50	200	020	2.39

• Hose Fittings • For 1/2" Polyethylene (.580 I.D.) Hose

Female Compression Adapter

FHT x Poly Adapter with Insert Expander



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
F-64B	**3/4X1/2**	50	600	020	2.06

Male Compression Adapter

MHT x Poly Adapter with Insert Expander



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
M-64B	**3/4X1/2**	100	0	020	1.58

Hose Tee

Ins x Ins x FHT Swivel



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
AP-101B	**1/2X3/4**	50	0	020	3.54

Transition Tee

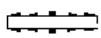
Soc x Soc x Ins



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
1102-007	**3/4**	50	0	040	3.22
1102-130	**1X1/2**	200	0	040	3.61
1102-250	**2X1-1/4**	10	0	040	5.08

Insert Coupling

Ins x Ins



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
1429-005A	**1/2**	200	0	140	.98

Insert Male Adapter

Ins x Mipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
1436-005A	**1/2**	200	0	140	.82

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

• Hose Fittings • For 1/2" Polyethylene (.580 I.D.) Hose

Plug
MHT



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HPL-6	**3/4**	100	600	020	2.06

Cap
FHT with Washer



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
AP-100	**3/4**	200	0	020	1.72

Hose Closure
For 1/2" Poly Hose



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S-HC-1	**1/2**	200	0	020	.91

Hose Adapters

For Solid Set Or Moveable Aluminum Systems

Fipt = Female Iron Pipe Thread
MHT = Male Hose Thread
Mipt = Male Iron Pipe Thread
Rebar = Accepts 1/2" Rebar

Cross
MHT x MHT x Fipt x MHT



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P-101	**3/4X3/4X1/2X3/4**	125	0	020	8.91

MHT x MHT x Fipt x Mipt

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P-100	**3/4**	125	0	020	8.91
P-102	**3/4X3/4X1/2X3/4**	100	0	020	8.91
P-103	**3/4X3/4X1/2X1/2**	50	0	020	8.91

Rebar Cross
MHT x MHT x Fipt x Rebar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PR-101	**3/4X1/2**	50	0	020	9.58
PR-103	**3/4X3/4X1/2X1/2**	50	0	020	9.58

Rebar Ell
MHT x Fipt x Rebar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PR-100	**3/4X1/2X1/2**	100	0	020	5.04
PR-102	**3/4X3/4X1/2**	100	0	020	5.04

Irrigation Accessories

Spears® PVC Adapter System offers a unique method for expanding field irrigation systems that lends versatility and economy to your project. These adapters are designed to use 1/2", 5/8" or 3/4" vinyl hose, and the Rebar fittings and crosses accept a 1/2" or 3/4" sprinkler base. Transition to the existing system can be accomplished with any one of the threaded outlets offered.

New Installation — Spears® PVC Adapter System is designed with threaded or swivel thread connections which simplify the initial installation and minimize material, manpower and installation costs. Additional savings accrue through a reduction of the number of laterals required.

Improving Existing Systems — The Spears® Adapter System is ideal for updating existing systems because it readily adapts to aluminum or PVC mains and laterals. Expansion or refinement of the irrigation system is easily accomplished through the versatility afforded the user in the location of the new sprinkler heads.

BSW	=	British Standard Whitworth Thread	NFT	=	National Fine Thread
FHT	=	Female Hose Thread	Rebar	=	Accepts 1/2" Rebar
Fipt	=	Female Iron Pipe Thread	Soc	=	IPS Solvent Weld Socket
MHT	=	Male Hose Thread	Spig	=	Spigot
Mipt		Male Iron Pipe Thread			

Hose System Riser
Soc x Mipt

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
RM-64	**1/2**	75	0	020	5.04
RM-66	**3/4**	75	0	020	5.04

Hose System Riser
Soc x MHT

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
RM-66-H	**3/4**	75	0	020	5.04

Hose System Riser
Soc x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
RF-64	**1/2**	75	0	020	6.28
RF-66	**3/4**	70	0	020	6.28

Trickle Irrigation Hex Cap
Fipt (Less Holes)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
T-1	**1/2**	800	0	020	1.64

Shrub Adapter
Fipt x NFT

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PA2010-01	**1/2X10-32**	50	300	020	1.27
PA2010-03	**1/2X5/16**	50	300	020	1.27
Fipt x Fipt					
PA2010-02	**1/2X1/8**	50	300	020	1.27
Fipt x BSW					
PA2010-04	**1/2X3/8**	50	300	020	1.27

Shrub Adapter
Soc x NFT

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PA2020-01	**1/2X10-32**	50	300	020	1.27

Shrub Adapter (continued)
Soc x NFT

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PA2020-03	**1/2X5/16**	50	300	020	1.27
Soc x Fipt					
PA2020-02	**1/2X1/8**	50	300	020	1.27
Soc x BSW					
PA2020-04	**1/2X3/8**	50	300	020	1.27

Transition Nipple
Mipt x MHT (1.790 Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
N-1	**3/4X3/4**	50	300	020	1.35
Mipt x Mipt (1.410 Length)					
N-2	**3/8X1/2**	50	300	020	1.35
Mipt x MHT (1.872 Length)					
N-3	**1/2X3/4**	50	300	020	1.35
Mipt x Mipt Polypropylene (1.480 Length)					
N-4	**3/4X1/2**	50	300	020	1.35

Pipe Support (90° Clip to Body)
Without Nail Holes

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PS4-90	**1/2**	750	0	020	.60
With Nail Holes					
PS4-90N	**1/2**	750	0	020	.76

Manifold Tee
Spig x Soc x Mipt

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
476-010	**1**	20	0	020	5.98

Manifold Tee
Spig x Soc x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
477-010	**1**	25	0	020	5.98

Sprinkler Accessories

Standard Sprinkler Stand
Hose Socket Inlet x Hose Socket Outlet x IPS Riser Outlet

Shown without adapters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ES-443†	**1/2X3/8**	100	0	020	7.82
ES-444†	**1/2X1/2**	100	0	020	7.82

Standard Sprinkler Stand (continued)
Hose Socket Inlet x Hose Socket Outlet x IPS Riser Outlet

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ES-543*	**5/8X1/2X3/8**	75	0	020	9.08
ES-544*	**5/8X1/2X1/2**	75	0	020	9.08
ES-553*	**5/8X3/8**	75	0	020	10.11
ES-554*	**5/8X1/2**	75	0	020	10.11
ES-653*	**3/4X5/8X3/8**	75	0	020	11.07
ES-654*	**3/4X5/8X1/2**	75	0	020	11.07

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Standard Sprinkler Stand (continued)

Hose Socket Inlet x Hose Socket Outlet x IPS Riser Outlet

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ES-663*	3/4X3/8	75	0	020	11.59
ES-664*	3/4X1/2	75	0	020	11.59

† Dual Connection — Hose Socket Inlets and Outlets accept 1/2" irrigation hose inside, and have 3/4" MHT on the outside.
* Item assembled when ordered — by providing either the ES-443 or ES-444 and one (1) or two (2) F-60 FHT Adapters with the applicable hose Socket size. Check with your servicing Regional Distribution Center for delivery lead time.

Easy Pull Sled



Hose Socket Inlet x Hose Socket Outlet x IPS Riser Outlet

Shown without adapters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
EP-443†	1/2X3/8	20	0	020	18.93
EP-444†	1/2	20	0	020	18.93
EP-543*	5/8X1/2X3/8	20	0	020	20.20
EP-544*	5/8X1/2X1/2	20	0	020	20.20
EP-553*	5/8X3/8	20	0	020	21.43
EP-554*	5/8X1/2	20	0	020	21.43
EP-653*	3/4X5/8X3/8	20	0	020	21.71
EP-654*	3/4X5/8X1/2	20	0	020	21.71
EP-663*	3/4X3/8	20	0	020	22.20
EP-664*	3/4X1/2	20	0	020	22.20

† Dual Connection — Hose Socket Inlets and Outlets accept 1/2" irrigation hose inside, and have 3/4" MHT on the outside.
* Item assembled when ordered — by providing either the EP-443 or EP-444 and one (1) or two (2) F-60 FHT Adapters with the applicable hose Socket size. Check with your servicing Regional Distribution Center for delivery lead time.

Tow-Line Tee



Soc

Assembled as shown

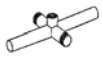
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
TL-112	1X1X1/2	15	0	020	12.61
TL-123	2X2X1/2	25	0	020	15.12

Soc x Soc x Fipt

TL-112-1	1X1X1/2	30	0	020	13.62
TL-116-1	1-1/4X1-1/4X1/2	30	0	020	13.88
TL-120-1	1-1/2X1-1/2X1/2	25	0	020	14.39
TL-123-1	2X2X1/2	25	0	020	15.64

NOTE: The Tow-Line Tee is used in conjunction with PVC Schedule 40 Pipe with solvent weld connection.

Hose Cross - with Legs



Hose Socket Inlet x Hose Socket Outlet x IPS Riser Outlet

Shown without adapters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HC-443†	1/2X3/8	60	0	020	9.08
HC-444†	1/2X1/2	60	0	020	9.08
HC-543*	5/8X1/2X3/8	60	0	020	10.35
HC-544*	5/8X1/2X1/2	60	0	020	10.35
HC-553*	5/8X3/8	60	0	020	11.59
HC-554*	5/8X1/2	60	0	020	11.59
HC-653*	3/4X5/8X3/8	60	0	020	12.36
HC-654*	3/4X5/8X1/2	60	0	020	12.36
HC-663*	3/4X3/8	60	0	020	13.12
HC-664*	3/4X1/2	60	0	020	13.12

† Dual Connection — Hose Socket Inlets and Outlets accept 1/2" irrigation hose inside, and have 3/4" MHT on the outside.
* Item assembled when ordered — by providing either the HC-443 or HC-444 and one (1) or two (2) F-60 FHT Adapters with the applicable hose Socket size. Check with your servicing Regional Distribution Center for delivery lead time.
NOTE: Hose Crosses are standard with 4" legs. 8" legs are available upon request. Add "-8" at the end of above Part Numbers for 8" legs (for example: HC-443-8). Contact your servicing Regional Distribution Center for pricing.

Hose Cross - Less Legs



Hose Socket Inlet x Hose Socket Inlet x IPS Riser Outlet

Shown without adapters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HC-443-1†	1/2X3/8	220	0	020	4.54
HC-444-1†	1/2X1/2	200	0	020	4.54
HC-543-1*	5/8X1/2X3/8	60	0	020	6.28
HC-544-1*	5/8X1/2X1/2	60	0	020	6.28
HC-553-1*	5/8X3/8	50	0	020	8.32
HC-554-1*	5/8X1/2	50	0	020	8.32
HC-653-1*	3/4X5/8X3/8	60	0	020	8.59
HC-654-1*	3/4X5/8X1/2	60	0	020	8.59
HC-663-1*	3/4X3/8	60	0	020	9.08
HC-664-1*	3/4X1/2	60	0	020	9.08

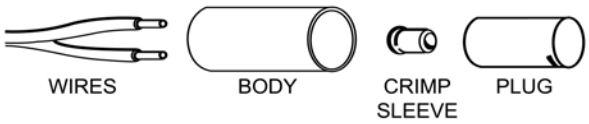
† Dual Connection — Hose Socket Inlets and Outlets accept 1/2" irrigation hose inside, and have 3/4" MHT on the outside.
* Item assembled when ordered — by providing either the HC-443-1 or HC-444-1 and one (1) or two (2) F-60 FHT Adapters with the applicable hose Socket size. Check with your servicing Regional Distribution Center for delivery lead time.

For use in electrical systems with 30v or less.

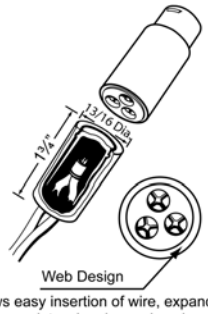
The Spears® Dri-Splice Seal designed into each wire hole enables you to stock one connector for all applications. The Dri-Splice Seal features an interference webbing which expands to accommodate #18 through #6 gauge wire sizes. In the event only two holes are used, the Dri-Splice Seal prevents sealant from leaking out through the third hole.

SOLD IN STANDARD PACK QUANTITIES ONLY

DS-100/DS-150 & DS-400/DS-450 Dri-Splice Wire Connector Installation Information



1. Insert wires through holes in base of body.
2. Twist stripped wires together and apply crimp sleeve with an indent type crimping tool. Trim excess bare wire.
3. DS-100 & DS-150 ONLY — Fill Plug to brim with DS-300 sealant.
4. Invert body and insert plug into body until it snaps tight.
5. Push wires all the way into the plug to completely seal the crimp sleeve.
6. DS-100 & DS-150 ONLY — Be certain sealant has formed into all holes in body.



DS-100 & DS-150 Dri-Splice

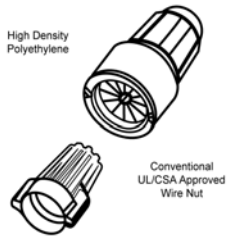
- DS-100 fits AWG #18, #14, #12, or #10
- DS-150 fits AWG #14, #12, #10, #8, or #6
- Designed to insure waterproof connections
- Easily installed in the field without special tools
- Permanent protection for underground wire splices
- Requires the use of DS-300 Sealant

DS-400 & DS-450 Pre-Filled Dri-Splice

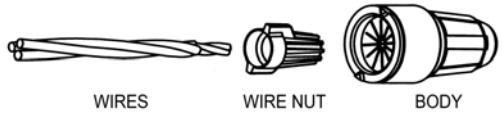
- All the features of the DS-100 or DS-150, plus the added benefit of being pre-filled with Dielectric Silicone Sealant
- Reduced inventory requirements
- Insures proper amount and type of Sealant every time
- Eliminates costly waste and clean-up
- Makes installations quick, clean and efficient

Dri-Splice Wire Connectors

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Dri-Splice Wire Connector with Crimp Sleeve (Sealant sold separately)					
DS-100	AWG #18, #14, #12, #10	25	400	020	1.46
DS-150	AWG #14, #12, #10, #8, #6	25	400	020	1.75
Pre-Filled Dri-Splice Wire Connector with Crimp Sleeve					
DS-400	AWG #18, #14, #12, #10	25	400	020	3.19
DS-450	AWG #14, #12, #10, #8, #6	25	400	020	3.47
Crimp Sleeves					
DS-200	AWG #18, #14, #12, #10	25	15000	901	.25
DS-250	AWG #14, #12, #10, #8, #6	25	12500	901	.53
Dri-Splice Sealant For DS-100 and DS-150 (Approx. 30 connections per 5 oz. tube)					
DS-300	AWG #18, #14, #12, #10	24	0	022	15.29



DS-500 Dri-Splice Wire Connector Installation Information

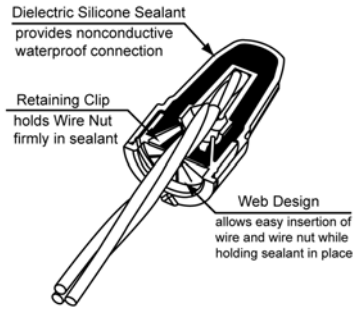


1. Strip wires and install wire nut.
2. wire nut wings with arrows and insert fully into body.

Dri-Splice Wire Connector General Information

Sealant:	DS-300 Sealant* (for DS-100 & DS-150) -*MSDS available upon request.* DS-400 & DS-450 Dielectric Silicone Sealant**defined as an Article, per OSHA 29 CFR 1910, 1200, which does not require an MSDS.* DS-500 Dielectric Silicone Sealant**defined as an Article, per OSHA 29 CFR 1910, 1200, which does not require an MSDS.*
Shelf Life:	DS-300 (unopened tube)— One Year* DS-400 & DS-450 — Indefinite at 73°F (23°C)* DS-500— Indefinite at 73°F (23°C)*
Electrical Systems:	For use in electrical systems with 30v or less. UL Listing NOT required in most areas.
DS-100/DS-150 & DS-400/DS-450 Components:	Plug— PVC Body— PVC Crimp Sleeve— UL and CSA Listed for 18 - 10 awg solid or stranded copper conductors.
DS-500 Components:	Body— Polyethylene Wire Nut— Twist-On Spring Type - UL/CSA Listed for 22 - 10 awg solid or stranded copper wire.

* Information developed and furnished by the Sealant Manufacturers. For additional information, please contact Spears® Technical Services Department.



DS-500 Dri-Splice Wire Connector

For use in electrical systems with 30v or less.

Spears® NEW DS-500 Dri Splice Wire Connector is the fast, reliable and clean way of making positive, waterproof connections you can depend on. Simply twist Wire Nut on and insert into Dielectric Silicone Sealant Cartridge. The DS-500 is specially designed for irrigation systems and low voltage lighting, marine and security systems and suitable for direct burial.

- Allows full assembly and check of connection prior to sealing
- Accepts wire combinations from 3 #22 to 3 #10 AWG solid or stranded copper wire
- Special "No-Mess" cartridge design fully encloses sealant
- Internal interlock prevents disengagement of wire nut from sealant cartridge

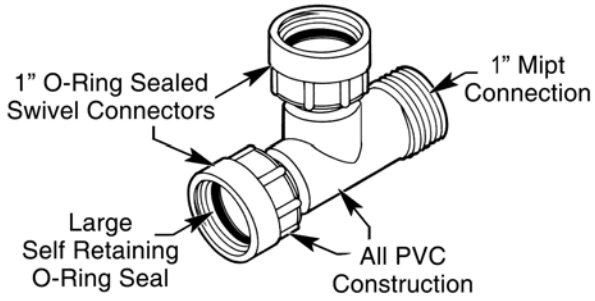
Dri-Splice Wire Connectors

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Pre-Filled Dri-Splice Wire Connector with Wire Nut					
DS-500	**3 AWG #22-#10**	25	500	020	3.19

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

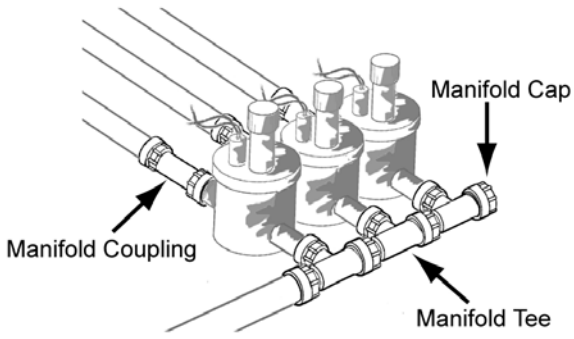
1" Manifold Tees & Companion Fitting Configurations
Designed For Uniform Irrigation Control Valve Installations

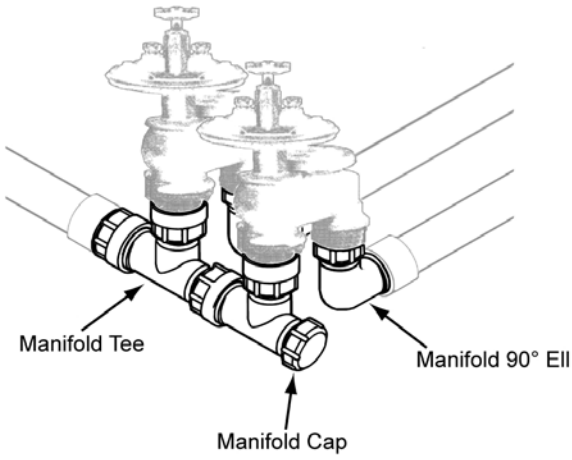


Manifold Tee
(1" Swivel x 1" Mipt x 1" Swivel)

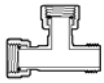
- O-ring Sealed Swivel Connections Require No Thread Sealants - Large Cross-section O−ring Allows Hand Tight Assembly for Positive Seal
- Compatible with all 1" IPS Pipe Thread Outlets
- Pressure Rated to 150 psi @ 73°F (23°C)

Typical Application
Hundreds of Variation Possibilities





Manifold Tee
Swivel x Mipt x Swivel with O-ring Seal



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MA0101-010	**1**	25	0	019	9.91

2 - Port Manifold Tee
Swivel x Mipt x Swivel Branch with O–ring Seal



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MA0101-010-2	**1**	25	0	019	14.38

3 - Port Manifold Tee
Swivel x Mipt x Swivel Branch with O–ring Seal



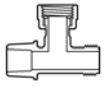
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MA0101-010-3	**1**	25	0	019	19.80

4 - Port Manifold Tee
Swivel x Mipt x Swivel Branch with O–ring Seal



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MA0101-010-4	**1**	25	0	019	25.26

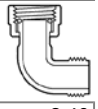
Manifold Tee
Soc(Spig) x Mipt x Swivel with O-ring Seal



For Solvent Cement Connection

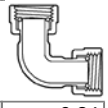
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MA0109-010	**1 (1-1/4)**	25	0	019	8.81

Manifold 90° Street Ell
Mipt x Swivel with O-ring Seal



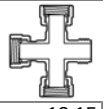
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MA0602-010	**1**	25	0	019	8.46

Manifold 90° Ell
Swivel x Swivel with O-ring Seal



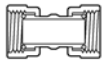
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MA0603-010	**1**	20	0	019	9.34

Manifold Cross
Swivel x Mipt x Swivel x Swivel with O–ring Seal



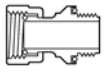
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MA2004-010	**1**	25	0	019	13.15

Manifold Swivel Coupling
Swivel x Swivel with O-ring Seal



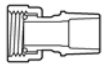
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MA2903-010	**1**	25	200	019	7.01

Manifold Nipple Coupling
Swivel x Mipt with O-ring Seal



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MA2907-010	**n/a**	25	200	019	5.12

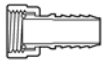
Manifold Socket (Spig) Coupling
Swivel x Soc (Spig) with O-ring Seal



For Solvent Cement Connection

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MA2908-010	**1 (1-1/4)**	25	0	019	5.12

Manifold Insert Coupling
Swivel x Barbed Insert with O-ring Seal



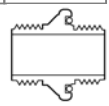
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MA3505-007	**1X3/4**	25	200	019	5.09
MA3505-010	**1**	25	200	019	5.43

Manifold Cap
Fipt with O-ring Seal



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MA4800-010	**1**	50	600	019	2.14

Manifold Nipple
Mipt x Mipt with O-ring Seal



1" Nipple End Uses MA-218 O-ring
3/4" Nipple End Uses MA-214 O-ring

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MA8306-010	**1**	25	200	019	2.29
MA8306-131	**1X3/4**	25	200	019	2.01

Manifold Replacement O–ring
For All 1" Cap/Swivel Connectors & For 3/4" Nipple End



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MA-214	**1 & 3/4**	50	500	901	.49

Manifold Nipple Replacement O–ring
For 1" Nipple & For 1" Nippled Coupling End



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MA-218	**1**	50	500	901	.53

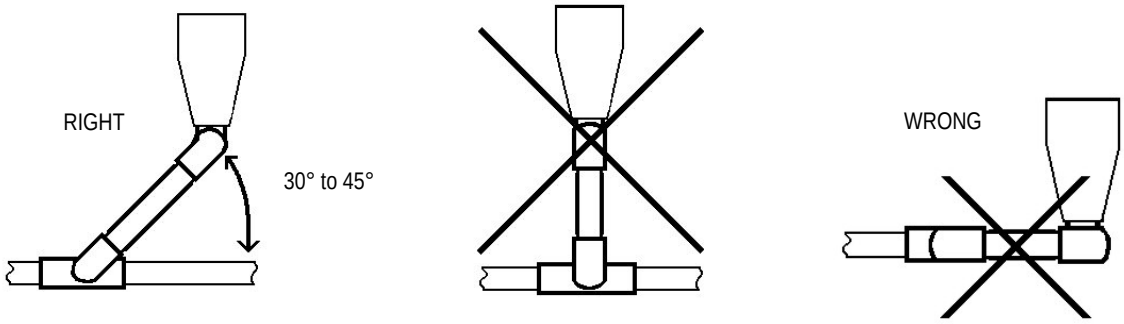
NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

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Turf Swivel Joints

Turf Swivel Joints, Compact Turf Swivel Joints and Turf Swivel Joint Kits are designed for open discharge systems and are not to be used with valve-in-head sprinklers or quick coupler valves. Can be used with bottom or side sprinklers. Provides 360° adjustment in three planes to place sprinklers at desired locations.

Turf Swivel Joint Assemblies should NOT be installed perpendicular or parallel to the supply line.



Turf Swivel Joint and Compact Turf Swivel Joints are pre-assembled from the factory with O-ring threaded joints. Turf Swivel Joint Kits are provided as two assemblies for use with user supplied pipe in solvent welded field assembly. These joints are pre-lubricated and should not be disassembled, as dirt, sand or other foreign objects could damage the O-ring or threads and cause leakage.

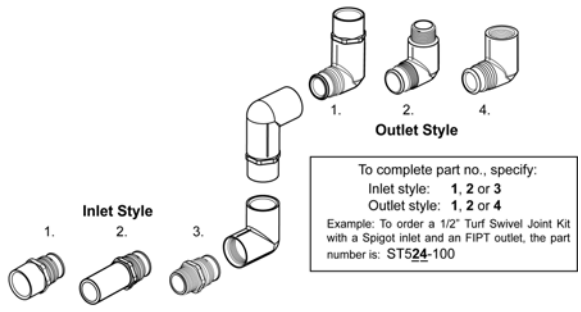
Prior to beginning installation, tighten each O-ring thread joint completely, and then back out the male part one full turn to allow the joint to swivel a full 360°.

3-Ell Swivel Joint Kits

Complete kit for field assembly with any length of user supplied pipe. Kit includes upper and lower Elbow assemblies with choice of the following Inlet & Outlet Options:

Inlet Code:
1 = Socket
2 = Spigot
3 = Mipt

Outlet Code:
1 = Socket
2 = Mipt
4 = Fipt



To complete part no., specify:
Inlet style: **1**, **2** or **3**
Outlet style: **1**, **2** or **4**
Example: To order a 1/2" Turf Swivel Joint Kit with a Spigot inlet and an FIPT outlet, the part number is: ST5**24**-100

Turf Swivel Joint Kit

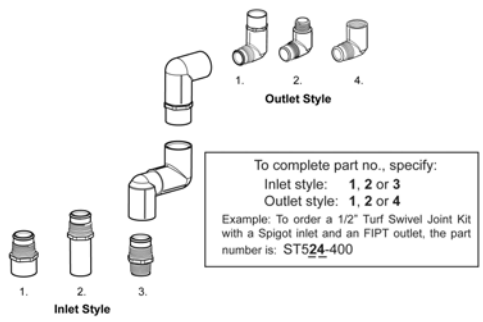
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3-Ell Swivel Joint Kits					
ST5__-100	**1/2**	10	0	030	19.61
ST7__-100	**3/4**	10	0	030	22.14
ST9__-100	**1**	10	0	030	25.77

4-Ell Swivel Joint Kits

Complete kit for field assembly with any length of user supplied pipe. Kit includes upper and lower Elbow assemblies with choice of the following Inlet & Outlet Options:

Inlet Code:
1 = Socket
2 = Spigot
3 = Mipt

Outlet Code:
1 = Socket
2 = Mipt
4 = Fipt



To complete part no., specify:
Inlet style: **1**, **2** or **3**
Outlet style: **1**, **2** or **4**
Example: To order a 1/2" Turf Swivel Joint Kit with a Spigot inlet and an FIPT outlet, the part number is: ST5**24**-400

4-Ell Swivel Joint Kits					
ST5__-400	**1/2**	10	0	030	20.82
ST7__-400	**3/4**	10	0	030	23.38
ST9__-400	**1**	10	0	030	28.21

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Turf Swivel Joints

Complete Factory Assembly. Available in sizes 1/2", 3/4" and 1" with the following Lay Length Options:

8" = 8L
12" = 12L
15" = 15L
19" = 19L

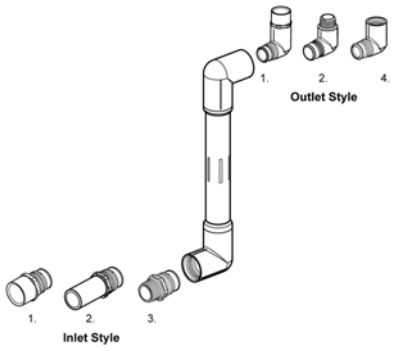
Choice of the following Inlet & Outlet Options:

Inlet Code			Outlet Code		
1	=	Socket	1	=	Socket
2	=	Spigot	2	=	Mipt
3	=	Mipt	4	=	Fipt

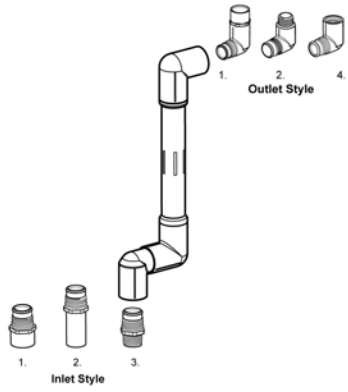
To complete part no., specify:
Inlet style: 1, 2, or 3
Outlet style: 1, 2, or 4

Example: To order a 1/2" 3-Ell Turf Swivel Joint with an 8" lay length, a Spigot inlet and an FIPT outlet, the part number is: ST52**4**-208

3-Ell Turf Swivel Joint



4-Ell Turf Swivel Joint



Turf Swivel Joints

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3-Ell Turf Swivel Joints					
ST5__-208	**1/2X8L**	10	0	030	30.74
ST5__-212	**1/2X12L**	10	0	030	31.11
ST5__-215	**1/2X15L**	10	0	030	32.06
ST5__-219	**1/2X19L**	10	0	030	33.09
ST7__-208	**3/4X8L**	10	0	030	33.14
ST7__-212	**3/4X12L**	10	0	030	34.71
ST7__-215	**3/4X15L**	10	0	030	35.38
ST7__-219	**3/4X19L**	10	0	030	36.22
ST9__-208	**1X8L**	10	0	030	36.49
ST9__-212	**1X12L**	10	0	030	37.64
ST9__-215	**1X15L**	10	0	030	38.62
ST9__-219	**1X19L**	10	0	030	39.95
ST57__-208	**1/2X3/4X8L**	10	0	030	30.74
ST57__-212	**1/2X3/4X12L**	10	0	030	31.11
ST57__-215	**1/2X3/4X15L**	10	0	030	32.06
ST57__-219	**1/2X3/4X19L**	10	0	030	33.09
ST75__-208	**3/4X1/2X8L**	10	0	030	33.14
ST75__-212	**3/4X1/2X12L**	10	0	030	34.71
ST75__-215	**3/4X1/2X15L**	10	0	030	35.38
ST75__-219	**3/4X1/2X19L**	10	0	030	35.38
4-Ell Turf Swivel Joints					
ST5__-408	**1/2X8L**	10	0	030	31.40
ST5__-412	**1/2X12L**	10	0	030	31.77
ST5__-415	**1/2X15L**	10	0	030	32.65
ST5__-419	**1/2X19L**	10	0	030	33.61
ST7__-408	**3/4X8L**	10	0	030	33.80
ST7__-412	**3/4X12L**	10	0	030	35.29
ST7__-415	**3/4X15L**	10	0	030	35.97
ST7__-419	**3/4X19L**	10	0	030	36.74
ST9__-408	**1X8L**	10	0	030	38.39
ST9__-412	**1X12L**	10	0	030	39.45
ST9__-415	**1X15L**	10	0	030	40.41
ST9__-419	**1X19L**	10	0	030	41.67
ST57__-408	**1/2X3/4X8L**	10	0	030	31.40
ST57__-412	**1/2X3/4X12L**	10	0	030	31.77
ST57__-415	**1/2X3/4X15L**	10	0	030	32.65
ST57__-419	**1/2X3/4X19L**	10	0	030	33.61
ST75__-408	**3/4X1/2X8L**	10	0	030	35.38
ST75__-412	**3/4X1/2X12L**	10	0	030	36.74

Turf Swivel Joints (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4-Ell Turf Swivel Joints					
ST75__-415	**3/4X1/2X15L**	10	0	030	36.74
ST75__-419	**3/4X1/2X19L**	10	0	030	36.74

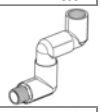
Compact Turf Swivel Joints

Factory Assembled
All Inlets are Swivel Male Threads
Three Outlet Choices:
Series ST11 & ST41 = Female Pipe Threads
Series ST12 & ST42 = Swivel Male Pipe Threads
Series ST13 & ST43 = Male Pipe Threads

Also available in 1" MBSP inlet x 1" MBSP outlet. Contact Spears® for pricing and availability.

3-Ell Compact Swivel Joints

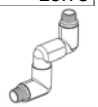
Swivel Mipt x Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ST1105	**1/2**	10	0	030	19.61
ST1107	**3/4**	10	0	030	22.14
ST1110	**1**	10	0	030	25.78

3-Ell Compact Swivel Joints

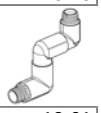
Swivel Mipt x Swivel Mipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ST1205	**1/2**	10	0	030	19.61
ST1207	**3/4**	10	0	030	22.14
ST1210	**1**	10	0	030	25.78

3-Ell Compact Swivel Joints

Swivel Mipt x Mipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ST1305	**1/2**	10	0	030	19.61
ST1307	**3/4**	10	0	030	22.14
ST1310	**1**	10	0	030	25.78

4-Ell Compact Swivel Joints

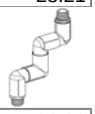
Swivel Mipt x Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ST4105	**1/2**	10	0	030	20.82
ST4107	**3/4**	10	0	030	23.38
ST4110	**1**	10	0	030	28.21

4-Ell Compact Swivel Joints

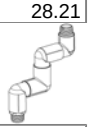
Swivel Mipt x Swivel Mipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ST4205	**1/2**	10	0	030	20.82
ST4207	**3/4**	10	0	030	23.38
ST4210	**1**	10	0	030	28.21

4-Ell Compact Swivel Joints

Swivel Mipt x Mipt



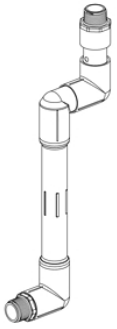
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ST4305	**1/2**	10	0	030	20.82
ST4307	**3/4**	10	0	030	23.38
ST4310	**1**	10	0	030	28.21

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

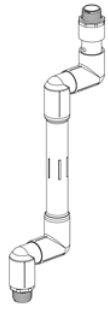
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Pressure Regulated Swivel Joints

3-Ell Pressure Regulated Swivel Joint



4-Ell Pressure Regulated Swivel Joint



Pressure Regulated Swivel Joints

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3-Ell - Mipt x Mipt					
ST73PR-208	**3/4X8L**	10	0	030	61.38
ST73PR-212	**3/4X12L**	10	0	030	63.05
ST73PR-215	**3/4X15L**	10	0	030	63.78
ST73PR-219	**3/4X19L**	10	0	030	64.64
ST93PR-208	**1X8L**	10	0	030	66.36
ST93PR-212	**1X12L**	10	0	030	67.57
ST93PR-215	**1X15L**	10	0	030	68.62
ST93PR-219	**1X19L**	10	0	030	70.02
4-Ell - Mipt x Mipt					
ST73PR-408	**3/4X8L**	10	0	030	64.78
ST73PR-412	**3/4X12L**	10	0	030	66.47
ST73PR-415	**3/4X15L**	10	0	030	67.18
ST73PR-419	**3/4X19L**	10	0	030	68.06
ST93PR-408	**1X8L**	10	0	030	71.80

Pressure Regulated Swivel Joints (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4-Ell - Mipt x Mipt					
ST93PR-412	**1X12L**	10	0	030	73.00
ST93PR-415	**1X15L**	10	0	030	74.05
ST93PR-419	**1X19L**	10	0	030	75.44

Complete Factory Assembly. Available in sizes 3/4" and 1" with Mipt Inlet x Mipt Outlet and the following Lay Length Options:

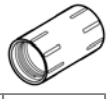
8" = 8L
12" = 12L
15" = 15L
19" = 19L

Maintains constant, uniform pressure to sprinkler at the following pre-set nominal values:
45 psi for 3/4" Turf Swivel Joint
70 psi for 1" Turf Swivel Joint

Not recommended for use in systems with pressures equal to or less than regulated pressures above.
Pressure Rating @ 73°F (23°C), Water 315 psi

Turf Swivel Joint Replacement Parts

Coupling
FAT x FAT



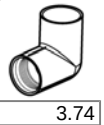
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ST430-007	**3/4**	1	350	030	6.47
ST430-010	**1**	1	250	030	8.60

90° Elbow
FAT x FAT



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ST1101-005	**1/2**	1	300	030	3.74
ST1101-007	**3/4**	1	250	030	4.32
ST1101-101	**3/4X1/2**	1	270	030	3.94
ST1101-010	**1**	1	175	030	7.12

90° Elbow
FAT x SOC



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ST1102-005	**1/2**	1	350	030	3.74
ST1102-007	**3/4**	1	250	030	4.32
ST1102-010	**1**	1	160	030	7.12

90° Street Ell
MAT x FAT



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ST425-005	**1/2**	1	200	030	5.44
ST425-007	**3/4**	1	300	030	5.81
ST425-010	**1**	1	200	030	8.08

Socket Inlet #1
SOC x MAT



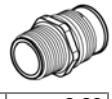
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ST436-005	**1/2**	1	350	030	3.49
ST436-007	**3/4**	1	50	030	3.86
ST436-010	**1**	1	100	030	7.24

Spigot Inlet #2
SPG x MAT



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ST105-035	**1/2**	1	350	030	3.72
ST107-035	**3/4**	1	50	030	4.16
ST110-040	**1**	1	140	030	7.58

Male Thread Inlet #3
Mipt x MAT



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ST205-020	**1/2**	1	25	030	3.29
ST207-020	**3/4**	1	350	030	3.86
ST210-020	**1**	1	150	030	4.19

Socket Outlet #1
MAT x SOC



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ST410-005	**1/2**	1	50	030	7.42
ST410-007	**3/4**	1	200	030	8.13
ST410-010	**1**	1	25	030	8.52

Turf Swivel Joint Replacement Parts

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Male Thread Outlet #2					
MAT x Mipt					
ST408-005	**1/2**	1	250	030	5.44
ST408-007	**3/4**	1	25	030	5.81
ST408-010	**1**	1	100	030	8.60
Female Thread Outlet #4					
MAT x Fipt					
ST412-005	**1/2**	1	250	030	5.44
ST412-007	**3/4**	1	25	030	5.81
ST412-010	**1**	1	200	030	8.08
Molded Nipples					
MAT x MAT					
ST207-065	**3/4X6-1/2**	1	200	030	7.69
ST207-105	**3/4X10-1/2**	1	115	030	17.73
ST210-065	**1X6-1/2**	1	120	030	9.89
ST210-105	**1X10-1/2**	1	25	030	23.44
O-ring Seal					
B-113	**1/2**	100	0	901	.07
B-115	**3/4**	100	0	901	.07
B-120	**1**	100	0	901	.18

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Flange Van Stone Style

Flange x PIP Soc



125 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
354-060F	**6X6.140**	1	4	320	133.67
354-080F	**8X8.160**	1	2	320	202.42
354-100F	**10X10.200**	1	2	320	284.61
354-120F	**12X12.240**	1	2	320	412.21
354-150F	**14X15.300**	1	0	320	1098.76
354-151F	**16X15.300**	1	0	320	1253.46
354-181F	**18X18.701**	1	0	320	1904.21
354-182F	**18X18.360**	1	0	320	1904.21
354-201F	**20X22.047**	1	0	320	2900.51
354-241F	**24X24.803**	1	0	320	4247.72

For more information, refer to 80, 100 & 125 psi PIP Fabrication Fittings.

PIP = Plastic Irrigation Pipe (dimensions are NOT the same as IPS dimensions)

Sizes 6" - 16" are furnished with plastic ring.
Sizes 18" - 24" are furnished with steel ring.

Flange One Piece

Soc



1/2" - 16" 150 psi Maximum Internal Pressure Rating @73°F (23°C)
18" - 24" 50 psi Maximum Internal Pressure Rating @73°F (23°C)

851-005	**1/2**	25	0	080	18.11
851-007	**3/4**	25	0	080	19.35
851-010	**1**	15	0	080	21.55
851-012	**1-1/4**	15	0	080	22.20
851-015	**1-1/2**	20	0	080	22.68
851-020	**2**	10	0	080	30.19
851-025	**2-1/2**	10	0	080	46.60
851-030	**3**	10	0	080	51.46
851-040	**4**	5	0	080	65.16
851-050	**5**	5	0	080	102.45
851-060	**6**	5	0	080	102.45
851-080	**8**	2	0	080	183.33
851-100F	**10**	1	2	083	498.18
851-120F	**12**	1	0	083	604.96
851-140F	**14**	1	0	083	1112.65
851-160F	**16**	1	0	083	1526.99
851-180F	**18**	1	0	083	3230.20
851-200F	**20**	1	0	083	3955.61
851-240F	**24**	1	0	083	5253.52

Flange One Piece

Fipt



150 psi Maximum Internal Pressure Rating @73°F (23°C)

852-005	**1/2**	25	0	080	21.67
852-007	**3/4**	25	0	080	25.39
852-010	**1**	15	0	080	27.80
852-012	**1-1/4**	15	0	080	38.33
852-015	**1-1/2**	20	0	080	41.83
852-020	**2**	10	0	080	42.78
852-025	**2-1/2**	10	0	080	98.36
852-030	**3**	10	0	080	101.24
852-040	**4**	5	0	080	190.22
852-060F	**6**	1	5	083	228.52
852-080F	**8**	1	2	083	573.52

Special Reinforced Flange One Piece Threaded

SR Fipt - Stainless Steel Collar



150 psi Maximum Internal Pressure Rating @73°F (23°C)

852-005SR	**1/2**	25	0	086	11.91

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
852-007SR	**3/4**	25	0	086	13.99
852-010SR	**1**	15	0	086	15.29
852-012SR	**1-1/4**	15	0	086	21.07
852-015SR	**1-1/2**	15	0	086	23.06
852-020SR	**2**	10	0	086	23.62
852-025SR	**2-1/2**	10	0	086	54.09
852-030SR	**3**	10	0	086	55.69
852-040SR	**4**	5	0	086	104.69

Blind Flange



1/2" - 12" Molded - 150 psi Maximum Internal Pressure Rating @ 73°F (23°C)
14" - 24" Fabricated - 50 psi Maximum Internal Pressure Rating @ 73°F (23°C)

853-005	**1/2**	25	0	080	25.38
853-007	**3/4**	25	0	080	30.23
853-010	**1**	15	0	080	41.29
853-012	**1-1/4**	20	0	080	50.68
853-015	**1-1/2**	15	0	080	50.68
853-020	**2**	10	0	080	75.73
853-025	**2-1/2**	10	0	080	123.38
853-030	**3**	10	0	080	148.89
853-040	**4**	8	0	080	185.48
853-050F	**5**	1	5	083	464.95
853-060	**6**	5	0	080	225.40
853-080	**8**	5	0	080	282.13
853-100	**10**	3	0	081	471.77
853-120	**12**	2	0	081	734.75
853-140F	**14**	1	0	083	1397.79
853-160F	**16**	1	0	083	1657.51
853-180F	**18**	1	0	083	1864.09
853-200F	**20**	1	0	083	3013.01
853-240F	**24**	1	0	083	4016.97

Flange Van Stone Style with PVC Ring

Soc



1/2" - 18" molded - 150 psi = maximum internal pressure rating @ 73°F (23°C)
18" - 24" fabricated - 50 psi = maximum internal pressure rating @ 73°F (23°C)

854-005	**1/2**	25	0	080	18.08
854-007	**3/4**	25	0	080	19.34
854-010	**1**	15	0	080	21.54
854-012	**1-1/4**	15	0	080	22.18
854-015	**1-1/2**	20	0	080	22.63
854-020	**2**	10	0	080	30.14
854-025	**2-1/2**	10	0	080	46.55
854P-030	**3**	10	0	080	51.44
854P-040	**4**	5	0	080	65.07
854P-050	**5**	5	0	080	102.36
854P-060	**6**	5	0	080	102.36
854P-080	**8**	2	0	080	166.68
854P-100	**10**	2	0	081	215.79
854P-120	**12**	2	0	081	232.66
854P-140	**14**	1	0	081	898.21
854P-160	**16**	1	0	081	1201.40
854P-180	**18**	1	0	081	1937.69
854-180FP	**18**	1	0	083	3065.76
854-200FP	**20**	1	0	083	3749.88
854-240FP	**24**	1	0	083	5101.07

Flange Van Stone Style with Glass Filled PVC Ring



Soc

3" - 18" molded - 150 psi = maximum internal pressure rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
854-030	**3**	10	0	080	51.44
854-040	**4**	5	0	080	65.07
854-050	**5**	5	0	080	102.36
854-060	**6**	5	0	080	102.36
854-080	**8**	2	0	080	166.68
854-100	**10**	2	0	081	215.79
854-120	**12**	2	0	081	232.66
854-140	**14**	1	0	082	898.21
854-160	**16**	1	0	082	1201.40
854-180	**18**	1	0	082	1937.69

18" flange has 4-section ring

Flange Van Stone Style Class 300 Bolt Pattern Fabricated with PVC Ring



Soc

1/2" - 16" molded with fab ring - 150 psi = maximum internal pressure rating @ 73°F (23°C)

18" - 24" fabricated - 50 psi = maximum internal pressure rating @ 73°F (23°C)

854-005CL300	**1/2**	1	25	083	148.64
854-007CL300	**3/4**	1	25	083	172.71
854-010CL300	**1**	1	15	083	271.37
854-012CL300	**1-1/4**	1	15	083	277.09
854-015CL300	**1-1/2**	1	20	083	287.83
854-020CL300	**2**	1	10	083	303.05
854-025CL300	**2-1/2**	1	10	083	332.76
854-030CL300	**3**	1	10	083	365.45
854-040CL300	**4**	1	3	083	619.67
854-060CL300	**6**	1	4	083	1180.24
854-080CL300	**8**	1	3	083	1343.43
854-100CL300	**10**	1	2	083	1581.60
854-120CL300	**12**	1	0	083	2026.35
854-140CL300	**14**	1	0	083	2234.24
854-160CL300	**16**	1	0	083	2326.72
854-180CL300	**18**	1	0	083	3253.11
854-200CL300	**20**	1	0	083	4224.02
854-240CL300	**24**	1	0	083	5354.88

Flange Van Stone Style with PVC Ring



Spig

1/2" - 12" molded - 150 psi = maximum internal pressure rating @ 73°F (23°C)

20" - 24" fabricated - 50 psi = maximum internal pressure rating @ 73°F (23°C)

856-005	**1/2**	25	0	080	18.18
856-007	**3/4**	25	0	080	19.48
856-010	**1**	15	0	080	21.72
856-012	**1-1/4**	15	0	080	22.40
856-015	**1-1/2**	15	0	080	22.85
856-020	**2**	10	0	080	30.37
856-025	**2-1/2**	10	0	080	46.94
856P-030	**3**	10	0	080	51.85
856P-040	**4**	5	0	080	65.61
856P-060	**6**	4	0	080	103.20
856P-080	**8**	2	0	080	184.61
856P-100	**10**	2	0	081	215.79
856P-120	**12**	2	0	081	232.66
856-200FP	**20**	1	0	083	3749.88
856-240FP	**24**	1	0	083	5101.07

Flange Van Stone Style with Glass Filled PVC Ring



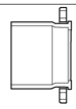
Spig

3" - 12" molded, 14" - 18" molded/fabricated - 150 psi = maximum internal pressure rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
856-030	**3**	10	0	080	51.85
856-040	**4**	5	0	080	65.61
856-060	**6**	4	0	080	103.20
856-080	**8**	2	0	080	184.61
856-100	**10**	2	0	081	215.79
856-120	**12**	2	0	081	232.66
856-140FP**	**14**	1	0	083	1926.95
856-160FP**	**16**	1	0	083	2337.92
856-180FP**	**18**	1	0	083	3065.76

** Fabricated from molded socket flanges with pipe spigot.
18" flange uses 4-piece ring

Flange Van Stone Style with Steel Ring



Soc

150 psi Maximum Internal Pressure Rating @73°F (23°C)

854-180FS	**18**	1	0	083	1809.89
854-200FS	**20**	1	0	083	2193.19
854-240FS	**24**	1	0	083	2951.69

Flange Van Stone Style with Steel Ring



Spig

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

856-140FS	**14**	1	0	083	975.22
856-160FS	**16**	1	0	083	1192.01
856-180FS	**18**	1	0	083	1350.67
856-200FS	**20**	1	0	083	1626.87
856-240FS	**24**	1	0	083	2209.11

Flange Van Stone Style PVC with Solid Ring



Soc

150 psi Maximum Internal Pressure Rating @73°F (23°C)

S854-020	**2**	10	0	080	37.68
S854-030	**3**	10	0	080	64.32
S854-040	**4**	5	0	080	81.36

Flange Van Stone Style PVC with Glass Filled PVC Solid Ring



Soc

150 psi Maximum Internal Pressure Rating @73°F (23°C)

S854-060	**6**	5	0	080	127.97
S854-080	**8**	2	0	080	208.35
S854-100	**10**	2	0	081	269.73
S854-120	**12**	2	0	081	290.80

PVC FLANGE One Piece*



ASTM Socket x Multi-bolt Pattern Ring

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

M851-100	**10**	2	0	081	189.75
M851-120	**12**	2	0	081	326.80

Hubs fit 10" and 12" ASTM IPS pipe. Rings are manufactured to accept bolt patterns in size 10" and 12" in ANSI Class 150, B.S. 4504 PN10, B.S. 4504 PN16, Table E & JIS 10K for size 10", Table D & E for size 12" Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Pipe Flanges

Flange Van Stone Style with PVC Ring

ASTM Soc x Multi-bolt Pattern Ring



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
M854-020	**2**	10	0	080	30.14

* Hubs fit 2" ASTM IPS pipe. Rings are manufactured to accept bolt patterns in size 2" in ANSI Class 150, B.S. 4504 PN10 B.S. 4504 PN16 (except 8"), B.S. 10 Table D and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

Flange Van Stone Style with Glass Filled PVC Ring

ASTM Soc x Multi-bolt Pattern Ring



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
M854-060	**6**	5	0	080	102.36
M854-080	**8**	2	0	080	166.68

* Hubs fit 6" and 8" ASTM IPS pipe. Rings are manufactured to accept bolt patterns in size 6" and 8" in ANSI Class 150, B.S. 4504 PN10 B.S. 4504 PN16 (except 8"), B.S. 10 Table D and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

Flange Van Stone Style with PVC Ring

ASTM Spig x Multi-bolt Pattern Ring



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
M856-020	**2**	10	0	080	30.37

* Spigots fit 2" ASTM IPS fitting socket. Rings are manufactured to accept bolt patterns in size 2" in ANSI Class 150, B.S. 4504 NP10 B.S. 4504 NP16 (except 8"), B.S. 10 Table D and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

Flange Van Stone Style with Glass Filled PVC Ring

ASTM Spig x Multi-bolt Pattern Ring



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
M856-060	**6**	4	0	080	103.20
M856-080	**8**	2	0	080	167.94

* Spigots fit 6" and 8" ASTM IPS fitting socket. Rings are manufactured to accept bolt patterns in size 6" and 8" in ANSI Class 150, B.S. 4504 PN10 B.S. 4504 PN16 (except 8"), B.S. 10 Table D and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

Flange Van Stone Style with PVC Ring

Fipt



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
855-005	**1/2**	25	0	080	21.63
855-007	**3/4**	25	0	080	25.38
855-010	**1**	15	0	080	27.76
855-012	**1-1/4**	15	0	080	38.26
855-015	**1-1/2**	20	0	080	41.79
855-020	**2**	10	0	080	42.76
855-025	**2-1/2**	10	0	080	98.29

Flange Van Stone Style with Glass Filled PVC Ring

Fipt



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
855-030	**3**	10	0	080	101.11
855-040	**4**	5	0	080	183.83
855-060	**6**	1	4	080	289.09
855-060F	**6**	1	4	083	256.97
855-080	**8**	2	0	080	358.24
855-080F	**8**	1	2	083	318.82
855-100F	**10**	1	2	083	359.19

Flange Bolt Kits

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each



Bolt Kit Selection Guide

Order Gaskets & Bolt Kits Separately

- Kit Contains All Bolts, Nuts, & Flat Washers for Specified Flange Size
- For Connecting Two (2) Mating Spears® Flanges
- Pre-coated, Anti-seize Lubricated Bolts
- Available in Zinc Coated Steel, Type 304 Stainless Steel or Type 316 Stainless Steel

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Bolt Kit Selection Guide (continued)

Flange Size	Bolts* Per Kit	Diameter (in.-TPI)	Length (in.)	Hardware Kit Part Number		
				Zinc	316 SS	304 SS
1/2 & 3/4	4	1/2-13	2	HK-005	HK1-005	HK2-005
1 & 1-1/4	4	1/2-13	2-1/4	HK-010	HK1-010	HK2-010
1-1/2	4	1/2-13	2-1/2	HK-015	HK1-015	HK2-015
2	4	5/8-11	3	HK-020	HK1-020	HK2-020
2-1/2	4	5/8-11	3-1/4	HK-025	HK1-025	HK2-025
3	4	5/8-11	3-1/2	HK-030	HK1-030	HK2-030
4	8	5/8-11	3-1/2	HK-040	HK1-040	HK2-040
5 & 6	8	3/4-10	4	HK-060	HK1-060	HK2-060
8	8	3/4-10	4-1/2	HK-080	HK1-080	HK2-080
10 & 12	12	7/8-9	5	HK-120	HK1-120	HK2-120

*Each Bolt Includes Nut & Two (2) Flat Washers

Zinc Plated Steel Flange Bolt Hardware Kits

For Connection of 2-Spears® Flanges Inlcudes Bolts, Nuts & Flat Washers



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HK-005	**1/2**	1	10	017	10.03

Zinc Plated Steel Flange Bolt Hardware Kits (continued)

For Connection of 2-Spears® Flanges Inlcudes Bolts, Nuts & Flat Washers

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HK-010	**3/4 & 1**	1	10	017	12.54
HK-015	**1-1/4 & 1-1/2**	1	10	017	18.85
HK-020	**2**	1	10	017	25.23
HK-025	**2-1/2**	1	10	017	30.25
HK-030	**3**	1	10	017	34.81
HK-040	**4**	1	5	017	72.12
HK-060	**5 & 6**	1	5	017	80.21
HK-080	**8**	1	0	017	94.00
HK-120	**10 & 12**	1	0	017	127.18

Type 316 Stainless Steel Flange Bolt Hardware Kits



For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers

HK1-005	**1/2**	1	10	017	30.11
HK1-010	**3/4 & 1**	1	10	017	43.37
HK1-015	**1-1/4 & 1-1/2**	1	10	017	47.78
HK1-020	**2**	1	10	017	57.46
HK1-025	**2-1/2**	1	10	017	61.59
HK1-030	**3**	1	10	017	81.26
HK1-040	**4**	1	5	017	162.96
HK1-060	**5 & 6**	1	5	017	212.54
HK1-080	**8**	1	0	017	266.69
HK1-120	**10 & 12**	1	0	017	542.58

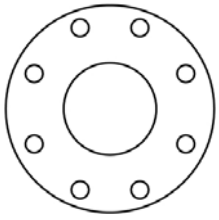
Type 304 Stainless Steel Flange Bolt Hardware Kits



For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers

HK2-005	**1/2**	1	10	017	26.34
HK2-010	**3/4 & 1**	1	10	017	37.57
HK2-015	**1-1/4 & 1-1/2**	1	10	017	44.26
HK2-020	**2**	1	10	017	52.06
HK2-025	**2-1/2**	1	10	017	55.20
HK2-030	**3**	1	10	017	68.55
HK2-040	**4**	1	5	017	137.09
HK2-060	**5 & 6**	1	5	017	144.51
HK2-080	**8**	1	0	017	190.02
HK2-120	**10 & 12**	1	0	017	336.78

Gasket Selection Guide



Order Gaskets & Bolt Kits Separately

- 1/8" Full-Face design with ANSI Class 150 Bolt Patterns
- Pressure rated to 150 psi @ 73°F
- Available in Buna-N, EPDM, or FKM

Flange Size	Bolt Holes	Gasket Part Number		
		Buna-N	EPDM	FKM
1/2	4	GK1-005	GK2-005	GK3-005
3/4	4	GK1-007	GK2-007	GK3-007
1	4	GK1-010	GK2-010	GK3-010
1-1/4	4	GK1-012	GK2-012	GK3-012
1-1/2	4	GK1-015	GK2-015	GK3-015
2	4	GK1-020	GK2-020	GK3-020
2-1/2	4	GK1-025	GK2-025	GK3-025
3	4	GK1-030	GK2-030	GK3-030
4	8	GK1-040	GK2-040	GK3-040
5	8	GK1-050	GK2-050	GK3-050
6	8	GK1-060	GK2-060	GK3-060
8	8	GK1-080	GK2-080	GK3-080
10	12	GK1-100	GK2-100	GK3-100
12	12	GK1-120	GK2-120	GK3-120

Buna-N Full-Faced Flange Gaskets

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK1-005	**1/2**	1	25	017	3.22
GK1-007	**3/4**	1	25	017	3.69
GK1-010	**1**	1	25	017	3.80
GK1-012	**1-1/4**	1	25	017	3.89
GK1-015	**1-1/2**	1	25	017	4.18
GK1-020	**2**	1	25	017	4.67
GK1-025	**2-1/2**	1	25	017	5.14
GK1-030	**3**	1	25	017	7.91
GK1-040	**4**	1	25	017	8.84
GK1-050	**5**	1	25	017	10.48
GK1-060	**6**	1	25	017	10.77
GK1-080	**8**	1	25	017	14.20
GK1-100	**10**	1	25	017	18.02
GK1-120	**12**	1	25	017	24.31
GK1-140	**14**	1	25	017	47.02
GK1-160	**16**	1	25	017	226.21
GK1-180	**18**	1	25	017	257.63
GK1-240	**24**	1	25	017	311.31

EPDM Full-Faced Flange Gaskets

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK2-005	**1/2**	1	25	017	4.27
GK2-007	**3/4**	1	25	017	4.55
GK2-010	**1**	1	25	017	4.75
GK2-012	**1-1/4**	1	25	017	4.99
GK2-015	**1-1/2**	1	25	017	5.36
GK2-020	**2**	1	25	017	6.54
GK2-025	**2-1/2**	1	25	017	7.85
GK2-030	**3**	1	25	017	11.54
GK2-040	**4**	1	25	017	13.14
GK2-050	**5**	1	25	017	16.43
GK2-060	**6**	1	25	017	17.24
GK2-080	**8**	1	25	017	22.97
GK2-100	**10**	1	25	017	29.93
GK2-120	**12**	1	25	017	41.18
GK2-140	**14**	1	25	017	100.45
GK2-160	**16**	1	25	017	178.22
GK2-180	**18**	1	25	017	208.16
GK2-200	**20**	1	25	017	241.60
GK2-240	**24**	1	25	017	364.73

FKM Full-Faced Flange Gaskets

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK3-005	**1/2**	1	25	017	15.25
GK3-007	**3/4**	1	25	017	18.11
GK3-010	**1**	1	25	017	20.01

FKM Full-Faced Flange Gaskets (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK3-012	**1-1/4**	1	5	017	22.59
GK3-015	**1-1/2**	1	25	017	28.49
GK3-020	**2**	1	25	017	39.83
GK3-025	**2-1/2**	1	25	017	53.27
GK3-030	**3**	1	25	017	119.04
GK3-040	**4**	1	25	017	137.42
GK3-050	**5**	1	25	017	160.20
GK3-060	**6**	1	25	017	181.75
GK3-080	**8**	1	25	017	258.94
GK3-100	**10**	1	25	017	344.42
GK3-120	**12**	1	25	017	485.28
GK3-140	**14**	1	25	017	711.26
GK3-160	**16**	1	25	017	810.63
GK3-180	**18**	1	25	017	912.00
GK3-240	**24**	1	25	017	1160.91

True Union 2000 Standard Ball Valve - PVC White

PVC White True Union 2000 Standard Ball Valve



Socket Ends - EPDM O-rings

Pressure Rating @73° F (23° C) = 235 psi
Maximum Service Pressure = 140° F (60° C)
Temperature/Pressure De-ratings Apply

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3622-015W	**1-1/2**	1	8	608	93.35
3622-020W	**2**	1	8	608	123.18

Check with Spears® for additional size availability

PVC White True Union 2000 Standard Ball Valves



SR Threaded Ends - EPDM O-rings

Pressure Rating @73° F (23° C) = 235 psi
Maximum Service Pressure = 140° F (60° C)
Temperature/Pressure De-ratings Apply

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3621-015WSR	**1-1/2**	1	8	608	99.98
3621-020WSR	**2**	1	8	608	130.35

Check with Spears® for additional size availability

True Union 2000 Standard Ball Valves



Socket Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" = 235 psi
2-1/2" - 4" = 150 psi
Flanged = 150 psi

Maximum Service Temperature
PVC = 140°F (60°C)

Temperature/Pressure De-ratings Apply
All Valves Assembled with Silicone-Free, Water Soluble Lubricant
See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

PVC Standard

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket & Threaded Ends					
1/2	3629-005 **39.77**	3639-005 **44.23**	1	18	608
3/4	3629-007 **47.03**	3639-007 **52.32**	1	18	608
1	3629-010 **56.02**	3639-010 **62.40**	1	12	608
1-1/4	3629-012 **77.48**	3639-012 **98.91**	1	8	608
1-1/2	3629-015 **93.35**	3639-015 **103.62**	1	8	608
2	3629-020 **123.18**	3639-020 **135.62**	1	4	608
Socket Ends					
2-1/2	3622-025 **235.95**	3632-025 **320.80**	1	0	609
3	3622-030 **312.14**	3632-030 **346.81**	1	0	609
4	3622-040 **527.23**	3632-040 **586.01**	1	0	609
Threaded Ends					
2-1/2	3621-025 **235.95**	3631-025 **320.80**	1	0	609
3	3621-030 **312.14**	3631-030 **346.81**	1	0	609
4	3621-040 **527.23**	3631-040 **586.01**	1	0	609
SR Threaded Ends					
1/2	3621-005SR **40.63**	3631-005SR **45.08**	1	18	608
3/4	3621-007SR **49.06**	3631-007SR **54.39**	1	18	608
1	3621-010SR **58.06**	3631-010SR **64.44**	1	18	608
1-1/4	3621-012SR **83.67**	3631-012SR **105.08**	1	12	608
1-1/2	3621-015SR **99.98**	3631-015SR **110.24**	1	8	608

PVC Standard (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
SR Threaded Ends					
2	3621-020SR **130.35**	3631-020SR **142.81**	1	8	608
2-1/2	3621-025SR **256.11**	3631-025SR **340.14**	1	0	609
3	3621-030SR **331.52**	3631-030SR **366.17**	1	0	609
4	3621-040SR **550.00**	3631-040SR **608.60**	1	0	609
Spigot Ends					
1/2	3627-005 **39.77**	3637-005 **44.23**	1	18	608
3/4	3627-007 **47.03**	3637-007 **52.32**	1	18	608
1	3627-010 **56.02**	3637-010 **62.40**	1	12	608
1-1/4	3627-012 **77.48**	3637-012 **98.91**	1	12	608
1-1/2	3627-015 **93.35**	3637-015 **103.62**	1	8	608
2	3627-020 **123.18**	3637-020 **135.62**	1	8	608
2-1/2	3627-025 **236.74**	3637-025 **320.80**	1	0	609
3	3627-030 **312.14**	3637-030 **346.81**	1	0	609
4	3627-040 **527.23**	3637-040 **586.01**	1	0	609
Flanged Ends					
1/2	3623-005 **56.87**	3633-005 **60.65**	1	8	608
3/4	3623-007 **72.05**	3633-007 **78.36**	1	8	608
1	3623-010 **87.18**	3633-010 **93.75**	1	8	608
1-1/4	3623-012 **102.35**	3633-012 **113.76**	1	4	608
1-1/2	3623-015 **128.93**	3633-015 **140.29**	1	4	608

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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Standard (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Flanged Ends					
2	3623-020 **205.28**	3633-020 **217.74**	1	0	608
2-1/2	3623-025 **379.14**	3633-025 **385.41**	1	0	609
3	3623-030 **392.87**	3633-030 **520.28**	1	0	609
4	3623-040 **842.57**	3633-040 **976.66**	1	0	609

CWV Ball Valves



A Combination of Economy & Quality - Made in the U.S.A.
For Greater Value in a General Purpose Cold Water Valve

Pressure Rating @ 73°F (23°C), Water = 125 psi

You don't have to go overseas to find an economical general purpose ball valve! Spears® CWV BALL VALVES are produced in the U.S.A. with Spears® high quality construction and NSF® Certified for potable water service. Designed for use with cold water, these PVC valves may be suitable for some applications previously handled by Spears® Utility Valves. Available in IPS sizes 1/2" through 2" with a Full 1-Year Warranty.

CWV PVC Ball Valve

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Socket Ends					
8722-005	**1/2**	50	0	204	8.43
8722-007	**3/4**	25	0	204	10.00
8722-010	**1**	25	0	204	13.60
8722-012	**1-1/4**	20	0	204	18.03
8722-015	**1-1/2**	20	0	204	27.52
8722-020	**2**	10	0	204	34.78

CWV PVC Ball Valve

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Threaded Ends					
8721-005	**1/2**	50	0	204	10.41
8721-007	**3/4**	25	0	204	12.35
8721-010	**1**	25	0	204	16.80
8721-012	**1-1/4**	20	0	204	22.25
8721-015	**1-1/2**	20	0	204	33.97
8721-020	**2**	10	0	204	42.94

Utility Ball Valves



Pressure Rating @ 73°F (23°C), Water
1/2" - 6" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply

All Valves Assembled with Silicone-Free,
Water Soluble Lubricant

PVC w/EPDM O-ring Seal

Size	Threaded Ends	Socket Ends	Std Pk	Mstr Pk	Disc Code
PVC White					
1/2	2621-005 **9.37**	2622-005 **9.37**	50	0	215
3/4	2621-007 **11.12**	2622-007 **11.12**	25	0	215
1	2621-010 **15.12**	2622-010 **15.12**	25	0	215
1-1/4	2621-012 **20.03**	2622-012 **20.03**	20	0	215
1-1/2	2621-015 **30.57**	2622-015 **30.57**	20	0	215
2	2621-020 **38.64**	2622-020 **38.64**	8	0	215
2-1/2	2621-025 **66.14**	2622-025 **66.14**	6	0	214
3	2621-030 **118.62**	2622-030 **118.62**	1	4	214
4	2621-040 **217.41**	2622-040 **217.41**	1	0	214
6 (Lever Handle)	---	2622-060 **350.76**	1	0	214

PVC w/EPDM O-ring Seal

Size	Threaded Ends	Socket Ends	Std Pk	Mstr Pk	Disc Code
PVC Gray					
1/2	2621-005G **9.37**	2622-005G **9.37**	50	0	215
3/4	2621-007G **11.12**	2622-007G **11.12**	25	0	215
1	2621-010G **15.12**	2622-010G **15.12**	25	0	215
1-1/4	2621-012G **20.03**	2622-012G **20.03**	20	0	215
1-1/2	2621-015G **30.57**	2622-015G **30.57**	20	0	215
2	2621-020G **38.64**	2622-020G **38.64**	8	0	215
2-1/2	2621-025G **66.14**	2622-025G **66.14**	6	0	214
3	2621-030G **118.62**	2622-030G **118.62**	1	4	214
4	2621-040G **217.41**	2622-040G **217.41**	1	0	214

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Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Single Entry Ball Valves



PVC White – Socket/Threaded Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
3" - 4" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service

All Valves Assembled with Silicone-Free, Water Soluble Lubricant.
See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

PVC White

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded Ends						
1/2	2411-005W 19.02	2421-005W 21.09	2431-005W 23.46	10	120	240
3/4	2411-007W 25.75	2421-007W 26.55	2431-007W 29.51	10	80	240
1	2411-010W 28.11	2421-010W 31.22	2431-010W 34.72	10	0	240
1-1/4	2411-012W 39.08	2421-012W 43.46	2431-012W 48.28	6	0	240
1-1/2	2411-015W 50.66	2421-015W 58.82	2431-015W 63.78	5	0	240
2	2411-020W 57.03	2421-020W 63.31	2431-020W 70.37	5	0	240
3	2411-030W 207.42	2421-030W 257.32	2431-030W 296.68	1	0	240
4	2411-040W 438.47	2421-040W 483.08	2431-040W 525.14	1	0	240
Socket Ends						
1/2	2412-005W 19.02	2422-005W 21.09	2432-005W 23.46	10	120	240
3/4	2412-007W 25.75	2422-007W 26.55	2432-007W 29.51	10	80	240
1	2412-010W 28.11	2422-010W 31.22	2432-010W 34.72	10	0	240
1-1/4	2412-012W 39.08	2422-012W 43.46	2432-012W 48.28	6	0	240
1-1/2	2412-015W 50.66	2422-015W 58.82	2432-015W 63.79	5	0	240
2	2412-020W 57.03	2422-020W 63.31	2432-020W 70.37	5	0	240
3	2412-030W 207.42	2422-030W 257.32	2432-030W 296.68	1	0	240
4	2412-040W 438.47	2422-040W 483.08	2432-040W 525.14	1	0	240



General Purpose True Union design, 1/4-turn shutoff. Basic On-Off operation.

- Blocked Seal Carrier
- PTFE/HDPE Seats
- 235 psi @ 73°F (23°C) (flanged 150 psi)
- 115 VAC standard, optional voltages available
- High Impact PP NEMA 4x Enclosure, SS316 Fasteners
- 2-Position with Stem-mounted Visual Open/Close Indicator

See Electric Actuator Accessories for "2-wire" Control Add-on Actuator Accessory

PVC Electro Actuated True Union 2000 Standard Ball Valve

O-ring	EPDM			FKM			Disc Code
Joint	Socket & Thread	SR Thread	Flanged	Socket & Thread	SR Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	E1453-005 **469.73**	E1451-005SR **470.59**	E1457-005 **577.91**	E1454-005 **517.58**	E1452-005SR **518.55**	E1458-005 **636.74**	500
3/4	E1453-007 **479.98**	E1451-007SR **481.93**	E1457-007 **606.21**	E1454-007 **536.13**	E1452-007SR **538.09**	E1458-007 **675.55**	500
1	E1453-010 **494.41**	E1451-010SR **494.41**	E1457-010 **632.88**	E1454-010 **548.11**	E1452-010SR **550.23**	E1458-010 **701.72**	500
1-1/4	E1553-012 **506.39**	E1551-012SR **512.47**	E1557-012 **658.42**	E1554-012 **584.32**	E1552-012SR **590.29**	E1558-012 **759.53**	500
1-1/2	E1553-015 **535.73**	E1551-015SR **542.20**	E1557-015 **691.06**	E1554-015 **599.61**	E1552-015SR **606.21**	E1558-015 **773.62**	500
2	E1553-020 **567.65**	E1551-020SR **574.68**	E1557-020 **760.69**	E1554-020 **631.15**	E1552-020SR **637.77**	E1558-020 **845.79**	500



General purpose industrial grade sealed unit design, 1/4-turn shutoff. Basic On-Off operation.

- Maintenance-free
- PTFE Seats
- 235 psi @ 73°F (23°C) (flanged 150 psi)
- 115 VAC standard, optional voltages available
- High Impact PP NEMA 4x Enclosure, SS316 Fasteners
- 2-Position with Stem-mounted Visual Open/Close Indicator

See Electric Actuator Accessories for "2-wire" Control Add-on Actuator Accessory

PVC Electro Actuated Compact 2000 Ball Valve

O-ring	EPDM			FKM			Disc Code
Joint	Socket	Thread	Flanged	Socket	Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	E1404-005 **452.61**	E1406-005 **452.61**	E1408-005 **557.42**	E1405-005 **498.81**	E1407-005 **498.81**	E1409-005 **587.83**	496
3/4	E1404-007 **463.71**	E1406-007 **463.71**	E1408-007 **586.16**	E1405-007 **515.36**	E1407-007 **515.36**	E1409-007 **616.72**	496
1	E1404-010 **472.03**	E1406-010 **472.03**	E1408-010 **604.24**	E1405-010 **523.54**	E1407-010 **523.54**	E1409-010 **635.27**	496
1-1/4	E1504-012 **488.69**	E1506-012 **488.69**	E1508-012 **636.49**	E1505-012 **552.26**	E1507-012 **552.26**	E1509-012 **670.07**	496
1-1/2	E1504-015 **502.61**	E1506-015 **502.61**	E1508-015 **648.42**	E1505-015 **563.01**	E1507-015 **563.01**	E1509-015 **686.42**	496
2	E1504-020 **524.78**	E1506-020 **524.78**	E1508-020 **705.54**	E1505-020 **585.32**	E1507-020 **585.32**	E1509-020 **744.75**	496

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Utility Swing Check Valves



Socket/Threaded



Compression End



Socket/Threaded

Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature
140°F (60°C)
Temperature/Pressure De-ratings Apply
EPDM Seat

General Installation Information: Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure less than 0.5 psi.

PVC White Swing Check

Size	Socket	Thread	SR Threaded	Std Pk	Mstr Pk	Disc Code
1/2	S1520-05 16.68	S1520-05F 16.68	S1520-05FSR 19.46	35	0	026
3/4	S1520-07 17.22	S1520-07F 17.22	S1520-07FSR 21.18	35	0	026
1	S1520-10 17.94	S1520-10F 17.94	S1520-10FSR 23.45	20	0	026
1-1/4	S1520-12 18.63	S1520-12F 18.63	S1520-12FSR 27.48	12	0	026
1-1/2	S1520-15 19.75	S1520-15F 19.75	S1520-15FSR 34.86	12	0	026
2	S1520-20 30.65	S1520-20F 30.65	S1520-20FSR 47.05	15	0	026
2-1/2	S1520-25 50.99	S1520-25F 50.99	S1520-25FSR 67.39	5	0	026
3	S1520-30 56.66	S1520-30F 56.66	S1520-30FSR 100.49	4	0	026
4	S1520-40 80.22	S1520-40F 80.22	S1520-40FSR 125.64	2	0	026
6	S1520-60 168.56	S1520-60F 168.56	S1520-60FSR 222.33	1	0	026
8	S1520-80 313.13	---	---	1	0	026

PVC Clear Swing Check

Size	Socket	Thread	SR Threaded	Std Pk	Mstr Pk	Disc Code
1/2	S1520C05 22.68	S1520C05F 22.68	S1520C05FSR 25.45	35	0	026
3/4	S1520C07 23.13	S1520C07F 23.13	S1520C07FSR 27.12	35	0	026
1	S1520C10 23.57	S1520C10F 23.57	S1520C10FSR 29.09	20	0	026
1-1/4	S1520C12 24.75	S1520C12F 24.75	S1520C12FSR 33.57	12	0	026
1-1/2	S1520C15 26.89	S1520C15F 26.89	S1520C15FSR 42.03	12	0	026
2	S1520C20 38.72	S1520C20F 38.72	S1520C20FSR 55.12	15	0	026
2-1/2	S1520C25 64.54	S1520C25F 64.54	S1520C25FSR 89.97	5	0	026
3	S1520C30 71.72	S1520C30F 71.72	S1520C30FSR 115.54	4	0	026
4	S1520C40 96.54	S1520C40F 96.54	S1520C40FSR 141.93	2	0	026
6	S1520C60 199.53	S1520C60F 199.53	S1520C60FSR 253.31	1	0	026
8	S1520C80 333.29	---	---	1	0	026

True Union Utility Swing Check Valves

PVC White True Union Swing Check

Size	Socket	Threaded	SR Thread	Std Pk	Mstr Pk	Disc Code
1/2	S1720-05 18.97	S1720-05F 18.97	S1720-05FSR 21.73	35	0	026
3/4	S1720-07 19.55	S1720-07F 19.55	S1720-07FSR 23.54	30	0	026
1	S1720-10 20.37	S1720-10F 20.37	S1720-10FSR 25.89	18	0	026
1-1/4	S1720-12 21.44	S1720-12F 21.44	S1720-12FSR 30.27	12	0	026
1-1/2	S1720-15 23.57	S1720-15F 23.57	S1720-15FSR 38.71	10	0	026
2	S1720-20 35.41	S1720-20F 35.41	S1720-20FSR 51.74	10	0	026
2-1/2	S1720-25 59.04	S1720-25F 59.04	S1720-25FSR 84.44	2	0	026
3	S1720-30 75.38	S1720-30F 75.38	S1720-30FSR 119.23	2	0	026
4	S1720-40 101.75	S1720-40F 101.75	S1720-40FSR 146.72	1	0	026

PVC Clear True Union Swing Check

Size	Socket	Threaded	SR Thread	Std Pk	Mstr Pk	Disc Code
1/2	S1720C05 24.57	S1720C05F 24.57	S1720C05FSR 27.33	35	0	026

PVC Clear True Union Swing Check (continued)

Size	Socket	Threaded	SR Thread	Std Pk	Mstr Pk	Disc Code
3/4	S1720C07 24.98	S1720C07F 24.98	S1720C07FSR 28.96	30	0	026
1	S1720C10 27.29	S1720C10F 27.29	S1720C10FSR 32.80	18	0	026
1-1/4	S1720C12 28.75	S1720C12F 28.75	S1720C12FSR 37.57	12	0	026
1-1/2	S1720C15 30.83	S1720C15F 30.83	S1720C15FSR 45.96	10	0	026
2	S1720C20 43.37	S1720C20F 43.37	S1720C20FSR 59.78	10	0	026
2-1/2	S1720C25 71.22	S1720C25F 71.22	S1720C25FSR 96.64	2	0	026
3	S1720C30 81.97	S1720C30F 81.97	S1720C30FSR 125.80	2	0	026
4	S1720C40 109.29	S1720C40F 109.29	S1720C40FSR 154.64	1	0	026

Compression Utility Swing Check Valves

PVC White Compression End Swing Check

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Compression End					
S1500-05	**1/2**	20	0	026	22.17
S1500-07	**3/4**	35	0	026	23.33
S1500-10	**1**	20	0	026	24.31
S1500-12	**1-1/4**	12	0	026	28.55
S1500-15	**1-1/2**	12	0	026	31.85
S1500-20	**2**	10	0	026	50.24
S1500-25	**2-1/2**	5	0	026	83.91
S1500-30	**3**	4	0	026	108.93
S1500-40	**4**	2	0	026	167.34

PVC Clear Compression End Swing Check

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Compression End					
S1500C05	**1/2**	35	0	026	24.38
S1500C07	**3/4**	20	0	026	26.24
S1500C10	**1**	20	0	026	26.78
S1500C12	**1-1/4**	12	0	026	30.06
S1500C15	**1-1/2**	12	0	026	33.88
S1500C20	**2**	10	0	026	50.58
S1500C25	**2-1/2**	5	0	026	84.84

PVC Clear Compression End Swing Check (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Compression End					
S1500C30	**3**	4	0	026	123.92
S1500C40	**4**	2	0	026	170.74

Compression Coupling Nut Wrenches

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CCW-005	**1/2**	1	50	299	11.93
CCW-007	**3/4**	1	50	299	12.14
CCW-010	**1**	1	50	299	12.65
CCW-012	**1-1/4**	1	50	299	14.32
CCW-015	**1-1/2**	1	50	299	15.44
CCW-020*	**2**	1	50	299	17.25
CCW-030**	**3**	1	25	299	21.22

* CCW-20 - Wrench also fits 2-1/2" Coupling Body
**CCW-30 - Wrench also fits 4" Coupling Body

Compression Coupling Nut Wrench Sets

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CCW-000	**Set**	1	25	299	99.68
Complete Set of Wrenches, Sizes 1/2" - 3"					

Utility Spring Check Valves

PVC White Spring Check (Spring Assisted Swing Check)

Size	Socket	Thread	SR Thread	Std Pk	Mstr Pk	Disc Code
1/2	S1580-05 32.84	S1580-05F 32.84	S1580-05FSR 35.62	20	0	026
3/4	S1580-07 37.17	S1580-07F 37.17	S1580-07FSR 41.13	20	0	026
1	S1580-10 38.72	S1580-10F 38.72	S1580-10FSR 44.22	20	0	026
1-1/4	S1580-12 40.32	S1580-12F 40.32	S1580-12FSR 49.17	12	0	026
1-1/2	S1580-15 42.92	S1580-15F 42.92	S1580-15FSR 58.02	12	0	026
2	S1580-20 44.99	S1580-20F 44.99	S1580-20FSR 61.39	15	0	026
2-1/2	S1580-25 79.85	S1580-25F 79.85	S1580-25FSR 105.28	4	0	026
3	S1580-30 83.28	S1580-30F 83.28	S1580-30FSR 127.12	4	0	026
4	S1580-40 118.19	S1580-40F 118.19	S1580-40FSR 163.61	2	0	026

PVC Clear Spring Check (Spring Assisted Swing Check)

Size	Socket	Thread	SR Thread	Std Pk	Mstr Pk	Disc Code
1/2	S1580C05 33.84	S1580C05F 33.84	S1580C05FSR 36.65	20	0	026
3/4	S1580C07 38.31	S1580C07F 38.31	S1580C07FSR 42.31	20	0	026
1	S1580C10 39.94	S1580C10F 39.94	S1580C10FSR 45.43	20	0	026
1-1/4	S1580C12 41.58	S1580C12F 41.58	S1580C12FSR 50.41	12	0	026
1-1/2	S1580C15 44.05	S1580C15F 44.05	S1580C15FSR 59.19	12	0	026
2	S1580C20 45.72	S1580C20F 45.72	S1580C20FSR 62.11	15	0	026
2-1/2	S1580C25 82.33	S1580C25F 82.33	S1580C25FSR 107.72	5	0	026
3	S1580C30 85.73	S1580C30F 85.73	S1580C30FSR 170.57	4	0	026
4	S1580C40 121.80	S1580C40F 121.80	S1580C40FSR 167.21	2	0	026

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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

True Union Utility Spring Check Valves

PVC White True Union Spring Check (Spring Assisted Swing Check)

Size	Socket	Thread	SR Thread	Std Pk	Mstr Pk	Disc Code
1/2	S1780-05 43.67	S1780-05F 43.67	S1780-05FSR 46.44	20	0	026
3/4	S1780-07 49.54	S1780-07F 49.54	S1780-07FSR 53.52	30	0	026
1	S1780-10 51.63	S1780-10F 51.63	S1780-10FSR 57.12	18	0	026
1-1/4	S1780-12 53.78	S1780-12F 53.78	S1780-12FSR 62.57	12	0	026
1-1/2	S1780-15 57.29	S1780-15F 57.29	S1780-15FSR 72.44	10	0	026
2	S1780-20 59.65	S1780-20F 59.65	S1780-20FSR 76.03	10	0	026
2-1/2	S1780-25 106.46	S1780-25F 106.46	S1780-25FSR 131.83	2	0	026
3	S1780-30 111.06	S1780-30F 111.06	S1780-30FSR 154.89	2	0	026
4	S1780-40 157.59	S1780-40F 157.59	S1780-40FSR 203.04	1	0	026

PVC Clear True Union Spring Check (Spring Assisted Swing Check)

Size	Socket	Thread	SR Thread	Std Pk	Mstr Pk	Disc Code
1/2	S1780C05 45.05	S1780C05F 45.05	S1780C05FSR 47.82	20	0	026
3/4	S1780C07 51.09	S1780C07F 51.09	S1780C07FSR 55.07	30	0	026
1	S1780C10 53.22	S1780C10F 53.22	S1780C10FSR 58.76	18	0	026
1-1/4	S1780C12 55.41	S1780C12F 55.41	S1780C12FSR 64.21	12	0	026
1-1/2	S1780C15 58.76	S1780C15F 58.76	S1780C15FSR 74.21	10	0	026
2	S1780C20 60.47	S1780C20F 60.47	S1780C20FSR 77.83	10	0	026
2-1/2	S1780C25 109.76	S1780C25F 109.76	S1780C25FSR 135.19	2	0	026
3	S1780C30 114.48	S1780C30F 114.48	S1780C30FSR 158.31	2	0	026
4	S1780C40 162.48	S1780C40F 162.48	S1780C40FSR 207.93	1	0	026

PVC In-line Adjustable Spring Check Valves



Fipt x Mipt



Mipt x Fipt



Fipt x Fipt

Pressure Rating @ 73°F (23°C), Water
200 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply

2 - 14 lbs. Adjustable Spring Tension
(5 to 32 feet of head)
Factory Preset to Approx. 5 psi
(12 feet of head)
Each full turn of adjustment nut = 1 psi
(2.3 feet of head)
Stainless Steel Adjustment Hardware
EPDM Seat

Standard Unit - Female Inlet x Male Outlet

Part Number	**Size**	Std Pk	Mstr Ctn	Disc Code	Price Each
Fipt x Mipt (Inlet x Outlet)					
S1102-05	**1/2**	30	180	026	10.95
S1102-07	**3/4**	25	150	026	11.20
S1102-10	**1**	25	150	026	18.59
S1102-05-07	**1/2X3/4**	25	150	026	15.98

Male Inlet x Female Outlet Option

Part Number	**Size**	Std Pk	Mstr Ctn	Disc Code	Price Each
Mipt x Fipt (Inlet x Outlet)					
S1101-05	**1/2**	30	180	026	10.95

Female Inlet x Female Outlet Option

Part Number	**Size**	Std Pk	Mstr Ctn	Disc Code	Price Each
Fipt x Fipt (Inlet x Outlet)					
S1100-07	**3/4**	25	150	026	11.57

EverTUFF® TURF™ Fittings For Golf Course & Turf Applications



Spears® EverTUFF® TURF™ Fittings are specifically engineered to meet the demanding system requirements of today's golf course and turf irrigation applications. This patented design provides greater surge resistance than Schedule 80 fittings for the most reliable turf fittings on the market. Produced in a distinct Blue color injection molded from specially balanced PVC materials or optional CPVC Gray, these performance fittings are Class 315 rated (315 psi) and available in IPS sizes 1" through 4".

- Over 50% Stronger than Any Other Solvent Weld Turf Fitting
- Full Class 315 Pressure Rating
- Patented Special Reinforced (SR) Threads on All Female Threaded Fittings
- Produced in Standard Configurations
- Optional CPVC for Higher Temperatures
- NSF® Certified

Selection Guide for Choosing PVC or High Temperature CPVC Materials

Heat can play a significant part in performance of any piping system. As with all thermoplastic products, pressure rating reduction is required as temperatures increase. This can apply to primary and secondary heat sources, such as basic ambient temperature and absorbed temperature from solar exposure or solar heated water supply sources. The following table shows applicable Class 315 (315 psi) pressure de-rating as temperatures elevate.

PVC & CPVC Class 315 Pressure Ratings at Elevated Temperatures, PSI												
Application Temperature	73° F (23° C)	90° F (32° C)	100° F (38° C)	110° F (43° C)	120° F (49° C)	130° F (54° C)	140° F (60° C)	150° F (66° C)	160° F (71° C)	170° F (77° C)	180° F (82° C)	200° F (99° C)
PVC	315	236	195	161	126	98	69	--	--	--	--	--
CPVC	315	287	258	227	205	180	158	132	126	91	79	62

PVC Tee

Soc



Class 315

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
401-010T	**1**	50	0	031	2.58
401-012T	**1-1/4**	25	0	031	4.03
401-015T	**1-1/2**	25	0	031	4.89
401-020T	**2**	25	0	031	7.13
401-025T	**2-1/2**	10	0	031	23.52
401-030T	**3**	10	0	031	30.89
401-040T	**4**	8	0	031	55.89

PVC Reducing Tee

Soc



Class 315

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
401-168T	**1-1/4X1**	25	0	031	4.42
401-212T	**1-1/2X1-1/4**	25	0	031	7.76
401-251T	**2X1-1/2**	10	0	031	9.84
401-292T	**2-1/2X2**	10	0	031	23.45
401-338T	**3X2**	6	0	031	33.55
401-422T	**4X3**	6	0	031	55.89

PVC 90° Elbow

Soc

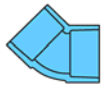


Class 315

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
406-010T	**1**	50	0	031	1.95
406-012T	**1-1/4**	25	0	031	3.43
406-015T	**1-1/2**	25	0	031	3.69
406-020T	**2**	25	0	031	5.78
406-025T	**2-1/2**	10	0	031	17.59
406-030T	**3**	10	0	031	21.05
406-040T	**4**	8	0	031	37.65

PVC 45° Elbow

Soc

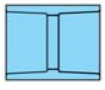


Class 315

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
417-010T	**1**	50	0	031	2.98
417-012T	**1-1/4**	25	0	031	4.14
417-015T	**1-1/2**	25	0	031	5.20
417-020T	**2**	25	0	031	6.75
417-025T	**2-1/2**	10	0	031	17.62
417-030T	**3**	10	0	031	27.35
417-040T	**4**	5	0	031	49.04

PVC Couplings

Soc

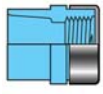


Class 315

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
429-010T	**1**	50	0	031	1.53
429-012T	**1-1/4**	25	0	031	2.12
429-015T	**1-1/2**	25	0	031	2.25
429-020T	**2**	25	0	031	3.44
429-025T	**2-1/2**	12	0	031	7.62
429-030T	**3**	10	0	031	11.95
429-040T	**4**	5	0	031	17.26

PVC Special Reinforced Female Adapter

Soc x SR Fipt - Stainless Steel Collar



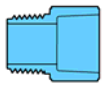
Class 315

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
435-010SRT	**1**	25	200	031	10.07
435-012SRT	**1-1/4**	10	60	031	16.29
435-015SRT	**1-1/2**	10	80	031	20.05
435-020SRT	**2**	10	0	031	34.97
435-025SRT	**2-1/2**	5	0	031	55.18
435-030SRT	**3**	10	0	031	62.18
435-040SRT	**4**	5	0	031	106.86

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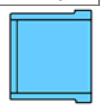
PVC Male Adapter
Mipt x Soc



Class 315

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
436-010T	1	50	0	031	1.73
436-012T	1-1/4	25	0	031	2.12
436-015T	1-1/2	25	0	031	2.82
436-020T	2	25	0	031	3.72
436-025T	2-1/2	10	0	031	10.94
436-030T	3	10	0	031	16.01
436-040T	4	5	0	031	20.41

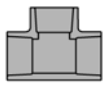
PVC Reducer Bushing Flush Style
Spig x Soc



Class 315

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
437-250T	2X1-1/4	10	120	031	4.32
437-251T	2X1-1/2	25	0	031	4.32
437-292T	2-1/2X2	15	0	031	6.94
437-338T	3X2	10	0	031	10.20
437-422T	4X3	6	0	031	21.47

CPVC Tee
Soc



Class 315

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
401-010TC	1	50	0	032	5.14
401-012TC	1-1/4	25	0	032	8.06
401-015TC	1-1/2	25	0	032	9.78
401-020TC	2	25	0	032	14.24
401-025TC	2-1/2	10	0	032	47.03
401-030TC	3	10	0	032	61.78
401-040TC	4	8	0	032	111.77

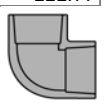
CPVC Reducing Tee
Soc



Class 315

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
401-168TC	1-1/4X1	25	0	032	8.83
401-212TC	1-1/2X1-1/4	25	0	032	15.52
401-251TC	2X1-1/2	10	0	032	23.83
401-292TC	2-1/2X2	10	0	032	46.89
401-338TC	3X2	6	0	032	67.08
401-422TC	4X3	6	0	032	111.77

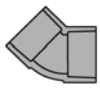
CPVC 90° Elbow
Soc



Class 315

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
406-010TC	1	50	0	032	3.89
406-012TC	1-1/4	25	0	032	6.85
406-015TC	1-1/2	25	0	032	7.39
406-020TC	2	25	0	032	11.56
406-025TC	2-1/2	10	0	032	35.17
406-030TC	3	10	0	032	42.09
406-040TC	4	8	0	032	75.28

CPVC 45° Elbow
Soc



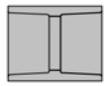
Class 315

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
417-010TC	1	50	0	032	5.96
417-012TC	1-1/4	25	0	032	8.26
417-015TC	1-1/2	25	0	032	10.38
417-020TC	2	25	0	032	10.38

CPVC 45° Elbow (continued)
Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
417-025TC	2-1/2	10	0	032	35.24
417-030TC	3	10	0	032	54.69
417-040TC	4	5	0	032	98.06

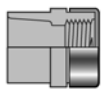
CPVC Couplings
Soc



Class 315

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
429-010TC	1	50	0	032	3.05
429-012TC	1-1/4	25	0	032	4.23
429-015TC	1-1/2	25	0	032	4.51
429-020TC	2	25	0	032	6.88
429-025TC	2-1/2	12	0	032	15.25
429-030TC	3	10	0	032	23.88
429-040TC	4	5	0	032	34.54

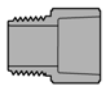
CPVC Special Reinforced Female Adapter
Soc x SR Fipt - Stainless Steel Collar



Class 315

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
435-010SRTC	1	25	200	032	20.16
435-012SRTC	1-1/4	10	60	032	32.59
435-015SRTC	1-1/2	10	80	032	40.12
435-020SRTC	2	10	0	032	69.95
435-025SRTC	2-1/2	5	0	032	110.36
435-030SRTC	3	10	0	032	124.37
435-040SRTC	4	5	0	032	213.73

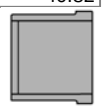
CPVC Male Adapter
Mipt x Soc



Class 315

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
436-010TC	1	50	0	032	3.46
436-012TC	1-1/4	25	0	032	4.23
436-015TC	1-1/2	25	0	032	5.64
436-020TC	2	25	0	032	7.42
436-025TC	2-1/2	10	0	032	21.87
436-030TC	3	5	0	032	32.01
436-040TC	4	5	0	032	40.82

CPVC Reducer Bushing Flush Style
Spig x Soc



Class 315

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
437-250TC	2X1-1/4	10	200	032	8.63
437-251TC	2X1-1/2	25	0	032	8.63
437-292TC	2-1/2X2	15	0	032	13.87
437-338TC	3X2	10	0	032	20.39
437-422TC	4X3	6	0	032	42.95

EverTUFF® TURF™ Mechanical Clamp-on Transition Saddles

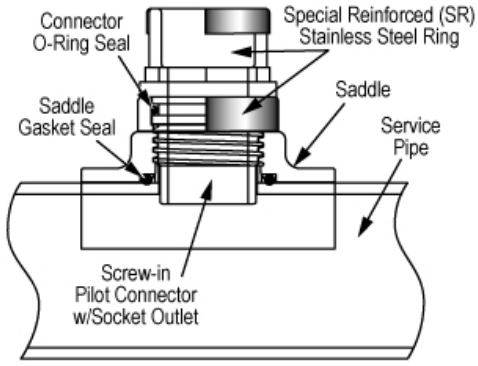
Designed for HDPE-to-PVC pipe transition to provide HDPE mainline take-off for PVC irrigation laterals and irrigation extensions, but fully suitable for any IPS pipe (metal or plastic) transition to PVC. Eliminates costly and cumbersome HDPE fusion process, which is generally cost prohibitive. Depending on the region and location, it has been found that the installed cost of HDPE laterals can be 25% higher than PVC laterals!

Pilot on lateral connector prevents saddle movement on pipe. Exceptionally strong Special Reinforced (SR) outlet on both Saddle outlet and Pilot Connector socket provide unparalleled strength. Injection molded in distinct blue EverTUFF® PVC proprietary material. Pilot Connectors are replaceable and interchangeable with any size EverTUFF® Mechanical Saddle for greater versatility.

Easy Installation - Clamp saddle to pipe, drill hole, install screw-in Pilot Connector with socket outlet. Available for a variety of mainline sizes and can be easily bushed for reduced lateral take-off sizes or special connections.



- Socket Outlet
- 315 psi Pressure Rating @ 73° F
- Stainless Steel Mechanical Clamp
- Elastomer Gasket & O-ring Seals
- Interchangeable 1-1/2" & 2" Lateral Connector Sizes
- Stainless Steel Reinforcing Rings for Extra Strength



Note: Mechanical Clamp Not Shown

Mechanical Clamp-on Transition Saddles

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Pipe O.D. x Socket					
For Polyethylene (or any IPS pipe, metal or plastic) - To - PVC Transitions					
865-419	**4X1-1/2**	2	0	086	733.37
865-420	**4X2**	1	0	086	743.42
865-527	**6X1-1/2**	1	0	086	804.53
865-528	**6X2**	1	0	086	838.42
865-577	**8X1-1/2**	1	0	086	941.68
865-578	**8X2**	1	0	086	978.32

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Many Configurations may be created and furnished by using the following Swing Joint Riser Numbering System.

X X | X X - X X X | X X

Code	Swing Arm Riser Style
58	Male Buttress Threaded Riser Style
59	Cut & Solvent Cemented Riser Style

Code	Inlet x Outlet Style Combination
01	Soc x Soc
02	Spig x Soc
03	Mipt x Soc
04	Tee x Soc
05	Soc x Mipt
06	Spig x Mipt
07	Mipt x Mipt
08	Tee x Mipt
09	Soc x Mat
10	Spig x Mat
11	Mipt x Mat
12	Tee x Mat
13	Soc x Fipt
14	Spig x Fipt
15	Mipt x Fipt
16	Tee x Fipt
17	Soc x SR Fipt
18	Spig x SR Fipt
19	Mipt x SR Fipt
20	Tee x SR Fipt
21†	Gmpt 2-1/2" Npl x Mat
22	Mat x Mat
23	Mat x Mpt
24	Mat x Fipt
25	Mat x SR Fipt
26	Spig x Fbt
27	Spig x Fat
28	Extended Spig x Fipt
29	Extended Spig x Mipt
30	Open
31†	Mipt x Gmpt 2-1/2" Npl
32†	Gmpt 2-1/2" Npl x Fipt
33†	Gmpt 2-1/2" Npl x Soc
34†	Gmpt 2-1/2" Npl x SR Fipt
35†	Soc x Gmpt 2-1/2" Npl
36†	Spig x Gmpt 2-1/2" Npl
37†	Gmpt x Gmpt 2-1/2" Npl
38†	Tee x Gmpt 2-1/2" Npl
39†	Gmpt 2-1/2" Npl x Mipt
40†	Open
41†	Mipt x Gmpt 3" Npl
42†	Gmpt 3" Npl x Fipt
43†	Gmpt 3" Npl x Soc
44†	Gmpt 3" Npl x SR Fipt
45†	Soc x Gmpt 3" Npl
46†	Spig x Gmpt 3" Npl
47†	Gmpt x Gmpt 3" Npl
48†	Tee x Gmpt 3" Npl
49†	Gmpt 3" Npl x Mipt
50†	Gmpt 3" Npl x Mat

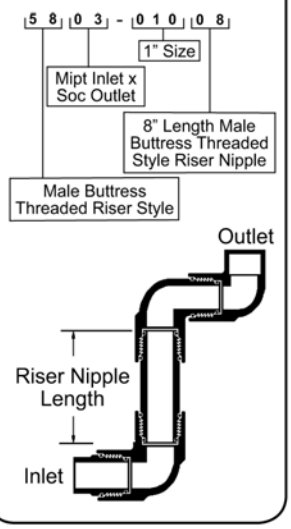
Code	Inlet x Outlet Style Combination
51‡	Soc x Soc Multi-Ell
52‡	Spig x Soc Multi-Ell
53‡	Mipt x Soc Multi-Ell
54‡	Tee x Soc Multi-Ell
55‡	Soc x Mipt Multi-Ell
56‡	Spig x Mipt Multi-Ell
57‡	Mipt x Mipt Multi-Ell
58‡	Tee x Mipt Multi-Ell
59‡	Soc x Mat Multi-Ell
60‡	Spig x Mat Multi-Ell
61‡	Mipt x Mat Multi-Ell
62‡	Tee x Mat Multi-Ell
63‡	Soc x Fipt Multi-Ell
64‡	Spig x Fipt Multi-Ell
65‡	Mipt x Fipt Multi-Ell
66‡	Tee x Fipt Multi-Ell
67‡	Soc x SR Fipt Multi-Ell
68‡	Spig x SR Fipt Multi-Ell
69‡	Mipt x SR Fipt Multi-Ell
70‡	Tee x SR Fipt Multi-Ell
71†‡	Soc x Gmpt 2-1/2" Npl Multi-Ell
72†‡	Spig x Gmpt 2-1/2" Npl Multi-Ell
73†‡	Mipt x Gmpt 2-1/2" Npl Multi-Ell
74†‡	Tee x Gmpt 2-1/2" Npl Multi-Ell
75†‡	Soc x Gmpt 3" Npl Multi-Ell
76†‡	Spig x Gmpt 3" Npl Multi-Ell
77†‡	Mipt x Gmpt 3" Npl Multi-Ell
78†‡	Tee x Gmpt 3" Npl Multi-Ell
79†‡	Gmpt 3" Npl x Mipt Multi-Ell
80†‡	Gmpt 3" Npl x Soc Multi-Ell
81†‡	Gmpt 3" Npl x Gmpt 3" Npl Multi-Ell
82‡	Mat x Mat Multi-Ell
83	Mipt x Mat Top Mount
84	Open
85	Open
86	Open
87	Open
88	Bsp x Bsp Multi-Ell
89	Bsp x Bsp Top Mount
90	Bsp x Mat
91	Bsp x Mipt
92	Mipt x Bsp
93	Bsp x Bsp
94	Astm Soc x Bsp
95	Astm Spig x Bsp
96	Din Spig x Bsp
97	Din Spig x Mipt
98	Jis Spig x Jis Mipt
99	Jis Spig x Mipt

Code	Size
010	1"
132	1" x 1-1/4"
133	1" x 1-1/2"
012	1-1/4"
015	1-1/2"
168	1-1/4" x 1"
169	1-1/4" x 1-1/2"
211	1-1/2" x 1"
212	1-1/2" x 1-1/4"
249	2" x 1" (Tee)
250	2" x 1-1/4" (Tee)
251	2" x 1-1/2" (Tee)

* Buttress Threaded Riser Lengths may be extended with the use of Riser Extension Couplings.

** Additional Nipple lengths are available. Please contact your servicing Spears® Regional Distribution Center.

Sample Assembly



Riser Nipple Length	
Code	Size
5800 Series* Male Buttress Threaded Style	
08	8"
10	10"
12	12"
14	14"
16	16"
18	18"
20	20"
24	24"
5900 Series Cut & Solvent Cemented Style**	
00	(No Nipple)
06	6"
07	7"
08	8"
10	10"
11	11"
12	12"
13	13"
14	14"
15	15"
16	16"
17	17"
18	18"
19	19"
20	20"
21	21"
22	22"
23	23"
24	24"

† Gmpt - A 2-1/2" Toe Nipple is solvent cemented in place. If a 3" Nipple is required, change the first digit from a "3" to a "4".
EXAMPLE:
38 = Tee x 2-1/2" Gmpt
48 = Tee x 3" Gmpt

‡ Multi-Ell - Two additional Elbows are located at the outlet of the Swing Joint Riser to allow 360° adjustment.

Most common configurations of Swing Joint Risers appear on the following pages. For those not shown, you may use the following worksheet to create various configurations. For assistance, please contact your servicing Spears® Regional Distribution Center.

Ordering Male Buttress Thread Riser Nipple Lengths Not Listed in Catalog

Swing Joint Risers on the following pages are shown with 8", 10", and 12" Nipple Lengths (LG). Additional standard Nipple lengths of 14", 16", 18", 20" and 24", plus virtually any custom lengths are available.

To order desired standard riser nipple length, replace the last two digits of the listed part number with the desired length in inches.

Example: 5805-01016 = 16" Nipple Length
5805-01018 = 18" Nipple Length

Contact your servicing Spears® Regional Distribution Center for pricing on these additional standard lengths or for custom produced nipple lengths.

Sample

SWING ARM RISER STYLE CODE		INLET x OUTLET STYLE COMBINATION CODE		—	SIZE CODE			RISER NIPPLE LENGTH CODE	
5	8	0	3	—	0	1	0	1	6
Male Buttress Threaded Riser Style		MIPT Inlet x SOC Outlet			1" Size			16" Length Male Buttress Threaded Style Riser Nipple	

Worksheet

SWING ARM RISER STYLE CODE		INLET x OUTLET STYLE COMBINATION CODE		—	SIZE CODE			RISER NIPPLE LENGTH CODE	
				—					
				—					
				—					
				—					
				—					
				—					
				—					
				—					
				—					

SOC Inlet x MIPT Outlet



8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
5805-01008	**1X8LG**	25	0	030	51.80
5805-01010	**1X10LG**	25	0	030	54.58
5805-01012	**1X12LG**	25	0	030	57.56
5805-01208	**1-1/4X8LG**	20	0	030	68.81
5805-01210	**1-1/4X10LG**	20	0	030	72.43
5805-01212	**1-1/4X12LG**	20	0	030	76.22
5805-16808	**1-1/4X1X8LG**	20	0	030	68.81
5805-16810	**1-1/4X1X10LG**	20	0	030	72.43
5805-16812	**1-1/4X1X12LG**	20	0	030	76.22
5805-16908	**1-1/4X1-1/2X8LG**	20	0	030	68.81
5805-16910	**1-1/4X1-1/2X10LG**	20	0	030	72.43
5805-16912	**1-1/4X1-1/2X12LG**	20	0	030	76.22
5805-01508	**1-1/2X8LG**	15	0	030	83.80
5805-01510	**1-1/2X10LG**	15	0	030	88.05
5805-01512	**1-1/2X12LG**	15	0	030	92.64

SOC Inlet x MAT Outlet



8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

5809-01008	**1X8LG**	25	0	030	51.80
5809-01010	**1X10LG**	25	0	030	54.58
5809-01012	**1X12LG**	25	0	030	57.56
5809-01208	**1-1/4X8LG**	20	0	030	68.81
5809-01210	**1-1/4X10LG**	20	0	030	72.43
5809-01212	**1-1/4X12LG**	20	0	030	76.22
5809-01508	**1-1/2X8LG**	15	0	030	83.80
5809-01510	**1-1/2X10LG**	15	0	030	88.05
5809-01512	**1-1/2X12LG**	15	0	030	92.64

SPIG Inlet x MIPT Outlet



8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

5806-01008	**1X8LG**	25	0	030	51.80
5806-01010	**1X10LG**	25	0	030	54.58
5806-01012	**1X12LG**	25	0	030	57.56
5806-01208	**1-1/4X8LG**	20	0	030	68.81
5806-01210	**1-1/4X10LG**	20	0	030	72.43
5806-01212	**1-1/4X12LG**	20	0	030	76.22
5806-16808	**1-1/4X1X8LG**	20	0	030	68.81
5806-16810	**1-1/4X1X10LG**	20	0	030	72.43
5806-16812	**1-1/4X1X12LG**	20	0	030	76.22
5806-16908	**1-1/4X1-1/2X8LG**	20	0	030	68.81
5806-16910	**1-1/4X1-1/2X10LG**	20	0	030	72.43
5806-16912	**1-1/4X1-1/2X12LG**	20	0	030	76.22
5806-01508	**1-1/2X8LG**	15	0	030	83.80
5806-01510	**1-1/2X10LG**	15	0	030	88.05
5806-01512	**1-1/2X12LG**	15	0	030	92.64

SPIG Inlet x MAT Outlet



8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

5810-01008	**1X8LG**	25	0	030	51.80
5810-01010	**1X10LG**	25	0	030	54.58
5810-01012	**1X12LG**	25	0	030	57.56

SPIG Inlet x MAT Outlet (continued)

5810-01208	**1-1/4X8LG**	20	0	030	68.81
5810-01210	**1-1/4X10LG**	20	0	030	72.43
5810-01212	**1-1/4X12LG**	20	0	030	76.22
5810-01508	**1-1/2X8LG**	15	0	030	83.80
5810-01510	**1-1/2X10LG**	15	0	030	88.05
5810-01512	**1-1/2X12LG**	15	0	030	92.64

MIPT Inlet x MIPT Outlet



8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

5807-01008	**1X8LG**	25	0	030	51.80
5807-01010	**1X10LG**	25	0	030	54.58
5807-01012	**1X12LG**	25	0	030	57.56
5807-01208	**1-1/4X8LG**	20	0	030	68.81
5807-01210	**1-1/4X10LG**	20	0	030	72.43
5807-01212	**1-1/4X12LG**	20	0	030	76.22
5807-16808	**1-1/4X1X8LG**	20	0	030	68.81
5807-16810	**1-1/4X1X10LG**	20	0	030	72.43
5807-16812	**1-1/4X1X12LG**	20	0	030	76.22
5807-16908	**1-1/4X1-1/2X8LG**	20	0	030	68.81
5807-16910	**1-1/4X1-1/2X10LG**	20	0	030	72.43
5807-16912	**1-1/4X1-1/2X12LG**	20	0	030	76.22
5807-01508	**1-1/2X8LG**	15	0	030	83.80
5807-01510	**1-1/2X10LG**	15	0	030	88.05
5807-01512	**1-1/2X12LG**	15	0	030	92.64

MIPT Inlet x MAT Outlet



8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

5811-01008	**1X8LG**	25	0	030	51.80
5811-01010	**1X10LG**	25	0	030	54.58
5811-01012	**1X12LG**	25	0	030	57.56
5811-01208	**1-1/4X8LG**	20	0	030	68.81
5811-01210	**1-1/4X10LG**	20	0	030	72.43
5811-01212	**1-1/4X12LG**	20	0	030	76.22
5811-01508	**1-1/2X8LG**	15	0	030	83.80
5811-01510	**1-1/2X10LG**	15	0	030	88.05
5811-01512	**1-1/2X12LG**	15	0	030	92.64

SOC TEE Inlet x MIPT Outlet



8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

5808-24908	**2X1 X8LG**	15	0	030	73.94
5808-24910	**2X1 X10LG**	15	0	030	77.91
5808-24912	**2X1 X12LG**	15	0	030	82.05
5808-25008	**2X1-1/4X8LG**	15	0	030	90.28
5808-25010	**2X1-1/4X10LG**	15	0	030	95.04
5808-25012	**2X1-1/4X12LG**	10	0	030	100.03
5808-25108	**2X1-1/2X8LG**	10	0	030	119.38
5808-25110	**2X1-1/2X10LG**	10	0	030	125.83
5808-25112	**2X1-1/2X12LG**	10	0	030	132.66

SOC TEE Inlet x MAT Outlet



8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

5812-24908	**2X1 X8LG**	15	0	030	73.94

SOC TEE Inlet x MAT Outlet (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
5812-24910	**2X1 X10LG**	15	0	030	77.91
5812-24912	**2X1 X12LG**	15	0	030	82.05
5812-25008	**2X1-1/4X8LG**	20	0	030	90.28
5812-25010	**2X1-1/4X10LG**	15	0	030	95.04
5812-25012	**2X1-1/4X12LG**	15	0	030	100.03
5812-25108	**2X1-1/2X8LG**	10	0	030	119.38
5812-25110	**2X1-1/2X10LG**	10	0	030	125.83
5812-25112	**2X1-1/2X12LG**	10	0	030	132.66



SOC Inlet x MIPT Outlet Multi EII

8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

5855-01008	**1X8LG**	20	0	030	74.83
5855-01010	**1X10LG**	15	0	030	80.48
5855-01012	**1X12LG**	15	0	030	83.26
5855-01208	**1-1/4X8LG**	20	0	030	95.45
5855-01210	**1-1/4X10LG**	15	0	030	101.09
5855-01212	**1-1/4X12LG**	15	0	030	103.87
5855-01508	**1-1/2X8LG**	10	0	030	115.95
5855-01510	**1-1/2X10LG**	10	0	030	121.54
5855-01512	**1-1/2X12LG**	10	0	030	124.34



SPIG Inlet x MIPT Outlet Multi-EII

8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

5856-01008	**1X8LG**	20	0	030	74.83
5856-01010	**1X10LG**	15	0	030	80.48
5856-01012	**1X12LG**	15	0	030	83.26
5856-01208	**1-1/4X8LG**	20	0	030	95.45
5856-01210	**1-1/4X10LG**	15	0	030	101.09
5856-01212	**1-1/4X12LG**	15	0	030	103.87
5856-01508	**1-1/2X8LG**	10	0	030	115.95
5856-01510	**1-1/2X10LG**	10	0	030	121.54
5856-01512	**1-1/2X12LG**	10	0	030	124.34



MIPT Inlet x MIPT Outlet Multi-EII

8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

5857-01008	**1X8LG**	20	0	030	74.83
5857-01010	**1X10LG**	15	0	030	80.48
5857-01012	**1X12LG**	15	0	030	83.26
5857-01208	**1-1/4X8LG**	20	0	030	95.45
5857-01210	**1-1/4X10LG**	15	0	030	101.09
5857-01212	**1-1/4X12LG**	15	0	030	103.87
5857-01508	**1-1/2X8LG**	10	0	030	115.95
5857-01510	**1-1/2X10LG**	10	0	030	121.54
5857-01512	**1-1/2X12LG**	10	0	030	124.34



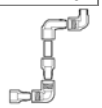
TEE Inlet x MIPT Outlet Multi-EII

8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

5858-24908	**2X1 X8LG**	15	0	030	106.95
5858-24910	**2X1 X10LG**	15	0	030	114.97
5858-24912	**2X1 X12LG**	10	0	030	118.94
5858-25008	**2X1-1/4X8LG**	10	0	030	136.37
5858-25010	**2X1-1/4X10LG**	10	0	030	144.40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
5858-25012	**2X1-1/4X12LG**	10	0	030	148.41
5858-25108	**2X1-1/2X8LG**	10	0	030	165.62
5858-25110	**2X1-1/2X10LG**	10	0	030	173.58
5858-25112	**2X1-1/2X12LG**	10	0	030	177.62

TEE Inlet x MIPT Outlet Multi-EII (continued)



Solvent Cemented Riser Nipple Style

SOC Inlet x MIPT Outlet

Assembly Without Nipple (part numbers ending in "00") & Optional Factory Assembled Unit With Customer Specified Nipple Length (see below)

5905-01000	**1**	1	10	030	42.40
5905-010__*	**1**	25	0	030	70.80
5905-010__**	**1**	25	0	030	80.48
5905-01200	**1-1/4**	1	10	030	56.09
5905-012__*	**1-1/4**	20	0	030	94.40
5905-012__**	**1-1/4**	20	0	030	107.33
5905-01500	**1-1/2**	1	8	030	69.78
5905-015__*	**1-1/2**	15	0	030	109.15
5905-015__**	**1-1/2**	15	0	030	124.03

Factory Assembled With Solvent Cemented Riser

Specifiy desired nipple length by filling in blank at end of Part Number with appropriate two-digit code (06 - 24) representing 1" increments.

* = Pricing for assembly with 6" to 18" length cemented Riser Nipple
** = Pricing for assembly with 19" to 24" length cemented Riser Nipple

Note: Cement Assembled Risers are Non-cancelable and Non-Returnable



Solvent Cemented Riser Nipple Style

SPIG Inlet x MIPT Outlet

Assembly Without Nipple (part numbers ending in "00") & Optional Factory Assembled Unit With Customer Specified Nipple Length (see below)

5906-01000	**1**	1	10	030	42.40
5906-010__*	**1**	25	0	030	70.80
5906-010__**	**1**	25	0	030	80.48
5906-01200	**1-1/4**	1	10	030	56.09
5906-012__*	**1-1/4**	20	0	030	94.40
5906-012__**	**1-1/4**	20	0	030	107.33
5906-01500	**1-1/2**	1	8	030	69.78
5906-015__*	**1-1/2**	15	0	030	109.15
5906-015__**	**1-1/2**	15	0	030	124.03

Factory Assembled With Solvent Cemented Riser

Specifiy desired nipple length by filling in blank at end of Part Number with appropriate two-digit code (06 - 24) representing 1" increments.

* = Pricing for assembly with 6" to 18" length cemented Riser Nipple
** = Pricing for assembly with 19" to 24" length cemented Riser Nipple

Note: Cement Assembled Risers are Non-cancelable and Non-Returnable



Solvent Cemented Riser Nipple Style

MIPT Inlet x MIPT Outlet

Assembly Without Nipple (part numbers ending in "00") & Optional Factory Assembled Unit With Customer Specified Nipple Length (see below)

5907-01000	**1**	1	10	030	42.40
5907-010__*	**1**	25	0	030	70.80
5907-010__**	**1**	25	0	030	80.48
5907-01200	**1-1/4**	1	10	030	56.09
5907-012__**	**1-1/4**	10	0	030	107.33
5907-012__*	**1-1/4**	15	0	030	94.40
5907-01500	**1-1/2**	1	8	030	69.78
5907-015__*	**1-1/2**	15	0	030	109.15
5907-015__**	**1-1/2**	0	0	030	124.03

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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Solvent Cemented Riser Nipple Style (continued)
MIPT Inlet x MIPT Outlet

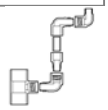
Factory Assembled With Solvent Cemented Riser

Specifiy desired nipple length by filling in blank at end of Part Number with appropriate two-digit code (06 - 24) representing 1" increments.

* = Pricing for assembly with 6" to 18" length cemented Riser Nipple
** = Pricing for assembly with 19" to 24" length cemented Riser Nipple

Note: Cement Assembled Risers are Non-cancelable and Non-Returnable

Solvent Cemented Riser Nipple Style
SOC TEE Inlet x MIPT Outlet



Assembly Without Nipple (part numbers ending in "00") & Optional Factory Assembled Unit With Customer Specified Nipple Length (see below)

5908-24900	**2X1**	1	8	030	49.88
5908-249__*	**1**	15	0	030	83.51
5908-249__**	**1**	15	0	030	94.87
5908-25000	**2X1-1/4**	5	0	030	63.33
5908-250__*	**1-1/4**	15	0	030	105.08
5908-250__**	**1-1/4**	15	0	030	112.81
5908-25100	**2X1-1/2**	1	6	030	70.80
5908-251__*	**1/2**	10	0	030	110.82
5908-251__**	**1/2**	10	0	030	125.96

Factory Assembled With Solvent Cemented Riser

Specifiy desired nipple length by filling in blank at end of Part Number with appropriate two-digit code (06 - 24) representing 1" increments.

* = Pricing for assembly with 6" to 18" length cemented Riser Nipple
** = Pricing for assembly with 19" to 24" length cemented Riser Nipple

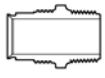
Note: Cement Assembled Risers are Non-cancelable and Non-Returnable

Cap
FAT



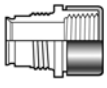
548-010-28A	**1**	50	0	030	1.98
548-012-28A	**1-1/4**	25	0	030	2.41
548-015-28A	**1-1/2**	25	0	030	2.58

Outlet Adapter
MAT x MIPT with O-rings



559-010-21AR	**1**	1	25	030	7.43
559-012-21AR	**1-1/4**	1	25	030	9.16
559-015-21AR	**1-1/2**	1	25	030	12.14

Outlet Adapter
MAT x SR FIPT with O-rings



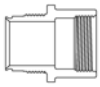
559-010-22SRAR	**1**	1	25	030	9.84
559-012-22SRAR	**1-1/4**	1	250	030	18.29
559-015-22SRAR	**1-1/2**	1	80	030	27.54

Outlet Adapter
FAT x MAT with O-rings



559-212-101AR	**1-1/2X1-1/4**	1	100	030	18.56

Outlet Adapter
MAT x FAT with O-rings



559-212-85AR	**1-1/2X1-1/4**	1	80	030	19.88

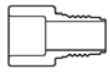
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Inlet Adapter
SPIG x MBT with O-rings



592-010-4AR	**1**	1	25	030	18.26
592-012-4AR	**1-1/4**	1	10	030	20.22
592-015-4AR	**1-1/2**	1	25	030	22.14

Inlet Adapter
SOC x MBT with O-rings



591-010-3AR	**1**	1	25	030	12.69
591-012-3AR	**1-1/4**	1	10	030	15.99
591-015-3AR	**1-1/2**	1	25	030	19.33

Inlet Adapter
JIS SPIG x MBT with O-rings



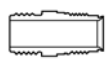
594-010-4AR	**25**	1	10	030	18.26
594-012-4AR	**32**	1	10	030	20.22
594-015-4AR	**40**	1	10	030	22.14

Inlet Adapter
DIN SPIG x MBT with O-rings



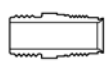
595-010-4AR	**32**	1	10	030	18.26
595-012-4AR	**40**	1	10	030	20.22
595-015-4AR	**50**	1	10	030	22.14

Inlet Adapters
MIPT x MBT with O-rings



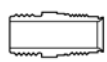
596-010-4AR	**1**	1	25	030	15.51
596-012-4AR	**1-1/4**	1	10	030	18.11
596-015-4AR	**1-1/2**	1	25	030	20.65

Reducing Inlet Adapter
MIPT x MBT with O-rings



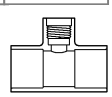
596-212-4AR	**1-1/2X1-1/4**	1	25	030	27.61

Inlet Adapter
BSP x MBT with O-rings



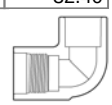
597-010-4AR	**1**	1	25	030	15.51
597-012-4AR	**1-1/4**	1	10	030	18.11
597-015-4AR	**1-1/2**	1	25	030	20.65

Reducing Tee
SOC x FBT



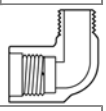
593-249-5A	**2X1**	30	0	030	32.40
593-250-5A	**2X1-1/4**	30	0	030	32.40
593-251-5A	**2X1-1/2**	25	0	030	32.40

90° Ell Outlet
FBT x SOC



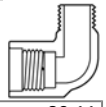
591-010-2A	**1**	115	0	030	20.11
591-012-2A	**1-1/4**	80	0	030	23.33
591-015-2A	**1-1/2**	50	0	030	26.49

90° Street Ell Outlet
FBT x MIPT



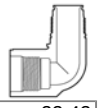
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
591-010-4A	1	140	0	030	17.17
591-012-4A	1-1/4	1	90	030	20.37
591-015-4A	1-1/2	1	60	030	23.55
591-168-4A	1-1/4X1	110	0	030	39.83

90° Street Ell Outlet
FBT x BSP



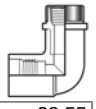
591-010-5A	1	140	0	030	20.11
591-012-5A	1-1/4	1	100	030	20.37
591-015-5A	1-1/2	60	0	030	26.49

90° Street Ell Outlet
FBT x MAT with O-rings



591-010-7AR	1	1	25	030	22.42
591-012-7AR	1-1/4	1	25	030	26.12
591-015-7AR	1-1/2	1	25	030	29.79
591-132-7AR	1X1-1/4	1	25	030	26.12
591-133-7AR	1X1-1/2	1	25	030	23.45
591-168-7AR	1-1/4X1	1	10	030	25.82
591-211-7AR	1-1/2X1	1	25	030	29.54
591-212-7AR	1-1/2X1-1/4	1	25	030	28.91

Special Reinforced 90° Ell Outlet
FBT x SR FIPT



591-010-8SRA	1	15	0	030	28.55
591-012-8SRA	1-1/4	15	0	030	32.61
591-015-8SRA	1-1/2	15	0	030	35.01

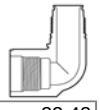
Brass Thread 90° Ell Outlet
FBT x FIPT with Brass Thread Insert



591-010-8BRA	1	15	0	030	35.51
591-012-8BRA	1-1/4	10	0	030	78.63
591-015-8BRA	1-1/2	10	0	030	113.67

Not intended to convey or dispense water for human consumption through drinking or cooking

90° Street Ell Outlet
MBT x FBT with O-rings



591-010-1AR	1	1	25	030	22.42
591-012-1AR	1-1/4	1	10	030	26.12
591-015-1AR	1-1/2	1	25	030	29.79

Riser Nipple
MBT (8" Length) with O-rings



59-010-08R	1X8	1	25	030	16.53
59-012-08R	1-1/4X8	1	10	030	21.54
59-015-08R	1-1/2X8	1	25	030	26.53

Riser Nipple
MBT (10" Length) with O-rings



59-010-10R	1X10	1	25	030	17.72
59-012-10R	1-1/4X10	1	10	030	22.87
59-015-10R	1-1/2X10	1	25	030	28.04

Riser Nipple
MBT (12" Length) with O-rings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
59-010-12R	1X12	1	25	030	20.09
59-012-12R	1-1/4X12	1	10	030	24.77
59-015-12R	1-1/2X12	1	25	030	29.52

Riser Nipple
MBT (14" Length) with O-rings



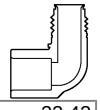
59-010-14R	1	1	25	030	14.34
59-012-14R	1-1/4	1	15	030	17.47
59-015-14R	1-1/2	1	15	030	19.66

Riser Nipple
MBT (16" Length) with O-rings



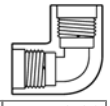
59-010-16R	1	1	45	030	15.61
59-012-16R	1-1/4	1	25	030	19.49
59-015-16R	1-1/2	1	20	030	22.07

90° Street Ell Outlet
SOC x MBT with O-rings



593-010-1AR	1	1	25	030	22.42
593-012-1AR	1-1/4	1	10	030	26.12
593-015-1AR	1-1/2	1	25	030	29.79

90° Ell Outlet
FBT x FBT



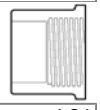
591-010-6A	1	95	0	030	18.26
591-012-6A	1-1/4	1	65	030	20.37
591-015-6A	1-1/2	50	0	030	26.72

Long Spigot Inlet
SPIG x MBT with O-ring (4" in length)



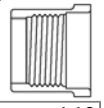
598-010-4AR	1	1	25	030	18.26
598-012-4AR	1-1/4	1	25	030	20.23
598-015-4AR	1-1/2	1	25	030	22.14

Reducer Bushing
SPIGOT x FAT (Female Acme Thread)



598-168-27	1-1/4X1	20	120	030	4.24
598-212-27	1-1/2X1-1/4	15	90	030	5.17
598-251-27	2X1-1/2	10	60	030	5.66

Reducer Bushing
SPIGOT x FBT (Female Buttress Thread)



598-168-26	1-1/4X1	20	120	030	4.16
598-212-26	1-1/2X1-1/4	10	60	030	4.66
598-251-26	2X1-1/2	10	60	030	5.47

Riser Extension Coupling



May be used with 5800 Series Buttress Threaded Nipples to Extend Height of Riser

58-010-1	1	140	0	030	15.20
58-012-1	1-1/4	100	0	030	15.98
58-015-1	1-1/2	80	0	030	17.92

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Special Reinforced
R MIPT x SPIG Adapter



May be used with SOC Inlet or Outlet to convert to MIPT Inlet or Outlet

590-168R	**1-1/4X1**	50	0	030	76.67

MIPT x SPIG Adapter



May be used with SOC Inlet or Outlet to convert to MIPT Inlet or Outlet

590-015	**1-1/2**	25	0	030	11.23
590-211	**1-1/2X1**	25	0	030	6.48
590-212	**1-1/2X1-1/4**	25	0	030	6.48

Wire Holder

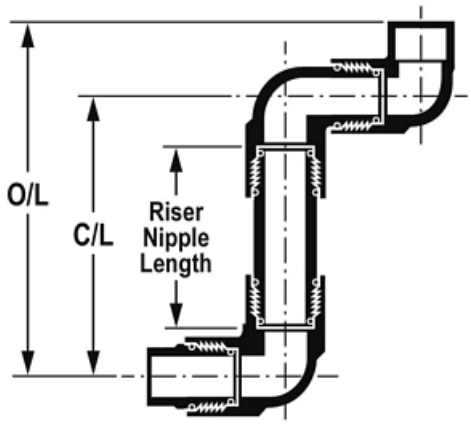


Holds up to 4-wires, #12 or #14 gauge single feeder irrigation control cable. Snaps onto Spears® Swing Joint Risers.

58WH-010	**1**	1500	0	030	2.23
58WH-012	**1-1/4**	450	0	030	2.43
58WH-015	**1-1/2**	400	0	030	2.76

Swing Joint Riser Dimensions

RISER NIPPLE LENGTH (IN.)	CENTER TO CENTER C/L			OVERALL LENGTH O/L		
	1"	1-1/4"	1-1/2"	1"	1-1/4"	1-1/2"
5800 SERIES* — MALE BUTTRESS THREADED STYLE						
8	9-11/16	10-3/16	10-7/16	12-1/16	12-11/16	13-1/4
10	11-11/16	12-3/16	12-7/16	14-1/16	14-11/16	15-1/4
12	13-11/16	14-3/16	14-7/16	16-1/16	16-11/16	17-1/4
14	15-11/16	16-3/16	16-7/16	18-1/16	18-11/16	19-1/4
16	17-11/16	18-3/16	18-7/16	20-1/16	20-11/16	21-1/4
18	19-11/16	20-3/16	20-7/16	22-1/16	22-11/16	23-1/4
20	21-11/16	22-3/16	22-7/16	24-1/16	24-11/16	25-1/4
24	25-11/16	26-3/16	26-7/16	28-1/16	28-11/16	29-1/4
5900 SERIES** — CUT & SOLVENT CEMENTED STYLE						
6	9-11/16	10-3/16	10-7/16	12-1/16	12-11/16	12-1/4
7	10-11/16	11-3/16	11-7/16	13-1/16	13-11/16	14-1/4
8	11-11/16	12-3/16	12-7/16	14-1/16	14-11/16	15-1/4
9	12-11/16	13-3/16	13-7/16	15-1/16	15-11/16	16-1/4
10	13-11/16	14-3/16	14-7/16	16-1/16	16-11/16	17-1/4
11	14-11/16	15-3/16	15-7/16	17-1/16	17-11/16	18-1/4
12	15-11/16	16-3/16	16-7/16	18-1/16	18-11/16	19-1/4
13	16-11/16	17-3/16	17-7/16	19-1/16	19-11/16	20-1/4
14	17-11/16	18-3/16	18-7/16	20-1/16	20-11/16	21-1/4
15	18-11/16	19-3/16	19-7/16	21-1/16	21-11/16	22-1/4
16	19-11/16	20-3/16	20-7/16	22-1/16	22-11/16	23-1/4
17	20-11/16	21-3/16	21-7/16	23-1/16	23-11/16	24-1/4
18	21-11/16	22-3/16	22-7/16	24-1/16	24-11/16	25-1/4
19	22-11/16	23-3/16	23-7/16	25-1/16	25-11/16	26-1/4
20	23-11/16	24-3/16	24-7/16	26-1/16	26-11/16	27-1/4
21	24-11/16	25-3/16	25-7/16	27-1/16	27-11/16	28-1/4
22	25-11/16	26-3/16	26-7/16	28-1/16	28-11/16	29-1/4
23	26-11/16	27-3/16	27-7/16	29-1/16	29-11/16	30-1/4
24	27-11/16	28-3/16	28-7/16	30-1/16	30-11/16	31-1/4



BSP	=	British Standard Pipe
C/L	=	Centerline to Centerline
DIN	=	European Metric Standard
FAT	=	Female Acme Thread
FBT	=	Female Buttress Thread
FIPT	=	Female Iron Pipe Thread
GMPT	=	Glued Male Pipe Thread
JIS	=	Japanese Industrial Standard
MAT	=	Male Acme Thread
MBT	=	Male Buttress Thread
MIPT	=	Male Iron Pipe Thread
NPL	=	Nipple
O/L	=	Overall Length
SOC	=	IPS Solvent Weld Socket
SPIG	=	Spigot End
SR FIPT	=	Special Reinforced Female Iron Pipe Thread

* Buttress Threaded Riser Lengths may be extended with the use of Riser Extension Couplings.

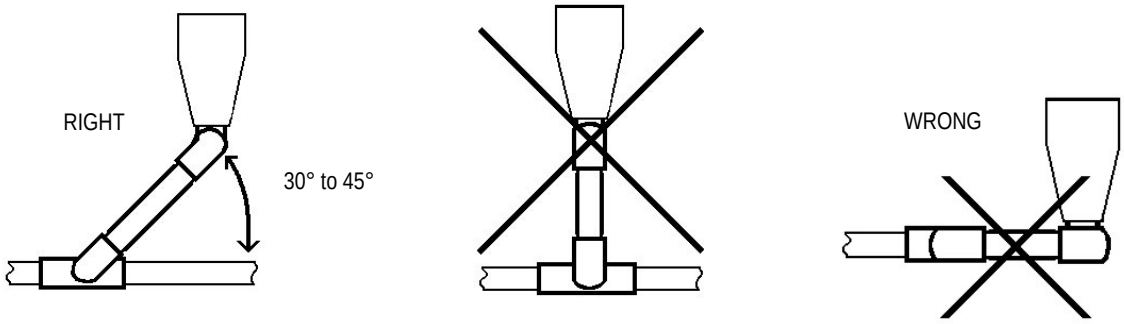
** Additional Nipple lengths are available. Please contact your servicing Spears® Regional Distribution Center.

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Turf Swivel Joints, Compact Turf Swivel Joints and Turf Swivel Joint Kits are designed for open discharge systems and are not to be used with valve-in-head sprinklers or quick coupler valves. Can be used with bottom or side sprinklers. Provides 360° adjustment in three planes to place sprinklers at desired locations.

Turf Swivel Joint Assemblies should NOT be installed perpendicular or parallel to the supply line.



Turf Swivel Joint and Compact Turf Swivel Joints are pre-assembled from the factory with O-ring threaded joints. Turf Swivel Joint Kits are provided as two assemblies for use with user supplied pipe in solvent welded field assembly. These joints are pre-lubricated and should not be disassembled, as dirt, sand or other foreign objects could damage the O-ring or threads and cause leakage.

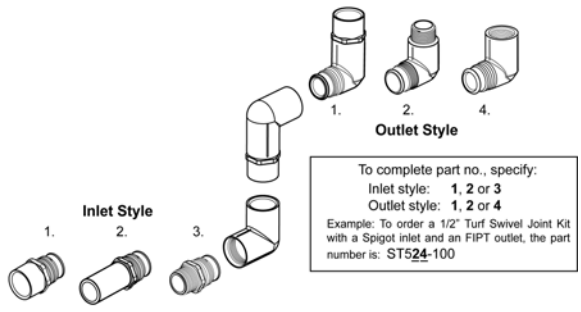
Prior to beginning installation, tighten each O-ring thread joint completely, and then back out the male part one full turn to allow the joint to swivel a full 360°.

3-Ell Swivel Joint Kits

Complete kit for field assembly with any length of user supplied pipe. Kit includes upper and lower Elbow assemblies with choice of the following Inlet & Outlet Options:

Inlet Code:
1 = Socket
2 = Spigot
3 = Mipt

Outlet Code:
1 = Socket
2 = Mipt
4 = Fipt



To complete part no., specify:
Inlet style: **1**, **2** or **3**
Outlet style: **1**, **2** or **4**
Example: To order a 1/2" Turf Swivel Joint Kit with a Spigot inlet and an FIPT outlet, the part number is: ST5**24**-100

Turf Swivel Joint Kit

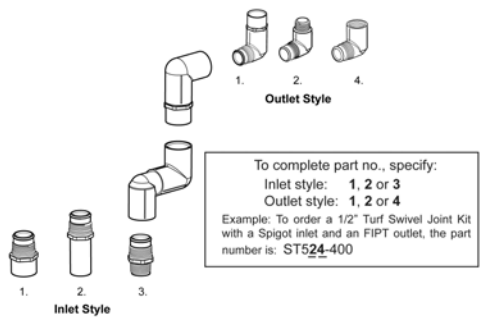
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3-Ell Swivel Joint Kits					
ST5__-100	**1/2**	10	0	030	19.61
ST7__-100	**3/4**	10	0	030	22.14
ST9__-100	**1**	10	0	030	25.77

4-Ell Swivel Joint Kits

Complete kit for field assembly with any length of user supplied pipe. Kit includes upper and lower Elbow assemblies with choice of the following Inlet & Outlet Options:

Inlet Code:
1 = Socket
2 = Spigot
3 = Mipt

Outlet Code:
1 = Socket
2 = Mipt
4 = Fipt



To complete part no., specify:
Inlet style: **1**, **2** or **3**
Outlet style: **1**, **2** or **4**
Example: To order a 1/2" Turf Swivel Joint Kit with a Spigot inlet and an FIPT outlet, the part number is: ST5**24**-400

4-Ell Swivel Joint Kits					
ST5__-400	**1/2**	10	0	030	20.82
ST7__-400	**3/4**	10	0	030	23.38
ST9__-400	**1**	10	0	030	28.21

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Turf Swivel Joints

Complete Factory Assembly. Available in sizes 1/2", 3/4" and 1" with the following Lay Length Options:

8" = 8L
12" = 12L
15" = 15L
19" = 19L

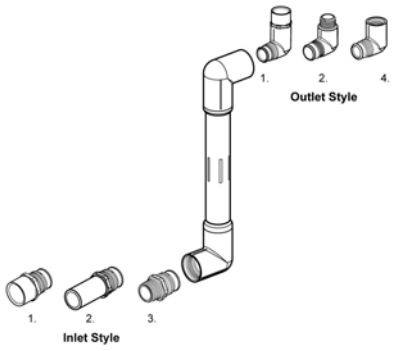
Choice of the following Inlet & Outlet Options:

Inlet Code			Outlet Code		
1	=	Socket	1	=	Socket
2	=	Spigot	2	=	Mipt
3	=	Mipt	4	=	Fipt

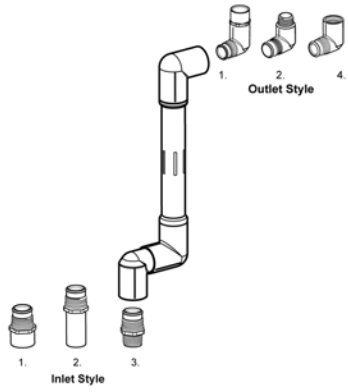
To complete part no., specify:
Inlet style: 1, 2, or 3
Outlet style: 1, 2, or 4

Example: To order a 1/2" 3-Ell Turf Swivel Joint with an 8" lay length, a Spigot inlet and an FIPT outlet, the part number is: ST5**24**-208

3-Ell Turf Swivel Joint



4-Ell Turf Swivel Joint



Turf Swivel Joints

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3-Ell Turf Swivel Joints					
ST5__-208	**1/2X8L**	10	0	030	30.74
ST5__-212	**1/2X12L**	10	0	030	31.11
ST5__-215	**1/2X15L**	10	0	030	32.06
ST5__-219	**1/2X19L**	10	0	030	33.09
ST7__-208	**3/4X8L**	10	0	030	33.14
ST7__-212	**3/4X12L**	10	0	030	34.71
ST7__-215	**3/4X15L**	10	0	030	35.38
ST7__-219	**3/4X19L**	10	0	030	36.22
ST9__-208	**1X8L**	10	0	030	36.49
ST9__-212	**1X12L**	10	0	030	37.64
ST9__-215	**1X15L**	10	0	030	38.62
ST9__-219	**1X19L**	10	0	030	39.95
ST57__-208	**1/2X3/4X8L**	10	0	030	30.74
ST57__-212	**1/2X3/4X12L**	10	0	030	31.11
ST57__-215	**1/2X3/4X15L**	10	0	030	32.06
ST57__-219	**1/2X3/4X19L**	10	0	030	33.09
ST75__-208	**3/4X1/2X8L**	10	0	030	33.14
ST75__-212	**3/4X1/2X12L**	10	0	030	34.71
ST75__-215	**3/4X1/2X15L**	10	0	030	35.38
ST75__-219	**3/4X1/2X19L**	10	0	030	35.38
4-Ell Turf Swivel Joints					
ST5__-408	**1/2X8L**	10	0	030	31.40
ST5__-412	**1/2X12L**	10	0	030	31.77
ST5__-415	**1/2X15L**	10	0	030	32.65
ST5__-419	**1/2X19L**	10	0	030	33.61
ST7__-408	**3/4X8L**	10	0	030	33.80
ST7__-412	**3/4X12L**	10	0	030	35.29
ST7__-415	**3/4X15L**	10	0	030	35.97
ST7__-419	**3/4X19L**	10	0	030	36.74
ST9__-408	**1X8L**	10	0	030	38.39
ST9__-412	**1X12L**	10	0	030	39.45
ST9__-415	**1X15L**	10	0	030	40.41
ST9__-419	**1X19L**	10	0	030	41.67
ST57__-408	**1/2X3/4X8L**	10	0	030	31.40
ST57__-412	**1/2X3/4X12L**	10	0	030	31.77
ST57__-415	**1/2X3/4X15L**	10	0	030	32.65
ST57__-419	**1/2X3/4X19L**	10	0	030	33.61
ST75__-408	**3/4X1/2X8L**	10	0	030	35.38
ST75__-412	**3/4X1/2X12L**	10	0	030	36.74

Turf Swivel Joints (continued)

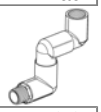
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4-Ell Turf Swivel Joints					
ST75__-415	**3/4X1/2X15L**	10	0	030	36.74
ST75__-419	**3/4X1/2X19L**	10	0	030	36.74

Compact Turf Swivel Joints

Factory Assembled
All Inlets are Swivel Male Threads
Three Outlet Choices:
Series ST11 & ST41 = Female Pipe Threads
Series ST12 & ST42 = Swivel Male Pipe Threads
Series ST13 & ST43 = Male Pipe Threads

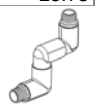
Also available in 1" MBSP inlet x 1" MBSP outlet. Contact Spears® for pricing and availability.

3-Ell Compact Swivel Joints
Swivel Mipt x Fipt



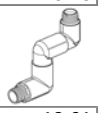
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ST1105	**1/2**	10	0	030	19.61
ST1107	**3/4**	10	0	030	22.14
ST1110	**1**	10	0	030	25.78

3-Ell Compact Swivel Joints
Swivel Mipt x Swivel Mipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ST1205	**1/2**	10	0	030	19.61
ST1207	**3/4**	10	0	030	22.14
ST1210	**1**	10	0	030	25.78

3-Ell Compact Swivel Joints
Swivel Mipt x Mipt



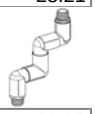
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ST1305	**1/2**	10	0	030	19.61
ST1307	**3/4**	10	0	030	22.14
ST1310	**1**	10	0	030	25.78

4-Ell Compact Swivel Joints
Swivel Mipt x Fipt



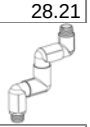
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ST4105	**1/2**	10	0	030	20.82
ST4107	**3/4**	10	0	030	23.38
ST4110	**1**	10	0	030	28.21

4-Ell Compact Swivel Joints
Swivel Mipt x Swivel Mipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ST4205	**1/2**	10	0	030	20.82
ST4207	**3/4**	10	0	030	23.38
ST4210	**1**	10	0	030	28.21

4-Ell Compact Swivel Joints
Swivel Mipt x Mipt



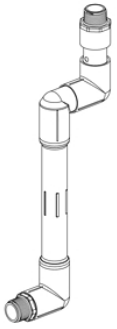
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ST4305	**1/2**	10	0	030	20.82
ST4307	**3/4**	10	0	030	23.38
ST4310	**1**	10	0	030	28.21

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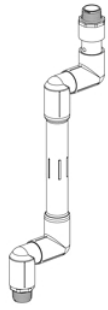
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Pressure Regulated Swivel Joints

3-Ell Pressure Regulated Swivel Joint



4-Ell Pressure Regulated Swivel Joint



Pressure Regulated Swivel Joints

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3-Ell - Mipt x Mipt					
ST73PR-208	**3/4X8L**	10	0	030	61.38
ST73PR-212	**3/4X12L**	10	0	030	63.05
ST73PR-215	**3/4X15L**	10	0	030	63.78
ST73PR-219	**3/4X19L**	10	0	030	64.64
ST93PR-208	**1X8L**	10	0	030	66.36
ST93PR-212	**1X12L**	10	0	030	67.57
ST93PR-215	**1X15L**	10	0	030	68.62
ST93PR-219	**1X19L**	10	0	030	70.02
4-Ell - Mipt x Mipt					
ST73PR-408	**3/4X8L**	10	0	030	64.78
ST73PR-412	**3/4X12L**	10	0	030	66.47
ST73PR-415	**3/4X15L**	10	0	030	67.18
ST73PR-419	**3/4X19L**	10	0	030	68.06
ST93PR-408	**1X8L**	10	0	030	71.80

Pressure Regulated Swivel Joints (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4-Ell - Mipt x Mipt					
ST93PR-412	**1X12L**	10	0	030	73.00
ST93PR-415	**1X15L**	10	0	030	74.05
ST93PR-419	**1X19L**	10	0	030	75.44

Complete Factory Assembly. Available in sizes 3/4" and 1" with Mipt Inlet x Mipt Outlet and the following Lay Length Options:

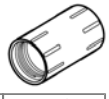
8" = 8L
12" = 12L
15" = 15L
19" = 19L

Maintains constant, uniform pressure to sprinkler at the following pre-set nominal values:
45 psi for 3/4" Turf Swivel Joint
70 psi for 1" Turf Swivel Joint

Not recommended for use in systems with pressures equal to or less than regulated pressures above.
Pressure Rating @ 73°F (23°C), Water 315 psi

Turf Swivel Joint Replacement Parts

Coupling
FAT x FAT



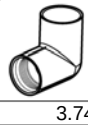
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ST430-007	**3/4**	1	350	030	6.47
ST430-010	**1**	1	250	030	8.60

90° Elbow
FAT x FAT



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ST1101-005	**1/2**	1	300	030	3.74
ST1101-007	**3/4**	1	250	030	4.32
ST1101-101	**3/4X1/2**	1	270	030	3.94
ST1101-010	**1**	1	175	030	7.12

90° Elbow
FAT x SOC



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ST1102-005	**1/2**	1	350	030	3.74
ST1102-007	**3/4**	1	250	030	4.32
ST1102-010	**1**	1	160	030	7.12

90° Street Ell
MAT x FAT



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ST425-005	**1/2**	1	200	030	5.44
ST425-007	**3/4**	1	300	030	5.81
ST425-010	**1**	1	200	030	8.08

Socket Inlet #1
SOC x MAT



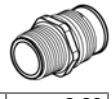
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ST436-005	**1/2**	1	350	030	3.49
ST436-007	**3/4**	1	50	030	3.86
ST436-010	**1**	1	100	030	7.24

Spigot Inlet #2
SPG x MAT



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ST105-035	**1/2**	1	350	030	3.72
ST107-035	**3/4**	1	50	030	4.16
ST110-040	**1**	1	140	030	7.58

Male Thread Inlet #3
Mipt x MAT



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ST205-020	**1/2**	1	25	030	3.29
ST207-020	**3/4**	1	350	030	3.86
ST210-020	**1**	1	150	030	4.19

Socket Outlet #1
MAT x SOC



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ST410-005	**1/2**	1	50	030	7.42
ST410-007	**3/4**	1	200	030	8.13
ST410-010	**1**	1	25	030	8.52

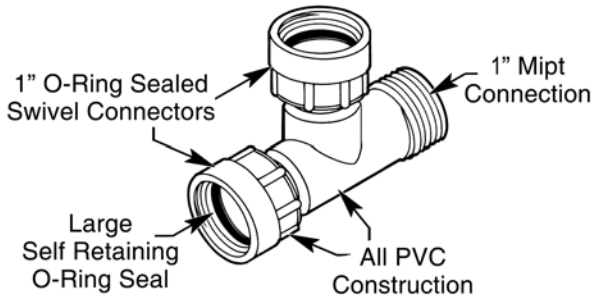
Turf Swivel Joint Replacement Parts

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Male Thread Outlet #2					
MAT x Mipt					
ST408-005	**1/2**	1	250	030	5.44
ST408-007	**3/4**	1	25	030	5.81
ST408-010	**1**	1	100	030	8.60
Female Thread Outlet #4					
MAT x Fipt					
ST412-005	**1/2**	1	250	030	5.44
ST412-007	**3/4**	1	25	030	5.81
ST412-010	**1**	1	200	030	8.08
Molded Nipples					
MAT x MAT					
ST207-065	**3/4X6-1/2**	1	200	030	7.69
ST207-105	**3/4X10-1/2**	1	115	030	17.73
ST210-065	**1X6-1/2**	1	120	030	9.89
ST210-105	**1X10-1/2**	1	25	030	23.44
O-ring Seal					
B-113	**1/2**	100	0	901	.07
B-115	**3/4**	100	0	901	.07
B-120	**1**	100	0	901	.18

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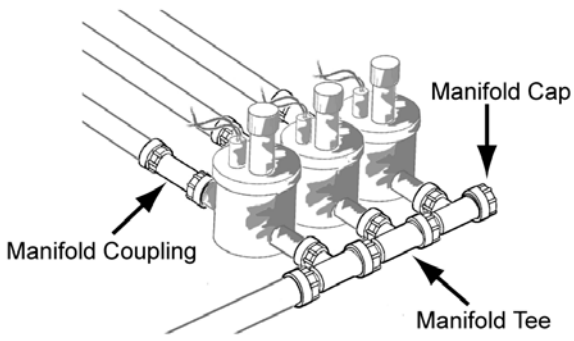
1" Manifold Tees & Companion Fitting Configurations
Designed For Uniform Irrigation Control Valve Installations

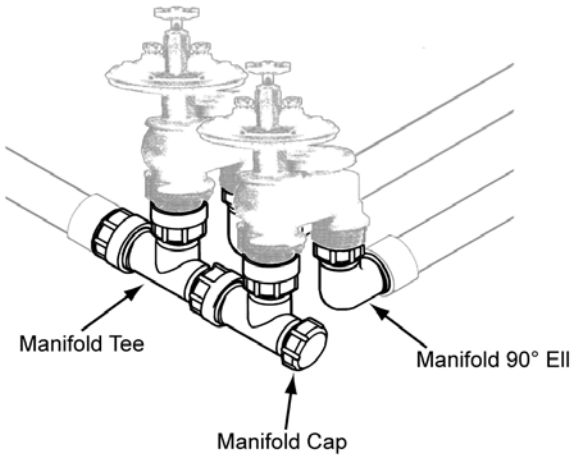


Manifold Tee
(1" Swivel x 1" Mipt x 1" Swivel)

- O-ring Sealed Swivel Connections Require No Thread Sealants - Large Cross-section O−ring Allows Hand Tight Assembly for Positive Seal
- Compatible with all 1" IPS Pipe Thread Outlets
- Pressure Rated to 150 psi @ 73°F (23°C)

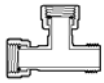
Typical Application
Hundreds of Variation Possibilities





Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Manifold Tee
Swivel x Mipt x Swivel with O-ring Seal



MA0101-010	**1**	25	0	019	9.91

2 - Port Manifold Tee
Swivel x Mipt x Swivel Branch with O–ring Seal



MA0101-010-2	**1**	25	0	019	14.38

3 - Port Manifold Tee
Swivel x Mipt x Swivel Branch with O–ring Seal



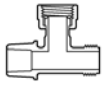
MA0101-010-3	**1**	25	0	019	19.80

4 - Port Manifold Tee
Swivel x Mipt x Swivel Branch with O–ring Seal



MA0101-010-4	**1**	25	0	019	25.26

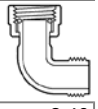
Manifold Tee
Soc(Spig) x Mipt x Swivel with O-ring Seal



For Solvent Cement Connection

MA0109-010	**1 (1-1/4)**	25	0	019	8.81

Manifold 90° Street Ell
Mipt x Swivel with O-ring Seal



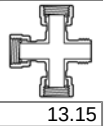
MA0602-010	**1**	25	0	019	8.46

Manifold 90° Ell
Swivel x Swivel with O-ring Seal



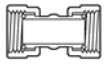
MA0603-010	**1**	20	0	019	9.34

Manifold Cross
Swivel x Mipt x Swivel x Swivel with O–ring Seal



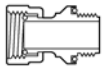
MA2004-010	**1**	25	0	019	13.15

Manifold Swivel Coupling
Swivel x Swivel with O-ring Seal



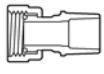
MA2903-010	**1**	25	200	019	7.01

Manifold Nipple Coupling
Swivel x Mipt with O-ring Seal



MA2907-010	**n/a**	25	200	019	5.12

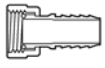
Manifold Socket (Spig) Coupling
Swivel x Soc (Spig) with O-ring Seal



For Solvent Cement Connection

MA2908-010	**1 (1-1/4)**	25	0	019	5.12

Manifold Insert Coupling
Swivel x Barbed Insert with O-ring Seal



MA3505-007	**1X3/4**	25	200	019	5.09
MA3505-010	**1**	25	200	019	5.43

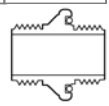
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Manifold Cap
Fipt with O-ring Seal



MA4800-010	**1**	50	600	019	2.14

Manifold Nipple
Mipt x Mipt with O-ring Seal



1" Nipple End Uses MA-218 O-ring
3/4" Nipple End Uses MA-214 O-ring

MA8306-010	**1**	25	200	019	2.29
MA8306-131	**1X3/4**	25	200	019	2.01

Manifold Replacement O–ring
For All 1" Cap/Swivel Connectors & For 3/4" Nipple End



MA-214	**1 & 3/4**	50	500	901	.49

Manifold Nipple Replacement O–ring
For 1" Nipple & For 1" Nippled Coupling End



MA-218	**1**	50	500	901	.53

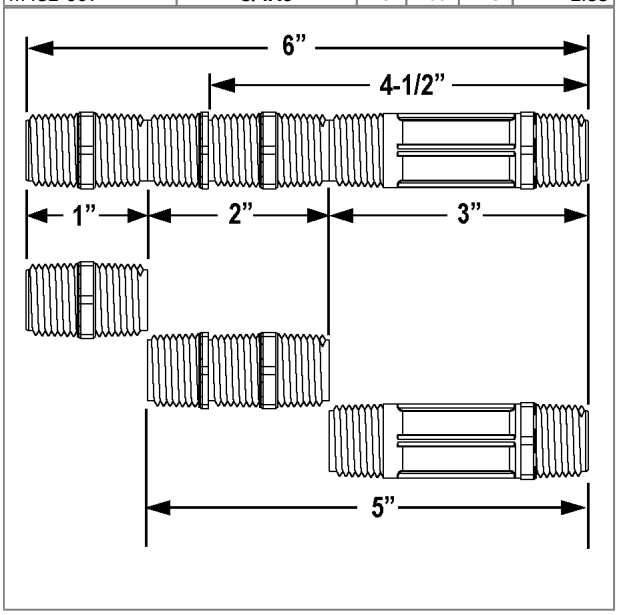
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- High quality polyethylene construction
- Choice of sizes from just one nipple
- Reduces inventory
- Eliminates waste
- Reduces contractor down time

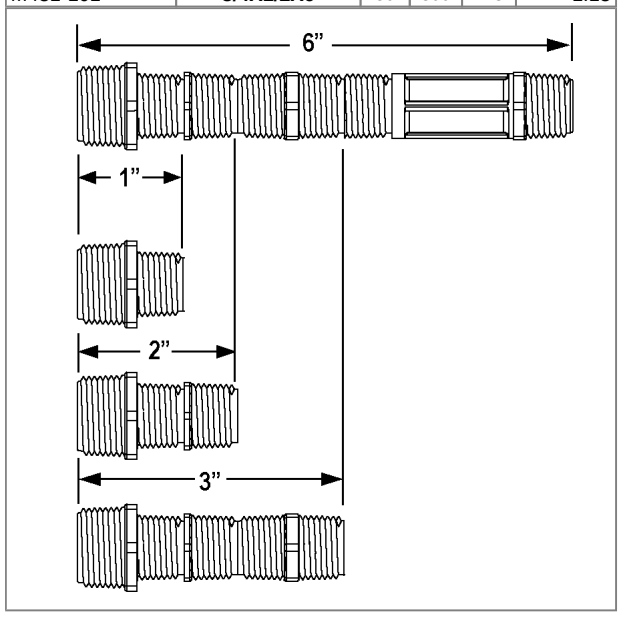
Four-In-One Cut-Off Nipple

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
M481-005	**1/2X6**	50	350	123	1.08
M481-007	**3/4X6**	25	200	123	1.55



Four-In-One Cut-Off Nipple - Reducing

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
M481-101	**3/4X1/2X6**	50	300	123	1.18



• Hose Fittings • Solvent Weld For Flexible PVC Hose

FHT = Female Hose Thread
Fipt = Female Iron Pipe Thread
HS = Hose Socket
Ins = Male Insert Barb

MHT = Male Hose Thread
Mipt = Male Iron Pipe Thread
Soc = IPS Solvent Weld Socket

Hose Coupling



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
C-44	**1/2**	200	0	020	.93
C-55	**5/8**	100	0	020	1.23
C-66	**3/4**	100	0	020	2.35

90° Ell

MHT x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
EHP-007	**3/4**	50	0	020	2.62
EHP-101	**3/4X1/2**	50	0	020	2.24

Hose Tee

MHT x MHT x FHT Swivel with Washer



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
AP-101	**3/4**	50	0	020	4.54



W-100



W-101

Hose Washer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Washer Only					
W-100	**3/4**	50	1500	020	.04
W-101	**3/4**	400	2400	020	1.21

Swivel Adapter

Fipt x FHT Swivel with Washer



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
AP-105	**1/2X3/4**	50	200	020	2.95
AP-106	**3/4**	50	200	020	2.95

Swivel Adapter

Mipt x FHT Swivel with Washer



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
AP-109	**3/4**	50	200	020	2.95
AP-112	**1/2X3/4**	50	200	020	2.95

Swivel Adapter

FHT Swivel x FHT Swivel with Washer



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
AP-110	**3/4**	50	200	020	2.95

Female Adapter

FHT Swivel x HS with Washer



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
F-64	**3/4X1/2**	100	0	020	2.28
F-65	**3/4X5/8**	100	0	020	2.43
F-66	**3/4**	100	0	020	2.51
FHT Swivel x Soc					
F-64-P	**3/4X1/2**	100	0	020	2.28
F-66-P	**3/4**	100	0	020	2.51

Male Adapter

Mipt x HS



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
M-44	**1/2X1/2**	50	300	020	1.27
MHT x HS					
M-64	**3/4X1/2**	50	300	020	1.29
M-65	**3/4X5/8**	50	200	020	2.06
M-66	**3/4**	50	200	020	2.39
MHT x Soc					
M-64-P	**3/4X1/2**	50	200	020	1.27
M-66-P	**3/4**	50	200	020	2.39

• Hose Fittings • For 1/2" Polyethylene (.580 I.D.) Hose

Female Compression Adapter

FHT x Poly Adapter with Insert Expander



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
F-64B	**3/4X1/2**	50	600	020	2.06

Male Compression Adapter

MHT x Poly Adapter with Insert Expander



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
M-64B	**3/4X1/2**	100	0	020	1.58

Hose Tee

Ins x Ins x FHT Swivel



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
AP-101B	**1/2X3/4**	50	0	020	3.54

Transition Tee

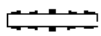
Soc x Soc x Ins



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
1102-007	**3/4**	50	0	040	3.22
1102-130	**1X1/2**	200	0	040	3.61
1102-250	**2X1-1/4**	10	0	040	5.08

Insert Coupling

Ins x Ins



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
1429-005A	**1/2**	200	0	140	.98

Insert Male Adapter

Ins x Mipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
1436-005A	**1/2**	200	0	140	.82

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• Hose Fittings • For 1/2" Polyethylene (.580 I.D.) Hose

Plug
MHT



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HPL-6	**3/4**	100	600	020	2.06

Cap
FHT with Washer



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
AP-100	**3/4**	200	0	020	1.72

Hose Closure
For 1/2" Poly Hose



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S-HC-1	**1/2**	200	0	020	.91

Irrigation Accessories

Spears® PVC Adapter System offers a unique method for expanding field irrigation systems that lends versatility and economy to your project. These adapters are designed to use 1/2", 5/8" or 3/4" vinyl hose, and the Rebar fittings and crosses accept a 1/2" or 3/4" sprinkler base. Transition to the existing system can be accomplished with any one of the threaded outlets offered.

New Installation — Spears® PVC Adapter System is designed with threaded or swivel thread connections which simplify the initial installation and minimize material, manpower and installation costs. Additional savings accrue through a reduction of the number of laterals required.

Improving Existing Systems — The Spears® Adapter System is ideal for updating existing systems because it readily adapts to aluminum or PVC mains and laterals. Expansion or refinement of the irrigation system is easily accomplished through the versatility afforded the user in the location of the new sprinkler heads.

BSW	=	British Standard Whitworth Thread	NFT	=	National Fine Thread
FHT	=	Female Hose Thread	Rebar	=	Accepts 1/2" Rebar
Fipt	=	Female Iron Pipe Thread	Soc	=	IPS Solvent Weld Socket
MHT	=	Male Hose Thread	Spig	=	Spigot
Mipt		Male Iron Pipe Thread			

Hose System Riser
Soc x Mipt



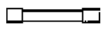
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
RM-64	**1/2**	75	0	020	5.04
RM-66	**3/4**	75	0	020	5.04

Hose System Riser
Soc x MHT



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
RM-66-H	**3/4**	75	0	020	5.04

Hose System Riser
Soc x Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
RF-64	**1/2**	75	0	020	6.28
RF-66	**3/4**	70	0	020	6.28

Trickle Irrigation Hex Cap
Fipt (Less Holes)



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
T-1	**1/2**	800	0	020	1.64

Shrub Adapter
Fipt x NFT



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PA2010-01	**1/2X10-32**	50	300	020	1.27
PA2010-03	**1/2X5/16**	50	300	020	1.27
Fipt x Fipt					
PA2010-02	**1/2X1/8**	50	300	020	1.27
Fipt x BSW					
PA2010-04	**1/2X3/8**	50	300	020	1.27

Shrub Adapter
Soc x NFT



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PA2020-01	**1/2X10-32**	50	300	020	1.27
PA2020-03	**1/2X5/16**	50	300	020	1.27
Soc x Fipt					
PA2020-02	**1/2X1/8**	50	300	020	1.27
Soc x BSW					
PA2020-04	**1/2X3/8**	50	300	020	1.27

Transition Nipple
Mipt x MHT (1.790 Length)



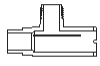
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
N-1	**3/4X3/4**	50	300	020	1.35
Mipt x Mipt (1.410 Length)					
N-2	**3/8X1/2**	50	300	020	1.35
Mipt x MHT (1.872 Length)					
N-3	**1/2X3/4**	50	300	020	1.35
Mipt x Mipt Polypropylene (1.480 Length)					
N-4	**3/4X1/2**	50	300	020	1.35

Pipe Support (90° Clip to Body)
Without Nail Holes



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PS4-90	**1/2**	750	0	020	.60
With Nail Holes					
PS4-90N	**1/2**	750	0	020	.76

Manifold Tee
Spig x Soc x Mipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
476-010	**1**	20	0	020	5.98

Irrigation Accessories

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Manifold Tee					
Spig x Soc x Fipt					
477-010	**1**	25	0	020	5.98

Hose Adapters

For Solid Set Or Moveable Aluminum Systems

Fipt = Female Iron Pipe Thread
MHT = Male Hose Thread
Mipt = Male Iron Pipe Thread
Rebar = Accepts 1/2" Rebar

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Cross					
MHT x MHT x Fipt x MHT					
P-101	**3/4X3/4X1/2X3/4**	125	0	020	8.91
MHT x MHT x Fipt x Mipt					
P-100	**3/4**	125	0	020	8.91
P-102	**3/4X3/4X1/2X3/4**	100	0	020	8.91
P-103	**3/4X3/4X1/2X1/2**	50	0	020	8.91
Rebar Cross					
MHT x MHT x Fipt x Rebar					
PR-101	**3/4X1/2**	50	0	020	9.58
PR-103	**3/4X3/4X1/2X1/2**	50	0	020	9.58
Rebar Ell					
MHT x Fipt x Rebar					
PR-100	**3/4X1/2X1/2**	100	0	020	5.04
PR-102	**3/4X3/4X1/2**	100	0	020	5.04

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Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Standard Sprinkler Stand



Hose Socket Inlet x Hose Socket Outlet x IPS Riser Outlet

Shown without adapters

ES-443†	**1/2X3/8**	100	0	020	7.82
ES-444†	**1/2X1/2**	100	0	020	7.82
ES-543*	**5/8X1/2X3/8**	75	0	020	9.08
ES-544*	**5/8X1/2X1/2**	75	0	020	9.08
ES-553*	**5/8X3/8**	75	0	020	10.11
ES-554*	**5/8X1/2**	75	0	020	10.11
ES-653*	**3/4X5/8X3/8**	75	0	020	11.07
ES-654*	**3/4X5/8X1/2**	75	0	020	11.07
ES-663*	**3/4X3/8**	75	0	020	11.59
ES-664*	**3/4X1/2**	75	0	020	11.59

† Dual Connection — Hose Socket Inlets and Outlets accept 1/2" irrigation hose inside, and have 3/4" MHT on the outside.
* Item assembled when ordered — by providing either the ES-443 or ES-444 and one (1) or two (2) F-60 FHT Adapters with the applicable hose Socket size. Check with your servicing Regional Distribution Center for delivery lead time.

Easy Pull Sled



Hose Socket Inlet x Hose Socket Outlet x IPS Riser Outlet

Shown without adapters

EP-443†	**1/2X3/8**	20	0	020	18.93
EP-444†	**1/2**	20	0	020	18.93
EP-543*	**5/8X1/2X3/8**	20	0	020	20.20
EP-544*	**5/8X1/2X1/2**	20	0	020	20.20
EP-553*	**5/8X3/8**	20	0	020	21.43
EP-554*	**5/8X1/2**	20	0	020	21.43
EP-653*	**3/4X5/8X3/8**	20	0	020	21.71
EP-654*	**3/4X5/8X1/2**	20	0	020	21.71
EP-663*	**3/4X3/8**	20	0	020	22.20
EP-664*	**3/4X1/2**	20	0	020	22.20

† Dual Connection — Hose Socket Inlets and Outlets accept 1/2" irrigation hose inside, and have 3/4" MHT on the outside.
* Item assembled when ordered — by providing either the EP-443 or EP-444 and one (1) or two (2) F-60 FHT Adapters with the applicable hose Socket size. Check with your servicing Regional Distribution Center for delivery lead time.

Tow-Line Tee



Soc

Assembled as shown

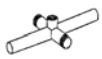
TL-112	**1X1X1/2**	15	0	020	12.61
TL-123	**2X2X1/2**	25	0	020	15.12

Soc x Soc x Fipt

TL-112-1	**1X1X1/2**	30	0	020	13.62
TL-116-1	**1-1/4X1-1/4X1/2**	30	0	020	13.88
TL-120-1	**1-1/2X1-1/2X1/2**	25	0	020	14.39
TL-123-1	**2X2X1/2**	25	0	020	15.64

NOTE: The Tow-Line Tee is used in conjunction with PVC Schedule 40 Pipe with solvent weld connection.

Hose Cross - with Legs



Hose Socket Inlet x Hose Socket Outlet x IPS Riser Outlet

Shown without adapters

HC-443†	**1/2X3/8**	60	0	020	9.08
HC-444†	**1/2X1/2**	60	0	020	9.08
HC-543*	**5/8X1/2X3/8**	60	0	020	10.35
HC-544*	**5/8X1/2X1/2**	60	0	020	10.35
HC-553*	**5/8X3/8**	60	0	020	11.59
HC-554*	**5/8X1/2**	60	0	020	11.59
HC-653*	**3/4X5/8X3/8**	60	0	020	12.36
HC-654*	**3/4X5/8X1/2**	60	0	020	12.36
HC-663*	**3/4X3/8**	60	0	020	13.12
HC-664*	**3/4X1/2**	60	0	020	13.12

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Hose Cross - with Legs (continued)

Hose Socket Inlet x Hose Socket Outlet x IPS Riser Outlet

† Dual Connection — Hose Socket Inlets and Outlets accept 1/2" irrigation hose inside, and have 3/4" MHT on the outside.
* Item assembled when ordered — by providing either the HC-443 or HC-444 and one (1) or two (2) F-60 FHT Adapters with the applicable hose Socket size. Check with your servicing Regional Distribution Center for delivery lead time.
NOTE: Hose Crosses are standard with 4" legs. 8" legs are available upon request. Add "-8" at the end of above Part Numbers for 8" legs (for example: HC-443-8). Contact your servicing Regional Distribution Center for pricing.

Hose Cross - Less Legs



Hose Socket Inlet x Hose Socket Inlet x IPS Riser Outlet

Shown without adapters

HC-443-1†	**1/2X3/8**	220	0	020	4.54
HC-444-1†	**1/2X1/2**	200	0	020	4.54
HC-543-1*	**5/8X1/2X3/8**	60	0	020	6.28
HC-544-1*	**5/8X1/2X1/2**	60	0	020	6.28
HC-553-1*	**5/8X3/8**	50	0	020	8.32
HC-554-1*	**5/8X1/2**	50	0	020	8.32
HC-653-1*	**3/4X5/8X3/8**	60	0	020	8.59
HC-654-1*	**3/4X5/8X1/2**	60	0	020	8.59
HC-663-1*	**3/4X3/8**	60	0	020	9.08
HC-664-1*	**3/4X1/2**	60	0	020	9.08

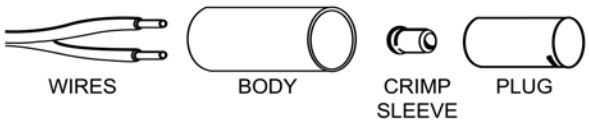
† Dual Connection — Hose Socket Inlets and Outlets accept 1/2" irrigation hose inside, and have 3/4" MHT on the outside.
* Item assembled when ordered — by providing either the HC-443-1 or HC-444-1 and one (1) or two (2) F-60 FHT Adapters with the applicable hose Socket size. Check with your servicing Regional Distribution Center for delivery lead time.

For use in electrical systems with 30v or less.

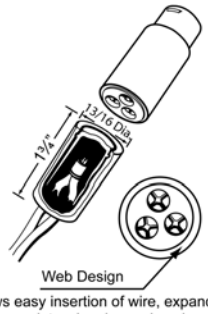
The Spears® Dri-Splice Seal designed into each wire hole enables you to stock one connector for all applications. The Dri-Splice Seal features an interference webbing which expands to accommodate #18 through #6 gauge wire sizes. In the event only two holes are used, the Dri-Splice Seal prevents sealant from leaking out through the third hole.

SOLD IN STANDARD PACK QUANTITIES ONLY

DS-100/DS-150 & DS-400/DS-450 Dri-Splice Wire Connector Installation Information



1. Insert wires through holes in base of body.
2. Twist stripped wires together and apply crimp sleeve with an indent type crimping tool. Trim excess bare wire.
3. DS-100 & DS-150 ONLY — Fill Plug to brim with DS-300 sealant.
4. Invert body and insert plug into body until it snaps tight.
5. Push wires all the way into the plug to completely seal the crimp sleeve.
6. DS-100 & DS-150 ONLY — Be certain sealant has formed into all holes in body.



DS-100 & DS-150 Dri-Splice

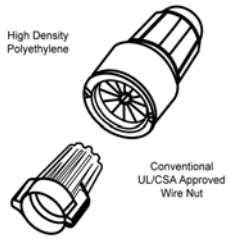
- DS-100 fits AWG #18, #14, #12, or #10
- DS-150 fits AWG #14, #12, #10, #8, or #6
- Designed to insure waterproof connections
- Easily installed in the field without special tools
- Permanent protection for underground wire splices
- Requires the use of DS-300 Sealant

DS-400 & DS-450 Pre-Filled Dri-Splice

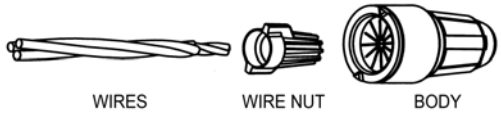
- All the features of the DS-100 or DS-150, plus the added benefit of being pre-filled with Dielectric Silicone Sealant
- Reduced inventory requirements
- Insures proper amount and type of Sealant every time
- Eliminates costly waste and clean-up
- Makes installations quick, clean and efficient

Dri-Splice Wire Connectors

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Dri-Splice Wire Connector with Crimp Sleeve (Sealant sold separately)					
DS-100	AWG #18, #14, #12, #10	25	400	020	1.46
DS-150	AWG #14, #12, #10, #8, #6	25	400	020	1.75
Pre-Filled Dri-Splice Wire Connector with Crimp Sleeve					
DS-400	AWG #18, #14, #12, #10	25	400	020	3.19
DS-450	AWG #14, #12, #10, #8, #6	25	400	020	3.47
Crimp Sleeves					
DS-200	AWG #18, #14, #12, #10	25	15000	901	.25
DS-250	AWG #14, #12, #10, #8, #6	25	12500	901	.53
Dri-Splice Sealant For DS-100 and DS-150 (Approx. 30 connections per 5 oz. tube)					
DS-300	AWG #18, #14, #12, #10	24	0	022	15.29



DS-500 Dri-Splice Wire Connector Installation Information

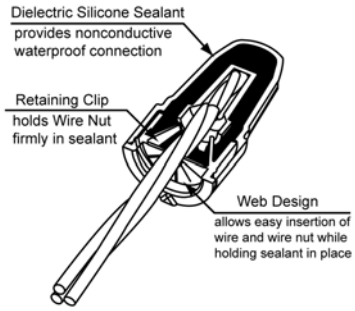


1. Strip wires and install wire nut.
2. wire nut wings with arrows and insert fully into body.

Dri-Splice Wire Connector General Information

Sealant:	DS-300 Sealant* (for DS-100 & DS-150) -*MSDS available upon request.*
	DS-400 & DS-450 Dielectric Silicone Sealant**-defined as an Article, per OSHA 29 CFR 1910, 1200, which does not require an MSDS.*
	DS-500 Dielectric Silicone Sealant**-defined as an Article, per OSHA 29 CFR 1910, 1200, which does not require an MSDS.*
Shelf Life:	DS-300 (unopened tube)— One Year*
	DS-400 & DS-450 — Indefinite at 73°F (23°C)*
	DS-500— Indefinite at 73°F (23°C)*
Electrical Systems:	For use in electrical systems with 30v or less. UL Listing NOT required in most areas.
DS-100/DS-150 & DS-400/DS-450 Components:	Plug— PVC
	Body— PVC
	Crimp Sleeve— UL and CSA Listed for 18 - 10 awg solid or stranded copper conductors.
DS-500 Components:	Body— Polyethylene
	Wire Nut— Twist-On Spring Type - UL/CSA Listed for 22 - 10 awg solid or stranded copper wire.

* Information developed and furnished by the Sealant Manufacturers. For additional information, please contact Spears® Technical Services Department.



DS-500 Dri-Splice Wire Connector

For use in electrical systems with 30v or less.

Spears® NEW DS-500 Dri Splice Wire Connector is the fast, reliable and clean way of making positive, waterproof connections you can depend on. Simply twist Wire Nut on and insert into Dielectric Silicone Sealant Cartridge. The DS-500 is specially designed for irrigation systems and low voltage lighting, marine and security systems and suitable for direct burial.

- Allows full assembly and check of connection prior to sealing
- Accepts wire combinations from 3 #22 to 3 #10 AWG solid or stranded copper wire
- Special "No-Mess" cartridge design fully encloses sealant
- Internal interlock prevents disengagement of wire nut from sealant cartridge

Dri-Splice Wire Connectors

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Pre-Filled Dri-Splice Wire Connector with Wire Nut					
DS-500	**3 AWG #22-#10**	25	500	020	3.19

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

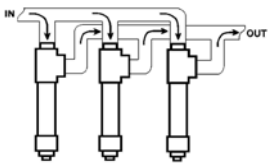
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Specially designed for agricultural and irrigation applications. Suitable for any application where cool, filtered water is required. Standard units utilize an internal-to-external filter cartridge. See following page for reverse flow (external to internal) filters.



- 200 psi Working Pressure Non-Shock @ 73°F (23°C)
- Filter Body is made from NSF®-PW Approved PVC Material
- Optional Screen Meshes
- Compact Design, Easy to Clean
- Lightweight, Easy to Install
- Filter Screens are designed using a standard perforated Stainless Steel Screen
- Mesh Sizes include an inner Stainless Steel Cloth with Spring Support (external cloth on reverse flow filters)
- Pressure loss: 100 GPM – 3 psi 50 GPM – 1.25 psi
- May be bushed to required pipe size

- When more than 100 gpm is required, filters may be installed in parallel
- When installing filter, allow space for removing filter screen for cleaning
- Remove stainless steel filter screen before solvent welding filter to pipe manifold
- When filters are installed in the direct sun, it is suggested the filter body be coated with a water-base latex paint having a high reflectance
- Installation in a shaded area is preferred



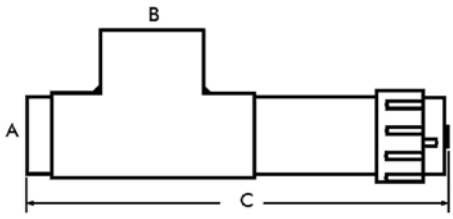
—CAUTION—

- WATER HAMMER MAY CAUSE SEVERE DAMAGE TO THE FILTER ASSEMBLY.
- BACK FLUSHING IS NOT RECOMMENDED.
- QUALITY GRADE THREAD SEALANT IS RECOMMENDED FOR ALL THREADED PVC CONNECTIONS.

Mesh Size	Hole Size (in.)	Part Number Extension
1/16" Holes	.0625	-16
1/32" Holes	.0312	-32
50 Mesh	.0117	-50
76 Mesh	.0095	-76
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.

Filter Dimensions & Weights



Series	A Inlet		B Outlet	C Overall Length	Screen Length	Filter Approx. Weight
	Socket	Spigot				
FLR	2-1/2	3	4	28	24	8
MFLR	2-1/2	3	4	16	12	4-3/4

Filter Assembly with Stainless Steel Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
100 GPM					
FL-16*	**2-1/2 /3 x 4**	1	0	020	555.11
FL-32*	**2-1/2 /3 x 4**	1	0	020	567.73
FL-50	**2-1/2 /3 x 4**	1	0	020	643.40
FL-76	**2-1/2 /3 x 4**	1	0	020	777.14
FL-100	**2-1/2 /3 x 4**	1	0	020	706.48
FL-150	**2-1/2 /3 x 4**	1	0	020	731.74
FL-200	**2-1/2 /3 x 4**	1	0	020	794.81
*Standard FL-16 and FL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet. NOTE: Filter Assemblies are furnished standard with a 1-1/4" IPS tapped cap (FL4a) for use with a valve, or may be plugged off (plug not furnished). Optional cap available with 1/4" IPS tapping for use with a pressure gauge — specify FL-5a when ordering.					
50 GPM					
MFL-16*	**2-1/2 /3 x 2**	1	0	020	466.82
MFL-32*	**2-1/2 /3 x 2**	1	0	020	474.37
MFL-50	**2-1/2 /3 x 2**	1	0	020	489.48
MFL-76	**2-1/2 /3 x 2**	1	0	020	592.98
MFL-100	**2-1/2 /3 x 2**	1	0	020	517.27
MFL-150	**2-1/2 /3 x 2**	1	0	020	542.49
MFL-200	**2-1/2 /3 x 2**	1	0	020	605.57
*Standard FL-16 and FL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet. NOTE: Filter Assemblies are furnished standard with a 1-1/4" IPS tapped cap (FL4a) for use with a valve, or may be plugged off (plug not furnished). Optional cap available with 1/4" IPS tapping for use with a pressure gauge — specify FL-5a when ordering.					

Filter Replacement Screens

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
100 GPM (24" Length)					
FL-16-1	**1/16" Holes**	3	0	020	222.04
FL-32-1	**1/32" Holes**	3	0	020	242.22

Filter Replacement Screens (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
100 GPM (24" Length)					
FL-50-1	**50 Mesh**	3	0	020	479.42
FL-76-1	**76 Mesh**	3	0	020	474.37
FL-100-1	**100 Mesh**	3	0	020	373.45
FL-150-1	**150 Mesh**	3	0	020	403.71
FL-200-1	**200 Mesh**	3	0	020	499.60
NOTE: When ordering replacement screens for FL and MFL Series Filters, please provide exact length of old screen within 1/64" to ensure proper fit of new screen in your filter body.					
50 GPM (12" Length)					
MFL-16-1	**1/16" Holes**	3	0	020	222.04
MFL-32-1	**1/32" Holes**	3	0	020	232.14
MFL-50-1	**50 Mesh**	3	0	020	252.33
MFL-76-1	**76 Mesh**	3	0	020	358.29
MFL-100-1	**100 Mesh**	3	0	020	277.57
MFL-150-1	**150 Mesh**	3	0	020	307.85
MFL-200-1	**200 Mesh**	3	0	020	378.46
NOTE: When ordering replacement screens for FL and MFL Series Filters, please provide exact length of old screen within 1/64" to ensure proper fit of new screen in your filter body.					

Filter Replacement Components

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
100 GPM Filter Body					
FL-11	**2-1/2 /3 X 4**	1	0	020	378.46
50 GPM Filter Body					
MFL-11	**2-1/2 /3 X 2**	1	0	020	290.17

Components for Old-Style Filters w/3" Bottom Cap

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Filter Cap w/Gasket					
FL-4A	**3X1-1/4**	70	0	020	31.55

Filters

Components for Old-Style Filters w/3" Bottom Cap (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Filter Cap w/Gasket					
FL-5A	**3X1/4**	70	0	020	31.55
Cap Gasket Only					
FCG-5	**3**	2	0	020	10.04

Components for New-Style Filters w/4" Bottom Cap

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Filter Cap w/O-rings					
FL-4B	**4X1-1/4**	25	0	020	57.97
FL-5B	**4X1/4**	1	0	020	93.78
Includes Cap with Cap O-ring (1) and bottom Filter Bushing O-ring (1)					
Cap O-Ring Only					
B-242	**- - -**	100	0	901	.83
Filter Bushing O-Rings					
B-335-60	**- - -**	100	0	901	3.66
Each filter uses two (2) Filter Bushing O-rings for top and bottom screen seals					

Reverse Flow Filters



100 GPM



50 GPM

- Filter cartridge specially designed for external-to-internal filtration
- Traps sediment and debris on outside of filter (standard filters use internal-to-external flow)
- 100 GPM and 50 GPM styles available

100 GPM Reverse Flow Filter Assembly with Stainless Steel Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Socket x Socket/Spigot					
FLR-16*	**4X2-1/2 /3**	1	0	020	555.11
FLR-32*	**4X2-1/2 /3**	1	0	020	567.73
FLR-50	**4X2-1/2 /3**	1	0	020	643.40
FLR-76	**4X2-1/2 /3**	1	0	020	777.14
FLR-100	**4X2-1/2 /3**	1	0	020	706.48
FLR-150	**4X2-1/2 /3**	1	0	020	731.74
FLR-200	**4X2-1/2 /3**	1	0	020	794.81
*Standard FL-16 and FL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.					

50 GPM Filter Assembly with Stainless Steel Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Socket x Socket/Spigot					
MFLR-16*	**2X2-1/2 /3**	1	0	020	466.82
MFLR-32*	**2X2-1/2 /3**	1	0	020	474.37
MFLR-50	**2X2-1/2 /3**	1	0	020	489.48
MFLR-76	**2X2-1/2 /3**	1	0	020	592.98
MFLR-100	**2X2-1/2 /3**	1	0	020	517.27
MFLR-150	**2X2-1/2 /3**	1	0	020	542.49
MFLR-200	**2X2-1/2 /3**	1	0	020	605.57
*Standard MFL-16 and MFL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.					

100 GPM Reverse Flow Filter Replacement Screens (24" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-16-1	**1/16" Holes**	3	0	020	222.04
FL-32-1	**1/32" Holes**	3	0	020	242.22
FLR-50-1	**50 Mesh**	3	0	020	243.39
FLR-76-1	**76 Mesh**	3	0	020	474.37

100 GPM Reverse Flow Filter Replacement Screens (24" Length) (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FLR-100-1	**100 Mesh**	3	0	020	337.02
FLR-150-1	**150 Mesh**	3	0	020	383.52
FLR-200-1	**200 Mesh**	3	0	020	474.62

50 GPM Reverse Flow Filter Replacement Screens (12" Length)

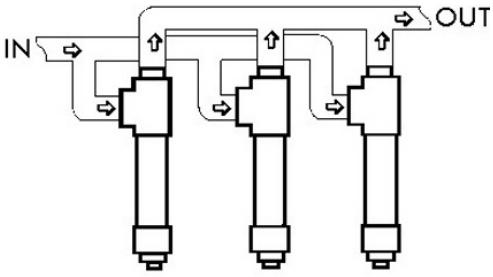
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-16-1	**1/16" Holes**	3	0	020	222.04
MFL-32-1	**1/32" Holes**	3	0	020	232.14
MFLR-50-1	**50 Mesh**	3	0	020	256.21
MFLR-76-1	**76 Mesh**	3	0	020	358.29
MFLR-100-1	**100 Mesh**	3	0	020	263.67
MFLR-150-1	**150 Mesh**	3	0	020	292.44
MFLR-200-1	**200 Mesh**	3	0	020	359.53

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

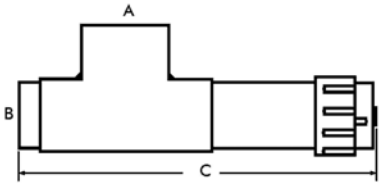
Mesh Size	Hole Size (in.)	Part Number Extension
1/16" Holes	.0625	-16
1/32" Holes	.0312	-32
50 Mesh	.0117	-50
76 Mesh	.0095	-76
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.
Example: FLR-50 = 50 Mesh

Typical Reverse Flow Application



- When more than 100 gpm is required, filters may be installed in parallel
- When installing filter, allow space for removing filter screen for cleaning
- Remove stainless steel filter screen before solvent welding filter to pipe manifold
- When filters are installed in direct sunlight, it is suggested the filter body be coated with a water-base latex paint having a high reflectance
- Installation in a shaded area is preferred



Series	A Inlet	B Outlet		C Overall Length	Screen Length	Filter Approx. Weight
		Socket	Spigot			
FLR	4	2-1/2	3	28	24	8
MFLR	4	2-1/2	3	16	12	4-3/4

100 GPM and 50 GPM • PVC White • Buna O-ring Seal



100 GPM 50 GPM

- In-line Design Simplifies Installation.
- Allows Easy Parallel Filter Configuration for Increased Flow and Filtration.
- Removable Type 304 Stainless Steel Filter Cartridges in Assorted Perforations and Screen Mesh.
- Standard Flow Filter (Internal-to-External) Traps Sediment on Inside of Cartridge, Reverse Flow Filter (External-to-Internal) Traps Sediment on Outside of Cartridge.
- Convenient Bottom Drain with 1-1/4" NPT Stainless Steel Reinforced Plastic Thread and Plug. Optional Cap with 1/4" Outlet Available.
- 200 psi Working Pressure for Water @ 73°F (23°C).
- Manufactured from NSF® Certified PVC Material.

Mesh Size	Hole Size (in.)	Part Number Extension
1/16" Holes	.0625	-16
1/32" Holes	.0312	-32
50 Mesh	.0117	-50
76 Mesh	.0095	-76
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.
Example: TF-50 = 50 Mesh

100 GPM PVC White Tee Filter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Buna-N O-ring Seal with Stainless Steel Screen					
TF-16*	2-1/2 /3 x 2-1/2 /3	1	0	020	555.11
TF-32*	2-1/2 /3 x 2-1/2 /3	1	0	020	567.73
TF-50	2-1/2 /3 x 2-1/2 /3	1	0	020	643.40
TF-76	2-1/2 /3 x 2-1/2 /3	1	0	020	777.14
TF-100	2-1/2 /3 x 2-1/2 /3	1	0	020	706.48
TF-150	2-1/2 /3 x 2-1/2 /3	1	0	020	731.74
TF-200	2-1/2 /3 x 2-1/2 /3	1	0	020	794.81

50 GPM PVC White Tee Filter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Buna-N O-ring Seal with Stainless Steel Screen					
MTF-16*	2-1/2 /3 x 2-1/2 /3	1	0	020	466.82
MTF-32*	2-1/2 /3 x 2-1/2 /3	1	0	020	474.37
MTF-50	2-1/2 /3 x 2-1/2 /3	1	0	020	489.48
MTF-76	2-1/2 /3 x 2-1/2 /3	1	0	020	592.98
MTF-100	2-1/2 /3 x 2-1/2 /3	1	0	020	517.27
MTF-150	2-1/2 /3 x 2-1/2 /3	1	0	020	542.49
MTF-200	2-1/2 /3 x 2-1/2 /3	1	0	020	605.57

100 GPM PVC White Reverse Tee Filter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Buna-N O-ring Seal with Stainless Steel Screen					
TF-16*	2-1/2 /3 x 2-1/2 /3	1	0	020	555.11
TF-32*	2-1/2 /3 x 2-1/2 /3	1	0	020	567.73
TFR-50	2-1/2 /3 x 2-1/2 /3	1	0	020	643.40
TFR-76	2-1/2 /3 x 2-1/2 /3	1	0	020	777.14
TFR-100	2-1/2 /3 x 2-1/2 /3	1	0	020	706.48
TFR-150	2-1/2 /3 x 2-1/2 /3	1	0	020	731.74
TFR-200	2-1/2 /3 x 2-1/2 /3	1	0	020	794.81

50 GPM PVC White Reverse Tee Filter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Buna-N O-ring Seal with Stainless Steel Screen					
MTF-16*	2-1/2 /3 x 2-1/2 /3	1	0	020	466.82
MTF-32*	2-1/2 /3 x 2-1/2 /3	1	0	020	474.37
MTFR-50	2-1/2 /3 x 2-1/2 /3	1	0	020	489.48
MTFR-76	2-1/2 /3 x 2-1/2 /3	1	0	020	592.98
MTFR-100	2-1/2 /3 x 2-1/2 /3	1	0	020	517.27
MTFR-150	2-1/2 /3 x 2-1/2 /3	1	0	020	542.49
MTFR-200	2-1/2 /3 x 2-1/2 /3	1	0	020	605.57

*Standard TF-16, TF-32, MTF-16 & MTF-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

100 GPM Filter Replacement Screens for TF Filters (24" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-16-1	**1/16" Holes**	3	0	020	222.04
FL-32-1	**1/32" Holes**	3	0	020	242.22
FL-50-1	**50 Mesh**	3	0	020	479.42

100 GPM Filter Replacement Screens for TF Filters (24" Length) (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-76-1	**76 Mesh**	3	0	020	474.37
FL-100-1	**100 Mesh**	3	0	020	373.45
FL-150-1	**150 Mesh**	3	0	020	403.71
FL-200-1	**200 Mesh**	3	0	020	499.60

NOTE: When ordering replacement screens for TF and MTF Series Filters, please provide exact length of old screen within 1/64" to insure proper fit of new screen in your filter body.

50 GPM Filter Replacement Screens for MTF Filters (12" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-16-1	**1/16" Holes**	3	0	020	222.04
MFL-32-1	**1/32" Holes**	3	0	020	232.14
MFL-50-1	**50 Mesh**	3	0	020	252.33
MFL-76-1	**76 Mesh**	3	0	020	358.29
MFL-100-1	**100 Mesh**	3	0	020	277.57
MFL-150-1	**150 Mesh**	3	0	020	307.85
MFL-200-1	**200 Mesh**	3	0	020	378.46

NOTE: When ordering replacement screens for TF and MTF Series Filters, please provide exact length of old screen within 1/64" to insure proper fit of new screen in your filter body.

100 GPM Reverse Flow Filter Replacement Screens for TFR Filters (24" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-16-1	**1/16" Holes**	3	0	020	222.04
FL-32-1	**1/32" Holes**	3	0	020	242.22
FLR-50-1	**50 Mesh**	3	0	020	243.39
FLR-76-1	**76 Mesh**	3	0	020	474.37
FLR-100-1	**100 Mesh**	3	0	020	337.02
FLR-150-1	**150 Mesh**	3	0	020	383.52
FLR-200-1	**200 Mesh**	3	0	020	474.62

50 GPM Reverse Flow Filter Replacement Screens for MTFR Filters (12" Length)

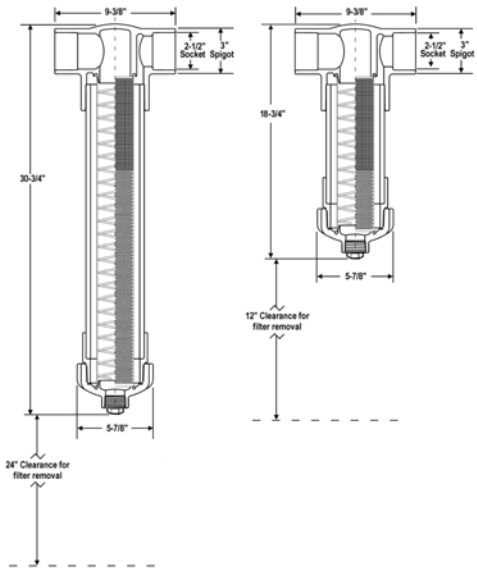
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-16-1	**1/16" Holes**	3	0	020	222.04
MFL-32-1	**1/32" Holes**	3	0	020	232.14
MFLR-50-1	**50 Mesh**	3	0	020	256.21
MFLR-76-1	**76 Mesh**	3	0	020	358.29
MFLR-100-1	**100 Mesh**	3	0	020	263.67
MFLR-150-1	**150 Mesh**	3	0	020	292.44
MFLR-200-1	**200 Mesh**	3	0	020	359.53

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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

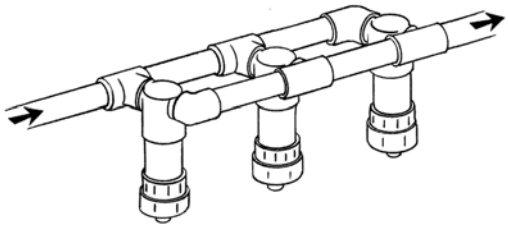
IN-LINE TECHNICAL INFORMATION

Dimensions

Filter includes drain plug for 1-1/4" NPT outlet. Optional valve for blow-out or filter cap with 1/4" NPT outlet can be purchased separately.

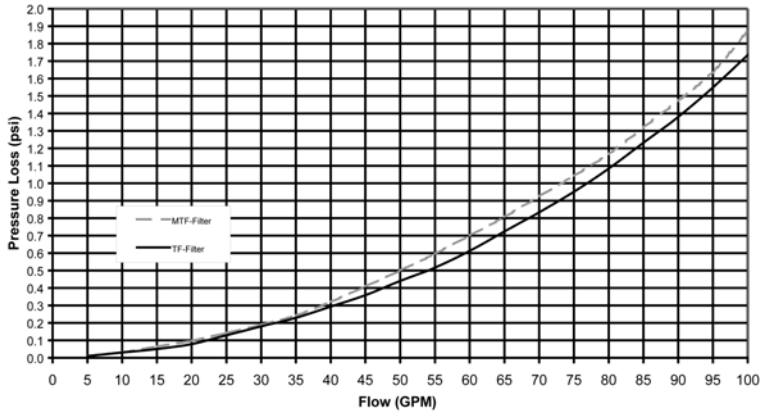


Parallel Filter Installation



- When more than 100 gpm is required, filters may be installed in parallel.
- When installing filter, allow space for removing filter screen for cleaning.
- Remove stainless steel filter screen before solvent welding filter to pipe manifold to avoid cement contact with screen.
- When filters are installed in the direct sun, it is suggested the filter body be coated with a water-base latex paint having a high reflectance.
- Installation in a shaded area is preferred.

Pressure Loss





7 GPM Steel



7 GPM Plastic/Nylon

NOTE: It is recommended to connect the inlet of the Hose Filter to the system with a swivel adapter such as Spears® AP Series, to facilitate servicing of the filter element (refer to Hose Fittings).

Mesh Size	Hole Size (in.)	Part Number Extension
20 Mesh	.0331	-20
30 Mesh	.0232	-30
50 Mesh	.0117	-50
80 Mesh	.0070	-80
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.
Example: HF-50 = 50 Mesh

7 GPM Hose Filter Assembly

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
with Stainless Steel Screen					
HF-20	**3/4**	10	60	020	18.71
HF-30	**3/4**	10	60	020	18.71
HF-50	**3/4**	10	60	020	18.71
HF-80	**3/4**	10	60	020	18.71
HF-100	**3/4**	10	60	020	19.43
HF-150	**3/4**	10	60	020	19.67
HF-200	**3/4**	10	60	020	20.20
with Plastic/Nylon Screen					
HF-150N	**3/4**	10	60	020	19.67

Hose Filter Replacement Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Stainless Steel Screen					
HF-20-1W	**5**	25	150	020	6.84
HF-30-1W	**5**	25	150	020	6.84
HF-50-1W	**5**	25	150	020	6.84
HF-80-1W	**5**	25	150	020	6.84
HF-100-1W	**5**	25	150	020	10.11
HF-150-1W	**5**	25	150	020	10.11
HF-200-1W	**5**	25	150	020	10.11
Plastic/Nylon Screen					
HF-150-1NW	**4-3/4**	25	150	020	10.11

7 GPM Hose Filter Body Components

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Hose Filter Body w/o screen					
HF	**3/4**	10	60	020	14.07
Hose Washer					
W-100	**3/4**	50	1500	020	.04
Screen Washer					
S-W	**- - -**	600	0	901	.21

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Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Coupling
Soc x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-100001	**4 IPS**	1	10	300	15.89
280-100002	**6**	1	5	300	19.61
280-100003	**8**	1	6	300	22.07
280-100004	**10**	1	4	300	30.68
280-100005	**12**	1	4	300	41.73
280-100006	**15**	1	0	300	73.61
280-100007	**18**	1	0	300	131.24
280-100008	**20**	1	0	300	161.93

11-1/4° Elbow
Soc x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-100114	**6**	1	10	300	23.32
280-100115	**8**	1	4	300	33.15
280-100116	**10**	1	2	300	47.82
280-100117	**12**	1	2	300	66.24
280-100118	**15**	1	0	300	114.09
280-100119	**18**	1	0	300	196.32
280-100120	**20**	1	0	300	249.05

15° Elbow
Soc x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-100234	**6**	1	10	300	23.32
280-100235	**8**	1	4	300	33.15
280-100236	**10**	1	2	300	47.82
280-100237	**12**	1	2	300	66.24
280-100238	**15**	1	0	300	114.09
280-100239	**18**	1	0	300	199.97
280-100240	**20**	1	0	300	258.84

22-1/2° Elbow
Soc x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-100354	**6**	1	4	300	23.32
280-100355	**8**	1	3	300	33.15
280-100356	**10**	1	2	300	47.82
280-100357	**12**	1	2	300	66.24
280-100358	**15**	1	0	300	114.09
280-100359	**18**	1	0	300	199.97
280-100360	**20**	1	0	300	258.84

30° Elbow
Soc x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-100474	**6**	1	8	300	39.23
280-100475	**8**	1	4	300	57.61
280-100476	**10**	1	2	300	71.15
280-100477	**12**	1	2	300	116.59
280-100478	**15**	1	0	300	187.72
280-100479	**18**	1	0	300	332.45
280-100480	**20**	1	0	300	369.29

45° Elbow
Soc x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-100592	**6**	1	4	300	39.23
280-100593	**8**	1	4	300	57.61
280-100594	**10**	1	2	300	71.15
280-100595	**12**	1	2	300	116.59
280-100596	**15**	1	0	300	187.72
280-100597	**18**	1	0	300	332.45

45° Elbow (continued)
Soc x Soc

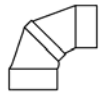
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-100598	**20**	1	0	300	369.29

60° Elbow
Soc x Soc



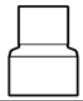
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-100702	**6**	1	4	300	73.61
280-100703	**8**	1	2	300	90.75
280-100704	**10**	1	0	300	144.79
280-100705	**12**	1	0	300	190.15
280-100706	**15**	1	0	300	310.38
280-100707	**18**	1	0	300	537.36
280-100708	**20**	1	0	300	723.93

90° Elbow
Soc x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-100812	**6**	1	4	300	73.61
280-100813	**8**	1	2	300	90.75
280-100814	**10**	1	0	300	144.79
280-100815	**12**	1	0	300	190.15
280-100816	**15**	1	0	300	310.38
280-100817	**18**	1	0	300	537.36
280-100818	**20**	1	0	300	723.93

Reducer
Soc x Soc



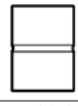
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-100928	**8X6**	1	2	300	34.35
2829-626	**10X6**	1	4	300	138.38
280-100931	**10X8**	1	4	300	52.76
280-100933	**12X6**	1	6	300	197.32
280-100934	**12X8**	1	4	300	153.36
280-100935	**12X10**	1	4	300	76.09
2829-726	**15X6**	1	0	300	342.43
2829-728	**15X8**	1	0	309	245.95
280-100939	**15X10**	1	0	300	174.87
280-100940	**15X12**	1	0	300	115.28
2829-786	**18X6**	1	0	300	514.23
2829-788	**18X8**	1	0	300	483.79
280-100944	**18X10**	1	0	300	423.29
280-100945	**18X12**	1	0	300	379.04
280-100946	**18X15**	1	0	300	185.26
2829-816	**20X6**	1	0	300	791.83
2829-818	**20X8**	1	0	300	753.89
2829-820	**20X10**	1	0	300	697.04
2829-822	**20X12**	1	0	300	640.64
2829-825	**20X15**	1	0	300	523.91
280-100953	**20X18**	1	0	300	271.12

PIP x IPS Reducer
Soc x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-101536	**6X4**	1	4	300	27.59
280-101537	**8X6**	1	8	300	39.88
280-101538	**10X8**	1	4	300	52.76
280-101534	**12X8**	1	4	300	153.36
280-101539	**12X10**	1	4	300	92.00
280-101540	**15X12**	1	0	300	147.18

IPS X PIP Adapter
Soc x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-101649	**6**	1	4	300	30.68
280-101650	**8**	1	4	300	45.36

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

IPS X PIP Adapter (continued)

Soc x Soc

280-101651	**10**	1	4	300	71.15
280-101652	**12**	1	4	300	100.59

Concrete Adapter

Soc x Concrete



280-101761	**6X6**	1	5	300	29.44
280-101762	**8X8**	1	6	300	42.92
280-101763	**10X10**	1	4	300	66.24
280-101764	**12X12**	1	4	300	93.20
280-101765	**12X14**	1	0	300	99.34
280-101766	**15X14**	1	0	300	137.37
280-101767	**15X15**	1	0	300	141.09
280-101768	**15X16**	1	0	300	143.55
280-101769	**18X18**	1	0	300	166.85
280-101770	**20X20**	1	0	300	208.56

Linegate Valve Adapter

Linegate x Soc



280-101777	**6**	1	6	300	24.45
280-101778	**8**	1	6	300	27.74
280-101779	**10**	1	4	300	44.20
280-101780	**12**	1	4	300	62.58
280-101781	**15**	1	0	300	107.94
2845-180	**18**	1	0	300	155.42

Linegate Valve PIP Adapter

Linegate x Soc



2845-180P	**18**	1	0	300	155.42

Saddle

Soc



280-101788	**4X2**	1	40	300	19.61
280-101789	**6X2**	1	10	300	19.61
280-101790	**8X2**	1	10	300	19.61
280-101791	**10X2**	1	10	300	19.61
280-101792	**12X2**	1	10	300	19.61
280-101793	**15X2**	1	10	300	19.61
280-101794	**18X2**	1	20	300	19.61
280-101795	**20X2**	1	10	300	20.83
280-101796	**4X3**	1	5	300	20.83
280-101797	**6X3**	1	10	300	20.83
280-101798	**8X3**	1	10	300	20.83
280-101799	**10X3**	1	10	300	20.83
280-101800	**12X3**	1	10	300	20.83
280-101801	**15X3**	1	10	300	20.83
280-101802	**18X3**	1	20	300	20.83
280-101803	**20X3**	1	10	300	30.92
280-101804	**6X4**	1	10	300	23.32
280-101805	**8X4**	1	10	300	23.32
280-101806	**10X4**	1	10	300	23.32
280-101807	**12X4**	1	10	300	23.32
280-101808	**15X4**	1	10	300	23.32
280-101809	**18X4**	1	10	300	23.32
280-101810	**20X4**	1	8	300	23.32
280-101811	**8X6**	1	8	300	29.44
280-101812	**10X6**	1	8	300	29.44
280-101813	**12X6**	1	8	300	29.44
280-101814	**15X6**	1	8	300	29.44
280-101815	**18X6**	1	10	300	29.44
280-101816	**20X6**	1	7	300	33.15

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Saddle (continued)

Soc

280-101817	**10X8**	1	8	300	34.35
280-101818	**12X8**	1	8	300	34.35
280-101819	**15X8**	1	8	300	34.35
280-101820	**18X8**	1	8	300	38.01
280-101821	**20X8**	1	8	300	53.94
280-101822	**12X10**	1	10	300	41.73
280-101823	**15X10**	1	10	300	47.82
280-101824	**18X10**	1	10	300	49.05
280-101825	**20X10**	1	7	300	90.75
280-101826	**15X12**	1	5	300	63.79
280-101827	**18X12**	1	3	300	82.16
280-101828	**20X12**	1	0	300	99.34
280-101829	**18X15**	1	0	300	106.71
280-101830	**20X15**	1	0	300	136.16
280-101831	**20X18**	1	0	300	150.88

Stub Saddle

Soc



280-101883	**4X2**	1	10	300	24.45
280-101884	**6X2**	1	10	300	24.45
280-101885	**8X2**	1	10	300	24.45
280-101886	**10X2**	1	10	300	24.45
280-101887	**12X2**	1	10	300	25.75
280-101888	**15X2**	1	10	300	28.22
280-101889	**18X2**	1	10	300	28.22
280-101890	**20X2**	1	10	300	31.88
280-101891	**4X3**	1	10	300	29.44
280-101892	**6X3**	1	5	300	29.44
280-101893	**8X3**	1	5	300	29.44
280-101894	**10X3**	1	5	300	29.44
280-101895	**12X3**	1	5	300	31.88
280-101896	**15X3**	1	5	300	31.88
280-101897	**18X3**	1	10	300	31.88
280-101898	**20X3**	1	5	300	34.35
280-101899	**6X4**	1	10	300	34.35
280-101900	**8X4**	1	10	300	34.35
280-101901	**10X4**	1	10	300	34.35
280-101902	**12X4**	1	10	300	34.35
280-101903	**15X4**	1	10	300	34.35
280-101904	**18X4**	1	10	300	36.09
280-101905	**20X4**	1	10	300	36.79
280-101906	**8X6**	1	6	300	40.46
280-101907	**10X6**	1	8	300	40.46
280-101908	**12X6**	1	6	300	40.46
280-101909	**15X6**	1	8	300	42.92
280-101910	**18X6**	1	10	300	42.92
280-101911	**20X6**	1	7	300	49.05
280-101912	**10X8**	1	4	300	53.94
280-101913	**12X8**	1	3	300	53.94
280-101914	**15X8**	1	5	300	57.61
280-101915	**18X8**	1	5	300	61.33
280-101916	**20X8**	1	0	300	77.27
280-101917	**12X10**	1	3	300	71.15
280-101918	**15X10**	1	5	300	74.84
280-101919	**18X10**	1	4	300	76.09
280-101920	**20X10**	1	0	300	117.73
280-101921	**15X12**	1	0	300	106.71
280-101922	**18X12**	1	0	300	123.91
280-101923	**20X12**	1	0	300	141.09
280-101924	**18X15**	1	0	300	166.85
280-101925	**20X15**	1	0	300	197.51
280-101926	**20X18**	1	0	300	240.45

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Same Size Saddle
Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-101937	6X6	1	10	300	33.71
280-101938	8X8	1	5	300	49.05
280-101939	10X10	1	5	300	67.43
280-101940	12X12	1	4	300	98.14
280-101941	15X15	1	0	300	147.18
280-101942	18X18	1	0	300	251.52
280-101943	20X20	1	0	300	343.53

Same Size Stub Saddle
Soc



280-101949	6X6	1	5	300	58.85
280-101950	8X8	1	4	300	94.21
280-101951	10X10	1	0	300	115.28
280-101952	12X12	1	0	300	131.24
280-101953	15X15	1	0	300	196.32
280-101954	18X18	1	0	300	341.08
280-101955	20X20	1	0	300	398.72

End Cap
Soc



280-107539	4 IPS	1	10	300	11.04
280-107540	6	1	10	300	12.26
280-107541	8	10	0	300	20.83
280-107542	10	1	10	300	33.15
280-107543	12	1	10	300	51.52
280-107545	15	1	5	300	72.39
280-107547	18	1	5	300	132.48
280-107548	20	1	5	300	177.89

Surface Reducer
Soc

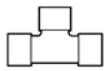


280-102013	6X2	1	10	300	19.61
280-102015	6X3	1	10	300	19.61
280-102016	6X4	1	10	300	19.61
280-102018	8X2	1	10	300	26.95
280-102020	8X3	1	10	300	26.95
280-102021	8X4	1	10	300	26.95
280-102022	8X6	1	10	300	26.95
280-102024	10X2	1	10	300	53.94
280-102026	10X3	1	10	300	53.94
280-102027	10X4	1	10	300	53.94
280-102028	10X6	1	10	300	53.94
280-102029	10X8	1	10	300	53.94
280-102031	12X2	1	10	300	66.24
280-102033	12X3	1	10	300	66.24
280-102034	12X4	1	10	300	66.24
280-102035	12X6	1	10	300	66.24
280-102036	12X8	1	10	300	66.24
280-102037	12X10	1	10	300	66.24
280-102048	15X2	1	5	300	93.20
280-102050	15X3	1	5	300	93.20
280-102051	15X4	1	5	300	93.20
280-102052	15X6	1	5	300	93.20
280-102053	15X8	1	5	300	93.20
280-102054	15X10	1	5	300	93.20
280-102055	15X12	1	5	300	93.20
280-102067	18X2	1	5	300	139.85
280-102069	18X3	1	4	300	139.85
280-102070	18X4	1	5	300	139.85
280-102071	18X6	1	5	300	139.85

Surface Reducer (continued)
Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-102072	18X8	1	5	300	139.85
280-102073	18X10	1	5	300	139.85
280-102074	18X12	1	5	300	139.85
280-102075	18X15	1	5	300	139.85
280-102077	20X2	1	0	300	185.26
280-102136	20X3	1	0	300	185.26
280-102137	20X4	1	5	300	185.26
280-102138	20X6	1	5	300	185.26
280-102139	20X8	1	5	300	185.26
280-102140	20X10	1	5	300	185.26
280-102141	20X12	1	5	300	185.26
280-102142	20X15	1	5	300	185.26
280-102143	20X18	1	5	300	185.26

Tee
Soc x Soc x Soc

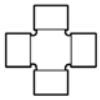


280-102502	6	1	8	300	46.59
280-102499	6X2	1	6	300	36.79
280-102500	6X3	1	4	300	39.88
280-102501	6X4	1	4	300	41.73
280-102507	8	1	2	300	73.79
280-102503	8X2	1	2	300	47.46
280-102504	8X3	1	3	300	56.39
280-102505	8X4	1	2	300	58.85
280-102506	8X6	1	0	300	67.43
280-102508	10X2	1	0	300	74.81
280-102509	10X3	1	0	300	76.04
280-102510	10X4	1	0	300	77.93
280-102511	10X6	1	0	300	79.73
280-102512	10X8	1	0	300	85.49
280-102513	10	1	0	300	92.01
280-102520	12	1	0	300	149.65
280-102514	12X2	1	2	300	98.14
280-102515	12X3	1	0	300	104.32
280-102516	12X4	1	0	300	109.16
280-102517	12X6	1	0	300	111.33
280-102518	12X8	1	0	300	116.59
280-102519	12X10	1	0	300	127.58
280-102528	15	1	0	300	296.92
280-102521	15X2	1	0	300	159.47
280-102522	15X3	1	0	300	159.47
280-102523	15X4	1	0	300	165.62
280-102524	15X6	1	0	300	170.51
280-102525	15X8	1	0	300	190.15
280-102526	15X10	1	0	300	212.21
280-102527	15X12	1	0	300	247.80
280-102537	18	1	0	300	516.55
280-102529	18X2	1	0	300	300.56
280-102530	18X3	1	0	300	302.98
280-102531	18X4	1	0	300	305.48
280-102532	18X6	1	0	300	311.61
280-102533	18X8	1	0	300	316.54
280-102534	18X10	1	0	300	345.99
280-102535	18X12	1	0	300	381.59
280-102536	18X15	1	0	300	417.15
280-102547	20	1	0	300	639.23
280-102538	20X2	1	0	300	380.34
280-102539	20X3	1	0	300	384.27
280-102540	20X4	1	0	300	390.14
280-102541	20X6	1	0	300	402.44
280-102542	20X8	1	0	300	411.01
280-102543	20X10	1	0	300	455.16
280-102544	20X12	1	0	300	483.40
280-102545	20X15	1	0	300	519.02

Tee (continued)
Soc x Soc x Soc

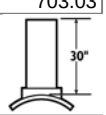
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-102546	**20X18**	1	0	300	584.00

Cross
Soc x Soc x Soc x Soc



280-103286	**6**	1	0	300	77.27
280-103283	**6X2**	1	0	300	61.33
280-103284	**6X3**	1	0	300	61.33
280-103285	**6X4**	1	4	300	67.43
280-103291	**8**	1	0	300	105.54
280-103287	**8X2**	1	0	300	85.85
280-103288	**8X3**	1	0	300	85.85
280-103289	**8X4**	1	0	300	92.00
280-103290	**8X6**	1	0	300	96.87
280-103297	**10**	1	0	300	143.55
280-103292	**10X2**	1	2	300	85.85
280-103293	**10X3**	1	0	300	88.95
280-103294	**10X4**	1	0	300	92.00
280-103295	**10X6**	1	0	300	103.06
280-103296	**10X8**	1	0	300	117.73
280-103304	**12**	1	0	300	199.97
280-103303	**12X10**	1	0	300	170.51
280-103298	**12X2**	1	0	300	115.95
280-103299	**12X3**	1	0	300	117.13
280-103300	**12X4**	1	0	300	120.20
280-103301	**12X6**	1	0	300	130.04
280-103302	**12X8**	1	0	300	141.09
280-103321	**15**	1	0	300	381.59
280-103313	**15X2**	1	0	300	170.51
280-103314	**15X3**	1	0	300	174.21
280-103315	**15X4**	1	0	300	182.82
280-103316	**15X6**	1	0	300	193.84
280-103317	**15X8**	1	0	300	208.56
280-103318	**15X10**	1	0	300	246.62
280-103319	**15X12**	1	0	300	296.92
280-103342	**18**	1	0	300	612.22
280-103332	**18X2**	1	0	300	331.26
280-103333	**18X3**	1	0	300	334.35
280-103334	**18X4**	1	0	300	337.42
280-103335	**18X6**	1	0	300	345.99
280-103336	**18X8**	1	0	300	355.79
280-103337	**18X10**	1	0	300	404.84
280-103338	**18X12**	1	0	300	430.69
280-103340	**18X15**	1	0	300	490.80
280-103354	**20**	1	0	300	806.11
280-103343	**20X2**	1	0	300	464.98
280-103344	**20X3**	1	0	300	468.66
280-103345	**20X4**	1	0	300	472.38
280-103346	**20X6**	1	0	300	483.40
280-103347	**20X8**	1	0	300	495.68
280-103348	**20X10**	1	0	300	531.23
280-103349	**20X12**	1	0	300	571.75
280-103351	**20X15**	1	0	300	598.73
280-103353	**20X18**	1	0	300	703.03

Orchard Riser
Saddle x Riser

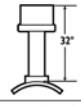


2880-04030	**4X4**	1	0	301	35.52
2880-53230	**6X4**	1	25	301	35.52
2880-06030	**6X6**	1	25	301	61.33
2880-58230	**8X4**	1	25	301	35.52
2880-58530	**8X6**	1	25	301	46.59
2880-08030	**8X8**	1	12	301	85.89
2880-62430	**10X4**	1	30	301	36.79

Orchard Riser (continued)
Saddle x Riser

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
2880-62630	**10X6**	1	20	301	46.59
2880-62830	**10X8**	1	16	301	63.79
2880-10030	**10X10**	1	6	301	122.65
2880-66430	**12X4**	1	25	301	38.01
2880-66630	**12X6**	1	20	301	46.59
2880-66830	**12X8**	1	12	301	63.79
2880-67030	**12X10**	1	9	301	88.31
2880-12030	**12X12**	1	6	301	171.75
2880-72430	**15X4**	1	25	301	40.46
2880-72630	**15X6**	1	25	301	53.94
2880-72830	**15X8**	1	12	301	72.39
2880-73030	**15X10**	1	9	301	100.59
2880-73230	**15X12**	1	6	301	138.62
2880-15030	**15X15**	1	4	301	287.08
2880-78430	**18X4**	1	25	301	44.20
2880-78630	**18X6**	1	25	301	52.46
2880-78830	**18X8**	1	10	301	76.09
2880-79030	**18X10**	1	9	301	101.82
2880-79230	**18X12**	1	6	301	157.01
2880-79530	**18X15**	1	4	301	226.96
2880-18030	**18X18**	1	3	301	430.62
2880-81430	**20X4**	1	0	301	46.62
2880-81630	**20X6**	1	12	301	61.36
2880-81830	**20X8**	1	12	301	92.00
2880-82030	**20X10**	1	6	301	143.56
2880-82230	**20X12**	1	5	301	174.21
2880-82530	**20X15**	1	0	301	256.46
2880-82830	**20X18**	1	0	301	315.31
2880-20030	**20X20**	1	2	301	555.82

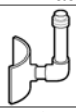
Erosion Pot Riser
Saddle x Riser x Pot



2881-53232	**6X4X8**	1	16	301	67.99
2881-06032	**6X6X10**	1	0	301	81.36
2881-58232	**8X4X8**	1	20	301	67.99
2881-58532	**8X6X10**	1	0	301	81.36
2881-08032	**8X8X12**	1	0	301	115.05
2881-62432	**10X4X8**	1	16	301	67.99
2881-62632	**10X6X10**	1	0	301	81.36
2881-62832	**10X8X12**	1	12	301	115.05
2881-10032	**10X10X15**	1	0	301	158.07
2881-66432	**12X4X8**	1	20	301	67.99
2881-66632	**12X6X10**	1	12	301	81.36
2881-66832	**12X8X12**	1	12	301	115.05
2881-67032	**12X10X15**	1	0	301	158.07
2881-12032	**12X12X18**	1	0	301	209.24
2881-72432	**15X4X8**	1	0	301	67.99
2881-72632	**15X6X10**	1	12	301	81.36
2881-72832	**15X8X12**	1	0	301	115.05
2881-73032	**15X10X15**	1	0	301	158.07
2881-73232	**15X12X18**	1	0	301	209.24
2881-15032	**15X15X20**	1	0	301	308.03
2881-78432	**18X4X8**	1	0	301	67.99
2881-78632	**18X6X10**	1	0	301	81.36
2881-78832	**18X8X12**	1	0	301	115.05
2881-79032	**18X10X15**	1	0	301	158.07
2881-79232	**18X12X18**	1	0	301	209.24
2881-79532	**18X15X20**	1	0	301	308.03
2881-81432	**20X4X8**	1	0	301	67.99
2881-81632	**20X6X10**	1	0	301	81.36
2881-81832	**20X8X12**	1	0	301	115.05
2881-82032	**20X10X15**	1	0	301	158.07
2881-82232	**20X12X18**	1	0	301	209.24
2881-82532	**20X15X20**	1	0	301	308.03

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Mechanical Vent Assembly
Saddle x Riser/Vent



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
2882-420	4X2	1	10	301	67.43
2882-422	4X3	1	0	301	104.24
2882-528	6X2	1	10	301	67.43
2882-530	6X3	1	5	301	104.24
2882-532	6X4	1	5	301	144.79
2882-578	8X2	1	8	301	67.43
2882-580	8X3	1	4	301	104.24
2882-582	8X4	1	8	301	144.79
2882-621	10X2	1	10	301	67.43
2882-623	10X3	1	5	301	104.24
2882-624	10X4	1	3	301	144.79
2882-661	12X2	1	10	301	67.43
2882-663	12X3	1	5	301	104.24
2882-664	12X4	1	4	301	144.79
2882-721	15X2	1	0	301	67.44
2882-723	15X3	1	6	301	104.24
2882-724	15X4	1	4	301	144.79
2882-781	18X2	1	0	301	67.44
2882-783	18X3	1	0	301	104.24
2882-784	18X4	1	4	301	144.79
2882-811	20X2	1	0	301	67.44
2882-813	20X3	1	0	301	104.24
2882-814	20X4	1	0	301	144.79

Mechanical Vent Riser
Saddle x Riser/Vent x Chamber



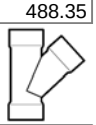
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
2883-52842	6X2X4	1	0	301	78.52
2883-57842	8X2X6	1	0	301	84.66
2883-58042	8X3X6	1	0	301	106.71
2883-62142	10X2X8	1	12	301	103.06
2883-62342	10X3X8	1	8	301	122.65
2883-62442	10X4X8	1	12	301	144.79
2883-66142	12X2X10	1	0	301	132.48
2883-66342	12X3X10	1	16	301	150.88
2883-66442	12X4X10	1	12	301	171.75
2883-72442	15X4X12	1	6	301	223.27
2883-78442	18X4X15	1	0	301	288.31
2883-81442	20X4X18	1	0	301	406.12

Vent Base
Saddle x Riser x Outlet



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
2888-532020	6X4X2	1	2	301	50.94
2888-585030	8X6X3	1	0	301	157.60
2888-585040	8X6X4	1	4	301	79.73
2888-628060	10X8X6	1	0	301	122.65
2888-670060	12X10X6	1	0	301	130.04
2888-732080	15X12X8	1	0	301	195.05
2888-795080	18X15X8	1	0	301	269.94
2888-828080	20X18X8	1	0	301	488.35

Low Head Wye
Soc x Soc



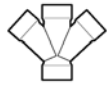
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
2875-060	6	1	2	300	86.11
2875-080	8	1	0	300	113.89
2875-100	10	1	0	300	148.17
2875-120	12	1	0	300	206.43
2875-150	15	1	0	300	319.35
2875-183	18	1	0	300	767.89
2875-200	20	1	0	300	1029.76

Reducing Low Head Wye
Soc x Soc



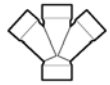
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
2875-532	6X4	1	4	300	67.15
2875-585	8X6	1	0	300	99.34
2875-626	10X6	1	0	300	127.04
2875-628	10X8	1	0	300	134.01
2875-666	12X6	1	0	300	139.62
2875-668	12X8	1	0	300	160.28
2875-670	12X10	1	0	300	171.22
2875-726	15X6	1	0	300	188.21
2875-728	15X8	1	0	300	203.99
2875-730	15X10	1	0	300	223.41
2875-732	15X12	1	0	300	245.28
2875-786	18X6	1	0	300	303.59
2875-788	18X8	1	0	300	308.39
2875-790	18X10	1	0	300	337.00
2875-792	18X12	1	0	300	371.67
2875-795	18X15	1	0	300	406.34
2875-816	20X6	1	0	300	379.47
2875-818	20X8	1	0	300	385.47
2875-820	20X10	1	0	300	421.24
2875-822	20X12	1	0	300	464.58
2875-825	20X15	1	0	300	507.94
2875-828	20X18	1	0	300	893.68

Double Wye
Soc x Soc



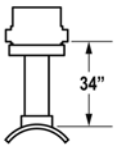
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
2876-060	6	1	0	300	135.23
2876-080	8	1	0	300	154.05
2876-100	10	1	0	300	257.96
2876-120	12	1	0	300	308.09
2876-150	15	1	0	300	476.64
2876-183	18	1	0	300	1292.38
2876-200	20	1	0	300	1837.24

Reducing Double Wye
Soc x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
2876-585	8X6	1	0	300	108.76
2876-626	10X6	1	0	300	154.05
2876-628	10X8	1	0	300	170.38
2876-666	12X6	1	0	300	208.39
2876-668	12X8	1	0	300	239.23
2876-670	12X10	1	0	300	286.01
2876-726	15X6	1	0	300	280.91
2876-728	15X8	1	0	300	304.45
2876-730	15X10	1	0	300	333.47
2876-732	15X12	1	0	300	452.14
2876-786	18X6	1	0	300	453.14
2876-788	18X8	1	0	300	460.28
2876-790	18X10	1	0	300	502.98
2876-792	18X12	1	0	300	554.74
2876-795	18X15	1	0	300	606.48
2876-816	20X6	1	0	300	625.86
2876-818	20X8	1	0	300	642.18
2876-820	20X10	1	0	300	657.37
2876-822	20X12	1	0	300	693.40
2876-825	20X15	1	0	300	758.11
2876-828	20X18	1	0	300	1402.01

Size	Disc Code	Part Number List Price Each	
DISTRIBUTING GATE RISER (Saddle x Riser x Pot)			
GATES NOT INCLUDED IN PRICE (See CHART #1 on Next Page)			
6x4x8	301	2884-53234 103.08	_ _ _
8x4x8	301	2884-58234 103.08	_ _ _
8x6x10	301	2884-58534 132.48	_ _ _
10x4x8	301	2884-62434 103.08	_ _ _
10x6x10	301	2884-62634 132.48	_ _ _
10x8x12	301	2884-62834 196.32	_ _ _
12x4x8	301	2884-66434 103.08	_ _ _
12x6x10	301	2884-66634 132.48	_ _ _
12x8x12	301	2884-66834 196.32	_ _ _
12x10x15	301	2884-67034 280.36	_ _ _
15x4x8	301	2884-72334 103.08	_ _ _
15x6x10	301	2884-72634 132.48	_ _ _
15x8x12	301	2884-72834 196.32	_ _ _
15x10x15	301	2884-73034 281.00	_ _ _
15x12x18	301	2884-73234 510.40	_ _ _
18x4x8	301	2884-78434 103.08	_ _ _
18x6x10	301	2884-78634 132.48	_ _ _
18x8x12	301	2884-78834 196.32	_ _ _
18x10x15	301	2884-79034 280.36	_ _ _
18x12x18	301	2884-79234 510.40	_ _ _
20x4x8	301	2884-81434 103.08	_ _ _
20x6x10	301	2884-81634 132.48	_ _ _
20x8x12	301	2884-81834 196.34	_ _ _
20x10x15	301	2884-82034 280.36	_ _ _
20x12x18	301	2884-82234 510.40	_ _ _



HOW TO ORDER A DISTRIBUTING GATE RISER

Choose the Distributing Gate Riser size required:
Example: 6 x 4 x 8
(6" Saddle x 4" Riser x 8" Pot)
Part Number 2884-53234 _ _ _

Next, choose the Gate size required from CHART #1:
Example: 2-1/2" Gates
(Code Number "2")

Next, add this Code Number to the end of the Part Number:
Example: 2884-53234 2 _ _

Next, choose the position required for the gates from CHART #2:
Example: Standard 2-Way Gates
(Code Number "05")

Next, add this Code Number to the very end of the Part Number:
Example: 2884-532342 0 5

The Part Number is now complete for a
6" Saddle x 4" Riser x 8" Pot
with 2-1/2" Standard 2-Way Gates –

2884–53234205

HOW TO CALCULATE A DISTRIBUTING GATE RISER TOTAL LIST PRICE EACH WITH GATES INSTALLED

Find the base unit List Price Each at left:
Example: $103.08

Next, find the List Price Each for the size of Gate required from CHART #1:
Example: 2-1/2" Gate – $15.92 each

Next, multiply the Gate price by the number of Gates required:
Example: $15.92 x 2 = $31.84

Next, add this amount to the base unit price, for the Total List Price Each:
Example: $103.08 + $31.84 = $134.92

The Total List Price Each for a
6" Saddle x 4" Riser x 8" Pot with 2-1/2"
Standard 2-Way Gates installed is

$134.92

CHART #1

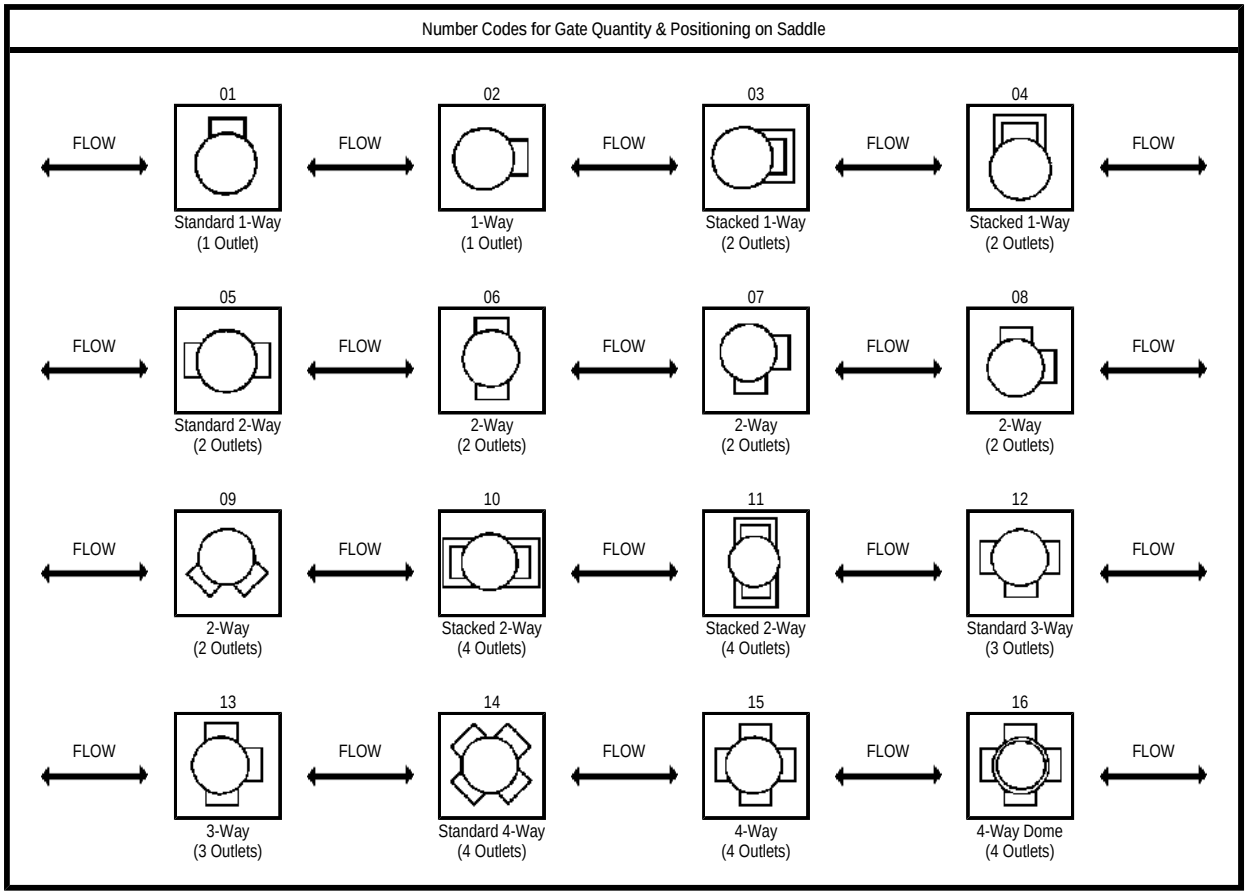
Gate/Hole Size	Distributing Gate Size Code	Disc Code	List Price Each Installed
2" Gate	1	301	13.49
2- 1/2" Gate	2	301	15.92
3" Gate	3	301	18.38
4" Gate	4	301	26.98
2" Hole*	5	301	—
2- 1/2" Hole*	6	301	—
3" Hole*	7	301	—
4" Hole*	8	301	—

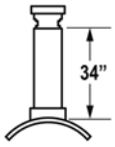
* Hole Size Codes MUST be chosen ONLY when ordering with NO GATES INSTALLED.

Number code for Gate Hole positioning must also be chosen from CHART #2 below.

CHART #2

Number Codes for Gate Quantity & Positioning on Saddle



Part Number Size		Disc Code	List Price Each			
RITE FLO RISER (Saddle x Riser)						
GATES NOT INCLUDED IN PRICE (See CHART #3 on Next Page)			1 Outlet	2 Outlets	3 Outlets	4 Outlets
	2885-58534 _ _ _ 8x6	301	124.62	128.53	131.15	133.41
	2885-62634 _ _ _ 10x6	301	124.62	128.53	131.15	133.41
	2885-66634 _ _ _ 12x6	301	124.62	128.53	131.15	133.41
	2885-72634 _ _ _ 15x6	301	124.62	128.53	131.15	133.41
	2885-78634 _ _ _ 18x6	301	124.62	128.53	131.15	133.41
	2885-81634 _ _ _ 20x6	301	124.62	128.53	131.15	133.41

HOW TO ORDER A RITE FLO RISER

Choose the Rite Flo Riser size required:
Example: 8 x 6 Riser
(8" Saddle x 6" Riser)
Part Number 2885-58534 _ _ _

Next, choose the Gate size required from CHART #3:
Example: 3" Gates
(Code Number "3")

Next, add this Code Number to the end of the Part Number:
Example: 2885-58534 3 _ _

Next, choose the position required for the gates from CHART #4:
Example: Standard 2-Way (2 Outlets)
(Code Number "05")

Next, add this Code Number to the very end of the Part Number:
Example: 2885-585343 0 5

The Part Number is now complete for an 8" Saddle x 6" Standard 2-Way Riser with 3" Gates –

2885–58534305

HOW TO CALCULATE A RITE FLO RISER TOTAL LIST PRICE EACH WITH GATES INSTALLED

Find the base unit List Price Each at left:
Example: $133.41

Next, find the List Price Each for the 3" Gate required from CHART #3:
Example: 3" Gate – $47.20 each

Next, multiply the Gate price by the number of Gates required:
Example: $47.20 x 4 = $188.80

Next, add this amount to the base unit price, for the Total List Price Each:
Example: $133.41 + $188.80 = $322.21

The Total List Price Each for a 8" Saddle x 6" 4-Way Dome Riser with 3" Gates installed is

$322.21

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CHART #3

Gate/Hole Size	Gate Size Code	Disc Code	Rite Flo List Price Each Installed
3" Gate	3	301	47.20
2" Hole*	5	301	—
3" Hole*	7	301	—

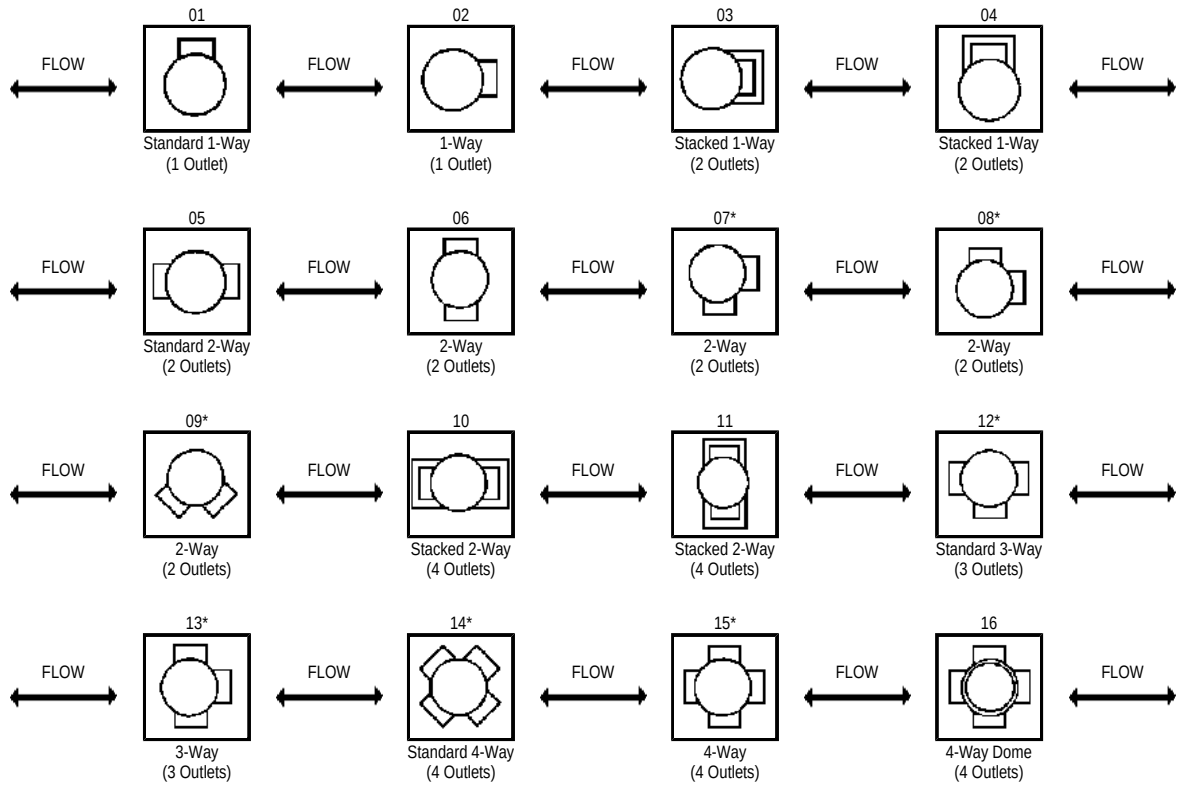
* Hole Size Codes MUST be chosen ONLY when ordering with NO GATES INSTALLED.

Number code for Gate Hole positioning must also be chosen from CHART #4 below.

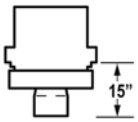
NOTE: 3" Rite Flo Gates can be installed on 6" Risers ONLY.

CHART #4

Number Codes for Gate Quantity & Positioning on Saddle



*Staggered gates are provided for Rite Flo Risers to allow adequate room for gates to operate properly.

	Size	Disc Code	Part Number List Price Each
DISTRIBUTING GATE REPAIR UNIT (Riser x Pot)			
GATES NOT INCLUDED IN PRICE (See CHART #5 on Next Page)			
	4x8	301	28840-42715 _ _ _ 85.89
	6x10	301	28840-53715 _ _ _ 115.33
	8x12	301	28840-59115 _ _ _ 165.61
	10x15	301	28840-63515 _ _ _ 218.92
	12x18	301	28840-67815 _ _ _ 413.51

HOW TO ORDER DISTRIBUTING GATE AND RITE FLO RISER REPAIR UNITS

Choose the Repair Unit size required:
Example: 4 x 8 Distributing Gate Repair Unit
(4" Riser x 8" Pot)
Part Number 28840-42715 _ _ _

Next, choose the Gate size required from CHART #5:
Example: 2" Gate
(Code Number "1")

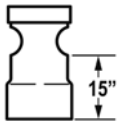
Next, add this Code Number to the end of the Part Number:
Example: 28840-42715 1 _ _

Next, choose the position required for the gates from CHART #6:
Example: 4-Way
(Code Number "14")

Next, add this Code Number to the very end of the Part Number:
Example: 28840-427151 1 4

The Part Number is now complete for a
4" Riser x 8" Pot Distributing Gate Riser Repair Unit with 2" 4-Way Gates –

28840–42715114

	Part Number Size	Disc Code	List Price Each			
RITE FLO RISER REPAIR UNIT						
GATES NOT INCLUDED IN PRICE (See CHART #5 on Next Page)			1 Outlet	2 Outlets	3 Outlets	4 Outlets
	28850-06015 6" _ _ _	301	62.95	68.18	73.39	78.67

HOW TO CALCULATE DISTRIBUTING GATE AND RITE FLO RISER REPAIR UNITS TOTAL LIST PRICE EACH WITH GATES INSTALLED

Find the base unit List Price Each above:
Example: $85.89

Next, find the List Price Each for the size of Gate required from CHART #5:
Example: 2" Gate – $13.50 each

Next, multiply the Gate price by the number of Gates required:
Example: $13.50 x 4 = $54.00

Next, add this amount to the base unit price, for the Total List Price Each:
Example: $85.89 + $54.00 = $139.89

The Total List Price Each for a
4" Riser x 8" Pot Distributing Gate Riser Repair Unit
with 2" 4-Way Gates installed is

$139.89

CHART #5

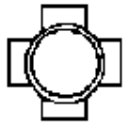
Gate/Hole Size	Gate Size Code	Disc Code	Distributing Gate List Price Each Installed	Rite Flo Gate List Price Each Installed
2" Gate	1	301	13.49	—
2- 1/2" Gate	2	301	15.92	—
3" Gate	3	301	18.38	47.20
4" Gate	4	301	26.98	—
2" Hole*	5	301	—	—
2- 1/2" Hole*	6	301	—	—
3" Hole*	7	301	—	—
4" Hole*	8	301	—	—

* Hole Size Codes MUST be chosen ONLY when ordering with NO GATES INSTALLED.

Number code for Gate Hole positioning must also be chosen from CHART #6 below.

NOTE: 3" Rite Flo Gates can be installed on 6" Risers ONLY.

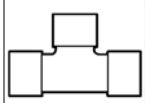
CHART #6

Repair Unit Number Codes for Gate Quantity & Positioning			
02  1-Way (1 Outlet)	04  Stacked 1-Way (2 Outlets)	06  2-Way (2 Outlets)	08*  2-Way (2 Outlets)
10  Stacked 2-Way (4 Outlets)	12*  3-Way (3 Outlets)	14*  4-Way (4 Outlets)	16  4-Way Dome (4 Outlets)

*Staggered gates are provided for Rite Flo Riser Repair Units
to allow adequate room for gate to operate properly.

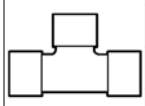
All Low Head PIP Fabricated Fittings showing size outlets of 4" and under are IPS size on that outlet

Tee (Socket)



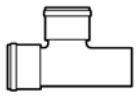
Size	80 PSI Disc Code: 310 Part Number / Price Each	100 PSI Disc Code: 320 Part Number / Price Each	125 PSI Disc Code: 330 Part Number / Price Each
6	290-102502 **89.55**	300-102502 **107.15**	3301-060P **107.73**
6X2	290-102499 **62.58**	300-102499 **72.39**	3301-528P **81.24**
6X3	290-102500 **67.43**	300-102500 **77.27**	3301-530P **87.42**
6X4	290-102501 **69.93**	300-102501 **80.94**	3301-532P **90.69**
8	290-102507 **154.43**	300-102507 **158.24**	3301-080P **215.97**
8X2	290-102503 **77.27**	300-102503 **89.55**	3301-578P **122.51**
8X3	290-102504 **85.85**	300-102504 **96.87**	3301-580P **133.51**
8X4	290-102505 **96.87**	300-102505 **105.54**	3301-582P **144.42**
8X6	290-102506 **115.28**	300-102506 **130.04**	3301-585P **178.94**
10	290-102513 **223.27**	300-102513 **254.00**	3301-100P **322.38**
10X2	290-102508 **112.85**	300-102508 **123.91**	3301-621P **170.32**
10X3	290-102509 **123.91**	300-102509 **158.24**	3301-623P **216.73**
10X4	290-102510 **143.55**	300-102510 **161.93**	3301-624P **223.28**
10X6	290-102511 **158.24**	300-102511 **165.62**	3301-626P **244.97**
10X8	290-102512 **182.82**	300-102512 **220.85**	3301-628P **303.81**
12	290-102520 **316.54**	300-102520 **404.84**	3301-120P **506.86**
12X2	290-102514 **149.65**	300-102514 **179.06**	3301-661P **266.96**
12X3	290-102515 **176.69**	300-102515 **214.68**	3301-663P **295.07**
12X4	290-102516 **199.97**	300-102516 **238.01**	3301-664P **325.83**
12X6	290-102517 **210.99**	300-102517 **258.84**	3301-666P **356.63**
12X8	290-102518 **249.05**	300-102518 **305.48**	3301-668P **422.18**
12X10	290-102519 **287.08**	300-102519 **352.11**	3301-670P **468.41**
15	290-102528 **592.58**	300-102528 **696.89**	3301-150P **905.48**
15X2	290-102521 **276.06**	300-102521 **322.65**	3301-721P **404.84**
15X3	290-102522 **290.78**	300-102522 **339.85**	3301-723P **430.69**
15X4	290-102523 **299.36**	300-102523 **354.58**	3301-724P **445.36**
15X6	290-102524 **325.09**	300-102524 **390.14**	3301-726P **504.26**
15X8	290-102525 **375.41**	300-102525 **436.78**	3301-728P **580.36**
15X10	290-102526 **425.73**	300-102526 **516.55**	3301-730P **656.39**
15X12	290-102527 **487.04**	300-102527 **580.36**	3301-732P **757.67**
18	290-102537 **917.74**	300-102537 **1069.86**	3301-180P **1523.89**
18X2	290-102529 **479.53**	300-102529 **523.85**	3301-781P **639.23**
18X3	290-102530 **494.45**	300-102530 **537.36**	3301-783P **715.27**
18X4	290-102531 **547.19**	300-102531 **591.39**	3301-784P **761.92**
18X6	290-102532 **563.14**	300-102532 **612.22**	3301-786P **780.33**
18X8	290-102533 **586.47**	300-102533 **637.99**	3301-788P **871.11**
18X10	290-102534 **619.59**	300-102534 **685.85**	3301-790P **952.08**

Tee (Socket) (continued)



Size	80 PSI Disc Code: 310 Part Number / Price Each	100 PSI Disc Code: 320 Part Number / Price Each	125 PSI Disc Code: 330 Part Number / Price Each
18X12	290-102535 **685.85**	300-102535 **814.69**	3301-792P **1069.86**
18X15	290-102536 **795.05**	300-102536 **985.22**	3301-795P **1245.38**
21	290-102558 **1693.18**	300-102558 **1992.56**	3301-210P **2271.07**
21X2	290-102548 **695.20**	300-102548 **873.56**	3301-841P **993.81**
21X3	290-102549 **712.15**	300-102549 **879.68**	3301-843P **1011.02**
21X4	290-102550 **736.14**	300-102550 **889.52**	3301-844P **1055.17**
21X6	290-102551 **780.33**	300-102551 **1078.45**	3301-846P **1209.78**
21X8	290-102552 **833.06**	300-102552 **1110.36**	3301-848P **1260.05**
21X10	290-102553 **888.27**	300-102553 **1152.07**	3301-850P **1318.97**
21X12	290-102554 **972.97**	300-102554 **1163.14**	3301-852P **1640.42**
21X15	290-102555 **1072.34**	300-102555 **1333.66**	3301-855P **1874.77**
21X18	290-102556 **1251.44**	300-102556 **1523.89**	3301-858P **2138.60**
24	290-102570 **2311.60**	300-102570 **2666.15**	3301-240P **2725.08**
24X2	290-102559 **917.74**	300-102559 **1084.60**	3301-901P **1171.69**
24X3	290-102560 **976.61**	300-102560 **1143.51**	3301-903P **1230.60**
24X4	290-102561 **1031.86**	300-102561 **1230.60**	3301-904P **1318.97**
24X6	290-102562 **1087.08**	300-102562 **1318.97**	3301-906P **1406.08**
24X8	290-102563 **1158.23**	300-102563 **1406.08**	3301-908P **1523.89**
24X10	290-102564 **1192.57**	300-102564 **1523.89**	3301-910P **1640.42**
24X12	290-102565 **1289.53**	300-102565 **1640.42**	3301-912P **1758.20**
24X15	290-102566 **1415.85**	300-102566 **1787.67**	3301-915P **1933.69**
24X18	290-102567 **1612.21**	300-102567 **2022.00**	3301-918P **2197.47**
24X21	290-102569 **1813.39**	300-102569 **2166.74**	3301-921P **2607.26**
27	2901-270 **3501.91**	3001-270 **4148.83**	3301-270P **5133.46**
27X4	2901-934 **1248.57**	3001-934 **1567.65**	3301-934P **1958.03**
27X6	2901-936 **1317.42**	3001-936 **1687.79**	3301-936P **2109.55**
27X8	2901-938 **1402.36**	3001-938 **1806.63**	3301-938P **2259.69**
27X10	2901-940 **1420.94**	3001-940 **1931.77**	3301-940P **2416.06**
27X12	2901-942 **1561.67**	3001-942 **2087.01**	3301-942P **2608.71**
27X15	2901-945 **1714.12**	3001-945 **2297.20**	3301-945P **2872.63**
27X18	2901-948 **1952.92**	3001-948 **2604.86**	3301-948P **3255.45**
27X21	2901-951 **2197.16**	3001-951 **2771.29**	3301-951P **3463.31**
27X24	2901-954 **2801.35**	3001-954 **3421.93**	3301-954P **4276.42**

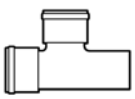
Tee (Gasket x Spigot x Gasket)



Size	100 PSI Disc Code: 320 Part Number / Price Each	125 PSI Disc Code: 330 Part Number / Price Each
6	290-103062 **184.02**	300-103062 **190.15**	3301-060232P **202.88**
6X4	290-103061 **159.47**	300-103061 **177.89**	3301-532232P **191.69**
8	290-103067 **233.13**	300-103067 **254.00**	3301-080232P **305.08**

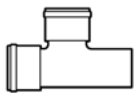
NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Tee (Gasket x Spigot x Gasket) (continued)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
8X4	290-103065 **196.32**	300-103065 **215.91**	3301-582232P **229.00**
8X6	290-103066 **220.85**	300-103066 **228.21**	3301-585232P **267.02**
10	290-103073 **348.45**	300-103073 **386.49**	3301-100232P **457.88**
10X4	290-103070 **304.27**	300-103070 **316.54**	3301-624232P **331.04**
10X6	290-103071 **310.38**	300-103071 **330.02**	3301-626232P **368.09**
10X8	290-103072 **342.29**	300-103072 **354.58**	3301-628232P **400.12**
12	290-103080 **480.94**	300-103080 **525.13**	3301-120232P **634.93**
12X4	290-103076 **354.58**	300-103076 **398.72**	3301-664232P **444.23**
12X6	290-103077 **364.38**	300-103077 **412.21**	3301-666232P **476.63**
12X8	290-103078 **422.05**	300-103078 **424.52**	3301-668232P **508.14**
12X10	290-103079 **434.34**	300-103079 **468.66**	3301-670232P **571.55**
15	290-103088 **768.05**	300-103088 **949.65**	3301-150232P **1138.56**
15X4	290-103083 **569.29**	300-103083 **601.16**	3301-724232P **791.36**
15X6	290-103084 **576.38**	300-103084 **696.89**	3301-726232P **841.64**
15X8	290-103085 **607.31**	300-103085 **709.17**	3301-728232P **873.56**
15X10	290-103086 **653.92**	300-103086 **727.59**	3301-730232P **917.74**
15X12	290-103087 **696.89**	300-103087 **791.36**	3301-732232P **976.27**
18	290-103097 **1224.46**	300-103097 **1423.23**	3301-180232P **1834.27**
18X4	290-103091 **738.60**	300-103091 **823.26**	3301-784232P **1012.20**
18X6	290-103092 **791.36**	300-103092 **885.82**	3301-786232P **1107.92**
18X8	290-103093 **808.55**	300-103093 **999.97**	3301-788232P **1202.40**
18X10	290-103094 **899.35**	300-103094 **1044.12**	3301-790232P **1296.87**
18X12	290-103095 **975.40**	300-103095 **1107.92**	3301-792232P **1360.71**
18X15	290-103096 **1019.57**	300-103096 **1170.48**	3301-795232P **1455.14**
21	2901-210232 **1927.53**	3001-210232 **2371.74**	3301-210232P **2896.81**
21X4	290-103110 **1145.98**	300-103110 **1392.60**	3301-844232P **1676.01**
21X6	290-103111 **1158.23**	300-103111 **1423.23**	3301-846232P **1707.89**
21X8	290-103112 **1219.57**	300-103112 **1499.33**	3301-848232P **1790.09**
21X10	290-103113 **1257.60**	300-103113 **1518.94**	3301-850232P **1847.74**
21X12	290-103114 **1380.34**	300-103114 **1613.43**	3301-852232P **2024.46**
21X15	290-103115 **1494.43**	300-103115 **1676.01**	3301-855232P **2182.71**
21X18	290-103116 **1690.73**	300-103116 **2024.46**	3301-858232P **2467.40**
24	2901-240232 **4322.97**	3001-240232 **4579.35**	3301-240232P **6243.22**
24X6	2901-906232 **3074.15**	3001-906232 **3483.32**	3301-906232P **4354.19**
24X8	2901-908232 **3235.31**	3001-908232 **3612.11**	3301-908232P **4579.20**
24X10	2901-910232 **3400.77**	3001-910232 **3677.29**	3301-910232P **4879.46**
24X12	2901-912232 **3584.27**	3001-912232 **3773.58**	3301-912232P **5095.95**

Tee (Gasket x Spigot x Gasket) (continued)



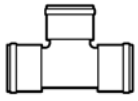
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
24X15	2901-915232 **3772.13**	3001-915232 **3935.01**	3301-915232P **5353.69**
24X18	2901-918232 **3967.42**	3001-918232 **4127.62**	3301-918232P **5611.53**
24X21	2901-921232 **4177.64**	3001-921232 **4386.61**	3301-921232P **5934.20**
27	2901-270232 **6503.11**	3001-270232 **7255.56**	3301-270232P **9191.09**
27X6	2901-936232 **3842.27**	3001-936232 **4354.06**	3301-936232P **5482.61**
27X8	2901-938232 **4043.65**	3001-938232 **4579.28**	3301-938232P **5740.28**
27X10	2901-940232 **4251.53**	3001-940232 **4837.07**	3301-940232P **5998.07**
27X12	2901-942232 **4481.67**	3001-942232 **5095.99**	3301-942232P **6288.28**
27X15	2901-945232 **4716.81**	3001-945232 **5353.69**	3301-945232P **6514.74**
27X18	2901-948232 **4960.88**	3001-948232 **5643.92**	3301-948232P **7030.25**
27X21	2901-951232 **5222.40**	3001-951232 **5934.33**	3301-951232P **7416.87**
27X24	2901-954232 **5497.60**	3001-954232 **6192.08**	3301-954232P **7836.11**

Tee (Gasketed)



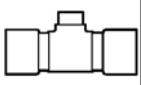
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-103174 **184.02**	300-103174 **190.15**	3301-0602P **202.88**
6X4	290-103173 **159.47**	300-103173 **177.89**	3301-5322P **191.69**
8	290-103179 **233.13**	300-103179 **254.00**	3301-0802P **305.08**
8X4	290-103177 **196.32**	300-103177 **215.91**	3301-5822P **229.00**
8X6	290-103178 **220.85**	300-103178 **228.21**	3301-5852P **267.02**
10	290-103185 **348.45**	300-103185 **386.49**	3301-1002P **457.88**
10X4	290-103182 **304.27**	300-103182 **316.54**	3301-6242P **331.04**
10X6	290-103183 **310.38**	300-103183 **330.02**	3301-6262P **368.09**
10X8	290-103184 **342.29**	300-103184 **354.58**	3301-6282P **400.12**
12	290-103192 **480.94**	300-103192 **525.13**	3301-1202P **634.93**
12X4	290-103188 **354.58**	300-103188 **398.72**	3301-6642P **444.23**
12X6	290-103189 **364.38**	300-103189 **412.21**	3301-6662P **476.62**
12X8	290-103190 **422.05**	300-103190 **424.52**	3301-6682P **508.14**
12X10	290-103191 **434.34**	300-103191 **468.66**	3301-6702P **571.55**
15	290-103200 **768.05**	300-103200 **949.65**	3301-1502P **1138.56**
15X4	290-103195 **569.29**	300-103195 **601.16**	3301-7242P **791.36**
15X6	290-103196 **576.38**	300-103196 **696.89**	3301-7262P **841.64**
15X8	290-103197 **607.31**	300-103197 **709.17**	3301-7282P **873.56**
15X10	290-103198 **653.92**	300-103198 **727.59**	3301-7302P **917.74**
15X12	290-103199 **696.89**	300-103199 **791.36**	3301-7322P **980.33**
18	290-103209 **1224.46**	300-103209 **1423.23**	3301-1802P **1834.27**
18X4	290-103203 **738.60**	300-103203 **823.26**	3301-7842P **1012.20**
18X6	290-103204 **791.36**	300-103204 **885.82**	3301-7862P **1107.92**
18X8	290-103205 **808.55**	300-103205 **999.97**	3301-7882P **1202.40**

Tee (Gasketed) (continued)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
18X10	290-103206 **899.35**	300-103206 **1044.12**	3301-7902P **1296.87**
18X12	290-103207 **975.40**	300-103207 **1107.92**	3301-7922P **1360.71**
18X15	290-103208 **1019.57**	300-103208 **1170.48**	3301-7952P **1455.14**
21	290-103230 **1927.53**	300-103230 **2371.74**	3301-2102P **2896.81**
21X4	290-103222 **1145.98**	300-103222 **1392.60**	3301-8442P **1676.01**
21X6	290-103223 **1158.23**	300-103223 **1423.23**	3301-8462P **1707.89**
21X8	290-103224 **1219.57**	300-103224 **1499.33**	3301-8482P **1790.09**
21X10	290-103225 **1257.60**	300-103225 **1518.94**	3301-8502P **1847.74**
21X12	290-103226 **1380.34**	300-103226 **1613.43**	3301-8522P **2024.46**
21X15	290-103227 **1494.43**	300-103227 **1676.01**	3301-8552P **2182.71**
21X18	290-103228 **1690.73**	300-103228 **2024.46**	3301-8582P **2467.40**
24	2901-2402 **4322.97**	3001-2402 **4579.35**	3301-2402P **6243.22**
24X6	2901-9062 **3074.15**	3001-9062 **3483.32**	3301-9062P **4354.19**
24X8	2901-9082 **3235.31**	3001-9082 **3612.11**	3301-9082P **4579.20**
24X10	2901-9102 **3400.77**	3001-9102 **3677.29**	3301-9102P **4879.46**
24X12	2901-9122 **3584.27**	3001-9122 **3773.58**	3301-9122P **5095.95**
24X15	2901-9152 **3772.13**	3001-9152 **3935.01**	3301-9152P **5353.69**
24X18	2901-9182 **3967.42**	3001-9182 **4127.62**	3301-9182P **5611.53**
24X21	2901-9212 **4177.64**	3001-9212 **4386.61**	3301-9212P **5934.20**
27	2901-2702 **6503.11**	3001-2702 **7255.56**	3301-2702P **9191.09**
27X6	2901-9362 **3842.27**	3001-9362 **4354.06**	3301-9362P **5482.61**
27X8	2901-9382 **4043.65**	3001-9382 **4579.28**	3301-9382P **5740.28**
27X10	2901-9402 **4251.53**	3001-9402 **4837.07**	3301-9402P **5998.07**
27X12	2901-9422 **4481.67**	3001-9422 **5095.99**	3301-9422P **6288.28**
27X15	2901-9452 **4716.81**	3001-9452 **5353.69**	3301-9452P **6514.74**
27X18	2901-9482 **4960.88**	3001-9482 **5643.92**	3301-9482P **7030.25**
27X21	2901-9512 **5222.40**	3001-9512 **5934.33**	3301-9512P **7416.87**
27X24	2901-9542 **5497.60**	3001-9542 **6192.08**	3301-9542P **7836.11**

Reinforced Tee (Soc x Soc x Fipt)



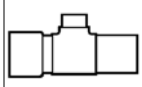
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6X2	---	300-202152 **75.27**	3302-528P **114.54**
6X3	---	300-202154 **82.16**	3302-530P **131.24**
6X4	---	300-202155 **92.00**	3302-532P **134.95**
8X2	---	300-202157 **114.09**	3302-578P **185.38**
8X3	---	300-202159 **120.20**	3302-580P **197.95**
8X4	---	300-202160 **130.04**	3302-582P **167.85**
10X2	---	300-202162 **155.83**	3302-621P **209.27**
10X3	---	300-202164 **191.37**	3302-623P **259.22**

Reinforced Tee (Soc x Soc x Fipt) (continued)



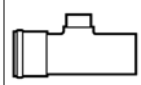
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
10X4	---	300-202165 **204.89**	3302-624P **255.07**
12X2	---	300-202167 **238.01**	3302-661P **257.58**
12X3	---	300-202169 **263.75**	3302-663P **283.15**
12X4	---	300-202170 **301.80**	3302-664P **331.39**
15X2	---	300-202172 **392.28**	3302-721P **453.93**
15X3	---	300-202174 **417.29**	3302-723P **478.49**
15X4	---	300-202175 **447.51**	3302-724P **490.80**

Reinforced Tee (Soc x Spig x Fipt)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6X2	---	300-202222 **62.58**	---
6X3	---	300-202224 **73.61**	---
6X4	---	300-202225 **85.85**	---
8X2	---	300-202227 **100.59**	---
8X3	---	300-202229 **110.41**	---
8X4	---	300-202230 **120.20**	---
10X2	---	300-202232 **149.61**	---
10X3	---	300-202234 **182.82**	---
10X4	---	300-202235 **193.84**	---
12X2	---	300-202237 **223.27**	---
12X3	---	300-202239 **255.17**	---
12X4	---	300-202240 **290.78**	---
15X2	---	300-202242 **390.14**	3302-72113P **441.69**
15X3	---	300-202244 **413.46**	3302-72313P **472.38**
15X4	---	300-202245 **440.43**	3302-72413P **484.61**

Reinforced Tee (Gasket x Spig x Fipt)

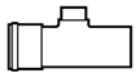


Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6X2	---	300-202362 **107.94**	---
6X3	---	300-202364 **139.85**	---
6X4	---	300-202365 **146.01**	---
8X2	---	300-202367 **152.13**	---
8X3	---	300-202369 **177.89**	---
8X4	---	300-202370 **196.32**	---
10X2	---	300-202372 **228.21**	---
10X3	---	300-202374 **240.45**	---
10X4	---	300-202375 **250.25**	---
12X2	---	300-202377 **316.54**	---
12X3	---	300-202379 **342.29**	---
12X4	---	300-202380 **354.58**	---
15X2	---	300-202382 **442.92**	3302-72123P **539.55**
15X3	---	300-202384 **468.66**	3302-72323P **578.24**

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	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each

Reinforced Tee (Gasket x Spig x Fipt) (continued)



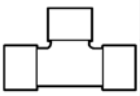
Size	80 PSI	100 PSI	125 PSI
15X4	---	300-202385 **506.71**	3302-72423P **630.48**

Reinforced Tee (Gasket x Fipt)



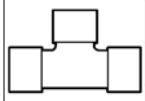
Size	80 PSI	100 PSI	125 PSI
6X2	---	300-202432 **114.09**	---
6X3	---	300-202434 **139.85**	---
6X4	---	300-202435 **152.13**	---
8X2	---	300-202437 **171.75**	---
8X3	---	300-202439 **187.72**	---
8X4	---	300-202440 **202.42**	---
10X2	---	300-202442 **247.80**	---
10X3	---	300-202444 **272.35**	---
10X4	---	300-202445 **291.97**	---
12X2	---	300-202447 **348.45**	---
12X3	---	300-202449 **366.82**	---
12X4	---	300-202450 **392.63**	---
15X2	---	300-202452 **506.71**	3302-7212P **619.11**
15X3	---	300-202454 **525.13**	3302-7232P **672.68**
15X4	---	300-202455 **550.91**	3302-7242P **707.42**

PIP X IPS Tee (Socket)



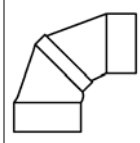
Size	80 PIP	100 PIP	125 PIP
6	2901-060PXI **84.18**	3001-060PXI **107.15**	3301-060PXI **107.73**
8	2901-080PXI **154.43**	3001-080PXI **215.28**	3301-080PXI **215.97**
8X6	2901-585PXI **108.37**	3001-585PXI **130.04**	3301-585PXI **168.20**
10	2901-100PXI **209.87**	3001-100PXI **254.00**	3301-100PXI **322.38**
10X6	2901-626PXI **148.75**	300-102821 **165.62**	3301-626PXI **230.27**
10X8	2901-628PXI **171.85**	3001-628PXI **339.99**	3301-628PXI **285.58**
12	2901-120PXI **316.54**	3001-120PXI **404.84**	3301-120PXI **476.45**
12X6	2901-666PXI **251.54**	300-102599 **258.84**	3301-666PXI **335.23**
12X8	2901-668PXI **234.11**	300-102607 **305.48**	3301-668PXI **396.85**
12X10	2901-670PXI **287.08**	3001-670PXI **352.11**	3301-670PXI **440.31**
15X6	2901-726PXI **305.59**	300-102708 **390.14**	3301-726PXI **474.01**
15X8	2901-728PXI **352.88**	300-102709 **492.14**	3301-728PXI **545.54**
15X10	2901-730PXI **400.18**	3001-730PXI **516.55**	3301-730PXI **617.01**
15X12	2901-732PXI **457.82**	300-102817 **580.36**	3301-732PXI **712.21**
18X6	2901-786PXI **529.35**	3001-786PXI **612.22**	3301-786PXI **733.51**
18X8	2901-788PXI **551.28**	3001-788PXI **637.99**	3301-788PXI **818.84**
18X10	2901-790PXI **619.59**	3001-790PXI **685.85**	3301-790PXI **894.96**

PIP X IPS Tee (Socket) (continued)



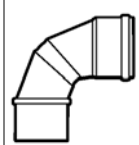
Size	80 PIP	100 PIP	125 PIP
18X12	2901-792PXI **685.85**	3001-792PXI **814.69**	3301-792PXI **1005.67**
21X6	2901-846PXI **780.33**	3001-846PXI **1078.08**	3301-846PXI **1137.19**
21X8	2901-848PXI **783.08**	3001-848PXI **1110.36**	3301-848PXI **1184.45**
21X10	2901-850PXI **888.27**	3001-850PXI **1152.07**	3301-850PXI **1239.83**
21X12	2901-852PXI **914.59**	3001-852PXI **1163.14**	3301-852PXI **1542.00**
24X6	2901-906PXI **1087.08**	3001-906PXI **1318.97**	3301-906PXI **1321.72**
24X8	2901-908PXI **1158.23**	3001-908PXI **1406.08**	3301-908PXI **1432.46**
24X10	2901-910PXI **1192.57**	3001-910PXI **1523.89**	3301-910PXI **1542.00**
24X12	2901-912PXI **1212.16**	3001-912PXI **1640.42**	3301-912PXI **1652.71**

90° Elbow (Socket)



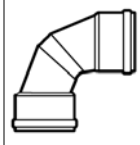
Size			
6	290-100812 **121.46**	300-100812 **142.33**	3306-060P **176.45**
8	290-100813 **164.40**	300-100813 **224.55**	3306-080P **256.04**
10	290-100814 **269.93**	300-100814 **316.54**	3306-100P **353.34**
12	290-100815 **347.17**	300-100815 **444.11**	3306-120P **459.67**
15	290-100816 **579.12**	300-100816 **688.32**	3306-150P **787.68**
18	290-100817 **871.11**	300-100817 **1025.67**	3306-180P **1348.39**
21	290-100819 **1363.12**	300-100819 **1652.67**	3306-210P **2030.60**
24	290-100820 **3046.54**	300-100820 **3633.02**	3306-240P **3826.83**
27	2906-270 **3245.43**	3006-270 **3853.56**	3306-270P **4260.29**

90° Elbow (Gasket x Spigot)



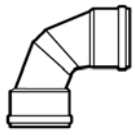
Size			
6	290-100878 **147.18**	300-100878 **159.47**	3306-06023P **234.72**
8	290-100879 **233.13**	300-100879 **255.17**	3306-08023P **304.95**
10	290-100880 **347.17**	300-100880 **393.81**	3306-10023P **471.04**
12	290-100881 **472.38**	300-100881 **559.47**	3306-12023P **677.71**
15	290-100882 **905.48**	300-100882 **1143.51**	3306-15023P **1289.53**
18	290-100883 **1518.94**	300-100883 **1758.20**	3306-18023P **1787.67**
21	290-100885 **2201.15**	300-100885 **2639.19**	3306-21023P **3187.65**
24	2906-24023 **3513.18**	3006-24023 **3992.52**	3306-24023P **4992.22**
27	2906-27023 **4767.00**	3006-27023 **5521.54**	3306-27023P **6563.63**

90° Elbow (Gasketed)



Size			
6	290-100900 **147.18**	300-100900 **159.47**	3306-0602P **234.72**
8	290-100901 **233.13**	300-100901 **255.17**	3306-0802P **304.95**
10	290-100902 **347.17**	300-100902 **393.81**	3306-1002P **471.04**
12	290-100903 **472.38**	300-100903 **559.47**	3306-1202P **677.71**
15	290-100904 **905.48**	300-100904 **1143.51**	3306-1502P **1289.53**
18	290-100905 **1518.94**	300-100905 **1758.20**	3306-1802P **1787.67**
21	290-100907 **2201.15**	300-100907 **2639.19**	3306-2102P **3187.65**
24	2906-2402 **3513.18**	3006-2402 **3992.52**	3306-2402P **4992.22**

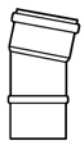
90° Elbow (Gasketed) (continued)

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
	27	2906-2702 **4767.00**	3006-2702 **5521.54**	3306-2702P **6563.63**

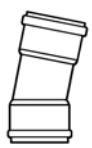
11-1/4° Elbow (Socket)

	6	290-100114 **33.15**	300-100114 **39.23**	3311-060P **48.57**
	8	290-100115 **53.94**	300-100115 **58.85**	3311-080P **72.28**
	10	290-100116 **96.87**	300-100116 **111.63**	3311-100P **140.02**
	12	290-100117 **137.37**	300-100117 **155.83**	3311-120P **192.71**
	15	290-100118 **213.47**	300-100118 **261.29**	3311-150P **339.85**
	18	290-100119 **366.82**	300-100119 **434.34**	3311-180P **539.85**
	21	290-100121 **612.22**	300-100121 **698.09**	3311-210P **909.17**
	24	290-100122 **823.26**	300-100122 **909.17**	3311-240P **981.54**
	27	2911-270 **1032.16**	3011-270 **1102.41**	3311-270P **1433.89**

11-1/4° Elbow (Gasket x Spigot)

	6	290-100186 **98.14**	300-100186 **120.20**	3311-06023P **139.99**
	8	290-100187 **159.47**	300-100187 **177.89**	3311-08023P **208.33**
	10	290-100188 **239.24**	300-100188 **263.75**	3311-10023P **305.67**
	12	290-100189 **325.09**	300-100189 **380.34**	3311-12023P **441.98**
	15	290-100190 **572.98**	300-100190 **628.17**	3311-15023P **743.53**
	18	290-100191 **907.92**	300-100191 **1040.43**	3311-18023P **1236.77**
	21	290-100193 **1341.02**	300-100193 **1442.91**	3311-21023P **1875.99**
	24	2911-24023 **2219.44**	3011-24023 **2511.59**	3311-24023P **3152.73**
	27	2911-27023 **2871.55**	3011-27023 **3248.12**	3311-27023P **3925.54**

11-1/4° Elbow (Gasketed)

	6	290-100210 **98.14**	300-100210 **120.20**	3311-0602P **139.99**
	8	290-100211 **159.47**	300-100211 **177.89**	3311-0802P **208.33**
	10	290-100212 **239.24**	300-100212 **263.75**	3311-1002P **305.67**
	12	290-100213 **325.09**	300-100213 **380.34**	3311-1202P **441.98**
	15	290-100214 **572.98**	300-100214 **628.17**	3311-1502P **743.53**
	18	290-100215 **907.92**	300-100215 **1040.43**	3311-1802P **1236.77**
	21	290-100217 **1341.02**	300-100217 **1442.91**	3311-2102P **1875.99**
	24	2911-2402 **2219.44**	3011-2402 **2511.59**	3311-2402P **3152.73**
	27	2911-2702 **2871.55**	3011-2702 **3248.12**	3311-2702P **3925.54**

15° Elbow (Socket)

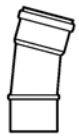
	6	290-100234 **33.15**	300-100234 **39.23**	3318-060P **48.57**
	8	290-100235 **53.94**	300-100235 **58.85**	3318-080P **72.28**
	10	290-100236 **96.87**	300-100236 **111.63**	3318-100P **140.02**
	12	290-100237 **137.37**	300-100237 **155.83**	3318-120P **192.71**

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PIP Disc Code: 330 Part Number Price Each

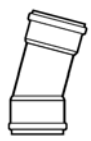
15° Elbow (Socket) (continued)

	15	290-100238 **213.47**	300-100238 **261.29**	3318-150P **339.85**
	18	290-100239 **366.82**	300-100239 **434.34**	3318-180P **539.85**
	21	290-100241 **612.22**	300-100241 **698.09**	3318-210P **909.17**
	24	290-100242 **823.26**	300-100242 **909.17**	3318-240P **981.54**
	27	2918-270 **1032.16**	3018-270 **1102.41**	3318-270P **1433.89**

15° Elbow (Gasket x Spigot)

	6	290-100306 **98.14**	300-100306 **120.20**	3318-06023P **139.99**
	8	290-100307 **159.47**	300-100307 **177.89**	3318-08023P **208.33**
	10	290-100308 **239.24**	300-100308 **263.75**	3318-10023P **305.67**
	12	290-100309 **325.09**	300-100309 **380.34**	3318-12023P **441.98**
	15	290-100310 **572.98**	300-100310 **628.17**	3318-15023P **743.53**
	18	290-100311 **907.92**	300-100311 **1040.43**	3318-18023P **1236.77**
	21	290-100313 **1341.02**	300-100313 **1442.91**	3318-21023P **1875.99**
	24	2918-24023 **2219.44**	3018-24023 **2511.59**	3318-24023P **3152.73**
	27	2918-27023 **2871.55**	3018-27023 **3248.12**	3318-27023P **3925.54**

15° Elbow (Gasketed)

	6	290-100330 **98.14**	300-100330 **120.20**	3318-0602P **139.99**
	8	290-100331 **159.47**	300-100331 **177.89**	3318-0802P **208.33**
	10	290-100332 **239.24**	300-100332 **263.75**	3318-1002P **305.67**
	12	290-100333 **325.09**	300-100333 **380.34**	3318-1202P **441.98**
	15	290-100334 **572.98**	300-100334 **628.17**	3318-1502P **743.53**
	18	290-100335 **907.92**	300-100335 **1040.43**	3318-1802P **1236.77**
	21	290-100336 **1341.06**	300-100336 **1442.91**	3318-2102P **1875.99**
	24	2918-2402 **2219.44**	3018-2402 **2511.59**	3318-2402P **3152.73**
	27	2918-2702 **2871.55**	3018-2702 **3248.12**	3318-2702P **3925.54**

22-1/2° Elbow (Socket)

	6	290-100354 **33.15**	300-100354 **39.23**	3316-060P **47.84**
	8	290-100355 **53.94**	300-100355 **58.85**	3316-080P **71.68**
	10	290-100356 **96.87**	300-100356 **111.63**	3316-100P **140.02**
	12	290-100357 **137.37**	300-100357 **155.83**	3316-120P **192.71**
	15	290-100358 **213.47**	300-100358 **261.29**	3316-150P **339.85**
	18	290-100359 **366.82**	300-100359 **434.34**	3316-180P **539.85**
	21	290-100361 **612.22**	300-100361 **698.09**	3316-210P **909.17**
	24	290-100362 **823.26**	300-100362 **909.17**	3316-240P **981.54**
	27	2916-270 **1032.16**	3016-270 **1102.41**	3316-270P **1433.89**

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Spears® Manufacturing Company
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22-1/2° Elbow (Gasket x Spigot)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-100426 **98.14**	300-100426 **120.20**	3316-06023P **139.99**
8	290-100427 **159.47**	300-100427 **177.89**	3316-08023P **208.33**
10	290-100428 **239.24**	300-100428 **263.75**	3316-10023P **305.67**
12	290-100429 **325.09**	300-100429 **380.34**	3316-12023P **441.98**
15	290-100430 **572.98**	300-100430 **628.17**	3316-15023P **743.53**
18	290-100431 **907.92**	300-100431 **1040.43**	3316-18023P **1236.77**
21	290-100433 **1341.02**	300-100433 **1442.91**	3316-21023P **1875.99**
24	2916-24023 **2219.44**	3016-24023 **2511.59**	3316-24023P **3152.73**
27	2916-27023 **2871.55**	3016-27023 **3248.12**	3316-27023P **3925.54**

22-1/2° Elbow (Gasketed)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-100450 **98.14**	300-100450 **120.20**	3316-0602P **139.99**
8	290-100451 **159.47**	300-100451 **177.89**	3316-0802P **208.33**
10	290-100452 **239.24**	300-100452 **263.75**	3316-1002P **305.67**
12	290-100453 **325.09**	300-100453 **380.34**	3316-1202P **441.98**
15	290-100454 **572.98**	300-100454 **628.17**	3316-1502P **743.53**
18	290-100455 **907.92**	300-100455 **1040.43**	3316-1802P **1236.77**
21	290-100457 **1341.02**	300-100457 **1442.91**	3316-2102P **1875.99**
24	2916-2402 **2219.44**	3016-2402 **2511.59**	3316-2402P **3152.73**
27	2916-2702 **2871.55**	3016-2702 **3248.12**	3316-2702P **3925.54**

30° Elbow (Socket)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-100474 **50.27**	300-100474 **52.76**	3315-060P **67.48**
8	290-100475 **76.09**	300-100475 **92.00**	3315-080P **113.92**
10	290-100476 **117.73**	300-100476 **138.62**	3315-100P **172.42**
12	290-100477 **169.27**	300-100477 **206.12**	3315-120P **228.61**
15	290-100478 **267.44**	300-100478 **320.22**	3315-150P **396.27**
18	290-100479 **436.78**	300-100479 **533.71**	3315-180P **668.65**
21	290-100481 **706.72**	300-100481 **861.34**	3315-210P **1084.60**
24	290-100482 **2015.89**	300-100482 **2343.47**	3315-240P **2460.04**
27	2915-270 **2221.92**	3015-270 **2499.78**	3315-270P **2753.83**

30° Elbow (Gasket x Spigot)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-100546 **122.65**	300-100546 **141.09**	3315-06023P **168.47**
8	290-100547 **184.02**	300-100547 **199.97**	3315-08023P **237.75**
10	290-100548 **258.84**	300-100548 **287.08**	3315-10023P **336.21**
12	290-100549 **348.45**	300-100549 **408.57**	3315-12023P **480.14**
15	290-100550 **709.17**	300-100550 **826.96**	3315-15023P **923.86**
18	290-100551 **996.25**	300-100551 **1171.69**	3315-18023P **1464.93**
21	290-100553 **1484.59**	300-100553 **1268.36**	3315-21023P **2085.81**
24	2915-24023 **2381.81**	3015-24023 **3266.20**	3315-24023P **3383.18**

30° Elbow (Gasket x Spigot) (continued)



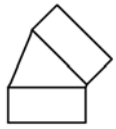
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
27	2915-27023 **3217.97**	3015-27023 **3755.29**	3315-27023P **4397.72**

30° Elbow (Gasketed)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-100570 **122.65**	300-100570 **141.09**	3315-0602P **168.47**
8	290-100571 **184.02**	300-100571 **199.97**	3315-0802P **237.75**
10	290-100572 **258.84**	300-100572 **287.08**	3315-1002P **336.21**
12	290-100573 **348.45**	300-100573 **408.57**	3315-1202P **480.14**
15	290-100574 **709.17**	300-100574 **826.96**	3315-1502P **923.86**
18	290-100575 **996.25**	300-100575 **1171.69**	3315-1802P **1464.93**
21	290-100577 **1484.59**	300-100577 **1268.36**	3315-2102P **2085.81**
24	2915-2402 **2382.07**	3015-2402 **3266.20**	3315-2402P **3383.18**
27	2915-2702 **3217.97**	3015-2702 **3755.29**	3315-2702P **4397.72**

45°Elbow (Socket)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-100592 **50.27**	300-100592 **52.76**	3317-060P **67.51**
8	290-100593 **76.09**	300-100593 **92.00**	3317-080P **113.92**
10	290-100594 **117.73**	300-100594 **138.62**	3317-100P **172.42**
12	290-100595 **169.27**	300-100595 **206.12**	3317-120P **228.61**
15	290-100596 **267.44**	300-100596 **320.22**	3317-150P **396.27**
18	290-100597 **436.78**	300-100597 **533.71**	3317-180P **668.65**
21	290-100599 **706.72**	300-100599 **861.34**	3317-210P **1084.60**
24	290-100600 **2015.89**	300-100600 **2343.47**	3317-240P **2460.04**
27	2917-270 **2221.92**	3017-270 **2499.78**	3317-270P **2753.83**

45°Elbow (Gasket x Spigot)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-100658 **122.65**	300-100658 **141.09**	3317-06023P **168.47**
8	290-100659 **184.02**	300-100659 **199.97**	3317-08023P **237.75**
10	290-100660 **258.84**	300-100660 **287.08**	3317-10023P **336.21**
12	290-100661 **348.45**	300-100661 **408.57**	3317-12023P **480.14**
15	290-100662 **709.17**	300-100662 **826.96**	3317-15023P **923.86**
18	290-100663 **996.25**	300-100663 **1171.69**	3317-18023P **1464.93**
21	290-100665 **1484.59**	300-100665 **1268.36**	3317-21023P **2085.81**
24	2917-24023 **2382.07**	3017-24023 **3266.20**	3317-24023P **3383.18**
27	2917-27023 **3217.97**	3017-27023 **3755.29**	3317-27023P **4397.72**

45°Elbow (Gasketed)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-100680 **122.65**	300-100680 **141.09**	3317-0602P **168.47**
8	290-100681 **184.02**	300-100681 **199.97**	3317-0802P **237.75**
10	290-100682 **258.84**	300-100682 **287.08**	3317-1002P **336.21**
12	290-100683 **348.45**	300-100683 **408.57**	3317-1202P **480.14**

45°Elbow (Gasketed) (continued)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
15	290-100684 **709.17**	300-100684 **826.96**	3317-1502P **923.86**
18	290-100685 **996.25**	300-100685 **1171.69**	3317-1802P **1464.93**
21	290-100687 **1484.59**	300-100687 **1765.59**	3317-2102P **2085.81**
24	2917-2402 **2382.07**	3017-2402 **3266.20**	3317-2402P **3383.18**
27	2917-2702 **3217.97**	3017-2702 **3755.29**	3317-2702P **4397.72**

60° Elbow (Socket)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-100702 **121.46**	300-100702 **142.33**	3324-060P **176.45**
8	290-100703 **164.40**	300-100703 **224.55**	3324-080P **256.01**
10	290-100704 **269.93**	300-100704 **316.54**	3324-100P **353.34**
12	290-100705 **347.17**	300-100705 **444.11**	3324-120P **459.67**
15	290-100706 **579.12**	300-100706 **688.32**	3324-150P **787.68**
18	290-100707 **871.11**	300-100707 **1025.67**	3324-180P **1348.39**
21	290-100709 **1363.12**	300-100709 **1652.67**	3324-210P **2030.60**
24	290-100710 **3046.54**	300-100710 **3633.02**	3324-240P **3826.83**
27	2924-270 **3245.43**	3024-270 **3853.56**	3324-270P **4260.29**

60° Elbow (Gasket x Spigot)



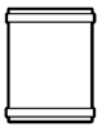
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-100768 **147.18**	300-100768 **159.47**	3324-06023P **234.72**
8	290-100769 **233.13**	300-100769 **255.17**	3324-08023P **304.95**
10	290-100770 **347.17**	300-100770 **393.81**	3324-10023P **471.04**
12	290-100771 **472.38**	300-100771 **559.47**	3324-12023P **677.71**
15	290-100772 **905.48**	300-100772 **1143.51**	3324-15023P **1289.53**
18	290-100773 **1518.94**	300-100773 **1758.20**	3324-18023P **1787.67**
21	290-100775 **2201.15**	300-100775 **2639.19**	3324-21023P **3187.65**
24	2924-24023 **3513.18**	3024-24023 **3992.52**	3324-24023P **4992.22**
27	2924-27023 **4767.00**	3024-27023 **5521.54**	3324-27023P **6563.63**

60° Elbow (Gasketed)



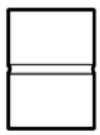
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-100790 **147.18**	300-100790 **159.47**	3324-0602P **234.72**
8	290-100791 **233.13**	300-100791 **255.17**	3324-0802P **304.95**
10	290-100792 **347.17**	300-100792 **393.81**	3324-1002P **471.04**
12	290-100793 **472.38**	300-100793 **559.47**	3324-1202P **677.71**
15	290-100794 **905.48**	300-100794 **1143.51**	3324-1502P **1289.53**
18	290-100795 **1518.94**	300-100795 **1758.20**	3324-1802P **1787.67**
21	290-100797 **2201.15**	300-100797 **2639.19**	3324-2102P **3187.65**
24	2924-2402 **3513.18**	3024-2402 **3992.52**	3324-2402P **4992.22**
27	2924-2702 **4767.00**	3024-2702 **5521.54**	3324-2702P **6563.63**

Repair Coupling (Gasketed)



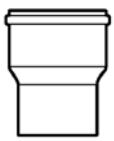
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	2928-060 **98.24**	3028-060 **111.63**	3328-060P **127.58**
8	2928-080 **137.62**	3028-080 **158.24**	3328-080P **190.12**
10	2928-100 **237.58**	3028-100 **254.00**	3328-100P **299.59**
12	2928-120 **331.39**	3028-120 **348.45**	3328-120P **414.85**
15	2928-150 **494.45**	3028-150 **519.02**	3328-150P **628.17**
18	2928-180 **823.82**	3028-180 **949.65**	3328-180P **1307.73**
21	2928-210 **1138.33**	3028-210 **1366.62**	3328-210P **1837.55**
24	2928-240 **1578.09**	3028-240 **1894.93**	3328-240P **2570.13**
27	2928-270 **2021.01**	3028-270 **2522.91**	3328-270P **3211.64**

Coupling (Socket)



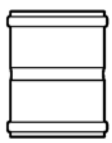
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-100002 **29.44**	300-100002 **33.15**	3329-060P **43.92**
8	290-100003 **36.79**	300-100003 **45.36**	3329-080P **55.85**
10	290-100004 **61.33**	300-100004 **72.39**	3329-100P **89.37**
12	290-100005 **92.00**	300-100005 **111.63**	3329-120P **145.09**
15	290-100006 **139.85**	300-100006 **191.37**	3329-150P **217.99**
18	290-100007 **320.22**	300-100007 **402.44**	3329-180P **490.69**
21	290-100009 **425.73**	300-100009 **703.03**	3329-210P **793.75**
24	290-100010 **747.17**	300-100010 **937.36**	3329-240P **954.62**
27	2929-270 **905.76**	3029-270 **1128.48**	3329-270P **1743.17**
30	2929-300 **1187.95**	3029-300 **1832.56**	---

Coupling (Gasket x Spigot)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-100068 **61.33**	300-100068 **65.01**	3329-06023P **81.35**
8	290-100069 **93.20**	300-100069 **100.59**	3329-08023P **128.77**
10	290-100070 **138.62**	300-100070 **147.18**	3329-10023P **191.23**
12	290-100071 **170.51**	300-100071 **199.97**	3329-12023P **250.99**
15	290-100072 **263.75**	300-100072 **398.72**	3329-15023P **463.79**
18	290-100073 **442.92**	300-100073 **539.85**	3329-18023P **610.22**
21	290-100075 **647.83**	300-100075 **837.99**	3329-21023P **929.94**
24	2929-24023 **791.36**	3029-24023 **1053.89**	3329-24023P **1316.86**
27	2929-27023 **1027.62**	3029-27023 **1284.38**	3329-27023P **1605.76**

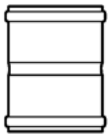
Coupling (Gasketed)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-100090 **73.61**	300-100090 **82.16**	3329-0602P **106.32**
8	290-100091 **134.95**	300-100091 **152.28**	3329-0802P **174.62**
10	290-100092 **172.69**	300-100092 **193.84**	3329-1002P **256.74**
12	290-100093 **217.18**	300-100093 **283.68**	3329-1202P **285.58**
15	290-100094 **349.64**	300-100094 **521.42**	3329-1502P **542.26**
18	290-100095 **584.00**	300-100095 **615.94**	3329-1802P **770.05**
21	290-100097 **730.02**	300-100097 **996.25**	3329-2102P **1133.41**

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Coupling (Gasketed) (continued)



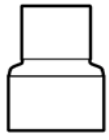
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
24	2929-2402 **1225.75**	3029-2402 **1326.19**	3329-2402P **1591.69**
27	2929-2702 **1412.60**	3029-2702 **1657.74**	3329-2702P **2073.12**

Reducer Coupling (Socket)



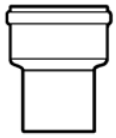
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6X2	2929-528 **62.74**	3029-528 **111.20**	---
6X2-1/2	---	3029-529 **92.82**	---
6X3	---	3029-530 **96.87**	---
6X4	2929-532 **36.24**	3029-532 **40.48**	3329-532P **43.17**
8X2	2929-578 **156.55**	---	---
8X2-1/2	---	3029-579 **161.92**	---
8X3	---	3029-580 **169.72**	---
8X4	2929-582 **103.05**	300-100927 **110.57**	3329-582P **128.64**
8X6	2929-585 **53.65**	300-100928 **62.58**	3329-585P **72.54**
10X2	2929-621 **185.06**	3029-621 **227.92**	---
10X2-1/2	---	3029-622 **187.26**	---
10X3	---	3029-623 **133.67**	---
10X4	2929-624 **141.76**	3029-624 **164.38**	3329-624P **180.64**
10X6	2929-626 **117.21**	300-100930 **128.77**	3329-626P **126.52**
10X8	2929-628 **73.69**	300-100931 **85.85**	3329-628P **160.42**
12X2	---	3029-661 **455.60**	---
12X2-1/2	---	3029-662 **311.31**	---
12X3	---	3029-663 **281.94**	---
12X4	2929-664 **203.46**	3029-664 **212.21**	3329-664P **309.44**
12X6	2929-666 **186.56**	300-100933 **198.77**	3329-666P **286.61**
12X8	2929-668 **130.00**	300-100934 **137.79**	3329-668P **250.87**
12X10	2929-670 **107.36**	300-100935 **123.91**	3329-670P **236.67**
15X2	2929-721 **464.68**	---	---
15X3	2929-723 **422.94**	3029-723 **487.43**	---
15X4	2929-724 **438.67**	3029-724 **469.40**	3329-724P **556.32**
15X6	2929-726 **414.73**	3029-726 **443.76**	3329-726P **482.86**
15X8	2929-728 **389.20**	3029-728 **420.35**	3329-728P **453.02**
15X10	2929-730 **268.53**	3029-730 **336.16**	3329-730P **365.64**
15X12	2929-732 **173.34**	300-100940 **199.97**	3329-732P **344.96**
18X4	2929-784 **853.66**	3029-784 **958.60**	3329-784P **1015.27**
18X6	2929-786 **889.07**	3029-786 **937.97**	3329-786P **994.15**
18X8	2929-788 **819.58**	3029-788 **868.76**	3329-788P **929.58**
18X10	2929-790 **527.42**	3029-790 **568.67**	3329-790P **642.64**

Reducer Coupling (Socket) (continued)



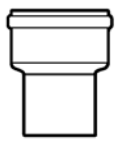
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
18X12	2929-792 **517.04**	3029-792 **534.17**	3329-792P **605.64**
18X15	2929-795 **310.71**	300-100946 **364.38**	3329-795P **442.92**
21X3	2929-843 **1060.92**	---	---
21X4	2929-844 **1084.28**	3029-844 **1142.83**	3329-844P **1234.27**
21X6	2929-846 **1038.74**	3029-846 **1101.05**	3329-846P **1172.63**
21X8	2929-848 **866.92**	3029-848 **910.63**	3329-848P **934.56**
21X10	2929-850 **803.05**	3029-850 **848.03**	3329-850P **876.77**
21X12	2929-852 **808.61**	3029-852 **776.64**	3329-852P **823.25**
21X15	2929-855 **711.96**	3029-855 **754.59**	3329-855P **904.83**
21X18	2929-858 **428.55**	300-100960 **501.79**	3329-858P **629.44**
24X3	2929-903 **1684.06**	3029-903 **1016.94**	---
24X6	2929-906 **1719.93**	3029-906 **1834.22**	3329-906P **1999.29**
24X8	2929-908 **1631.80**	3029-908 **1711.24**	3329-908P **1804.79**
24X10	2929-910 **1553.34**	3029-910 **1637.21**	3329-910P **1758.00**
24X12	2929-912 **1359.62**	3029-912 **1440.82**	3329-912P **1538.79**
24X15	2929-915 **989.16**	3029-915 **1068.29**	3329-915P **1081.53**
24X18	2929-918 **938.59**	3029-918 **1004.28**	3329-918P **1072.17**
24X20	---	3029-920 **1380.34**	---
24X21	2929-921 **635.31**	300-100969 **738.60**	3329-921P **898.09**
27X6	2929-936 **2236.27**	3029-936 **2387.36**	3329-936P **2578.36**
27X8	2929-938 **2080.05**	3029-938 **2257.80**	3329-938P **2411.02**
27X10	2929-940 **1950.16**	3029-940 **2077.73**	3329-940P **2220.99**
27X12	2929-942 **1832.18**	3029-942 **1942.12**	3329-942P **2097.17**
27X15	2929-945 **1443.26**	3029-945 **1542.17**	3329-945P **1645.57**
27X18	2929-948 **1353.89**	3029-948 **1448.05**	3329-948P **1524.12**
27X21	2929-951 **1122.86**	3029-951 **1344.85**	3329-951P **1437.85**
27X24	2929-954 **873.35**	3029-954 **1089.17**	3329-954P **1358.20**
30X18	2929-978 **2702.25**	3029-978 **3375.63**	---
30X21	---	3029-981 **2847.40**	---
30X24	2929-984 **2022.41**	3029-984 **2539.97**	---
30X27	2929-987 **2006.92**	3029-987 **2160.51**	---

Reducer Coupling (Gasket x Spigot)



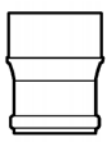
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6X4	2929-53223 **87.36**	300-101310 **89.55**	3329-53223P **127.69**
8X4	2929-58223 **198.41**	300-100927 **110.57**	3329-58223P **247.40**
8X6	2929-58523 **105.15**	300-101312 **127.58**	3329-58523P **165.67**
10X4	2929-62423 **290.01**	3029-62423 **316.12**	3329-62423P **347.38**
10X6	2929-62623 **225.41**	300-100930 **128.77**	3329-62623P **282.65**

Reducer Coupling (Gasket x Spigot) (continued)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
10X8	2929-62823 **171.39**	300-101315 **184.02**	3329-62823P **253.20**
12X4	2929-66423 **391.26**	3029-66423 **408.09**	3329-66423P **572.17**
12X6	2929-66623 **358.76**	300-100933 **198.77**	3329-66623P **551.16**
12X8	2929-66823 **249.99**	300-100934 **137.79**	3329-66823P **482.45**
12X10	2929-67023 **240.05**	300-101319 **269.93**	3329-67023P **329.66**
15X4	2929-72423 **843.62**	3029-72423 **902.68**	3329-72423P **1138.13**
15X6	2929-72623 **797.55**	3029-72623 **853.38**	3329-72623P **872.87**
15X8	2929-72823 **748.47**	3029-72823 **808.37**	3329-72823P **858.23**
15X10	2929-73023 **516.38**	3029-73023 **646.46**	3329-73023P **749.65**
15X12	2929-73223 **412.58**	300-101324 **449.05**	3329-73223P **579.58**
18X4	2929-78423 **1746.44**	3029-78423 **1843.46**	3329-78423P **1952.44**
18X6	2929-78623 **1709.75**	3029-78623 **1803.79**	3329-78623P **1911.80**
18X8	2929-78823 **1575.99**	3029-78823 **1670.67**	3329-78823P **1787.64**
18X10	2929-79023 **1014.26**	3029-79023 **1093.62**	3329-79023P **1235.85**
18X12	2929-79223 **994.33**	3029-79223 **1027.24**	3329-79223P **1164.69**
18X15	2929-79523 **726.66**	300-101330 **853.97**	3329-79523P **885.82**
21X6	2929-84623 **1997.56**	3029-84623 **2117.48**	3329-84623P **2255.06**
21X8	2929-84823 **1733.84**	3029-84823 **1750.52**	3329-84823P **1797.23**
21X10	2929-85023 **1544.35**	3029-85023 **1630.82**	3329-85023P **1686.08**
21X12	2929-85223 **1436.22**	3029-85223 **1493.54**	3329-85223P **1583.17**
21X15	2929-85523 **1369.15**	3029-85523 **1451.15**	3329-85523P **1541.57**
21X18	2929-85823 **1076.09**	300-101344 **1364.54**	3329-85823P **1455.14**
24X6	2929-90623 **3307.55**	3029-90623 **3527.34**	3329-90623P **3844.22**
24X8	2929-90823 **3138.08**	3029-90823 **3290.84**	3329-90823P **3470.75**
24X10	2929-91023 **2987.18**	3029-91023 **3147.78**	3329-91023P **3380.76**
24X12	2929-91223 **2614.64**	3029-91223 **2769.77**	3329-91223P **2959.20**
24X15	2929-91523 **1902.23**	3029-91523 **2054.42**	3329-91523P **2689.13**
24X18	2929-91823 **1804.97**	3029-91823 **2026.63**	3329-91823P **2559.72**
24X21	2929-92123 **1605.79**	3029-92123 **1992.56**	3329-92123P **2440.59**
27X6	2929-93623 **4300.52**	3029-93623 **4591.08**	3329-93623P **4957.64**
27X8	2929-93823 **3999.88**	3029-93823 **4341.37**	3329-93823P **4634.60**
27X10	2929-94023 **3750.31**	3029-94023 **4007.35**	3329-94023P **4270.36**
27X12	2929-94223 **3521.21**	3029-94223 **3734.26**	3329-94223P **4032.09**
27X15	2929-94523 **2774.36**	3029-94523 **2964.51**	3329-94523P **3521.21**
27X18	2929-94823 **2595.66**	3029-94823 **2783.52**	3329-94823P **3405.93**
27X21	2929-95123 **2295.54**	3029-95123 **2584.20**	3329-95123P **3358.55**
27X24	2929-95423 **2247.96**	3029-95423 **2826.59**	3329-95423P **3323.27**

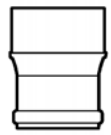
Reducer Coupling (Spigot x Gasket)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6X4	2929-53232 **83.20**	300-101383 **86.25**	3329-53232P **110.99**
8X4	2929-58232 **190.48**	3029-58232 **204.15**	3329-58232P **237.51**
8X6	2929-58532 **100.95**	300-101385 **120.20**	3329-58532P **128.27**
10X4	2929-62432 **278.41**	3029-62432 **303.47**	3329-62432P **333.49**
10X6	2929-62632 **216.38**	3029-62632 **237.74**	3329-62632P **271.36**
10X8	2929-62832 **158.63**	300-101388 **179.34**	3329-62832P **229.05**
12X4	2929-66432 **375.62**	3029-66432 **391.77**	3329-66432P **549.28**
12X6	2929-66632 **344.40**	3029-66632 **366.97**	3329-66632P **529.11**
12X8	2929-66832 **240.00**	3029-66832 **277.26**	3329-66832P **463.05**
12X10	2929-67032 **229.49**	300-101392 **254.00**	3329-67032P **323.96**
15X4	2929-72432 **809.86**	3029-72432 **866.57**	3329-72432P **1092.61**
15X6	2929-72632 **765.64**	3029-72632 **819.26**	3329-72632P **891.44**
15X8	2929-72832 **718.55**	3029-72832 **776.03**	3329-72832P **823.89**
15X10	2929-73032 **495.62**	3029-73032 **620.59**	3329-73032P **719.66**
15X12	2929-73232 **337.00**	300-101397 **392.63**	3329-73232P **557.00**
18X4	2929-78432 **1676.59**	3029-78432 **1769.72**	3329-78432P **1874.35**
18X6	2929-78632 **1641.35**	3029-78632 **1731.62**	3329-78632P **1835.34**
18X8	2929-78832 **1512.95**	3029-78832 **1603.84**	3329-78832P **1716.14**
18X10	2929-79032 **973.45**	3029-79032 **1049.86**	3329-79032P **1186.42**
18X12	2929-79232 **954.54**	3029-79232 **986.16**	3329-79232P **1118.11**
18X15	2929-79532 **660.74**	300-101403 **759.46**	3329-79532P **852.76**
21X6	2929-84632 **1917.66**	3029-84632 **2032.79**	3329-84632P **2164.85**
21X8	2929-84832 **1664.48**	3029-84832 **1680.49**	3329-84832P **1773.22**
21X10	2929-85032 **1458.75**	3029-85032 **1565.58**	3329-85032P **1618.64**
21X12	2929-85232 **1378.79**	3029-85232 **1433.80**	3329-85232P **1518.66**
21X15	2929-85532 **1314.38**	3029-85532 **1392.96**	3329-85532P **1479.87**
21X18	2929-85832 **1015.26**	300-101417 **1144.72**	3329-85832P **1328.80**
24X6	2929-90632 **3175.24**	3029-90632 **3386.24**	3329-90632P **3690.55**
24X8	2929-90832 **3012.56**	3029-90832 **3159.20**	3329-90832P **3331.92**
24X10	2929-91032 **2867.69**	3029-91032 **3021.87**	3329-91032P **3245.66**
24X12	2929-91232 **2510.31**	3029-91232 **2658.98**	3329-91232P **2840.82**
24X15	2929-91532 **1826.41**	3029-91532 **1973.86**	3329-91532P **2581.57**
24X18	2929-91832 **1732.77**	3029-91832 **1945.56**	3329-91832P **2456.55**
24X21	2929-92132 **1580.17**	3029-92132 **1902.99**	3329-92132P **2116.43**
27X6	2929-93632 **4128.48**	3029-93632 **4407.61**	3329-93632P **4759.34**
27X8	2929-93832 **3839.89**	3029-93832 **4167.44**	3329-93832P **4445.21**
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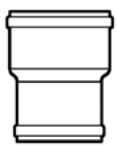
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Reducer Coupling (Spigot x Gasket) (continued)



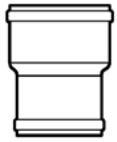
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
27X12	2929-94232 **3380.36**	3029-94232 **3584.91**	3329-94232P **3870.82**
27X15	2929-94532 **2663.56**	3029-94532 **2845.92**	3329-94532P **3379.47**
27X18	2929-94832 **2491.83**	3029-94832 **2672.18**	3329-94832P **3269.68**
27X21	2929-95132 **2203.71**	3029-95132 **2480.83**	3329-95132P **3030.51**
27X24	2929-95432 **2208.33**	3029-95432 **2644.97**	3329-95432P **3189.63**

Reducer Coupling (Gasketed)



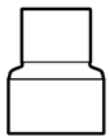
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6X4	2929-5322 **101.18**	300-101456 **120.20**	3329-5322P **152.82**
8X4	2929-5822 **226.66**	3029-5822 **242.94**	3329-5822P **282.62**
8X6	2929-5852 **127.97**	300-101458 **158.24**	3329-5852P **196.69**
10X4	2929-6242 **331.29**	3029-6242 **361.13**	3329-6242P **395.51**
10X6	2929-6262 **257.91**	3029-6262 **282.92**	3329-6262P **322.93**
10X8	2929-6282 **224.53**	300-101461 **254.00**	3329-6282P **317.47**
12X4	2929-6642 **446.99**	3029-6642 **466.41**	3329-6642P **653.65**
12X6	2929-6662 **409.84**	3029-6662 **436.69**	3329-6662P **629.64**
12X8	2929-6682 **334.02**	3029-6682 **389.87**	3329-6682P **551.03**
12X10	2929-6702 **301.62**	300-101465 **348.45**	3329-6702P **438.95**
15X4	2929-7242 **964.94**	3029-7242 **1031.35**	3329-7242P **1300.27**
15X6	2929-7262 **911.12**	3029-7262 **974.92**	3329-7262P **1061.81**
15X8	2929-7282 **855.06**	3029-7282 **923.48**	3329-7282P **980.43**
15X10	2929-7302 **589.69**	3029-7302 **719.88**	3329-7302P **856.41**
15X12	2929-7322 **444.96**	300-101470 **506.71**	3329-7322P **633.08**
18X4	2929-7842 **1994.62**	3029-7842 **2105.94**	3329-7842P **2229.96**
18X6	2929-7862 **1953.20**	3029-7862 **2060.64**	3329-7862P **2184.05**
18X8	2929-7882 **1800.41**	3029-7882 **1908.58**	3329-7882P **2042.23**
18X10	2929-7902 **1158.40**	3029-7902 **1249.34**	3329-7902P **1411.83**
18X12	2929-7922 **1135.85**	3029-7922 **1173.53**	3329-7922P **1331.17**
18X15	2929-7952 **794.96**	300-101476 **885.82**	3329-7952P **1012.20**
21X6	2929-8462 **2281.98**	3029-8462 **2419.01**	3329-8462P **2576.17**
21X8	2929-8482 **1980.74**	3029-8482 **1998.88**	3329-8482P **2109.45**
21X10	2929-8502 **1735.92**	3029-8502 **1862.79**	3329-8502P **1926.59**
21X12	2929-8522 **1640.77**	3029-8522 **1706.22**	3329-8522P **1807.51**
21X15	2929-8552 **1563.66**	3029-8552 **1657.22**	3329-8552P **1760.72**
21X18	2929-8582 **1301.41**	300-101489 **1392.60**	3329-8582P **1549.64**
24X6	2929-9062 **3778.03**	3029-9062 **4030.37**	3329-9062P **4390.45**
24X8	2929-9082 **3585.23**	3029-9082 **3759.45**	3329-9082P **3964.98**
24X10	2929-9102 **3412.27**	3029-9102 **3595.15**	3329-9102P **3861.67**
24X12	2929-9122 **2986.98**	3029-9122 **3164.19**	3329-9122P **3381.08**

Reducer Coupling (Gasketed) (continued)



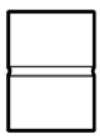
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24X15	2929-9152 **2173.25**	3029-9152 **2348.89**	3329-9152P **3072.04**
24X18	2929-9182 **2122.01**	3029-9182 **2315.02**	3329-9182P **2923.18**
24X21	2929-9212 **2097.08**	3029-9212 **2289.48**	3329-9212P **2902.71**
27X6	2929-9362 **4913.56**	3029-9362 **5202.76**	3329-9362P **5663.49**
27X8	2929-9382 **4570.49**	3029-9382 **4958.93**	3329-9382P **5289.24**
27X10	2929-9402 **4284.12**	3029-9402 **4577.58**	3329-9402P **4878.12**
27X12	2929-9422 **4021.82**	3029-9422 **4265.69**	3329-9422P **4605.94**
27X15	2929-9452 **3169.85**	3029-9452 **3385.34**	3329-9452P **4020.45**
27X18	2929-9482 **2964.31**	3029-9482 **3179.78**	3329-9482P **3890.02**
27X21	2929-9512 **2741.77**	3029-9512 **3070.28**	3329-9512P **3836.15**
27X24	2929-9542 **2644.95**	3029-9542 **2935.37**	3329-9542P **3740.96**

PIP X IPS Reducer (Socket)



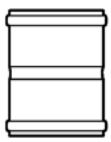
Size			
6X4	2929-532 **36.24**	---	---
8X6	---	300-101537 **47.82**	---
10X6	---	3029-626PXI **147.37**	---
10X8	---	300-101538 **108.75**	---
12X10	---	300-101539 **131.24**	---
15X10	---	300-101541 **331.26**	---
15X12	---	300-101540 **225.75**	---

IPS X PIP Adapter (Socket)



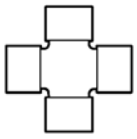
Size			
6	---	300-101649 **39.23**	---
8	---	300-101650 **56.39**	---
10	---	300-101651 **94.48**	---
12	---	300-101652 **147.18**	---

IPS X PIP Adapter (Gasketed)



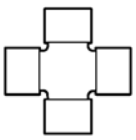
Size			
6	---	300-101747 **95.66**	---
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10	---	300-101749 **224.58**	---
12	---	300-101750 **316.54**	---

Cross (Socket)



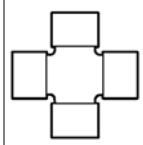
Size			
6	290-103286 **101.82**	300-103286 **141.09**	3320-060P **175.58**
6X2	290-103283 **77.27**	300-103283 **89.55**	3320-528P **109.28**
6X3	290-103284 **84.66**	300-103284 **100.59**	3320-530P **118.02**
6X4	290-103285 **92.00**	300-103285 **107.94**	3320-532P **124.01**
8	290-103291 **172.97**	300-103291 **206.12**	3320-080P **254.14**
8X2	290-103287 **95.66**	300-103287 **115.28**	3320-578P **132.56**
8X3	290-103288 **104.24**	300-103288 **126.35**	3320-580P **148.58**
8X4	290-103289 **111.63**	300-103289 **134.95**	3320-582P **168.12**

Cross (Socket) (continued)



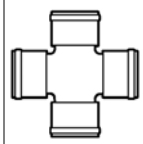
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
8X6	290-103290 **130.04**	300-103290 **155.83**	3320-585P **192.71**
10	290-103297 **293.21**	300-103297 **354.58**	3320-100P **411.99**
10X2	290-103292 **147.18**	300-103292 **153.36**	3320-621P **171.88**
10X3	290-103293 **158.24**	300-103293 **179.06**	3320-623P **194.53**
10X4	290-103294 **176.69**	300-103294 **191.37**	3320-624P **236.41**
10X6	290-103295 **199.97**	300-103295 **214.68**	3320-626P **264.92**
10X8	290-103296 **234.31**	300-103296 **261.29**	3320-628P **323.76**
12	290-103304 **455.16**	300-103304 **536.17**	3320-120P **662.04**
12X2	290-103298 **220.85**	300-103298 **225.75**	3320-661P **285.98**
12X3	290-103299 **244.14**	300-103299 **246.62**	3320-663P **311.48**
12X4	290-103300 **249.05**	300-103300 **269.93**	3320-664P **333.67**
12X6	290-103301 **267.44**	300-103301 **296.92**	3320-666P **367.91**
12X8	290-103302 **311.61**	300-103302 **345.99**	3320-668P **378.88**
12X10	290-103303 **366.82**	300-103303 **417.15**	3320-670P **514.80**
15	290-103321 **761.92**	300-103321 **923.86**	3320-150P **1177.87**
15X2	290-103313 **311.61**	300-103313 **352.11**	3320-721P **411.01**
15X3	290-103314 **316.54**	300-103314 **373.00**	3320-723P **449.05**
15X4	290-103315 **331.26**	300-103315 **381.59**	3320-724P **466.20**
15X6	290-103316 **364.38**	300-103316 **422.05**	3320-726P **483.40**
15X8	290-103317 **430.69**	300-103317 **483.40**	3320-728P **660.09**
15X10	290-103318 **498.12**	300-103318 **601.16**	3320-730P **799.95**
15X12	290-103319 **586.47**	300-103319 **703.03**	3320-732P **914.01**
18	290-103342 **1318.97**	300-103342 **1494.43**	3320-180P **1904.21**
18X2	290-103332 **466.20**	300-103332 **545.97**	3320-781P **711.58**
18X3	290-103333 **478.49**	300-103333 **571.75**	3320-783P **750.88**
18X4	290-103334 **495.68**	300-103334 **584.00**	3320-784P **797.46**
18X6	290-103335 **531.23**	300-103335 **630.63**	3320-786P **879.68**
18X8	290-103336 **588.91**	300-103336 **689.54**	3320-788P **996.25**
18X10	290-103337 **650.25**	300-103337 **747.17**	3320-790P **1143.51**
18X12	290-103338 **759.46**	300-103338 **923.86**	3320-792P **1295.65**
18X15	290-103340 **920.20**	300-103340 **1201.20**	3320-795P **1538.60**
21	290-103367 **1947.19**	300-103367 **2461.23**	3320-210P **2929.97**
21X2	290-103355 **711.58**	300-103355 **907.92**	3320-841P **932.46**
21X3	290-103356 **742.28**	300-103356 **956.99**	3320-843P **1055.17**
21X4	290-103357 **785.22**	300-103357 **996.25**	3320-844P **1177.87**
21X6	290-103358 **835.49**	300-103358 **1055.17**	3320-846P **1272.29**
21X8	290-103359 **903.01**	300-103359 **1143.51**	3320-848P **1406.08**

Cross (Socket) (continued)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
21X10	290-103360 **976.61**	300-103360 **1260.05**	3320-850P **1553.32**
21X12	290-103361 **1093.20**	300-103361 **1406.08**	3320-852P **1728.78**
21X15	290-103363 **1253.93**	300-103363 **1640.42**	3320-855P **1992.56**
21X18	290-103365 **1502.99**	300-103365 **1963.12**	3320-858P **2431.81**
24	290-103381 **2783.93**	300-103381 **3280.85**	3320-240P **4511.54**
24X2	290-103368 **981.54**	300-103368 **1177.87**	3320-901P **1226.94**
24X3	290-103369 **1030.59**	300-103369 **1226.94**	3320-903P **1282.16**
24X4	290-103370 **1093.20**	300-103370 **1289.53**	3320-904P **1348.39**
24X6	290-103371 **1186.43**	300-103371 **1374.16**	3320-906P **1435.54**
24X8	290-103372 **1260.05**	300-103372 **1494.43**	3320-908P **1582.75**
24X10	290-103373 **1348.39**	300-103373 **1612.21**	3320-910P **1758.20**
24X12	290-103374 **1464.93**	300-103374 **1787.67**	3320-912P **1933.69**
24X15	290-103376 **1758.20**	300-103376 **2022.00**	3320-915P **2197.47**
24X18	290-103378 **1992.56**	300-103378 **2343.47**	3320-918P **2636.73**
24X21	290-103380 **2372.92**	300-103380 **2783.93**	3320-921P **3193.74**
27	2920-270 **4215.02**	3020-270 **4967.07**	3320-270P **6456.02**
27X4	2920-934 **1246.62**	3020-934 **1561.47**	3320-934P **2029.38**
27X6	2920-936 **1438.81**	3020-936 **1666.69**	3320-936P **2168.18**
27X8	2920-938 **1527.60**	3020-938 **1811.69**	3320-938P **2355.95**
27X10	2920-940 **1632.80**	3020-940 **1953.22**	3320-940P **2539.85**
27X12	2920-942 **1774.16**	3020-942 **2165.78**	3320-942P **2815.11**
27X15	2920-945 **2129.36**	3020-945 **2449.77**	3320-945P **3184.38**
27X18	2920-948 **2412.35**	3020-948 **2839.00**	3320-948P **3675.84**
27X21	2920-951 **2875.19**	3020-951 **3371.97**	3320-951P **4385.44**
27X24	2920-954 **3371.93**	3020-954 **3973.74**	3320-954P **5164.61**

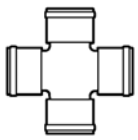
Cross (Gasketed)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-104001 **245.32**	300-104001 **252.69**	3320-0602P **303.23**
6X4	290-104000 **227.32**	300-104000 **233.13**	3320-5322P **260.82**
8	290-104006 **343.53**	300-104006 **364.38**	3320-0802P **438.25**
8X4	290-104004 **273.45**	300-104004 **282.15**	3320-5822P **352.88**
8X6	290-104005 **311.24**	300-104005 **318.99**	3320-5852P **379.64**
10	290-104012 **510.38**	300-104012 **512.84**	3320-1002P **604.24**
10X4	290-104009 **364.06**	300-104009 **368.07**	3320-6242P **433.96**
10X6	290-104010 **398.72**	300-104010 **411.01**	3320-6262P **458.31**
10X8	290-104011 **427.60**	300-104011 **460.11**	3320-6282P **515.01**
12	290-104019 **732.51**	300-104019 **761.92**	3320-1202P **916.42**
12X4	290-104015 **441.69**	300-104015 **472.38**	3320-6642P **600.67**

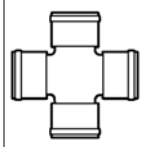
NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Cross (Gasketed) (continued)



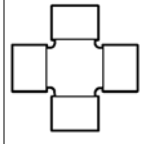
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
12X6	290-104016 **478.49**	300-104016 **515.27**	3320-6662P **639.71**
12X8	290-104017 **539.85**	300-104017 **588.91**	3320-6682P **656.60**
12X10	290-104018 **625.72**	300-104018 **662.58**	3320-6702P **777.35**
15	290-104036 **1143.51**	300-104036 **1318.97**	3320-1502P **1656.36**
15X4	290-104030 **662.58**	300-104030 **834.32**	3320-7242P **886.45**
15X6	290-104031 **711.58**	300-104031 **889.52**	3320-7262P **923.18**
15X8	290-104032 **797.46**	300-104032 **950.86**	3320-7282P **981.54**
15X10	290-104033 **920.20**	300-104033 **1042.91**	3320-7302P **1104.26**
15X12	290-104034 **977.92**	300-104034 **1165.60**	3320-7322P **1318.97**
18	290-104057 **1758.20**	300-104057 **1992.56**	3320-1802P **2515.26**
18X4	290-104049 **981.54**	300-104049 **1104.26**	3320-7842P **1128.76**
18X6	290-104050 **1067.42**	300-104050 **1226.94**	3320-7862P **1282.45**
18X8	290-104051 **1202.40**	300-104051 **1349.63**	3320-7882P **1368.99**
18X10	290-104052 **1288.28**	300-104052 **1472.36**	3320-7902P **1524.79**
18X12	290-104053 **1411.01**	300-104053 **1595.01**	3320-7922P **1668.69**
18X15	2920-7952 **1614.22**	3020-7952 **1814.67**	3320-7952P **2143.55**
21	290-104082 **2910.36**	300-104082 **3875.43**	3320-2102P **4101.00**
21X4	290-104072 **1570.49**	300-104072 **2657.15**	3320-8442P **3147.16**
21X6	290-104073 **1680.88**	300-104073 **2760.37**	3320-8462P **3212.73**
21X8	290-104074 **1840.40**	300-104074 **2879.75**	3320-8482P **3356.98**
21X10	290-104075 **2024.46**	300-104075 **3045.68**	3320-8502P **3435.63**
21X12	290-104076 **2269.87**	300-104076 **3212.21**	3320-8522P **3593.00**
21X15	290-104078 **2515.26**	300-104078 **3359.35**	3320-8552P **3615.11**
21X18	290-104080 **2699.29**	300-104080 **3709.48**	3320-8582P **3804.26**
24	2920-2402 **5516.67**	3020-2402 **6595.12**	3320-2402P **8222.40**
24X4	2920-9042 **2877.74**	3020-9042 **3199.51**	3320-9042P **3998.76**
24X6	2920-9062 **2889.88**	3020-9062 **3230.39**	3320-9062P **4014.24**
24X8	2920-9082 **3120.58**	3020-9082 **3468.63**	3320-9082P **4334.80**
24X10	2920-9102 **3377.53**	3020-9102 **3751.98**	3320-9102P **4688.87**
24X12	2920-9122 **3634.61**	3020-9122 **4037.34**	3320-9122P **5045.31**
24X15	2920-9152 **4211.38**	3020-9152 **4678.82**	3320-9152P **5848.73**
24X18	2920-9182 **4652.59**	3020-9182 **5168.58**	3320-9182P **6461.76**
24X21	2920-9212 **5350.72**	3020-9212 **5945.69**	3320-9212P **7431.11**
27	2920-2702 **7673.88**	3020-2702 **11029.28**	3320-2702P **13751.19**
27X4	2920-9342 **3382.29**	3020-9342 **4000.89**	3320-9342P **4998.58**
27X6	2920-9362 **3630.57**	3020-9362 **4016.54**	3320-9362P **5071.82**
27X8	2920-9382 **3891.62**	3020-9382 **4336.81**	3320-9382P **5421.37**

Cross (Gasketed) (continued)



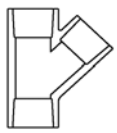
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
27X10	2920-9402 **4221.51**	3020-9402 **4688.98**	3320-9402P **5862.76**
27X12	2920-9422 **4543.27**	3020-9422 **5049.19**	3320-9422P **6310.13**
27X15	2920-9452 **5263.71**	3020-9452 **5848.56**	3320-9452P **7311.73**
27X18	2920-9482 **5816.17**	3020-9482 **6461.76**	3320-9482P **8075.85**
27X21	2920-9512 **6688.39**	3020-9512 **7431.11**	3320-9512P **9290.89**
27X24	2920-9542 **7240.95**	3020-9542 **8222.56**	3320-9542P **10278.47**

PIP X IPS Cross (Socket)



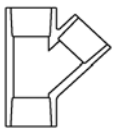
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	2920-060PXI **101.82**	3020-060PXI **141.09**	3320-060PXI **175.58**
8	2920-080PXI **172.97**	3020-080PXI **206.12**	3320-080PXI **254.14**
8X6	2920-585PXI **122.24**	3020-585PXI **155.83**	3320-585PXI **192.71**
10	2920-100PXI **293.21**	3020-100PXI **354.58**	3320-100PXI **411.99**
10X6	2920-626PXI **187.97**	300-103700 **214.68**	3320-626PXI **249.02**
10X8	2920-628PXI **220.24**	3020-628PXI **291.83**	3320-628PXI **304.34**
12	2920-120PXI **455.16**	3020-120PXI **536.17**	3320-120PXI **662.04**
12X6	2920-666PXI **267.44**	3020-666PXI **296.92**	3320-666PXI **345.83**
12X8	2920-668PXI **311.61**	3020-668PXI **345.99**	3320-668PXI **729.43**
12X10	2920-670PXI **344.81**	3020-670PXI **417.15**	3320-670PXI **483.92**
15X6	2920-726PXI **342.52**	3020-726PXI **422.05**	3320-726PXI **454.40**
15X8	2920-728PXI **404.85**	3020-728PXI **483.40**	3320-728PXI **620.48**
15X10	2920-730PXI **468.23**	3020-730PXI **601.16**	3320-730PXI **751.95**
15X12	2920-732PXI **551.28**	3020-732PXI **703.03**	3320-732PXI **859.17**
18X6	2920-786PXI **531.23**	3020-786PXI **630.63**	3320-786PXI **879.68**
18X8	2920-788PXI **553.57**	3020-788PXI **689.54**	3320-788PXI **936.47**
18X10	2920-790PXI **650.25**	3020-790PXI **747.17**	3320-790PXI **1074.89**
18X12	2920-792PXI **759.46**	3020-792PXI **923.86**	3320-792PXI **1217.92**
21X6	2920-846PXI **875.21**	3020-846PXI **1055.17**	3320-846PXI **1195.96**
21X8	2920-848PXI **903.01**	3020-848PXI **1143.51**	3320-848PXI **1321.72**
21X10	2920-850PXI **976.61**	3020-850PXI **1260.05**	3320-850PXI **1460.12**
21X12	2920-852PXI **1027.61**	3020-852PXI **1406.08**	3320-852PXI **1625.05**
24X6	2920-906PXI **1186.43**	3020-906PXI **1374.16**	3320-906PXI **1349.40**
24X8	2920-908PXI **1260.05**	3020-908PXI **1494.43**	3320-908PXI **1487.78**
24X10	2920-910PXI **1348.39**	3020-910PXI **1612.21**	3320-910PXI **1652.71**
24X12	2920-912PXI **1464.93**	3020-912PXI **1787.67**	3320-912PXI **1817.67**

Wyes (Socket)



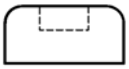
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	2975-060 **193.72**	---	---
6X4	2975-532 **108.97**	---	---
8	2975-080 **205.64**	---	---
8X4	2975-582 **178.48**	---	---

Wyes (Socket) (continued)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
8X6	2975-585 **290.84**	---	---
10	2975-100 **323.82**	---	---
10X4	2975-624 **198.36**	---	---
10X6	2975-626 **208.63**	---	---
10X8	2975-628 **266.78**	---	---
12	2975-120 **463.55**	---	---
12X4	2975-664 **235.29**	---	---
12X6	2975-666 **257.32**	---	---
12X8	2975-668 **290.76**	---	---
12X10	2975-670 **310.29**	---	---
15	2975-150 **928.65**	---	---
15X4	2975-724 **373.21**	---	---
15X6	2975-726 **399.42**	---	---
15X8	2975-728 **483.19**	---	---
15X10	2975-730 **519.02**	---	---
15X12	2975-732 **717.49**	---	---
18	2975-187 **1356.41**	---	---
18X4	2975-784 **585.98**	---	---
18X6	2975-786 **621.27**	---	---
18X8	2975-788 **686.02**	---	---
18X10	2975-790 **715.55**	---	---
18X12	2975-792 **938.63**	---	---
18X15	2975-795 **1176.62**	---	---

Surface Reducer (Socket)



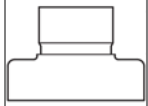
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6X2	---	300-102013 **49.05**	---
6X3	---	300-102015 **49.05**	---
8X2	---	300-102018 **92.00**	---
8X3	---	300-102020 **92.00**	---
8X4	---	300-102021 **92.00**	---
10X2	---	300-102024 **116.59**	---
10X3	---	300-102026 **116.59**	---
10X4	---	300-102027 **116.59**	---
10X6	---	300-102028 **116.59**	---
12X2	---	300-102031 **171.75**	---
12X3	---	300-102033 **171.75**	---
12X4	---	300-102034 **171.75**	---
12X6	---	300-102035 **171.75**	---

Surface Reducer (Socket) (continued)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
12X8	---	300-102036 **171.75**	---
15X2	---	300-102048 **312.75**	---
15X3	---	300-102050 **312.75**	---
15X4	---	300-102051 **312.75**	---
15X6	---	300-102052 **312.75**	---
15X8	---	300-102053 **312.75**	---
15X10	---	300-102054 **312.75**	---
18X2	---	300-102067 **472.38**	---
18X3	---	300-102069 **472.38**	---
18X4	---	300-102070 **472.38**	---
18X6	---	300-102071 **472.38**	---
18X8	---	300-102072 **472.38**	---
18X10	---	300-102073 **472.38**	---
18X12	---	300-102074 **472.38**	---
21X2	---	300-102088 **779.13**	---
21X3	---	300-102089 **779.13**	---
21X4	---	300-102090 **779.13**	---
21X6	---	300-102091 **779.13**	---
21X8	---	300-102092 **779.13**	---
21X10	---	300-102093 **779.13**	---
21X12	---	300-102094 **779.13**	---
21X15	---	300-102095 **779.13**	---

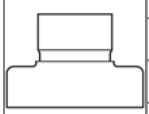
Stub Surface Reducer (Socket)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6X4	---	30040-532 **120.85**	---
8X4	---	30040-582 **138.64**	---
8X6	---	30040-585 **148.02**	---
10X4	---	30040-624 **157.51**	---
10X6	---	30040-626 **166.36**	---
10X8	---	30040-628 **174.94**	---
12X4	---	30040-664 **177.31**	---
12X6	---	30040-666 **180.89**	---
12X8	---	30040-668 **208.49**	---
12X10	---	30040-670 **240.16**	---
15X4	---	30040-724 **290.84**	---
15X6	---	30040-726 **304.26**	---
15X8	---	30040-728 **319.22**	---
15X10	---	30040-730 **352.28**	---

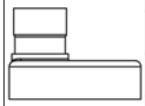
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Stub Surface Reducer (Socket) (continued)



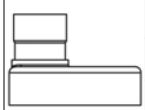
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
15X12	---	30040-732 **363.27**	---
18X4	---	30040-784 **695.20**	---
18X6	---	30040-786 **715.28**	---
18X8	---	30040-788 **730.60**	---
18X10	---	30040-790 **757.43**	---
18X12	---	30040-792 **778.33**	---
18X15	---	30040-795 **891.63**	---
21X4	---	30040-844 **964.83**	---
21X6	---	30040-846 **974.55**	---
21X8	---	30040-848 **1001.13**	---
21X10	---	30040-850 **1034.19**	---
21X12	---	30040-852 **1047.96**	---
21X15	---	30040-855 **1161.64**	---
21X18	---	30040-858 **1282.81**	---
24X4	---	30040-904 **1089.32**	---
24X6	---	30040-906 **1096.77**	---
24X8	---	30040-908 **1124.53**	---
24X10	---	30040-910 **1157.58**	---
24X12	---	30040-912 **1172.25**	---
24X15	---	30040-915 **1286.03**	---
24X18	---	30040-918 **1407.25**	---
24X21	---	30040-921 **1669.24**	---

Eccentric Stub Surface Reducer (Socket)



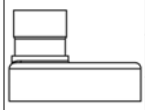
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6X2	---	3040-528E **81.44**	---
6X3	---	3040-530E **82.08**	---
6X4	---	3040-532E **85.06**	---
8X2	---	3040-578E **105.57**	---
8X3	---	3040-580E **106.75**	---
8X4	---	3040-582E **108.63**	---
8X6	---	3040-585E **119.84**	---
10X2	---	3040-621E **127.58**	---
10X3	---	3040-623E **133.47**	---
10X4	---	3040-624E **142.20**	---
10X6	---	3040-626E **146.48**	---
10X8	---	3040-628E **165.98**	---
12X2	---	3040-661E **180.34**	---
12X4	---	3040-664E **212.21**	---

Eccentric Stub Surface Reducer (Socket) (continued)



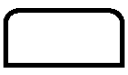
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
12X6	---	3040-666E **221.77**	---
12X8	---	3040-668E **227.31**	---
15X2	---	3040-721E **193.41**	---
15X3	---	3040-723E **220.98**	---
15X4	---	3040-724E **228.27**	---
15X6	---	3040-726E **232.98**	---
15X8	---	3040-728E **252.47**	---
15X10	---	3040-730E **277.29**	---
15X12	---	3040-732E **310.62**	---
18X2	---	3040-781E **448.98**	---
18X3	---	3040-783E **453.17**	---
18X4	---	3040-784E **457.53**	---
18X6	---	3040-786E **465.19**	---
18X8	---	3040-788E **484.71**	---
18X10	---	3040-790E **504.68**	---
18X12	---	3040-792E **538.03**	---
18X15	---	3040-795E **601.58**	---
21X2	---	3040-841E **558.24**	---
21X3	---	3040-843E **563.05**	---
21X4	---	3040-844E **566.21**	---
21X6	---	3040-846E **573.87**	---
21X8	---	3040-848E **593.38**	---
21X10	---	3040-850E **613.39**	---
21X12	---	3040-852E **646.73**	---
21X15	---	3040-855E **710.28**	---
21X18.701	---	3040-858E **788.99**	---
24X2	---	3040-901E **895.24**	---
24X3	---	3040-903E **902.05**	---
24X6	---	3040-906E **1045.25**	---
24X8	---	3040-908E **1064.77**	---
24X10	---	3040-910E **1084.77**	---
24X12	---	3040-912E **1118.08**	---
24X15	---	3040-915E **1171.69**	---
24X18	---	3040-918E **1260.38**	---
24X21	---	3040-921E **1392.98**	---
27X3	---	3040-933E **1642.45**	---
27X4	---	3040-934E **1643.67**	---

Eccentric Stub Surface Reducer (Socket) (continued)



Size	80 PSI Disc Code: 310 Part Number / Price Each	100 PSI Disc Code: 320 Part Number / Price Each	125 PSI Disc Code: 330 Part Number / Price Each
27X6	---	3040-936E **1654.46**	---
27X8	---	3040-938E **1673.98**	---
27X10	---	3040-940E **1693.96**	---
27X12	---	3040-942E **1727.31**	---
27X15	---	3040-945E **1780.88**	---
27X18	---	3040-948E **1869.58**	---
27X21	---	3040-951E **2002.20**	---
27X24	---	3040-954E **4354.15**	---
30X18	---	3040-978E **2850.04**	---

Cap (Socket)



Size	80 PSI Disc Code: 310 Part Number / Price Each	100 PSI Disc Code: 320 Part Number / Price Each	125 PSI Disc Code: 330 Part Number / Price Each
6	---	300-107540 **49.05**	---
8	---	300-107541 **62.58**	---
10	---	300-107542 **100.59**	---
12	---	300-107543 **132.48**	---
15	---	300-107545 **215.91**	---
18	---	300-107547 **421.81**	---
21	---	300-107549 **645.34**	---
24	---	300-107550 **882.46**	---
27	---	3047-270 **1107.38**	---
30	---	3047-300 **2705.66**	---

Saddle (Socket)



Size	80 PSI Disc Code: 310 Part Number / Price Each	100 PSI Disc Code: 320 Part Number / Price Each	125 PSI Disc Code: 330 Part Number / Price Each
6X2	---	300-101789 **61.33**	---
6X3	---	300-101797 **73.61**	---
6X4	---	300-101804 **85.85**	---
8X2	---	300-101790 **61.33**	---
8X3	---	300-101798 **73.61**	---
8X4	---	300-101805 **85.85**	---
8X6	---	300-101811 **98.14**	---
10X2	---	300-101791 **61.33**	---
10X3	---	300-101799 **73.61**	---
10X4	---	300-101806 **85.85**	---
10X6	---	300-101812 **98.14**	---
10X8	---	300-101817 **110.41**	---
12X2	---	300-101792 **61.33**	---
12X3	---	300-101800 **73.61**	---
12X4	---	300-101807 **85.85**	---
12X6	---	300-101813 **98.14**	---

Saddle (Socket) (continued)



Size	80 PSI Disc Code: 310 Part Number / Price Each	100 PSI Disc Code: 320 Part Number / Price Each	125 PSI Disc Code: 330 Part Number / Price Each
12X8	---	300-101818 **110.41**	---
12X10	---	300-101822 **122.65**	---
15X2	---	300-101793 **61.33**	---
15X3	---	300-101801 **88.61**	---
15X4	---	300-101808 **85.85**	---
15X6	---	300-101814 **98.14**	---
15X8	---	300-101819 **110.41**	---
15X10	---	300-101823 **122.65**	---
15X12	---	300-101826 **170.62**	---
18X2	---	300-101794 **61.33**	---
18X3	---	300-101802 **131.61**	---
18X4	---	300-101809 **167.82**	---
18X6	---	300-101815 **202.64**	---
18X8	---	300-101820 **216.49**	---
18X10	---	300-101824 **249.22**	---
18X12	---	300-101827 **262.77**	---
18X15	---	300-101829 **402.01**	---

NOTE: When assembling Spears® Saddles to PVC pipe, Spears® Manufacturing Company recommends Industrial Polychemical Service (IPS) #719 Solvent Cement and #P-68 Primer, or equivalent. Although good connections may be accomplished without Saddle Straps, Spears® Manufacturing Company recommends the use of clamp or strap device during the asssembly step to insure good compression between the pipe and fitting surfaces as the solvent cures. PVC Fabricated Saddle connections are designed for use in low pressure open ended systems and are not intended for use in high pressure applications. For further details, contact Spears® Technical Services Department.

Stub Saddle (Socket)



Size	80 PSI Disc Code: 310 Part Number / Price Each	100 PSI Disc Code: 320 Part Number / Price Each	125 PSI Disc Code: 330 Part Number / Price Each
6X2	---	300-101884 **85.85**	---
6X3	---	300-101892 **94.48**	---
6X4	---	300-101899 **109.16**	---
8X2	---	300-101885 **85.85**	---
8X3	---	300-101893 **94.48**	---
8X4	---	300-101900 **109.16**	---
8X6	---	300-101906 **134.95**	---
10X2	---	300-101886 **85.85**	---
10X3	---	300-101894 **94.48**	---
10X4	---	300-101901 **109.16**	---
10X6	---	300-101907 **134.95**	---
10X8	---	300-101912 **176.69**	---
12X2	---	300-101887 **85.85**	---
12X3	---	300-101895 **94.48**	---
12X4	---	300-101902 **109.16**	---

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Glue-on Saddles

Stub Saddle (Socket) (continued)

Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
12X6	---	300-101908 **134.95**	---
12X8	---	300-101913 **176.69**	---
12X10	---	300-101917 **191.37**	---
15X2	---	300-101888 **123.91**	---
15X3	---	300-101896 **137.37**	---
15X4	---	300-101903 **143.55**	---
15X6	---	300-101909 **148.43**	---
15X8	---	300-101914 **176.69**	---
15X10	---	300-101918 **203.64**	---
15X12	---	300-101921 **268.67**	---
18X2	---	300-101889 **202.42**	---
18X3	---	300-101897 **207.34**	---

Stub Saddle (Socket) (continued)

Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
18X4	---	300-101904 **250.25**	---
18X6	---	300-101910 **318.99**	---
18X8	---	300-101915 **341.08**	---
18X10	---	300-101919 **392.63**	---
18X12	---	300-101922 **452.77**	---
18X15	---	300-101924 **633.08**	---

NOTE: When assembling Spears® Saddles to PVC pipe, Spears® Manufacturing Company recommends Industrial Polychemical Service (IPS) #719 Solvent Cement and #P-68 Primer, or equivalent. Although good connections may be accomplished without Saddle Straps, Spears® Manufacturing Company recommends the use of clamp or strap device during the assembly step to insure good compression between the pipe and fitting surfaces as the solvent cures. PVC Fabricated Saddle connections are designed for use in low pressure open ended systems and are not intended for use in high pressure applications. For further details, contact Spears® Technical Services Department.

Pipe Flanges

Flange x PIP (Socket)

Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6X6.140	---	---	354-060F **133.67**
8X8.160	---	---	354-080F **202.42**
10X10.200	---	---	354-100F **284.61**
12X12.240	---	---	354-120F **412.21**
14X15.300	---	---	354-150F **1098.76**
16X15.300	---	---	354-151F **1253.46**
18X18.360	---	354-182F **1904.21**	---
18X18.701	---	354-181F **1904.21**	---
20X22.047	---	354-201F **2900.51**	---
24X24.803	---	354-241F **4247.72**	---

PIP =Plastic Irrigation Pipe (PIP dimensions are NOT the same as IPS dimensions.)
Sizes 6" through 16" are furnished with Plastic Ring.
Sizes 18" Through 24" are furnished with Steel Ring.

Tee (Gasket x Spigot x Fipt)

Size	CLASS 63 Disc Code: 340 Part Number Price Each	CLASS 100 Disc Code: 350 Part Number Price Each	CLASS 125 Disc Code: 360 Part Number Price Each	CLASS 160 Disc Code: 370 Part Number Price Each	CLASS 200 Disc Code: 380 Part Number Price Each
4X1-1/2	---	---	---	340-102356 **189.49**	350-102356 **220.87**
4X2	---	---	---	340-102357 **189.49**	350-102357 **220.87**
4X2-1/2	---	---	---	340-102358 **202.32**	350-102358 **234.83**
4X3	---	---	---	340-102359 **202.32**	---
6X1-1/2	---	---	---	340-102361 **275.58**	350-102361 **287.19**
6X2	---	---	---	340-102362 **275.58**	350-102362 **287.19**
6X2-1/2	---	---	---	340-102363 **293.03**	350-102363 **299.97**
6X3	---	---	---	340-102364 **293.03**	350-102364 **299.97**
6X4	---	---	---	340-102365 **304.60**	350-102365 **316.24**
8X1-1/2	---	---	---	340-102366 **336.01**	350-102366 **409.26**
8X2	---	---	---	340-102367 **336.01**	350-102367 **409.26**
8X2-1/2	---	---	---	340-102368 **353.45**	350-102368 **426.69**
8X3	---	---	---	340-102369 **353.45**	350-102369 **426.69**
8X4	---	---	---	340-102370 **382.52**	350-102370 **444.12**
10X2	---	---	---	340-102372 **570.87**	350-102372 **623.20**
10X2-1/2	---	---	---	340-102373 **605.77**	---
10X3	---	---	---	340-102374 **605.77**	350-102374 **653.43**
10X4	---	---	---	340-102375 **637.13**	350-102375 **687.17**
12X2	---	---	---	340-102377 **760.40**	350-102377 **818.52**
12X2-1/2	---	---	---	340-102378 **792.95**	---
12X3	---	---	---	340-102379 **792.95**	350-102379 **862.69**
12X4	---	---	---	340-102380 **830.18**	350-102380 **906.91**

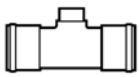
Tee (Gasket x Gasket x Fipt)

Size	CLASS 63 Disc Code: 340 Part Number Price Each	CLASS 100 Disc Code: 350 Part Number Price Each	CLASS 125 Disc Code: 360 Part Number Price Each	CLASS 160 Disc Code: 370 Part Number Price Each	CLASS 200 Disc Code: 380 Part Number Price Each
4X1-1/2	---	---	---	340-102426 **209.28**	350-102426 **229.06**
4X2	---	---	---	340-102427 **209.28**	350-102427 **229.06**
4X2-1/2	---	---	---	340-102428 **227.86**	350-102428 **246.48**
4X3	---	---	---	340-102429 **227.86**	350-102429 **246.48**
6X1-1/2	---	---	---	340-102431 **301.12**	350-102431 **316.24**
6X2	---	---	---	340-102432 **301.12**	350-102432 **316.24**
6X2-1/2	---	---	---	340-102433 **312.76**	350-102433 **331.39**
6X3	---	---	---	340-102434 **312.76**	350-102434 **331.39**
6X4	---	---	---	340-102435 **322.06**	350-102435 **345.33**
8X1-1/2	---	---	---	340-102436 **368.59**	350-102436 **441.82**
8X2	---	---	---	340-102437 **368.59**	350-102437 **441.82**
8X2-1/2	---	---	---	340-102438 **390.66**	350-102438 **465.06**
8X3	---	---	---	340-102439 **390.66**	350-102439 **465.06**
8X4	---	---	---	340-102440 **415.07**	350-102440 **641.20**

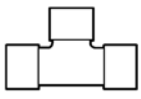
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Tee (Gasket x Gasket x Fipt) (continued)

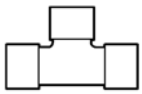
	Size	CLASS 63 Disc Code: 340 Part Number Price Each	CLASS 100 Disc Code: 350 Part Number Price Each	CLASS 125 Disc Code: 360 Part Number Price Each	CLASS 160 Disc Code: 370 Part Number Price Each	CLASS 200 Disc Code: 380 Part Number Price Each
	**10X2**	---	---	---	340-102442 **624.35**	350-102442 **687.17**
	10X2-1/2	---	---	---	340-102443 **653.43**	350-102443 **725.55**
	10X3	---	---	---	340-102444 **653.43**	350-102444 **725.55**
	10X4	---	---	---	340-102445 **689.44**	350-102445 **754.56**
	12X2	---	---	---	340-102447 **805.40**	350-102447 **876.67**
	12X2-1/2	---	---	---	340-102448 **845.27**	---
	12X3	---	---	---	340-102449 **845.27**	350-102449 **920.85**
	12X4	---	---	---	340-102450 **888.27**	350-102450 **965.04**

Tee (Soc x Soc x Soc)

	**6**	310-102502 **72.27**	320-102502 **145.69**	330-102502 **161.97**	340-102502 **285.59**	350-102502 **302.22**
	6X2	310-102499 **57.08**	320-102499 **75.75**	330-102499 **90.89**	340-102499 **226.69**	350-102499 **235.45**
	6X3	310-102500 **60.60**	320-102500 **85.06**	330-102500 **96.71**	340-102500 **241.20**	350-102500 **247.16**
	6X4	310-102501 **66.44**	320-102501 **93.25**	330-102501 **108.38**	340-102501 **249.94**	350-102501 **264.61**
	8	310-102507 **121.25**	320-102507 **184.15**	330-102507 **217.99**	340-102507 **447.66**	350-102507 **532.53**
	8X2	310-102503 **79.25**	320-102503 **100.23**	330-102503 **108.38**	340-102503 **288.35**	350-102503 **318.58**
	8X3	310-102504 **85.06**	320-102504 **111.86**	330-102504 **121.25**	340-102504 **323.23**	350-102504 **345.33**
	8X4	310-102505 **90.89**	320-102505 **127.00**	330-102505 **138.65**	340-102505 **341.83**	350-102505 **362.76**
	8X6	310-102506 **108.38**	320-102506 **163.18**	330-102506 **172.48**	340-102506 **396.48**	350-102506 **430.18**
	10	310-102513 **180.64**	320-102513 **256.38**	330-102513 **354.32**	340-102513 **695.27**	350-102513 **845.27**
	10X2	310-102508 **108.38**	320-102508 **132.83**	330-102508 **170.15**	340-102508 **408.12**	350-102508 **485.98**
	10X3	310-102509 **127.00**	320-102509 **153.83**	330-102509 **200.47**	340-102509 **438.36**	350-102509 **517.37**
	10X4	310-102510 **144.54**	320-102510 **172.48**	330-102510 **226.09**	340-102510 **474.39**	350-102510 **555.75**
	10X6	310-102511 **157.35**	320-102511 **189.98**	330-102511 **250.55**	340-102511 **522.04**	350-102511 **611.55**
	10X8	310-102512 **167.83**	320-102512 **220.28**	330-102512 **298.36**	340-102512 **588.33**	350-102512 **687.17**
	12	310-102520 **248.24**	320-102520 **404.44**	330-102520 **531.47**	340-102520 **989.47**	350-102520 **1306.84**
	12X2	310-102514 **186.52**	320-102514 **200.47**	330-102514 **262.27**	340-102514 **539.46**	350-102514 **640.65**
	12X3	310-102515 **192.29**	320-102515 **212.13**	330-102515 **284.38**	340-102515 **575.55**	350-102515 **690.63**
	12X4	310-102516 **199.32**	320-102516 **236.60**	330-102516 **314.71**	340-102516 **615.07**	350-102516 **737.09**
	12X6	310-102517 **205.12**	320-102517 **270.40**	330-102517 **354.32**	340-102517 **683.68**	350-102517 **835.96**
	12X8	310-102518 **216.80**	320-102518 **298.36**	330-102518 **398.65**	340-102518 **761.55**	350-102518 **891.78**
	12X10	310-102519 **222.58**	320-102519 **356.66**	330-102519 **473.19**	340-102519 **851.09**	350-102519 **1044.09**
	15X2	310-102521** **221.46**	---	---	---	---
	15X3	310-102522** **233.09**	---	---	---	---
	15X4	310-102523** **258.75**	---	---	---	---
	15X6	310-102524** **264.58**	---	---	---	---
	15X8	310-102525** **284.38**	---	---	---	---
	15X10	310-102526** **298.36**	---	---	---	---

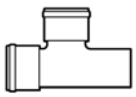
	Size	CLASS 63 Disc Code: 340 Part Number Price Each	CLASS 100 Disc Code: 350 Part Number Price Each	CLASS 125 Disc Code: 360 Part Number Price Each	CLASS 160 Disc Code: 370 Part Number Price Each	CLASS 200 Disc Code: 380 Part Number Price Each

Tee (Soc x Soc x Soc) (continued)

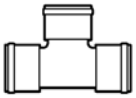
	**15X12**	310-102527** **336.83**	---	---	---	---
	15X15	310-102528* **428.92**	---	---	---	---

* 15" PIP O.D.
** 15" PIP O.D. x IPS

Tee (Gasket x Spigot x Gasket)

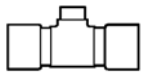
	**4**	---	320-103058 **116.54**	330-103058 **121.25**	340-103058 **221.46**	350-103058 **248.47**
	6	---	320-103062 **169.01**	330-103062 **180.64**	340-103062 **342.98**	350-103062 **395.29**
	6X4	---	320-103061 **144.54**	330-103061 **174.81**	340-103061 **304.60**	350-103061 **327.86**
	8	---	320-103067 **233.62**	330-103067 **300.71**	340-103067 **509.26**	350-103067 **640.65**
	8X4	---	320-103065 **182.35**	330-103065 **199.32**	340-103065 **380.18**	350-103065 **462.75**
	8X6	---	320-103066 **212.13**	330-103066 **251.77**	340-103066 **420.89**	350-103066 **526.69**
	10	---	320-103073 **396.29**	330-103073 **481.38**	340-103073 **833.66**	350-103073 **1051.96**
	10X4	---	320-103070 **272.73**	330-103070 **348.47**	340-103070 **559.27**	350-103070 **702.26**
	10X6	---	320-103071 **300.71**	330-103071 **378.82**	340-103071 **611.55**	350-103071 **766.20**
	10X8	---	320-103072 **334.52**	330-103072 **420.76**	340-103072 **687.17**	350-103072 **865.04**
	12	---	320-103080 **554.80**	330-103080 **662.03**	---	---
	12X4	---	320-103076 **368.32**	330-103076 **451.12**	340-103076 **731.31**	350-103076 **918.49**
	12X6	---	320-103077 **392.79**	330-103077 **456.89**	340-103077 **804.58**	350-103077 **1011.55**
	12X8	---	320-103078 **434.74**	330-103078 **481.38**	340-103078 **891.78**	350-103078 **1110.36**
	12X10	---	320-103079 **495.37**	330-103079 **540.83**	340-103079 **1009.22**	350-103079 **1256.85**
	12X12	---	---	---	340-103080 **1183.57**	---

Tee (Gasket x Gasket x Gasket)

	**4**	---	320-103170 **139.85**	330-103170 **191.08**	340-103170 **219.76**	350-103170 **272.07**
	6	---	320-103174 **163.18**	330-103174 **216.80**	340-103174 **366.24**	350-103174 **397.61**
	6X4	---	320-103173 **144.54**	330-103173 **205.12**	340-103173 **316.24**	350-103173 **339.49**
	8	---	320-103179 **289.04**	330-103179 **312.76**	340-103179 **570.87**	350-103179 **673.19**
	8X4	---	320-103177 **216.80**	330-103177 **241.26**	340-103177 **447.66**	350-103177 **497.60**
	8X6	---	320-103178 **222.58**	330-103178 **272.73**	340-103178 **497.60**	350-103178 **549.98**
	10	---	320-103185 **420.76**	330-103185 **529.14**	340-103185 **935.96**	350-103185 **1098.76**
	10X4	---	320-103182 **322.86**	330-103182 **400.95**	340-103182 **702.26**	350-103182 **716.20**
	10X6	---	320-103183 **346.18**	330-103183 **418.42**	340-103183 **745.28**	350-103183 **777.87**
	10X8	---	320-103184 **376.47**	330-103184 **487.22**	340-103184 **833.66**	350-103184 **876.67**
	12	---	320-103192 **585.13**	330-103192 **765.77**	340-103192 **1301.06**	350-103192 **1519.65**
	12X4	---	320-103188 **412.58**	330-103188 **487.22**	340-103188 **891.78**	350-103188 **932.47**
	12X6	---	320-103189 **423.12**	330-103189 **501.17**	340-103189 **974.32**	350-103189 **1031.31**
	12X8	---	320-103190 **445.26**	330-103190 **601.45**	340-103190 **1067.56**	350-103190 **1127.79**
	12X10	---	320-103191 **529.14**	330-103191 **641.08**	340-103191 **1198.77**	350-103191 **1276.62**

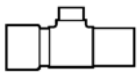
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Reinforced Tee (Soc x Soc x Fipt)



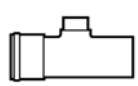
Size	CLASS 63 Disc Code: 340 Part Number / Price Each	CLASS 100 Disc Code: 350 Part Number / Price Each	CLASS 125 Disc Code: 360 Part Number / Price Each	CLASS 160 Disc Code: 370 Part Number / Price Each	CLASS 200 Disc Code: 380 Part Number / Price Each
6X2	---	---	330-202152 **81.59**	---	---
6X3	---	---	330-202154 **93.25**	---	---
6X4	---	---	330-202155 **106.03**	---	---
8X2	---	---	330-202157 **117.71**	---	---
8X3	---	---	330-202159 **137.52**	---	---
8X4	---	---	330-202160 **150.31**	---	---
10X2	---	---	330-202162 **181.79**	---	---
10X3	---	---	330-202164 **212.13**	---	---
10X4	---	---	330-202165 **231.92**	---	---
12X2	---	---	330-202167 **262.27**	---	---
12X3	---	---	330-202169 **292.57**	---	---
12X4	---	---	330-202170 **322.86**	---	---

Reinforced Tee (Soc x Spigot x Fipt)



Size	CLASS 63 Disc Code: 340 Part Number / Price Each	CLASS 100 Disc Code: 350 Part Number / Price Each	CLASS 125 Disc Code: 360 Part Number / Price Each	CLASS 160 Disc Code: 370 Part Number / Price Each	CLASS 200 Disc Code: 380 Part Number / Price Each
6X2	---	---	330-202222 **81.59**	---	---
6X3	---	---	330-202224 **93.25**	---	---
6X4	---	---	330-202225 **106.03**	---	---
8X2	---	---	330-202227 **116.54**	---	---
8X3	---	---	330-202229 **130.48**	---	---
8X4	---	---	330-202230 **143.32**	---	---
10X2	---	---	330-202232 **172.48**	---	---
10X3	---	---	330-202234 **201.61**	---	---
10X4	---	---	330-202235 **222.58**	---	---
12X2	---	---	330-202237 **249.41**	---	---
12X3	---	---	330-202239 **278.57**	---	---
12X4	---	---	330-202240 **310.05**	---	---

Reinforced Tee (Gasket x Spigot x Fipt)



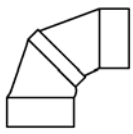
Size	CLASS 63 Disc Code: 340 Part Number / Price Each	CLASS 100 Disc Code: 350 Part Number / Price Each	CLASS 125 Disc Code: 360 Part Number / Price Each	CLASS 160 Disc Code: 370 Part Number / Price Each	CLASS 200 Disc Code: 380 Part Number / Price Each
6X2	---	---	330-202362 **139.85**	---	---
6X3	---	---	330-202364 **159.64**	---	---
6X4	---	---	330-202365 **169.01**	---	---
8X2	---	---	330-202367 **174.81**	---	---
8X3	---	---	330-202369 **186.52**	---	---
8X4	---	---	330-202370 **199.32**	---	---
10X2	---	---	330-202372 **264.58**	---	---
10X3	---	---	330-202374 **285.55**	---	---
10X4	---	---	330-202375 **313.53**	---	---
12X2	---	---	330-202377 **361.31**	---	---
12X3	---	---	330-202379 **391.61**	---	---
12X4	---	---	330-202380 **420.76**	---	---

Reinforced Tee (Gasket x Gasket x Fipt)



Size	CLASS 63 Disc Code: 340	CLASS 100 Disc Code: 350	CLASS 125 Disc Code: 360	CLASS 160 Disc Code: 370	CLASS 200 Disc Code: 380
	Part Number Price Each	Part Number Price Each	Part Number Price Each	Part Number Price Each	Part Number Price Each
6X2	---	---	330-202432 **169.01**	---	---
6X3	---	---	330-202434 **180.64**	---	---
6X4	---	---	330-202435 **192.29**	---	---
8X2	---	---	330-202437 **210.96**	---	---
8X3	---	---	330-202439 **222.58**	---	---
8X4	---	---	330-202440 **241.26**	---	---
10X2	---	---	330-202442 **328.69**	---	---
10X3	---	---	330-202444 **346.18**	---	---
10X4	---	---	330-202445 **382.29**	---	---
12X2	---	---	330-202447 **445.26**	---	---
12X3	---	---	330-202449 **487.22**	---	---
12X4	---	---	330-202450 **509.40**	---	---

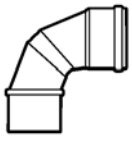
90° Elbow (Soc x Soc)



6	310-100812 **79.25**	320-100812 **102.53**	330-100812 **114.20**	340-100812 **294.15**	350-100812 **318.58**
8	310-100813 **108.38**	320-100813 **157.35**	330-100813 **187.62**	340-100813 **408.12**	350-100813 **462.75**
10	310-100814 **169.01**	320-100814 **245.93**	330-100814 **297.21**	340-100814 **620.88**	350-100814 **762.71**
12	310-100815 **241.26**	320-100815 **342.64**	330-100815 **454.58**	340-100815 **899.91**	350-100815 **1023.18**
15	310-100816* **451.12**	---	---	---	---

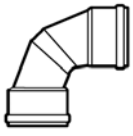
* 15" PIP O.D.

90° Elbow (Gasket x Spigot)



4	---	---	330-100877 **177.00**	---	---
6	---	320-100878 **207.48**	330-100878 **238.94**	340-100878 **389.47**	350-100878 **409.26**
8	---	320-100879 **314.71**	330-100879 **385.82**	340-100879 **555.75**	350-100879 **596.47**
10	---	320-100880 **458.07**	330-100880 **607.23**	340-100880 **804.58**	350-100880 **982.45**
12	---	320-100881 **614.26**	330-100881 **723.83**	340-100881 **1081.34**	350-100881 **1242.91**

90° Elbow (Gasket x Gasket)



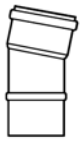
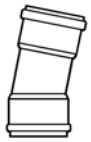
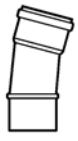
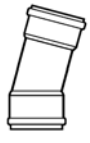
4	---	---	330-100899 **177.00**	340-100899 **263.92**	350-100899 **293.03**
6	---	320-100900 **207.48**	330-100900 **238.94**	340-100900 **389.47**	350-100900 **409.26**
8	---	320-100901 **314.71**	330-100901 **385.82**	340-100901 **555.75**	350-100901 **596.47**
10	---	320-100902 **458.07**	330-100902 **607.23**	340-100902 **804.58**	350-100902 **982.45**
12	---	320-100903 **614.26**	330-100903 **723.83**	3406-1202 **900.63**	350-100903 **1242.91**

11-1/4° Elbow (Soc x Soc)

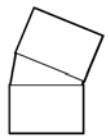


4	---	---	330-100113 **33.76**	340-100113 **37.38**	350-100113 **44.84**
6	310-100114 **30.25**	320-100114 **39.64**	330-100114 **47.76**	340-100114 **52.31**	350-100114 **55.79**
8	310-100115 **47.76**	320-100115 **60.60**	330-100115 **94.37**	340-100115 **90.68**	350-100115 **102.31**
10	310-100116 **67.57**	320-100116 **96.71**	330-100116 **134.04**	340-100116 **156.98**	350-100116 **210.40**
12	310-100117 **109.51**	320-100117 **151.53**	330-100117 **217.99**	340-100117 **246.48**	350-100117 **351.15**

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	Size	CLASS 63 Disc Code: 340 Part Number Price Each	CLASS 100 Disc Code: 350 Part Number Price Each	CLASS 125 Disc Code: 360 Part Number Price Each	CLASS 160 Disc Code: 370 Part Number Price Each	CLASS 200 Disc Code: 380 Part Number Price Each
11-1/4° Elbow (Soc x Soc) (continued)						
	**15**	310-100118 **184.15**	**---**	**---**	---	---
11-1/4° Elbow (Gasket x Spigot)						
	**4**	**---**	**---**	330-100185 **121.25**	340-100185 **134.55**	350-100185 **165.57**
	6	**---**	320-100186 **135.19**	330-100186 **169.01**	340-100186 **186.87**	350-100186 **204.63**
	8	**---**	320-100187 **165.51**	330-100187 **252.93**	340-100187 **274.06**	350-100187 **330.20**
	10	**---**	320-100188 **283.25**	330-100188 **336.83**	340-100188 **389.47**	350-100188 **573.17**
	12	**---**	320-100189 **378.82**	330-100189 **456.89**	340-100189 **567.40**	350-100189 **789.48**
11-1/4° Elbow (Gasket x Gasket)						
	**4**	**---**	**---**	330-100209 **121.25**	340-100209 **134.55**	350-100209 **165.57**
	6	**---**	320-100210 **135.19**	330-100210 **169.01**	340-100210 **186.87**	350-100210 **204.63**
	8	**---**	320-100211 **165.51**	330-100211 **252.93**	340-100211 **274.06**	350-100211 **330.20**
	10	**---**	320-100212 **283.25**	330-100212 **336.83**	340-100212 **389.47**	350-100212 **573.17**
	12	**---**	320-100213 **378.82**	330-100213 **456.89**	340-100213 **567.40**	350-100213 **789.48**
15° Elbow (Soc x Soc)						
	**4**	**---**	**---**	330-100233 **33.76**	340-100233 **37.38**	350-100233 **44.84**
	6	310-100234 **30.25**	320-100234 **39.64**	330-100234 **47.76**	340-100234 **52.31**	350-100234 **55.79**
	8	310-100235 **47.76**	320-100235 **60.60**	330-100235 **73.39**	340-100235 **90.68**	350-100235 **104.32**
	10	310-100236 **67.57**	320-100236 **96.71**	330-100236 **134.04**	340-100236 **156.98**	350-100236 **210.40**
	12	310-100237 **109.51**	320-100237 **151.53**	330-100237 **217.99**	340-100237 **246.48**	350-100237 **351.15**
	15	310-100238* **184.15**	**---**	**---**	---	---
* 15" PIP O.D.						
15° Elbow (Gasket x Spigot)						
	**4**	**---**	**---**	330-100305 **121.25**	340-100305 **134.55**	350-100305 **165.57**
	6	**---**	320-100306 **135.19**	330-100306 **169.01**	340-100306 **186.87**	350-100306 **204.63**
	8	**---**	320-100307 **165.51**	330-100307 **252.93**	340-100307 **274.06**	350-100307 **330.20**
	10	**---**	320-100308 **283.25**	330-100308 **336.83**	340-100308 **389.47**	350-100308 **573.17**
	12	**---**	320-100309 **378.82**	330-100309 **456.89**	340-100309 **567.40**	350-100309 **789.48**
15° Elbow (Gasket x Gasket)						
	**4**	**---**	**---**	330-100329 **121.25**	340-100329 **134.55**	350-100329 **165.57**
	6	**---**	320-100330 **135.19**	330-100330 **169.01**	340-100330 **186.87**	350-100330 **204.63**
	8	**---**	320-100331 **177.89**	330-100331 **252.93**	340-100331 **274.06**	350-100331 **330.20**
	10	**---**	320-100332 **263.75**	330-100332 **336.83**	340-100332 **389.47**	350-100332 **573.17**
	12	**---**	320-100333 **380.32**	330-100333 **456.89**	340-100333 **567.40**	350-100333 **789.48**

22-1/2° Elbow (Soc x Soc)

	Size	CLASS 63 Disc Code: 340	CLASS 100 Disc Code: 350	CLASS 125 Disc Code: 360	CLASS 160 Disc Code: 370	CLASS 200 Disc Code: 380
		Part Number Price Each	Part Number Price Each	Part Number Price Each	Part Number Price Each	Part Number Price Each
	4	---	---	330-100353 **33.76**	340-100353 **37.38**	350-100353 **44.84**
	6	310-100354 **30.25**	320-100354 **39.64**	330-100354 **47.76**	340-100354 **52.31**	350-100354 **55.79**
	8	310-100355 **47.76**	320-100355 **60.60**	330-100355 **73.39**	340-100355 **90.68**	350-100355 **104.32**
	10	310-100356 **67.57**	320-100356 **96.71**	330-100356 **134.04**	340-100356 **156.98**	350-100356 **210.40**
	12	310-100357 **109.51**	320-100357 **151.53**	330-100357 **217.99**	340-100357 **246.48**	350-100357 **351.15**
	15	310-100358* **184.15**	---	---	---	---

* 15" PIP O.D.

22-1/2° Elbow (Gasket x Spigot)

	4	---	---	330-100425 **121.25**	340-100425 **134.55**	350-100425 **165.57**
	6	---	320-100426 **135.19**	330-100426 **169.01**	340-100426 **186.87**	350-100426 **204.63**
	8	---	320-100427 **165.51**	330-100427 **252.93**	340-100427 **274.06**	350-100427 **330.20**
	10	---	320-100428 **283.25**	330-100428 **336.83**	340-100428 **389.47**	350-100428 **573.17**
	12	---	320-100429 **378.82**	330-100429 **456.89**	340-100429 **567.40**	350-100429 **789.48**

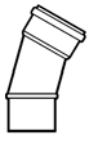
22-1/2° Elbow (Gasket x Gasket)

	4	---	---	330-100449 **121.25**	340-100449 **134.55**	350-100449 **165.57**
	6	---	320-100450 **135.19**	330-100450 **169.01**	340-100450 **186.87**	350-100450 **204.63**
	8	---	320-100451 **165.51**	330-100451 **252.93**	340-100451 **274.06**	350-100451 **330.20**
	10	---	320-100452 **283.25**	330-100452 **336.83**	340-100452 **389.47**	350-100452 **573.17**
	12	---	320-100453 **378.82**	330-100453 **456.89**	340-100453 **567.40**	350-100453 **789.48**

30° Elbow (Soc x Soc)

	4	---	---	330-100473 **41.94**	340-100473 **88.31**	350-100473 **146.81**
	6	310-100474 **41.94**	320-100474 **52.46**	330-100474 **59.42**	340-100474 **216.26**	350-100474 **261.36**
	8	310-100475 **61.74**	320-100475 **87.41**	330-100475 **92.05**	340-100475 **294.15**	350-100475 **351.15**
	10	310-100476 **89.75**	320-100476 **134.04**	330-100476 **189.98**	340-100476 **455.78**	350-100476 **549.98**
	12	310-100477 **145.69**	320-100477 **195.80**	330-100477 **278.57**	340-100477 **660.40**	350-100477 **768.54**
	15	310-100478 **217.99**	---	---	---	---

30° Elbow (Gasket x Spigot)

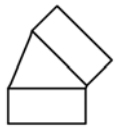
	4	---	---	330-100545 **139.13**	340-100545 **167.42**	350-100545 **175.56**
	6	---	320-100546 **180.64**	330-100546 **192.29**	340-100546 **248.82**	350-100546 **304.60**
	8	---	320-100547 **222.58**	330-100547 **270.40**	340-100547 **366.24**	350-100547 **453.43**
	10	---	320-100548 **313.53**	330-100548 **397.42**	340-100548 **608.07**	350-100548 **756.95**
	12	---	320-100549 **433.61**	330-100549 **576.95**	340-100549 **804.58**	350-100549 **949.93**

30° Elbow (Gasket x Gasket)

	4	---	---	330-100569 **139.13**	340-100569 **167.42**	350-100569 **175.56**
	6	---	320-100570 **180.64**	330-100570 **192.29**	340-100570 **248.82**	350-100570 **304.60**
	8	---	320-100571 **222.58**	330-100571 **270.40**	340-100571 **366.24**	350-100571 **453.43**
	10	---	320-100572 **313.53**	330-100572 **397.42**	340-100572 **608.07**	350-100572 **756.95**
	12	---	320-100573 **433.61**	330-100573 **576.95**	340-100573 **804.58**	350-100573 **949.93**

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45° Elbow (Soc x Soc)



Size	CLASS 63 Disc Code: 340 Part Number / Price Each	CLASS 100 Disc Code: 350 Part Number / Price Each	CLASS 125 Disc Code: 360 Part Number / Price Each	CLASS 160 Disc Code: 370 Part Number / Price Each	CLASS 200 Disc Code: 380 Part Number / Price Each
6	310-100592 **41.94**	320-100592 **52.46**	330-100592 **59.42**	340-100592 **216.26**	350-100592 **225.54**
8	310-100593 **61.74**	320-100593 **87.41**	330-100593 **92.05**	340-100593 **294.15**	350-100593 **351.15**
10	310-100594 **89.75**	320-100594 **134.04**	330-100594 **189.98**	340-100594 **455.78**	350-100594 **549.98**
12	310-100595 **145.69**	320-100595 **195.80**	330-100595 **278.57**	340-100595 **660.40**	350-100595 **768.54**
15	310-100596* **217.99**	---	---	---	---

* 15" PIP O.D.

45° Elbow (Gasket x Spigot)



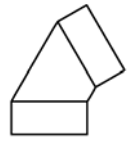
Size	CLASS 63 Disc Code: 340 Part Number / Price Each	CLASS 100 Disc Code: 350 Part Number / Price Each	CLASS 125 Disc Code: 360 Part Number / Price Each	CLASS 160 Disc Code: 370 Part Number / Price Each	CLASS 200 Disc Code: 380 Part Number / Price Each
4	---	---	330-100657 **139.13**	340-100657 **167.42**	350-100657 **175.56**
6	---	320-100658 **141.09**	330-100658 **192.29**	340-100658 **248.82**	350-100658 **304.60**
8	---	320-100659 **199.97**	330-100659 **270.40**	340-100659 **366.24**	350-100659 **453.43**
10	---	320-100660 **287.06**	330-100660 **397.42**	340-100660 **608.07**	350-100660 **755.13**
12	---	320-100661 **408.54**	330-100661 **576.95**	340-100661 **804.58**	350-100661 **949.93**

45° Elbow (Gasket x Gasket)



Size	CLASS 63 Disc Code: 340 Part Number / Price Each	CLASS 100 Disc Code: 350 Part Number / Price Each	CLASS 125 Disc Code: 360 Part Number / Price Each	CLASS 160 Disc Code: 370 Part Number / Price Each	CLASS 200 Disc Code: 380 Part Number / Price Each
4	---	---	330-100679 **139.13**	340-100679 **167.42**	350-100679 **175.56**
6	---	320-100680 **141.09**	330-100680 **192.29**	340-100680 **248.82**	350-100680 **304.60**
8	---	320-100681 **199.97**	330-100681 **270.40**	340-100681 **366.24**	350-100681 **453.43**
10	---	320-100682 **287.06**	330-100682 **397.42**	340-100682 **608.07**	350-100682 **756.95**
12	---	320-100683 **433.58**	330-100683 **576.95**	340-100683 **804.58**	350-100683 **949.93**

60° Elbow (Soc x Soc)



Size	CLASS 63 Disc Code: 340 Part Number / Price Each	CLASS 100 Disc Code: 350 Part Number / Price Each	CLASS 125 Disc Code: 360 Part Number / Price Each	CLASS 160 Disc Code: 370 Part Number / Price Each	CLASS 200 Disc Code: 380 Part Number / Price Each
4	---	---	330-100701 **75.01**	---	---
6	310-100702 **79.25**	320-100702 **102.53**	330-100702 **114.20**	340-100702 **294.15**	350-100702 **318.58**
8	310-100703 **108.38**	320-100703 **157.35**	330-100703 **187.62**	340-100703 **408.12**	350-100703 **462.75**
10	310-100704 **169.01**	320-100704 **245.93**	330-100704 **297.21**	340-100704 **620.88**	350-100704 **762.71**
12	310-100705 **241.26**	320-100705 **342.64**	330-100705 **454.58**	340-100705 **899.91**	350-100705 **1023.18**
15	310-100706* **451.12**	---	---	---	---

* 15" PIP O.D.

60° Elbow (Gasket x Spigot)



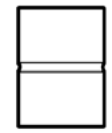
Size	CLASS 63 Disc Code: 340 Part Number / Price Each	CLASS 100 Disc Code: 350 Part Number / Price Each	CLASS 125 Disc Code: 360 Part Number / Price Each	CLASS 160 Disc Code: 370 Part Number / Price Each	CLASS 200 Disc Code: 380 Part Number / Price Each
4	---	---	330-100767 **177.00**	340-100767 **263.92**	350-100767 **293.03**
6	---	320-100768 **207.48**	330-100768 **238.94**	340-100768 **389.47**	350-100768 **409.26**
8	---	320-100769 **314.71**	330-100769 **385.82**	340-100769 **555.75**	350-100769 **596.47**
10	---	320-100770 **458.07**	330-100770 **607.23**	340-100770 **804.58**	350-100770 **982.45**
12	---	320-100771 **614.26**	330-100771 **723.83**	340-100771 **1081.34**	350-100771 **1242.91**

60° Elbow (Gasket x Gasket)



Size	CLASS 63 Disc Code: 340 Part Number / Price Each	CLASS 100 Disc Code: 350 Part Number / Price Each	CLASS 125 Disc Code: 360 Part Number / Price Each	CLASS 160 Disc Code: 370 Part Number / Price Each	CLASS 200 Disc Code: 380 Part Number / Price Each
4	---	---	330-100789 **177.00**	340-100789 **263.92**	350-100789 **293.03**
6	---	320-100790 **207.48**	330-100790 **238.94**	340-100790 **389.47**	350-100790 **409.26**
8	---	320-100791 **314.71**	330-100791 **385.82**	340-100791 **555.75**	350-100791 **596.47**
10	---	320-100792 **458.07**	330-100792 **607.23**	340-100792 **804.58**	350-100792 **982.45**
12	---	320-100793 **614.26**	330-100793 **723.83**	340-100793 **1081.34**	350-100793 **1242.91**

Coupling (Soc x Soc)



Size	CLASS 63 Disc Code 340 Part Number Price Each	CLASS 100 Disc Code 350 Part Number Price Each	CLASS 125 Disc Code 360 Part Number Price Each	CLASS 160 Disc Code 370 Part Number Price Each	CLASS 200 Disc Code 380 Part Number Price Each
6	310-100002 **22.15**	320-100002 **26.77**	330-100002 **30.25**	340-100002 **36.02**	350-100002 **44.20**
8	310-100003 **38.44**	320-100003 **46.60**	330-100003 **50.13**	340-100003 **66.31**	350-100003 **84.86**
10	310-100004 **45.46**	320-100004 **76.92**	330-100004 **92.05**	340-100004 **105.28**	350-100004 **184.87**
12	310-100005 **69.93**	320-100005 **120.03**	330-100005 **148.04**	340-100005 **168.60**	350-100005 **277.88**
15	310-100006* **104.91**	**---**	**---**	---	---

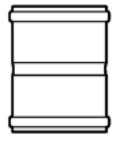
* 15" PIP O.D.

Coupling (Gasket x Spigot)



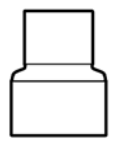
4	---	320-100067 **40.77**	330-100067 **52.46**	340-100067 **58.54**	350-100067 **70.88**
6	---	320-100068 **64.06**	330-100068 **69.93**	340-100068 **94.19**	350-100068 **99.99**
8	---	320-100069 **103.72**	330-100069 **125.84**	340-100069 **150.00**	350-100069 **167.42**
10	---	320-100070 **137.52**	330-100070 **167.83**	340-100070 **219.76**	350-100070 **277.88**
12	---	320-100071 **189.98**	330-100071 **228.44**	340-100071 **330.20**	350-100071 **397.61**

Coupling (Gasket x Gasket)



4	---	320-100089 **64.06**	330-100089 **75.75**	340-100089 **83.03**	350-100089 **91.33**
6	---	320-100090 **96.71**	330-100090 **108.38**	340-100090 **113.89**	350-100090 **144.16**
8	---	320-100091 **144.54**	330-100091 **157.35**	340-100091 **170.56**	350-100091 **190.68**
10	---	320-100092 **205.12**	330-100092 **228.44**	340-100092 **275.58**	350-100092 **330.20**
12	---	320-100093 **270.40**	330-100093 **313.53**	340-100093 **362.76**	350-100093 **491.79**

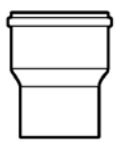
Reducer Coupling (Soc x Soc)



6X4	310-100926 **30.25**	320-100926 **33.76**	330-100926 **38.44**	340-100926 **40.65**	350-100926 **51.15**
8X6	310-100928 **39.64**	320-100928 **53.58**	330-100928 **59.42**	340-100928 **65.09**	350-100928 **70.88**
10X8	310-100931 **55.93**	320-100931 **106.44**	330-100931 **95.56**	340-100931 **120.91**	350-100931 **144.16**
12X10	310-100935 **97.93**	320-100935 **145.69**	330-100935 **181.79**	340-100935 **222.06**	350-100935 **237.19**
15X12	310-100940** **184.15**	**---**	**---**	---	---

** 15" PIP O.D. x IPS

Reducer Coupling (Gasket x Spigot)



6X4	---	320-101310 **96.51**	330-101310 **114.20**	340-101310 **133.67**	350-101310 **147.65**
8X6	---	320-101312 **138.65**	330-101312 **169.01**	340-101312 **208.09**	350-101312 **231.38**
10X8	---	320-101315 **192.29**	330-101315 **228.44**	340-101315 **286.03**	350-101315 **325.54**
12X10	---	320-101319 **272.73**	330-101319 **328.69**	340-101319 **462.75**	350-101319 **522.04**

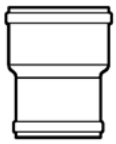
Reducer Coupling (Spigot x Gasket)



6X4	---	320-101383 **90.89**	330-101383 **102.53**	340-101383 **111.63**	350-101383 **127.87**
8X6	---	320-101385 **121.25**	330-101385 **144.54**	340-101385 **184.87**	350-101385 **210.40**
10X8	---	320-101388 **180.64**	330-101388 **222.58**	340-101388 **268.60**	350-101388 **316.24**
12X10	---	320-101392 **270.40**	330-101392 **310.05**	340-101392 **436.00**	350-101392 **511.57**

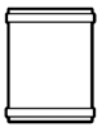
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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Reducer Coupling (Gasket x Gasket)



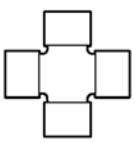
Size	CLASS 63 Disc Code: 340	CLASS 100 Disc Code: 350	CLASS 125 Disc Code: 360	CLASS 160 Disc Code: 370	CLASS 200 Disc Code: 380
	Part Number Price Each	Part Number Price Each	Part Number Price Each	Part Number Price Each	Part Number Price Each
6X4	---	320-101456 **121.25**	330-101456 **132.83**	340-101456 **156.98**	350-101456 **172.06**
8X6	---	320-101458 **174.81**	330-101458 **192.29**	340-101458 **252.28**	350-101458 **275.58**
10X8	---	320-101461 **241.26**	330-101461 **300.71**	340-101461 **360.39**	350-101461 **526.69**
12X10	---	320-101465 **334.52**	330-101465 **378.82**	340-101465 **478.53**	350-101465 **783.66**

Repair Coupling (Gasket x Gasket)



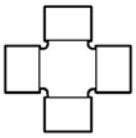
4	---	3228-040 **70.78**	3328-040 **75.75**	3428-040 **100.04**	3528-040 **121.36**
6	---	3228-060 **99.16**	3328-060 **102.53**	3428-060 **127.95**	3528-060 **148.20**
8	---	3228-080 **151.31**	3328-080 **157.35**	3428-080 **183.17**	3528-080 **199.64**
10	---	3228-100 **216.02**	3328-100 **234.27**	3428-100 **288.46**	3528-100 **320.23**
12	---	3228-120 **289.41**	3328-120 **313.53**	3428-120 **375.58**	3528-120 **447.24**
14	---	3228-140 **415.63**	3328-140 **437.32**	3428-140 **474.68**	---
16	---	3228-160 **548.04**	3328-160 **622.56**	3428-160 **675.27**	---

Cross (Soc x Soc x Soc x Soc)



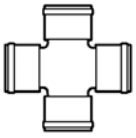
4X2	---	320-103280 **58.25**	330-103280 **87.41**	---	---
4X3	---	320-103281 **64.06**	330-103281 **90.33**	---	---
6	310-103286 **96.71**	320-103286 **167.83**	330-103286 **189.98**	340-103286 **391.80**	350-103286 **430.18**
6X2	310-103283 **66.44**	320-103283 **72.27**	330-103283 **96.71**	340-103283 **287.19**	350-103283 **289.52**
6X3	310-103284 **75.75**	320-103284 **90.89**	330-103284 **121.25**	340-103284 **298.80**	350-103284 **304.60**
6X4	310-103285 **81.59**	320-103285 **102.53**	330-103285 **138.65**	340-103285 **322.06**	350-103285 **345.33**
8	310-103291 **125.84**	320-103291 **217.99**	330-103291 **264.58**	340-103291 **590.63**	350-103291 **631.35**
8X2	310-103287 **85.06**	320-103287 **108.38**	330-103287 **121.25**	340-103287 **368.59**	350-103287 **374.22**
8X3	310-103288 **90.89**	320-103288 **121.25**	330-103288 **132.83**	340-103288 **380.18**	350-103288 **420.89**
8X4	310-103289 **103.72**	320-103289 **138.65**	330-103289 **159.64**	340-103289 **406.92**	350-103289 **444.12**
8X6	310-103290 **114.20**	320-103290 **169.01**	330-103290 **200.47**	340-103290 **474.39**	350-103290 **509.26**
10	310-103297 **203.97**	320-103297 **325.17**	330-103297 **456.89**	340-103297 **976.66**	350-103297 **1041.43**
10X2	310-103292 **103.72**	320-103292 **150.31**	330-103292 **178.32**	340-103292 **570.87**	350-103292 **619.75**
10X3	310-103293 **114.20**	320-103293 **170.15**	330-103293 **214.43**	340-103293 **579.01**	350-103293 **634.80**
10X4	310-103294 **125.84**	320-103294 **189.98**	330-103294 **242.43**	340-103294 **628.99**	350-103294 **666.22**
10X6	310-103295 **139.85**	320-103295 **210.96**	330-103295 **282.06**	340-103295 **702.26**	350-103295 **742.97**
10X8	310-103296 **159.64**	320-103296 **258.75**	330-103296 **350.84**	340-103296 **789.48**	350-103296 **845.27**
12	310-103304 **318.19**	320-103304 **501.17**	330-103304 **737.80**	340-103304 **1446.39**	350-103304 **1671.94**
12X2	310-103298 **148.04**	320-103298 **198.14**	330-103298 **289.04**	340-103298 **725.55**	350-103298 **731.31**
12X3	310-103299 **161.97**	320-103299 **228.44**	330-103299 **300.71**	340-103299 **764.03**	350-103299 **803.57**
12X4	310-103300 **172.48**	320-103300 **273.16**	330-103300 **336.83**	340-103300 **862.69**	350-103300 **876.67**
12X6	310-103301 **181.79**	320-103301 **284.38**	330-103301 **386.96**	340-103301 **947.58**	350-103301 **965.04**
12X8	310-103302 **209.79**	320-103302 **332.17**	330-103302 **454.58**	340-103302 **1058.02**	350-103302 **1081.34**
12X10	310-103303 **250.55**	320-103303 **412.58**	330-103303 **576.95**	340-103303 **1212.65**	350-103303 **1256.85**

Cross (Soc x Soc x Soc x Soc) (continued)

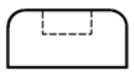
	Size	CLASS 63 Disc Code: 340 Part Number Price Each	CLASS 100 Disc Code: 350 Part Number Price Each	CLASS 125 Disc Code: 360 Part Number Price Each	CLASS 160 Disc Code: 370 Part Number Price Each	CLASS 200 Disc Code: 380 Part Number Price Each
	**15**	310-103321* **540.83**	---	---	---	---
	15X2	310-103313** **233.09**	---	---	---	---
	15X3	310-103314** **262.27**	---	---	---	---
	15X4	310-103315** **289.04**	---	---	---	---
	15X6	310-103316** **331.03**	---	---	---	---
	15X8	310-103317** **361.31**	---	---	---	---
	15X10	310-103318** **391.61**	---	---	---	---
	15X12	310-103319** **433.61**	---	---	---	---

* 15" PIP O.D.
** 15" PIP O.D. x IPS

Cross (Gasket x Gasket x Gasket x Gasket)

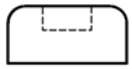
	**4**	---	320-103997 **203.97**	330-103997 **221.46**	340-103997 **276.84**	350-103997 **298.99**
	6	---	320-104001 **237.75**	330-104001 **298.36**	340-104001 **497.60**	350-104001 **631.35**
	6X4	---	320-104000 **215.63**	330-104000 **273.89**	340-104000 **391.80**	350-104000 **491.79**
	8	---	320-104006 **389.31**	330-104006 **445.26**	340-104006 **772.04**	350-104006 **959.24**
	8X4	---	320-104004 **291.38**	330-104004 **337.99**	340-104004 **534.78**	350-104004 **642.96**
	8X6	---	320-104005 **349.64**	330-104005 **384.60**	340-104005 **641.80**	350-104005 **748.76**
	10	---	320-104012 **585.13**	330-104012 **773.98**	340-104012 **1285.93**	350-104012 **1432.42**
	10X4	---	320-104009 **407.94**	330-104009 **495.37**	340-104009 **695.27**	350-104009 **830.18**
	10X6	---	320-104010 **466.20**	330-104010 **512.85**	340-104010 **851.09**	350-104010 **947.58**
	10X8	---	320-104011 **524.52**	330-104011 **670.22**	340-104011 **1046.43**	350-104011 **1081.34**
	12	---	320-104019 **793.75**	330-104019 **1086.36**	340-104019 **1791.69**	350-104019 **2017.25**
	12X4	---	320-104015 **582.79**	330-104015 **641.08**	340-104015 **1019.64**	350-104015 **1169.65**
	12X6	---	320-104016 **641.08**	330-104016 **676.03**	340-104016 **1169.16**	350-104016 **1247.56**
	12X8	---	320-104017 **699.34**	330-104017 **792.60**	340-104017 **1319.61**	350-104017 **1348.72**
	12X10	---	320-104018 **745.99**	330-104018 **955.78**	340-104018 **1546.39**	350-104018 **1578.94**

Surface Reducer (Soc)

	**6X2**	310-102013 **32.62**	---	330-102013 **46.60**	---	---
	6X3	310-102015 **32.62**	---	330-102015 **46.60**	---	---
	6X4	310-102016 **32.62**	---	---	---	---
	8X2	310-102018 **44.23**	---	330-102018 **93.25**	---	---
	8X3	310-102020 **44.23**	---	330-102020 **93.25**	---	---
	8X4	310-102021 **44.23**	---	330-102021 **93.25**	---	---
	8X6	310-102022 **44.23**	---	3340-585 **93.25**	---	---
	10X2	310-102024 **71.07**	---	330-102024 **145.69**	---	---
	10X3	310-102026 **71.07**	---	330-102026 **145.69**	---	---
	10X4	310-102027 **71.07**	---	330-102027 **145.69**	---	---
	10X6	310-102028 **71.07**	---	330-102028 **145.69**	---	---

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Surface Reducer (Soc) (continued)



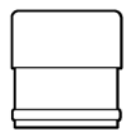
Size	CLASS 63 Disc Code: 340 Part Number / Price Each	CLASS 100 Disc Code: 350 Part Number / Price Each	CLASS 125 Disc Code: 360 Part Number / Price Each	CLASS 160 Disc Code: 370 Part Number / Price Each	CLASS 200 Disc Code: 380 Part Number / Price Each
10X8	310-102029 **71.07**	---	330-102029 **145.69**	---	---
12X2	310-102031 **87.41**	---	330-102031 **262.27**	---	---
12X3	310-102033 **87.41**	---	330-102033 **262.27**	---	---
12X4	310-102034 **87.41**	---	330-102034 **262.27**	---	---
12X6	310-102035 **87.41**	---	330-102035 **262.27**	---	---
12X8	310-102036 **87.41**	---	330-102036 **262.27**	---	---
12X10	310-102037 **87.41**	---	330-102037 **262.27**	---	---

Cap (Soc)



Size	CLASS 63 Disc Code: 340 Part Number / Price Each	CLASS 100 Disc Code: 350 Part Number / Price Each	CLASS 125 Disc Code: 360 Part Number / Price Each	CLASS 160 Disc Code: 370 Part Number / Price Each	CLASS 200 Disc Code: 380 Part Number / Price Each
6	310-107540 **22.15**	---	330-107540 **43.11**	---	---
8	310-107541 **40.77**	---	330-107541 **55.93**	---	---
10	310-107542 **69.93**	---	330-107542 **89.75**	---	---
12	310-107543 **85.59**	---	330-107543 **172.48**	---	---

Cap (Gasket)



Size	CLASS 63 Disc Code: 340 Part Number / Price Each	CLASS 100 Disc Code: 350 Part Number / Price Each	CLASS 125 Disc Code: 360 Part Number / Price Each	CLASS 160 Disc Code: 370 Part Number / Price Each	CLASS 200 Disc Code: 380 Part Number / Price Each
4	---	---	330-107565 **78.64**	---	---
6	---	---	330-107566 **111.86**	---	---
8	---	---	330-107567 **189.98**	---	---
10	---	---	330-107568 **306.51**	---	---
12	---	---	330-107569 **462.73**	---	---

Saddle (Soc)



Size	CLASS 63 Disc Code: 340 Part Number / Price Each	CLASS 100 Disc Code: 350 Part Number / Price Each	CLASS 125 Disc Code: 360 Part Number / Price Each	CLASS 160 Disc Code: 370 Part Number / Price Each	CLASS 200 Disc Code: 380 Part Number / Price Each
6	310-101937 **31.47**	---	---	---	---
6X2	310-101789 **24.44**	---	330-101789 **69.93**	---	---
6X3	310-101797 **26.77**	---	330-101797 **81.59**	---	---
6X4	310-101804 **30.25**	---	330-101804 **93.25**	---	---
8	310-101938 **46.60**	---	---	---	---
8X2	310-101790 **24.44**	---	330-101790 **69.93**	---	---
8X3	310-101798 **26.77**	---	330-101798 **81.59**	---	---
8X4	310-101805 **30.25**	---	330-101805 **93.25**	---	---
8X6	310-101811 **31.47**	---	330-101811 **104.91**	---	---
10	310-101939 **72.27**	---	---	---	---
10X2	310-101791 **24.44**	---	330-101791 **69.93**	---	---
10X3	310-101799 **26.77**	---	330-101799 **81.59**	---	---
10X4	310-101806 **30.25**	---	330-101806 **93.25**	---	---
10X6	310-101812 **31.47**	---	330-101812 **104.91**	---	---
10X8	310-101817 **46.60**	---	330-101817 **116.54**	---	---
12	310-101940 **108.12**	---	---	---	---
12X2	310-101792 **32.78**	---	330-101792 **69.93**	---	---

Saddle (Soc) (continued)

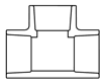
	Size	CLASS 63 Disc Code: 340 Part Number Price Each	CLASS 100 Disc Code: 350 Part Number Price Each	CLASS 125 Disc Code: 360 Part Number Price Each	CLASS 160 Disc Code: 370 Part Number Price Each	CLASS 200 Disc Code: 380 Part Number Price Each
	**12X3**	310-101800 **26.77**	**---**	330-101800 **81.59**	---	---
	12X4	310-101807 **30.25**	**---**	330-101807 **93.25**	---	---
	12X6	310-101813 **31.47**	**---**	330-101813 **104.91**	---	---
	12X8	310-101818 **46.60**	**---**	330-101818 **116.54**	---	---
	12X10	310-101822 **72.27**	**---**	330-101822 **128.20**	---	---

Stub Saddle (Soc)

	**6**	310-101949 **51.25**	**---**	**---**	---	---
	6X2	310-101884 **33.76**	**---**	330-101884 **61.74**	---	---
	6X3	310-101892 **39.64**	**---**	330-101892 **67.57**	---	---
	6X4	310-101899 **45.46**	**---**	330-101899 **75.75**	---	---
	8	310-101950 **69.93**	**---**	**---**	---	---
	8X2	310-101885 **33.76**	**---**	330-101885 **61.74**	---	---
	8X3	310-101893 **39.64**	**---**	330-101893 **67.57**	---	---
	8X4	310-101900 **45.46**	**---**	330-101900 **75.75**	---	---
	8X6	310-101906 **51.25**	**---**	330-101906 **92.05**	---	---
	10	310-101951 **96.71**	**---**	**---**	---	---
	10X2	310-101886 **33.76**	**---**	330-101886 **61.74**	---	---
	10X3	310-101894 **39.64**	**---**	330-101894 **67.57**	---	---
	10X4	310-101901 **45.46**	**---**	330-101901 **75.75**	---	---
	10X6	310-101907 **51.25**	**---**	330-101907 **92.05**	---	---
	10X8	310-101912 **69.93**	**---**	330-101912 **106.03**	---	---
	12	310-101952 **121.25**	**---**	**---**	---	---
	12X2	310-101887 **33.76**	**---**	330-101887 **61.74**	---	---
	12X3	310-101895 **39.64**	**---**	330-101895 **67.57**	---	---
	12X4	310-101902 **45.46**	**---**	330-101902 **87.44**	---	---
	12X6	310-101908 **51.25**	**---**	330-101908 **92.05**	---	---
	12X8	310-101913 **69.93**	**---**	330-101913 **106.03**	---	---
	12X10	310-101917 **96.71**	**---**	330-101917 **111.86**	---	---

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Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each



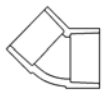
Tee, Class 125 Molded

12501-100	**10**	1	0	361	378.71
12501-120	**12**	1	0	361	568.02



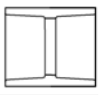
90° Elbow, Class 125 Molded

12506-100	**10**	1	0	361	317.65
12506-120	**12**	1	0	361	485.84



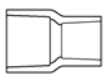
45° Elbow, Class 125 Molded

12517-100	**10**	1	0	361	203.04
12517-120	**12**	1	0	361	297.73



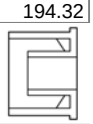
Coupling, Class 125 Molded

12529-100	**10**	1	0	361	98.39
12529-120	**12**	1	0	361	158.24



Reducer Coupling, Class 125 Molded

12529-626	**10X6**	1	0	361	164.04
12529-628	**10X8**	1	0	361	102.16
12529-668	**12X8**	1	0	361	244.08
12529-670	**12X10**	1	0	361	194.32



Reducer Bushing, Class 125 Molded

12537-626	**10X6**	1	2	361	155.73
12537-628	**10X8**	1	4	361	155.73
12537-668	**12X8**	1	2	361	280.33
12537-670	**12X10**	1	2	361	278.63

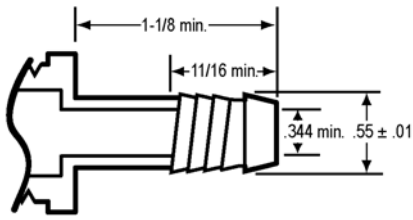
STANDARDS & SPECIFICATIONS



ASTM D 2609	Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe.
Material	Spears® Insert Fittings are produced from PVC Type 1, Cell Classification 12454, CPVC Cell Classification 23447 or Polypropylene (PP).

It is the user's responsibility to determine the suitability for the intended service application.

Dimensions of Spiral Barb Ends

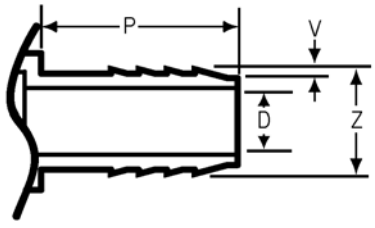


Dimensions of Polyethylene Pipe ASTM D 2104 and D 2239

Spears® Manufacturing Company Insert Fittings are designed for use with polyethylene pipe produced with average inside diameter as shown in the chart below.

Nominal Size in.	Average I.D. in.	Tolerance in.
1/2	.622	+.010 -.010
3/4	.824	+.010 -.015
1	1.049	+.010 -.020
1-1/4	1.380	+.010 -.020
1-1/2	1.610	+.015 -.020
2	2.067	+.015 -.020
2-1/2	2.469	+.010 -.025
3	3.068	+.015 -.030
4	4.026	+.015 -.035

Dimensions of Insert Ends ASTM D 2609



Nominal Size	Insert Length "P"	Barb O.D. "Z"		Barb Depth "V"	Inside Diameter "D"
in.	min.	max.	min.	min.	min.
1/2	1-1/4	0.665	0.635	0.015	0.406
3/4	1-1/4	0.865	0.835	0.015	0.562
1	1-1/4	1.095	1.065	0.020	0.750
1-1/4	1-1/4	1.425	1.395	0.025	0.995
1-1/2	1-1/2	1.665	1.630	0.030	1.125
2	1-1/2	2.125	2.085	0.030	1.656
2-1/2	2	2.520	2.487	0.030	2.062
3	2-1/8	3.125	3.086	0.030	2.600
4	3	4.090	4.044	0.030	3.525

INSERT FITTING INSTALLATION

Pipe is cut to length with handsaw or knife. When installing flexible lines, (a) snake line one foot or more per 100 lineal feet, (b) cold water should be run through lines prior to backfilling to permit pipe to contract, (c) care should be taken to prevent large and sharp-edged rocks from being in position to crush pipe. Insert fittings are used to join lengths of flexible pipe. Stainless steel clamps are first slipped over ends of pipe, fitting is inserted and steel clamps are tightened securely over barbs on fittings. DO NOT use oil or detergent on any fittings. Use plain water or soapy water as lubricant on fitting. For attachment to previously installed metallic systems or threaded fixtures, the insert adapter is utilized. Apply thread sealant to the threaded end of adapter and tighten into female connection. Steel clamp is then slipped over pipe end and pipe slipped over serrated end of insert adapter. Steel clamp is then positioned over serrations on insert adapter and securely tightened with a screwdriver.

TWIST LOCK INSERT INSTALLATION

Twist Lock Fittings with built in lock ring are installed the same as regular Insert Fittings, but do not require steel clamps. Check that lock ring component is fully threaded onto fitting. Slip pipe over serrated end of insert adapter. Twist lock ring back over pipe and barb to seal.

SPIRAL BARB FITTING INSTALLATION

Spiral Barb fittings are designed for use with 1/2" (.490) polyethylene irrigation hose and do not require steel clamps. Install with a twisting motion to fully engage barbs.

Barbed Insert Fittings

PVC Twist Lock Coupling

Loc Insert x Loc Insert

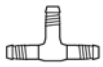


Requires NO Clamps

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
1429TL-005	**1/2**	50	600	140	5.98
1429TL-007	**3/4**	50	600	140	7.27
1429TL-010	**1**	50	400	140	8.65

PVC Spiral Barb Tee

Spiral Barb

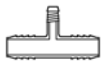


3/8" Spiral Barb accepts .490 Irrigation Pipe.

1401-003	**3/8**	50	800	140	1.81

PVC Spiral Barb Tee

Insert x Insert x Spiral Barb

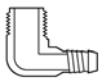


3/8" Spiral Barb accepts .490 Irrigation Pipe.

1401-099	**3/4X3/8**	25	450	140	3.29
1401-129	**1X3/8**	25	200	140	3.58

PP Spiral Barb 90° Ell

Mipt x Spiral Barb



3/8" Spiral Barb accepts .490 Irrigation Pipe.

1413-073	**1/2X3/8**	50	200	140	1.29
1413-099	**3/4X3/8**	50	200	140	1.29

PVC Spiral Barb Coupling

Spiral Barb x Spiral Barb

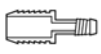


3/8" Spiral Barb accepts .490 Irrigation Pipe.

1429-003	**3/8**	50	300	140	1.95

PVC Spiral Barb Coupling

Insert x Spiral Barb



3/8" Spiral Barb accepts .490 Irrigation Pipe.

1429-099	**3/4X3/8**	50	600	140	2.13
1429-129	**1X3/8**	50	200	140	2.27

PP Spiral Barb Male Adapter

Mipt x Spiral Barb

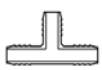


3/8" Spiral Barb accepts .490 Irrigation Pipe.

1436-073	**1/2X3/8**	50	300	140	1.29
1436-099	**3/4X3/8**	50	300	140	1.29

PVC Tee

Insert x Insert x Insert

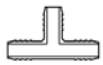


Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
1401-005	**1/2**	50	400	140	2.11
1401-007	**3/4**	50	0	140	2.28
1401-010	**1**	25	150	140	2.97
1401-012	**1-1/4**	10	80	140	4.64
1401-015	**1-1/2**	10	0	140	5.26
1401-020	**2**	10	0	140	10.38
1401-040*	**4**	2	0	140	159.86
1401-060*	**6**	1	0	140	299.44

* Assembled molded components

CPVC Tee

Insert x Insert x Insert



1401-005C	**1/2**	50	400	143	3.52

PVC Reducing Tee

Insert x Insert x Insert

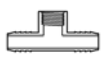


1401-074	**1/2X3/4**	25	400	140	5.69
1401-094	**3/4X1/2X1/2**	25	300	140	2.85
1401-101	**3/4X1/2**	25	150	140	2.58
1401-102	**3/4X1**	25	275	140	6.56
1401-124	**1X3/4X1/2**	25	200	140	4.15
1401-125	**1X3/4X3/4**	25	200	140	4.93
1401-130	**1X1/2**	25	200	140	3.02
1401-131	**1X3/4**	25	200	140	3.05
1401-132	**1X1-1/4**	25	0	140	9.16
1401-156	**1-1/4X1X1/2**	25	0	140	5.66
1401-157	**1-1/4X1X3/4**	25	0	140	5.66
1401-158	**1-1/4X1X1**	25	0	140	5.66
1401-166	**1-1/4X1/2**	25	0	140	3.98
1401-167	**1-1/4X3/4**	25	0	140	3.98
1401-168	**1-1/4X1**	25	0	140	3.98
1401-169	**1-1/4X1-1/2**	25	0	140	3.98
1401-201	**1-1/2X1-1/4X3/4**	10	80	140	7.13
1401-202	**1-1/2X1-1/4X1**	10	80	140	7.13
1401-203	**1-1/2X1-1/4X1-1/4**	10	0	140	7.13
1401-209	**1-1/2X1/2**	10	80	140	6.94
1401-210	**1-1/2X3/4**	10	80	140	6.94
1401-211	**1-1/2X1**	10	80	140	6.94
1401-212	**1-1/2X1-1/4**	10	0	140	6.94
1401-241	**2X1-1/2X1-1/2**	10	0	140	9.16
1401-247	**2X1/2**	10	0	140	9.87
1401-248	**2X3/4**	10	0	140	9.87
1401-249	**2X1**	10	0	140	9.87
1401-250	**2X1-1/4**	10	0	140	10.34
1401-251	**2X1-1/2**	10	0	140	10.64
1401-335*	**3X1**	5	0	140	110.40
1401-338*	**3X2**	5	0	140	121.67

* Assembled molded components

PVC Tee

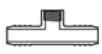
Insert x Insert x Fipt



1402-005	**1/2**	50	400	140	2.28
1402-007	**3/4**	50	0	140	3.44
1402-010	**1**	25	0	140	4.05
1402-012	**1-1/4**	10	0	140	5.95
1402-015	**1-1/2**	10	0	140	10.34
1402-020	**2**	10	0	140	12.82

PVC Reducing Tee

Insert x Insert x Fipt



1402-094	**3/4X1/2X1/2**	25	200	140	3.73
1402-101	**3/4X1/2**	25	150	140	2.85
1402-124	**1X3/4X1/2**	25	200	140	4.66
1402-125	**1X3/4X3/4**	25	0	140	5.56
1402-130	**1X1/2**	25	200	140	3.74
1402-131	**1X3/4**	25	200	140	3.74
1402-156	**1-1/4X1X1/2**	25	0	140	6.89
1402-157	**1-1/4X1X3/4**	25	0	140	8.06
1402-166	**1-1/4X1/2**	25	0	140	5.11
1402-167	**1-1/4X3/4**	25	0	140	5.63
1402-168	**1-1/4X1**	25	0	140	5.95
1402-199	**1-1/2X1-1/4X1/2**	25	0	140	10.85

PVC Reducing Tee (continued)
Insert x Insert x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
1402-201	1-1/2X1-1/4X3/4	10	0	140	12.08
1402-202	1-1/2X1-1/4X1	10	0	140	13.82
1402-209	1-1/2X1/2	10	80	140	7.85
1402-210	1-1/2X3/4	10	80	140	9.29
1402-211	1-1/2X1	10	0	140	9.29
1402-212	1-1/2X1-1/4	10	0	140	9.53
1402-247	2X1/2	10	0	140	10.53
1402-248	2X3/4	10	0	140	11.12
1402-249	2X1	10	0	140	12.24
1402-251	2X1-1/2	10	0	140	12.82

PVC Tee
Insert x Insert x Mipt



1403-005	1/2	50	500	140	2.92
1403-007	3/4	50	0	140	3.98
1403-010	1	25	0	140	5.11
1403-012	1-1/4	10	80	140	6.64
1403-015	1-1/2	10	0	140	7.43
1403-020	2	10	0	140	11.56

PVC Reducing Tee
Insert x Insert x Mipt



1403-130	1X1X1/2	25	200	140	4.87
1403-131	1X1X3/4	25	0	140	4.87

PVC Tee
Insert x Insert x Socket



1404-010	1	25	0	140	4.05

PVC Reducing Tee
Insert x Insert x Socket



1404-102	3/4X3/4X1	100	0	140	6.56

PVC Side Outlet Tee
Insert x Insert x Insert x Fipt



1416-007	3/4X3/4	50	0	140	7.16

PVC Reducing Side Outlet Tee
Insert x Insert x Insert x Fipt



1416-101	3/4X1/2	50	0	140	7.16
1416-130	1X1/2	50	0	140	7.62
1416-131	1X3/4	50	0	140	7.62

PVC 90° Ell
Insert x Insert



1406-005	1/2	50	1000	140	1.93
1406-007	3/4	50	400	140	2.36
1406-010	1	25	200	140	2.61
1406-012	1-1/4	10	180	140	2.92
1406-015	1-1/2	10	80	140	3.44
1406-020	2	10	0	140	4.80
1406-025	2-1/2	10	0	140	21.67
1406-040*	4	2	0	140	71.74

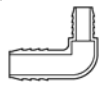
* Assembled

CPVC 90° Ell
Insert x Insert



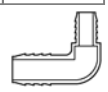
1407-007C	3/4	50	0	142	3.31

PVC 90° Reducing Ell
Insert x Insert



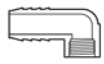
1406-101	3/4X1/2	25	300	140	2.23
1406-131	1X3/4	25	300	140	2.74
1406-168	1-1/4X1	25	0	140	4.05
1406-212	1-1/2X1-1/4	10	80	140	4.80
1406-251	2X1-1/2	10	0	140	5.28

CPVC 90° Reducing Ell
Insert x Insert



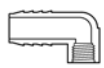
1407-074C	1/2X3/4	20	160	143	6.59

PVC 90° Ell
Insert x Fipt



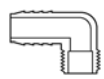
1407-005	1/2	50	400	140	2.17
1407-007	3/4	50	0	140	2.36
1407-010	1	25	0	140	3.02
1407-012	1-1/4	10	140	140	4.48
1407-015	1-1/2	10	0	140	5.11
1407-020	2	10	0	140	8.62

PVC 90° Reducing Ell
Insert x Fipt



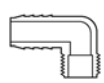
1407-074	1/2X3/4	50	400	140	2.23
1407-101	3/4X1/2	50	400	140	2.23
1407-130	1X1/2	25	300	140	2.36
1407-131	1X3/4	25	200	140	2.74
1407-166	1-1/4X1/2	25	200	140	4.05
1407-167	1-1/4X3/4	25	250	140	4.05
1407-168	1-1/4X1	25	0	140	4.05
1407-211	1-1/2X1	10	80	140	4.61
1407-212	1-1/2X1-1/4	10	80	140	5.01
1407-251	2X1-1/2	10	0	140	8.18

PVC 90° Ell
Insert x Mipt



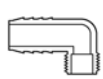
1413-005	1/2	50	600	140	2.42
1413-007	3/4	50	400	140	3.35
1413-010	1	25	200	140	4.40
1413-012	1-1/4	10	120	140	5.85
1413-015	1-1/2	10	80	140	7.77
1413-015H	1-1/2	10	80	140	7.77
1413-020	2	10	0	140	12.26

CPVC 90° Ell
Insert x Mipt



1413-020C	2	10	0	140	15.27

PVC 90° Reducing Ell
Insert x Mipt



1413-055	3/8X3/4	50	200	140	2.61
1413-101	3/4X1/2	50	300	140	4.19
1413-130	1X1/2	50	400	140	4.77

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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC 90° Reducing Ell (continued)
Insert x Mipt

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
1413-131	1X3/4	50	0	140	5.12

PVC 90° Side Outlet Ell
Insert x Insert x Fipt



1414-101	3/4X3/4X1/2	50	0	140	5.56
1414-130	1X1X1/2	25	200	140	5.97
1414-131	1X3/4	50	0	140	5.97

PVC Cross
Insert



1420-005	1/2	50	0	140	4.07
1420-007	3/4	25	150	140	5.52
1420-010	1	25	0	140	6.86

PVC Coupling
Insert x Insert



1429-005	1/2	50	600	140	.98
1429-007	3/4	50	600	140	1.18
1429-010	1	50	400	140	1.23
1429-012	1-1/4	25	200	140	1.82
1429-015	1-1/2	25	0	140	2.16
1429-020	2	25	0	140	4.08
1429-025	2-1/2	10	0	140	10.58
1429-030	3	10	0	140	17.97
1429-040	4	10	0	140	24.46
1429-060	6	8	0	140	69.32
1429-080*	8	4	0	140	150.06

* Fabricated

CPVC Coupling
Insert x Insert



1429-005C	1/2	50	600	142	1.39
1429-007C	3/4	50	600	142	2.01
1429-010C	1	50	400	143	1.75

PVC Reducer Coupling
Insert x Insert



1429-101	3/4X1/2	50	600	140	1.60
1429-130	1X1/2	50	400	140	2.20
1429-131	1X3/4	50	400	140	1.64
1429-1315	1X7/8	50	400	140	3.36
1429-167	1-1/4X3/4	25	300	140	3.36
1429-168	1-1/4X1	25	200	140	2.61
1429-210	1-1/2X3/4	25	275	140	4.08
1429-211	1-1/2X1	25	200	140	3.93
1429-212	1-1/2X1-1/4	25	0	140	3.05
1429-249	2X1	10	80	140	5.56
1429-250	2X1-1/4	10	80	140	5.17
1429-251	2X1-1/2	10	80	140	4.92
1429-291	2-1/2X1-1/2	10	0	140	14.07
1429-338*	3X2	12	0	140	39.79
1429-422	4X3	18	0	140	69.95
1429-532	6X4	8	0	140	79.57

* Fabricated

Insert Adapter (White PVC)
Insert x I.P.S. Spigot



460-005	1/2	50	300	040	2.26

Insert Adapter (White PVC) (continued)
Insert x I.P.S. Spigot

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
460-007	3/4	50	200	040	2.97
460-007N	3/4X3/4X1/2	50	200	040	2.97
460-010	1	50	0	040	3.11
460-012	1-1/4	20	160	040	3.20
460-012N	1-1/4X1-1/4X1	20	160	040	3.20
460-015	1-1/2	25	0	040	3.44
460-020	2	10	0	040	5.72
460-030	3	25	0	040	19.31
460-040	4	10	0	040	22.24
460-131N	3/4X1X3/4	20	160	040	3.46
460-132N	1X1-1/4X1	20	160	040	3.74
1432-060	6	8	0	140	95.61
1432-080*	8	4	0	140	189.82

N = Nesting
* Fabricated

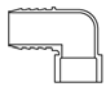
Insert Adapter (PVC Gray)
Insert x I.P.S. Spigot



460-005G	1/2	50	300	043	2.51
460-007G	3/4	50	200	043	3.31
460-010G	1	50	0	043	3.44
460-012G	1-1/4	20	160	043	3.56
460-015G	1-1/2	25	0	043	3.82
460-020G	2	10	0	043	6.36
460-030G	3	25	0	043	21.45
460-040G	4	10	0	043	23.75
1432-060G*	6	4	0	140	106.24

* Fabricated

Insert Adapter 90° Ell (White PVC)
Insert x I.P.S. Spigot



460A-015	1-1/2	10	80	040	6.83

Insert Adapter (White PVC)
Insert x Soc



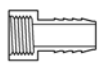
474-005	1/2	50	600	040	2.06
474-007	3/4	50	400	040	2.47
474-010	1	50	0	040	2.62
474-012	1-1/4	25	0	040	4.16
474-015	1-1/2	25	0	040	4.61
474-020	2	25	0	040	8.54
474-030	3	15	0	040	25.45
474-040	4	15	0	040	29.09

Insert Adapter (PVC Gray)
Insert x Soc



474-005G	1/2	50	600	043	2.28
474-007G	3/4	50	400	043	2.76
474-010G	1	50	0	043	2.92
474-012G	1-1/4	25	0	043	4.62
474-015G	1-1/2	25	0	043	4.79
474-020G	2	25	0	043	9.48

PVC Female Adapter
Fipt x Insert



1435-005	1/2	50	300	140	4.28
1435-007	3/4	50	400	140	4.66
1435-010	1	50	0	140	5.17
1435-012	1-1/4	25	0	140	6.35
1435-015	1-1/2	25	0	140	8.06

PVC Female Adapter (continued)
Fipt x Insert

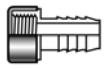
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
1435-020	**2**	10	0	140	10.24

CPVC Female Adapter
Fipt x Insert



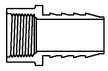
1435-005C	**1/2**	50	300	143	4.87
1435-007C	**3/4**	50	400	143	6.65
1435-010C	**1**	50	0	143	7.56
1435-012C	**1-1/4**	25	0	143	8.29
1435-015C	**1-1/2**	25	0	143	10.47
1435-020C	**2**	10	0	143	13.72

Special Reinforced PVC Female Adapter
SR Fipt x Insert



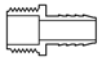
1435-005SR	**1/2**	50	400	142	5.73
1435-007SR	**3/4**	50	400	142	6.77
1435-010SR	**1**	50	0	142	8.07
1435-015SR	**1-1/2**	20	0	142	22.78

PVC Reducing Female Adapter
Fipt x Insert



1435-074	**1/2X3/4**	50	500	140	5.97
1435-101	**3/4X1/2**	50	600	140	5.53
1435-102	**3/4X1**	50	0	140	6.17
1435-131	**1X3/4**	50	0	140	4.07

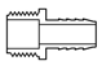
PVC Male Adapter
Mipt x Insert



1436-005	**1/2**	50	600	140	.96
1436-007	**3/4**	50	400	140	1.18
1436-010	**1**	50	0	140	1.22
1436-012	**1-1/4**	20	160	140	1.93
1436-015	**1-1/2**	25	0	140	2.16
1436-015W	**1-1/2**	20	0	001	2.16
1436-020	**2**	10	0	140	4.14
1436-025	**2-1/2**	10	0	140	17.00
1436-030	**3**	10	0	140	19.61
1436-040	**4**	10	0	140	27.26
1436-060G[1]	**6**	1	4	140	153.72
1436-060[2]	**6**	4	0	140	138.35

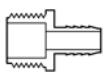
1 Fabricated - Gray PVC
2 Fabricated - White PVC

CPVC Male Adapter
Mipt x Insert



1436-005C	**1/2**	1400	0	143	1.39
1436-007C	**3/4**	50	400	143	1.69
1436-010C	**1**	50	0	143	1.74
1436-012C	**1-1/4**	20	160	143	2.61
1436-015C	**1-1/2**	25	0	143	3.11
1436-020C	**2**	10	0	143	5.92
1436-030C	**3**	10	0	143	26.77
1436-040C	**4**	10	0	143	41.38
1436-060C	**6**	4	0	001	139.49
1436-080CF	**8**	1	0	002	160.42

PVC Reducing Male Adapter
Mipt x Insert



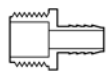
1436-074	**1/2X3/4**	50	300	140	3.05

PVC Reducing Male Adapter (continued)
Mipt x Insert

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
1436-075	**1/2X1**	50	200	140	3.17
1436-101	**3/4X1/2**	50	600	140	2.76
1436-102	**3/4X1**	50	400	140	3.17
1436-131	**1X3/4**	50	0	140	2.85
1436-132	**1X1-1/4**	25	200	140	3.85
1436-133	**1X1-1/2**	25	0	140	5.80
1436-167	**1-1/4X3/4**	25	200	140	3.36
1436-168	**1-1/4X1**	25	200	140	3.61
1436-169	**1-1/4X1-1/2**	10	120	140	5.80
1436-211	**1-1/2X1**	25	0	140	4.40
1436-212	**1-1/2X1-1/4**	25	0	140	4.40
1436-213	**1-1/2X2**	10	80	140	7.46
1436-251	**2X1-1/2**	10	80	140	7.40
1436-252*	**2X2-1/2**	10	0	140	13.44
1436-292*	**2-1/2X2**	10	0	140	59.29

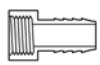
*Assembled molded components

CPVC Reducing Male Adapter
Mipt x Insert



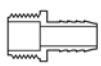
1436-073C	**1/2X3/8**	50	300	143	1.53
1436-074C	**1/2X3/4**	50	300	142	3.48
1436-101C	**3/4X1/2**	50	600	142	3.93
1436-212C	**1-1/2X1-1/4**	25	0	143	6.09

PVC Female Hose Adapter
Female Hose Thread x Insert



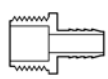
1435-007FHT	**3/4**	50	400	140	5.56

PVC Male Hose Adapter
Male Hose Thread x Insert



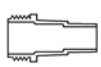
1436-007MHT	**3/4**	50	400	140	2.87

PVC Reducing Male Hose Adapter
Male Hose Thread x Insert



1436-101MHT	**3/4X1/2**	50	600	140	2.74
1436-102MHT	**3/4X1**	50	400	140	3.14

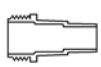
PVC Pool Adapter
Mipt x Hose ID



Not NSF Approved

1436-204	**1-1/2X1-1/2X1-1/4**	25	0	140	5.52

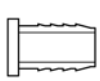
PP Pool Adapter
Mipt x Hose ID



Not NSF Approved

1436-204P	**1-1/2X1-1/2X1-1/4**	25	0	140	5.52

PVC Plug
Insert



1449-005	**1/2**	100	600	140	1.75
1449-007	**3/4**	100	1200	140	1.82
1449-010	**1**	50	600	140	2.46
1449-012	**1-1/4**	25	300	140	3.13
1449-015	**1-1/2**	25	300	140	3.40
1449-020	**2**	10	120	140	5.99

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Barbed Insert Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

PVC Lay Flat Plug

Insert



For Lay Flat Type Hose

1449-030LF	**3**	1	4	140	23.21
1449-040LF	**4**	4	0	140	30.42
1449-060LF	**6**	1	6	140	165.19



- PVC/CPVC Nipples furnished may be produced from extruded stock, or from molding grade PVC/CPVC compounds. Both processes provide quality products meeting ASTM requirements.
- Half Size Nipples not shown are priced the same as the next full size.
  For example: 7-1/2" is priced the same as 8".
- CONTACT YOUR LOCAL SPEARS® REPRESENTATIVE FOR PRICE AND AVAILABILITY OF SIZES, LENGTHS, AND/OR CONFIGURATIONS NOT SHOWN.

Length of Close & Short Nipples

Size	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	6"	8"	10"	12"
Close	3/4	7/8	1	1-1/8	1-3/8	1-1/2	1-5/8	1-3/4	2	2-1/2	2-5/8	2-7/8	3-3/4	3-5/8	4	4-3/8
Short	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	2	2	2	2-1/2	3	3	3-1/2	4-1/2	4-1/2	4-1/2	5

THREADED CONNECTIONS — Use a quality grade thread sealant. WARNING: SOME PIPE JOINT COMPOUNDS OR PTFE PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING TO PLASTIC. Spears® Manufacturing Company recommends the use of Spears® **BLUE 75**™ Thread Sealant which has been tested for compatibility with Spears® products. Please follow the sealant manufacturers' application / installation instructions. Choice of an appropriate thread sealant other than those listed above is at the discretion of the installer. 1 to 2 turns beyond FINGER TIGHT is generally all that is required to make a sound plastic threaded connection. Unnecessary OVERTIGHTENING will cause DAMAGE TO BOTH PIPE AND FITTING.

THIS PRODUCT IS ONLY TO BE USED FOR ITS INTENDED PURPOSE.

PVC Schedule 80 Nipple

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
1/8" Diameter						
1/8XCLOSE	879-005 **1.18**	1879-005 **1.18**	879-005P **1.18**	25	800	120
1/8X1-1/2	879-015 **1.18**	1879-015 **1.18**	879-015P **1.18**	25	800	120
1/8X2	879-020 **1.34**	1879-020 **1.34**	879-020P **1.34**	25	800	120
1/8X2-1/2	879-025 **1.41**	1879-025 **1.41**	879-025P **1.41**	25	800	120
1/8X3	879-030 **1.41**	1879-030 **1.41**	879-030P **1.41**	25	800	120
1/8X3-1/2	879-035 **1.56**	1879-035 **1.56**	879-035P **1.56**	25	800	120
1/8X4	879-040 **1.56**	1879-040 **1.56**	879-040P **1.56**	25	800	120
1/8X4-1/2	879-045 **1.76**	1879-045 **1.76**	879-045P **1.76**	25	600	120
1/8X5	879-050 **1.76**	1879-050 **1.76**	879-050P **1.76**	25	600	120
1/8X5-1/2	879-055 **2.01**	1879-055 **2.01**	879-055P **2.01**	25	600	120
1/8X6	879-060 **2.01**	1879-060 **2.01**	879-060P **2.01**	25	600	120
1/8X7	879-070 **2.34**	1879-070 **2.34**	879-070P **2.34**	25	450	120
1/8X8	879-080 **2.65**	1879-080 **2.65**	879-080P **2.65**	25	600	120
1/8X9	879-090 **2.79**	1879-090 **2.79**	879-090P **2.79**	25	400	120
1/8X10	879-100 **3.20**	1879-100 **3.20**	879-100P **3.20**	25	400	120
1/8X11	879-110 **3.47**	1879-110 **3.47**	879-110P **3.47**	25	400	120
1/8X12	879-120 **3.47**	1879-120 **3.47**	879-120P **3.47**	25	400	120
1/8X13	879-130 **4.48**	1879-130 **4.48**	879-130P **4.48**	25	400	120
1/8X14	879-140 **4.89**	1879-140 **4.89**	879-140P **4.89**	25	250	120
1/8X15	879-150 **5.14**	1879-150 **5.14**	879-150P **5.14**	25	300	120
1/8X16	879-160 **5.68**	1879-160 **5.68**	879-160P **5.68**	25	250	120
1/8X17	879-170 **5.91**	1879-170 **5.91**	879-170P **5.91**	25	250	120
1/8X18	879-180 **6.07**	1879-180 **6.07**	879-180P **6.07**	25	0	120
1/8X19	879-190 **6.46**	1879-190 **6.46**	879-190P **6.46**	5	0	120
1/8X20	879-200 **6.89**	1879-200 **6.89**	879-200P **6.89**	25	0	120
1/8X22	879-220 **7.35**	1879-220 **7.35**	879-220P **7.35**	25	0	120
1/8X24	879-240 **8.02**	1879-240 **8.02**	879-240P **8.02**	25	0	120
1/8X30	879-300 **10.22**	1879-300 **10.22**	879-300P **10.22**	25	0	120
1/8X36	879-360 **12.04**	1879-360 **12.04**	879-360P **12.04**	25	0	120
1/8X42	879-420 **14.02**	1879-420 **14.02**	879-420P **14.02**	25	0	120
1/8X48	879-480 **16.03**	1879-480 **16.03**	879-480P **16.03**	25	0	120
1/4" Diameter						
1/4XCLOSE	880-005 **1.23**	1880-005 **1.23**	880-005P **1.23**	25	1200	120
1/4X1-1/2	880-015 **1.23**	1880-015 **1.23**	880-015P **1.23**	25	1200	120
1/4X2	880-020 **1.51**	1880-020 **1.51**	880-020P **1.51**	25	500	120
1/4X2-1/2	880-025 **1.51**	1880-025 **1.51**	880-025P **1.51**	25	500	120
1/4X3	880-030 **2.01**	1880-030 **2.01**	880-030P **2.01**	25	550	120

PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
1/4" Diameter						
1/4X3-1/2	880-035 **2.01**	1880-035 **2.01**	880-035P **2.01**	25	500	120
1/4X4	880-040 **2.34**	1880-040 **2.34**	880-040P **2.34**	25	300	120
1/4X4-1/2	880-045 **2.34**	1880-045 **2.34**	880-045P **2.34**	25	250	120
1/4X5	880-050 **2.54**	1880-050 **2.54**	880-050P **2.54**	25	250	120
1/4X5-1/2	880-055 **2.54**	1880-055 **2.54**	880-055P **2.54**	25	250	120
1/4X6	880-060 **2.65**	1880-060 **2.65**	880-060P **2.65**	25	250	120
1/4X7	880-070 **2.74**	1880-070 **2.74**	880-070P **2.74**	25	250	120
1/4X8	880-080 **2.89**	1880-080 **2.89**	880-080P **2.89**	25	250	120
1/4X9	880-090 **2.97**	1880-090 **2.97**	880-090P **2.97**	25	250	120
1/4X10	880-100 **3.04**	1880-100 **3.04**	880-100P **3.04**	25	250	120
1/4X11	880-110 **3.26**	1880-110 **3.26**	880-110P **3.26**	25	250	120
1/4X12	880-120 **3.59**	1880-120 **3.59**	880-120P **3.59**	25	250	120
1/4X13	880-130 **5.22**	1880-130 **5.22**	880-130P **5.22**	25	250	120
1/4X14	880-140 **5.26**	1880-140 **5.26**	880-140P **5.26**	25	250	120
1/4X15	880-150 **5.58**	1880-150 **5.58**	880-150P **5.58**	25	500	120
1/4X16	880-160 **7.02**	1880-160 **7.02**	880-160P **7.02**	25	250	120
1/4X17	880-170 **7.38**	1880-170 **7.38**	880-170P **7.38**	25	300	120
1/4X18	880-180 **7.53**	1880-180 **7.53**	880-180P **7.53**	25	300	120
1/4X19	880-190 **7.89**	1880-190 **7.89**	880-190P **7.89**	25	300	120
1/4X20	880-200 **8.01**	1880-200 **8.01**	880-200P **8.01**	25	200	120
1/4X22	880-220 **8.38**	1880-220 **8.38**	880-220P **8.38**	25	300	120
1/4X24	880-240 **8.53**	1880-240 **8.53**	880-240P **8.53**	25	200	120
1/4X30	880-300 **10.47**	1880-300 **10.47**	880-300P **10.47**	25	0	120
1/4X36	880-360 **12.68**	1880-360 **12.68**	880-360P **12.68**	25	0	120
1/4X42	880-420 **14.92**	1880-420 **14.92**	880-420P **14.92**	25	0	120
1/4X48	880-480 **16.59**	1880-480 **16.59**	880-480P **16.59**	25	0	120
3/8' Diameter						
3/8XCLOSE	881-005 **1.28**	1881-005 **1.28**	881-005P **1.28**	25	800	120
3/8X1-1/2	881-015 **1.28**	1881-015 **1.28**	881-015P **1.28**	25	800	120
3/8X2	881-020 **1.64**	1881-020 **1.64**	881-020P **1.64**	25	600	120
3/8X2-1/2	881-025 **1.64**	1881-025 **1.64**	881-025P **1.64**	25	600	120
3/8X3	881-030 **1.64**	1881-030 **1.64**	881-030P **1.64**	25	400	120
3/8X3-1/2	881-035 **2.34**	1881-035 **2.34**	881-035P **2.34**	25	400	120
3/8X4	881-040 **2.54**	1881-040 **2.54**	881-040P **2.54**	25	300	120
3/8X4-1/2	881-045 **2.54**	1881-045 **2.54**	881-045P **2.54**	25	250	120
3/8X5	881-050 **2.74**	1881-050 **2.74**	881-050P **2.74**	25	250	120
3/8X5-1/2	881-055 **2.74**	1881-055 **2.74**	881-055P **2.74**	25	250	120

PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
3/8' Diameter						
3/8X6	881-060 **2.83**	1881-060 **2.83**	881-060P **2.83**	25	250	120
3/8X7	881-070 **2.91**	1881-070 **2.91**	881-070P **2.91**	25	200	120
3/8X8	881-080 **3.13**	1881-080 **3.13**	881-080P **3.13**	25	200	120
3/8X9	881-090 **3.36**	1881-090 **3.36**	881-090P **3.36**	25	200	120
3/8X10	881-100 **3.47**	1881-100 **3.47**	881-100P **3.47**	25	200	120
3/8X11	881-110 **3.67**	1881-110 **3.67**	881-110P **3.67**	25	200	120
3/8X12	881-120 **3.89**	1881-120 **3.89**	881-120P **3.89**	25	200	120
3/8X13	881-130 **5.60**	1881-130 **5.60**	881-130P **5.60**	25	0	120
3/8X14	881-140 **5.80**	1881-140 **5.80**	881-140P **5.80**	25	200	120
3/8X15	881-150 **6.08**	1881-150 **6.08**	881-150P **6.08**	25	200	120
3/8X16	881-160 **6.24**	1881-160 **6.24**	881-160P **6.24**	25	200	120
3/8X17	881-170 **6.46**	1881-170 **6.46**	881-170P **6.46**	25	0	120
3/8X18	881-180 **6.69**	1881-180 **6.69**	881-180P **6.69**	25	200	120
3/8X19	881-190 **6.83**	1881-190 **6.83**	881-190P **6.83**	25	0	120
3/8X20	881-200 **7.02**	1881-200 **7.02**	881-200P **7.02**	25	250	120
3/8X22	881-220 **7.60**	1881-220 **7.60**	881-220P **7.60**	25	0	120
3/8X24	881-240 **7.78**	1881-240 **7.78**	881-240P **7.78**	25	0	120
3/8X30	881-300 **10.49**	1881-300 **10.49**	881-300P **10.49**	25	0	120
3/8X36	881-360 **13.45**	1881-360 **13.45**	881-360P **13.45**	25	0	120
3/8X42	881-420 **15.13**	1881-420 **15.13**	881-420P **15.13**	25	0	120
3/8X48	881-480 **17.13**	1881-480 **17.13**	881-480P **17.13**	25	0	120
1/2" Diameter						
1/2XCLOSE	882-005 **1.11**	1882-005 **1.11**	882-005P **1.11**	25	675	120
1/2X1-1/2	882-015 **1.11**	1882-015 **1.11**	882-015P **1.11**	25	600	120
1/2X2	882-020 **1.18**	1882-020 **1.18**	882-020P **1.18**	25	150	120
1/2X2-1/2	882-025 **1.18**	1882-025 **1.18**	882-025P **1.18**	50	600	120
1/2X3	882-030 **1.34**	1882-030 **1.34**	882-030P **1.34**	25	300	120
1/2X3-1/2	882-035 **1.34**	1882-035 **1.34**	882-035P **1.34**	25	300	120
1/2X4	882-040 **1.56**	1882-040 **1.56**	882-040P **1.56**	25	300	120
1/2X4-1/2	882-045 **1.56**	1882-045 **1.56**	882-045P **1.56**	25	300	120
1/2X5	882-050 **1.74**	1882-050 **1.74**	882-050P **1.74**	25	300	120
1/2X5-1/2	882-055 **1.74**	1882-055 **1.74**	882-055P **1.74**	25	300	120
1/2X6	882-060 **1.82**	1882-060 **1.82**	882-060P **1.82**	25	300	120
1/2X7	882-070 **2.12**	1882-070 **2.12**	882-070P **2.12**	25	200	120
1/2X8	882-080 **2.27**	1882-080 **2.27**	882-080P **2.27**	25	0	120
1/2X9	882-090 **2.34**	1882-090 **2.34**	882-090P **2.34**	25	0	120
1/2X10	882-100 **2.48**	1882-100 **2.48**	882-100P **2.48**	25	0	120

PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
1/2" Diameter						
1/2X11	882-110 **2.65**	1882-110 **2.65**	882-110P **2.65**	25	0	120
1/2X12	882-120 **2.74**	1882-120 **2.74**	882-120P **2.74**	25	0	120
1/2X13	882-130 **3.13**	1882-130 **3.13**	882-130P **3.13**	25	0	120
1/2X14	882-140 **3.19**	1882-140 **3.19**	882-140P **3.19**	100	0	120
1/2X15	882-150 **3.44**	1882-150 **3.44**	882-150P **3.44**	100	0	120
1/2X16	882-160 **3.84**	1882-160 **3.84**	882-160P **3.84**	100	0	120
1/2X17	882-170 **3.95**	1882-170 **3.95**	882-170P **3.95**	100	0	120
1/2X18	882-180 **4.19**	1882-180 **4.19**	882-180P **4.19**	25	100	120
1/2X19	882-190 **4.33**	1882-190 **4.33**	882-190P **4.33**	100	0	120
1/2X20	882-200 **4.44**	1882-200 **4.44**	882-200P **4.44**	100	0	120
1/2X22	882-220 **4.44**	1882-220 **4.44**	882-220P **4.44**	100	0	120
1/2X24	882-240 **5.42**	1882-240 **5.42**	882-240P **5.42**	25	100	120
1/2X30	882-300 **6.83**	1882-300 **6.83**	882-300P **6.83**	25	0	120
1/2X36	882-360 **9.25**	1882-360 **9.25**	882-360P **9.25**	25	0	120
1/2X42	882-420 **12.34**	1882-420 **12.34**	882-420P **12.34**	25	0	120
1/2X48	882-480 **12.98**	1882-480 **12.98**	882-480P **12.98**	25	0	120
3/4" Diameter						
3/4XCLOSE	883-005 **1.18**	1883-005 **1.18**	883-005P **1.18**	25	450	120
3/4X1-1/2	883-015 **1.18**	1883-015 **1.18**	883-015P **1.18**	25	500	120
3/4X2	883-020 **1.18**	1883-020 **1.18**	883-020P **1.18**	25	150	120
3/4X2-1/2	883-025 **1.34**	1883-025 **1.34**	883-025P **1.34**	25	150	120
3/4X3	883-030 **1.34**	1883-030 **1.34**	883-030P **1.34**	25	300	120
3/4X3-1/2	883-035 **1.56**	1883-035 **1.56**	883-035P **1.56**	25	300	120
3/4X4	883-040 **1.82**	1883-040 **1.82**	883-040P **1.82**	25	300	120
3/4X4-1/2	883-045 **1.82**	1883-045 **1.82**	883-045P **1.82**	25	200	120
3/4X5	883-050 **2.18**	1883-050 **2.18**	883-050P **2.18**	25	200	120
3/4X5-1/2	883-055 **2.18**	1883-055 **2.18**	883-055P **2.18**	25	200	120
3/4X6	883-060 **2.27**	1883-060 **2.27**	883-060P **2.27**	25	200	120
3/4X7	883-070 **5.30**	1883-070 **2.34**	883-070P **2.34**	25	200	120
3/4X8	883-080 **2.65**	1883-080 **2.65**	883-080P **2.65**	25	0	120
3/4X9	883-090 **2.74**	1883-090 **2.74**	883-090P **2.74**	25	0	120
3/4X10	883-100 **3.04**	1883-100 **3.04**	883-100P **3.04**	25	0	120
3/4X11	883-110 **3.26**	1883-110 **3.26**	883-110P **3.26**	25	0	120
3/4X12	883-120 **3.44**	1883-120 **3.44**	883-120P **3.44**	25	0	120
3/4X13	883-130 **3.72**	1883-130 **3.72**	883-130P **3.72**	25	0	120
3/4X14	883-140 **3.72**	1883-140 **3.72**	883-140P **3.72**	100	0	120
3/4X15	883-150 **3.89**	1883-150 **3.89**	883-150P **3.89**	100	0	120

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
3/4" Diameter						
3/4X16	883-160 **4.33**	1883-160 **4.33**	883-160P **4.33**	100	0	120
3/4X17	883-170 **4.44**	1883-170 **4.44**	883-170P **4.44**	100	0	120
3/4X18	883-180 **4.54**	1883-180 **4.54**	883-180P **4.54**	25	100	120
3/4X19	883-190 **5.07**	1883-190 **5.07**	883-190P **5.07**	100	0	120
3/4X20	883-200 **5.39**	1883-200 **5.39**	883-200P **5.39**	100	0	120
3/4X22	883-220 **5.59**	1883-220 **5.59**	883-220P **5.59**	100	0	120
3/4X24	883-240 **6.52**	1883-240 **6.52**	883-240P **6.52**	25	100	120
3/4X30	883-300 **9.02**	1883-300 **9.02**	883-300P **9.02**	25	0	120
3/4X36	883-360 **11.17**	1883-360 **11.17**	883-360P **11.17**	25	0	120
3/4X42	883-420 **13.06**	1883-420 **13.06**	883-420P **13.06**	25	0	120
3/4X48	883-480 **14.75**	1883-480 **14.75**	883-480P **14.75**	25	0	120
1" Diameter						
1XCLOSE	884-005 **1.56**	1884-005 **1.56**	884-005P **1.56**	25	300	120
1X1-1/2	884-015 **1.74**	1884-015 **1.74**	884-015P **1.74**	25	300	120
1X2	884-020 **1.74**	1884-020 **1.74**	884-020P **1.74**	25	300	120
1X2-1/2	884-025 **1.82**	1884-025 **1.82**	884-025P **1.82**	25	300	120
1X3	884-030 **1.98**	1884-030 **1.98**	884-030P **1.98**	25	200	120
1X3-1/2	884-035 **2.12**	1884-035 **2.12**	884-035P **2.12**	25	200	120
1X4	884-040 **2.27**	1884-040 **2.27**	884-040P **2.27**	25	200	120
1X4-1/2	884-045 **2.48**	1884-045 **2.48**	884-045P **2.48**	25	200	120
1X5	884-050 **2.74**	1884-050 **2.74**	884-050P **2.74**	25	0	120
1X5-1/2	884-055 **3.04**	1884-055 **3.04**	884-055P **3.04**	25	0	120
1X6	884-060 **3.13**	1884-060 **3.13**	884-060P **3.13**	25	0	120
1X7	884-070 **3.44**	1884-070 **3.44**	884-070P **3.44**	25	0	120
1X8	884-080 **3.67**	1884-080 **3.67**	884-080 **3.67**	25	0	120
1X9	884-090 **4.16**	1884-090 **4.16**	884-090P **4.16**	25	0	120
1X10	884-100 **4.33**	1884-100 **4.33**	884-100P **4.33**	25	0	120
1X11	884-110 **4.67**	1884-110 **4.67**	884-110P **4.67**	25	0	120
1X12	884-120 **5.01**	1884-120 **5.01**	884-120P **5.01**	25	0	120
1X13	884-130 **5.77**	1884-130 **5.77**	884-130P **5.77**	25	0	120
1X14	884-140 **5.77**	1884-140 **5.77**	884-140P **5.77**	50	0	120
1X15	884-150 **6.17**	1884-150 **6.17**	884-150P **6.17**	50	0	120
1X16	884-160 **6.21**	1884-160 **6.21**	884-160P **6.21**	50	0	120
1X17	884-170 **7.02**	1884-170 **7.02**	884-170P **7.02**	50	0	120
1X18	884-180 **7.38**	1884-180 **7.38**	884-180P **7.38**	50	0	120
1X19	884-190 **7.55**	1884-190 **7.55**	884-190P **7.55**	50	0	120
1X20	884-200 **7.91**	1884-200 **7.91**	884-200P **7.91**	50	0	120

PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
1" Diameter						
1X22	884-220 **8.06**	1884-220 **8.06**	884-220P **8.06**	50	0	120
1X24	884-240 **8.32**	1884-240 **8.32**	884-240P **8.32**	50	0	120
1X30	884-300 **11.63**	1884-300 **11.63**	884-300P **11.63**	15	0	120
1X36	884-360 **15.47**	1884-360 **15.47**	884-360P **15.47**	15	0	120
1X42	884-420 **18.89**	1884-420 **18.89**	884-420P **18.89**	15	0	120
1X48	884-480 **19.73**	1884-480 **19.73**	884-480P **19.73**	15	0	120
1-1/4" Diameter						
1-1/4XCLOSE	885-005 **2.27**	1885-005 **2.27**	885-005P **2.27**	25	200	120
1-1/4X2	885-020 **2.34**	1885-020 **2.34**	885-020P **2.34**	25	200	120
1-1/4X2-1/2	885-025 **2.56**	1885-025 **2.56**	885-025P **2.56**	25	200	120
1-1/4X3	885-030 **2.65**	1885-030 **2.65**	885-030P **2.65**	25	0	120
1-1/4X3-1/2	885-035 **3.04**	1885-035 **3.04**	885-035P **3.04**	25	0	120
1-1/4X4	885-040 **3.04**	1885-040 **3.04**	885-040P **3.04**	25	0	120
1-1/4X4-1/2	885-045 **3.47**	1885-045 **3.47**	885-045P **3.47**	25	0	120
1-1/4X5	885-050 **3.47**	1885-050 **3.47**	885-050P **3.47**	25	0	120
1-1/4X5-1/2	885-055 **3.89**	1885-055 **3.89**	885-055P **3.89**	25	0	120
1-1/4X6	885-060 **3.89**	1885-060 **3.89**	885-060P **3.89**	25	0	120
1-1/4X7	885-070 **4.44**	1885-070 **4.44**	885-070P **4.44**	25	0	120
1-1/4X8	885-080 **4.67**	1885-080 **4.67**	885-080P **4.67**	25	0	120
1-1/4X9	885-090 **5.07**	1885-090 **5.07**	885-090P **5.07**	25	0	120
1-1/4X10	885-100 **5.45**	1885-100 **5.45**	885-100P **5.45**	25	0	120
1-1/4X11	885-110 **5.83**	1885-110 **5.83**	885-110P **5.83**	25	0	120
1-1/4X12	885-120 **6.17**	1885-120 **6.17**	885-120P **6.17**	25	0	120
1-1/4X13	885-130 **7.15**	1885-130 **7.15**	885-130P **7.15**	25	0	120
1-1/4X14	885-140 **7.41**	1885-140 **7.41**	885-140P **7.41**	25	0	120
1-1/4X15	885-150 **7.82**	1885-150 **7.82**	885-150P **7.82**	25	0	120
1-1/4X16	885-160 **8.15**	1885-160 **8.15**	885-160P **8.15**	25	0	120
1-1/4X17	885-170 **8.93**	1885-170 **8.93**	885-170P **8.93**	25	0	120
1-1/4X18	885-180 **9.74**	1885-180 **9.74**	885-180P **9.74**	25	0	120
1-1/4X19	885-190 **10.83**	1885-190 **10.83**	885-190P **10.83**	25	0	120
1-1/4X20	885-200 **11.05**	1885-200 **11.05**	885-200P **11.05**	25	0	120
1-1/4X22	885-220 **11.26**	1885-220 **11.26**	885-220P **11.26**	25	0	120
1-1/4X24	885-240 **11.43**	1885-240 **11.43**	885-240P **11.43**	25	0	120
1-1/4X30	885-300 **14.92**	1885-300 **14.92**	885-300P **14.92**	10	0	120
1-1/4X36	885-360 **16.31**	1885-360 **16.31**	885-360P **16.31**	10	0	120
1-1/4X42	885-420 **20.71**	1885-420 **20.71**	885-420P **20.71**	10	0	120
1-1/4X48	885-480 **21.55**	1885-480 **21.55**	885-480P **21.55**	10	0	120

PVC Schedule 80 Nipple

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
1-1/2" Diameter						
1-1/2XCLOSE	886-005 **2.48**	1886-005 **2.48**	886-005P **2.48**	25	0	120
1-1/2X2	886-020 **2.74**	1886-020 **2.74**	886-020P **2.74**	25	0	120
1-1/2X2-1/2	886-025 **2.91**	1886-025 **2.91**	886-025P **2.91**	25	0	120
1-1/2X3	886-030 **3.13**	1886-030 **3.13**	886-030P **3.13**	25	0	120
1-1/2X3-1/2	886-035 **3.47**	1886-035 **3.47**	886-035P **3.47**	25	0	120
1-1/2X4	886-040 **4.16**	1886-040 **4.16**	886-040P **4.16**	25	0	120
1-1/2X4-1/2	886-045 **4.16**	1886-045 **4.16**	886-045P **4.16**	25	0	120
1-1/2X5	886-050 **4.67**	1886-050 **4.67**	886-050P **4.67**	25	0	120
1-1/2X5-1/2	886-055 **4.67**	1886-055 **4.67**	886-055P **4.67**	25	0	120
1-1/2X6	886-060 **5.01**	1886-060 **5.01**	886-060P **5.01**	25	0	120
1-1/2X7	886-070 **5.59**	1886-070 **5.59**	886-070P **5.59**	25	0	120
1-1/2X8	886-080 **6.17**	1886-080 **6.17**	886-080P **6.17**	25	0	120
1-1/2X9	886-090 **6.54**	1886-090 **6.54**	886-090P **6.54**	25	0	120
1-1/2X10	886-100 **6.89**	1886-100 **6.89**	886-100P **6.89**	25	0	120
1-1/2X11	886-110 **7.41**	1886-110 **7.41**	886-110P **7.41**	25	0	120
1-1/2X12	886-120 **8.32**	1886-120 **8.32**	886-120P **8.32**	25	0	120
1-1/2X13	886-130 **8.54**	1886-130 **8.54**	886-130P **8.54**	25	0	120
1-1/2X14	886-140 **9.25**	1886-140 **9.25**	886-140P **9.25**	25	0	120
1-1/2X15	886-150 **9.65**	1886-150 **9.65**	886-150P **9.65**	25	0	120
1-1/2X16	886-160 **10.41**	1886-160 **10.41**	886-160P **10.41**	25	0	120
1-1/2X17	886-170 **10.64**	1886-170 **10.64**	886-170P **10.64**	25	0	120
1-1/2X18	886-180 **11.33**	1886-180 **11.33**	886-180P **11.33**	25	0	120
1-1/2X19	886-190 **12.58**	1886-190 **12.58**	886-190P **12.58**	25	0	120
1-1/2X20	886-200 **12.98**	1886-200 **12.98**	886-200P **12.98**	25	0	120
1-1/2X22	886-220 **13.13**	1886-220 **13.13**	886-220P **13.13**	25	0	120
1-1/2X24	886-240 **13.51**	1886-240 **13.51**	886-240P **13.51**	25	0	120
1-1/2X30	886-300 **18.43**	1886-300 **18.43**	886-300P **18.43**	5	0	120
1-1/2X36	886-360 **19.34**	1886-360 **19.34**	886-360P **19.34**	5	0	120
1-1/2X42	886-420 **25.96**	1886-420 **25.96**	886-420P **25.96**	5	0	120
1-1/2X48	886-480 **27.44**	1886-480 **27.44**	886-480P **27.44**	5	0	120
2" Diameter						
2XCLOSE	887-005 **3.26**	1887-005 **3.26**	887-005P **3.26**	25	0	120
2X2	887-020 **3.79**	1887-020 **3.79**	887-020P **3.79**	25	0	120
2X2-1/2	887-025 **3.84**	1887-025 **3.84**	887-025P **3.84**	25	0	120
2X3	887-030 **3.89**	1887-030 **3.89**	887-030P **3.89**	25	0	120
2X3-1/2	887-035 **4.54**	1887-035 **4.54**	887-035P **4.54**	25	0	120
2X4	887-040 **5.39**	1887-040 **5.39**	887-040P **5.39**	25	0	120

PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
2" Diameter						
2X4-1/2	887-045 **5.39**	1887-045 **5.39**	887-045P **5.39**	25	0	120
2X5	887-050 **5.83**	1887-050 **5.83**	887-050P **5.83**	25	0	120
2X5-1/2	887-055 **5.83**	1887-055 **5.83**	887-055P **5.83**	25	0	120
2X6	887-060 **7.15**	1887-060 **7.15**	887-060P **7.15**	25	0	120
2X7	887-070 **7.41**	1887-070 **7.41**	887-070P **7.41**	25	0	120
2X8	887-080 **7.91**	1887-080 **7.91**	887-080P **7.91**	25	0	120
2X9	887-090 **8.54**	1887-090 **8.54**	887-090P **8.54**	25	0	120
2X10	887-100 **9.25**	1887-100 **9.25**	887-100P **9.25**	25	0	120
2X11	887-110 **9.68**	1887-110 **9.68**	887-110P **9.68**	25	0	120
2X12	887-120 **10.43**	1887-120 **10.43**	887-120P **10.43**	25	0	120
2X13	887-130 **10.83**	1887-130 **10.83**	887-130P **10.83**	25	0	120
2X14	887-140 **11.04**	1887-140 **11.04**	887-140P **11.04**	20	0	120
2X15	887-150 **11.95**	1887-150 **11.95**	887-150P **11.95**	20	0	120
2X16	887-160 **12.75**	1887-160 **12.75**	887-160P **12.75**	20	0	120
2X17	887-170 **13.92**	1887-170 **13.92**	887-170P **13.92**	20	0	120
2X18	887-180 **15.53**	1887-180 **15.53**	887-180P **15.53**	20	0	120
2X19	887-190 **16.63**	1887-190 **16.63**	887-190P **16.63**	25	0	120
2X20	887-200 **16.86**	1887-200 **16.86**	887-200P **16.86**	20	0	120
2X22	887-220 **17.29**	1887-220 **17.29**	887-220P **17.29**	20	0	120
2X24	887-240 **17.38**	1887-240 **17.38**	887-240P **17.38**	20	0	120
2X30	887-300 **22.44**	1887-300 **22.44**	887-300P **22.44**	5	0	120
2X36	887-360 **29.81**	1887-360 **29.81**	887-360P **29.81**	5	0	120
2X42	887-420 **36.26**	1887-420 **36.26**	887-420P **36.26**	5	0	120
2X48	887-480 **38.37**	1887-480 **38.37**	887-480P **38.37**	5	0	120
2-1/2" Diameter						
2-1/2XCLOSE	888-005 **11.17**	1888-005 **11.17**	888-005P **11.17**	25	0	120
2-1/2X2-1/2	888-025 **12.73**	1888-025 **12.73**	888-025P **12.73**	25	0	121
2-1/2X3	888-030 **12.73**	1888-030 **12.73**	888-030P **12.73**	30	0	120
2-1/2X3-1/2	888-035 **14.55**	1888-035 **14.55**	888-035P **14.55**	25	0	120
2-1/2X4	888-040 **16.46**	1888-040 **16.46**	888-040P **16.46**	25	0	120
2-1/2X4-1/2	888-045 **16.46**	1888-045 **16.46**	888-045P **16.46**	25	0	120
2-1/2X5	888-050 **18.54**	1888-050 **18.54**	888-050P **18.54**	25	0	120
2-1/2X5-1/2	888-055 **18.54**	1888-055 **18.54**	888-055P **18.54**	25	0	120
2-1/2X6	888-060 **20.31**	1888-060 **20.31**	888-060P **20.31**	25	0	120
2-1/2X7	888-070 **21.40**	1888-070 **21.40**	888-070P **21.40**	16	0	120
2-1/2X8	888-080 **22.44**	1888-080 **22.44**	888-080P **22.44**	16	0	120
2-1/2X9	888-090 **25.96**	1888-090 **25.96**	888-090P **25.96**	16	0	120

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PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
2-1/2" Diameter						
2-1/2X10	888-100 **27.51**	1888-100 **27.51**	888-100P **27.51**	16	0	120
2-1/2X11	888-110 **29.81**	1888-110 **29.81**	888-110P **29.81**	16	0	120
2-1/2X12	888-120 **30.03**	1888-120 **30.03**	888-120P **30.03**	16	0	120
2-1/2X13	888-130 **32.40**	1888-130 **32.40**	888-130P **32.40**	25	0	120
2-1/2X14	888-140 **33.72**	1888-140 **33.72**	888-140P **33.72**	25	0	120
2-1/2X15	888-150 **36.26**	1888-150 **38.82**	888-150P **36.26**	25	0	120
2-1/2X16	888-160 **38.82**	1888-160 **38.82**	888-160P **38.82**	20	0	120
2-1/2X17	888-170 **39.54**	1888-170 **39.54**	888-170P **39.54**	20	0	120
2-1/2X18	888-180 **40.21**	1888-180 **40.21**	888-180P **40.21**	20	0	120
2-1/2X19	888-190 **42.79**	1888-190 **42.79**	888-190P **42.79**	25	0	120
2-1/2X20	888-200 **44.53**	1888-200 **44.53**	888-200P **44.53**	12	0	120
2-1/2X22	888-220 **49.48**	1888-220 **49.48**	888-220P **49.48**	25	0	120
2-1/2X24	888-240 **50.47**	1888-240 **50.47**	888-240P **50.47**	10	0	120
2-1/2X30	888-300 **61.48**	1888-300 **61.48**	888-300P **61.48**	3	0	120
2-1/2X36	888-360 **75.14**	1888-360 **75.14**	888-360P **75.14**	3	0	120
2-1/2X42	888-420 **86.80**	1888-420 **86.80**	888-420P **86.80**	3	0	120
2-1/2X48	888-480 **93.87**	1888-480 **93.87**	888-480P **93.87**	3	0	120
3" Diameter						
3XCLOSE	889-005 **13.34**	1889-005 **13.34**	889-005P **13.34**	25	0	120
3X3	889-030 **14.55**	1889-030 **14.55**	889-030P **14.55**	20	0	120
3X3-1/2	889-035 **17.00**	1889-035 **17.00**	889-035P **17.00**	30	0	120
3X4	889-040 **19.44**	1889-040 **19.44**	889-040P **19.44**	30	0	120
3X4-1/2	889-045 **19.44**	1889-045 **19.44**	889-045P **19.44**	20	0	120
3X5	889-050 **21.79**	1889-050 **21.79**	889-050P **21.79**	20	0	120
3X5-1/2	889-055 **21.79**	1889-055 **21.79**	889-055P **21.79**	20	0	120
3X6	889-060 **27.23**	1889-060 **27.23**	889-060P **27.23**	20	0	120
3X7	889-070 **28.74**	1889-070 **28.74**	889-070P **28.74**	10	0	120
3X8	889-080 **29.58**	1889-080 **29.58**	889-080P **29.58**	10	0	120
3X9	889-090 **31.11**	1889-090 **31.11**	889-090P **31.11**	10	0	120
3X10	889-100 **33.86**	1889-100 **33.86**	889-100P **34.18**	10	0	120
3X11	889-110 **36.26**	1889-110 **36.26**	889-110P **36.26**	10	0	120
3X12	889-120 **36.88**	1889-120 **36.88**	889-120P **36.88**	10	0	120
3X13	889-130 **38.23**	1889-130 **38.23**	889-130P **38.23**	20	0	120
3X14	889-140 **41.47**	1889-140 **41.47**	889-140P **41.47**	20	0	120
3X15	889-150 **44.03**	1889-150 **44.03**	889-150P **44.03**	20	0	120
3X16	889-160 **46.60**	1889-160 **46.60**	889-160P **46.60**	20	0	120
3X17	889-170 **47.93**	1889-170 **47.93**	889-170P **47.93**	10	0	120

PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
3" Diameter						
3X18	889-180 **50.47**	1889-180 **50.47**	889-180P **50.47**	10	0	120
3X19	889-190 **58.26**	1889-190 **58.26**	889-190P **58.26**	10	0	120
3X20	889-200 **61.48**	1889-200 **61.48**	889-200P **61.48**	10	0	120
3X22	889-220 **62.85**	1889-220 **62.85**	889-220P **62.85**	10	0	120
3X24	889-240 **69.26**	1889-240 **69.26**	889-240P **69.26**	10	0	120
3X30	889-300 **88.21**	1889-300 **88.21**	889-300P **88.21**	3	0	120
3X36	889-360 **91.24**	1889-360 **91.24**	889-360P **91.24**	3	0	120
3X42	889-420 **106.82**	1889-420 **106.82**	889-420P **106.82**	3	0	120
3X48	889-480 **119.14**	1889-480 **119.14**	889-480P **119.14**	3	0	120
4" Diameter						
4XCLOSE	890-005 **21.79**	1890-005 **21.79**	890-005P **21.79**	25	0	120
4X2-1/2	890-025 **22.85**	1890-025 **22.85**	890-025P **22.85**	18	0	120
4X3	890-030 **22.85**	1890-030 **22.85**	890-030P **22.85**	25	0	120
4X3-1/2	890-035 **27.33**	1890-035 **27.33**	890-035P **27.33**	25	0	120
4X4	890-040 **30.25**	1890-040 **30.25**	890-040P **30.25**	18	0	120
4X4-1/2	890-045 **30.25**	1890-045 **30.25**	890-045P **30.25**	12	0	120
4X5	890-050 **30.25**	1890-050 **30.25**	890-050P **30.25**	12	0	120
4X5-1/2	890-055 **30.25**	1890-055 **30.25**	890-055P **30.25**	12	0	120
4X6	890-060 **32.40**	1890-060 **32.40**	890-060P **32.40**	12	0	120
4X7	890-070 **35.56**	1890-070 **35.56**	890-070P **35.56**	16	0	120
4X8	890-080 **37.61**	1890-080 **37.61**	890-080P **37.61**	16	0	120
4X9	890-090 **37.85**	1890-090 **37.85**	890-090P **37.85**	16	0	120
4X10	890-100 **40.21**	1890-100 **40.21**	890-100P **40.21**	16	0	120
4X11	890-110 **45.38**	1890-110 **45.38**	890-110P **45.38**	16	0	120
4X12	890-120 **52.39**	1890-120 **52.39**	890-120P **52.39**	16	0	120
4X13	890-130 **54.36**	1890-130 **54.36**	890-130P **54.36**	16	0	120
4X14	890-140 **55.69**	1890-140 **55.69**	890-140P **55.69**	15	0	120
4X15	890-150 **58.26**	1890-150 **58.26**	890-150P **58.26**	12	0	120
4X16	890-160 **60.89**	1890-160 **60.89**	890-160P **60.89**	12	0	120
4X17	890-170 **64.77**	1890-170 **64.77**	890-170P **64.77**	12	0	120
4X18	890-180 **73.05**	1890-180 **73.05**	890-180P **73.05**	4	0	120
4X19	890-190 **73.78**	1890-190 **73.78**	890-190P **73.78**	12	0	120
4X20	890-200 **78.99**	1890-200 **78.99**	890-200P **78.99**	4	0	120
4X22	890-220 **81.56**	1890-220 **81.56**	890-220P **81.56**	8	0	120
4X24	890-240 **86.95**	1890-240 **86.95**	890-240P **86.95**	4	0	120
4X30	890-300 **103.59**	1890-300 **103.59**	890-300P **103.59**	3	0	120
4X36	890-360 **123.04**	1890-360 **123.04**	890-360P **123.04**	3	0	120

PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
4" Diameter						
4X42	890-420 **150.20**	1890-420 **150.20**	890-420P **150.20**	3	0	120
4X48	890-480 **184.38**	1890-480 **184.38**	890-480P **184.38**	3	0	120
6" Diameter						
6XCLOSE	892-005 **23.91**	1892-005 **23.91**	892-005P **23.91**	8	0	120
6X4	892-040 **30.57**	1892-040 **30.57**	892-040P **30.57**	4	0	120
6X4-1/2	892-045 **33.88**	1892-045 **33.88**	892-045P **33.88**	4	0	120
6X5	892-050 **37.19**	1892-050 **37.19**	892-050P **37.19**	1	2	120
6X5-1/2	892-055 **40.54**	1892-055 **40.54**	892-055P **40.54**	1	2	120
6X6	892-060 **44.23**	1892-060 **44.23**	892-060P **44.23**	1	2	120
6X7	892-070 **50.82**	1892-070 **50.82**	892-070P **50.82**	1	2	120
6X8	892-080 **57.55**	1892-080 **57.55**	892-080P **57.55**	1	0	120
6X9	892-090 **64.19**	1892-090 **64.19**	892-090P **64.19**	1	0	120
6X10	892-100 **71.26**	1892-100 **71.26**	892-100P **71.26**	1	0	120
6X11	892-110 **77.93**	1892-110 **77.93**	892-110P **77.93**	1	0	120
6X12	892-120 **84.58**	1892-120 **84.58**	892-120P **84.58**	1	0	120
6X13	892-130 **91.22**	1892-130 **91.22**	892-130P **91.22**	1	0	120
6X14	892-140 **97.87**	1892-140 **97.87**	892-140P **97.87**	1	0	120
6X15	892-150 **104.52**	1892-150 **104.52**	892-150P **104.52**	1	0	120
6X16	892-160 **111.18**	1892-160 **111.18**	892-160P **111.18**	1	2	120
6X17	892-170 **118.58**	1892-170 **118.58**	892-170P **118.58**	1	2	120
6X18	892-180 **124.45**	1892-180 **124.45**	892-180P **124.45**	1	6	120
6X19	892-190 **131.99**	1892-190 **131.99**	892-190P **131.99**	1	0	120
6X20	892-200 **137.76**	1892-200 **137.76**	892-200P **137.76**	2	0	120
6X22	892-220 **151.71**	1892-220 **151.71**	892-220P **151.71**	1	0	120
6X24	892-240 **164.98**	1892-240 **164.98**	892-240P **164.98**	1	3	120
6X30	892-300 **204.89**	1892-300 **204.89**	892-300P **204.89**	1	0	120
6X36	892-360 **245.80**	1892-360 **245.80**	892-360P **245.80**	1	0	120
6X42	892-420 **285.67**	1892-420 **285.67**	892-420P **285.67**	1	0	120
6X48	892-480 **325.75**	1892-480 **325.75**	892-480P **325.75**	1	0	120
8" Diameter						
8XCLOSE	893-005 **66.13**	1893-005 **66.13**	893-005P **66.13**	2	0	120
8X4-1/2	893-045 **75.69**	1893-045 **75.69**	893-045P **75.69**	1	0	120
8X5	893-050 **78.91**	1893-050 **78.91**	893-050P **78.91**	1	0	120
8X5-1/2	893-055 **82.09**	1893-055 **82.09**	893-055P **82.09**	1	0	120
8X6	893-060 **85.29**	1893-060 **85.29**	893-060P **85.29**	4	0	120
8X7	893-070 **91.71**	1893-070 **91.71**	893-070P **91.71**	4	0	120
8X8	893-080 **98.12**	1893-080 **98.12**	893-080P **98.12**	4	0	120
8X9	893-090 **104.49**	1893-090 **104.49**	893-090P **104.49**	2	0	120

PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
8" Diameter						
8X10	893-100 **110.89**	1893-100 **110.89**	893-100P **110.89**	1	0	120
8X11	893-110 **117.32**	1893-110 **117.32**	893-110P **117.32**	1	0	120
8X12	893-120 **123.71**	1893-120 **123.71**	893-120P **123.71**	1	0	120
8X13	893-130 **130.09**	1893-130 **130.09**	893-130P **130.09**	1	0	120
8X14	893-140 **136.49**	1893-140 **136.49**	893-140P **136.49**	1	0	120
8X15	893-150 **142.92**	1893-150 **142.92**	893-150P **142.92**	1	0	120
8X16	893-160 **149.29**	1893-160 **149.29**	893-160P **149.29**	1	0	120
8X17	893-170 **155.67**	1893-170 **155.67**	893-170P **155.67**	4	0	120
8X18	893-180 **162.06**	1893-180 **162.06**	893-180P **162.03**	4	0	120
8X19	893-190 **168.17**	1893-190 **168.17**	893-190P **168.17**	2	0	120
8X20	893-200 **174.88**	1893-200 **174.88**	893-200P **174.88**	2	0	120
8X22	893-220 **187.67**	1893-220 **187.67**	893-220P **187.67**	1	0	120
8X24	893-240 **201.06**	1893-240 **201.06**	893-240P **201.06**	1	2	120
8X30	893-300 **240.17**	1893-300 **240.17**	893-300P **240.17**	4	0	120
8X36	893-360 **277.25**	1893-360 **277.25**	893-360P **277.25**	4	0	120
8X42	893-420 **315.61**	1893-420 **315.61**	893-420P **315.61**	1	0	120
8X48	893-480 **354.03**	1893-480 **354.03**	893-480P **354.03**	1	0	120
10" Diameter						
10XCLOSE	894-005 **75.89**	1894-005 **75.89**	894-005P **75.89**	1	0	120
10X2	894-020 **76.74**	1894-020 **76.74**	894-020P **76.74**	1	6	120
10X4-1/2	894-045 **90.39**	1894-045 **90.39**	894-045P **90.39**	1	0	120
10X5	894-050 **94.81**	1894-050 **94.81**	894-050P **94.81**	1	0	120
10X5-1/2	894-055 **100.04**	1894-055 **100.04**	894-055P **100.04**	1	0	120
10X6	894-060 **104.87**	1894-060 **104.87**	894-060P **104.87**	2	0	120
10X7	894-070 **114.53**	1894-070 **114.53**	894-070P **114.53**	1	0	120
10X8	894-080 **124.18**	1894-080 **124.18**	894-080P **124.18**	1	0	120
10X9	894-090 **133.66**	1894-090 **133.66**	894-090P **133.66**	1	0	120
10X10	894-100 **143.52**	1894-100 **143.52**	894-100P **143.52**	1	0	120
10X11	894-110 **153.17**	1894-110 **153.17**	894-110P **153.17**	1	0	120
10X12	894-120 **162.83**	1894-120 **162.83**	894-120P **162.83**	1	0	120
10X13	894-130 **172.47**	1894-130 **172.47**	894-130P **172.47**	1	0	120
10X14	894-140 **182.15**	1894-140 **182.15**	894-140P **182.15**	1	0	120
10X15	894-150 **191.80**	1894-150 **191.80**	894-150P **191.80**	1	0	120
10X16	894-160 **201.45**	1894-160 **201.45**	894-160P **201.45**	1	0	120
10X17	894-170 **211.12**	1894-170 **211.12**	894-170P **211.12**	1	0	120
10X18	894-180 **220.78**	1894-180 **220.78**	894-180P **220.78**	1	2	120
10X19	894-190 **230.42**	1894-190 **230.42**	894-190P **230.42**	1	0	120

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PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
10" Diameter						
10X20	894-200 **240.09**	1894-200 **240.09**	894-200P **240.09**	1	0	120
10X22	894-220 **260.21**	1894-220 **260.21**	894-220P **260.21**	1	0	120
10X24	894-240 **278.74**	1894-240 **278.74**	894-240P **278.74**	1	2	120
10X30	894-300 **336.68**	1894-300 **336.68**	894-300P **336.68**	1	0	120
10X36	894-360 **394.63**	1894-360 **394.63**	894-360P **394.63**	1	0	120
10X42	894-420 **452.59**	1894-420 **452.59**	894-420P **452.59**	1	0	120
10X48	894-480 **510.56**	1894-480 **510.56**	894-480P **510.56**	1	0	120
12" Diameter						
12XCLOSE	895-005 **92.13**	1895-005 **92.13**	895-005P **92.13**	1	0	120
12X5	895-050 **113.31**	1895-050 **113.31**	895-050P **113.31**	1	0	120
12X5-1/2	895-055 **119.96**	1895-055 **119.60**	895-055P **119.96**	1	0	120
12X6	895-060 **126.59**	1895-060 **126.61**	895-060P **126.59**	1	0	120
12X7	895-070 **139.85**	1895-070 **139.85**	895-070P **139.85**	1	0	120
12X8	895-080 **152.67**	1895-080 **152.67**	895-080P **152.67**	1	0	120
12X9	895-090 **166.43**	1895-090 **166.43**	895-090P **166.43**	1	0	120
12X10	895-100 **179.69**	1895-100 **179.69**	895-100P **179.69**	1	0	120
12X11	895-110 **192.99**	1895-110 **192.99**	895-110P **192.99**	1	0	120
12X12	895-120 **206.25**	1895-120 **206.25**	895-120P **206.25**	1	0	120
12X13	895-130 **219.54**	1895-130 **219.54**	895-130P **219.54**	1	0	120
12X14	895-140 **232.82**	1895-140 **232.82**	895-140P **232.82**	1	0	120
12X15	895-150 **246.12**	1895-150 **246.12**	895-150P **246.12**	1	0	120
12X16	895-160 **259.38**	1895-160 **259.38**	895-160P **259.38**	1	0	120
12X17	895-170 **272.65**	1895-170 **272.65**	895-170P **272.65**	1	0	120
12X18	895-180 **285.93**	1895-180 **285.93**	895-180P **285.93**	1	0	120
12X19	895-190 **299.20**	1895-190 **299.20**	895-190P **299.20**	1	0	120
12X20	895-200 **312.47**	1895-200 **312.47**	895-200P **312.47**	1	0	120
12X22	895-220 **339.05**	1895-220 **339.05**	895-220P **339.05**	1	0	120
12X24	895-240 **365.61**	1895-240 **365.61**	895-240P **365.61**	1	0	120
12X30	895-300 **445.27**	1895-300 **445.27**	895-300P **445.27**	1	0	120
12X36	895-360 **524.96**	1895-360 **524.96**	895-360P **524.96**	1	0	120
12X42	895-420 **631.17**	1895-420 **631.17**	895-420P **631.17**	1	0	120
12X48	895-480 **684.27**	1895-480 **684.27**	895-480P **684.27**	1	0	120

The following nipples are normally injection molded, but are optionally available as machined nipples listed below. All other nipples are normally machined.

PVC Schedule 80 Machined Nipples
1/4" Diameter



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
880-005M	1/4XCLOSE	25	1200	120	4.06
880-015M	1/4X1-1/2	25	1200	120	4.32
880-020M	1/4X2	25	500	120	2.96
880-030M	1/4X3	25	500	120	2.01
880-040M	1/4X4	25	250	120	5.13
880-050M	1/4X5	25	250	120	5.39

PVC Schedule 80 Machined Nipples
3/8" Diameter



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
881-015M	3/8X1-1/2	25	800	120	4.63
881-020M	3/8X2	25	600	120	4.63
881-040M	3/8X4	25	300	120	5.86
881-030M	3/8X3	25	400	120	.74

PVC Schedule 80 Machined Nipples
1/2" Diameter



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
882-005M	1/2XCLOSE	25	450	120	3.42
882-015M	1/2X1-1/2	25	600	120	3.43
882-100M	1/2X10	25	0	120	5.47
882-120M	1/2X12	25	0	120	6.00
882-020M	1/2X2	25	300	120	3.43
882-025M	1/2X2-1/2	25	300	120	3.43
882-030M	1/2X3	25	300	120	3.55
882-040M	1/2X4	25	300	120	3.73
882-045M	1/2X4-1/2	25	300	120	3.99
882-050M	1/2X5	25	300	120	4.16
882-060M	1/2X6	25	300	120	4.34
882-080M	1/2X8	25	0	120	4.94
882-070M	1/2X7	25	200	120	4.59

PVC Schedule 80 Machined Nipples
3/4" Diameter



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
883-005M	3/4X	25	300	120	3.74
883-015M	3/4X1-1/2	25	300	120	3.74
883-100M	3/4X10	25	0	120	6.18
883-120M	3/4X12	25	0	120	6.91
883-020M	3/4X2	25	300	120	4.01
883-025M	3/4X2-1/2	25	300	120	4.06
883-030M	3/4X3	25	300	120	4.09
883-035M	3/4X3-1/2	25	300	120	4.15
883-040M	3/4X4	25	300	120	4.44
883-045M	3/4X4-1/2	25	200	120	4.52
883-050M	3/4X5	25	200	120	4.84
883-060M	3/4X6	25	200	120	5.19
883-080M	3/4X8	25	0	120	5.52

PVC Schedule 80 Machined Nipples
1" Diameter



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
884-005M	1XCLOSE	25	300	120	4.30
884-100M	1X10	25	0	120	8.63
884-120M	1X12	25	0	120	9.80
884-020M	1X2	25	300	120	4.60
884-025M	1X2-1/2	25	200	120	4.56
884-030M	1X3	25	200	120	4.64
884-040M	1X4	25	200	120	5.18

PVC Schedule 80 Machined Nipples (continued)
1" Diameter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
884-050M	1X5	25	0	120	5.75
884-060M	1X6	25	0	120	6.29
884-080M	1X8	25	0	120	7.40

PVC Schedule 80 Machined Nipples
1-1/4" Diameter



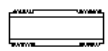
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
885-005M	1-1/4X	25	200	120	4.38
885-120M	1-1/4X12	25	0	120	10.93
885-020M	1-1/4X2	25	200	120	4.69
885-030M	1-1/4X3	25	0	120	5.03
885-040M	1-1/4X4	25	0	120	5.75
885-060M	1-1/4X6	25	0	120	3.89

PVC Schedule 80 Machined Nipples
1-1/2" Diameter



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
886-005M	1-1/2XCLOSE	25	0	120	4.97
886-100M	1-1/2X10	25	0	120	11.76
886-120M	1-1/2X12	25	0	120	13.48
886-020M	1-1/2X2	25	0	120	5.32
886-030M	1-1/2X3	25	0	120	6.63
886-040M	1-1/2X4	25	0	120	6.63
886-060M	1-1/2X6	25	0	120	8.27
886-070M	1-1/2X7	25	0	120	9.17
886-080M	1-1/2X8	25	0	120	10.02

PVC Schedule 80 Machined Nipples
2" Diameter



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
887-005M	2XCLOSE	25	0	120	5.93
887-030M	2X3	25	0	120	7.21
887-040M	2X4	25	0	120	8.34
887-060M	2X6	25	0	120	10.79

PVC Reducing Nipples

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
882-101	3/4X1/2	50	300	120	1.55
884-130R	1X1/2	25	300	120	2.09
884-131	1X3/4	50	200	120	2.17

CPVC Schedule 80 Nipple
1/4" Diameter

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
1/4XCLOSE	880-005C **2.54**	1880-005C **2.54**	880-005CP **2.54**	25	1200	121
1/4X1-1/2	880-015C **2.74**	1880-015C **2.74**	880-015CP **2.74**	25	1200	121
1/4X2	880-020C **2.96**	1880-020C **2.96**	880-020CP **2.96**	25	500	121
1/4X2-1/2	880-025C **3.44**	1880-025C **3.44**	880-025CP **3.44**	25	500	121
1/4X3	880-030C **3.44**	1880-030C **3.44**	880-030CP **3.44**	25	500	121
1/4X3-1/2	880-035C **3.89**	1880-035C **3.89**	880-035CP **3.89**	25	500	121
1/4X4	880-040C **3.89**	1880-040C **3.89**	880-040CP **3.89**	25	250	121
1/4X4-1/2	880-045C **4.36**	1880-045C **4.36**	880-045CP **4.36**	25	250	121
1/4X5	880-050C **4.36**	1880-050C **4.36**	880-050CP **4.36**	25	250	121

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
1/4" Diameter						
1/4X5-1/2	880-055C **4.74**	1880-055C **4.74**	880-055CP **4.74**	25	250	121
1/4X6	880-060C **4.74**	1880-060C **4.74**	880-060CP **4.74**	25	250	121
1/4X7	880-070C **7.17**	1880-070C **7.17**	880-070CP **7.17**	25	250	121
1/4X8	880-080C **7.71**	1880-080C **7.71**	880-080CP **7.71**	25	250	121
1/4X9	880-090C **8.19**	1880-090C **8.19**	880-090CP **8.19**	25	250	121
1/4X10	880-100C **8.62**	1880-100C **8.62**	880-100CP **8.62**	25	250	121
1/4X11	880-110C **9.14**	1880-110C **9.14**	880-110CP **9.14**	25	250	121
1/4X12	880-120C **9.53**	1880-120C **9.53**	880-120CP **9.53**	25	250	121
1/4X13	880-130C **12.07**	1880-130C **12.07**	880-130CP **12.07**	25	250	121
1/4X14	880-140C **15.51**	1880-140C **15.51**	880-140CP **15.51**	25	250	121
1/4X15	880-150C **16.13**	1880-150C **16.13**	880-150CP **16.13**	25	500	121
1/4X16	880-160C **16.33**	1880-160C **16.33**	880-160CP **16.33**	25	250	121
1/4X17	880-170C **17.19**	1880-170C **17.19**	880-170CP **17.19**	25	0	121
1/4X18	880-180C **18.59**	1880-180C **18.59**	880-180CP **18.59**	25	300	121
1/4X19	880-190C **18.97**	1880-190C **18.97**	880-190CP **18.97**	25	0	121
1/4X20	880-200C **19.47**	1880-200C **19.47**	880-200CP **19.47**	25	0	121
1/4X22	880-220C **20.18**	1880-220C **20.18**	880-220CP **20.18**	25	300	121
1/4X24	880-240C **23.33**	1880-240C **23.33**	880-240CP **23.33**	25	0	121
1/4X30	880-300C **28.24**	1880-300C **28.24**	880-300CP **28.24**	25	0	121
1/4X36	880-360C **33.34**	1880-360C **33.34**	880-360CP **33.34**	25	0	121
1/4X42	880-420C **39.12**	1880-420C **39.12**	880-420CP **39.12**	25	0	121
1/4X48	880-480C **40.85**	1880-480C **40.85**	880-480CP **40.85**	25	0	121
3/8" Diameter						
3/8XCLOSE	881-005C **2.91**	1881-005C **2.91**	881-005CP **2.91**	25	800	121
3/8X1-1/2	881-015C **3.04**	1881-015C **3.04**	881-015CP **3.04**	25	800	121
3/8X2	881-020C **3.44**	1881-020C **3.44**	881-020CP **3.44**	25	600	121
3/8X2-1/2	881-025C **3.88**	1881-025C **3.88**	881-025CP **3.88**	25	600	121
3/8X3	881-030C **4.07**	1881-030C **4.07**	881-030CP **4.07**	25	400	121
3/8X3-1/2	881-035C **4.54**	1881-035C **4.54**	881-035CP **4.54**	25	400	121
3/8X4	881-040C **4.92**	1881-040C **4.92**	881-040CP **4.92**	25	300	121
3/8X4-1/2	881-045C **5.39**	1881-045C **5.39**	881-045CP **5.39**	25	250	121
3/8X5	881-050C **5.80**	1881-050C **5.80**	881-050CP **5.80**	25	250	121
3/8X5-1/2	881-055C **6.37**	1881-055C **6.37**	881-055CP **6.37**	25	250	121
3/8X6	881-060C **7.05**	1881-060C **7.05**	881-060CP **7.05**	25	250	121
3/8X7	881-070C **8.46**	1881-070C **8.46**	881-070CP **8.46**	25	200	121
3/8X8	881-080C **8.85**	1881-080C **8.85**	881-080CP **8.85**	25	200	121
3/8X9	881-090C **9.86**	1881-090C **9.86**	881-090CP **9.86**	25	200	121

CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
3/8" Diameter						
3/8X10	881-100C **10.04**	1881-100C **10.04**	881-100CP **10.04**	25	200	121
3/8X11	881-110C **10.67**	1881-110C **10.67**	881-110CP **10.67**	25	200	121
3/8X12	881-120C **10.87**	1881-120C **10.87**	881-120CP **10.87**	25	200	121
3/8X13	881-130C **13.94**	1881-130C **13.94**	881-130CP **13.94**	25	0	121
3/8X14	881-140C **16.97**	1881-140C **16.97**	881-140CP **16.97**	25	200	121
3/8X15	881-150C **17.35**	1881-150C **17.35**	881-150CP **17.35**	25	200	121
3/8X16	881-160C **17.76**	1881-160C **17.76**	881-160CP **17.76**	25	200	121
3/8X17	881-170C **18.38**	1881-170C **18.38**	881-170CP **18.38**	25	0	121
3/8X18	881-180C **19.01**	1881-180C **19.01**	881-180CP **19.01**	25	200	121
3/8X19	881-190C **19.60**	1881-190C **19.60**	881-190CP **19.60**	25	0	121
3/8X20	881-200C **20.22**	1881-200C **20.22**	881-200CP **20.22**	25	0	121
3/8X22	881-220C **20.87**	1881-220C **20.87**	881-220CP **20.87**	25	0	121
3/8X24	881-240C **21.82**	1881-240C **21.82**	881-240CP **21.82**	25	0	121
3/8X30	881-300C **33.37**	1881-300C **33.37**	881-300CP **33.37**	25	0	121
3/8X36	881-360C **41.21**	1881-360C **41.21**	881-360CP **41.21**	25	0	121
3/8X42	881-420C **42.19**	1881-420C **42.19**	881-420CP **42.19**	25	0	121
3/8X48	881-480C **43.65**	1881-480C **43.65**	881-480CP **43.65**	25	0	121
1/2" Diameter						
1/2XCLOSE	882-005C **2.74**	1882-005C **2.74**	882-005CP **2.74**	25	450	121
1/2X1-1/2	882-015C **2.96**	1882-015C **2.96**	882-015CP **2.96**	25	600	121
1/2X2	882-020C **3.26**	1882-020C **3.26**	882-020CP **3.26**	25	300	121
1/2X2-1/2	882-025C **3.47**	1882-025C **3.47**	882-025CP **3.47**	25	300	121
1/2X3	882-030C **3.72**	1882-030C **3.72**	882-030CP **3.72**	25	300	121
1/2X3-1/2	882-035C **4.36**	1882-035C **4.36**	882-035CP **4.36**	25	300	121
1/2X4	882-040C **4.36**	1882-040C **4.36**	882-040CP **4.36**	25	300	121
1/2X4-1/2	882-045C **4.89**	1882-045C **4.89**	882-045CP **4.89**	25	300	121
1/2X5	882-050C **4.89**	1882-050C **4.89**	882-050CP **4.89**	25	300	121
1/2X5-1/2	882-055C **5.52**	1882-055C **5.52**	882-055CP **5.52**	25	300	121
1/2X6	882-060C **5.52**	1882-060C **5.52**	882-060CP **5.52**	25	300	121
1/2X7	882-070C **8.06**	1882-070C **8.06**	882-070CP **8.06**	25	200	121
1/2X8	882-080C **8.60**	1882-080C **8.60**	882-080CP **8.60**	25	0	121
1/2X9	882-090C **9.28**	1882-090C **9.28**	882-090CP **9.28**	25	0	121
1/2X10	882-100C **9.77**	1882-100C **9.77**	882-100CP **9.77**	25	0	121
1/2X11	882-110C **10.41**	1882-110C **10.41**	882-110CP **10.41**	25	0	121
1/2X12	882-120C **11.04**	1882-120C **11.04**	882-120CP **11.04**	25	0	121
1/2X13	882-130C **13.61**	1882-130C **13.61**	882-130CP **13.61**	25	0	121
1/2X14	882-140C **16.17**	1882-140C **16.17**	882-140CP **16.17**	100	0	121

CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
1/2" Diameter						
1/2X15	882-150C **16.67**	1882-150C **16.67**	882-150CP **16.67**	100	0	121
1/2X16	882-160C **17.22**	1882-160C **17.22**	882-160CP **17.22**	100	0	121
1/2X17	882-170C **17.96**	1882-170C **17.96**	882-170CP **17.96**	100	0	121
1/2X18	882-180C **18.26**	1882-180C **18.26**	882-180CP **18.26**	25	100	121
1/2X19	882-190C **18.93**	1882-190C **18.93**	882-190CP **18.93**	100	0	121
1/2X20	882-200C **19.57**	1882-200C **19.57**	882-200CP **19.57**	100	0	121
1/2X22	882-220C **21.07**	1882-220C **21.07**	882-220CP **21.07**	100	0	121
1/2X24	882-240C **22.13**	1882-240C **22.13**	882-240CP **22.13**	100	0	121
1/2X30	882-300C **33.23**	1882-300C **33.23**	882-300CP **33.23**	25	0	121
1/2X36	882-360C **36.56**	1882-360C **36.56**	882-360CP **36.56**	25	0	121
1/2X42	882-420C **40.05**	1882-420C **40.05**	882-420CP **40.05**	25	0	121
1/2X48	882-480C **44.18**	1882-480C **44.18**	882-480CP **44.18**	25	0	121
3/4" Diameter						
3/4XCLOSE	883-005C **3.36**	1883-005C **3.36**	883-005CP **3.36**	25	300	121
3/4X1-1/2	883-015C **3.61**	1883-015C **3.61**	883-015CP **3.61**	25	300	121
3/4X2	883-020C **3.89**	1883-020C **3.89**	883-020CP **3.89**	25	300	121
3/4X2-1/2	883-025C **4.44**	1883-025C **4.44**	883-025CP **4.44**	25	300	121
3/4X3	883-030C **4.44**	1883-030C **4.44**	883-030CP **4.44**	25	300	121
3/4X3-1/2	883-035C **5.14**	1883-035C **5.14**	883-035CP **5.14**	25	300	121
3/4X4	883-040C **5.14**	1883-040C **5.14**	883-040CP **5.14**	25	300	121
3/4X4-1/2	883-045C **5.69**	1883-045C **5.69**	883-045CP **5.69**	25	200	121
3/4X5	883-050C **5.69**	1883-050C **5.69**	883-050CP **5.69**	25	200	121
3/4X5-1/2	883-055C **6.36**	1883-055C **6.36**	883-055CP **6.36**	25	200	121
3/4X6	883-060C **6.36**	1883-060C **6.36**	883-060CP **6.36**	25	200	121
3/4X7	883-070C **9.57**	1883-070C **9.57**	883-070CP **9.57**	25	200	121
3/4X8	883-080C **10.11**	1883-080C **10.11**	883-080CP **10.11**	25	0	121
3/4X9	883-090C **10.83**	1883-090C **10.83**	883-090CP **10.83**	25	0	121
3/4X10	883-100C **11.36**	1883-100C **11.36**	883-100CP **11.36**	25	0	121
3/4X11	883-110C **12.06**	1883-110C **12.06**	883-110CP **12.06**	25	0	121
3/4X12	883-120C **12.78**	1883-120C **12.78**	883-120CP **12.78**	25	0	121
3/4X13	883-130C **15.97**	1883-130C **15.97**	883-130CP **15.97**	25	0	121
3/4X14	883-140C **19.15**	1883-140C **19.15**	883-140CP **19.15**	100	0	121
3/4X15	883-150C **19.67**	1883-150C **19.67**	883-150CP **19.67**	100	0	121
3/4X16	883-160C **20.25**	1883-160C **20.23**	883-160CP **20.25**	100	0	121
3/4X17	883-170C **20.92**	1883-170C **20.92**	883-170CP **20.92**	100	0	121
3/4X18	883-180C **21.60**	1883-180C **21.60**	883-180CP **21.60**	100	0	121
3/4X19	883-190C **22.17**	1883-190C **22.17**	883-190CP **22.17**	100	0	121

CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
3/4" Diameter						
3/4X20	883-200C **22.75**	1883-200C **22.75**	883-200CP **22.75**	100	0	121
3/4X22	883-220C **24.14**	1883-220C **24.14**	883-220CP **24.14**	100	0	121
3/4X24	883-240C **25.55**	1883-240C **25.55**	883-240CP **25.55**	100	0	121
3/4X30	883-300C **38.96**	1883-300C **38.96**	883-300CP **38.96**	25	0	121
3/4X36	883-360C **42.47**	1883-360C **42.47**	883-360CP **42.37**	25	0	121
3/4X42	883-420C **46.63**	1883-420C **46.63**	883-420CP **46.63**	25	0	121
3/4X48	883-480C **49.72**	1883-480C **49.72**	883-480CP **49.72**	25	0	121
1" Diameter						
1XCLOSE	884-005C **4.07**	1884-005C **4.07**	884-005CP **4.07**	25	300	121
1X2	884-020C **4.44**	1884-020C **4.44**	884-020CP **4.44**	25	300	121
1X2-1/2	884-025C **5.52**	1884-025C **5.52**	884-025CP **5.52**	25	200	121
1X3	884-030C **5.52**	1884-030C **5.52**	884-030CP **5.52**	25	200	121
1X3-1/2	884-035C **6.36**	1884-035C **6.36**	884-035CP **6.36**	25	200	121
1X4	884-040C **6.36**	1884-040C **6.36**	884-040CP **6.36**	25	200	121
1X4-1/2	884-045C **7.17**	1884-045C **7.17**	884-045CP **7.17**	25	200	121
1X5	884-050C **7.17**	1884-050C **7.17**	884-050CP **7.17**	25	0	121
1X5-1/2	884-055C **8.32**	1884-055C **8.32**	884-055CP **8.32**	25	0	121
1X6	884-060C **8.32**	1884-060C **8.32**	884-060CP **8.32**	25	0	121
1X7	884-070C **11.63**	1884-070C **11.63**	884-070CP **11.63**	25	0	121
1X8	884-080C **12.74**	1884-080C **12.74**	884-080CP **12.74**	25	0	121
1X9	884-090C **13.82**	1884-090C **13.82**	884-090CP **13.82**	25	0	121
1X10	884-100C **14.84**	1884-100C **14.84**	884-100CP **14.84**	25	0	121
1X11	884-110C **15.52**	1884-110C **15.52**	884-110CP **15.52**	25	0	121
1X12	884-120C **16.68**	1884-120C **16.68**	884-120CP **16.68**	25	0	121
1X13	884-130C **19.95**	1884-130C **19.95**	884-130CP **19.95**	25	0	121
1X14	884-140C **23.26**	1884-140C **23.26**	884-140CP **23.26**	50	0	121
1X15	884-150C **24.38**	1884-150C **24.38**	884-150CP **24.38**	50	0	121
1X16	884-160C **25.52**	1884-160C **25.52**	884-160CP **25.52**	50	0	121
1X17	884-170C **26.59**	1884-170C **26.59**	884-170CP **26.59**	50	0	121
1X18	884-180C **27.67**	1884-180C **27.67**	884-180CP **27.67**	50	0	121
1X19	884-190C **28.26**	1884-190C **28.26**	884-190CP **28.26**	50	0	121
1X20	884-200C **28.94**	1884-200C **28.94**	884-200CP **28.94**	25	0	121
1X22	884-220C **31.41**	1884-220C **31.41**	884-220CP **31.41**	50	0	121
1X24	884-240C **33.26**	1884-240C **33.26**	884-240CP **33.26**	50	0	121
1X30	884-300C **48.81**	1884-300C **48.81**	884-300CP **48.81**	15	0	121
1X36	884-360C **55.32**	1884-360C **55.32**	884-360CP **55.32**	15	0	121
1X42	884-420C **58.63**	1884-420C **58.63**	884-420CP **58.63**	15	0	121

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CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
1" Diameter						
1X48	884-480C **66.57**	1884-480C **66.57**	884-480CP **66.57**	15	0	121
1-1/4" Diameter						
1-1/4XCLOSE	885-005C **5.14**	1885-005C **5.14**	885-005CP **5.14**	25	200	121
1-1/4X2	885-020C **5.69**	1885-020C **5.69**	885-020CP **5.69**	25	200	121
1-1/4X2-1/2	885-025C **7.17**	1885-025C **7.17**	885-025CP **7.17**	25	200	121
1-1/4X3	885-030C **7.58**	1885-030C **7.58**	885-030CP **7.58**	25	0	121
1-1/4X3-1/2	885-035C **8.93**	1885-035C **8.93**	885-035CP **8.93**	25	0	121
1-1/4X4	885-040C **8.93**	1885-040C **8.93**	885-040CP **8.93**	25	0	121
1-1/4X4-1/2	885-045C **10.49**	1885-045C **10.49**	885-045CP **10.49**	25	0	121
1-1/4X5	885-050C **10.49**	1885-050C **10.49**	885-050CP **10.49**	25	0	121
1-1/4X5-1/2	885-055C **12.06**	1885-055C **12.06**	885-055CP **12.06**	25	0	121
1-1/4X6	885-060C **12.06**	1885-060C **12.06**	885-060CP **12.06**	25	0	121
1-1/4X7	885-070C **17.71**	1885-070C **17.71**	885-070CP **17.71**	25	0	121
1-1/4X8	885-080C **18.43**	1885-080C **18.43**	885-080CP **18.43**	25	0	121
1-1/4X9	885-090C **19.25**	1885-090C **19.25**	885-090CP **19.25**	25	0	121
1-1/4X10	885-100C **20.95**	1885-100C **20.95**	885-100CP **20.95**	25	0	121
1-1/4X11	885-110C **22.54**	1885-110C **22.54**	885-110CP **22.54**	25	0	121
1-1/4X12	885-120C **24.08**	1885-120C **24.08**	885-120CP **24.08**	25	0	121
1-1/4X13	885-130C **28.22**	1885-130C **28.22**	885-130CP **28.22**	25	0	121
1-1/4X14	885-140C **32.35**	1885-140C **32.35**	885-140CP **32.35**	25	0	121
1-1/4X15	885-150C **33.88**	1885-150C **33.88**	885-150CP **33.88**	25	0	121
1-1/4X16	885-160C **35.42**	1885-160C **35.42**	885-160CP **35.42**	25	0	121
1-1/4X17	885-170C **37.00**	1885-170C **37.00**	885-170CP **37.00**	25	0	121
1-1/4X18	885-180C **39.32**	1885-180C **39.32**	885-180CP **39.32**	25	0	121
1-1/4X19	885-190C **40.25**	1885-190C **40.25**	885-190CP **40.25**	25	0	121
1-1/4X20	885-200C **41.93**	1885-200C **41.93**	885-200CP **41.93**	25	0	121
1-1/4X22	885-220C **45.04**	1885-220C **45.04**	885-220CP **45.04**	25	0	121
1-1/4X24	885-240C **51.47**	1885-240C **51.47**	885-240CP **51.47**	25	0	121
1-1/4X30	885-300C **67.77**	1885-300C **67.77**	885-300CP **67.77**	10	0	121
1-1/4X36	885-360C **71.54**	1885-360C **71.54**	885-360CP **71.54**	10	0	121
1-1/4X42	885-420C **86.74**	1885-420C **86.74**	885-420CP **86.74**	10	0	121
1-1/4X48	885-480C **96.33**	1885-480C **96.33**	885-480CP **96.33**	10	0	121
1-1/2" Diameter						
1-1/2XCLOSE	886-005C **5.69**	1886-005C **5.69**	886-005CP **5.69**	25	0	121
1-1/2X2	886-020C **6.36**	1886-020C **6.36**	886-020CP **6.36**	25	0	121
1-1/2X2-1/2	886-025C **7.91**	1886-025C **7.91**	886-025CP **7.91**	25	0	121
1-1/2X3	886-030C **7.91**	1886-030C **7.91**	886-030CP **7.91**	25	0	121
1-1/2X3-1/2	886-035C **9.57**	1886-035C **9.57**	886-035CP **9.57**	25	0	121

CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
1-1/2" Diameter						
1-1/2X4	886-040C **9.57**	1886-040C **9.57**	886-040CP **9.57**	25	0	121
1-1/2X4-1/2	886-045C **11.17**	1886-045C **11.17**	886-045CP **11.17**	25	0	121
1-1/2X5	886-050C **12.73**	1886-050C **12.73**	886-050CP **12.73**	25	0	121
1-1/2X5-1/2	886-055C **12.73**	1886-055C **12.73**	886-055CP **12.73**	25	0	121
1-1/2X6	886-060C **12.73**	1886-060C **12.73**	886-060CP **12.73**	25	0	121
1-1/2X7	886-070C **19.09**	1886-070C **19.09**	886-070CP **19.09**	25	0	121
1-1/2X8	886-080C **20.68**	1886-080C **20.68**	886-080CP **20.68**	25	0	121
1-1/2X9	886-090C **21.28**	1886-090C **21.28**	886-090CP **21.28**	25	0	121
1-1/2X10	886-100C **23.20**	1886-100C **23.20**	886-100CP **23.20**	25	0	121
1-1/2X11	886-110C **23.93**	1886-110C **23.93**	886-110CP **23.93**	25	0	121
1-1/2X12	886-120C **25.52**	1886-120C **25.52**	886-120CP **25.52**	25	0	121
1-1/2X13	886-130C **30.22**	1886-130C **30.22**	886-130CP **30.22**	25	0	121
1-1/2X14	886-140C **34.91**	1886-140C **34.91**	886-140CP **34.91**	25	0	121
1-1/2X15	886-150C **36.96**	1886-150C **36.96**	886-150CP **36.96**	25	0	121
1-1/2X16	886-160C **39.68**	1886-160C **39.68**	886-160CP **39.68**	25	0	121
1-1/2X17	886-170C **40.16**	1886-170C **40.16**	886-170CP **40.16**	25	0	121
1-1/2X18	886-180C **41.34**	1886-180C **41.34**	886-180CP **41.34**	25	0	121
1-1/2X19	886-190C **42.98**	1886-190C **42.98**	886-190CP **42.98**	25	0	121
1-1/2X20	886-200C **44.59**	1886-200C **44.59**	886-200CP **44.59**	25	0	121
1-1/2X22	886-220C **47.79**	1886-220C **47.79**	886-220CP **47.79**	25	0	121
1-1/2X24	886-240C **51.00**	1886-240C **51.00**	886-240CP **51.00**	25	0	121
1-1/2X30	886-300C **73.15**	1886-300C **73.15**	886-300CP **73.15**	5	0	121
1-1/2X36	886-360C **82.69**	1886-360C **82.69**	886-360CP **82.69**	5	0	121
1-1/2X42	886-420C **92.38**	1886-420C **92.38**	886-420CP **92.38**	5	0	121
1-1/2X48	886-480C **101.98**	1886-480C **101.98**	886-480CP **101.98**	5	0	121
2" Diameter						
2XCLOSE	887-005C **8.81**	1887-005C **8.81**	887-005CP **8.81**	25	0	121
2X2	887-020C **10.49**	1887-020C **10.49**	887-020CP **10.49**	25	0	121
2X2-1/2	887-025C **10.49**	1887-025C **10.49**	887-025CP **10.49**	25	0	121
2X3	887-030C **12.44**	1887-030C **12.44**	887-030CP **12.44**	25	0	121
2X3-1/2	887-035C **12.44**	1887-035C **12.44**	887-035CP **12.44**	25	0	121
2X4	887-040C **14.38**	1887-040C **14.38**	887-040CP **14.38**	25	0	121
2X4-1/2	887-045C **14.38**	1887-045C **14.38**	887-045CP **14.38**	25	0	121
2X5	887-050C **16.31**	1887-050C **16.31**	887-050CP **16.31**	25	0	121
2X5-1/2	887-055C **16.31**	1887-055C **16.31**	887-055CP **16.31**	25	0	121
2X6	887-060C **22.93**	1887-060C **22.93**	887-060CP **22.93**	25	0	121
2X7	887-070C **23.63**	1887-070C **23.63**	887-070CP **23.63**	25	0	121

CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
2" Diameter						
2X8	887-080C **24.87**	1887-080C **24.87**	887-080CP **24.87**	25	0	121
2X9	887-090C **27.04**	1887-090C **27.04**	887-090CP **27.04**	25	0	121
2X10	887-100C **28.99**	1887-100C **28.99**	887-100CP **28.99**	25	0	121
2X11	887-110C **30.69**	1887-110C **30.69**	887-110CP **30.69**	25	0	121
2X12	887-120C **32.65**	1887-120C **32.65**	887-120CP **32.65**	25	0	121
2X13	887-130C **39.20**	1887-130C **39.20**	887-130CP **39.20**	25	0	121
2X14	887-140C **45.88**	1887-140C **45.88**	887-140CP **45.88**	25	0	121
2X15	887-150C **47.77**	1887-150C **47.77**	887-150CP **47.77**	25	0	121
2X16	887-160C **49.71**	1887-160C **49.71**	887-160CP **49.71**	25	0	121
2X17	887-170C **52.92**	1887-170C **52.92**	887-170CP **52.92**	20	0	121
2X18	887-180C **56.09**	1887-180C **56.09**	887-180CP **56.09**	20	0	121
2X19	887-190C **59.68**	1887-190C **59.68**	887-190CP **59.68**	25	0	121
2X20	887-200C **60.76**	1887-200C **60.76**	887-200CP **60.76**	20	0	121
2X22	887-220C **62.21**	1887-220C **62.21**	887-220CP **62.21**	20	0	121
2X24	887-240C **65.27**	1887-240C **65.27**	887-240CP **65.27**	20	0	121
2X30	887-300C **95.57**	1887-300C **95.57**	887-300CP **95.57**	5	0	121
2X36	887-360C **114.47**	1887-360C **114.47**	887-360CP **114.47**	5	0	121
2X42	887-420C **131.79**	1887-420C **131.79**	887-420CP **131.79**	5	0	121
2X48	887-480C **149.63**	1887-480C **149.63**	887-480CP **149.63**	5	0	121
2-1/2" Diameter						
2-1/2XCLOSE	888-005C **15.99**	1888-005C **15.99**	888-005CP **15.99**	25	0	121
2-1/2X3	888-030C **17.55**	1888-030C **17.55**	888-030CP **17.55**	25	0	121
2-1/2X3-1/2	888-035C **21.40**	1888-035C **21.40**	888-035CP **21.40**	25	0	121
2-1/2X4	888-040C **21.40**	1888-040C **21.40**	888-040CP **21.40**	25	0	121
2-1/2X4-1/2	888-045C **25.57**	1888-045C **25.57**	888-045CP **25.57**	25	0	121
2-1/2X5	888-050C **25.57**	1888-050C **25.57**	888-050CP **25.57**	25	0	121
2-1/2X5-1/2	888-055C **30.00**	1888-055C **30.00**	888-055CP **30.00**	25	0	121
2-1/2X6	888-060C **30.00**	1888-060C **30.00**	888-060CP **30.00**	25	0	121
2-1/2X7	888-070C **38.37**	1888-070C **38.45**	888-070CP **38.37**	16	0	121
2-1/2X8	888-080C **42.76**	1888-080C **42.76**	888-080CP **42.76**	16	0	121
2-1/2X9	888-090C **46.92**	1888-090C **46.92**	888-090CP **46.92**	25	0	121
2-1/2X10	888-100C **51.11**	1888-100C **51.11**	888-100CP **51.11**	16	0	121
2-1/2X11	888-110C **55.54**	1888-110C **55.54**	888-110CP **55.54**	16	0	121
2-1/2X12	888-120C **59.97**	1888-120C **59.97**	888-120CP **59.97**	16	0	121
2-1/2X13	888-130C **68.35**	1888-130C **68.35**	888-130CP **68.35**	25	0	121
2-1/2X14	888-140C **76.72**	1888-140C **76.72**	888-140CP **76.72**	25	0	121
2-1/2X15	888-150C **82.01**	1888-150C **82.01**	888-150CP **82.01**	25	0	121

CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
2-1/2" Diameter						
2-1/2X16	888-160C **87.49**	1888-160C **87.49**	888-160CP **87.49**	20	0	121
2-1/2X17	888-170C **90.42**	1888-170C **90.42**	888-170CP **90.42**	20	0	121
2-1/2X18	888-180C **93.85**	1888-180C **93.85**	888-180CP **93.85**	20	0	121
2-1/2X19	888-190C **98.03**	1888-190C **98.03**	888-190CP **98.03**	25	0	121
2-1/2X20	888-200C **102.22**	1888-200C **102.22**	888-200CP **102.22**	12	0	121
2-1/2X22	888-220C **111.06**	1888-220C **111.06**	888-220CP **111.06**	25	0	121
2-1/2X24	888-240C **120.17**	1888-240C **120.17**	888-240CP **120.17**	10	0	121
2-1/2X30	888-300C **125.79**	1888-300C **125.79**	888-300CP **125.79**	3	0	121
2-1/2X36	888-360C **151.76**	1888-360C **151.76**	888-360CP **151.76**	3	0	121
2-1/2X42	888-420C **174.42**	1888-420C **174.42**	888-420CP **174.42**	3	0	121
2-1/2X48	888-480C **198.63**	1888-480C **198.63**	888-480CP **198.63**	3	0	121
3" Diameter						
3XCLOSE	889-005C **20.71**	1889-005C **20.71**	889-005CP **20.71**	25	0	121
3X3	889-030C **20.71**	1889-030C **20.71**	889-030CP **20.71**	20	0	121
3X3-1/2	889-035C **27.08**	1889-035C **27.08**	889-035CP **27.08**	30	0	121
3X4	889-040C **27.08**	1889-040C **27.08**	889-040CP **27.08**	30	0	121
3X4-1/2	889-045C **31.53**	1889-045C **31.53**	889-045CP **31.53**	20	0	121
3X5	889-050C **36.01**	1889-050C **36.01**	889-050CP **36.01**	20	0	121
3X5-1/2	889-055C **36.01**	1889-055C **36.01**	889-055CP **36.01**	20	0	121
3X6	889-060C **42.38**	1889-060C **42.38**	889-060CP **42.38**	20	0	121
3X7	889-070C **45.38**	1889-070C **45.38**	889-070CP **45.38**	10	0	121
3X8	889-080C **52.29**	1889-080C **52.29**	889-080CP **52.29**	10	0	121
3X9	889-090C **58.46**	1889-090C **58.46**	889-090CP **58.46**	10	0	121
3X10	889-100C **68.43**	1889-100C **68.43**	889-100CP **68.43**	10	0	121
3X11	889-110C **74.25**	1889-110C **74.25**	889-110CP **74.25**	10	0	121
3X12	889-120C **78.74**	1889-120C **78.74**	889-120CP **78.74**	10	0	121
3X13	889-130C **81.40**	1889-130C **81.40**	889-130CP **81.40**	20	0	121
3X14	889-140C **90.71**	1889-140C **90.71**	889-140CP **90.71**	20	0	121
3X15	889-150C **101.16**	1889-150C **101.16**	889-150CP **101.16**	20	0	121
3X16	889-160C **104.59**	1889-160C **104.59**	889-160CP **104.59**	20	0	121
3X17	889-170C **114.91**	1889-170C **114.91**	889-170CP **114.91**	10	0	121
3X18	889-180C **116.97**	1889-180C **116.97**	889-180CP **116.97**	10	0	121
3X19	889-190C **126.39**	1889-190C **126.39**	889-190CP **126.39**	10	0	121
3X20	889-200C **133.85**	1889-200C **133.85**	889-200CP **133.85**	10	0	121
3X22	889-220C **138.63**	1889-220C **138.63**	889-220CP **138.63**	10	0	121
3X24	889-240C **144.19**	1889-240C **144.19**	889-240CP **144.19**	10	0	121
3X30	889-300C **191.79**	1889-300C **191.79**	889-300CP **191.79**	3	0	121

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CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
3" Diameter						
3X36	889-360C **233.88**	1889-360C **233.88**	889-360CP **233.88**	3	0	121
3X42	889-420C **266.00**	1889-420C **266.00**	889-420CP **266.00**	3	0	121
3X48	889-480C **288.32**	1889-480C **288.32**	889-480CP **288.32**	3	0	121
4" Diameter						
4XCLOSE	890-005C **31.93**	1890-005C **31.93**	890-005CP **31.93**	25	0	121
4X3	890-030C **36.47**	1890-030C **36.47**	890-030CP **36.47**	25	0	121
4X3-1/2	890-035C **36.47**	1890-035C **36.47**	890-035CP **36.47**	25	0	121
4X4	890-040C **38.33**	1890-040C **38.33**	890-040CP **38.33**	18	0	121
4X4-1/2	890-045C **44.64**	1890-045C **44.64**	890-045CP **44.64**	12	0	121
4X5	890-050C **44.64**	1890-050C **44.64**	890-050CP **44.64**	12	0	121
4X5-1/2	890-055C **51.01**	1890-055C **51.01**	890-055CP **51.01**	12	0	121
4X6	890-060C **60.60**	1890-060C **60.60**	890-060CP **60.60**	12	0	121
4X7	890-070C **64.03**	1890-070C **64.03**	890-070CP **64.03**	16	0	121
4X8	890-080C **76.60**	1890-080C **76.60**	890-080CP **76.60**	16	0	121
4X9	890-090C **82.95**	1890-090C **82.95**	890-090CP **82.95**	16	0	121
4X10	890-100C **89.36**	1890-100C **89.36**	890-100CP **89.36**	16	0	121
4X11	890-110C **98.60**	1890-110C **98.60**	890-110CP **98.60**	16	0	121
4X12	890-120C **102.06**	1890-120C **102.06**	890-120CP **102.06**	16	0	121
4X13	890-130C **113.16**	1890-130C **113.16**	890-130CP **113.16**	16	0	121
4X14	890-140C **121.79**	1890-140C **121.79**	890-140CP **121.79**	16	0	121
4X15	890-150C **137.20**	1890-150C **137.20**	890-150CP **137.20**	12	0	121
4X16	890-160C **153.18**	1890-160C **153.47**	890-160CP **153.18**	12	0	121
4X17	890-170C **159.55**	1890-170C **159.55**	890-170CP **159.55**	12	0	121
4X18	890-180C **165.92**	1890-180C **165.92**	890-180CP **165.92**	4	0	121
4X19	890-190C **178.66**	1890-190C **178.66**	890-190CP **178.66**	12	0	121
4X20	890-200C **185.28**	1890-200C **185.28**	890-200CP **185.28**	8	0	121
4X22	890-220C **189.68**	1890-220C **189.68**	890-220CP **189.68**	8	0	121
4X24	890-240C **206.68**	1890-240C **206.68**	890-240CP **206.68**	4	0	121
4X30	890-300C **274.42**	1890-300C **274.39**	890-300CP **274.42**	3	0	121
4X36	890-360C **334.55**	1890-360C **334.55**	890-360CP **334.55**	3	0	121
4X42	890-420C **370.95**	1890-420C **370.95**	890-420CP **370.95**	3	0	120
4X48	890-480C **401.48**	1890-480C **401.48**	890-480CP **401.48**	3	0	121
6" Diameter						
6XCLOSE	892-005C **75.56**	1892-005C **75.56**	892-005CP **75.56**	1	8	121
6X3	892-030C **85.77**	1892-030C **85.77**	892-030CP **85.77**	1	4	121
6X4	892-040C **117.32**	1892-040C **117.32**	892-040CP **117.32**	1	0	121
6X4-1/2	892-045C **122.74**	1892-045C **122.74**	892-045CP **122.74**	1	4	121
6X5	892-050C **131.57**	1892-050C **131.57**	892-050CP **131.57**	1	2	121

CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
6" Diameter						
6X5-1/2	892-055C **139.36**	1892-055C **139.99**	892-055CP **139.36**	1	2	121
6X6	892-060C **153.55**	1892-060C **153.55**	892-060CP **153.55**	1	0	121
6X7	892-070C **162.82**	1892-070C **162.82**	892-070CP **162.82**	1	2	121
6X8	892-080C **180.55**	1892-080C **180.55**	892-080CP **180.55**	1	0	121
6X9	892-090C **196.09**	1892-090C **196.09**	892-090CP **196.09**	1	0	121
6X10	892-100C **211.60**	1892-100C **211.60**	892-100CP **211.60**	1	0	121
6X11	892-110C **227.14**	1892-110C **227.14**	892-110CP **227.14**	1	0	121
6X12	892-120C **242.65**	1892-120C **242.65**	892-120CP **242.65**	1	0	121
6X13	892-130C **258.19**	1892-130C **258.19**	892-130CP **258.19**	1	0	121
6X14	892-140C **273.74**	1892-140C **273.74**	892-140CP **273.74**	1	0	121
6X15	892-150C **289.24**	1892-150C **289.24**	892-150CP **289.24**	1	0	121
6X16	892-160C **304.78**	1892-160C **304.52**	892-160CP **304.78**	1	0	121
6X17	892-170C **320.32**	1892-170C **320.32**	892-170CP **320.32**	1	0	121
6X18	892-180C **330.73**	1892-180C **330.73**	892-180CP **330.73**	1	6	121
6X19	892-190C **351.41**	1892-190C **351.41**	892-190CP **351.41**	1	0	121
6X20	892-200C **366.89**	1892-200C **366.89**	892-200CP **366.89**	1	0	121
6X22	892-220C **397.96**	1892-220C **397.96**	892-220CP **397.96**	1	0	121
6X24	892-240C **458.37**	1892-240C **458.37**	892-240CP **458.37**	1	3	121
6X30	892-300C **522.18**	1892-300C **522.18**	892-300CP **522.18**	1	0	121
6X36	892-360C **615.38**	1892-360C **615.38**	892-360CP **615.38**	1	0	121
6X42	892-420C **708.56**	1892-420C **708.56**	892-420CP **708.56**	1	0	121
6X48	892-480C **801.75**	1892-480C **801.75**	892-480CP **801.75**	1	0	121
8" Diameter						
8XCLOSE	893-005C **110.80**	1893-005C **110.80**	893-005CP **110.80**	2	0	121
8X4-1/2	893-045C **142.73**	1893-045C **142.73**	893-045CP **142.73**	1	0	121
8X5	893-050C **153.36**	1893-050C **153.36**	893-050CP **153.36**	1	0	121
8X5-1/2	893-055C **164.01**	1893-055C **164.01**	893-055CP **164.01**	1	0	121
8X6	893-060C **174.64**	1893-060C **174.64**	893-060CP **174.64**	1	0	121
8X7	893-070C **195.94**	1893-070C **195.94**	893-070CP **195.94**	1	0	121
8X8	893-080C **217.22**	1893-080C **217.22**	893-080CP **217.22**	4	0	121
8X9	893-090C **240.35**	1893-090C **240.35**	893-090CP **240.35**	1	0	121
8X10	893-100C **259.80**	1893-100C **259.80**	893-100CP **259.80**	1	0	121
8X11	893-110C **281.07**	1893-110C **281.07**	893-110CP **281.07**	1	0	121
8X12	893-120C **308.71**	1893-120C **308.71**	893-120CP **308.71**	1	0	121
8X13	893-130C **323.65**	1893-130C **323.65**	893-130CP **323.65**	1	0	121
8X14	893-140C **344.95**	1893-140C **344.95**	893-140CP **344.95**	1	0	121
8X15	893-150C **366.22**	1893-150C **366.22**	893-150CP **366.22**	1	0	121

CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
8" Diameter						
8X16	893-160C **387.52**	1893-160C **387.52**	893-160CP **387.52**	1	0	121
8X17	893-170C **408.80**	1893-170C **408.53**	893-170CP **408.80**	1	0	121
8X18	893-180C **430.07**	1893-180C **430.07**	893-180CP **430.07**	4	0	121
8X19	893-190C **451.39**	1893-190C **451.39**	893-190CP **451.39**	1	0	121
8X20	893-200C **472.67**	1893-200C **472.67**	893-200CP **472.67**	2	0	121
8X22	893-220C **493.96**	1893-220C **493.96**	893-220CP **493.96**	1	0	121
8X24	893-240C **515.24**	1893-240C **515.24**	893-240CP **515.24**	2	2	121
8X30	893-300C **742.57**	1893-300C **742.57**	893-300CP **742.57**	4	0	121
8X36	893-360C **905.78**	1893-360C **905.78**	893-360CP **905.78**	4	0	121
8X42	893-420C **958.58**	1893-420C **958.58**	893-420CP **958.58**	1	0	121
8X48	893-480C **1051.26**	1893-480C **1051.26**	893-480CP **1051.26**	1	0	121
10" Diameter						
10XCLOSE	894-005C **154.63**	1894-005C **154.63**	894-005CP **154.63**	1	0	121
10X4-1/2	894-045C **208.47**	1894-045C **208.47**	894-045CP **208.47**	1	0	121
10X5	894-050C **226.39**	1894-050C **226.39**	894-050CP **226.39**	1	0	121
10X5-1/2	894-055C **244.36**	1894-055C **244.36**	894-055CP **244.36**	1	0	121
10X6	894-060C **262.31**	1894-060C **262.31**	894-060CP **262.31**	1	0	121
10X7	894-070C **298.21**	1894-070C **298.21**	894-070CP **298.21**	1	0	121
10X8	894-080C **334.11**	1894-080C **334.11**	894-080CP **334.11**	1	0	121
10X9	894-090C **370.00**	1894-090C **370.00**	894-090CP **370.00**	1	0	121
10X10	894-100C **405.91**	1894-100C **405.91**	894-100CP **405.91**	1	0	121
10X11	894-110C **441.81**	1894-110C **441.81**	894-110CP **441.81**	1	0	121
10X12	894-120C **477.72**	1894-120C **477.72**	894-120CP **477.72**	1	0	121
10X13	894-130C **525.89**	1894-130C **525.89**	894-130CP **525.89**	1	0	121
10X14	894-140C **558.64**	1894-140C **558.64**	894-140CP **558.64**	1	0	121
10X15	894-150C **585.41**	1894-150C **585.41**	894-150CP **585.41**	1	0	121
10X16	894-160C **657.03**	1894-160C **657.03**	894-160CP **657.03**	1	0	121
10X17	894-170C **663.81**	1894-170C **663.81**	894-170CP **663.81**	1	0	121
10X18	894-180C **693.09**	1894-180C **693.09**	894-180CP **693.09**	1	0	121
10X19	894-190C **760.53**	1894-190C **760.53**	894-190CP **760.53**	1	0	121
10X20	894-200C **801.32**	1894-200C **801.32**	894-200CP **801.32**	1	0	121
10X22	894-220C **840.21**	1894-220C **840.21**	894-220CP **840.21**	1	0	121
10X24	894-240C **991.55**	1894-240C **991.55**	894-240CP **991.55**	1	2	121
10X30	894-300C **1074.47**	1894-300C **1074.47**	894-300CP **1074.47**	1	0	121
10X36	894-360C **1309.05**	1894-360C **1309.05**	894-360CP **1309.05**	1	0	121
10X42	894-420C **1526.43**	1894-420C **1526.43**	894-420CP **1526.43**	1	0	121
10X48	894-480C **1726.49**	1894-480C **1726.49**	894-480CP **1726.49**	1	0	121

CPVC Schedule 80 Nipple

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Disc Code
12" Diameter						
12XCLOSE	895-005C **217.04**	1895-005C **217.04**	895-005CP **217.04**	1	0	121
12X5	895-050C **290.24**	1895-050C **290.24**	895-050CP **290.24**	1	0	121
12X5-1/2	895-055C **314.55**	1895-055C **314.55**	895-055CP **314.55**	1	0	121
12X6	895-060C **337.78**	1895-060C **337.78**	895-060CP **337.78**	1	0	121
12X7	895-070C **387.57**	1895-070C **387.57**	895-070CP **387.57**	1	0	121
12X8	895-080C **436.24**	1895-080C **436.24**	895-080CP **436.24**	1	0	121
12X9	895-090C **433.31**	1895-090C **433.31**	895-090CP **433.31**	1	0	121
12X10	895-100C **533.56**	1895-100C **533.56**	895-100CP **533.56**	1	0	121
12X11	895-110C **582.23**	1895-110C **582.23**	895-110CP **582.23**	1	0	121
12X12	895-120C **630.88**	1895-120C **630.88**	895-120CP **630.88**	1	0	121
12X13	895-130C **679.54**	1895-130C **679.54**	895-130CP **679.54**	1	0	121
12X14	895-140C **728.23**	1895-140C **728.23**	895-140CP **728.23**	1	0	121
12X15	895-150C **776.86**	1895-150C **776.86**	895-150CP **776.86**	1	0	121
12X16	895-160C **825.54**	1895-160C **825.54**	895-160CP **825.54**	1	0	121
12X17	895-170C **874.20**	1895-170C **874.20**	895-170CP **874.20**	1	0	121
12X18	895-180C **922.86**	1895-180C **922.86**	895-180CP **922.86**	1	0	121
12X19	895-190C **971.52**	1895-190C **971.52**	895-190CP **971.52**	1	0	121
12X20	895-200C **1020.20**	1895-200C **1020.20**	895-200CP **1020.20**	1	0	121
12X22	895-220C **1068.85**	1895-220C **1068.85**	895-220CP **1068.85**	1	0	121
12X24	895-240C **1316.74**	1895-240C **1316.74**	895-240CP **1316.74**	1	0	121
12X30	895-300C **1527.00**	1895-300C **1527.00**	895-300CP **1527.00**	1	0	121
12X36	895-360C **1798.81**	1895-360C **1798.81**	895-360CP **1798.81**	1	0	121
12X42	895-420C **2010.58**	1895-420C **2010.58**	895-420CP **2010.58**	1	0	121
12X48	895-480C **2382.77**	1895-480C **2382.77**	895-480CP **2382.77**	1	0	121

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

The following nipples are normally injection molded, but are optionally available as machined nipples listed below. All other nipples are normally machined.

CPVC Schedule 80 Machined Nipples
1/4" Diameter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
880-005CM	**1/4XCLOSE**	25	1200	121	4.76

CPVC Schedule 80 Machined Nipples
1/2" Diameter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
882-020CM	**1/2X2**	25	300	121	3.95
882-040CM	**1/2X4**	25	150	121	5.61
882-030CM	**1/2X3**	25	300	121	4.93

CPVC Schedule 80 Machined Nipples
3/4" Diameter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
883-060CM	**3/4X6**	25	200	121	10.00
883-030CM	**3/4X3**	25	300	121	7.14

CPVC Schedule 80 Machined Nipples
1" Diameter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
884-005CM	**1X**	25	300	121	7.52
884-020CM	**1X2**	25	300	121	7.02

Polyethylene Schedule 40 Nipple
1/2" Diameter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P42-005	**1/2XCLOSE**	25	450	120	.94
P42-015	**1/2X1-1/2**	25	300	120	.94
P42-020	**1/2X2**	25	300	120	.94
P42-025	**1/2X2-1/2**	25	300	120	1.11
P42-030	**1/2X3**	25	300	120	1.11
P42-035	**1/2X3-1/2**	25	300	120	1.18
P42-040	**1/2X4**	25	300	120	1.18
P42-045	**1/2X4-1/2**	25	300	120	1.34
P42-050	**1/2X5**	25	300	120	1.34
P42-055	**1/2X5-1/2**	25	300	120	1.56
P42-060	**1/2X6**	25	300	120	1.56
P42-070	**1/2X7**	25	200	120	2.34
P42-080	**1/2X8**	25	100	120	2.38
P42-090	**1/2X9**	25	0	120	2.48
P42-100	**1/2X10**	25	0	120	2.53
P42-110	**1/2X11**	25	0	120	2.65
P42-120	**1/2X12**	25	0	120	2.66
P42-140	**1/2X14**	100	0	120	3.67
P42-150	**1/2X15**	100	0	120	4.07
P42-160	**1/2X16**	100	0	120	4.44
P42-180	**1/2X18**	100	0	120	4.81
P42-240	**1/2X24**	100	0	120	7.02

Polyethylene Schedule 40 Nipple
3/4" Diameter

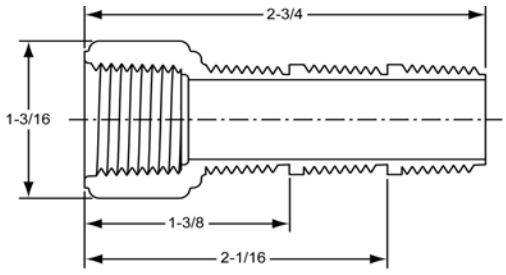
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P43-005	**3/4XCLOSE**	25	300	120	1.11
P43-020	**3/4X2**	25	300	120	1.11
P43-025	**3/4X2-1/2**	25	300	120	1.56
P43-030	**3/4X3**	25	300	120	1.56
P43-035	**3/4X3-1/2**	25	300	120	1.74
P43-040	**3/4X4**	25	300	120	1.74
P43-045	**3/4X4-1/2**	25	200	120	1.82
P43-050	**3/4X5**	25	200	120	1.82
P43-055	**3/4X5-1/2**	25	200	120	1.98

Polyethylene Schedule 40 Nipple (continued)
3/4" Diameter

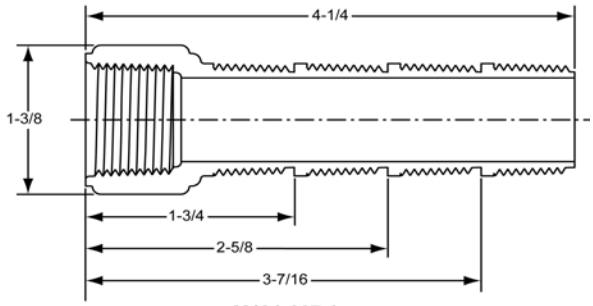
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P43-060	**3/4X6**	25	200	120	1.98
P43-070	**3/4X7**	25	200	120	6.09
P43-080	**3/4X8**	25	0	120	6.37
P43-090	**3/4X9**	25	0	120	6.95
P43-100	**3/4X10**	25	0	120	7.49
P43-110	**3/4X11**	25	0	120	7.86
P43-120	**3/4X12**	25	0	120	8.06

Polyethylene Cut-Off Nipples

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
491-060	**1/2"MPTx6"Cut-Off**	50	400	120	.94
492-060	1/2"x3/4"MPTx6"Cut-Off	50	350	120	1.41
493-060	**3/4"MPTx6"Cut-Off**	50	300	120	1.41



M434-005-3



M434-007-4

Polyethylene Cut-Off Riser Extension

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FIPT x MIPT Cut-Off (1/2" = 3 - Section Cut-Off; 3/4" = 4 - Section Cut-Off)					
M434-005-3	**1/2X3**	50	600	120	1.42
M434-007-4	**3/4X4**	50	0	120	1.88

PVC Schedule 80 Grooved Nipple

Size	Groove X Groove	Plain X Groove	Thread X Groove	Std Pk	Mstr Pk	Disc Code
1-1/2" Diameter						
1-1/2X3	886-030GG **4.33**	886-030PG **3.72**	886-030TG **4.33**	25	0	120
1-1/2X4	886-040GG **5.39**	886-040PG **4.89**	886-040TG **5.39**	25	0	120
1-1/2X6	886-060GG **7.58**	886-060PG **7.17**	886-060TG **7.17**	25	0	120

PVC Schedule 80 Grooved Nipple

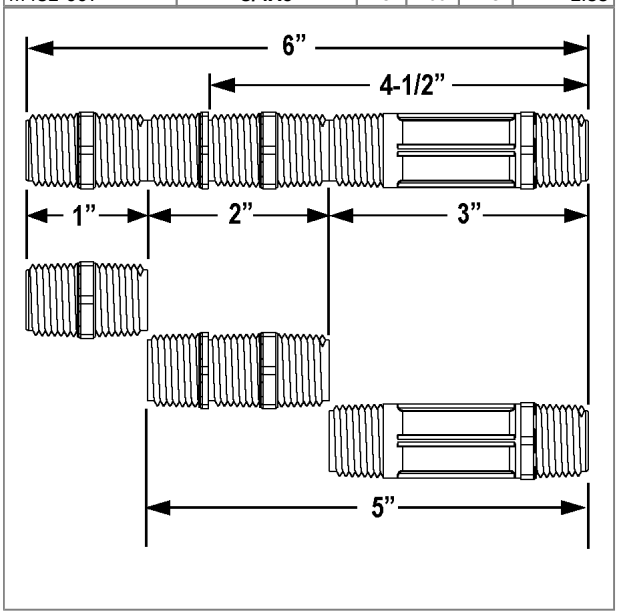
Size	Groove X Groove	Plain X Groove	Thread X Groove	Std Pk	Mstr Pk	Disc Code
2" Diameter						
2X3	887-030GG **6.83**	887-030PG **6.83**	887-030TG **6.83**	25	0	120
2X4	887-040GG **7.91**	887-040PG **7.91**	887-040TG **7.91**	25	0	120
2X6	887-060GG **10.49**	887-060PG **10.79**	887-060TG **10.79**	25	0	120
3" Diameter						
3X3	889-030GG **13.75**	889-030PG **12.26**	889-030TG **13.75**	20	0	120
3X4	889-040GG **19.44**	889-040PG **19.44**	889-040TG **19.44**	30	0	120
3X6	889-060GG **27.23**	889-060PG **27.23**	889-060TG **27.23**	20	0	120
4" Diameter						
4X3	890-030GG **22.85**	890-030PG **22.85**	890-030TG **22.85**	25	0	120
4X4	890-040GG **30.25**	890-040PG **30.25**	890-040TG **30.25**	18	0	120
4X6	890-060GG **30.45**	890-060PG **30.45**	890-060TG **30.45**	12	0	120
6" Diameter						
6X3	892-030GG **25.68**	892-030PG **25.68**	892-030TG **25.68**	1	4	121
6X4	892-040GG **30.57**	892-040PG **30.57**	892-040TG **30.57**	4	0	120
6X6	892-060GG **44.23**	892-060PG **44.23**	892-060TG **44.23**	2	0	120

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

- High quality polyethylene construction
- Choice of sizes from just one nipple
- Reduces inventory
- Eliminates waste
- Reduces contractor down time

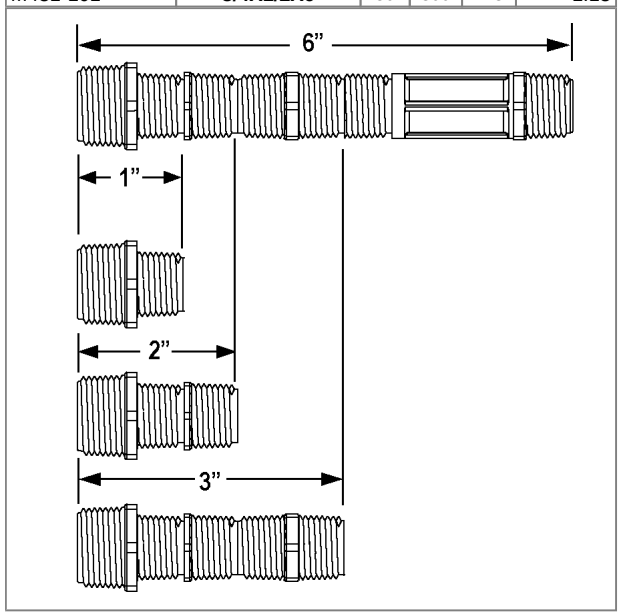
Four-In-One Cut-Off Nipple

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
M481-005	**1/2X6**	50	350	123	1.08
M481-007	**3/4X6**	25	200	123	1.55



Four-In-One Cut-Off Nipple - Reducing

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
M481-101	**3/4X1/2X6**	50	300	123	1.18



Schedule 80 PVC Industrial Pipe

PVC Schedule 80 Plain End

10' Lengths, Price Per Foot



List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PD-800-001-10	1/8	250	0	744	1.97
PD-800-002-10	1/4	250	0	744	2.94
PD-800-003-10	3/8	250	0	744	4.08
PD-800-005-10	1/2	10	0	744	1.23
PD-800-007-10	3/4	10	0	744	1.66
PD-800-010-10	1	10	0	744	2.44
PD-800-012-10	1-1/4	10	0	744	3.37
PD-800-015-10	1-1/2	10	0	744	3.82
PD-800-020-10	2	10	0	744	5.29
PD-800-025-10	2-1/2	10	0	744	8.92
PD-800-030-10	3	10	0	744	10.82
PD-800-040-10	4	10	0	744	15.83
PD-800-060-10	6	10	0	744	30.23
PD-800-080-10	8	10	0	744	45.85
PD-800-100-10	10	10	0	744	68.03
PD-800-120-10	12	10	0	744	93.53
PD-800-140-10	14	10	0	947	128.21
PD-800-160-10	16	10	0	947	145.75
PD-800-180-10	18	10	0	947	214.48
PD-800-200-10	20	10	0	947	270.21
PD-800-240-10	24	10	0	947	339.02

20' Lengths, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PD-800-001	1/8	500	0	744	1.97
PD-800-002	1/4	500	0	744	2.94
PD-800-003	3/8	500	0	744	4.08
PD-800-005	1/2	20	0	744	1.23
PD-800-007	3/4	20	0	744	1.66
PD-800-010	1	20	0	744	2.44
PD-800-012	1-1/4	20	0	744	3.37
PD-800-015	1-1/2	20	0	744	3.82
PD-800-020	2	20	0	744	5.29
PD-800-025	2-1/2	20	0	744	8.92
PD-800-030	3	20	0	744	10.82
PD-800-040	4	20	0	744	15.83
PD-800-050	5	20	0	744	21.73
PD-800-060	6	20	0	744	30.23

PVC Schedule 80 Plain End (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
20' Lengths, Price Per Foot					
PD-800-080	8	20	0	744	45.85
PD-800-100	10	20	0	744	68.03
PD-800-120	12	20	0	744	93.53
PD-800-140	14	20	0	947	128.21
PD-800-160	16	20	0	947	145.75
PD-800-180	18	20	0	947	214.48
PD-800-200	20	20	0	947	270.21
PD-800-240	24	20	0	947	339.02

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.
- See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

ASTM D-1784 ASTM D-1785		Schedule 80 PVC Plain End Pipe				
Size	Max Work Pressure	Avg OD	Min Wall	10' Length Skid Quantity FT/Pieces	20' Length Skid Quantity FT/Pieces	Weight Per FT
1/8"	1230	0.405	0.095	2850/285	5700/285	0.063
1/4"	1130	0.540	0.119	2850/285	5700/285	0.105
3/8"	920	0.675	0.126	2850/285	5700/285	0.146
1/2"	850	0.840	0.147	2430/243	4860/243	0.213
3/4"	690	1.050	0.154	1540/154	3080/154	0.289
1"	630	1.315	0.179	2520/252	5040/252	0.124
1-1/4"	520	1.660	0.191	1230/123	2460/123	0.586
1-1/2"	470	1.900	0.200	1720/172	3440/172	0.717
2"	400	2.375	0.218	1230/123	2460/123	0.984
2-1/2"	420	2.875	0.276	540/54	1080/54	1.500
3"	370	3.500	0.300	460/46	920/46	2.010
4"	320	4.500	0.337	340/34	680/34	2.938
6"	280	6.625	0.432	170/17	340/17	5.610
8"	250	8.625	0.500	90/9	180/9	8.522
10"	230	10.750	0.593	110/11	220/11	12.635
12"	230	12.750	0.687	80/8	160/8	17.384

Schedule 80 Clear Pipe

PVC Clear Schedule 80 Pipe

10' Lengths, Price Per Foot



List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PD-800-002L-10	1/4	1000	0	742	1.29
PD-800-003L-10	3/8	100	0	742	1.79
PD-800-005L-10	1/2	420	0	742	2.62
PD-800-007L-10	3/4	360	0	742	3.54
PD-800-010L-10	1	360	0	742	5.21
PD-800-012L-10	1-1/4	360	0	742	7.18
PD-800-015L-10	1-1/2	160	0	742	8.73
PD-800-020L-10	2	180	0	742	12.07
PD-800-025L-10	2-1/2	40	0	742	18.40
PD-800-030L-10	3	80	0	742	24.67
PD-800-040L-10	4	40	0	742	36.06
PD-800-060L-10	6	10	0	742	68.88

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Professional grade solvent cements developed for contractors' essential needs in joining PVC, CPVC and ABS pipe and fittings.

- NSF® Certified & Listed for use in piping applications such as potable water, turf, irrigation, pool & spa, industrial, plumbing, DWV, and/or sewer, plus special applications including fire protection, chemical waste, and ultra-pure water.
- Meets ASTM Standards for solvent cements and primers used for plastic pipe installation.
- Environmentally friendly. LEED® Compliant (Leadership in Energy and Environmental Design). Credit can be gained through the use of Spears® Low VOC products. This program, developed by the US Green Building Council, uses SCAQMD Rule 1168 as a benchmark to qualify one credit toward LEED® certification for green building.

PVC Low VOC Cements

Low VOC PVC Cements

Regular, Medium, heavy and extra heavy bodied cements are specifically formulated for PVC pipe in virtually every schedule and in sizes with interference fit to 30" diameter.

- Low VOC emissions comply with *SCAQMD Rule 1168/316A*
- 3-Year Shelf Life

PVC-00 CLEAR: Regular bodied, fast setting PVC cement for all classes and schedules (except Schedule 80) with interference fit through 4". Excellent for plumbing, DWV, irrigation, electrical conduit, pool & spa and PVC foam core pipe. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-00 Clear Regular Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC00C-005	**1/4 Pint**	24	0	705	6.55
PVC00C-010	**1/2 Pint**	24	0	705	9.52
PVC00C-020	**Pint**	12	0	705	14.67
PVC00C-030	**Quart**	12	0	705	24.75
PVC00C-040	**Gallon**	6	0	705	80.35

PVC-02 CLEAR: Regular bodied, fast setting PVC cement for all classes and schedules (except Schedule 80) with interference fit through 4" diameter. Goes on clear, dries clearest and is slightly thicker than PVC-00. Excellent for plumbing, DWV, irrigation, electrical conduit, pool & spa and PVC foam core pipe. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-02 Clear Regular Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC02C-005	**1/4 Pint**	24	0	705	7.27
PVC02C-010	**1/2 Pint**	24	0	705	10.58
PVC02C-020	**Pint**	12	0	705	16.29
PVC02C-030	**Quart**	12	0	705	27.49
PVC02C-040	**Gallon**	6	0	705	89.19

PVC-05 CLEAR: Medium bodied, fast setting, PVC cement for all classes and schedules with interference fit through 6" diameter and Schedule 80 through 4" diameter in industrial, plumbing, DWV, irrigation, electrical conduit, pool & spa and PVC foam core pipe. Can be used without primer on non-pressure systems if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-05 Clear Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC05C-005	**1/4 Pint**	24	0	705	7.39
PVC05C-010	**1/2 Pint**	24	0	705	10.69
PVC05C-020	**Pint**	12	0	705	18.76
PVC05C-030	**Quart**	12	0	705	29.84
PVC05C-040	**Gallon**	6	0	705	101.68

PVC-21 BLUE: Medium bodied, fast setting, high strength PVC cement. It is suitable for use on rigid PVC with interference fit Schedule 40 thru 6" and Schedule 80 thru 4". Can be used without primer on PVC Schedule 40 and SDR pressure water piping systems through 4" if local code permits. Do not use PVC-21 without primer in any other application, schedule, or size such as Schedule 80 industrial applications. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-21 Blue Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC21B-005	**1/4 Pint**	24	0	705	7.89
PVC21B-010	**1/2 Pint**	24	0	705	12.99
PVC21B-020	**Pint**	12	0	705	22.23
PVC21B-030	**Quart**	12	0	705	37.35
PVC21B-040	**Gallon**	6	0	705	128.39

PVC-25 AQUA BLUE WET-N-DRY: (will fade to CLEAR in sunlight) Medium bodied, very fast setting PVC cement for all classes and schedules with interference fit through 6" diameter and Schedule 80 through 4" diameter. Formulated for wet conditions and quick pressurization. Designed for irrigation, plumbing, and pool & spa applications. Can be used without primer on non-pressure systems if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-25 Aqua Blue Wet-N-Dry Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC25B-005	**1/4 Pint**	24	0	705	7.89
PVC25B-010	**1/2 Pint**	24	0	705	12.82
PVC25B-020	**Pint**	12	0	705	21.83
PVC25B-030	**Quart**	12	0	705	36.56
PVC25B-040	**Gallon**	6	0	705	126.09

PVC-26 BLUE POOL-PRO™: (will fade to CLEAR in sunlight) Medium bodied, very fast setting PVC cement for all classes and schedules with interference fit through 6" diameter and Schedule 80 through 4" diameter. Specially formulated for pool maintenance and repair - wet or quick pressurization conditions. Can be used without primer on non-pressure systems if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-26 Blue POOL-PRO™ Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC26B-005	**1/4 Pint**	24	0	705	7.89
PVC26B-010	**1/2 Pint**	24	0	705	12.82
PVC26B-020	**Pint**	12	0	705	21.83
PVC26B-030	**Quart**	12	0	705	36.56
PVC26B-040	**Gallon**	6	0	705	126.09

PVC-27 CLEAR COLD-N-HOT: Medium bodied, very fast setting, PVC cement for all classes and schedules with interference fit through 6" diameter, Schedule 80 through 4" diameter. Formulated for -15°F to 110°F (-26°C to 43°C) weather conditions. Designed for industrial, plumbing, irrigation, pool & spa, electrical conduit and PVC foam core pipe. Can be used without primer on non-pressure systems if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-27 Clear Cold-N-Hot Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC27C-040	**Gallon**	6	0	705	133.09
PVC27C-020	**Pint**	12	0	705	22.79
PVC27C-030	**Quart**	12	0	705	38.36

PVC-50 HOT BLUE: Medium bodied, very fast setting, high strength PVC cement. Can be used on PVC with interference fit for Schedule 40 thru 6" and Schedule 80 thru 4". Hot Blue premium all-weather formulation is excellent for use in challenging conditions including wet, damp or cold temperatures in irrigation, plumbing DWV, pool & spa, and non-pressure applications. PVC-50 may be used without primer on Schedule 40 pipe and fittings if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-50 HOT BLUE Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC50B-005	**1/4 Pint**	24	0	705	7.12
PVC50B-010	**1/2 Pint**	24	0	705	11.71
PVC50B-020	**Pint**	12	0	705	20.04
PVC50B-030	**Quart**	12	0	705	33.65
PVC50B-040	**Gallon**	6	0	705	115.67

PVC-11 GRAY: Heavy bodied, medium setting PVC cement for all classes and schedules with interference fit through 12" diameter. Medium set allows more working time in warm weather and has good gap filling properties. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code, CSA B137.3, B181.2.



PVC-11 Gray Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC11G-010	**1/2 Pint**	24	0	706	17.47
PVC11G-020	**Pint**	12	0	706	23.29
PVC11G-030	**Quart**	12	0	706	39.19
PVC11G-040	**Gallon**	6	0	706	132.53

PVC-17 CLEAR/GRAY: Heavy bodied, medium setting PVC cement for all classes and schedules with interference fit through 12" diameter (non-pressure applications only up to 18"). Medium set allows more working time in warm weather and has good gap filling properties. Designed for plumbing, industrial, pool, irrigation and electrical piping systems. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P.Code (Clear/Gray); CSA B137.3, B181.2 (Gray only).



PVC-17 Gray Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC17G-010	**1/2 Pint**	24	0	706	13.11
PVC17G-020	**Pint**	12	0	706	23.01
PVC17G-030	**Quart**	12	0	706	38.85
PVC17G-040	**Gallon**	6	0	706	130.91

PVC-17 Clear Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC17C-010	**1/2 Pint**	24	0	706	13.11
PVC17C-020	**Pint**	12	0	706	23.01
PVC17C-030	**Quart**	12	0	706	38.85
PVC17C-040	**Gallon**	6	0	706	130.91

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PVC Low VOC Cements



PVC-19 Gray Extra-Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC19G-020	**Pint**	12	0	706	35.20
PVC19G-030	**Quart**	12	0	706	46.92
PVC19G-040	**Gallon**	4	0	706	154.71
PVC19G-040-F*	**Gallon**	6	0	706	154.71
PVC19G-050	**5 Gallon**	1	0	706	668.81

PVC-19 Gray Extra-Heavy Body PVC Cement (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

* PVC-19 Cement in 1-Gallon size is offered in both round Paint Type can or rectangular F-Type can which has part number ending in "-F"

CPVC Low VOC Cements

Heavy bodied cements are specifically formulated for CPVC plastic pipe and fittings including a variety of One-Step (no primer required) CPVC specialty cements. These products are ideal for use in hot/cold water plumbing systems, water treatment and chemical plants, as well as industrial piping systems.

- Low VOC emissions comply with *SCAQMD Rule 1168/316A*
- 2-Year Shelf Life

CPVC-24 GRAY/ORANGE: Heavy bodied, medium setting CPVC cement for all classes and schedules with interference fit through 24" diameter. High-strength, chemical-resistant solvent cement for use with CPVC piping systems carrying acids, bases, salts, and sodium hypochlorite. Ideal for use in waste water plants. Recommended for use on PVC industrial piping systems for chemical applications; best choice for both PVC and CPVC fume & air duct systems. Listings: ASTM F493, NSF®-PW, DWV, SW, U.P. Code.



The Most Chemically Resistant Cement Available for Both PVC & CPVC Applications

CPVC-24 Gray Heavy Body CPVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CPVC24G-005	**1/4 Pint**	24	0	707	9.01
CPVC24G-010	**1/2 Pint**	24	0	707	14.34
CPVC24G-020	**Pint**	12	0	707	26.09
CPVC24G-030	**Quart**	12	0	707	46.08
CPVC24G-040	**Gallon**	6	0	707	159.13



CPVC-24 Orange Heavy Body CPVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CPVC24O-005	**1/4 Pint**	24	0	707	9.01
CPVC24O-010	**1/2 Pint**	24	0	707	14.34
CPVC24O-020	**Pint**	12	0	707	26.09
CPVC24O-030	**Quart**	12	0	707	46.08

CPVC-24 Orange Heavy Body CPVC Cement (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CPVC24O-040	**Gallon**	6	0	707	159.13

Primers are used for the surface preparation of plastic pipe and fittings, which is necessary for the proper solvent welding of these materials. Cleaner aids in pre-cleaning to remove oil and grease.

- All Spears® Primers and Cleaners are low VOC products, which are environmentally friendly with lower emissions and reduced odor, surpassing the most stringent regulations and comply with *SCAQMD Rule 1168/316A*.
- Spears® Primers are certified for use with potable water by NSF® International.
- 3-Year Shelf Life

PRIMER-70 INDUSTRIAL GRADE PURPLE/CLEAR: Premium, industrial strength primer essential for proper softening and preparation of PVC and CPVC pipe and fitting surfaces. Specially recommended for use on Schedule 80 (150 psi and higher) and large size pipe. Excellent for cold weather applications. Listings: ASTM F656, NSF®-PW, DWV, SW, U.P. Code (Purple Only).



PRIMER-70 Clear Industrial Strength Primer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PRIM70C-005	**1/4 Pint**	24	0	709	7.89
PRIM70C-010	**1/2 Pint**	24	0	709	10.75
PRIM70C-020	**Pint**	12	0	709	21.51
PRIM70C-030	**Quart**	12	0	709	34.83
PRIM70C-040	**Gallon**	6	0	709	114.44



PRIMER-70 Purple Industrial Strength Primer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PRIM70P-005	**1/4 Pint**	24	0	709	7.89
PRIM70P-010	**1/2 Pint**	24	0	709	10.75
PRIM70P-020	**Pint**	12	0	709	21.51
PRIM70P-030	**Quart**	12	0	709	34.83
PRIM70P-040	**Gallon**	6	0	709	114.44

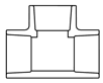
CLEANER-65 CLEAR CLEANER: Water-thin cleaner recommended for use before priming of pipe and fittings to remove dirt, oil and grease from the bonding surfaces of PVC, CPVC, ABS and Styrene.



CLEANER-65 Clear Cleaner

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CLEAN65-005	**1/4 Pint**	24	0	709	5.82
CLEAN65-010	**1/2 Pint**	24	0	709	8.67
CLEAN65-020	**Pint**	12	0	709	15.06
CLEAN65-030	**Quart**	12	0	709	22.12
CLEAN65-040	**Gallon**	6	0	709	70.83

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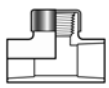
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
801-002	1/4	50	300	080	9.32
801-003	3/8	25	150	080	9.32
801-005	1/2	25	200	080	9.32
801-007	3/4	15	120	080	9.77
801-010	1	15	0	080	12.22
801-012	1-1/4	10	0	080	33.57
801-015	1-1/2	10	0	080	33.57
801-020	2	10	0	080	41.97
801-025	2-1/2	10	0	080	45.64
801-030	3	5	0	080	57.04
801-040	4	5	0	080	66.09
801-050	5	5	0	080	161.21
801-050F	5	1	4	083	376.81
801-060	6	2	0	080	225.66
801-080	8	2	0	080	523.37
801-080F	8	1	0	083	493.67
801-100	10	1	0	081	1729.11
801-100F	10	1	0	083	877.32
801-120	12	1	0	081	2441.99
801-120F	12	1	0	083	1236.18
801-140	14	1	0	082	3074.46
801-140F	14	1	0	083	2593.45
801-160F	16	1	0	083	3372.26
801-180F	18	1	0	083	4017.12
801-200F	20	1	0	083	5179.05
801-240F	24	1	0	083	6883.12

Tee
Soc x Fipt



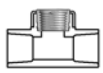
802-002	1/4	25	150	080	21.55
802-005	1/2	20	160	080	14.74
802-007	3/4	20	160	080	19.07
802-010	1	15	0	080	22.32
802-012	1-1/4	15	0	080	23.85
802-015	1-1/2	10	0	080	28.03
802-020	2	10	0	080	34.57
802-030	3	5	0	080	73.78
802-040	4	5	0	080	138.62

Special Reinforced Tee
Soc x SR Fipt - Stainless Steel Collar



802-005SR	1/2	25	200	086	8.06
802-007SR	3/4	15	120	086	11.40
802-010SR	1	15	0	086	13.39
802-012SR	1-1/4	25	0	086	15.93
802-020SR	2	10	0	086	32.93
802-030SR	3	5	0	086	71.16
802-040SR	4	5	0	086	133.45

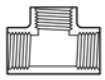
Transition Tee
Soc x Fipt With Brass Thread Insert



802-005BR	1/2	20	120	086	32.92
802-007BR	3/4	20	80	086	65.97

Not intended to convey or dispense water for human consumption through drinking or cooking

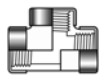
Tee
Fipt



805-002	1/4	25	150	080	10.77

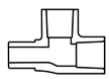
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Tee (continued)					
Fipt					
805-003	3/8	25	150	080	10.77
805-005	1/2	20	240	080	10.77
805-007	3/4	15	120	080	11.99
805-010	1	15	0	080	26.47
805-012	1-1/4	10	0	080	28.06
805-015	1-1/2	10	0	080	34.02
805-020	2	10	0	080	36.57
805-025	2-1/2	5	0	080	133.15
805-030	3	5	0	080	139.06
805-040	4	5	0	080	226.00
805-060F	6	1	2	083	355.13
805-080F	8	1	0	083	655.33

Special Reinforced Tee
SR Fipt - Stainless Steel Collar



805-002SR	1/4	25	150	086	9.38
805-003SR	3/8	25	150	086	9.38
805-005SR	1/2	25	150	086	9.68
805-007SR	3/4	25	100	086	10.64
805-010SR	1	15	0	086	25.29
805-015SR	1-1/2	10	0	086	29.60
805-020SR	2	10	0	086	31.12

Street Tee
Spig x Soc x Soc



844-005	1/2	25	200	080	11.65
844-007	3/4	15	120	080	12.22
844-010	1	15	0	080	15.27
844-012	1-1/4	10	0	080	41.97
844-015	1-1/2	10	0	080	41.97
844-020	2	10	0	080	52.45

Reducing Tee
Soc



801-101	3/4X1/2	15	120	080	7.14
801-130	1X1/2	15	0	080	10.33
801-131	1X3/4	15	0	080	10.33
801-157	1-1/4X1X3/4	15	0	080	17.04
801-158	1-1/4X1X1	15	0	080	17.04
801-159	1-1/4X1X1-1/4	15	0	080	17.04
801-166[1]	1-1/4X1/2	10	0	080	28.48
801-167	1-1/4X3/4	10	0	080	22.41
801-168	1-1/4X1	15	0	080	22.41
801-202	1-1/2X1-1/4X1	10	0	080	22.41
801-209	1-1/2X1/2	10	0	080	22.41
801-210	1-1/2X3/4	15	0	080	22.41
801-211	1-1/2X1	10	0	080	22.41
801-212	1-1/2X1-1/4	10	0	080	22.41
801-247	2X1/2	10	0	080	28.40
801-248	2X3/4	10	0	080	28.40
801-249	2X1	10	0	080	28.40
801-250[1]	2X1-1/4	10	0	080	43.29
801-251	2X1-1/2	10	0	080	28.40
801-254[1]	2X2X4	5	0	080	198.31
801-287	2-1/2X1/2	10	0	080	43.41
801-288	2-1/2X3/4	10	0	080	43.41
801-289	2-1/2X1	10	0	080	37.05
801-290	2-1/2X1-1/4	10	0	080	37.05
801-291	2-1/2X1-1/2	10	0	080	37.05
801-292	2-1/2X2	10	0	080	37.05
801-333[1]	3X1/2	5	0	080	52.05
801-334[1]	3X3/4	5	0	080	58.74

Reducing Tee (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
801-335	3X1	5	0	080	52.05
801-336[1]	3X1-1/4	5	0	080	52.05
801-337	3X1-1/2	5	0	080	52.05
801-338	3X2	5	0	080	52.05
801-339	3X2-1/2	6	0	080	52.05
801-416[1]	4X3/4	5	0	080	102.95
801-417[1]	4X1	5	0	080	102.95
801-418[1]	4X1-1/4	5	0	080	102.95
801-419	4X1-1/2	5	0	080	84.11
801-420	4X2	5	0	080	84.11
801-421[1]	4X2-1/2	5	0	080	151.42
801-422	4X3	5	0	080	84.11
801-426[1]	4X6	4	0	080	412.22
801-482[1]	5X1-1/4	4	0	080	333.52
801-482F	5X1-1/4	1	5	083	222.99
801-484[1]	5X1-1/2	4	0	080	363.59
801-484F	5X1-1/2	1	5	083	227.20
801-486[1]	5X2	4	0	080	316.36
801-486F	5X2	1	5	083	227.20
801-487[1]	5X2-1/2	4	0	080	368.03
801-487F	5X2-1/2	1	4	083	259.08
801-488[1]	5X3	4	0	080	316.36
801-488F	5X3	1	4	083	267.56
801-490[1]	5X4	4	0	080	250.94
801-490F	5X4	1	4	083	285.62
801-523[1]	6X1/2	4	0	080	218.75
801-525	6X1	4	0	080	168.07
801-526[1]	6X1-1/4	4	0	080	218.75
801-527[1]	6X1-1/2	4	0	080	218.75
801-528	6X2	4	0	080	168.07
801-529[1]	6X2-1/2	4	0	080	218.57
801-530	6X3	5	0	080	168.07
801-532	6X4	5	0	080	225.66
801-533F	6X5	1	3	083	475.01
801-537F	6X10	1	0	083	1848.89
801-539F	6X12	1	0	083	2052.88
801-573[1]	8X1/2	2	0	080	642.20
801-575[1]	8X1	2	0	080	642.59
801-578[1]	8X2	2	0	080	611.02
801-578F	8X2	1	2	083	419.13
801-579[1]	8X2-1/2	2	0	080	672.29
801-579F	8X2-1/2	1	2	083	423.02
801-580[1]	8X3	2	0	080	611.02
801-580F	8X3	1	2	083	427.76
801-582[1]	8X4	2	0	080	611.02
801-582F	8X4	1	2	083	449.80
801-583F	8X5	1	0	083	608.07
801-585	8X6	2	0	080	523.37
801-591[1]	8X12	1	0	081	3733.67
801-621F	10X2	1	2	083	629.60
801-622F	10X2-1/2	1	0	083	657.58
801-623[1]	10X3	1	0	081	1611.03
801-623F	10X3	1	0	083	675.24
801-624[1]	10X4	1	0	081	1611.03
801-624F	10X4	1	0	083	699.53
801-625F	10X5	1	0	083	752.27
801-626	10X6	1	0	081	1521.63
801-626F	10X6	1	0	083	791.13
801-628[1]	10X8	1	0	081	1790.76
801-628F	10X8	1	0	083	887.53
801-632F	10X12	1	0	083	2186.24
801-661F	12X2	1	0	083	814.14
801-662F	12X2-1/2	1	0	083	849.28
801-663F	12X3	1	0	083	876.99
801-664[1]	12X4	1	0	081	2920.84

Reducing Tee (continued)

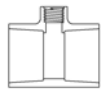
Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
801-664F	12X4	1	0	083	930.33
801-665F	12X5	1	0	083	974.92
801-666[1]	12X6	1	0	081	2755.74
801-666F	12X6	1	0	083	1027.26
801-668	12X8	1	0	081	2263.74
801-668F	12X8	1	0	083	1102.11
801-670[1]	12X10	1	0	081	3031.45
801-670F	12X10	1	0	083	1224.68
801-678F	12X18	1	0	083	5458.97
801-691F	14X2	1	0	083	1020.11
801-692F	14X2-1/2	1	0	083	1071.69
801-693F	14X3	1	0	083	1252.40
801-694F	14X4	1	0	083	1380.16
801-696F	14X6	1	0	083	1489.88
801-698[1]	14X8	1	0	082	2115.93
801-698F	14X8	1	0	083	1566.69
801-700[1]	14X10	1	0	082	2490.66
801-700F	14X10	1	0	083	1673.75
801-702	14X12	1	0	082	2899.32
801-702F	14X12	1	0	083	1767.38
801-706F	14X16	1	0	083	5718.92
801-751F	16X2	1	0	083	1308.13
801-752F	16X2-1/2	1	0	083	1391.37
801-753F	16X3	1	0	083	1411.31
801-754F	16X4	1	0	083	1544.03
801-756F	16X6	1	0	083	1642.60
801-758F	16X8	1	0	083	1824.44
801-760F	16X10	1	0	083	1977.71
801-762F	16X12	1	0	083	2179.49
801-764F	16X14	1	0	083	2513.14
801-781F	18X2	1	0	083	1503.78
801-783F	18X3	1	0	083	1830.92
801-784F	18X4	1	0	083	2811.82
801-786F	18X6	1	0	083	3045.48
801-788F	18X8	1	0	083	3175.88
801-790F	18X10	1	0	083	3402.34
801-792F	18X12	1	0	083	3595.58
801-794F	18X14	1	0	083	3821.21
801-796F	18X16	1	0	083	3870.03
801-814F	20X4	1	0	083	3448.54
801-816F	20X6	1	0	083	3641.28
801-818F	20X8	1	0	083	3753.20
801-820F	20X10	1	0	083	3908.31
801-822F	20X12	1	0	083	4190.71
801-824F	20X14	1	0	083	4493.97
801-826F	20X16	1	0	083	4816.71
801-828F	20X18	1	0	083	5062.75
801-904F	24X4	1	0	083	4293.87
801-906F	24X6	1	0	083	4458.31
801-908F	24X8	1	0	083	4574.25
801-910F	24X10	1	0	083	4855.74
801-912F	24X12	1	0	083	5034.93
801-914F	24X14	1	0	083	5242.69
801-916F	24X16	1	0	083	5484.55
801-918F	24X18	1	0	083	6633.87
801-920F	24X20	1	0	083	6759.89

[1] Sized with Bushing

Reducing Tee

Soc x Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
802-101	3/4X1/2	15	120	080	13.54
802-130	1X1/2	50	0	080	14.07
802-131	1X3/4	15	0	080	18.08

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Reducing Tee (continued)
Soc x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
802-166	1-1/4X1/2	25	0	080	23.01
802-167[1]	1-1/4X3/4	15	0	080	23.01
802-168	1-1/4X1	10	0	080	45.67
802-209	1-1/2X1/2	25	0	080	28.48
802-210[1]	1-1/2X3/4	20	0	080	28.48
802-211	1-1/2X1	10	0	080	28.48
802-212	1-1/2X1-1/4	10	0	080	28.48
802-247	2X1/2	10	0	080	32.54
802-248	2X3/4	10	0	080	32.54
802-249	2X1	10	0	080	43.29
802-250[1]	2X1-1/4	10	0	080	43.29
802-251[1]	2X1-1/2	10	0	080	60.36
802-287	2-1/2X1/2	10	0	080	74.92
802-288[1]	2-1/2X3/4	10	0	080	74.92
802-289[1]	2-1/2X1	10	0	080	74.92
802-290[1]	2-1/2X1-1/4	10	0	080	74.92
802-291[1]	2-1/2X1-1/2	10	0	080	74.92
802-292[1]	2-1/2X2	10	0	080	83.65
802-333[1]	3X1/2	5	0	080	58.74
802-334[1]	3X3/4	5	0	080	58.74
802-335[1]	3X1	5	0	080	70.65
802-336[1]	3X1-1/4	5	0	080	70.65
802-337[1]	3X1-1/2	5	0	080	70.65
802-338[1]	3X2	5	0	080	90.22
802-339[1]	3X2-1/2	5	0	080	126.89
802-415[1]	4X1/2	5	0	080	103.37
802-416[1]	4X3/4	5	0	080	103.37
802-417[1]	4X1	5	0	080	103.37
802-418[1]	4X1-1/4	5	0	080	103.37
802-419[1]	4X1-1/2	5	0	080	103.37
802-420[1]	4X2	5	0	080	154.52
802-421[1]	4X2-1/2	5	0	080	154.52
802-422[1]	4X3	5	0	080	172.98
802-525[1]	6X1	4	0	080	240.54
802-526[1]	6X1-1/4	4	0	080	240.54
802-527[1]	6X1-1/2	4	0	080	240.54
802-528[1]	6X2	4	0	080	240.54
802-528F*	6X2	1	3	083	438.05
802-529[1]	6X2-1/2	4	0	080	240.54
802-530[1]	6X3	4	0	080	335.81
802-532[1]	6X4	2	0	080	351.83
802-532F*	6X4	1	4	083	542.85
802-578[1]	8X2	2	0	080	655.62
802-578F	8X2	1	2	083	586.67
802-580[1]	8X3	2	0	080	655.62
802-580F	8X3	1	2	083	586.67
802-582[1]	8X4	2	0	080	655.62
802-582F*	8X4	1	2	083	650.24
802-621[1]	10X2	1	0	081	1674.26
802-621F	10X2	1	0	083	712.39
802-623[1]	10X3	1	0	080	1674.26
802-623F	10X3	1	0	083	770.05
802-624[1]	10X4	1	0	081	1674.26
802-624F*	10X4	1	0	083	855.49
802-661[1]	12X2	1	0	081	2652.85
802-661F	12X2	1	0	083	904.88
802-663[1]	12X3	1	0	081	2652.85
802-663F	12X3	1	0	083	981.88
802-664[1]	12X4	1	0	081	2652.85
802-664F	12X4	1	0	083	1083.75

[1] Sized with Bushing

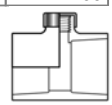
* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

Reducing Tee
Soc x Fipt x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
803-095	3/4X1/2X3/4	50	0	080	12.69

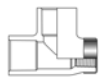
Special Reinforced Reducing Tee
Soc x SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
802-072SR	1/2X1/4	25	150	086	8.06
802-098SR	3/4X1/4	25	100	086	10.47
802-101SR	3/4X1/2	50	0	086	10.47
802-128SR[1]	1X1/4	10	80	086	24.79
802-130SR	1X1/2	50	0	086	12.92
802-131SR	1X3/4	15	0	086	24.79
802-164SR[1]	1-1/4X1/4	5	0	086	26.43
802-166SR	1-1/4X1/2	25	0	086	17.52
802-168SR	1-1/4X1	10	0	086	17.87
802-207SR[1]	1-1/2X1/4	10	0	086	30.84
802-211SR	1-1/2X1	10	0	086	19.35
802-212SR	1-1/2X1-1/4	10	0	086	19.35
802-245SR[1]	2X1/4	10	0	086	35.62
802-247SR	2X1/2	10	0	086	35.62
802-248SR	2X3/4	10	0	086	35.62
802-287SR	2-1/2X1/2	10	0	086	26.25
802-331SR[1]	3X1/4	5	0	086	68.00
802-333SR[1]	3X1/2	5	0	086	69.97
802-413SR[1]	4X1/4	5	0	086	93.64
802-415SR[1]	4X1/2	5	0	086	101.77

[1] Sized with Bushing

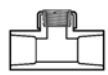
Special Reinforced Reducing Tee
Soc x SR Fipt - Stainless Steel Collar x Soc



(See also Gauge & Instrument Fittings for additional configurations)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
803-095SR	3/4X1/2X3/4	15	0	086	13.19

Transition Reducing Tee
Soc x Fipt With Brass Thread Insert



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
802-072BR	1/2X1/4	20	120	086	35.48
802-101BR	3/4X1/2	50	0	086	41.08

Not intended to convey or dispense water for human consumption through drinking or cooking

90° Ell
Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
806-002	1/4	50	300	080	3.31
806-003	3/8	25	150	080	3.31
806-005	1/2	20	240	080	3.31
806-007	3/4	20	160	080	4.22
806-010	1	25	0	080	6.80
806-012	1-1/4	10	0	080	9.11
806-015	1-1/2	10	0	080	9.76
806-020	2	25	0	080	11.79
806-025	2-1/2	5	0	080	27.59
806-030	3	5	0	080	31.01
806-040	4	5	0	080	47.16
806-045F	4-1/2	1	2	083	216.82
806-050	5	4	0	080	120.91
806-050F	5	1	4	083	242.08
806-060	6	4	0	080	134.19
806-080	8	2	0	080	369.86
806-100	10	1	0	081	1655.26
806-100F	10	1	0	083	660.59
806-120	12	1	0	081	2157.75

90° Ell (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
806-120	**12**	1	0	081	2157.75
806-120F	**12**	1	0	083	1079.76
806-140	**14**	1	0	082	2419.32
806-140F	**14**	1	0	083	1377.35
806-160F	**16**	1	0	083	1712.98
806-180F	**18**	1	0	083	2448.07
806-200F	**20**	1	0	083	2923.53
806-240F	**24**	1	0	083	4489.44
806-338[1]	**3X2**	5	0	080	76.01
806-422[1]	**4X3**	5	0	080	113.54

[1] Sized with Bushing

90° Ell Sweep

Soc x Soc



806-005S	**1/2**	25	150	080	8.24
806-007S	**3/4**	25	100	080	10.67
806-010S	**1**	25	0	080	17.19
806-012S	**1-1/4**	25	0	080	22.73
806-015S	**1-1/2**	25	0	080	24.43
806-020S	**2**	25	0	080	29.60

Long Sweep 90° Ell

Soc



806-005LSF	**1/2**	1	25	083	28.57
806-007LSF	**3/4**	1	25	083	32.06
806-010LSF	**1**	1	25	083	35.84
806-012LSF	**1-1/4**	1	25	083	60.62
806-015LSF	**1-1/2**	1	25	083	61.39
806-020LSF	**2**	1	10	083	66.37
806-025LSF	**2-1/2**	1	7	083	113.97
806-030LSF	**3**	1	5	083	124.34
806-040LSF	**4**	1	4	083	139.43
806-060LSF	**6**	1	2	083	213.55

Not Listed for Electrical Conduit Use

90° Ell

Soc x Fipt

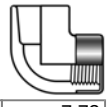


807-002	**1/4**	25	450	080	13.00
807-003	**3/8**	25	150	080	13.00
807-005	**1/2**	20	240	080	13.00
807-007	**3/4**	20	160	080	15.29
807-010	**1**	20	0	080	16.54
807-012	**1-1/4**	10	0	080	19.07
807-015	**1-1/2**	10	0	080	22.75
807-020	**2**	10	0	080	29.47
807-030	**3**	5	0	080	70.39
807-040	**4**	5	0	080	132.74
807-060[1]	**6**	3	0	080	307.99

[1]Thread outlet sized with Female Adapter

Special Reinforced 90° Ell

Soc x SR Fipt - Stainless Steel Collar

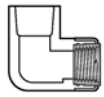


807-005SR	**1/2**	20	240	086	7.72
807-007SR	**3/4**	75	0	086	9.18
807-010SR	**1**	50	0	086	9.28
807-012SR	**1-1/4**	25	0	086	12.47
807-015SR	**1-1/2**	10	0	086	15.41
807-020SR	**2**	10	0	086	17.68
807-030SR	**3**	5	0	086	44.89
807-040SR	**4**	5	0	086	79.32

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Transition 90° Ell

Soc x Fipt With Brass Thread Insert

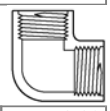


807-005BR	**1/2**	20	240	086	28.92
807-007BR	**3/4**	20	160	086	51.19

Not intended to convey or dispense water for human consumption through drinking or cooking

90° Ell

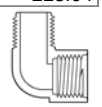
Fipt



808-002	**1/4**	25	450	080	8.20
808-003	**3/8**	25	150	080	8.20
808-005	**1/2**	20	120	080	7.65
808-007	**3/4**	20	240	080	9.53
808-010	**1**	15	120	080	11.99
808-012	**1-1/4**	10	0	080	12.92
808-015	**1-1/2**	10	0	080	18.32
808-020	**2**	10	0	080	20.64
808-025	**2-1/2**	5	0	080	80.37
808-030	**3**	5	0	080	129.60
808-040	**4**	5	0	080	228.04

90° Street Ell

Mipt x Fipt

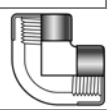


812-002	**1/4**	50	300	080	17.63
812-005[1]	**1/2**	20	240	080	14.64
812-010[1]	**1**	50	0	080	22.60
812-012[1]	**1-1/4**	10	0	080	25.97
812-015[1]	**1-1/2**	10	0	080	42.56

[1] Sized with Adapter

Special Reinforced 90° Ell

SR Fipt - Stainless Steel Collar



808-003SR	**3/8**	25	150	086	4.51
808-005SR	**1/2**	20	120	086	4.51
808-007SR	**3/4**	20	120	086	5.67
808-010SR	**1**	50	0	086	6.60
808-012SR	**1-1/4**	25	0	086	7.05
808-015SR	**1-1/2**	10	0	086	11.00
808-020SR	**2**	10	0	086	12.39

90° Street Ell

Spig x Soc



809-005	**1/2**	50	200	080	4.14
809-007	**3/4**	50	0	080	5.28
809-010	**1**	50	0	080	8.52
809-012	**1-1/4**	25	0	080	11.40
809-015	**1-1/2**	10	0	080	12.22
809-020	**2**	25	0	080	14.75
809-030	**3**	5	0	080	41.38
809-040	**4**	4	0	080	62.87
809-060	**6**	1	0	080	178.93
809-080	**8**	2	0	080	493.16
809-100	**10**	1	0	081	2206.41
809-120	**12**	1	0	081	2876.12

Reducing 90° Ell

Soc x Fipt



807-101	**3/4X1/2**	10	60	080	7.88
807-130[1]	**1X1/2**	10	80	080	12.58
807-131[1]	**1X3/4**	10	80	080	12.58

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

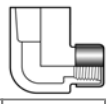
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Reducing 90° Ell (continued)

Soc x Fipt

[1] Sized with Bushing

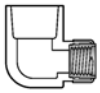
Special Reinforced Reducing 90° Ell



Soc x SR Fipt - Stainless Steel Collar

807-101SR	**3/4X1/2**	50	0	086	9.16
807-130SR	**1X1/2**	50	0	086	10.28

Transition Reducing 90° Ell



Soc x Fipt With Brass Thread Insert

807-101BR	**3/4X1/2**	20	120	086	36.09

Not intended to convey or dispense water for human consumption through drinking or cooking

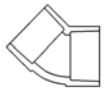
60° Ell



Soc

824-005F	**1/2**	1	7	083	74.22
824-007F	**3/4**	1	25	083	87.64
824-010F	**1**	1	25	083	95.36
824-012F	**1-1/4**	1	16	083	97.22
824-015F	**1-1/2**	1	16	083	103.85
824-020F	**2**	1	16	083	131.75
824-025F	**2-1/2**	1	10	083	155.11
824-030F	**3**	1	4	083	155.39
824-040F	**4**	1	4	083	199.67
824-060F	**6**	1	2	083	356.59
824-080F	**8**	1	2	083	432.20
824-100F	**10**	1	2	083	738.44
824-120F	**12**	1	0	083	964.51
824-140F	**14**	1	0	083	1201.02
824-160F	**16**	1	0	083	1357.04
824-180F	**18**	1	0	083	2403.19
824-200F	**20**	1	0	083	2651.38
824-240F	**24**	1	0	083	4421.29

45° Ell



Soc

817-002	**1/4**	25	450	080	11.87
817-003	**3/8**	25	150	080	11.87
817-005	**1/2**	20	240	080	6.22
817-007	**3/4**	20	240	080	9.51
817-010	**1**	15	120	080	14.25
817-012	**1-1/4**	10	80	080	18.15
817-015	**1-1/2**	10	0	080	21.46
817-020	**2**	10	0	080	27.83
817-025	**2-1/2**	5	0	080	58.42
817-030	**3**	5	0	080	71.11
817-040	**4**	5	0	080	128.05
817-045F	**4-1/2**	1	2	083	88.71
817-050	**5**	4	0	080	153.20
817-050F	**5**	1	4	083	121.05
817-060	**6**	4	0	080	161.26
817-080	**8**	2	0	080	349.63
817-100	**10**	1	0	081	1100.75
817-100F	**10**	1	2	083	464.54
817-120	**12**	1	0	081	1419.89
817-120F	**12**	1	0	083	653.56
817-140	**14**	1	0	082	1667.16
817-140F	**14**	1	0	083	1065.27
817-160F	**16**	1	0	083	1304.15
817-180F	**18**	1	0	083	1587.37
817-200F	**20**	1	0	083	2180.34

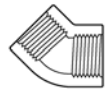
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

45° Ell (continued)

Soc

817-240F	**24**	1	0	083	2700.68

45° Ell



Fipt

819-002	**1/4**	25	450	080	13.46
819-003	**3/8**	25	150	080	13.46
819-005	**1/2**	25	150	080	12.28
819-007	**3/4**	10	60	080	13.20
819-010	**1**	10	60	080	16.56
819-012	**1-1/4**	10	80	080	25.26
819-015	**1-1/2**	10	0	080	31.76
819-020	**2**	10	0	080	47.08
819-025	**2-1/2**	5	0	080	93.16
819-030	**3**	5	0	080	149.84
819-040	**4**	5	0	080	215.01

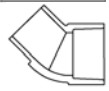
Special Reinforced 45° Ell



SR Fipt - Stainless Steel Collar

819-005SR	**1/2**	25	150	086	7.10
819-007SR	**3/4**	10	120	086	7.76
819-010SR	**1**	10	60	086	12.83

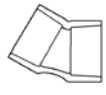
45° Street Ell



Spig x Soc

827-005	**1/2**	50	400	080	6.22
827-007	**3/4**	50	0	080	9.51
827-010	**1**	50	0	080	14.25
827-012	**1-1/4**	25	0	080	18.15
827-015	**1-1/2**	25	0	080	21.46
827-020	**2**	10	0	080	27.83
827-025	**2-1/2**	12	0	080	36.69
827-030	**3**	10	0	080	71.11
827-040	**4**	5	0	080	128.05
827-050F	**5**	1	2	083	154.92
827-060	**6**	4	0	080	189.69
827-080	**8**	2	0	080	411.35
827-100	**10**	1	0	081	1295.03
827-120	**12**	1	0	081	1670.46
827-140F	**14**	1	0	083	983.22
827-160F	**16**	1	0	083	1577.21
827-180F	**18**	1	0	083	1763.17
827-200F	**20**	1	0	083	2319.57
827-240F	**24**	1	0	083	3688.31

30° Ell



Soc

815-005F	**1/2**	1	25	083	26.75
815-007F	**3/4**	1	25	083	26.94
815-010F	**1**	1	30	083	29.47
815-012F	**1-1/4**	1	15	083	31.92
815-015F	**1-1/2**	1	25	083	32.36
815-020F	**2**	1	25	083	35.28
815-025F	**2-1/2**	1	18	083	39.09
815-030F	**3**	1	20	083	42.65
815-040F	**4**	1	6	083	55.93
815-045F	**4-1/2**	1	18	083	85.19
815-050F	**5**	1	2	083	102.17
815-060	**6**	5	0	080	189.69
815-080F	**8**	1	3	083	171.15
815-100F	**10**	1	2	083	303.33

30° Ell (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
815-120F	**12**	1	2	083	443.33
815-140F	**14**	1	0	083	678.69
815-160F	**16**	1	0	083	907.22
815-180F	**18**	1	0	083	1393.67
815-200F	**20**	1	0	083	2020.52
815-240F	**24**	1	0	083	2410.66

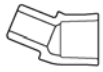
22-1/2° Ell



Soc

816-005	**1/2**	20	240	080	7.34
816-007	**3/4**	20	240	080	11.20
816-010	**1**	20	160	080	16.78
816-010F	**1**	1	25	083	16.18
816-015F	**1-1/2**	1	25	083	28.22
816-012	**1-1/4**	20	0	080	21.36
816-015	**1-1/2**	20	0	080	25.25
816-020	**2**	20	0	080	32.71
816-025	**2-1/2**	5	0	080	67.20
816-025F	**2-1/2**	1	18	083	39.09
816-030	**3**	5	0	080	83.84
816-040	**4**	4	0	080	150.66
816-045F	**4-1/2**	1	18	083	85.19
816-050F	**5**	1	8	083	102.17
816-060	**6**	4	0	080	189.69
816-060F	**6**	1	8	083	104.56
816-080	**8**	4	0	080	411.35
816-080F	**8**	1	4	083	171.15
816-100F	**10**	1	2	083	303.33
816-120F	**12**	1	2	083	443.33
816-140F	**14**	1	0	083	678.69
816-160F	**16**	1	0	083	907.22
816-180F	**18**	1	0	083	1171.17
816-200F	**20**	1	0	083	2020.52
816-240F	**24**	1	0	083	2410.66

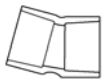
22-1/2° Street Ell



Spig x Soc

842-005	**1/2**	50	400	080	7.62
842-007	**3/4**	50	0	080	11.71
842-010	**1**	50	0	080	18.40
842-012	**1-1/4**	20	0	080	22.91
842-015	**1-1/2**	25	0	080	25.97
842-020	**2**	20	0	080	32.71
842-025	**2-1/2**	5	0	080	85.38
842-030	**3**	5	0	080	93.73
842-040	**4**	4	0	080	164.84
842-040F	**4**	1	5	084	105.02
842-060	**6**	6	0	080	234.28
842-060F	**6**	1	6	083	131.75
842-080	**8**	1	2	080	506.54
842-080F	**8**	1	4	083	173.88
842-100F	**10**	1	0	083	355.36
842-120F	**12**	1	2	084	463.03

15° Ell



Soc

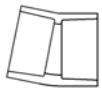
818-005F	**1/2**	1	25	083	26.75
818-007F	**3/4**	1	23	083	26.94
818-010F	**1**	1	20	083	29.47
818-012F	**1-1/4**	15	0	083	31.92
818-015F	**1-1/2**	1	25	083	32.36
818-020F	**2**	1	25	083	35.28

15° Ell (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
818-025F	**2-1/2**	1	18	083	115.19
818-030F	**3**	1	35	083	42.65
818-040F	**4**	1	20	083	55.93
818-045F	**4-1/2**	1	18	083	85.19
818-050F	**5**	1	2	083	102.17
818-060F	**6**	1	8	083	104.56
818-080F	**8**	1	4	083	171.15
818-100F	**10**	1	2	083	303.33
818-120F	**12**	1	2	083	443.33
818-140F	**14**	1	0	083	678.69
818-160F	**16**	1	0	083	907.22
818-180F	**18**	1	0	083	1171.17
818-200F	**20**	1	0	083	2020.52
818-240F	**24**	1	0	083	2410.66

11-1/4° Ell



Soc

811-005F	**1/2**	1	52	083	26.75
811-007F	**3/4**	1	52	083	26.94
811-010F	**1**	1	50	083	29.47
811-012F	**1-1/4**	1	26	083	31.92
811-015	**1-1/2**	25	0	080	26.68
811-020	**2**	10	0	080	32.71
811-025F	**2-1/2**	1	25	083	39.09
811-030	**3**	10	0	080	83.84
811-040	**4**	4	0	080	150.66
811-045F	**4-1/2**	1	18	083	85.19
811-050F	**5**	1	4	083	102.17
811-060F	**6**	1	10	083	104.56
811-080F	**8**	1	4	083	171.15
811-100F	**10**	1	2	083	303.33
811-120F	**12**	1	2	083	443.33
811-140F	**14**	1	0	083	678.69
811-160F	**16**	1	0	083	907.22
811-180F	**18**	1	0	083	1171.17
811-200F	**20**	1	0	083	2020.52
811-240F	**24**	1	0	083	2410.66

Wye



Soc

1/2" - 2" - 235 psi Maximum Internal Pressure Rating @ 73°F (23°C)
2-1/2" - 6" - 150 psi Maximum Internal Pressure Rating @ 73°F (23°C)
8" - Larger & All Fabricated Sizes - 100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

875-005	**1/2**	25	100	080	13.68
875-007	**3/4**	25	0	080	14.38
875-010	**1**	20	0	080	23.01
875-012	**1-1/4**	20	0	080	35.28
875-015	**1-1/2**	20	0	080	35.28
875-020	**2**	10	0	080	101.22
875-025[1]	**2-1/2**	6	0	080	461.20
875-030	**3**	5	0	080	325.38
875-040	**4**	4	0	080	403.17
875-050F*	**5**	1	2	083	630.71
875-060	**6**	2	0	080	550.66
875-080	**8**	1	0	080	1107.40
875-080F	**8**	1	0	083	853.29
875-100F*	**10**	1	0	083	1338.99
875-120F*	**12**	1	0	083	1701.91
875-140F*	**14**	1	0	083	2842.43
875-160F*	**16**	1	0	083	3733.88
875-180F*	**18**	1	0	083	4186.18
875-200F*	**20**	1	0	083	5591.94

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Wye (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
875-240F*	24	1	0	083	7442.15

[1] Sized with Bushing

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

Reducing Wye



Soc

1/2" - 2" - 235 psi Maximum Internal Pressure Rating @ 73°F (23°C)
3" - 6" - 150 psi Maximum Internal Pressure Rating @ 73°F (23°C)
8" - Larger & All Fabricated Sizes - 100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
875-101[1]	3/4X1/2	25	0	080	16.60
875-130[1]	1X1/2	20	0	080	29.11
875-131[1]	1X3/4	20	0	080	29.11
875-166[1]	1-1/4X1/2	20	0	080	44.84
875-167[1]	1-1/4X3/4	20	0	080	44.84
875-168[1]	1-1/4X1	20	0	080	44.84
875-209[1]	1-1/2X1/2	20	0	080	48.03
875-210[1]	1-1/2X3/4	20	0	080	48.03
875-211[1]	1-1/2X1	20	0	080	48.03
875-212[1]	1-1/2X1-1/4	20	0	080	48.03
875-247[1]	2X1/2	10	0	080	120.41
875-248[1]	2X3/4	10	0	080	120.41
875-249[1]	2X1	10	0	080	120.41
875-250[1]	2X1-1/4	10	0	080	120.41
875-251[1]	2X1-1/2	10	0	080	120.41
875-292[1]	2-1/2X2-1/2X2	5	0	080	468.76
875-335[1]	3X1	5	0	080	379.27
875-336[1]	3X1-1/4	5	0	080	379.27
875-337[1]	3X1-1/2	5	0	080	379.27
875-338[1]	3X2	4	0	080	379.27
875-339[1]	3X2-1/2	5	0	080	379.27
875-420	4X2	4	0	080	476.83
875-420F*	4X2	1	5	083	397.41
875-421[1]	4X2-1/2	4	0	080	528.54
875-421F*	4X2-1/2	1	4	083	444.12
875-422[1]	4X3	4	0	080	476.83
875-525[1]	6X1	5	0	080	584.64
875-528[1]	6X2	5	0	080	519.19
875-528F*	6X2	1	3	083	408.28
875-530[1]	6X3	5	0	080	519.19
875-530F*	6X3	1	2	083	443.57
875-532	6X4	5	0	080	419.66
875-578[1]	8X2	1	0	080	1448.65
875-578F*	8X2	1	2	083	660.56
875-579F*	8X2-1/2	1	2	083	675.37
875-580[1]	8X3	1	0	080	1448.65
875-580F*	8X3	1	2	083	670.95
875-582	8X4	2	0	080	1448.65
875-582F*	8X4	1	2	083	711.42
875-585[1]	8X6	1	0	080	1351.33
875-585F*	8X6	1	0	083	838.92
875-621F*	10X2	1	0	083	889.24
875-622F*	10X2-1/2	1	0	083	895.43
875-623F*	10X3	1	0	083	906.56
875-624F*	10X4	1	0	083	988.04
875-625F*	10X5	1	0	083	1107.33
875-626	10X6	1	0	081	1564.51
875-626F*	10X6	1	0	083	1124.31
875-628	10X8	1	0	081	1991.86
875-628F*	10X8	1	0	083	1300.27
875-661F*	12X2	1	0	083	986.82
875-662F*	12X2-1/2	1	0	083	1075.84
875-663F*	12X3	1	0	083	1177.29

Reducing Wye (continued)

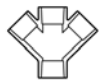
Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
875-664F*	12X4	1	0	083	1246.79
875-666F*	12X6	1	0	083	1421.92
875-668F*	12X8	1	0	083	1557.75
875-670F*	12X10	1	0	083	1650.80
875-694F*	14X4	1	0	083	1542.98
875-696F*	14X6	1	0	083	1632.80
875-698F*	14X8	1	0	083	1670.46
875-700F*	14X10	1	0	083	1865.06
875-702F*	14X12	1	0	083	2113.86
875-754F*	16X4	1	0	083	1680.47
875-756F*	16X6	1	0	083	1687.76
875-758F*	16X8	1	0	083	1904.77
875-760F*	16X10	1	0	083	2144.28
875-762F*	16X12	1	0	083	2336.28
875-764F*	16X14	1	0	083	2705.55
875-784F*	18X4	1	0	083	3016.78
875-786F*	18X6	1	0	083	3406.48
875-788F*	18X8	1	0	083	3533.01
875-790F*	18X10	1	0	083	3797.31
875-792F*	18X12	1	0	083	3811.79
875-794F*	18X14	1	0	083	4116.92
875-796F*	18X16	1	0	083	4145.94
875-814F*	20X4	1	0	083	3727.95
875-816F*	20X6	1	0	083	4017.12
875-818F*	20X8	1	0	083	4245.20
875-820F*	20X10	1	0	083	4388.98
875-822F*	20X12	1	0	083	4546.60
875-824F*	20X14	1	0	083	4908.17
875-826F*	20X16	1	0	083	5314.37
875-828F*	20X18	1	0	083	5516.26
875-904F*	24X4	1	0	083	4638.11
875-906F*	24X6	1	0	083	4797.68
875-908F*	24X8	1	0	083	4920.49
875-910F*	24X10	1	0	083	5143.16
875-912F*	24X12	1	0	083	5470.07
875-914F*	24X14	1	0	083	5682.24
875-916F*	24X16	1	0	083	6062.14
875-918F*	24X18	1	0	083	6990.88
875-920F*	24X20	1	0	083	7318.35

[1] Sized with Bushing

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

Double Wye



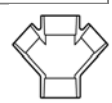
Soc

100 psi Maximum Internal Presure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
876-020F*	2	1	4	083	334.67
876-030F*	3	1	4	083	421.77
876-040F*	4	1	2	083	765.93
876-060F*	6	1	0	083	895.23
876-080F*	8	1	0	083	1066.61
876-100F*	10	1	0	083	1900.60
876-120F*	12	1	0	083	2676.48

For larger sizes please contact your Regional Spears® Distribution Center.

Reducing Double Wye



Soc

Size 3" is 150 psi, all Fabricated Sizes- 100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
876-338	3X2	5	0	080	406.99
876-420F*	4X2	1	2	083	531.52
876-421F*	4X2-1/2	1	2	083	601.79

Reducing Double Wye (continued)

Soc

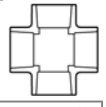
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
876-422F*	4X3	1	2	083	622.46
876-528F*	6X2	1	2	083	625.44
876-529F*	6X2-1/2	1	2	083	653.28
876-530F*	6X3	1	2	083	657.53
876-532F*	6X4	1	0	083	783.78
876-578F*	8X2	1	2	083	806.75
876-579F*	8X2-1/2	1	2	083	844.83
876-580F*	8X3	1	0	083	849.99
876-582F*	8X4	1	0	083	877.41
876-585F*	8X6	1	0	083	990.69
876-621F*	10X2	1	0	083	1075.73
876-622F*	10X2-1/2	1	0	083	1157.96
876-623F*	10X3	1	0	083	1164.83
876-624F*	10X4	1	0	083	1209.04
876-626F*	10X6	1	0	083	1265.54
876-628F*	10X8	1	0	083	1626.46
876-661F*	12X2	1	0	083	1201.98
876-662F*	12X2-1/2	1	0	083	1273.29
876-663F*	12X3	1	0	083	1293.39
876-664F*	12X4	1	0	083	1377.71
876-666F*	12X6	1	0	083	1598.79
876-668F*	12X8	1	0	083	1909.69
876-670F*	12X10	1	0	083	2178.07

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

For larger sizes please contact your Regional Spears® Distribution Center.

Cross

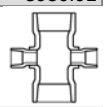
Soc



820-002	1/4	25	150	080	45.94
820-005	1/2	50	0	080	45.94
820-007	3/4	50	0	080	48.35
820-010	1	50	0	080	56.61
820-012	1-1/4	25	0	080	67.93
820-015	1-1/2	25	0	080	73.23
820-020	2	10	0	080	90.67
820-025	2-1/2	10	0	080	123.63
820-030	3	5	0	080	154.20
820-040	4	3	0	080	268.29
820-060F	6	1	0	083	644.71
820-080F	8	1	0	083	942.69
820-100F	10	1	0	083	1520.48
820-120F	12	1	0	083	2141.20
820-140F	14	1	0	083	3441.27
820-160F	16	1	0	083	3900.04
820-180F	18	1	0	083	4090.77
820-200F	20	1	0	083	5956.54
820-240F	24	1	0	083	8950.91

Reducing Cross

Soc



820-101[1]	3/4X1/2	50	0	080	53.26
820-130[1]	1X1/2	25	0	080	69.00
820-131	1X3/4	20	0	080	69.00
820-166[1]	1-1/4X1/2	25	0	080	66.27
820-167	1-1/4X3/4	25	0	080	61.15
820-168[1]	1-1/4X1	25	0	080	87.14
820-209[1]	1-1/2X1/2	20	0	080	98.83
820-210	1-1/2X3/4	15	0	080	98.83
820-211[1]	1-1/2X1	25	0	080	98.83
820-212[1]	1-1/2X1-1/4	25	0	080	98.83
820-247[1]	2X1/2	10	0	080	126.80

Reducing Cross (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
820-248[1]	2X3/4	10	0	080	126.80
820-249[1]	2X1	10	0	080	126.80
820-250[1]	2X1-1/4	10	0	080	126.80
820-251[1]	2X1-1/2	10	0	080	126.80
820-289	2-1/2X1	15	0	080	126.80
820-290[1]	2-1/2X1-1/4	10	0	080	185.73
820-291[1]	2-1/2X1-1/2	10	0	080	185.73
820-292[1]	2-1/2X2	4	0	080	185.73
820-335[1]	3X1	4	0	080	251.86
820-336[1]	3X1-1/4	4	0	080	251.86
820-337[1]	3X1-1/2	4	0	080	251.86
820-338[1]	3X2	4	0	080	251.86
820-339[1]	3X2-1/2	4	0	080	251.86
820-420[1]	4X2	3	0	080	404.64
820-420F*	4X2	1	4	083	395.17
820-422[1]	4X3	3	0	080	404.64
820-528F	6X2	1	4	083	500.35
820-530F	6X3	1	2	083	526.02
820-532F	6X4	1	2	083	626.97
820-533F*	6X5	1	2	083	743.35
820-578F	8X2	1	0	083	645.65
820-580F	8X3	1	0	083	679.67
820-582F	8X4	1	0	083	701.95
820-585F	8X6	1	0	083	758.55
820-621F	10X2	1	0	083	859.47
820-622F	10X2-1/2	1	0	083	883.56
820-623F	10X3	1	0	083	931.92
820-624F	10X4	1	0	083	967.35
820-626F	10X6	1	0	083	1012.33
820-628F	10X8	1	0	083	1301.89
820-661F	12X2	1	0	083	961.58
820-663F	12X3	1	0	083	1035.99
820-664F	12X4	1	0	083	1102.59
820-666F	12X6	1	0	083	1280.39
820-668F	12X8	1	0	083	1529.51
820-670F	12X10	1	0	083	1040.24
820-691F	14X2	1	0	083	1379.79
820-693F	14X3	1	0	083	1484.94
820-694F	14X4	1	0	083	1630.41
820-696F	14X6	1	0	083	1800.81
820-698F	14X8	1	0	083	2048.53
820-700F	14X10	1	0	083	2366.88
820-702F	14X12	1	0	083	2677.14
820-751F	16X2	1	0	083	1726.16
820-753F	16X3	1	0	083	1858.93
820-754F	16X4	1	0	083	2062.17
820-756F	16X6	1	0	083	2230.31
820-758F	16X8	1	0	083	2494.58
820-760F	16X10	1	0	083	2718.33
820-762F	16X12	1	0	083	3053.15
820-764F	16X14	1	0	083	3823.62
820-784F	18X4	1	0	083	2910.95
820-786F	18X6	1	0	083	3038.26
820-788F	18X8	1	0	083	3260.62
820-790F	18X10	1	0	083	3482.81
820-792F	18X12	1	0	083	3647.03
820-794F	18X14	1	0	083	3864.17
820-796F	18X16	1	0	083	4026.45
820-814F	20X4	1	0	083	3650.09
820-816F	20X6	1	0	083	4204.38
820-818F	20X8	1	0	083	4251.60
820-820F	20X10	1	0	083	4545.29
820-822F	20X12	1	0	083	4873.76
820-824F	20X14	1	0	083	5442.01
820-826F	20X16	1	0	083	5548.12

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Reducing Cross (continued)

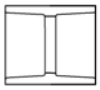
Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
820-828F	**20X18**	1	0	083	5847.82
820-904F	**24X4**	1	0	083	4357.68
820-906F	**24X6**	1	0	083	4631.88
820-908F	**24X8**	1	0	083	4812.75
820-910F	**24X10**	1	0	083	4881.51
820-912F	**24X12**	1	0	083	5104.49
820-914F	**24X14**	1	0	083	6073.65
820-916F	**24X16**	1	0	083	6486.02
820-918F	**24X18**	1	0	083	7442.09
820-920F	**24X20**	1	0	083	8898.58

[1] Sized with Bushing

Coupling

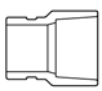
Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
829-002	**1/4**	25	450	080	9.57
829-003	**3/8**	25	150	080	9.57
829-005	**1/2**	25	150	080	5.98
829-007	**3/4**	25	300	080	8.09
829-010	**1**	25	200	080	8.32
829-012	**1-1/4**	10	60	080	12.67
829-015	**1-1/2**	10	80	080	13.66
829-020	**2**	20	0	080	14.67
829-025	**2-1/2**	10	0	080	36.11
829-030	**3**	5	0	080	41.46
829-040	**4**	5	0	080	51.93
829-050	**5**	5	0	080	102.98
829-050F	**5**	1	5	083	64.27
829-060	**6**	4	0	080	111.76
829-080	**8**	4	0	080	152.09
829-100	**10**	1	0	081	522.01
829-100F	**10**	1	0	083	175.80
829-120	**12**	1	0	081	601.61
829-120F	**12**	1	0	083	202.64
829-140	**14**	1	0	082	765.42
829-140F	**14**	1	0	083	405.21
829-160F	**16**	1	0	083	481.75
829-180F	**18**	1	0	083	949.59
829-200F	**20**	1	0	083	1170.80
829-240F	**24**	1	0	083	1285.55

Grooved Coupling Adapter

Groove x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
833-012	**1-1/4**	10	60	080	16.60
833-015	**1-1/2**	10	80	080	18.55
833-020	**2**	10	80	080	21.58
833-025	**2-1/2**	5	0	080	46.60
833-030	**3**	5	0	080	55.55
833-040	**4**	5	0	080	63.04
833-050F	**5**	1	7	084	121.01
833-060	**6**	5	0	080	136.12
833-080F	**8**	1	4	084	156.09
833-100F	**10**	1	0	084	191.68
833-120F	**12**	1	0	084	258.95

Coupling

Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
830-002	**1/4**	25	450	080	7.17
830-003	**3/8**	25	150	080	7.17
830-005	**1/2**	25	150	080	6.69
830-007	**3/4**	25	300	080	9.54
830-010	**1**	15	90	080	10.24

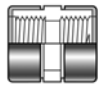
Coupling (continued)

Fipt

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
830-012	**1-1/4**	10	120	080	12.67
830-015	**1-1/2**	10	80	080	28.20
830-020	**2**	10	0	080	29.60
830-025	**2-1/2**	5	0	080	70.66
830-030	**3**	5	0	080	82.86
830-040	**4**	5	0	080	143.48
830-060F	**6**	1	8	083	180.83
830-080F	**8**	1	6	083	265.92
830-100F	**10**	1	2	083	361.68

Special Reinforced Coupling

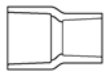
SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
830-005SR	**1/2**	25	150	086	3.69
830-007SR	**3/4**	25	150	086	5.25
830-010SR	**1**	25	200	086	5.61
830-012SR	**1-1/4**	10	120	086	6.99
830-015SR	**1-1/2**	10	80	086	15.47
830-020SR	**2**	10	0	086	16.22

Reducer Coupling

Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
829-101	**3/4X1/2**	50	400	080	7.32
829-130	**1X1/2**	25	200	080	10.22
829-131	**1X3/4**	25	200	080	10.67
829-166	**1-1/4X1/2**	25	0	080	21.67
829-167	**1-1/4X3/4**	25	0	080	21.67
829-168	**1-1/4X1**	25	0	080	21.67
829-209	**1-1/2X1/2**	25	0	080	22.68
829-210	**1-1/2X3/4**	25	0	080	22.68
829-211	**1-1/2X1**	25	0	080	22.68
829-212	**1-1/2X1-1/4**	25	0	080	28.03
829-247	**2X1/2**	25	0	080	25.58
829-248	**2X3/4**	10	80	080	25.58
829-249	**2X1**	25	0	080	25.58
829-250	**2X1-1/4**	10	40	080	25.58
829-251	**2X1-1/2**	10	40	080	25.58
829-291	**2-1/2X1-1/2**	10	0	080	34.12
829-292	**2-1/2X2**	10	0	080	34.12
829-335[1]	**3X1**	8	0	080	78.02
829-336[1]	**3X1-1/4**	6	0	080	78.02
829-337[1]	**3X1-1/2**	8	0	080	78.02
829-338	**3X2**	8	0	080	62.83
829-339	**3X2-1/2**	5	0	080	89.59
829-339F	**3X2-1/2**	1	9	083	109.27
829-416[1]	**4X3/4**	6	0	080	129.75
829-417[1]	**4X1**	6	0	080	129.75
829-419[1]	**4X1-1/2**	6	0	080	129.75
829-420	**4X2**	6	0	080	119.78
829-421	**4X2-1/2**	4	0	080	119.78
829-422	**4X3**	4	0	080	118.37
829-460F	**4-1/2X4**	1	20	083	78.36
829-487F	**5X2-1/2**	1	6	083	116.34
829-488F	**5X3**	1	6	083	112.79
829-490F	**5X4**	1	8	083	60.84
829-491F	**5X4-1/2**	1	10	083	85.89
829-528[1]	**6X2**	6	0	080	296.38
829-529[1]	**6X2-1/2**	4	0	080	355.41
829-530[1]	**6X3**	12	0	080	299.40
829-530F	**6X3**	1	10	083	111.73
829-532	**6X4**	4	0	080	241.43
829-534F	**6X4-1/2**	1	5	083	97.68
829-533F	**6X5**	1	5	083	102.43
829-579F	**8X2-1/2**	1	6	083	309.23

Reducer Coupling (continued)

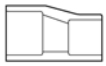
Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
829-580F	8X3	1	6	083	283.37
829-582F	8X4	1	6	083	264.44
829-583F	8X5	1	4	083	290.69
829-585	8X6	2	0	080	731.23
829-621F	10X2	1	2	083	456.13
829-623F	10X3	1	2	083	427.03
829-624F	10X4	1	2	083	403.03
829-625F	10X5	1	4	083	366.45
829-626	10X6	1	0	081	856.06
829-626F	10X6	1	4	083	330.28
829-628	10X8	1	0	081	856.06
829-663F	12X3	1	2	083	658.40
829-664F	12X4	1	2	083	562.44
829-665F	12X5	1	2	083	521.81
829-666F	12X6	1	0	083	486.53
829-668	12X8	1	0	081	974.12
829-668F	12X8	1	0	083	376.71
829-670F	12X10	1	0	083	254.49
829-691F	14X2	1	0	083	981.38
829-694F	14X4	1	0	083	819.47
829-696F	14X6	1	0	083	692.18
829-698F	14X8	1	0	083	633.39
829-700F	14X10	1	0	083	619.49
829-702F	14X12	1	0	083	371.57
829-754F	16X4	1	0	083	1216.69
829-756F	16X6	1	0	083	1100.40
829-758F	16X8	1	0	083	966.45
829-760F	16X10	1	0	083	858.45
829-762F	16X12	1	0	083	723.59
829-764F	16X14	1	0	083	549.29
829-783F	18X3	1	0	083	2640.07
829-784F	18X4	1	0	083	2567.20
829-786F	18X6	1	0	083	2399.75
829-788F	18X8	1	0	083	2272.17
829-790F	18X10	1	0	083	2055.42
829-792F	18X12	1	0	083	1691.86
829-794F	18X14	1	0	083	1145.33
829-796F	18X16	1	0	083	977.80
829-814F	20X4	1	0	083	2541.55
829-816F	20X6	1	0	083	2340.06
829-818F	20X8	1	0	083	2236.65
829-820F	20X10	1	0	083	2158.20
829-822F	20X12	1	0	083	1867.04
829-824F	20X14	1	0	083	1862.11
829-826F	20X16	1	0	083	1710.54
829-828F	20X18	1	0	083	1179.55
829-904F	24X4	1	0	083	4065.45
829-906F	24X6	1	0	083	4003.55
829-908F	24X8	1	0	083	3916.79
829-910F	24X10	1	0	083	3822.32
829-912F	24X12	1	0	083	3477.16
829-914F	24X14	1	0	083	3207.22
829-916F	24X16	1	0	083	2922.93
829-918F	24X18	1	0	083	2669.89
829-920F	24X20	1	0	083	2520.93

[1] Sized with Bushing

Eccentric Reducer Coupling

Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
829-101FE	3/4X1/2	1	25	083	38.56
829-130FE	1X1/2	1	16	083	27.05
829-131FE	1X3/4	1	15	083	39.69
829-168FE	1-1/4X1	1	12	083	31.46
829-209FE	1-1/2X1/2	1	20	083	49.82

Eccentric Reducer Coupling (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
829-210FE	1-1/2X3/4	1	25	083	51.56
829-212FE	1-1/2X1-1/4	1	20	083	32.67
829-249FE	2X1	1	25	083	46.59
829-250FE	2X1-1/4	1	25	083	43.29
829-251FE	2X1-1/2	1	10	083	41.31
829-290FE[2]	2-1/2X1-1/4	1	10	083	64.17
829-291FE[2]	2-1/2X1-1/2	1	20	083	62.38
829-292FE	2-1/2X2	1	10	083	48.17
829-335FE[2]	3X1	1	10	083	63.21
829-336FE[2]	3X1-1/4	1	10	083	60.88
829-337FE[2]	3X1-1/2	1	10	083	58.49
829-338E	3X2	15	0	080	62.83
829-338FE	3X2	1	20	083	37.36
829-339FE	3X2-1/2	1	10	083	121.31
829-417FE[3]	4X1	1	18	083	153.63
829-418FE[3]	4X1-1/4	1	6	083	150.91
829-419FE[3]	4X1-1/2	1	6	083	146.11
829-420FE[2]	4X2	1	10	083	102.01
829-421FE[2]	4X2-1/2	1	6	083	85.06
829-422FE	4X3	1	10	083	77.15
829-490FE	5X4	1	8	083	102.66
829-528FE[3]	6X2	1	6	083	180.80
829-529FE[3]	6X2-1/2	1	2	083	165.03
829-530FE[2]	6X3	1	6	083	159.27
829-532FE	6X4	1	5	083	115.31
829-533FE	6X5	1	5	083	106.34
829-575FE[5]	8X1	1	0	083	368.84
829-577FE[5]	8X1-1/2	1	0	083	360.56
829-578FE[4]	8X2	1	0	083	320.35
829-580FE[3]	8X3	1	2	083	244.15
829-582FE[2]	8X4	1	2	083	199.43
829-583FE[2]	8X5	1	2	083	199.01
829-585FE	8X6	1	4	083	153.36
829-624FE[3]	10X4	1	0	083	337.48
829-625FE[3]	10X5	1	0	083	384.21
829-626FE[2]	10X6	1	2	083	286.43
829-628FE	10X8	1	2	083	264.67
829-664FE[4]	12X4	1	0	083	516.08
829-666FE[3]	12X6	1	0	083	424.73
829-668FE[2]	12X8	1	0	083	366.94
829-670FE	12X10	1	2	083	234.55
829-696FE[3]	14X6	1	0	083	840.68
829-698FE[2]	14X8	1	0	083	691.34
829-700FE	14X10	1	0	083	573.39
829-702FE	14X12	1	0	083	368.36
829-756FE[4]	16X6	1	0	083	1553.20
829-758FE[3]	16X8	1	0	083	1422.29
829-760FE[2]	16X10	1	0	083	1034.67
829-762FE[2]	16X12	1	0	083	918.62
829-764FE	16X14	1	0	083	711.53
829-786FE[5]	18X6	1	0	083	2144.06
829-788FE[4]	18X8	1	0	083	2052.44
829-790FE[3]	18X10	1	0	083	1917.95
829-792FE[3]	18X12	1	0	083	1711.92
829-794FE[2]	18X14	1	0	083	1411.37
829-796FE	18X16	1	0	083	1377.17

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

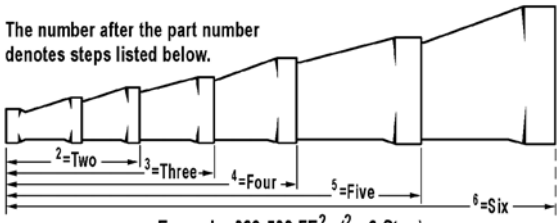
Eccentric Reducer Coupling (continued)

Soc

Eccentric Reducer Coupling Footnotes

Multi-Step Configurations

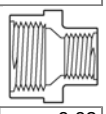
The number after the part number denotes steps listed below.



Example: 829-582 FE[2] ([2]= 2 Step)

Reducer Coupling

Fipt

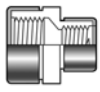


830-073[1]	**1/2X3/8**	25	150	080	9.02
830-101	**3/4X1/2**	50	200	080	7.96
830-211[1]	**1-1/2X1**	10	40	080	38.80

[1] Sized with Bushing

Special Reinforced Reducer Coupling

SR Fipt - Stainless Steel Collar



830-101SR	**3/4X1/2**	50	200	086	4.78
830-130SR	**1X1/2**	50	0	086	7.09
830-131SR	**1X3/4**	25	200	086	7.09
830-168SR	**1-1/4X1**	25	0	086	15.22
830-210SR	**1-1/2X3/4**	25	0	086	22.59
830-211SR	**1-1/2X1**	10	80	086	22.59
830-212SR	**1-1/2X1-1/4**	10	80	086	22.59
830-249SR	**2X1**	25	0	086	29.94
830-251SR	**2X1-1/2**	10	0	086	29.94

Fabricated Repair Coupling

Gasket



828-020F	**2**	1	15	083	82.17
828-030F	**3**	1	5	083	104.67
828-040F	**4**	1	4	083	130.43
828-060F	**6**	1	2	083	151.11
828-080F	**8**	1	2	083	198.66
828-100F	**10**	1	0	083	355.72
828-120F	**12**	1	0	083	453.13
828-140F	**14**	1	0	083	1038.74
828-160F	**16**	1	0	083	1239.54
828-180F	**18**	1	0	083	2139.17
828-200F	**20**	1	0	083	2310.32
828-240F	**24**	1	0	083	3170.72

Female Adapter

Soc x Fipt



835-002	**1/4**	25	450	080	10.12
835-003	**3/8**	25	400	080	10.12
835-005	**1/2**	25	150	080	5.60
835-007	**3/4**	25	150	080	8.32
835-010	**1**	15	90	080	12.26
835-012	**1-1/4**	10	120	080	19.86
835-015	**1-1/2**	10	80	080	24.35
835-020	**2**	10	0	080	42.48
835-025	**2-1/2**	5	0	080	67.07

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

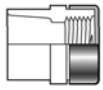
Female Adapter (continued)

Soc x Fipt

835-030	**3**	5	0	080	75.51
835-040	**4**	5	0	080	129.77
835-060	**6**	6	0	080	153.66
835-060F	**6**	1	8	083	201.78
835-080	**8**	3	0	080	288.88
835-080F	**8**	1	6	083	238.53
835-100F	**10**	1	2	083	261.45
835-120F	**12**	1	0	083	329.96

Special Reinforced Female Adapter

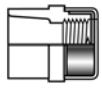
Soc x SR Fipt - Stainless Steel Collar



835-002SR	**1/4**	25	450	086	5.59
835-003SR	**3/8**	25	300	086	5.59
835-005SR	**1/2**	25	300	086	3.11
835-007SR	**3/4**	25	300	086	4.52
835-010SR	**1**	25	200	086	6.72
835-012SR	**1-1/4**	10	60	086	10.86
835-015SR	**1-1/2**	10	80	086	13.37
835-020SR	**2**	10	0	086	23.32
835-025SR	**2-1/2**	5	0	086	36.79
835-030SR	**3**	15	0	086	41.45
835-040SR	**4**	5	0	086	71.24
835-060SR	**6**	6	0	086	92.56

Encapsulated Special Reinforced Female Adapter

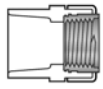
Soc x ESR Fipt



835-002ESR	**1/4**	25	450	086	8.09
835-003ESR	**3/8**	25	300	086	8.09
835-005ESR	**1/2**	25	300	086	5.02
835-007ESR	**3/4**	25	300	086	7.41
835-010ESR	**1**	25	200	086	9.81
835-012ESR	**1-1/4**	10	80	086	15.83
835-015ESR	**1-1/2**	10	80	086	22.87
835-020ESR	**2**	10	0	086	34.00

Transition Female Adapter

Soc x Fipt With Brass Thread Insert

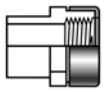


835-005BR	**1/2**	25	150	086	24.97
835-007BR	**3/4**	15	90	086	35.86
835-010BR	**1**	15	90	086	61.80
835-012BR	**1-1/4**	15	60	086	101.77
835-015BR	**1-1/2**	10	40	086	133.69
835-020BR	**2**	8	32	086	165.59

Not intended to convey or dispense water for human consumption through drinking or cooking

Special Reinforced Spigot Female Adapter

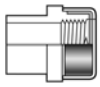
Spig x SR Fipt - Stainless Steel Collar



878-005SR	**1/2**	50	600	086	4.08
878-007SR	**3/4**	25	300	086	4.81
878-010SR	**1**	50	0	086	7.41
878-012SR	**1-1/4**	25	0	086	11.80
878-015SR	**1-1/2**	25	0	086	14.15
878-020SR	**2**	15	0	086	23.55
878-030SR	**3**	5	0	086	43.28
878-040SR	**4**	5	0	086	73.48

Encapsulated Special Reinforced Spigot Female Adapter

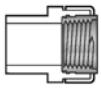
Spig x ESR Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
878-005ESR	1/2	50	600	086	5.57
878-007ESR	3/4	25	300	086	7.67
878-010ESR	1	50	0	086	10.53
878-012ESR	1-1/4	25	0	086	16.20
878-015ESR	1-1/2	25	0	086	23.00
878-020ESR	2	15	0	086	34.66

Transition Female Adapter

Spig x Fipt With Brass Thread Insert

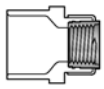


878-005BR	1/2	25	150	086	21.00
878-007BR	3/4	15	90	086	34.01
878-010BR	1	15	90	086	66.81

Not intended to convey or dispense water for human consumption through drinking or cooking

Transition Reducing Female Adapter

Soc x Fipt With Brass Thread Insert

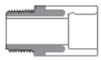


835-101BR	3/4X1/2	50	0	086	37.07
835-131BR	1X3/4	50	0	086	63.01

Not intended to convey or dispense water for human consumption through drinking or cooking

Transiton Male Adapter w/ Brass Thread

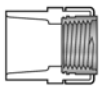
Brass Mipt x Socket



836-005BR	1/2	40	160	086	27.48
836-007BR	3/4	40	160	086	41.44
836-010BR	1	10	60	086	67.39
836-012BR	1-1/4	10	60	086	113.52
836-015BR	1-1/2	10	40	086	150.63
836-020BR	2	8	32	086	187.13

Transition Female Adapter

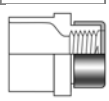
Soc x Fipt With 316 Stainless Steel Thread Insert



835-005SS	1/2	25	300	086	48.93
835-007SS	3/4	15	90	086	70.32
835-010SS	1	15	90	086	119.65
835-012SS	1-1/4	15	60	086	199.83
835-015SS	1-1/2	10	40	086	261.04
835-020SS	2	8	32	086	334.87

Special Reinforced Reducing Female Adapter

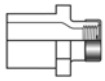
Soc x SR Fipt - Stainless Steel Collar



835-074SR	1/2X3/4	50	400	086	4.52
835-101SR	3/4X1/2	50	400	086	4.52
835-102SR	3/4X1	50	0	086	6.72
835-130SR	1X1/2	50	0	086	6.72
835-131SR	1X3/4	25	200	086	6.72

Special Reinforced Reducing Spigot Female Adapter

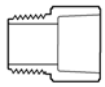
Spig x SR Fipt - Stainless Steel Collar



878-072SR	1/2X1/4	25	450	086	11.35
878-098SR	3/4X1/4	50	400	086	15.64
878-128SR	1X1/4	50	400	086	16.13

Male Adapter

Mipt x Soc

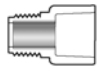


Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
836-053	3/8X1/2	50	900	080	6.96
836-005	1/2	25	150	080	6.99
836-007	3/4	25	300	080	7.71
836-102	3/4X1	50	0	080	16.51
836-131	1X3/4	50	400	080	16.51
836-010	1	20	120	080	13.34
836-012	1-1/4	10	120	080	15.60
836-015	1-1/2	10	120	080	22.41
836-251[1]	2X1-1/2	10	0	080	14.65
836-020	2	10	80	080	32.41
836-025	2-1/2	5	0	080	36.84
836-030	3	5	0	080	40.89
836-040	4	4	0	080	72.76
836-050F	5	1	8	083	221.20
836-060	6	5	0	080	161.62
836-080F	8	1	2	083	174.26
836-100F	10	1	2	083	208.56
836-120F	12	1	0	083	309.94

1- Sized With Bushing

Reinforced Male Adapter

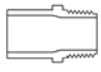
R Mipt x Soc - Stainless Steel Sleeve



836-005R	1/2	25	150	086	3.84
836-007R	3/4	25	300	086	4.21
836-010R	1	10	60	086	7.38

Male Adapter

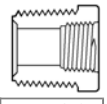
Spig x Mipt



861-005	1/2	50	300	080	7.03
861-007	3/4	25	300	080	10.37
861-010	1	50	0	080	15.32
861-131	1X3/4	50	200	080	15.80
861-012	1-1/4	25	0	080	16.60
861-015	1-1/2	25	0	080	18.55
861-020	2	25	0	080	21.58

Reducer (T.T.) Bushing Flush Style

Mipt x Fipt



839-041	1/4X1/8	25	500	080	12.05
839-052	3/8X1/4	50	450	080	12.05
839-072	1/2X1/4	50	300	080	12.05
839-073	1/2X3/8	50	300	080	12.05
839-098	3/4X1/4	50	300	080	8.98
839-099	3/4X3/8	50	300	080	8.98
839-101	3/4X1/2	50	300	080	7.40
839-128	1X1/4	25	150	080	14.49
839-129	1X3/8	50	600	080	11.59
839-130	1X1/2	50	300	080	11.59
839-131	1X3/4	50	700	080	11.59
839-166	1-1/4X1/2	25	150	080	12.29
839-167	1-1/4X3/4	25	150	080	12.29
839-168	1-1/4X1	25	300	080	12.29
839-209	1-1/2X1/2	25	150	080	14.57
839-210	1-1/2X3/4	25	300	080	14.57
839-211	1-1/2X1	25	300	080	14.57
839-212	1-1/2X1-1/4	25	300	080	14.57
839-247	2X1/2	10	60	080	21.35
839-248	2X3/4	10	60	080	21.35
839-249	2X1	10	60	080	21.35
839-250	2X1-1/4	10	60	080	21.35

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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

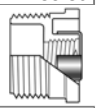
Reducer (T.T.) Bushing Flush Style (continued)

Mipt x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
839-251	**2X1-1/2**	10	60	080	21.35
839-292	**2-1/2X2**	10	80	080	28.91
839-337	**3X1-1/2**	10	0	080	39.29
839-338	**3X2**	10	0	080	39.29
839-339	**3X2-1/2**	10	0	080	39.29
839-420	**4X2**	6	0	080	80.99
839-422	**4X3**	6	0	080	103.43
839-532	**6X4**	5	0	080	135.89

Special Reinforced Reducer Bushing

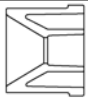
Mipt x SR Fipt - Stainless Steel Collar



839-128SR	**1X1/4**	25	150	086	5.98
839-209SR	**1-1/2X1/2**	25	300	086	8.74
839-210SR	**1-1/2X3/4**	25	300	086	8.74
839-247SR	**2X1/2**	10	60	086	12.83
839-248SR	**2X3/4**	10	60	086	12.83
839-249SR	**2X1**	10	120	086	12.83
839-420SR	**4X2**	6	0	086	48.59

Reducer Bushing Flush Style

Spig x Soc



837-052	**3/8X1/4**	50	450	080	5.28
837-072	**1/2X1/4**	50	300	080	5.28
837-073	**1/2X3/8**	50	600	080	5.28
837-101	**3/4X1/2**	50	600	080	1.93
837-129[1]	**1X3/8**	50	200	080	11.01
837-130	**1X1/2**	50	300	080	5.52
837-131	**1X3/4**	50	400	080	5.52
837-166	**1-1/4X1/2**	25	150	080	8.65
837-167	**1-1/4X3/4**	25	300	080	8.65
837-168	**1-1/4X1**	25	200	080	8.65
837-209	**1-1/2X1/2**	25	200	080	11.79
837-210	**1-1/2X3/4**	25	200	080	11.79
837-211	**1-1/2X1**	25	200	080	11.79
837-212	**1-1/2X1-1/4**	25	200	080	11.79
837-247	**2X1/2**	10	120	080	16.81
837-248	**2X3/4**	10	120	080	16.81
837-249	**2X1**	10	120	080	16.81
837-250	**2X1-1/4**	10	120	080	16.81
837-251	**2X1-1/2**	10	120	080	16.81
837-287[1]	**2-1/2X1/2**	10	40	080	39.04
837-288[1]	**2-1/2X3/4**	10	40	080	39.04
837-289	**2-1/2X1**	10	40	080	39.04
837-290	**2-1/2X1-1/4**	10	80	080	29.19
837-291	**2-1/2X1-1/2**	10	40	080	29.19
837-292	**2-1/2X2**	15	0	080	29.19
837-333[1]	**3X1/2**	10	0	080	53.75
837-334[1]	**3X3/4**	10	0	080	52.04
837-335	**3X1**	10	0	080	46.31
837-336	**3X1-1/4**	10	0	080	46.31
837-337	**3X1-1/2**	10	0	080	46.31
837-338	**3X2**	10	0	080	46.31
837-339	**3X2-1/2**	15	0	080	46.31
837-415[1]	**4X1/2**	6	0	080	82.32
837-416[1]	**4X3/4**	6	0	080	82.32
837-417[1]	**4X1**	6	0	080	82.32
837-418[1]	**4X1-1/4**	6	0	080	82.32
837-419[1]	**4X1-1/2**	6	0	080	82.32
837-420	**4X2**	6	0	080	64.12
837-421	**4X2-1/2**	6	0	080	64.12
837-422	**4X3**	6	0	080	64.12
837-486[1]	**5X2**	3	0	080	72.17
837-488[1]	**5X3**	5	0	080	95.05

Reducer Bushing Flush Style (continued)

Spig x Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
837-490	**5X4**	4	0	080	84.71
837-490F	**5X4**	1	4	083	90.34
837-524[1]	**6X3/4**	5	0	080	107.02
837-525[1]	**6X1**	5	0	080	101.67
837-526[1]	**6X1-1/4**	5	0	080	107.02
837-527[1]	**6X1-1/2**	5	0	080	107.02
837-528	**6X2**	5	0	080	89.16
837-529*	**6X2-1/2**	5	0	080	138.23
837-530	**6X3**	5	0	080	89.16
837-532	**6X4**	5	0	080	89.16
837-533F	**6X5**	1	5	083	290.07
837-534	**6X5**	5	0	080	89.16
837-577[1]	**8X1-1/2**	4	0	080	329.85
837-578[1]	**8X2**	4	0	080	312.28
837-580[1]	**8X3**	6	0	080	312.28
837-582[1]	**8X4**	6	0	080	216.89
837-583[1]	**8X5**	2	0	080	315.54
837-583F	**8X5**	1	6	083	513.40
837-585	**8X6**	4	0	080	216.89
837-621[1]	**10X2**	2	0	081	603.87
837-622[1]	**10X2-1/2**	2	0	081	657.96
837-623[1]	**10X3**	2	0	081	603.87
837-624[1]	**10X4**	2	0	081	603.87
837-625F	**10X5**	1	4	083	786.54
837-626	**10X6**	4	0	081	509.51
837-628	**10X8**	4	0	081	509.51
837-628F	**10X8**	1	6	083	197.05
837-663[1]	**12X3**	2	0	081	894.88
837-664[1]	**12X4**	2	0	081	894.88
837-666[1]	**12X6**	2	0	081	822.16
837-666F[1]	**12X6**	1	2	083	578.84
837-668	**12X8**	2	0	081	588.82
837-668F[1]	**12X8**	1	2	083	560.07
837-670	**12X10**	2	0	081	588.82
837-670F	**12X10**	1	3	083	224.34
837-694F	**14X4**	1	3	083	1276.08
837-696F	**14X6**	1	0	083	1136.21
837-698F	**14X8**	1	0	083	814.08
837-700F	**14X10**	1	3	083	508.22
837-702F	**14X12**	1	3	083	218.02
837-754F	**16X4**	1	0	083	1457.79
837-756F	**16X6**	1	0	083	1353.68
837-758F	**16X8**	1	0	083	1065.78
837-760F	**16X10**	1	0	083	772.51
837-762F	**16X12**	1	2	083	455.93
837-764F	**16X14**	1	2	083	445.39
837-786F	**18X6**	1	0	083	2294.89
837-788F	**18X8**	1	0	083	2102.60
837-790F	**18X10**	1	0	083	1725.99
837-792F	**18X12**	1	0	083	1099.87
837-794F	**18X14**	1	0	083	1089.40
837-796F	**18X16**	1	0	083	503.14
837-816F	**20X6**	1	0	083	3201.57
837-818F	**20X8**	1	0	083	2960.99
837-820F	**20X10**	1	0	083	2741.03
837-822F	**20X12**	1	0	083	2430.46
837-824F	**20X14**	1	0	083	1998.45
837-826F	**20X16**	1	0	083	1568.04
837-828F	**20X18**	1	0	083	818.56
837-906F	**24X6**	1	0	083	5029.45
837-908F	**24X8**	1	0	083	4876.32
837-910F	**24X10**	1	0	083	4283.33
837-912F	**24X12**	1	0	083	3864.53
837-914F	**24X14**	1	0	083	3619.45
837-916F	**24X16**	1	0	083	3423.78

Reducer Bushing Flush Style (continued)

Spig x Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
837-918F	**24X18**	1	0	083	2967.67
837-920F	**24X20**	1	0	083	2452.61

[1] Sized with Bushing

Reducer Bushing Flush Style

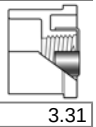
Spig x Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
838-052	**3/8X1/4**	50	450	080	5.28
838-071	**1/2X1/8**	50	600	080	5.28
838-072	**1/2X1/4**	50	350	080	5.28
838-073	**1/2X3/8**	50	500	080	5.28
838-098	**3/4X1/4**	50	600	080	3.49
838-099	**3/4X3/8**	50	600	080	3.49
838-101	**3/4X1/2**	50	300	080	3.49
838-127	**1X1/8**	25	150	080	5.52
838-129	**1X3/8**	50	400	080	5.52
838-130	**1X1/2**	50	300	080	5.52
838-131	**1X3/4**	50	400	080	5.52
838-166	**1-1/4X1/2**	25	300	080	11.21
838-167	**1-1/4X3/4**	25	300	080	11.21
838-168	**1-1/4X1**	25	300	080	11.21
838-206	**1-1/2X1/8**	25	100	080	14.04
838-207	**1-1/2X1/4**	25	200	080	13.34
838-209	**1-1/2X1/2**	25	200	080	14.04
838-210	**1-1/2X3/4**	25	200	080	14.04
838-211	**1-1/2X1**	25	200	080	14.04
838-212	**1-1/2X1-1/4**	25	200	080	14.04
838-247	**2X1/2**	10	60	080	17.18
838-248	**2X3/4**	10	60	080	17.18
838-249	**2X1**	10	120	080	17.18
838-250	**2X1-1/4**	10	120	080	17.18
838-251	**2X1-1/2**	10	120	080	17.18
838-287	**2-1/2X1/2**	10	0	080	36.37
838-288	**2-1/2X3/4**	10	40	080	36.37
838-289	**2-1/2X1**	10	40	080	36.37
838-290	**2-1/2X1-1/4**	10	40	080	36.37
838-291	**2-1/2X1-1/2**	10	0	080	36.37
838-292	**2-1/2X2**	10	40	080	36.37
838-334	**3X3/4**	10	0	080	67.33
838-335	**3X1**	10	0	080	67.33
838-336	**3X1-1/4**	10	0	080	67.33
838-337	**3X1-1/2**	10	0	080	67.33
838-338	**3X2**	10	0	080	67.33
838-339	**3X2-1/2**	10	0	080	67.33
838-419	**4X1-1/2**	6	0	080	130.13
838-420	**4X2**	6	0	080	103.43
838-421	**4X2-1/2**	6	0	080	103.43
838-422	**4X3**	6	0	080	103.43
838-528	**6X2**	5	0	080	119.14
838-530	**6X3**	5	0	080	119.14
838-532	**6X4**	5	0	080	119.14

Special Reinforced Reducer Bushing Flush Style

Spig x SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
838-128SR	**1X1/4**	25	150	086	3.31
838-207SR	**1-1/2X1/4**	25	200	086	8.43
838-166SR	**1-1/4X1/2**	25	100	086	6.04
838-209SR	**1-1/2X1/2**	10	60	086	8.43
838-210SR	**1-1/2X3/4**	25	200	086	8.43
838-247SR	**2X1/2**	10	80	086	10.32
838-248SR	**2X3/4**	10	80	086	10.32
838-249SR	**2X1**	10	80	086	10.32
838-334SR	**3X3/4**	10	0	086	40.38
838-335SR	**3X1**	10	0	086	40.38

Special Reinforced Reducer Bushing Flush Style (continued)

Spig x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
838-336SR	**3X1-1/4**	10	0	086	40.38
838-337SR	**3X1-1/2**	10	0	086	40.38
838-528SR	**6X2**	5	0	086	71.48
838-530SR	**6X3**	5	0	086	64.35
838-532SR	**6X4**	5	0	086	71.48

Cap

Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
847-002	**1/4**	25	450	080	7.60
847-003	**3/8**	25	450	080	7.60
847-005	**1/2**	25	150	080	5.85
847-007	**3/4**	25	300	080	6.17
847-010	**1**	15	90	080	10.96
847-012	**1-1/4**	10	60	080	13.22
847-015	**1-1/2**	10	120	080	13.22
847-020	**2**	10	80	080	26.11
847-025	**2-1/2**	5	40	080	53.31
847-030	**3**	5	0	080	62.38
847-040	**4**	5	0	080	105.19
847-050F	**5**	1	6	083	133.59
847-060	**6**	4	0	080	261.68
847-080	**8**	3	0	080	335.98
847-100F	**10**	1	5	083	343.68
847-120F	**12**	1	4	083	515.79
847-140F	**14**	1	2	083	571.21
847-160F	**16**	1	2	083	740.00
847-180F	**18**	1	0	083	1080.38
847-200F	**20**	1	0	083	1448.29
847-240F	**24**	1	0	083	2694.45

Cap

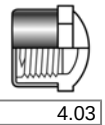
Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
848-002	**1/4**	25	450	080	7.32
848-003	**3/8**	25	450	080	7.32
848-005	**1/2**	25	300	080	7.32
848-007	**3/4**	25	300	080	8.20
848-010	**1**	15	90	080	10.33
848-012	**1-1/4**	10	60	080	12.29
848-015	**1-1/2**	10	120	080	14.04
848-020	**2**	10	40	080	27.59
848-025	**2-1/2**	5	40	080	55.19
848-030	**3**	5	0	080	64.97
848-040	**4**	5	0	080	114.40
848-060F	**6**	1	4	083	190.86
848-080F	**8**	1	3	083	248.39

Special Reinforced Cap

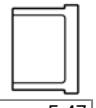
SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
848-002SR	**1/4**	25	500	086	4.03
848-003SR	**3/8**	25	450	086	4.03
848-005SR	**1/2**	50	300	086	4.41
848-007SR	**3/4**	25	300	086	5.65
848-030SR	**3**	5	0	086	34.84

Plug

Spig



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
849-005	**1/2**	50	300	080	5.47
849-007	**3/4**	50	300	080	6.09
849-010	**1**	50	200	080	6.87

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

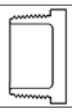
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Plug (continued)
Spig

849-012	**1-1/4**	25	100	080	8.77
849-015	**1-1/2**	10	120	080	9.62
849-020	**2**	10	120	080	12.73
849-025F[4]	**2-1/2**	1	4	083	29.80
849-030F[4]	**3**	1	4	083	35.94
849-040F[4]	**4**	1	4	083	78.61
849-060F[4]	**6**	1	6	083	218.58
849-080F[4]	**8**	1	6	083	284.60
849-100F[4]	**10**	1	2	083	462.79
849-120F[4]	**12**	1	0	083	857.31

[4] Plug fabricated using Cap and pipe spigot.

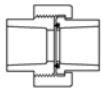
Plug
Mipt



850-002	**1/4**	50	900	080	6.32
850-003	**3/8**	50	600	080	6.32
850-005	**1/2**	50	500	080	5.63
850-007	**3/4**	50	300	080	5.85
850-010	**1**	15	90	080	7.17
850-012	**1-1/4**	10	120	080	10.57
850-015	**1-1/2**	10	120	080	12.85
850-020	**2**	10	120	080	13.20
850-025	**2-1/2**	5	60	080	36.84
850-030	**3**	5	40	080	42.99
850-040	**4**	6	0	080	83.69
850-060	**6**	6	0	080	99.49
850-080F[4]	**8**	1	2	083	245.58
850-100F[4]	**10**	1	3	083	359.93
850-120F[4]	**12**	1	0	083	492.98

[4] Plug fabricated using Cap and threaded pipe.

Union 2000
Soc with FKM O-ring Seal



235 psi Maximum Internal Presure rating @ 73°F (23°C)

857-002	**1/4**	25	150	080	22.91
857-003	**3/8**	25	150	080	22.91
8057-005	**1/2**	20	120	080	12.26
8057-007	**3/4**	20	80	080	15.58
8057-010	**1**	15	90	080	17.77
8057-012	**1-1/4**	10	0	080	35.31
8057-015	**1-1/2**	10	0	080	39.99
8057-020	**2**	5	0	080	54.21
8057-025	**2-1/2**	5	0	080	86.82
8057-030	**3**	5	0	080	100.94
8057-040	**4**	4	0	080	140.59
8057-060	**6**	1	0	080	312.46

Union 2000
Soc with EPDM O-ring Seal



235 psi Maximum Internal Presure rating @ 73°F (23°C)

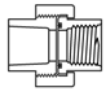
897-002	**1/4**	25	150	080	22.62
897-003	**3/8**	25	150	080	22.62
8097-005	**1/2**	20	120	080	12.08
8097-007	**3/4**	20	80	080	15.38
8097-010	**1**	15	90	080	17.60
8097-012	**1-1/4**	10	0	080	34.89
8097-015	**1-1/2**	10	0	080	39.48
8097-020	**2**	5	0	080	53.57
8097-025	**2-1/2**	5	0	080	85.16
8097-030	**3**	5	0	080	99.68

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Union 2000 (continued)
Soc with EPDM O-ring Seal

8097-040	**4**	4	0	080	137.88
8097-060	**6**	1	0	080	306.41

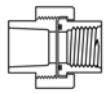
Union 2000
Soc x Fipt with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

859-002	**1/4**	25	150	080	24.67
859-003	**3/8**	25	150	080	24.67
8059-005	**1/2**	20	120	080	14.93
8059-007	**3/4**	20	80	080	20.88
8059-010	**1**	15	90	080	27.77
8059-012	**1-1/4**	10	0	080	53.05
8059-015	**1-1/2**	10	0	080	65.66
8059-020	**2**	5	0	080	101.09
8059-025	**2-1/2**	5	0	080	179.63
8059-030	**3**	5	0	080	238.58
8059-040	**4**	4	0	080	274.19
8059-060	**6**	1	0	080	609.34

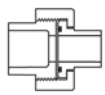
Union 2000
Soc x Fipt with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

899-002	**1/4**	25	150	080	24.38
899-003	**3/8**	25	150	080	24.38
8099-005	**1/2**	20	120	080	14.74
8099-007	**3/4**	20	80	080	20.62
8099-010	**1**	15	90	080	27.42
8099-012	**1-1/4**	10	0	080	52.42
8099-015	**1-1/2**	10	0	080	64.88
8099-020	**2**	5	0	080	99.83
8099-025	**2-1/2**	5	0	080	141.15
8099-030	**3**	5	0	080	235.59
8099-040	**4**	4	0	080	270.51
8099-060	**6**	1	0	080	601.12

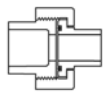
Union 2000
Soc x Spig with FKM O-ring Seal



235 psi Maximum Internal Presure rating @ 73°F (23°C)

8056-005	**1/2**	20	120	080	12.26
8056-007	**3/4**	20	160	080	15.58
8056-010	**1**	15	90	080	17.77
8056-012	**1-1/4**	10	0	080	35.31
8056-015	**1-1/2**	10	0	080	39.99
8056-020	**2**	5	0	080	54.21
8056-025	**2-1/2**	5	0	080	86.82
8056-030	**3**	5	0	080	100.94
8056-040	**4**	4	0	080	140.59
8056-060	**6**	1	0	080	312.46

Union 2000
Soc x Spig with EPDM O-ring Seal



235 psi Maximum Internal Presure rating @ 73°F (23°C)

8096-005	**1/2**	20	160	080	12.08
8096-007	**3/4**	20	80	080	15.38
8096-010	**1**	15	90	080	17.60
8096-012	**1-1/4**	10	0	080	34.89
8096-015	**1-1/2**	10	0	080	39.48
8096-020	**2**	5	0	080	53.57
8096-025	**2-1/2**	5	0	080	85.16
8096-030	**3**	5	0	080	99.68

Union 2000 (continued)
Soc x Spig with EPDM O-ring Seal

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8096-040	**4**	4	0	080	137.88
8096-060	**6**	1	0	080	306.41

Special Reinforced Union 2000
Soc x SR Fipt with FKM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8059-005SR	**1/2**	20	120	086	8.32
8059-007SR	**3/4**	20	80	086	11.45
8059-010SR	**1**	15	90	086	14.88
8059-012SR	**1-1/4**	10	0	086	28.44
8059-015SR	**1-1/2**	10	0	086	35.09
8059-020SR	**2**	5	0	086	53.59
8059-025SR	**2-1/2**	5	0	086	115.19
8059-030SR	**3**	5	0	086	130.95
8059-040SR	**4**	4	0	086	150.35
8059-060SR	**6**	1	0	086	334.11

Special Reinforced Union 2000
Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8099-005SR	**1/2**	20	160	086	8.00
8099-007SR	**3/4**	20	80	086	11.40
8099-010SR	**1**	15	90	086	14.71
8099-012SR	**1-1/4**	10	0	086	25.58
8099-015SR	**1-1/2**	10	0	086	33.15
8099-020SR	**2**	5	0	086	53.35
8099-025SR	**2-1/2**	5	0	086	114.12
8099-030SR	**3**	5	0	086	127.04
8099-040SR	**4**	4	0	086	144.99
8099-060SR	**6**	1	0	086	322.21

Union 2000
Fipt with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
858-002	**1/4**	25	150	080	24.67
858-003	**3/8**	25	150	080	24.67
8058-005	**1/2**	20	120	080	14.21
8058-007	**3/4**	20	80	080	19.91
8058-010	**1**	15	90	080	26.48
8058-012	**1-1/4**	10	0	080	50.53
8058-015	**1-1/2**	10	0	080	62.57
8058-020	**2**	5	0	080	96.26
8058-025	**2-1/2**	5	0	080	162.82
8058-030	**3**	5	0	080	244.18
8058-040	**4**	4	0	080	286.98
8058-060	**6**	1	0	080	637.71

Union 2000
Fipt with EPDM O-ring Seal



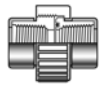
235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
898-002	**1/4**	25	150	080	24.38
898-003	**3/8**	25	150	080	24.38
8098-005	**1/2**	20	240	080	14.04
8098-007	**3/4**	20	80	080	19.64
8098-010	**1**	15	90	080	26.16
8098-012	**1-1/4**	10	0	080	49.89
8098-015	**1-1/2**	10	0	080	61.78
8098-020	**2**	5	0	080	95.06
8098-025	**2-1/2**	5	0	080	127.31
8098-030	**3**	5	0	080	241.16

Union 2000 (continued)
Fipt with EPDM O-ring Seal

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8098-040	**4**	4	0	080	282.05
8098-060	**6**	1	0	080	626.59

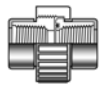
Special Reinforced Union 2000
SR Fipt with FKM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8058-005SR	**1/2**	20	120	086	8.56
8058-007SR	**3/4**	20	80	086	11.59
8058-010SR	**1**	15	90	086	15.51
8058-012SR	**1-1/4**	10	0	086	29.54
8058-015SR	**1-1/2**	10	0	086	36.35
8058-020SR	**2**	5	0	086	56.44
8058-025SR	**2-1/2**	5	0	086	118.02
8058-030SR	**3**	5	0	086	134.25
8058-040SR	**4**	4	0	086	158.04
8058-060SR	**6**	1	0	086	351.19

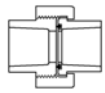
Special Reinforced Union 2000
SR Fipt with EPDM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Presure rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8098-005SR	**1/2**	20	120	086	8.43
8098-007SR	**3/4**	20	80	086	11.48
8098-010SR	**1**	15	90	086	15.20
8098-012SR	**1-1/4**	10	0	086	28.26
8098-015SR	**1-1/2**	10	0	086	35.55
8098-020SR	**2**	5	0	086	55.86
8098-025SR	**2-1/2**	5	0	086	112.75
8098-030SR	**3**	5	0	086	132.97
8098-040SR	**4**	4	0	086	152.65
8098-060SR	**6**	1	0	086	339.26

Union (Old Style)
Soc with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
857-005	**1/2**	15	90	080	12.26
857-007	**3/4**	10	60	080	15.58
857-010	**1**	10	40	080	17.77
857-012	**1-1/4**	5	20	080	35.31
857-015	**1-1/2**	5	0	080	39.99
857-020	**2**	5	0	080	54.21
857-025	**2-1/2**	5	0	080	86.82
857-030	**3**	5	0	080	100.94
857-040	**4**	4	0	080	140.59

Union (Old Style)
Soc with EPDM O-ring Seal

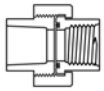


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
897-005	**1/2**	15	90	080	12.08
897-007	**3/4**	10	60	080	15.38
897-010	**1**	10	40	080	17.60
897-012	**1-1/4**	5	20	080	34.89
897-015	**1-1/2**	5	0	080	39.48
897-020	**2**	5	0	080	53.57
897-025	**2-1/2**	5	0	080	85.16
897-030	**3**	5	0	080	99.68
897-040	**4**	4	0	080	137.88

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

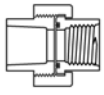
Union (Old Style)
Soc x Fipt with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
859-005	1/2	15	90	080	14.93
859-007	3/4	10	60	080	20.88
859-010	1	10	40	080	27.77
859-012	1-1/4	5	20	080	53.05
859-015	1-1/2	5	0	080	65.66
859-020	2	5	0	080	101.09
859-025	2-1/2	5	0	080	179.63
859-030	3	5	0	080	238.58
859-040	4	4	0	080	274.19

Union (Old Style)
Soc x Fipt with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
899-005	1/2	15	90	080	14.74
899-007	3/4	10	60	080	20.62
899-010	1	10	40	080	27.42
899-012	1-1/4	5	20	080	52.42
899-015	1-1/2	5	0	080	64.88
899-020	2	5	0	080	99.83
899-025	2-1/2	5	0	080	141.15
899-030	3	5	0	080	235.59
899-040	4	4	0	080	270.51

Special Reinforced Union (Old Style)
Soc x SR Fipt with FKM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
859-002SR	1/4	25	150	086	15.32
859-003SR	3/8	25	100	086	15.32
859-005SR	1/2	10	60	086	8.32
859-007SR	3/4	10	40	086	11.45
859-010SR	1	10	40	086	14.88
859-012SR	1-1/4	5	20	086	28.44
859-015SR	1-1/2	5	0	086	35.09
859-020SR	2	5	0	086	53.59
859-030SR	3	5	0	086	130.95
859-040SR	4	4	0	086	150.35

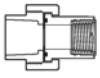
Special Reinforced Union (Old Style)
Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
899-002SR	1/4	25	150	086	15.11
899-003SR	3/8	25	100	086	15.11
899-005SR	1/2	10	60	086	8.00
899-007SR	3/4	10	40	086	11.40
899-010SR	1	10	40	086	14.71
899-012SR	1-1/4	5	20	086	25.58
899-015SR	1-1/2	5	0	086	33.15
899-020SR	2	5	0	086	53.35
899-030SR	3	5	0	086	127.04
899-040SR	4	4	0	086	144.99

Union
Soc x Fipt with Brass Thread Insert & FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

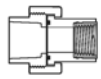
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
859-007BR	3/4	10	40	086	53.19
859-010BR	1	10	0	086	65.64
859-012BR	1-1/4	5	20	086	113.29

Union (continued)
Soc x Fipt with Brass Thread Insert & FKM O-ring Seal

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
859-015BR	1-1/2	5	0	086	149.94
859-020BR	2	5	0	086	199.26

Not intended to convey or dispense water for human consumption through drinking or cooking

Union
Soc x Fipt with Brass Thread Insert & EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
899-007BR	3/4	10	60	086	47.96
899-010BR	1	10	0	086	64.68
899-012BR	1-1/4	5	20	086	108.77
899-015BR	1-1/2	5	0	086	143.96
899-020BR	2	5	0	086	191.89

Not intended to convey or dispense water for human consumption through drinking or cooking

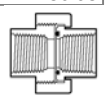
Union (Old Style)
Fipt with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
858-005	1/2	15	90	080	14.21
858-007	3/4	10	60	080	19.91
858-010	1	10	40	080	26.48
858-012	1-1/4	5	20	080	50.53
858-015	1-1/2	5	0	080	62.57
858-020	2	5	0	080	96.26
858-025	2-1/2	5	0	080	162.82
858-030	3	5	0	080	244.18
858-040	4	4	0	080	286.98

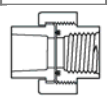
Union (Old Style)
Fipt with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
898-005	1/2	15	90	080	14.04
898-007	3/4	10	60	080	19.64
898-010	1	10	40	080	26.16
898-012	1-1/4	5	20	080	49.89
898-015	1-1/2	5	0	080	61.78
898-020	2	5	0	080	95.06
898-025	2-1/2	5	0	080	127.31
898-030	3	5	0	080	241.16
898-040	4	4	0	080	282.05

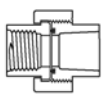
PVC Transition Union
JIS (mm) Soc x ASTM (in.) Fipt with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8298-016	16 DN X 1/2	20	160	197	13.26
8298-020	20 DN X 3/4	20	80	197	18.56
8298-025	25 DN X 1	15	90	197	24.69
8298-030	30 DN X 1-1/4	10	0	197	46.94
8298-040	40 DN X 1-1/2	10	0	197	58.38
8298-050	50 DN X 2	5	0	197	89.84
8298-075	75 DN X 3	5	0	197	212.03
8298-100	100 DN X 4	4	0	197	243.45

PVC Transition Union
BSP Thread (in.) x ASTM (in.) Soc with FKM O-ring Seal



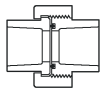
235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8359-005	1/2	20	160	197	13.45
8359-007	3/4	20	80	197	18.80
8359-010	1	15	90	197	25.01

PVC Transition Union (continued)
BSP Thread (in.) x ASTM (in.) Soc with FKM O-ring Seal

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8359-012	**1-1/4**	10	0	197	47.76
8359-015	**1-1/2**	10	0	197	59.12
8359-020	**2**	5	0	197	90.96
8359-030	**3**	5	0	197	214.72
8359-040	**4**	4	0	197	246.77

PVC Transition Union
DIN (mm) Soc x ASTM (in.) Soc with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8657-020	**20 d X 1/2**	10	60	197	11.01
8657-025	**25 d X 3/4**	10	40	197	14.02
8657-032	**32 d X1**	10	40	197	16.00
8657-040	**40 d X 1-1/4**	10	0	197	31.78
8657-050	**50 d X 1-1/2**	10	0	197	35.99
8657-063	**63 d X 2**	5	0	197	48.81
8657-090	**90 d X 3**	5	0	197	90.85
8657-110	**110 d X 4**	4	0	197	126.54

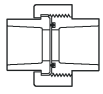
PVC Transition Union
DIN (mm) Soc x ASTM (in.) Fipt with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8658-020	**20 d X 1/2**	10	60	197	13.45
8658-025	**25 d X 3/4**	20	80	197	18.80
8658-032	**32 d X1**	15	90	197	25.01
8658-040	**40 d X 1-1/4**	10	0	197	47.76
8658-050	**50 d X 1-1/2**	10	0	197	59.12
8658-063	**63 d X 2**	5	0	197	90.96
8658-090	**90 d X 3**	5	0	197	214.72
8658-110	**110 d X 4**	4	0	197	246.77

PVC Transition Union
DIN (mm) Soc x ASTM (in.) Soc with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8697-020	**20 d X1/2**	20	240	197	10.87
8697-025	**25 d X 3/4**	10	60	197	13.85
8697-032	**32d X 1**	15	90	197	15.84
8697-040	**40 d X 1-1/4**	10	0	197	31.40
8697-050	**50 d X 1-1/2**	10	0	197	35.55
8697-063	**63 d X 2**	5	0	197	48.21
8697-090	**90 d X 3**	5	0	197	89.72
8697-110	**110 d X 4**	4	0	197	124.08

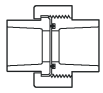
PVC Transition Union
DIN (mm) Soc x ASTM (in.) Fipt with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8698-020	**20 d X 1/2**	20	160	197	13.26
8698-025	**25 d X 3/4**	20	80	197	18.56
8698-032	**32 d X 1**	15	90	197	24.69
8698-040	**40 d X 1-1/4**	10	0	197	46.94
8698-050	**50 d X 1-1/2**	10	0	197	58.38
8698-063	**63 d X 2**	5	0	197	89.84
8698-090	**90 d X 3**	5	0	197	212.03
8698-110	**110 d X 4**	4	0	197	243.45

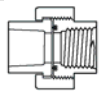
PVC Transition Union
JIS (mm) Soc x ASTM (in.) Soc with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8257-016	**16 DN X 1/2**	20	160	197	11.01
8257-020	**20 DN X 3/4**	10	40	197	14.02
8257-025	**25 DN X1**	15	90	197	16.00
8257-030	**30 DN X 1-1/4**	10	0	197	31.78
8257-040	**40 DN X 1-1/2**	10	0	197	35.99
8257-050	**50 DN X 2**	5	0	197	48.81
8257-075	**75 DN X 3**	5	0	197	90.85
8257-100	**100 DN X 4**	4	0	197	126.54

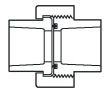
PVC Transition Union
JIS (mm) Soc x ASTM (in.) Fipt with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8258-016	**16 DN X 1/2**	20	160	197	13.45
8258-020	**20 DN X 3/4**	20	80	197	18.80
8258-025	**25 DN X 1**	15	90	197	25.01
8258-030	**30 DN X 1-1/4**	10	0	197	47.76
8258-040	**40 DN X 1-1/2**	10	0	197	59.12
8258-075	**75 DN X 3**	5	0	197	214.72
8258-100	**100 DN X 4**	4	0	197	246.77

PVC Transition Union
JIS (mm) Soc x ASTM (in.) Soc with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8297-016	**16 DN X 1/2**	20	160	197	10.87
8297-020	**20 DN X 3/4**	20	80	197	13.85
8297-025	**25 DN X 1**	15	90	197	15.84
8297-030	**30 DN X 1-1/4**	10	0	197	31.40
8297-040	**40 DN X 1-1/2**	10	0	197	35.55
8297-050	**50 DN X 2**	5	0	197	48.21
8297-075	**75 DN X 3**	5	0	197	89.72
8297-100	**100 DN X 4**	4	0	197	124.08

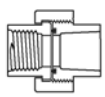
PVC Transition Union
BSP Thread (in.) x ASTM (in.) Fipt with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8358-005	**1/2**	20	160	197	12.82
8358-007	**3/4**	20	80	197	17.91
8358-010	**1**	15	90	197	23.84
8358-012	**1-1/4**	10	0	197	45.48
8358-015	**1-1/2**	10	0	197	56.31
8358-020	**2**	5	0	197	86.64
8358-030	**3**	5	0	197	219.76
8358-040	**4**	4	0	197	258.26

PVC Transition Union
BSP Thread (in.) x ASTM (in.) Soc with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8399-005	**1/2**	10	60	197	13.26
8399-007	**3/4**	20	80	197	18.56
8399-010	**1**	15	90	197	24.69
8399-012	**1-1/4**	10	0	197	47.17
8399-015	**1-1/2**	10	0	197	58.38
8399-020	**2**	5	0	197	89.84
8399-030	**3**	5	0	197	212.03
8399-040	**4**	4	0	197	243.45

PVC Transition Union
BSP Thread (in.) x ASTM (in.) Fipt with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8398-005	**1/2**	10	60	197	12.63
8398-007	**3/4**	10	60	197	17.68

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Transition Union (continued)

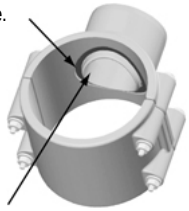
BSP Thread (in.) x ASTM (in.) Fipt with EPDM O-ring Seal

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8398-010	**1**	10	40	197	23.54
8398-012	**1-1/4**	5	20	197	44.92
8398-015	**1-1/2**	5	0	197	55.60
8398-020	**2**	5	0	197	89.33
8398-030	**3**	5	0	197	217.04
8398-040	**4**	4	0	197	253.84

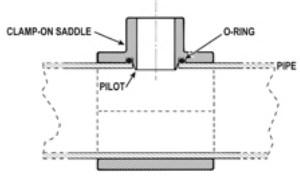
Spears® Two-Piece Clamp-On Saddle Design Clamps onto Pipe for Quick and Easy Installation



O-ring seal provides positive, trouble-free sealing to pipe.

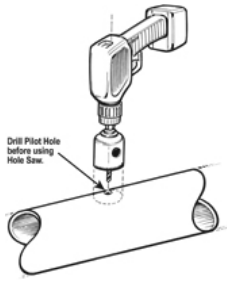


Special pilot engages with hole in pipe to prevent saddle dislocation.



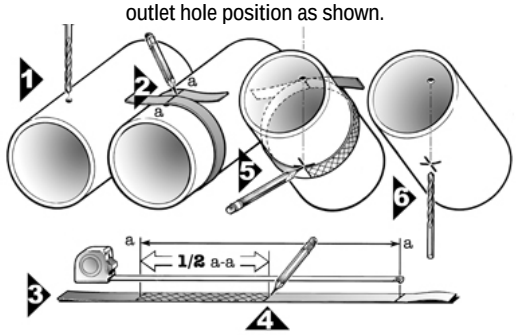
Clamp-On Saddle Installation Instructions

1. Using a standard industrial grade hole-saw, cut specified hole in desired position on pipe according to recommended hole saw size engraved on the saddle. Note: Care must be taken to deburr hole and remove all residue from hole area to assure tight fit and avoid leakage.
2. Fully seat O-ring in groove on underside of saddle outlet component. Position over hole and fully seat saddle onto pipe. Note: Certain saddle outlets are piloted. Be sure pilot lip fully engages with hole in pipe.
3. Place strap component opposite outlet and secure with bolts (4), nuts (4) and washers (8). Important: Washers MUST be placed under each bolt head (1) and under each nut (1) to avoid damage to saddle.
4. Tighten bolts to specified torque.



Saddle Size	2	3	4	6 & up
Recommended Bolt-Torque - ft/lb	8	8	8	10

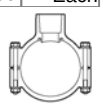
For Double Outlet Saddle Installation — Determine second outlet hole position as shown.



Spears® Hot-Tap Saddles Designed for Adding Branch Connections to Piping Systems Under Live ("Hot") Pressure

Hot-Tap Saddle branch outlets are either 3/4" socket (with 1" Spigot O.D.) or 1-1/2" socket (with 2" Spigot O.D.) in saddle sizes 2" through 6" to fit IPS pipe using a built-in O-ring seal. Internal cutter is operated using conventional ratchet and drive extension and permanently retains coupon cut from pipe. Maximum operating pressure at 73°F (23°C) is 235 psi for saddle sizes 2" - 4", 200 psi for 6" saddles and 150 psi for 8" saddles. See packaged Installation Instructions for details.

PVC Gray Clamp-On Saddle x Soc Single Outlet



with FKM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
866V-247	2X1/2	3/4	1	10	086	34.00
866V-248	2X3/4	7/8	1	10	086	34.00
866V-249	2X1	1-1/8	1	10	086	34.00
866V-250	2X1-1/4	1-1/2	1	10	086	34.00
866V-251	2X1-1/2	1-1/2	1	10	086	34.00
866V-291	2-1/2X1-1/2	1-3/4	1	10	086	47.08
866V-333[1]	3X1/2	7/8	1	10	086	47.08
866V-334	3X3/4	7/8	1	10	086	47.08
866V-335	3X1	1-1/8	1	10	086	47.08
866V-336[1]	3X1-1/4	2-1/4	1	10	086	47.08
866V-337[1]	3X1-1/2	2-1/4	1	10	086	47.08
866V-338	3X2	2-1/4	1	10	086	47.08

PVC Gray Clamp-On Saddle x Soc Single Outlet (continued)

with FKM O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
866V-415[1]	4X1/2	1-1/8	1	10	086	56.44
866V-416[1]	4X3/4	1-1/8	1	10	086	56.44
866V-417	4X1	1-1/8	1	8	086	56.44
866V-418[1]	4X1-1/4	1-3/4	1	8	086	56.44
866V-419	4X1-1/2	1-3/4	1	8	086	56.44
866V-420	4X2	2-1/4	1	8	086	56.44
866V-421[1]	4X2-1/2	3	1	4	086	61.56
866V-422	4X3	3	1	4	086	66.99
866V-523[1]	6X1/2	1-1/8	1	4	086	94.03
866V-524[1]	6X3/4	1-1/8	1	4	086	94.03
866V-525	6X1	1-1/8	1	4	086	94.03
866V-526[1]	6X1-1/4	2-1/4	1	4	086	94.03
866V-527[1]	6X1-1/2	2-1/4	1	4	086	94.03
866V-528	6X2	2-1/4	1	4	086	94.03

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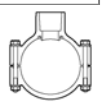
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Gray Clamp-On Saddle x Soc Single Outlet (continued)
with FKM O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
866V-529[1]	6X2-1/2	3	1	4	086	118.31
866V-530	6X3	3	1	4	086	123.18
866V-532	6X4	4	1	4	086	129.73
866V-573[1]	8X1/2	4	1	0	086	201.53
866V-574[1]	8X3/4	4	1	0	086	201.53
866V-575[1]	8X1	4	1	0	086	201.53
866V-576[1]	8X1-1/4	4	1	0	086	201.53
866V-577[1]	8X1-1/2	4	1	0	086	201.53
866V-578[1]	8 X 2	4	1	0	086	201.53
866V-579[1]	8X2-1/2	4	1	0	086	211.42
866V-580[1]	8X3	4	1	0	086	222.07
866V-582	8X4	4	1	0	086	235.40
866V-585	8X6	6	1	0	086	261.28
866V-624	10X4	4	1	0	086	310.83
866V-626	10X6	6	1	0	086	357.43
866V-664	12X4	4	1	0	086	389.80
866V-666	12X6	6	1	0	086	452.06

[1]Outlet-sized with Bushing

PVC Gray Clamp-On Saddle x Soc Single Outlet
with FKM O-ring Seal & SS Hardware



2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
866SV-247	2X1/2	3/4	1	10	086	57.94
866SV-248	2X3/4	7/8	1	10	086	57.94
866SV-249	2X1	1-1/8	1	10	086	57.94
866SV-250	2X1-1/4	1-1/2	1	10	086	57.94
866SV-251	2X1-1/2	1-1/2	1	10	086	57.94
866SV-291	2-1/2X1-1/2	1-3/4	1	10	086	77.66
866SV-333[1]	3X1/2	7/8	1	10	086	77.66
866SV-334	3X3/4	7/8	1	10	086	77.66
866SV-335	3X1	1-1/8	1	10	086	77.66
866SV-336[1]	3X1-1/4	2-1/4	1	10	086	77.66
866SV-337[1]	3X1-1/2	2-1/4	1	10	086	77.66
866SV-338	3X2	2-1/4	1	10	086	77.66
866SV-415[1]	4X1/2	1-1/8	1	10	086	99.93
866SV-416[1]	4X3/4	1-1/8	1	10	086	99.93
866SV-417	4X1	1-1/8	1	8	086	99.93
866SV-418[1]	4X1-1/4	1-3/4	1	8	086	99.93
866SV-419	4X1-1/2	1-3/4	1	8	086	99.93
866SV-420	4X2	2-1/4	1	8	086	99.93
866SV-421[1]	4X2-1/2	3	1	4	086	103.89
866SV-422	4X3	3	1	4	086	109.25
866SV-523[1]	6X1/2	1-1/8	1	4	086	148.08
866SV-524[1]	6X3/4	1-1/8	1	4	086	148.08
866SV-525	6X1	1-1/8	1	4	086	148.08
866SV-526[1]	6X1-1/4	2-1/4	1	4	086	148.08
866SV-527[1]	6X1-1/2	2-1/4	1	4	086	148.08
866SV-528	6X2	2-1/4	1	4	086	148.08
866SV-529[1]	6X2-1/2	3	1	4	086	153.83
866SV-530	6X3	3	1	4	086	159.01
866SV-532	6X4	4	1	4	086	164.43
866SV-573[1]	8X1/2	4	1	0	086	270.41
866SV-574[1]	8X3/4	4	1	0	086	270.41
866SV-575[1]	8 X 1	4	1	0	086	270.41
866SV-576[1]	8X1-1/4	4	1	0	086	270.41
866SV-577[1]	8X1-1/2	4	1	0	086	270.41
866SV-578[1]	8 X 2	4	1	0	086	270.41
866SV-579[1]	8X2-1/2	4	1	0	086	297.42
866SV-580[1]	8X3	4	1	0	086	312.28
866SV-582	8X4	4	1	0	086	331.04
866SV-585	8X6	6	1	0	086	367.42
866SV-624	10X4	4	1	0	086	437.35
866SV-626	10X6	6	1	0	086	502.81

PVC Gray Clamp-On Saddle x Soc Single Outlet (continued)
with FKM O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
866SV-664	12X4	4	1	0	086	548.03
866SV-666	12X6	6	1	0	086	635.77

[1]Outlet-sized with Bushing

PVC Gray Clamp-On Saddle x Soc Single Outlet
with EPDM O-ring Seal & Zinc-Plated Hardware

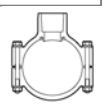


2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
866-247	2X1/2	3/4	1	10	086	32.40
866-248	2X3/4	7/8	1	10	086	32.40
866-249	2X1	1-1/8	1	10	086	32.40
866-250	2X1-1/4	1-1/2	1	10	086	32.40
866-251	2X1-1/2	1-1/2	1	10	086	32.40
866-291	2-1/2X1-1/2	1-3/4	1	10	086	43.26
866-333[1]	3X1/2	7/8	1	10	086	43.26
866-334	3X3/4	7/8	1	10	086	43.26
866-335	3X1	1-1/8	1	10	086	43.26
866-336[1]	3X1-1/4	2-1/4	1	10	086	43.26
866-337[1]	3X1-1/2	2-1/4	1	10	086	43.26
866-338	3X2	2-1/4	1	10	086	43.26
866-415[1]	4X1/2	1-1/8	1	10	086	52.58
866-416[1]	4X3/4	1-1/8	1	10	086	52.58
866-417	4X1	1-1/8	1	10	086	52.58
866-418[1]	4X1-1/4	1-3/4	1	8	086	52.58
866-419	4X1-1/2	1-3/4	1	8	086	52.58
866-420	4X2	2-1/4	1	8	086	52.58
866-421[1]	4X2-1/2	3	1	4	086	57.44
866-422	4X3	3	1	4	086	62.86
866-523[1]	6X1/2	1-1/8	1	4	086	87.64
866-524[1]	6X3/4	1-1/8	1	4	086	87.64
866-525	6X1	1-1/8	1	4	086	87.64
866-526[1]	6X1-1/4	2-1/4	1	4	086	87.64
866-527[1]	6X1-1/2	2-1/4	1	4	086	87.64
866-528	6X2	2-1/4	1	4	086	87.64
866-529[1]	6X2-1/2	3	1	4	086	95.66
866-530	6X3	3	1	4	086	105.19
866-532	6X4	4	1	4	086	109.63
866-573[1]	8X1/2	4	1	0	086	168.58
866-574[1]	8X3/4	4	1	0	086	168.58
866-575[1]	8X1	4	1	0	086	168.58
866-576[1]	8X1-1/4	4	1	0	086	168.58
866-577[1]	8X1-1/2	4	1	0	086	168.58
866-578[1]	8 X 2	4	1	0	086	168.58
866-579[1]	8X2-1/2	4	1	0	086	185.44
866-580[1]	8X3	4	1	0	086	194.73
866-582	8X4	4	1	0	086	206.24
866-585	8X6	6	1	0	086	229.13
866-621[1]	10X2	4	1	0	086	273.17
866-624	10X4	4	1	0	086	273.17
866-626	10X6	6	1	0	086	312.57
866-664	12X4	4	1	0	086	341.62
866-666	12X6	6	1	0	086	395.12

[1]Outlet-sized with Bushing

PVC Gray Clamp-On Saddle x Soc Single Outlet
with EPDM O-ring Seal & SS Hardware



2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
866S-247	2X1/2	3/4	1	10	086	51.91
866S-248	2X3/4	7/8	1	10	086	51.91
866S-249	2X1	1-1/8	1	10	086	51.91
866S-250	2X1-1/4	1-1/2	1	10	086	51.91
866S-251	2X1-1/2	1-1/2	1	10	086	51.91
866S-291	2-1/2X1-1/2	1-3/4	1	10	086	69.78

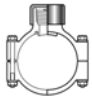
PVC Gray Clamp-On Saddle x Soc Single Outlet (continued)

with EPDM O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
866S-333[1]	3X1/2	7/8	1	10	086	69.78
866S-334	3X3/4	7/8	1	10	086	69.78
866S-335	3X1	1-1/8	1	10	086	69.78
866S-336[1]	3X1-1/4	2-1/4	1	10	086	69.78
866S-337[1]	3X1-1/2	2-1/4	1	10	086	69.78
866S-338	3X2	2-1/4	1	10	086	69.78
866S-415[1]	4X1/2	1-1/8	1	10	086	89.83
866S-416[1]	4X3/4	1-1/8	1	10	086	89.83
866S-417	4X1	1-1/8	1	8	086	89.83
866S-418[1]	4X1-1/4	1-3/4	1	8	086	89.83
866S-419	4X1-1/2	1-3/4	1	8	086	89.83
866S-420	4X2	2-1/4	1	8	086	89.83
866S-421[1]	4X2-1/2	3	1	4	086	93.00
866S-422	4X3	3	1	4	086	98.49
866S-523[1]	6X1/2	1-1/8	1	4	086	135.19
866S-524[1]	6X3/4	1-1/8	1	4	086	135.19
866S-525	6X1	1-1/8	1	4	086	135.19
866S-526[1]	6X1-1/4	2-1/4	1	4	086	135.19
866S-527[1]	6X1-1/2	2-1/4	1	4	086	135.19
866S-528	6X2	2-1/4	1	4	086	135.19
866S-529[1]	6X2-1/2	3	1	4	086	141.61
866S-530	6X3	3	1	4	086	146.44
866S-532	6X4	4	1	4	086	151.92
866S-573[1]	8X1/2	4	1	0	086	254.06
866S-574[1]	8X3/4	4	1	0	086	254.06
866S-575	8X1	4	1	0	086	254.06
866S-576[1]	8X1-1/4	4	1	0	086	254.06
866S-577[1]	8X1-1/2	4	1	0	086	254.06
866S-578[1]	8 X 2	4	1	0	086	254.06
866S-579[1]	8X2-1/2	4	1	0	086	279.53
866S-580[1]	8X3	4	1	0	086	293.55
866S-582	8X4	4	1	0	086	309.79
866S-585	8X6	6	1	0	086	345.40
866S-624	10X4	4	1	0	086	411.13
866S-626	10X6	6	1	0	086	472.69
866S-664	12X4	4	1	0	086	515.36
866S-666	12X6	6	1	0	086	597.76

[1]Outlet-sized with Bushing

PVC Gray Clamp-On Saddle x SR Thread Single Outlet



with FKM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

867V-247SR	2X1/2	3/4	1	10	086	38.02
867V-248SR	2X3/4	7/8	1	10	086	38.02
867V-249SR	2X1	1-1/8	1	10	086	38.02
867V-250SR	2X1-1/4	1-1/2	1	10	086	38.02
867V-251SR	2X1-1/2	1-1/2	1	10	086	38.02
867V-291SR	2-1/2X1-1/2	1-3/4	1	10	086	52.98
867V-333SR[1]	3X1/2	7/8	1	10	086	52.98
867V-334SR	3X3/4	7/8	1	10	086	52.98
867V-335SR	3X1	1-1/8	1	10	086	52.98
867V-336SR[1]	3X1-1/4	2-1/4	1	10	086	52.98
867V-337SR[1]	3X1-1/2	2-1/4	1	10	086	52.98
867V-338SR	3X2	2-1/4	1	10	086	52.98
867V-415SR[1]	4X1/2	1-1/8	1	10	086	66.21
867V-416SR[1]	4X3/4	1-1/8	1	10	086	66.21
867V-417SR	4X1	1-1/8	1	8	086	66.21
867V-418SR[1]	4X1-1/4	1-3/4	1	8	086	66.21
867V-419SR	4X1-1/2	1-3/4	1	8	086	66.21
867V-420SR	4X2	2-1/4	1	8	086	66.21
867V-421SR[1]	4X2-1/2	3	1	4	086	71.31
867V-422SR	4X3	3	1	4	086	75.48
867V-523SR[1]	6X1/2	1-1/8	1	4	086	110.35

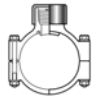
PVC Gray Clamp-On Saddle x SR Thread Single Outlet (continued)

with FKM O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
867V-524SR[1]	6X3/4	1-1/8	1	4	086	110.35
867V-525SR	6X1	1-1/8	1	4	086	110.35
867V-526SR[1]	6X1-1/4	2-1/4	1	4	086	110.35
867V-527SR[1]	6X1-1/2	2-1/4	1	4	086	110.35
867V-528SR	6X2	2-1/4	1	4	086	110.35
867V-529SR[1]	6X2-1/2	3	1	4	086	141.48
867V-530SR	6X3	3	1	4	086	147.03
867V-532SR	6X4	4	1	4	086	153.39
867V-573SR[1]	8X1/2	4	1	0	086	222.42
867V-574SR[1]	8X3/4	4	1	0	086	222.42
867V-575SR[1]	8X1	4	1	0	086	222.42
867V-576SR[1]	8X1-1/4	4	1	0	086	222.42
867V-577SR[1]	8X1-1/2	4	1	0	086	222.42
867V-578SR[1]	8X2	4	1	0	086	222.42
867V-579SR[1]	8X2-1/2	4	1	0	086	244.61
867V-580SR[1]	8X3	4	1	0	086	256.88
867V-582SR	8X4	4	1	0	086	272.31
867V-585SR	8X6	4	1	0	086	303.09
867V-624SR	10X4	4	1	0	086	324.06
867V-626SR	10X6	6	1	0	086	372.60
867V-664SR	12X4	4	1	0	086	406.22
867V-666SR	12X6	6	1	0	086	471.15

[1]Outlet-sized with Bushing

PVC Gray Clamp-On Saddle x SR Thread Single Outlet



with FKM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

867SV-245SR[1]	2X1/4	1-1/8	1	10	086	70.39
867SV-247SR	2X1/2	3/4	1	10	086	64.64
867SV-248SR	2X3/4	7/8	1	10	086	64.64
867SV-249SR	2X1	1-1/8	1	10	086	64.64
867SV-250SR	2X1-1/4	1-1/2	1	10	086	64.64
867SV-251SR	2X1-1/2	1-1/2	1	10	086	64.64
867SV-291SR	2-1/2X1-1/2	1-3/4	1	10	086	86.42
867SV-331SR[1]	3X1/4	1-1/8	1	10	086	86.42
867SV-333SR[1]	3X1/2	7/8	1	10	086	86.42
867SV-334SR	3X3/4	7/8	1	10	086	86.42
867SV-335SR	3X1	1-1/8	1	10	086	86.42
867SV-336SR[1]	3X1-1/4	2-1/4	1	10	086	86.42
867SV-337SR[1]	3X1-1/2	2-1/4	1	10	086	86.42
867SV-338SR	3X2	2-1/4	1	10	086	86.42
867SV-413SR[1]	4X1/4	1-1/8	1	8	086	110.27
867SV-415SR[1]	4X1/2	1-1/8	1	10	086	109.12
867SV-416SR[1]	4X3/4	1-1/8	1	10	086	109.12
867SV-417SR	4X1	1-1/8	1	8	086	109.12
867SV-418SR[1]	4X1-1/4	1-3/4	1	8	086	109.12
867SV-419SR	4X1-1/2	1-3/4	1	8	086	109.12
867SV-420SR	4X2	2-1/4	1	8	086	109.12
867SV-421SR[1]	4X2-1/2	3	1	4	086	112.74
867SV-422SR	4X3	3	1	4	086	118.49
867SV-521SR[1]	6X1/4	1-1/8	1	8	086	163.76
867SV-523SR[1]	6X1/2	1-1/8	1	4	086	160.27
867SV-524SR[1]	6X3/4	1-1/8	1	4	086	160.27
867SV-525SR	6X1	1-1/8	1	4	086	160.27
867SV-526SR[1]	6X1-1/4	2-1/4	1	4	086	160.27
867SV-527SR[1]	6X1-1/2	2-1/4	1	4	086	160.27
867SV-528SR	6X2	2-1/4	1	4	086	160.27
867SV-529SR[1]	6X2-1/2	3	1	4	086	173.64
867SV-530SR	6X3	3	1	4	086	181.65
867SV-532SR	6X4	4	1	4	086	188.06
867SV-571SR[1]	8X1/4	4	1	0	086	297.93
867SV-573SR[1]	8X1/2	4	1	0	086	286.42
867SV-574SR[1]	8X3/4	4	1	0	086	286.42

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Spears® Manufacturing Company
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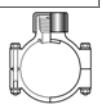
PVC Gray Clamp-On Saddle x SR Thread Single Outlet (continued)

with FKM O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
867SV-575SR[1]	8X1	4	1	0	086	286.42
867SV-576SR[1]	8X1-1/4	4	1	0	086	286.42
867SV-577SR[1]	8X1-1/2	4	1	0	086	286.42
867SV-578SR[1]	8X2	4	1	0	086	286.42
867SV-579SR[1]	8X2-1/2	4	1	0	086	315.05
867SV-580SR[1]	8X3	4	1	0	086	330.80
867SV-582SR	8X4	4	1	0	086	350.65
867SV-585SR	8X6	6	1	0	086	384.27
867SV-624SR	10X4	4	1	0	086	417.13
867SV-626SR	10X6	6	1	0	086	479.95
867SV-664SR	12X4	4	1	0	086	523.11
867SV-666SR	12X6	6	1	0	086	606.72

[1]Outlet-sized with Bushing

PVC Gray Clamp-On Saddle x SR Thread Single Outlet



with EPDM O-ring Seal & Zinc-Plated Hardware

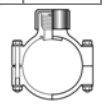
2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

867-247SR	2X1/2	3/4	1	10	086	33.81
867-248SR	2X3/4	7/8	1	10	086	33.81
867-249SR	2X1	1-1/8	1	10	086	33.81
867-250SR	2X1-1/4	1-1/2	1	10	086	33.81
867-251SR	2X1-1/2	1-1/2	1	10	086	33.81
867-291SR	2-1/2X1-1/2	1-3/4	1	10	086	46.20
867-333SR[1]	3X1/2	7/8	1	10	086	46.20
867-334SR	3X3/4	7/8	1	10	086	46.20
867-335SR	3X1	1-1/8	1	10	086	46.20
867-336SR[1]	3X1-1/4	2-1/4	1	10	086	46.20
867-337SR[1]	3X1-1/2	2-1/4	1	10	086	46.20
867-338SR	3X2	2-1/4	1	10	086	46.20
867-415SR[1]	4X1/2	1-1/8	1	10	086	58.21
867-416SR[1]	4X3/4	1-1/8	1	10	086	58.21
867-417SR	4X1	1-1/8	1	8	086	58.21
867-418SR[1]	4X1-1/4	1-3/4	1	8	086	58.21
867-419SR[1]	4X1-1/2	1-3/4	1	8	086	58.21
867-420SR	4X2	2-1/4	1	8	086	58.21
867-421SR[1]	4X2-1/2	3	1	4	086	59.58
867-422SR	4X3	3	1	4	086	68.28
867-523SR[1]	6X1/2	1-1/8	1	4	086	96.99
867-524SR[1]	6X3/4	1-1/8	1	4	086	96.99
867-525SR	6X1	1-1/8	1	4	086	96.99
867-526SR[1]	6X1-1/4	2-1/4	1	4	086	96.99
867-527SR[1]	6X1-1/2	2-1/4	1	4	086	96.99
867-528SR	6X2	2-1/4	1	4	086	96.99
867-529SR[1]	6X2-1/2	3	1	4	086	120.48
867-530SR	6X3	3	1	4	086	129.71
867-532SR	6X4	4	1	4	086	135.82
867-573SR	8X1/2	4	1	0	086	205.29
867-574SR[1]	8X3/4	4	1	0	086	205.29
867-575SR	8X1	4	1	0	086	205.29
867-576SR[1]	8X1-1/4	4	1	0	086	205.29
867-577SR[1]	8X1-1/2	4	1	0	086	205.29
867-578SR[1]	8X2	4	1	0	086	205.29
867-579SR[1]	8X2-1/2	4	1	0	086	225.85
867-580SR[1]	8X3	4	1	0	086	237.04
867-582SR	8X4	4	1	0	086	251.33
867-585SR	8X6	6	1	0	086	289.45
867-624SR	10X4	4	1	0	086	298.97
867-626SR	10X6	4	1	0	086	343.85
867-664SR	12X4	4	1	0	086	374.64
867-666SR	12X6	6	1	0	086	434.85

[1]Outlet-sized with Bushing

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each

PVC Gray Clamp-On Saddle x SR Thread Single Outlet



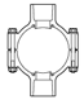
with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

867S-245SR[1]	2X1/4	1-1/8	1	10	086	64.64
867S-247SR	2X1/2	3/4	1	10	086	57.77
867S-248SR	2X3/4	7/8	1	10	086	57.77
867S-249SR	2X1	1-1/8	1	10	086	57.77
867S-250SR	2X1-1/4	1-1/2	1	10	086	57.77
867S-251SR	2X1-1/2	1-1/2	1	10	086	57.77
867S-291SR	2-1/2X1-1/2	1-3/4	1	10	086	77.67
867S-331SR[1]	3X1/4	1-1/8	1	10	086	85.92
867S-333SR[1]	3X1/2	7/8	1	10	086	77.67
867S-334SR	3X3/4	7/8	1	10	086	77.67
867S-335SR	3X1	1-1/8	1	10	086	77.67
867S-336SR[1]	3X1-1/4	2-1/4	1	10	086	77.67
867S-337SR[1]	3X1-1/2	2-1/4	1	10	086	77.67
867S-338SR	3X2	2-1/4	1	10	086	77.67
867S-413SR	4X1/4		1	8	086	101.09
867S-415SR[1]	4X1/2	1-1/8	1	10	086	97.79
867S-416SR[1]	4X3/4	1-1/8	1	10	086	97.79
867S-417SR	4X1	1-1/8	1	8	086	97.79
867S-418SR[1]	4X1-1/4	1-3/4	1	8	086	97.79
867S-419SR	4X1-1/2	1-3/4	1	8	086	97.79
867S-420SR	4X2	2-1/4	1	8	086	97.79
867S-421SR[1]	4X2-1/2	3	1	4	086	102.35
867S-422SR	4X3	3	1	4	086	110.32
867S-521SR[1]	6X1/4	1-1/8	1	8	086	155.12
867S-523SR[1]	6X1/2	1-1/8	1	4	086	141.37
867S-524SR[1]	6X3/4	1-1/8	1	4	086	141.37
867S-525SR	6X1	1-1/8	1	4	086	141.37
867S-526SR[1]	6X1-1/4	2-1/4	1	4	086	141.37
867S-527SR[1]	6X1-1/2	2-1/4	1	4	086	141.37
867S-528SR	6X2	2-1/4	1	4	086	141.37
867S-529SR[1]	6X2-1/2	3	1	4	086	161.38
867S-530SR	6X3	3	1	4	086	166.62
867S-532SR	6X4	4	1	4	086	173.55
867S-571SR[1]	8X1/4	4	1	0	086	306.28
867S-573SR[1]	8X1/2	4	1	0	086	262.14
867S-574SR[1]	8X3/4	4	1	0	086	262.14
867S-575SR[1]	8X1	4	1	0	086	262.14
867S-576SR[1]	8X1-1/4	4	1	0	086	262.14
867S-577SR[1]	8X1-1/2	4	1	0	086	262.14
867S-578SR[1]	8X2	4	1	0	086	262.14
867S-579SR[1]	8X2-1/2	4	1	0	086	292.43
867S-580SR[1]	8X3	4	1	0	086	309.04
867S-582SR	8X4	4	1	0	086	326.49
867S-585SR	8X6	6	1	0	086	342.75
867S-624SR	10X4	4	1	0	086	402.46
867S-626SR	10X6	6	1	0	086	423.16
867S-664SR	12X4	4	1	0	086	461.35
867S-666SR	12X6	6	1	0	086	535.14

[1]Outlet-sized with Bushing

PVC Gray Clamp-On Saddle x Soc Double Outlet



with FKM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

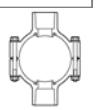
868V-247	2X1/2	3/4	1	10	086	42.13
868V-248	2X3/4	7/8	1	10	086	42.13
868V-249	2X1	1-1/8	1	10	086	42.13
868V-250	2X1-1/4	1-1/2	1	10	086	42.13
868V-251	2X1-1/2	1-1/2	1	10	086	42.13
868V-291	2-1/2X1-1/2	1-3/4	1	10	086	53.97
868V-333[1]	3X1/2	7/8	1	10	086	53.97
868V-334	3X3/4	7/8	1	10	086	53.97

PVC Gray Clamp-On Saddle x Soc Double Outlet (continued)
with FKM O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
868V-335	3X1	1-1/8	1	10	086	53.97
868V-336[1]	3X1-1/4	2-1/4	1	10	086	53.97
868V-337[1]	3X1-1/2	2-1/4	1	10	086	53.97
868V-338	3X2	2-1/4	1	10	086	53.97
868V-415[1]	4X1/2	1-1/8	1	10	086	72.05
868V-416[1]	4X3/4	1-1/8	1	10	086	72.05
868V-417	4X1	1-1/8	1	8	086	72.05
868V-418[1]	4X1-1/4	1-3/4	1	8	086	72.05
868V-419	4X1-1/2	1-3/4	1	8	086	72.05
868V-420	4X2	2-1/4	1	8	086	72.05
868V-421[1]	4X2-1/2	3	1	4	086	78.32
868V-422	4X3	3	1	4	086	84.43
868V-523[1]	6X1/2	1-1/8	1	4	086	118.29
868V-524[1]	6X3/4	1-1/8	1	4	086	118.29
868V-525	6X1	1-1/8	1	4	086	118.29
868V-526[1]	6X1-1/4	2-1/4	1	4	086	118.29
868V-527[1]	6X1-1/2	2-1/4	1	4	086	118.29
868V-528	6X2	2-1/4	1	4	086	118.29
868V-529[1]	6X2-1/2	3	1	4	086	122.82
868V-530	6X3	3	1	4	086	129.54
868V-532	6X4	4	1	4	086	138.45
868V-573[1]	8X1/2	4	1	0	086	248.75
868V-574[1]	8X3/4	4	1	0	086	248.75
868V-575[1]	8X1	4	1	0	086	248.75
868V-576[1]	8X1-1/4	4	1	0	086	248.75
868V-577[1]	8X1-1/2	4	1	0	086	248.75
868V-578[1]	8X2	4	1	0	086	248.75
868V-579[1]	8X2-1/2	4	1	0	086	260.94
868V-580[1]	8X3	4	1	0	086	274.19
868V-582	8X4	4	1	0	086	290.55
868V-585	8X6	6	1	0	086	322.52
868V-624	10X4	4	1	0	086	383.85
868V-626	10X6	6	1	0	086	405.08
868V-664	12X4	4	1	0	086	481.15
868V-666	12X6	6	1	0	086	558.02

[1]Outlet-sized with Bushing

PVC Gray Clamp-On Saddle x Soc Double Outlet
with FKM O-ring Seal & SS Hardware



2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

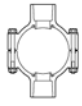
Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
868SV-247	2X1/2	3/4	1	10	086	67.76
868SV-248	2X3/4	7/8	1	10	086	67.76
868SV-249	2X1	1-1/8	1	10	086	67.76
868SV-250	2X1-1/4	1-1/2	1	10	086	67.76
868SV-251	2X1-1/2	1-1/2	1	10	086	67.76
868SV-291	2-1/2X1-1/2	1-3/4	1	10	086	90.04
868SV-333[1]	3X1/2	7/8	1	10	086	90.04
868SV-334	3X3/4	7/8	1	10	086	90.04
868SV-335	3X1	1-1/8	1	10	086	90.04
868SV-336[1]	3X1-1/4	2-1/4	1	10	086	90.04
868SV-337[1]	3X1-1/2	2-1/4	1	10	086	90.04
868SV-338	3X2	2-1/4	1	10	086	90.04
868SV-415[1]	4X1/2	1-18	1	10	086	115.29
868SV-416[1]	4X3/4	1-1/8	1	10	086	115.29
868SV-417	4X1	1-1/8	1	8	086	115.29
868SV-418[1]	4X1-1/4	1-3/4	1	8	086	115.29
868SV-419	4X1-1/2	1-3/4	1	8	086	115.29
868SV-420	4X2	2-1/4	1	16	086	115.29
868SV-421[1]	4X2-1/2	3	1	4	086	123.80
868SV-422	4X3	3	1	4	086	128.94
868SV-523[1]	6X1/2	1-1/8	1	4	086	178.60
868SV-524[1]	6X3/4	1-1/8	1	4	086	178.60
868SV-525	6X1	1-1/8	1	4	086	178.60

PVC Gray Clamp-On Saddle x Soc Double Outlet (continued)
with FKM O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
868SV-526[1]	6X1-1/4	2-1/4	1	4	086	178.60
868SV-527[1]	6X1-1/2	2-1/4	1	4	086	178.60
868SV-528	6X2	2-1/4	1	4	086	178.60
868SV-529[1]	6X2-1/2	3	1	4	086	189.31
868SV-530	6X3	3	1	4	086	194.56
868SV-532	6X4	4	1	4	086	200.22
868SV-573[1]	8X1/2	4	1	0	086	333.88
868SV-574[1]	8X3/4	4	1	0	086	333.88
868SV-575[1]	8X1	4	1	0	086	333.88
868SV-576[1]	8X1-1/4	4	1	0	086	333.88
868SV-577[1]	8X1-1/2	4	1	0	086	333.88
868SV-578[1]	8X2	4	1	0	086	333.88
868SV-579[1]	8X2-1/2	4	1	0	086	367.26
868SV-580[1]	8X3	4	1	0	086	385.59
868SV-582	8X4	4	1	0	086	387.46
868SV-585	8X6	6	1	0	086	453.61
868SV-624	10X4	4	1	0	086	539.79
868SV-626	10X6	6	1	0	086	620.81
868SV-664	12X4	4	1	0	086	676.63
868SV-666	12X6	6	1	0	086	784.92

[1]Outlet-sized with Bushing

PVC Gray Clamp-On Saddle x Soc Double Outlet
with EPDM O-ring Seal & Zinc-Plated Hardware



2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
868-247	2X1/2	3/4	1	10	086	38.56
868-248	2X3/4	7/8	1	10	086	38.56
868-249	2X1	1-1/8	1	10	086	38.56
868-250	2X1-1/4	1-1/2	1	10	086	38.56
868-251	2X1-1/2	1-1/2	1	10	086	38.56
868-291	2-1/2X1-1/2	1-3/4	1	10	086	52.99
868-333[1]	3X1/2	7/8	1	10	086	52.99
868-334	3X3/4	7/8	1	10	086	52.99
868-335	3X1	1-1/8	1	10	086	52.99
868-336[1]	3X1-1/4	2-1/4	1	10	086	52.99
868-337[1]	3X1-1/2	2-1/4	1	10	086	52.99
868-338	3X2	2-1/4	1	10	086	52.99
868-415[1]	4X1/2	1-1/8	1	10	086	66.85
868-416[1]	4X3/4	1-1/8	1	10	086	66.85
868-417	4X1	1-1/8	1	8	086	66.85
868-418[1]	4X1-1/4	1-3/4	1	8	086	66.85
868-419	4X1-1/2	1-3/4	1	8	086	66.85
868-420	4X2	2-1/4	1	8	086	66.85
868-421[1]	4X2-1/2	3	1	4	086	71.79
868-422	4X3	3	1	4	086	75.97
868-523[1]	6X1/2	1-1/8	1	4	086	111.67
868-524[1]	6X3/4	1-1/8	1	4	086	111.67
868-525	6X1	1-1/8	1	4	086	111.67
868-526[1]	6X1-1/4	2-1/4	1	4	086	111.67
868-527[1]	6X1-1/2	2-1/4	1	4	086	111.67
868-528	6X2	2-1/4	1	4	086	111.67
868-529[1]	6X2-1/2	3	1	4	086	118.02
868-530	6X3	3	1	4	086	124.73
868-532	6X4	4	1	4	086	129.72
868-573[1]	8X1/2	4	1	0	086	208.83
868-574[1]	8X3/4	4	1	0	086	208.83
868-575[1]	8X1	4	1	0	086	208.83
868-576[1]	8X1-1/4	4	1	0	086	208.83
868-577[1]	8X1-1/2	4	1	0	086	208.83
868-578[1]	8X2	4	1	0	086	208.83
868-579[1]	8X2-1/2	4	1	0	086	228.96
868-580[1]	8X3	4	1	0	086	240.31
868-582	8X4	4	1	0	086	254.57

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Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each

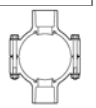
PVC Gray Clamp-On Saddle x Soc Double Outlet (continued)

with EPDM O-ring Seal & Zinc-Plated Hardware

868-585	8X6	6	1	0	086	282.79
868-624	10X4	4	1	0	086	336.46
868-626	10X6	6	1	0	086	387.04
868-664	12X4	4	1	0	086	421.77
868-666	12X6	6	1	0	086	489.22

[1]Outlet-sized with Bushing

PVC Gray Clamp-On Saddle x Soc Double Outlet



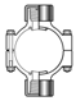
with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

868S-247	2X1/2	3/4	1	10	086	58.78
868S-248	2X3/4	7/8	1	10	086	58.78
868S-249	2X1	1-1/8	1	10	086	58.78
868S-250	2X1-1/4	1-1/2	1	10	086	58.78
868S-251	2X1-1/2	1-1/2	1	10	086	58.78
868S-291	2-1/2X1-1/2	1-3/4	1	10	086	78.99
868S-333[1]	3X1/2	7/8	1	10	086	78.99
868S-334	3X3/4	7/8	1	10	086	78.99
868S-335	3X1	1-1/8	1	10	086	78.99
868S-336[1]	3X1-1/4	2-1/4	1	10	086	78.99
868S-337[1]	3X1-1/2	2-1/4	1	10	086	78.99
868S-338	3X2	2-1/4	1	10	086	78.99
868S-415[1]	4X1/2	1-1/8	1	10	086	101.72
868S-416[1]	4X3/4	1-1/8	1	10	086	101.72
868S-417	4X1	1-1/8	1	8	086	101.72
868S-418[1]	4X1-1/4	1-3/4	1	8	086	101.72
868S-419	4X1-1/2	1-3/4	1	8	086	101.72
868S-420	4X2	2-1/4	1	8	086	101.72
868S-421[1]	4X2-1/2	3	1	4	086	110.38
868S-422	4X3	3	1	4	086	113.34
868S-523[1]	6X1/2	1-1/8	1	4	086	169.52
868S-524[1]	6X3/4	1-1/8	1	4	086	169.52
868S-525	6X1	1-1/8	1	4	086	169.52
868S-526[1]	6X1-1/4	2-1/4	1	4	086	169.52
868S-527[1]	6X1-1/2	2-1/4	1	4	086	169.52
868S-528	6X2	2-1/4	1	4	086	169.52
868S-529[1]	6X2-1/2	3	1	4	086	175.26
868S-530	6X3	3	1	4	086	182.38
868S-532	6X4	4	1	4	086	189.64
868S-573[1]	8X1/2	4	1	0	086	313.58
868S-574[1]	8X3/4	4	1	0	086	313.58
868S-575[1]	8X1	4	1	0	086	313.58
868S-576[1]	8X1-1/4	4	1	0	086	313.58
868S-577[1]	8X1-1/2	4	1	0	086	313.58
868S-578[1]	8X2	4	1	0	086	313.58
868S-579[1]	8X2-1/2	4	1	0	086	345.07
868S-580[1]	8X3	4	1	0	086	362.43
868S-582	8X4	4	1	0	086	382.40
868S-585	8X6	6	1	0	086	456.13
868S-624	10X4	4	1	0	086	507.46
868S-626	10X6	6	1	0	086	583.57
868S-664	12X4	4	1	0	086	636.13
868S-666	12X6	6	1	0	086	737.78

[1]Outlet-sized with Bushing

PVC Gray Clamp-On Saddle x SR Thread Double Outlet



with FKM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

869V-247SR	2X1/2	3/4	1	10	086	46.88
869V-248SR	2X3/4	7/8	1	10	086	46.88
869V-249SR	2X1	1-1/8	1	10	086	46.88
869V-250SR	2X1-1/4	1-1/2	1	10	086	46.88

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each

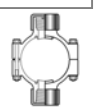
PVC Gray Clamp-On Saddle x SR Thread Double Outlet (continued)

with FKM O-ring Seal & Zinc-Plated Hardware

869V-251SR	2X1-1/2	1-1/2	1	10	086	46.88
869V-291SR	2-1/2X1-1/2	1-3/4	1	10	086	64.45
869V-333SR[1]	3X1/2	7/8	1	10	086	64.45
869V-334SR	3X3/4	7/8	1	10	086	64.45
869V-335SR	3X1	1-1/8	1	10	086	64.45
869V-336SR[1]	3X1-1/4	2-1/4	1	10	086	64.45
869V-337SR[1]	3X1-1/2	2-1/4	1	10	086	64.45
869V-338SR	3X2	2-1/4	1	10	086	64.45
869V-415SR[1]	4X1/2	1-1/8	1	10	086	80.04
869V-416SR[1]	4X3/4	1-1/8	1	10	086	80.04
869V-417SR	4X1	1-1/8	1	8	086	80.04
869V-418SR[1]	4X1-1/4	1-3/4	1	8	086	80.04
869V-419SR	4X1-1/2	1-3/4	1	8	086	80.04
869V-420SR	4X2	2-1/4	1	8	086	80.04
869V-421SR[1]	4X2-1/2	3	1	4	086	86.04
869V-422SR	4X3	3	1	4	086	90.91
869V-523SR[1]	6X1/2	1-1/8	1	4	086	135.56
869V-524SR[1]	6X3/4	1-1/8	1	4	086	135.56
869V-525SR	6X1	1-1/8	1	4	086	135.56
869V-526SR[1]	6X1-1/4	2-1/4	1	4	086	135.56
869V-527SR[1]	6X1-1/2	2-1/4	1	4	086	135.56
869V-528SR	6X2	2-1/4	1	4	086	135.56
869V-529SR[1]	6X2-1/2	3	1	4	086	163.75
869V-530SR	6X3	3	1	4	086	173.05
869V-532SR	6X4	4	1	4	086	181.78
869V-573SR[1]	8X1/2	4	1	0	086	274.53
869V-574SR[1]	8X3/4	4	1	0	086	274.53
869V-575SR[1]	8X1	4	1	0	086	274.53
869V-576SR[1]	8X1-1/4	4	1	0	086	274.53
869V-577SR[1]	8X1-1/2	4	1	0	086	274.53
869V-578SR[1]	8X2	4	1	0	086	274.53
869V-579SR[1]	8X2-1/2	4	1	0	086	302.06
869V-580SR[1]	8X3	4	1	0	086	317.20
869V-582SR	8X4	4	1	0	086	336.29
869V-585SR	8X6	6	1	0	086	391.45
869V-624SR	10X4	4	1	0	086	400.12
869V-626SR	10X6	6	1	0	086	460.13
869V-664SR	12X4	4	1	0	086	501.58
869V-666SR	12X6	6	1	0	086	583.64

[1]Outlet-sized with Bushing

PVC Gray Clamp-On Saddle x SR Thread Double Outlet



with FKM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

869SV-247SR	2X1/2	3/4	1	10	086	75.37
869SV-248SR	2X3/4	7/8	1	10	086	75.37
869SV-249SR	2X1	1-1/8	1	10	086	75.37
869SV-250SR	2X1-1/4	1-1/2	1	10	086	75.37
869SV-251SR	2X1-1/2	1-1/2	1	10	086	75.37
869SV-291SR	2-1/2X1-1/2	1-3/4	1	10	086	99.99
869SV-333SR[1]	3X1/2	7/8	1	10	086	99.99
869SV-335SR	3X1	1-1/8	1	10	086	99.99
869SV-334SR	3X3/4	7/8	1	10	086	99.99
869SV-336SR[1]	3X1-1/4	2-1/4	1	10	086	99.99
869SV-337SR[1]	3X1-1/2	2-1/4	1	10	086	99.99
869SV-338SR	3X2	2-1/4	1	10	086	99.99
869SV-415SR[1]	4X1/2	1-1/8	1	10	086	125.72
869SV-416SR[1]	4X3/4	1-1/8	1	10	086	125.72
869SV-417SR	4X1	1-1/8	1	8	086	125.72
869SV-418SR[1]	4X1-1/4	1-3/4	1	8	086	125.72
869SV-419SR	4X1-1/2	1-3/4	1	8	086	125.72
869SV-420SR	4X2	2-1/4	1	8	086	125.72
869SV-421SR[1]	4X2-1/2	3	1	4	086	132.40

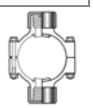
PVC Gray Clamp-On Saddle x SR Thread Double Outlet (continued)

with FKM O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
869SV-422SR	4X3	3	1	4	086	139.16
869SV-523SR[1]	6X1/2	1-1/8	1	4	086	209.45
869SV-524SR[1]	6X3/4	1-1/8	1	4	086	209.45
869SV-525SR	6X1	1-1/8	1	4	086	209.45
869SV-526SR[1]	6X1-1/4	2-1/4	1	4	086	209.45
869SV-527SR[1]	6X1-1/2	2-1/4	1	4	086	209.45
869SV-528SR	6X2	2-1/4	1	4	086	209.45
869SV-529SR[1]	6X2-1/2	3	1	4	086	224.25
869SV-530SR	6X3	3	1	4	086	238.53
869SV-532SR	6X4	4	1	4	086	244.73
869SV-573SR[1]	8X1/2	4	1	0	086	353.66
869SV-574SR[1]	8X3/4	4	1	0	086	353.66
869SV-575SR[1]	8X1	4	1	0	086	353.66
869SV-576SR[1]	8X1-1/4	4	1	0	086	353.66
869SV-577SR[1]	8X1-1/2	4	1	0	086	353.66
869SV-578SR[1]	8X2	4	1	0	086	353.66
869SV-579SR[1]	8X2-1/2	4	1	0	086	388.93
869SV-580SR[1]	8X3	4	1	0	086	408.37
869SV-582SR	8X4	4	1	0	086	432.97
869SV-585SR	8X6	6	1	0	086	472.79
869SV-624SR	10X4	4	1	0	086	515.19
869SV-626SR	10X6	4	1	0	086	592.51
869SV-664SR	12X4	4	1	0	086	645.74
869SV-666SR	12X6	6	1	0	086	749.14

[1]Outlet-sized with Bushing

PVC Gray Clamp-On Saddle x SR Thread Double Outlet



with EPDM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
869-247SR	2X1/2	3/4	1	10	086	42.00
869-248SR	2X3/4	7/8	1	10	086	42.00
869-249SR	2X1	1-1/8	1	10	086	42.00
869-250SR	2X1-1/4	1-1/2	1	10	086	42.00
869-251SR	2X1-1/2	1-1/2	1	10	086	42.00
869-291SR	2-1/2X1-1/2	1-3/4	1	10	086	56.56
869-333SR[1]	3X1/2	7/8	1	10	086	56.56
869-334SR	3X3/4	7/8	1	10	086	56.56
869-335SR	3X1	1-1/8	1	10	086	56.56
869-336SR[1]	3X1-1/4	1-1/8	1	10	086	56.56
869-337SR[1]	3X1-1/2	2-1/4	1	10	086	56.56
869-338SR	3X2	2-1/4	1	10	086	56.56
869-415SR[1]	4X1/2	1-1/8	1	10	086	70.72
869-416SR[1]	4X3/4	1-1/8	1	10	086	70.72
869-417SR	4X1	1-1/8	1	8	086	70.72
869-418SR[1]	4X1-1/4	1-3/4	1	8	086	70.72
869-419SR	4X1-1/2	1-3/4	1	8	086	70.72
869-420SR	4X2	2-1/4	1	8	086	70.72
869-421SR[1]	4X2-1/2	3	1	4	086	77.34
869-422SR	4X3	3	1	4	086	82.09
869-523SR[1]	6X1/2	1-1/8	1	4	086	117.85
869-524SR[1]	6X3/4	1-1/8	1	4	086	117.85
869-525SR	6X1	1-1/8	1	4	086	117.85
869-526SR[1]	6X1-1/4	2-1/4	1	4	086	117.85
869-527SR[1]	6X1-1/2	2-1/4	1	4	086	117.85
869-528SR	6X2	2-1/4	1	4	086	117.85
869-529SR[1]	6X2-1/2	3	1	4	086	146.16
869-530SR	6X3	3	1	4	086	154.78
869-532SR	6X4	4	1	4	086	172.47
869-573SR[1]	8X1/2	4	1	0	086	253.38
869-574SR[1]	8X3/4	4	1	0	086	253.38
869-575SR[1]	8X1	4	1	0	086	253.38
869-576SR[1]	8X1-1/4	4	1	0	086	253.38
869-577SR[1]	8X1-1/2	4	1	0	086	253.38

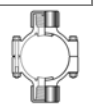
PVC Gray Clamp-On Saddle x SR Thread Double Outlet (continued)

with EPDM O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
869-578SR[1]	8X2	4	1	0	086	253.38
869-579SR[1]	8X2-1/2	4	1	0	086	278.84
869-580SR[1]	8X3	4	1	0	086	292.43
869-582SR	8X4	4	1	0	086	310.14
869-585SR	8X6	6	1	0	086	350.38
869-624SR	10X4	4	1	0	086	368.96
869-626SR	10X6	6	1	0	086	424.37
869-664SR	12X4	4	1	0	086	462.73
869-666SR	12X6	6	1	0	086	536.71

[1]Outlet-sized with Bushing

PVC Gray Clamp-On Saddle x SR Thread Double Outlet



with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
869S-247SR	2X1/2	3/4	1	10	086	67.59
869S-248SR	2X3/4	7/8	1	10	086	67.59
869S-249SR	2X1	1-1/8	1	10	086	67.59
869S-250SR	2X1-1/4	1-1/2	1	10	086	67.59
869S-251SR	2X1-1/2	1-1/2	1	10	086	67.59
869S-291SR	2-1/2X1-1/2	1-3/4	1	10	086	90.11
869S-333SR[1]	3X1/2	7/8	1	10	086	90.11
869S-334SR	3X3/4	7/8	1	10	086	90.11
869S-335SR	3X1	1-1/8	1	10	086	90.11
869S-336SR[1]	3X1-1/4	2-1/4	1	10	086	90.11
869S-337SR[1]	3X1-1/2	2-1/4	1	10	086	90.11
869S-338SR	3X2	2-1/4	1	10	086	90.11
869S-415SR[1]	4X1/2	1-1/8	1	10	086	112.88
869S-416SR[1]	4X3/4	1-1/8	1	10	086	112.88
869S-417SR	4X1	1-1/8	1	8	086	112.88
869S-418SR[1]	4X1-1/4	1-3/4	1	8	086	112.88
869S-419SR	4X1-1/2	1-3/4	1	8	086	112.88
869S-420SR	4X2	2-1/4	1	8	086	112.88
869S-421SR[1]	4X2-1/2	3	1	4	086	120.59
869S-422SR	4X3	3	1	4	086	125.99
869S-523SR[1]	6X1/2	1-1/8	1	4	086	188.06
869S-524SR[1]	6X3/4	1-1/8	1	4	086	188.06
869S-525SR	6X1	1-1/8	1	4	086	188.06
869S-526SR[1]	6X1-1/4	2-1/4	1	4	086	188.06
869S-527SR[1]	6X1-1/2	2-1/4	1	4	086	188.06
869S-528SR	6X2	2-1/4	1	4	086	188.06
869S-529SR[1]	6X2-1/2	3	1	4	086	197.35
869S-530SR	6X3	3	1	4	086	205.45
869S-532SR	6X4	4	1	4	086	211.97
869S-573SR[1]	8X1/2	4	1	0	086	323.65
869S-574SR[1]	8X3/4	4	1	0	086	323.65
869S-575SR[1]	8X1	4	1	0	086	323.65
869S-576SR[1]	8X1-1/4	4	1	0	086	323.65
869S-577SR[1]	8X1-1/2	4	1	0	086	323.65
869S-578SR[1]	8X2	4	1	0	086	323.65
869S-579SR[1]	8X2-1/2	4	1	0	086	339.73
869S-580SR[1]	8X3	4	1	0	086	360.21
869S-582SR	8X4	4	1	0	086	381.88
869S-585SR	8X6	6	1	0	086	419.20
869S-624SR	10X4	4	1	0	086	368.96
869S-626SR	10X6	6	1	0	086	522.60
869S-664SR	12X4	4	1	0	086	569.72
869S-666SR	12X6	6	1	0	086	660.80

[1]Outlet-sized with Bushing

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Gray Hot-Tap Saddle
EPDM Saddle x Soc (Spigot) Zinc Plated Bolts



2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HT2-248	**2X3/4 (1)**	1	5	049	51.19
HT2-251	**2X1-1/2 (2)**	1	5	049	105.76
HT2-288	**2-1/2X3/4 (1)**	1	5	049	54.71
HT2-291	**2-1/2X1-1/2 (2)**	1	5	049	109.28
HT2-334	**3X3/4 (1)**	1	5	049	62.65
HT2-337	**3X1-1/2 (2)**	1	5	049	120.45
HT2-416	**4X3/4 (1)**	1	5	049	72.36
HT2-419	**4X1-1/2 (2)**	1	0	049	127.36
HT2-524	**6X3/4 (1)**	1	5	049	81.34
HT2-527	**6X1-1/2 (2)**	1	0	049	135.60
HT2-574	**8X3/4 (1)**	1	0	049	90.01
HT2-577	**8X1-1/2 (2)**	1	0	049	144.58

PVC Gray Hot-Tap Saddle
EPDM Saddle x Soc (Spigot) SS316 Bolts



2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HT2S-248	**2X3/4 (1)**	1	5	049	79.71
HT2S-251	**2X1-1/2 (2)**	1	5	049	164.57
HT2S-288	**2-1/2X3/4 (1)**	1	5	049	85.15
HT2S-291	**2-1/2X1-1/2 (2)**	1	5	049	170.01
HT2S-334	**3X3/4 (1)**	1	5	049	97.53
HT2S-337	**3X1-1/2 (2)**	1	5	049	187.53
HT2S-416	**4X3/4 (1)**	1	5	049	112.66
HT2S-419	**4X1-1/2 (2)**	1	0	049	198.25
HT2S-524	**6X3/4 (1)**	1	5	049	126.49
HT2S-527	**6X1-1/2 (2)**	1	0	049	210.89
HT2S-574	**8X3/4 (1)**	1	0	049	139.42
HT2S-577	**8X1-1/2 (2)**	1	0	049	224.14

PVC Gray Hot-Tap Saddle
FKM Saddle x Soc (Spigot) Zinc Plated Bolts



2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HT3-248	**2X3/4 (1)**	1	5	049	55.60
HT3-251	**2X1-1/2 (2)**	1	5	049	114.73
HT3-288	**2-1/2X3/4 (1)**	1	5	049	59.42
HT3-291	**2-1/2X1-1/2 (2)**	1	5	049	118.55
HT3-334	**3X3/4 (1)**	1	5	049	67.94
HT3-337	**3X1-1/2 (2)**	1	5	049	130.89
HT3-416	**4X3/4 (1)**	1	5	049	78.54
HT3-419	**4X1-1/2 (2)**	1	0	049	136.54
HT3-524	**6X3/4 (1)**	1	5	049	88.25
HT3-527	**6X1-1/2 (2)**	1	0	049	146.78
HT3-574	**8X3/4 (1)**	1	0	049	98.09
HT3-577	**8X1-1/2 (2)**	1	0	049	173.83

PVC Gray Hot-Tap Saddle
FKM Saddle x Soc (Spigot) SS316 Bolts



2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HT3S-248	**2X3/4 (1)**	1	5	049	86.47
HT3S-251	**2X1-1/2 (2)**	1	5	049	178.56
HT3S-288	**2-1/2X3/4 (1)**	1	5	049	92.65
HT3S-291	**2-1/2X1-1/2 (2)**	1	5	049	184.57
HT3S-334	**3X3/4 (1)**	1	5	049	105.76
HT3S-337	**3X1-1/2 (2)**	1	5	049	203.69
HT3S-416	**4X3/4 (1)**	1	5	049	122.07
HT3S-419	**4X1-1/2 (2)**	1	0	049	215.17
HT3S-524	**6X3/4 (1)**	1	5	049	137.37
HT3S-527	**6X1-1/2 (2)**	1	0	049	228.57
HT3S-574	**8X3/4 (1)**	1	0	049	151.93

PVC Gray Hot-Tap Saddle (continued)
FKM Saddle x Soc (Spigot) SS316 Bolts

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HT3S-577	**8X1-1/2 (2)**	1	0	049	242.26

PVC Gray Hot-Tap Saddle
EPDM with Stainless Steel Cutter & Bolts



2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HTS2S-248	**2X3/4 (1)**	1	5	049	381.86
HTS2S-251	**2X1-1/2 (2)**	1	5	049	575.51
HTS2S-288	**2-1/2X3/4 (1)**	1	5	049	408.59
HTS2S-291	**2-1/2X1-1/2 (2)**	1	5	049	577.61
HTS2S-334	**3X3/4 (1)**	1	5	049	386.73
HTS2S-337	**3X1-1/2 (2)**	1	5	049	586.62
HTS2S-416	**4X3/4 (1)**	1	5	049	418.89
HTS2S-419	**4X1-1/2 (2)**	1	0	049	603.47
HTS2S-524	**6X3/4 (1))**	1	5	049	462.78
HTS2S-527	**6X1-1/2 (2)**	1	0	049	663.61
HTS2S-574	**8X3/4 (1)**	1	0	049	660.20
HTS2S-577	**8X1-1/2 (2)**	1	0	049	784.00

PVC Gray Hot-Tap Saddle
FKM with Stainless Steel Cutter & Bolts



2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HTS3S-248	**2X3/4 (1)**	1	5	049	387.91
HTS3S-251	**2X1-1/2 (2)**	1	5	049	586.21
HTS3S-288	**2-1/2X3/4 (1)**	1	5	049	415.09
HTS3S-291	**2-1/2X1-1/2 (2)**	1	5	049	588.25
HTS3S-334	**3X3/4 (1)**	1	5	049	391.44
HTS3S-337	**3X1-1/2 (2)**	1	5	049	600.25
HTS3S-416	**4X3/4 (1)**	1	5	049	427.23
HTS3S-419	**4X1-1/2 (2)**	1	0	049	620.16
HTS3S-524	**6X3/4 (1)**	1	5	049	471.08
HTS3S-527	**6X1-1/2 (2)**	1	0	049	679.57
HTS3S-574	**8X3/4 (1)**	1	0	049	666.89
HTS3S-577	**8X1-1/2(20)**	1	0	049	798.79

Mechanical Clamp-On Transition Saddles

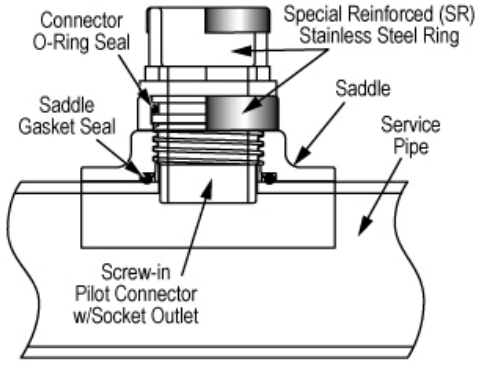
Designed for HDPE-to-PVC pipe transition to provide HDPE mainline take-off for PVC irrigation laterals and irrigation extensions, but fully suitable for any IPS pipe (metal or plastic) transition to PVC. Eliminates costly and cumbersome HDPE fusion process, which is generally cost prohibitive. Depending on the region and location, it has been found that the installed cost of HDPE laterals can be 25% higher than PVC laterals!

Pilot on lateral connector prevents saddle movement on pipe. Exceptionally strong Special Reinforced (SR) outlet on both Saddle outlet and Pilot Connector socket provide unparalleled strength. Injection molded in distinct blue EverTUFF® PVC proprietary material. Pilot Connectors are replaceable and interchangeable with any size EverTUFF® Mechanical Saddle for greater versatility.

Easy Installation - Clamp saddle to pipe, drill hole, install screw-in Pilot Connector with socket outlet. Available for a variety of mainline sizes and can be easily bushed for reduced lateral take-off sizes or special connections.



- Socket Outlet
- 315 psi Pressure Rating @ 73° F
- Stainless Steel Mechanical Clamp
- Elastomer Gasket & O-ring Seals
- Interchangeable 1-1/2" & 2" Lateral Connector Sizes
- Stainless Steel Reinforcing Rings for Extra Strength



Note: Mechanical Clamp Not Shown

Mechanical Clamp-on Transition Saddles

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Pipe O.D. x Socket					
For Polyethylene (or any IPS pipe, metal or plastic) - To - PVC Transitions					
865-419	**4X1-1/2**	2	0	086	733.37
865-420	**4X2**	1	0	086	743.42
865-527	**6X1-1/2**	1	0	086	804.53
865-528	**6X2**	1	0	086	838.42

Mechanical Clamp-on Transition Saddles (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Pipe O.D. x Socket					
865-577	**8X1-1/2**	1	0	086	941.68
865-578	**8X2**	1	0	086	978.32

Glue-on Saddles

Saddle

IPS O.D. x Socket Schedule 80



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Non Pressure Rated					
3963-528	**6X2**	1	5	400	60.22
3963-530	**6X3**	1	5	400	60.76
3963-532	**6X4**	1	5	400	61.28
3963-578	**8X2**	1	10	400	85.07
3963-580	**8X3**	1	8	400	86.11
3963-582	**8X4**	1	5	400	87.03
3963-585	**8X6**	1	5	400	89.06
3963-621	**10X2**	1	8	400	78.77
3963-623	**10X3**	1	5	400	79.88
3963-624	**10X4**	1	8	400	80.22
3963-626	**10X6**	1	5	400	93.28
3963-628	**10X8**	1	5	400	149.49
3963-661	**12X2**	1	10	400	93.06
3963-663	**12X3**	1	8	400	93.61
3963-664	**12X4**	1	5	400	94.40
3963-666	**12X6**	1	6	400	109.48
3963-668	**12X8**	1	2	400	172.28
3963-670	**12X10**	1	4	400	210.86

Saddle (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
IPS O.D. x Socket Schedule 80					
3963-691	**14X2**	1	5	400	114.61
3963-693	**14X3**	1	8	400	115.68
3963-694	**14X4**	1	5	400	116.24
3963-696	**14X6**	1	5	400	132.32
3963-698	**14X8**	1	4	400	202.85
3963-700	**14X10**	1	3	400	259.77
3963-702	**14X12**	1	4	400	286.83
3963-751	**16X2**	1	8	400	120.69
3963-753	**16X3**	1	8	400	121.74
3963-754	**16X4**	1	10	400	122.43
3963-756	**16X6**	1	10	400	139.54
3963-758	**16X8**	1	3	400	208.08
3963-760	**16X10**	1	0	400	264.96
3963-762	**16X12**	1	0	400	294.28
3963-764	**16X14**	1	0	400	306.66
3963-781	**18X2**	1	8	400	177.31
3963-783	**18X3**	1	4	400	178.38
3963-784	**18X4**	1	5	400	179.19
3963-786	**18X6**	1	5	400	189.65
3963-788	**18X8**	1	5	400	278.65
3963-790	**18X10**	1	0	400	308.91
3963-792	**18X12**	1	0	400	440.55

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Saddle (continued)

IPS O.D. x Socket Schedule 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3963-794	**18X14**	1	0	400	479.48
3963-796	**18X16**	1	0	400	627.41
3963-811	**20X2**	1	0	400	179.33
3963-813	**20X3**	1	4	400	179.75
3963-814	**20X4**	1	4	400	181.91
3963-816	**20X6**	1	0	400	190.82
3963-818	**20X8**	1	0	400	275.64
3963-820	**20X10**	1	5	400	305.68
3963-822	**20X12**	1	0	400	436.02
3963-824	**20X14**	1	0	400	475.54
3963-826	**20X16**	1	0	400	623.04
3963-828	**20X18**	1	0	400	707.43
3963-901	**24X2**	1	5	400	182.47
3963-903	**24X3**	1	5	400	183.44
3963-904	**24X4**	1	5	400	184.28
3963-906	**24X6**	1	5	400	192.29
3963-908	**24X8**	1	5	409	259.52
3963-910	**24X10**	1	5	400	307.00
3963-912	**24X12**	1	0	409	407.26
3963-914	**24X14**	1	0	400	473.88
3963-916	**24X16**	1	0	400	648.61
3963-918	**24X18**	1	0	400	731.41
3963-920	**24X20**	1	0	400	823.20

Stub Saddle

IPS O.D. x Socket Schedule 80



Non Pressure Rated

3965-528	**6X2**	1	10	400	64.76
3965-530	**6X3**	1	3	400	65.32
3965-532	**6X4**	1	10	400	65.91
3965-578	**8X2**	1	5	409	85.99
3965-580	**8X3**	1	4	400	92.59
3965-582	**8X4**	1	6	400	93.58
3965-585	**8X6**	1	4	400	95.77
3965-621	**10X2**	1	6	400	84.71
3965-623	**10X3**	1	6	409	80.75
3965-624	**10X4**	1	4	400	86.26
3965-626	**10X6**	1	4	400	100.29
3965-628	**10X8**	1	4	400	160.74
3965-661	**12X2**	1	2	400	100.06
3965-663	**12X3**	1	2	400	101.13
3965-664	**12X4**	1	2	400	101.51
3965-666	**12X6**	1	2	400	117.73
3965-668	**12X8**	1	2	400	185.25
3965-670	**12X10**	1	2	400	271.75
3965-691	**14X2**	1	4	400	123.25
3965-693	**14X3**	1	0	400	124.40
3965-694	**14X4**	1	5	400	124.98
3965-696	**14X6**	1	2	400	142.27
3965-700	**14X10**	1	0	400	279.33
3965-702	**14X12**	1	0	400	308.41
3965-751	**16X2**	1	5	400	129.77
3965-753	**16X3**	1	4	400	130.89
3965-754	**16X4**	1	3	400	131.63
3965-756	**16X6**	1	2	400	150.03
3965-758	**16X8**	1	3	400	223.75
3965-760	**16X10**	1	3	400	284.92
3965-762	**16X12**	1	0	400	316.43
3965-764	**16X14**	1	0	400	329.76
3965-781	**18X2**	1	2	400	190.64
3965-783	**18X3**	1	0	400	191.80
3965-784	**18X4**	1	0	400	192.67
3965-786	**18X6**	1	2	400	203.93
3965-788	**18X8**	1	0	400	299.62

Stub Saddle (continued)

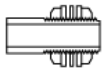
IPS O.D. x Socket Schedule 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3965-790	**18X10**	1	0	400	332.16
3965-792	**18X12**	1	0	400	473.71
3965-794	**18X14**	1	0	400	515.58
3965-796	**18X16**	1	0	400	674.63
3965-811	**20X2**	1	0	400	192.82
3965-813	**20X3**	1	2	400	193.27
3965-814	**20X4**	1	0	400	195.59
3965-816	**20X6**	1	0	400	205.17
3965-818	**20X8**	1	0	400	296.39
3965-820	**20X10**	1	0	400	328.69
3965-822	**20X12**	1	0	400	468.84
3965-824	**20X14**	1	0	400	511.33
3965-826	**20X16**	1	0	400	669.96
3965-828	**20X18**	1	0	400	760.68
3965-901	**24X2**	1	5	400	196.20
3965-903	**24X3**	1	5	400	197.24
3965-904	**24X4**	1	5	400	198.15
3965-906	**24X6**	1	3	400	206.78
3965-908	**24X8**	1	0	400	296.86
3965-910	**24X10**	1	0	400	330.12
3965-912	**24X12**	1	0	409	437.93
3965-914	**24X14**	1	0	400	509.55
3965-916	**24X16**	1	0	400	697.43
3965-918	**24X18**	1	0	400	786.46
3965-920	**24X20**	1	0	400	885.16

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

PVC Spigot Tank Adapter with EPDM Gasket

Spig



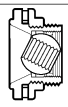
150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8173E-005	**1/2**	25	150	100	35.39
8173E-007	**3/4**	25	100	100	39.93
8173E-010	**1**	25	0	100	48.14
8173E-015	**1-1/2**	20	0	100	62.33
8173E-020	**2**	12	0	100	91.72

Install with threaded end, gasket and one nut inside tank. Use thread sealant on internal nut.

PVC Self Aligning Tank Adapter with Neoprene Gasket

Fipt

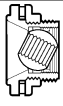


75 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172SA-010	**1**	5	0	100	147.85
8172SA-020	**2**	4	0	100	229.91
8172SA-030	**3**	2	0	100	347.87

PVC Self Aligning Tank Adapter with EPDM Gasket

Fipt

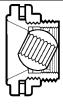


75 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172ESA-010	**1**	5	0	100	155.59
8172ESA-020	**2**	4	0	100	236.11
8172ESA-030	**3**	2	0	100	366.29

PVC Self Aligning Tank Adapter with FKM Gasket

Fipt

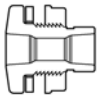


75 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172VSA-010	**1**	5	0	100	403.15
8172VSA-020	**2**	4	0	100	572.35
8172VSA-030	**3**	2	0	100	899.32

PVC New Style Standard Tank Adapters with Neoprene Gaskets

Soc

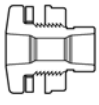


150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8170-002	**1/4**	25	150	100	34.34
8170-003	**3/8**	25	150	100	34.34
8170-005	**1/2**	25	0	100	34.34
8170-007	**3/4**	25	0	100	39.15
8170-010	**1**	25	0	100	43.49
8170-012	**1-1/4**	20	0	100	52.40
8170-015	**1-1/2**	20	0	100	57.49
8170-020	**2**	15	0	100	85.22
8170-025	**2-1/2**	4	0	100	131.69
8170-030	**3**	4	0	100	156.77
8170-040	**4**	2	0	100	308.81
8170-060	**6**	1	0	100	599.42
8170-080	**8**	1	0	100	1330.24

PVC New Style Standard Tank Adapters with EPDM Gaskets

Soc



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8170E-002	**1/4**	25	150	100	35.39
8170E-003	**3/8**	25	150	100	35.39
8170E-005	**1/2**	25	0	100	35.39
8170E-007	**3/4**	25	0	100	39.93
8170E-010	**1**	25	0	100	48.14
8170E-012	**1-1/4**	20	0	100	57.22
8170E-015	**1-1/2**	20	0	100	62.33

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

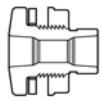
PVC New Style Standard Tank Adapters with EPDM Gaskets (continued)

Soc

8170E-020	**2**	15	0	100	91.72
8170E-025	**2-1/2**	4	0	100	152.86
8170E-030	**3**	4	0	100	162.62
8170E-040	**4**	2	0	100	316.61
8170E-060	**6**	1	0	100	620.94
8170E-080	**8**	1	0	100	1379.57

PVC New Style Standard Tank Adapters with FKM Gaskets

Soc

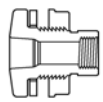


150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8170V-002	**1/4**	25	150	100	58.35
8170V-003	**3/8**	25	150	100	58.35
8170V-005	**1/2**	25	0	100	58.35
8170V-007	**3/4**	25	0	100	63.97
8170V-010	**1**	25	0	100	76.60
8170V-012	**1-1/4**	20	0	100	80.77
8170V-015	**1-1/2**	20	0	100	88.96
8170V-020	**2**	15	0	100	145.96
8170V-025	**2-1/2**	4	0	100	220.01
8170V-030	**3**	4	0	100	261.92
8170V-040	**4**	2	0	100	655.21
8170V-060	**6**	1	0	100	1178.46
8170V-080	**8**	1	0	100	2193.73

PVC New Style Standard Tank Adapters with Neoprene Gasket

Soc x Fipt

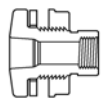


150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171-002	**1/4**	25	150	100	34.34
8171-003	**3/8**	25	200	100	34.34
8171-005	**1/2**	25	0	100	34.34
8171-007	**3/4**	25	0	100	39.15
8171-010	**1**	25	0	100	43.49
8171-012	**1-1/4**	20	0	100	52.40
8171-015	**1-1/2**	20	0	100	57.49
8171-020	**2**	15	0	100	85.22
8171-025	**2-1/2**	4	0	100	131.69
8171-030	**3**	4	0	100	156.77
8171-040	**4**	2	0	100	308.81
8171-060	**6**	1	0	100	599.42

PVC New Style Standard Tank Adapters with EPDM Gaskets

Soc x Fipt

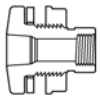


150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171E-002	**1/4**	25	150	100	35.39
8171E-003	**3/8**	25	200	100	35.39
8171E-005	**1/2**	25	0	100	35.39
8171E-007	**3/4**	25	0	100	39.93
8171E-010	**1**	25	0	100	48.14
8171E-012	**1-1/4**	20	0	100	57.22
8171E-015	**1-1/2**	20	0	100	62.33
8171E-020	**2**	15	0	100	91.72
8171E-025	**2-1/2**	4	0	100	152.86
8171E-030	**3**	4	0	100	162.62
8171E-040	**4**	2	0	100	316.61
8171E-060	**6**	1	0	100	620.94

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PVC New Style Standard Tank Adapters with FKM Gaskets



Soc x Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8171V-002	1/4	25	150	100	58.35
8171V-003	3/8	25	200	100	58.35
8171V-005	1/2	25	0	100	58.35
8171V-007	3/4	25	0	100	63.97
8171V-010	1	25	0	100	76.60
8171V-012	1-1/4	20	0	100	80.77
8171V-015	1-1/2	20	0	100	88.96
8171V-020	2	15	0	100	145.96
8171V-025	2-1/2	4	0	100	220.01
8171V-030	3	4	0	100	261.92
8171V-040	4	2	0	100	655.21
8171V-060	6	1	0	100	1178.46

PVC New Style Special Reinforced (SR) Threaded Tank Adapters with Neoprene Gaskets



Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8171-002SR	1/4	25	150	100	35.58
8171-003SR	3/8	25	200	100	35.58
8171-005SR	1/2	25	0	100	35.58
8171-007SR	3/4	25	0	100	41.22
8171-010SR	1	25	0	100	46.42
8171-012SR	1-1/4	20	0	100	57.06
8171-015SR	1-1/2	20	0	100	65.49
8171-020SR	2	15	0	100	93.86
8171-025SR	2-1/2	4	0	100	151.13
8171-030SR	3	4	0	100	179.89
8171-040SR	4	2	0	100	332.76
8171-060SR	6	1	0	100	622.77

PVC New Style Special Reinforced (SR) Threaded Tank Adapters with EPDM Gaskets



Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8171E-002SR	1/4	25	150	100	36.83
8171E-003SR	3/8	25	200	100	36.83
8171E-005SR	1/2	25	0	100	36.83
8171E-007SR	3/4	25	0	100	42.00
8171E-010SR	1	25	0	100	51.06
8171E-012SR	1-1/4	20	0	100	61.86
8171E-015SR	1-1/2	20	0	100	70.31
8171E-020SR	2	15	0	100	100.36
8171E-025SR	2-1/2	4	0	100	156.03
8171E-030SR	3	4	0	100	185.76
8171E-040SR	4	2	0	100	340.58
8171E-060SR	6	1	0	100	644.19

PVC New Style Special Reinforced (SR) Threaded Tank Adapters with FKM Gaskets



Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

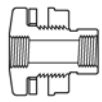
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8171V-002SR	1/4	25	150	100	59.79
8171V-003SR	3/8	25	200	100	59.79
8171V-005SR	1/2	25	0	100	59.79
8171V-007SR	3/4	25	0	100	65.61
8171V-010SR	1	25	0	100	80.87
8171V-012SR	1-1/4	20	0	100	90.56
8171V-015SR	1-1/2	20	0	100	102.08
8171V-020SR	2	15	0	100	156.33
8171V-025SR	2-1/2	4	0	100	238.00
8171V-030SR	3	4	0	100	283.32

PVC New Style Special Reinforced (SR) Threaded Tank Adapters with FKM Gaskets (continued)

Soc x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8171V-040SR	4	2	0	100	680.71
8171V-060SR	6	2	0	100	1206.42

PVC New Style Standard Tank Adapters with Neoprene Gaskets

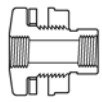


Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8172-002	1/4	25	150	100	46.12
8172-003	3/8	25	200	100	46.12
8172-005	1/2	25	0	100	46.12
8172-007	3/4	25	0	100	50.58
8172-010	1	25	0	100	55.32
8172-012	1-1/4	20	0	100	73.75
8172-015	1-1/2	20	0	100	80.39
8172-020	2	15	0	100	105.86
8172-025	2-1/2	4	0	100	154.95
8172-030	3	4	0	100	184.43
8172-040	4	2	0	100	345.61
8172-060	6	1	0	100	691.64

PVC New Style Standard Tank Adapters with EPDM Gaskets

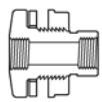


Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8172E-002	1/4	25	150	100	47.48
8172E-003	3/8	25	200	100	47.48
8172E-005	1/2	25	0	100	47.48
8172E-007	3/4	25	0	100	51.57
8172E-010	1	25	0	100	61.26
8172E-012	1-1/4	20	0	100	80.53
8172E-015	1-1/2	20	0	100	87.09
8172E-020	2	15	0	100	113.93
8172E-025	2-1/2	4	0	100	160.72
8172E-030	3	4	0	100	191.36
8172E-040	4	2	0	100	354.42
8172E-060	6	1	0	100	716.49

PVC New Style Standard Tank Adapters with FKM Gaskets

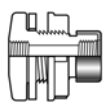


Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8172V-002	1/4	25	150	100	71.35
8172V-003	3/8	25	200	100	71.35
8172V-005	1/2	25	0	100	71.35
8172V-007	3/4	25	0	100	76.04
8172V-010	1	25	0	100	86.85
8172V-012	1-1/4	20	0	100	98.56
8172V-015	1-1/2	20	0	100	112.49
8172V-020	2	15	0	100	166.68
8172V-025	2-1/2	4	0	100	238.07
8172V-030	3	4	0	100	283.49
8172V-040	4	2	0	100	690.93
8172V-060	6	1	0	100	1321.96

PVC New Style Special Reinforced (SR) Threaded Tank Adapters with Neoprene Gaskets



Fipt x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

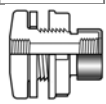
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8172-002SR	1/4	25	150	100	47.57
8172-003SR	3/8	25	200	100	47.57
8172-005SR	1/2	25	0	100	47.57
8172-007SR	3/4	25	0	100	52.66

PVC New Style Special Reinforced (SR) Threaded Tank Adapters with Neoprene Gaskets (continued)

Fipt x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8172-010SR	1	25	0	100	58.24
8172-012SR	1-1/4	20	0	100	78.43
8172-015SR	1-1/2	20	0	100	88.39
8172-020SR	2	15	0	100	114.53
8172-025SR	2-1/2	4	0	100	174.37
8172-030SR	3	4	0	100	207.59
8172-040SR	4	2	0	100	369.57
8172-060SR	6	1	0	100	714.88

PVC New Style Special Reinforced (SR) Threaded Tank Adapters with EPDM Gaskets

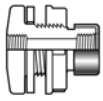


Fipt x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172E-002SR	1/4	25	150	100	48.94
8172E-003SR	3/8	25	200	100	48.94
8172E-005SR	1/2	25	0	100	48.94
8172E-007SR	3/4	25	0	100	53.65
8172E-010SR	1	25	0	100	64.19
8172E-012SR	1-1/4	20	0	100	85.21
8172E-015SR	1-1/2	20	0	100	95.06
8172E-020SR	2	15	0	100	122.60
8172E-025SR	2-1/2	4	0	100	180.17
8172E-030SR	3	4	0	100	214.46
8172E-040SR	4	2	0	100	378.38
8172E-060SR	6	1	0	100	739.66

PVC New Style Special Reinforced (SR) Threaded Tank Adapters with FKM Gaskets

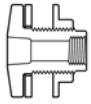


Fipt x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172V-002SR	1/4	25	150	100	72.79
8172V-003SR	3/8	25	200	100	72.79
8172V-005SR	1/2	25	0	100	72.79
8172V-007SR	3/4	25	0	100	78.15
8172V-010SR	1	25	0	100	89.78
8172V-012SR	1-1/4	20	0	100	103.21
8172V-015SR	1-1/2	20	0	100	120.48
8172V-020SR	2	15	0	100	175.36
8172V-025SR	2-1/2	4	0	100	257.49
8172V-030SR	3	4	0	100	306.62
8172V-040SR	4	2	0	100	714.88
8172V-060SR	6	2	0	100	1349.89

Tank Adapter with Neoprene Gasket (Old Style)

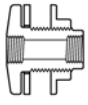


Soc x Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

871-005	1/2	25	0	100	34.34
871-007	3/4	25	0	100	39.15
871-010	1	25	0	100	43.49
871-012	1-1/4	20	0	100	52.40
871-015	1-1/2	20	0	100	57.49
871-020	2	15	0	100	85.22
871-030	3	4	0	100	156.77
871-040	4	2	0	100	308.81

Tank Adapter with Neoprene Gasket (Old Style)



Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

872-005	1/2	25	0	100	46.12
872-007	3/4	25	0	100	50.58

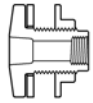
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Tank Adapter with Neoprene Gasket (Old Style) (continued)

Fipt

872-010	1	25	0	100	55.32
872-012	1-1/4	20	0	100	73.75
872-015	1-1/2	20	0	100	80.39
872-020	2	15	0	100	105.86
872-030	3	4	0	100	184.43
872-040	4	2	0	100	345.61

Tank Adapter with EPDM Gasket (Old Style)

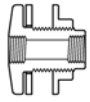


Soc x Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

871E-005	1/2	25	0	100	35.39
871E-007	3/4	25	0	100	39.93
871E-010	1	25	0	100	48.14
871E-012	1-1/4	20	0	100	57.22
871E-015	1-1/2	20	0	100	62.33
871E-020	2	15	0	100	91.72
871E-030	3	4	0	100	162.62
871E-040	4	2	0	100	316.61

Tank Adapter with EPDM Gasket (Old Style)



Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

872E-005	1/2	25	0	100	47.48
872E-007	3/4	25	0	100	51.57
872E-010	1	25	0	100	61.26
872E-012	1-1/4	20	0	100	80.53
872E-015	1-1/2	20	0	100	87.09
872E-020	2	15	0	100	113.93
872E-030	3	4	0	100	191.36
872E-040	4	2	0	100	354.42

Neoprene Tank Adapter Gasket Only (New Style)



3N-002	1/4	100	0	901	2.71
3N-003	3/8	50	0	901	2.71
3N-005	1/2	10	0	901	2.71
3N-007	3/4	10	0	901	2.91
3N-010	1	10	0	901	3.09
3N-012	1-1/4	10	0	901	4.27
3N-015	1-1/2	10	0	901	5.01
3N-020	2	10	0	901	6.56
3N-025	2-1/2	10	0	901	6.84
3N-030	3	10	0	901	7.14
3N-040	4	10	0	901	19.75
2N-060	6	10	0	901	24.67
3N-080	8	10	0	901	113.14

EPDM Tank Adapter Gasket Only (New Style)



3E-002	1/4	10	0	901	3.15
3E-003	3/8	10	0	901	3.15
3E-005	1/2	10	0	901	3.15
3E-007	3/4	10	0	901	3.25
3E-010	1	10	0	901	5.64
3E-012	1-1/4	10	0	901	8.26
3E-015	1-1/2	10	0	901	8.48
3E-020	2	10	0	901	9.71
3E-025	2-1/2	10	0	901	13.76
3E-030	3	10	0	901	14.79

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Tank Adapters

EPDM Tank Adapter Gasket Only (New Style) (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3E-040	**4**	10	0	901	22.28
2E-060	**6**	10	0	901	40.22
3E-080	**8**	10	0	901	145.99



FKM Tank Adapter Gasket Only (New Style)

3V-002	**1/4**	10	0	901	11.53
3V-003	**3/8**	10	0	901	13.59
3V-005	**1/2**	10	0	901	20.28
3V-007	**3/4**	10	0	901	25.12
3V-010	**1**	10	0	901	34.34
3V-012	**1-1/4**	10	0	901	54.61
3V-015	**1-1/2**	10	0	901	58.99
3V-020	**2**	10	0	901	94.48
3V-025	**2-1/2**	10	0	901	104.38
3V-030	**3**	10	0	901	108.76
3V-040	**4**	10	0	901	246.09
2V-060	**6**	10	0	901	616.03
3V-080	**8**	10	0	901	1033.18



Neoprene Tank Adapter Gasket Only (Old Style)

2N-005	**1/2**	10	0	901	2.71
2N-007	**3/4**	10	0	901	2.91
2N-010	**1**	10	0	901	3.09
2N-015	**1-1/4 OR 1-1/2**	10	0	901	5.01
2N-020	**2**	10	0	901	6.56
2N-030	**3**	10	0	901	7.14
2N-040	**4**	10	0	901	19.75



EPDM Tank Adapter Gasket Only (Old Style)

2E-005	**1/2**	10	0	901	3.15
2E-007	**3/4**	10	0	901	3.25
2E-010	**1**	10	0	901	5.64
2E-015	**1-1/4 OR 1-1/2**	10	0	901	8.48
2E-020	**2**	10	0	901	9.71
2E-030	**3**	10	0	901	14.79
2E-040	**4**	10	0	901	22.28

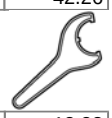
Wrench Sets (New Style)

Body Wrench & Nut Wrench



TAW-002	**1/4**	1	25	299	21.89
TAW-003	**3/8**	1	25	299	21.89
TAW-005	**1/2**	1	25	299	21.89
TAW-007	**3/4**	1	25	299	22.32
TAW-010	**1**	1	25	299	23.21
TAW-012	**1-1/4**	1	20	299	26.18
TAW-015	**1-1/2**	1	20	299	28.40
TAW-020	**2**	1	10	299	32.35
TAW-025	**2-1/2**	1	10	299	35.79
TAW-030	**3**	1	10	299	39.44
TAW-040	**4**	1	10	299	42.26

Individual Body Wrench (New Style)



TAW1-002	**1/4**	500	0	299	12.28
TAW1-003	**3/8**	400	0	299	12.28
TAW1-005	**1/2**	250	0	299	12.28
TAW1-007	**3/4**	220	0	299	12.52
TAW1-010	**1**	200	0	299	13.03
TAW1-012	**1-1/4**	300	0	299	14.76
TAW1-015	**1-1/2**	150	0	299	15.89
TAW1-020	**2**	100	0	299	17.25
TAW1-025	**2-1/2**	80	0	299	18.03
TAW1-030	**3**	74	0	299	22.61
TAW1-040	**4**	35	0	299	23.26

Individual Nut Wrench (New Style)



TAW2-002	**1/4**	300	0	299	12.28
TAW2-003	**3/8**	250	0	299	12.28
TAW2-005	**1/2**	200	0	299	12.28
TAW2-007	**3/4**	160	0	299	12.52
TAW2-010	**1**	110	0	299	13.03
TAW2-012	**1-1/4**	200	0	299	14.76
TAW2-015	**1-1/2**	120	0	299	15.89
TAW2-020	**2**	100	0	299	17.25
TAW2-025	**2-1/2**	50	0	299	18.03
TAW2-030	**3**	40	0	299	22.61
TAW2-040	**4**	35	0	299	23.26

Expansion Joints

PVC Fabricated Expansion Joints

6" Travel with EPDM O-rings



1/2" - 2" 235 psi @ 73°F (23°C)
2-1/2" - 12" 150 psi @ 73°F (23°C)
14" 100 psi @ 73°F (23°C)

826-005X6	**1/2**	10	0	085	313.03
826-007X6	**3/4**	6	0	085	336.52
826-010X6	**1**	5	0	085	340.31
826-012X6	**1-1/4**	4	0	085	395.55
826-015X6	**1-1/2**	4	0	085	419.43
826-020X6	**2**	2	0	085	469.18

PVC Fabricated Expansion Joints (continued)

6" Travel with EPDM O-rings

826-025X6	**2-1/2**	1	0	085	535.15
826-030X6	**3**	1	0	085	555.51
826-040X6	**4**	1	0	085	596.17
826-060X6	**6**	1	0	085	982.20
826-080X6	**8**	1	0	085	1352.21
826-100X6	**10**	1	0	085	1587.88
826-120X6	**12**	1	0	085	2813.54
826-140X6	**14**	1	0	085	3213.82

FKM O-rings available on special order. Add a "V" preceding the dash (-) separator, e.g. 826V-005X6.

Expansion Joints

PVC Fabricated Expansion Joints

12" Travel with EPDM O-rings



1/2" - 2" 235 psi @ 73°F (23°C)
2-1/2" - 12" 150 psi @ 73°F (23°C)
14" 100 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
826-005X12	**1/2**	10	0	085	352.11
826-007X12	**3/4**	6	0	085	372.39
826-010X12	**1**	5	0	085	446.24
826-012X12	**1-1/4**	4	0	085	487.57
826-015X12	**1-1/2**	4	0	085	451.77
826-020X12	**2**	2	0	085	532.92
826-025X12	**2-1/2**	1	0	085	895.29
826-030X12	**3**	1	0	085	688.48
826-040X12	**4**	1	0	085	773.44
826-060X12	**6**	1	0	085	1126.68
826-080X12	**8**	1	0	085	1510.54
826-100X12	**10**	1	0	085	1846.74
826-120X12	**12**	1	0	085	2957.95
826-140X12	**14**	1	0	085	3283.27

FKM O-rings available on special order. Add a "V" preceding the dash (-) separator, e.g. 826V-005X12

PVC Elastomer Expansion Joint

with Neoprene Bellows Soc



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
EJ02-007	**3/4**	10	0	085	197.85
EJ02-010	**1**	10	0	085	224.34
EJ02-012	**1-1/4**	15	0	085	239.02
EJ02-015	**1-1/2**	10	0	085	294.26
EJ02-020	**2**	8	0	085	360.58
EJ02-025	**2-1/2**	4	0	085	510.09
EJ02-030	**3**	2	0	085	701.17

PVC Elastomer Expansion Joint

with EPDM Bellows Soc



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
EJ22-007	**3/4**	10	0	085	201.88
EJ22-010	**1**	10	0	085	228.89
EJ22-012	**1-1/4**	15	0	085	246.41
EJ22-015	**1-1/2**	10	0	085	299.36
EJ22-020	**2**	8	0	085	367.94
EJ22-025	**2-1/2**	4	0	085	520.48
EJ22-030	**3**	2	0	085	715.45

PVC Elastomer Expansion Joint

with Neoprene Bellows SR Fipt - Stainless Steel Collar



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
EJ01-007SR	**3/4**	10	0	085	200.62
EJ01-010SR	**1**	10	0	085	228.47
EJ01-012SR	**1-1/4**	15	0	085	248.49
EJ01-015SR	**1-1/2**	10	0	085	317.23
EJ01-020SR	**2**	8	0	085	381.13
EJ01-025SR	**2-1/2**	4	0	085	555.41
EJ01-030SR	**3**	2	0	085	746.94

PVC Elastomer Expansion Joint

with EPDM Bellows SR Fipt - Stainless Steel Collar



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
EJ21-007SR	**3/4**	10	0	085	204.69
EJ21-010SR	**1**	10	0	085	233.14
EJ21-012SR	**1-1/4**	15	0	085	253.59
EJ21-015SR	**1-1/2**	10	0	085	323.68
EJ21-020SR	**2**	8	0	085	388.92
EJ21-025SR	**2-1/2**	4	0	085	563.59
EJ21-030SR	**3**	2	0	085	762.18

Pipe Flanges

Flange Van Stone Style

Flange x PIP Soc



125 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
354-060F	**6X6.140**	1	4	320	133.67
354-080F	**8X8.160**	1	2	320	202.42
354-100F	**10X10.200**	1	2	320	284.61
354-120F	**12X12.240**	1	2	320	412.21
354-150F	**14X15.300**	1	0	320	1098.76
354-151F	**16X15.300**	1	0	320	1253.46
354-181F	**18X18.701**	1	0	320	1904.21
354-182F	**18X18.360**	1	0	320	1904.21
354-201F	**20X22.047**	1	0	320	2900.51
354-241F	**24X24.803**	1	0	320	4247.72

For more information, refer to 80, 100 & 125 psi PIP Fabrication Fittings.

PIP = Plastic Irrigation Pipe (dimensions are NOT the same as IPS dimensions)

Sizes 6" - 16" are furnished with plastic ring.
Sizes 18" - 24" are furnished with steel ring.

Flange One Piece

Soc



1/2" - 16" 150 psi Maximum Internal Pressure Rating @73°F (23°C)
18" - 24" 50 psi Maximum Internal Pressure Rating @73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
851-005	**1/2**	25	0	080	18.11
851-007	**3/4**	25	0	080	19.35
851-010	**1**	15	0	080	21.55
851-012	**1-1/4**	15	0	080	22.20
851-015	**1-1/2**	20	0	080	22.68
851-020	**2**	10	0	080	30.19
851-025	**2-1/2**	10	0	080	46.60
851-030	**3**	10	0	080	51.46
851-040	**4**	5	0	080	65.16
851-050	**5**	5	0	080	102.45
851-060	**6**	5	0	080	102.45
851-080	**8**	2	0	080	183.33
851-100F	**10**	1	2	083	498.18
851-120F	**12**	1	0	083	604.96
851-140F	**14**	1	0	083	1112.65
851-160F	**16**	1	0	083	1526.99
851-180F	**18**	1	0	083	3230.20
851-200F	**20**	1	0	083	3955.61

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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Flange One Piece (continued)

Soc

851-240F	**24**	1	0	083	5253.52

Flange One Piece

Fipt



150 psi Maximum Internal Pressure Rating @73°F (23°C)

852-005	**1/2**	25	0	080	21.67
852-007	**3/4**	25	0	080	25.39
852-010	**1**	15	0	080	27.80
852-012	**1-1/4**	15	0	080	38.33
852-015	**1-1/2**	20	0	080	41.83
852-020	**2**	10	0	080	42.78
852-025	**2-1/2**	10	0	080	98.36
852-030	**3**	10	0	080	101.24
852-040	**4**	5	0	080	190.22
852-060F	**6**	1	5	083	228.52
852-080F	**8**	1	2	083	573.52

Special Reinforced Flange One Piece Threaded

SR Fipt - Stainless Steel Collar



150 psi Maximum Internal Pressure Rating @73°F (23°C)

852-005SR	**1/2**	25	0	086	11.91
852-007SR	**3/4**	25	0	086	13.99
852-010SR	**1**	15	0	086	15.29
852-012SR	**1-1/4**	15	0	086	21.07
852-015SR	**1-1/2**	15	0	086	23.06
852-020SR	**2**	10	0	086	23.62
852-025SR	**2-1/2**	10	0	086	54.09
852-030SR	**3**	10	0	086	55.69
852-040SR	**4**	5	0	086	104.69

Blind Flange



1/2" - 12" Molded - 150 psi Maximum Internal Pressure Rating @ 73°F (23°C)
14" - 24" Fabricated - 50 psi Maximum Internal Pressure Rating @ 73°F (23°C)

853-005	**1/2**	25	0	080	25.38
853-007	**3/4**	25	0	080	30.23
853-010	**1**	15	0	080	41.29
853-012	**1-1/4**	20	0	080	50.68
853-015	**1-1/2**	15	0	080	50.68
853-020	**2**	10	0	080	75.73
853-025	**2-1/2**	10	0	080	123.38
853-030	**3**	10	0	080	148.89
853-040	**4**	8	0	080	185.48
853-050F	**5**	1	5	083	464.95
853-060	**6**	5	0	080	225.40
853-080	**8**	5	0	080	282.13
853-100	**10**	3	0	081	471.77
853-120	**12**	2	0	081	734.75
853-140F	**14**	1	0	083	1397.79
853-160F	**16**	1	0	083	1657.51
853-180F	**18**	1	0	083	1864.09
853-200F	**20**	1	0	083	3013.01
853-240F	**24**	1	0	083	4016.97

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Flange Van Stone Style with PVC Ring

Soc



1/2" - 18" molded - 150 psi = maximum internal pressure rating @ 73°F (23°C)
18" - 24" fabricated - 50 psi = maximum internal pressure rating @ 73°F (23°C)

854-005	**1/2**	25	0	080	18.08
854-007	**3/4**	25	0	080	19.34
854-010	**1**	15	0	080	21.54
854-012	**1-1/4**	15	0	080	22.18
854-015	**1-1/2**	20	0	080	22.63
854-020	**2**	10	0	080	30.14
854-025	**2-1/2**	10	0	080	46.55
854P-030	**3**	10	0	080	51.44
854P-040	**4**	5	0	080	65.07
854P-050	**5**	5	0	080	102.36
854P-060	**6**	5	0	080	102.36
854P-080	**8**	2	0	080	166.68
854P-100	**10**	2	0	081	215.79
854P-120	**12**	2	0	081	232.66
854P-140	**14**	1	0	081	898.21
854P-160	**16**	1	0	081	1201.40
854P-180	**18**	1	0	081	1937.69
854-180FP	**18**	1	0	083	3065.76
854-200FP	**20**	1	0	083	3749.88
854-240FP	**24**	1	0	083	5101.07

Flange Van Stone Style with Glass Filled PVC Ring

Soc



3" - 18" molded - 150 psi = maximum internal pressure rating @ 73°F (23°C)

854-030	**3**	10	0	080	51.44
854-040	**4**	5	0	080	65.07
854-050	**5**	5	0	080	102.36
854-060	**6**	5	0	080	102.36
854-080	**8**	2	0	080	166.68
854-100	**10**	2	0	081	215.79
854-120	**12**	2	0	081	232.66
854-140	**14**	1	0	082	898.21
854-160	**16**	1	0	082	1201.40
854-180	**18**	1	0	082	1937.69

18" flange has 4-section ring

Flange Van Stone Style Class 300 Bolt Pattern Fabricated with PVC Ring

Soc



1/2" - 16" molded with fab ring - 150 psi = maximum internal pressure rating @ 73°F (23°C)
18" - 24" fabricated - 50 psi = maximum internal pressure rating @ 73°F (23°C)

854-005CL300	**1/2**	1	25	083	148.64
854-007CL300	**3/4**	1	25	083	172.71
854-010CL300	**1**	1	15	083	271.37
854-012CL300	**1-1/4**	1	15	083	277.09
854-015CL300	**1-1/2**	1	20	083	287.83
854-020CL300	**2**	1	10	083	303.05
854-025CL300	**2-1/2**	1	10	083	332.76
854-030CL300	**3**	1	10	083	365.45
854-040CL300	**4**	1	3	083	619.67
854-060CL300	**6**	1	4	083	1180.24
854-080CL300	**8**	1	3	083	1343.43
854-100CL300	**10**	1	2	083	1581.60
854-120CL300	**12**	1	0	083	2026.35
854-140CL300	**14**	1	0	083	2234.24
854-160CL300	**16**	1	0	083	2326.72
854-180CL300	**18**	1	0	083	3253.11

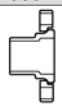
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Flange Van Stone Style Class 300 Bolt Pattern Fabricated with PVC Ring (continued)

Soc

854-200CL300	**20**	1	0	083	4224.02
854-240CL300	**24**	1	0	083	5354.88

Flange Van Stone Style with PVC Ring



Spig

1/2" - 12" molded - 150 psi = maximum internal pressure rating @ 73°F (23°C)
20" - 24" fabricated - 50 psi = maximum internal pressure rating @ 73°F (23°C)

856-005	**1/2**	25	0	080	18.18
856-007	**3/4**	25	0	080	19.48
856-010	**1**	15	0	080	21.72
856-012	**1-1/4**	15	0	080	22.40
856-015	**1-1/2**	15	0	080	22.85
856-020	**2**	10	0	080	30.37
856-025	**2-1/2**	10	0	080	46.94
856P-030	**3**	10	0	080	51.85
856P-040	**4**	5	0	080	65.61
856P-060	**6**	4	0	080	103.20
856P-080	**8**	2	0	080	184.61
856P-100	**10**	2	0	081	215.79
856P-120	**12**	2	0	081	232.66
856-200FP	**20**	1	0	083	3749.88
856-240FP	**24**	1	0	083	5101.07

Flange Van Stone Style with Glass Filled PVC Ring



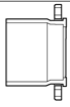
Spig

3" - 12" molded, 14" - 18" molded/fabricated - 150 psi = maximum internal pressure rating @ 73°F (23°C)

856-030	**3**	10	0	080	51.85
856-040	**4**	5	0	080	65.61
856-060	**6**	4	0	080	103.20
856-080	**8**	2	0	080	184.61
856-100	**10**	2	0	081	215.79
856-120	**12**	2	0	081	232.66
856-140FP**	**14**	1	0	083	1926.95
856-160FP**	**16**	1	0	083	2337.92
856-180FP**	**18**	1	0	083	3065.76

** Fabricated from molded socket flanges with pipe spigot.
18" flange uses 4-piece ring

Flange Van Stone Style with Steel Ring



Soc

150 psi Maximum Internal Pressure Rating @73°F (23°C)

854-180FS	**18**	1	0	083	1809.89
854-200FS	**20**	1	0	083	2193.19
854-240FS	**24**	1	0	083	2951.69

Flange Van Stone Style with Steel Ring



Spig

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

856-140FS	**14**	1	0	083	975.22
856-160FS	**16**	1	0	083	1192.01
856-180FS	**18**	1	0	083	1350.67
856-200FS	**20**	1	0	083	1626.87
856-240FS	**24**	1	0	083	2209.11

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Flange Van Stone Style PVC with Solid Ring



Soc

150 psi Maximum Internal Pressure Rating @73°F (23°C)

S854-020	**2**	10	0	080	37.68
S854-030	**3**	10	0	080	64.32
S854-040	**4**	5	0	080	81.36

Flange Van Stone Style PVC with Glass Filled PVC Solid Ring



Soc

150 psi Maximum Internal Pressure Rating @73°F (23°C)

S854-060	**6**	5	0	080	127.97
S854-080	**8**	2	0	080	208.35
S854-100	**10**	2	0	081	269.73
S854-120	**12**	2	0	081	290.80

PVC FLANGE One Piece*



ASTM Socket x Multi-bolt Pattern Ring

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

M851-100	**10**	2	0	081	189.75
M851-120	**12**	2	0	081	326.80

Hubs fit 10" and 12" ASTM IPS pipe. Rings are manufactured to accept bolt patterns in size 10" and 12" in ANSI Class 150, B.S. 4504 PN10, B.S. 4504 PN16, Table E & JIS 10K for size 10", Table D & E for size 12" Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

Flange Van Stone Style with PVC Ring



ASTM Soc x Multi-bolt Pattern Ring

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

M854-020	**2**	10	0	080	30.14

* Hubs fit 2" ASTM IPS pipe. Rings are manufactured to accept bolt patterns in size 2" in ANSI Class 150, B.S. 4504 PN10 B.S. 4504 PN16 (except 8"), B.S. 10 Table D and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

Flange Van Stone Style with Glass Filled PVC Ring



ASTM Soc x Multi-bolt Pattern Ring

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

M854-060	**6**	5	0	080	102.36
M854-080	**8**	2	0	080	166.68

* Hubs fit 6" and 8" ASTM IPS pipe. Rings are manufactured to accept bolt patterns in size 6" and 8" in ANSI Class 150, B.S. 4504 PN10 B.S. 4504 PN16 (except 8"), B.S. 10 Table D and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

Flange Van Stone Style with PVC Ring



ASTM Spig x Multi-bolt Pattern Ring

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

M856-020	**2**	10	0	080	30.37

* Spigots fit 2" ASTM IPS fitting socket. Rings are manufactured to accept bolt patterns in size 2" in ANSI Class 150, B.S. 4504 NP10 B.S. 4504 NP16 (except 8"), B.S. 10 Table D and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

Flange Van Stone Style with Glass Filled PVC Ring



ASTM Spig x Multi-bolt Pattern Ring

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

M856-060	**6**	4	0	080	103.20
M856-080	**8**	2	0	080	167.94

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Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Pipe Flanges

Flange Van Stone Style with Glass Filled PVC Ring (continued)

ASTM Spig x Multi-bolt Pattern Ring

* Spigots fit 6" and 8" ASTM IPS fitting socket. Rings are manufactured to accept bolt patterns in size 6" and 8" in ANSI Class 150, B.S. 4504 PN10 B.S. 4504 PN16 (except 8"), B.S. 10 Table D and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

Flange Van Stone Style with PVC Ring

Fipt



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
855-005	**1/2**	25	0	080	21.63
855-007	**3/4**	25	0	080	25.38
855-010	**1**	15	0	080	27.76
855-012	**1-1/4**	15	0	080	38.26
855-015	**1-1/2**	20	0	080	41.79
855-020	**2**	10	0	080	42.76
855-025	**2-1/2**	10	0	080	98.29

Flange Van Stone Style with Glass Filled PVC Ring

Fipt



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
855-030	**3**	10	0	080	101.11
855-040	**4**	5	0	080	183.83
855-060	**6**	1	4	080	289.09

Flange Van Stone Style with Glass Filled PVC Ring (continued)

Fipt

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
855-060F	**6**	1	4	083	256.97
855-080	**8**	2	0	080	358.24
855-080F	**8**	1	2	083	318.82
855-100F	**10**	1	2	083	359.19

PVC FLANGE* Van Stone Style

ASTM Socket x Table D&E Drilling



150 psi

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
854-030DE	**3"/80 nom.**	10	0	080	51.44
854-040DE	**4"/110 nom.**	5	0	080	65.07

* Hubs fit 3"or 4" ASTM IPS Pipe. Rings are manufactured to BS 10 Table D & Table E bolt patterns.

PVC FLANGE* Van Stone Style

ASTM Socket x DIN PN 10/16 Drilling



150 psi

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
854-030DIN	**3"/80 nom.**	10	0	080	51.44
854-040DIN	**4"/110 nom.**	5	0	080	65.07

* Hubs fit 3" or 4" ASTM IPS Pipe. Rings are manufactured to DIN 8063-4 PN 10 and PN 16 bolt patterns.

Van Stone Style Flange Replacement Split Rings

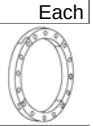
Application & Use of Van Stone Style Flange Replacement Split Rings

Designed for easy Van Stone style flange ring replacement in the event of system modification, repair, or improper assembly without having to remove existing flange hub. Split rings are made as a direct replacement of existing one-piece rings used on Spears® brand only of Van Stone style flanges with ANSI Class 150 bolt pattern plastic rings. Remove old ring to be replaced then simply place the split ring sections around hub and install flange bolts (not included) through special designed section overlap to hold in position. Install appropriate user supplied bolts, washers and gasket (see Flange Gasket and Bolt Hardware Kits in this catalog); torque to specifications according to normal flange assembly. Split rings are a set of either 2-pieces or 4-pieces (illustrated) sections depending on size, in regular PVC, Glass Filled PVC, or CPVC for flange type and sizes listed.



PVC Flange Replacement Split Rings

For Spears® flanges with regular PVC Rings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
854P-005-1S	**1/2**	10	0	080	54.98
854P-007-1S	**3/4**	10	0	080	58.37
854P-010-1S	**1**	15	0	080	65.27
854P-012-1S	**1-1/4**	15	0	080	66.55
854P-015-1S	**1-1/2**	10	0	080	68.18
854P-020-1S	**2**	10	0	080	90.49
854P-025-1S	**2-1/2**	10	0	080	104.68
854P-030-1S	**3**	10	0	080	116.06
854P-040-1S	**4**	10	0	080	124.42
854P-050-1S	**5**	10	0	080	168.49
854P-060-1S	**6**	5	0	080	199.38
854P-080-1S	**8**	4	0	080	227.80
854P-100-1S	**10**	4	0	081	287.57
854P-120-1S	**12**	2	0	081	356.43
854P-140-1S	**14**	2	0	081	488.20
854P-160-1S	**16**	1	0	081	606.48
854P-180-1S	**18**	1	0	081	658.69
854P-200-1S	**20**	1	0	083	3496.06
854P-240-1S	**24**	1	0	083	4283.55

Fits 854-xxx Socket, 855-xxx Threaded, and 856-xxx Spigot hub configurations

Glass Filled PVC Flange Replacement Split Rings

For Spears® flanges with Glass Filled PVC Rings



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
854-030-1S	**3**	10	0	080	116.06
854-040-1S	**4**	10	0	080	124.42
854-050-1S	**5**	5	0	080	168.49
854-060-1S	**6**	5	0	080	199.38
854-080-1S	**8**	4	0	080	227.80
854-100-1S	**10**	4	0	081	287.57
854-120-1S	**12**	2	0	081	356.43
854-140-1S	**14**	2	0	081	488.20
854-160-1S	**16**	1	0	082	606.48
854-180-1S	**18**	1	0	082	658.69

Fits 854-xxx Socket, 855-xxx Threaded, and 856-xxx Spigot hub configurations

Flange Insulating Joints

Flange Insulating Joints - Class 150 Bolt Pattern



PP Flange Spacer with PVC Bolt Isolators

Size = Nominal Flange Diameter x Thickness (in.)
For Dielectric Insulation Between Dissimilar Metal Flanges
300 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
IJ-030-010P	**3X1**	1	0	016	460.69
IJ-040-010P	**4X1**	1	0	016	514.74
IJ-060-010P	**6X1**	1	0	016	611.82
IJ-080-010P	**8X1**	1	0	016	710.06
IJ-100-010P	**10X1**	1	0	016	1443.20
IJ-120-010P	**12X1**	1	0	016	1563.13
IJ-140-010P	**14X1**	1	0	016	2025.46
IJ-160-010P	**16X1**	1	0	016	2573.78
IJ-180-010P	**18X1**	1	0	016	3445.23
IJ-200-010P	**20X1**	1	0	016	4447.74
IJ-240-010P	**24X1**	1	0	016	6177.09

Flange Insulating Joints - Class 300 Bolt Pattern



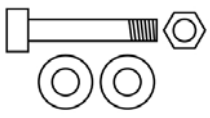
PP Flange Spacer with PVC Bolt Isolators

Size = Nominal Flange Diameter x Thickness (in.)
For Dielectric Insulation Between Dissimilar Metal Flanges
300 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
IJ300-030-010P	**3X1**	1	0	016	678.67
IJ300-040-010P	**4X1**	1	0	016	754.83
IJ300-060-010P	**6X1**	1	0	016	1156.18
IJ300-080-010P	**8X1**	1	0	016	1442.38
IJ300-100-010P	**10X1**	1	0	016	2392.84
IJ300-120-010P	**12X1**	1	0	016	3144.45
IJ300-140-010P	**14X1**	1	0	016	3961.23
IJ300-160-010P	**16X1**	1	0	016	4223.97
IJ300-180-010P	**18X1**	1	0	016	5278.95
IJ300-200-010P	**20X1**	1	0	016	6116.11
IJ300-240-010P	**24X1**	1	0	016	7509.49

Flange Bolt Kits

Bolt Kit Selection Guide



Order Gaskets & Bolt Kits Separately

- Kit Contains All Bolts, Nuts, & Flat Washers for Specified Flange Size
- For Connecting Two (2) Mating Spears® Flanges
- Pre-coated, Anti-seize Lubricated Bolts
- Available in Zinc Coated Steel, Type 304 Stainless Steel or Type 316 Stainless Steel

Flange Size	Bolts[1] Per Kit	Diameter (in.-TPI)	Length (in.)	Hardware Kit Part Number		
				Zinc	316 SS	304 SS
1/2 & 3/4	4	1/2-13	2	HK-005	HK1-005	HK2-005
1 & 1-1/4	4	1/2-13	2-1/4	HK-010	HK1-010	HK2-010
1-1/2	4	1/2-13	2-1/2	HK-015	HK1-015	HK2-015
2	4	5/8-11	3	HK-020	HK1-020	HK2-020
2-1/2	4	5/8-11	3-1/4	HK-025	HK1-025	HK2-025
3	4	5/8-11	3-1/2	HK-030	HK1-030	HK2-030
4	8	5/8-11	3-1/2	HK-040	HK1-040	HK2-040
5 & 6	8	3/4-10	4	HK-060	HK1-060	HK2-060
8	8	3/4-10	4-1/2	HK-080	HK1-080	HK2-080
10 & 12	12	7/8-9	5	HK-120	HK1-120	HK2-120

1 - Each Bolt includes Nut & two (2) Flat Washers

Zinc Plated Steel Flange Bolt Hardware Kits



For Connection of 2-Spears® Flanges Inlcudes Bolts, Nuts & Flat Washers

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HK-005	**1/2**	1	10	017	10.03
HK-010	**3/4 & 1**	1	10	017	12.54
HK-015	**1-1/4 & 1-1/2**	1	10	017	18.85
HK-020	**2**	1	10	017	25.23
HK-025	**2-1/2**	1	10	017	30.25
HK-030	**3**	1	10	017	34.81
HK-040	**4**	1	5	017	72.12
HK-060	**5 & 6**	1	5	017	80.21
HK-080	**8**	1	0	017	94.00
HK-120	**10 & 12**	1	0	017	127.18

Type 316 Stainless Steel Flange Bolt Hardware Kits



For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HK1-005	**1/2**	1	10	017	30.11
HK1-010	**3/4 & 1**	1	10	017	43.37
HK1-015	**1-1/4 & 1-1/2**	1	10	017	47.78
HK1-020	**2**	1	10	017	57.46
HK1-025	**2-1/2**	1	10	017	61.59
HK1-030	**3**	1	10	017	81.26
HK1-040	**4**	1	5	017	162.96
HK1-060	**5 & 6**	1	5	017	212.54
HK1-080	**8**	1	0	017	266.69
HK1-120	**10 & 12**	1	0	017	542.58

Type 304 Stainless Steel Flange Bolt Hardware Kits



For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HK2-005	**1/2**	1	10	017	26.34

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Flange Bolt Kits

Type 304 Stainless Steel Flange Bolt Hardware Kits (continued)

For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HK2-010	**3/4 & 1**	1	10	017	37.57
HK2-015	**1-1/4 & 1-1/2**	1	10	017	44.26
HK2-020	**2**	1	10	017	52.06
HK2-025	**2-1/2**	1	10	017	55.20
HK2-030	**3**	1	10	017	68.55
HK2-040	**4**	1	5	017	137.09

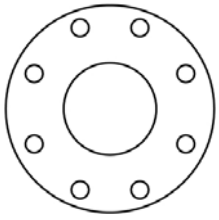
Type 304 Stainless Steel Flange Bolt Hardware Kits (continued)

For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HK2-060	**5 & 6**	1	5	017	144.51
HK2-080	**8**	1	0	017	190.02
HK2-120	**10 & 12**	1	0	017	336.78

Full-Faced Flange Gaskets

Gasket Selection Guide



Order Gaskets & Bolt Kits Separately

- 1/8" Full-Face design with ANSI Class 150 Bolt Patterns
- Pressure rated to 150 psi @ 73°F
- Available in Buna-N, EPDM, or FKM

Flange Size	Bolt Holes	Gasket Part Number		
		Buna-N	EPDM	FKM
1/2	4	GK1-005	GK2-005	GK3-005
3/4	4	GK1-007	GK2-007	GK3-007
1	4	GK1-010	GK2-010	GK3-010
1-1/4	4	GK1-012	GK2-012	GK3-012
1-1/2	4	GK1-015	GK2-015	GK3-015
2	4	GK1-020	GK2-020	GK3-020
2-1/2	4	GK1-025	GK2-025	GK3-025
3	4	GK1-030	GK2-030	GK3-030
4	8	GK1-040	GK2-040	GK3-040
5	8	GK1-050	GK2-050	GK3-050
6	8	GK1-060	GK2-060	GK3-060
8	8	GK1-080	GK2-080	GK3-080
10	12	GK1-100	GK2-100	GK3-100
12	12	GK1-120	GK2-120	GK3-120

Buna-N Full-Faced Flange Gaskets

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK1-005	**1/2**	1	25	017	3.22
GK1-007	**3/4**	1	25	017	3.69
GK1-010	**1**	1	25	017	3.80
GK1-012	**1-1/4**	1	25	017	3.89
GK1-015	**1-1/2**	1	25	017	4.18
GK1-020	**2**	1	25	017	4.67
GK1-025	**2-1/2**	1	25	017	5.14
GK1-030	**3**	1	25	017	7.91
GK1-040	**4**	1	25	017	8.84
GK1-050	**5**	1	25	017	10.48
GK1-060	**6**	1	25	017	10.77
GK1-080	**8**	1	25	017	14.20
GK1-100	**10**	1	25	017	18.02
GK1-120	**12**	1	25	017	24.31
GK1-140	**14**	1	25	017	47.02
GK1-160	**16**	1	25	017	226.21
GK1-180	**18**	1	25	017	257.63
GK1-240	**24**	1	25	017	311.31

EPDM Full-Faced Flange Gaskets

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK2-005	**1/2**	1	25	017	4.27
GK2-007	**3/4**	1	25	017	4.55
GK2-010	**1**	1	25	017	4.75
GK2-012	**1-1/4**	1	25	017	4.99
GK2-015	**1-1/2**	1	25	017	5.36
GK2-020	**2**	1	25	017	6.54
GK2-025	**2-1/2**	1	25	017	7.85
GK2-030	**3**	1	25	017	11.54
GK2-040	**4**	1	25	017	13.14

EPDM Full-Faced Flange Gaskets (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK2-050	**5**	1	25	017	16.43
GK2-060	**6**	1	25	017	17.24
GK2-080	**8**	1	25	017	22.97
GK2-100	**10**	1	25	017	29.93
GK2-120	**12**	1	25	017	41.18
GK2-140	**14**	1	25	017	100.45
GK2-160	**16**	1	25	017	178.22
GK2-180	**18**	1	25	017	208.16
GK2-200	**20**	1	25	017	241.60
GK2-240	**24**	1	25	017	364.73

FKM Full-Faced Flange Gaskets

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK3-005	**1/2**	1	25	017	15.25
GK3-007	**3/4**	1	25	017	18.11
GK3-010	**1**	1	25	017	20.01
GK3-012	**1-1/4**	1	5	017	22.59
GK3-015	**1-1/2**	1	25	017	28.49
GK3-020	**2**	1	25	017	39.83
GK3-025	**2-1/2**	1	25	017	53.27
GK3-030	**3**	1	25	017	119.04
GK3-040	**4**	1	25	017	137.42
GK3-050	**5**	1	25	017	160.20
GK3-060	**6**	1	25	017	181.75
GK3-160	**16**	1	25	017	810.63
GK3-180	**18**	1	25	017	912.00
GK3-080	**8**	1	25	017	258.94
GK3-100	**10**	1	25	017	344.42
GK3-120	**12**	1	25	017	485.28
GK3-140	**14**	1	25	017	711.26
GK3-240	**24**	1	25	017	1160.91

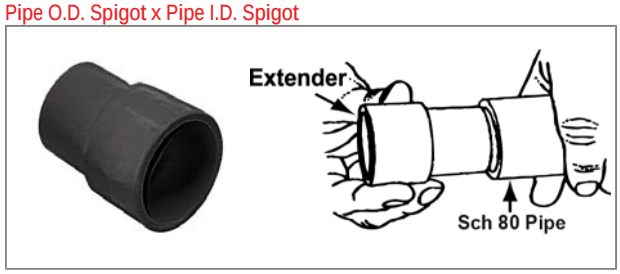
Schedule 80 Repair Fittings

Pipe Extenders

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Pipe O.D. Spigot x Pipe I.D. Spigot					
Fabricated, Non-Pressure Rated					
S0801-20F	**2**	1	10	394	77.56
S0801-25F	**2-1/2**	1	8	394	89.75
S0801-30F	**3**	1	8	394	101.57
S0801-40F	**4**	1	12	394	110.11
S0801-60F	**6**	1	10	394	147.05
S0801-80F	**8**	1	2	394	158.75
S0801-100F	**10**	1	0	394	206.61
S0801-120F	**12**	1	0	394	290.18
S0801-140F	**14**	1	0	394	823.37
S0801-160F	**16**	1	0	394	963.62
S0801-180F	**18**	1	0	394	1264.79

Pipe Extenders (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Pipe O.D. Spigot x Pipe I.D. Spigot					



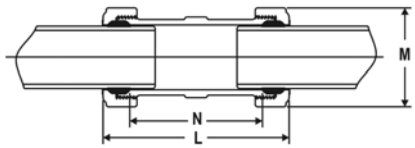
Compression Couplings



- Designed for Quick Connections, System Modifications or Repairs
- Completely Redesigned for Improved Versatility
- Easy-Thread Compression Nut
- New Spigot Conversion Capability
- Full Service 200 PSI Pressure Rating
- NSF® Certified for Potable Water Use

Basic Dimensions

Part Number	Size (in.)	L	M	N
S110-05G	1/2	5-3/16	1-3/16	3-3/8
S110-07G	3/4	5-7/16	2-1/16	3-9/16
S110-10G	1	5-11/16	2-7/16	3-3/4
S110-12G	1-1/4	6-1/4	2-15/16	4-1/8
S110-15G	1-1/2	6-1/2	3-5/16	4-5/8
S110-20G	2	7-1/8	3-3/4	5-1/16
S110-25G	2-1/2	8-11/16	4-11/16	5-7/8
S110-30G	3	9-1/2	5-1/2	6-3/16
S110-40G	4	11-5/16	6-3/4	7-3/8
S110-60G	6	11-5/8	9-5/16	7-9/16



N = Maximum allowable space between pipe ends.
NOTE: Decreasing distance between pipe ends improves stability and is recommended.

PVC Gray

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
EPDM Gasket					
S110E-05G	**1/2**	28	0	024	4.60
S110E-07G	**3/4**	24	0	024	6.17
S110E-10G	**1**	15	0	024	7.96
S110E-12G	**1-1/4**	10	0	024	12.27
S110E-15G	**1-1/2**	16	0	024	12.67
S110E-20G	**2**	12	0	024	16.44
S110E-25G	**2-1/2**	6	0	024	30.96
S110E-30G	**3**	4	0	024	40.48
S110E-40G	**4**	4	0	024	66.60
S110E-60G	**6**	1	0	024	151.46

Compression Coupling Nut Wrenches



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CCW-005	**1/2**	1	50	299	11.93

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Compression Coupling Nut Wrenches (continued)

CCW-007	**3/4**	1	50	299	12.14
CCW-010	**1**	1	50	299	12.65
CCW-012	**1-1/4**	1	50	299	14.32
CCW-015	**1-1/2**	1	50	299	15.44
CCW-020*	**2**	1	50	299	17.25
CCW-030**	**3**	1	25	299	21.22
CCW-060	**6**	8	0	299	31.92

* CCW-20 - Wrench also fits 2-1/2" Coupling Body
**CCW-30 - Wrench also fits 4" Coupling Body

Compression Coupling Nut Wrench Set

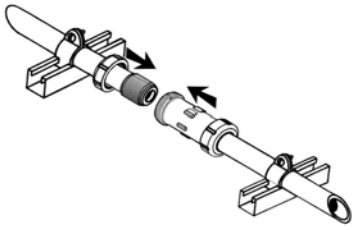
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CCW-000	**Set**	1	25	299	99.68
Complete Set of Wrenches, Sizes 1/2 - 3					

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

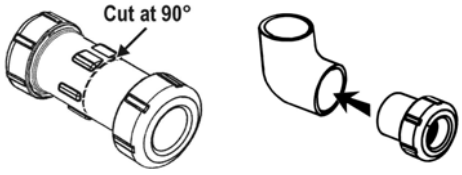
Easy Installation

Spears® Compression Couplings easily install by simply sliding nut over pipe, slip on gasket, then insert into body and tighten nuts.



Convert Fittings to Compression Outlet

Socket-type fittings 3/4" through 3" can be easily converted to compression outlet sizes 1/2" through 2-1/2" by simply cutting the Compression Coupling at the center holding ribs and solvent welding the spigot body into a fitting socket.



Compression Coupling Size (in.)	Body Spigot Size (in.)
1/2	3/4
3/4	1
1	1-1/4
1-1/4	1-1/2
1-1/2	2
2	2-1/2
2-1/2	3

Important Installation Note

WARNING: The compression joints provide a positive seal but do not restrain pipe from thrusts and movement under pressure. Use of compression joint requires blocking connecting pipe to prevent any movement. Failure to do so can result in system failure or severe personal injury. Use in cold water/fluid applications only.

PVC Cut-in Kit

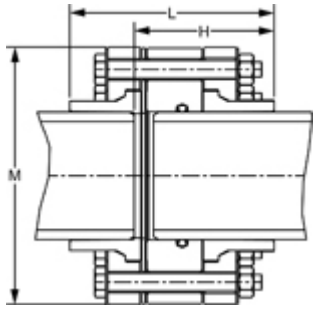
When planned system changes are needed, system downtime can be a major concern. Spears® Flange Cut-in Kit minimizes downtime for actual cut-in to allow new connection in just minutes. Kit provides all necessary components to create a flanged joint for connection to system alterations in just minutes. Special Flange Hub can be cemented to piping and allowed to cure before shutting down and cutting into system. This allows immediate joining to mating flange (included) that can also be pre-assembled to desired alteration piping.

Kit includes special Split Flange Socket Hub, O-ring Sealed Hub Body, Stainless Steel Clamp, Split Ring, Full-Faced EPDM or FKM Gasket, Mating Flange Hub & Ring, and complete set of Stainless Steel Bolts, Flat Washers and anti-seize Brass Nuts to make the final joint. Available for IPS Pipe Sizes 2" - 12".



Pressure Rated to 150 psi @ 73°F (22°C)
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

Size (in.)	H	L	M
2	2-3/8	4-7/8	6
2-1/2	3-3/4	5-1/2	7
3	4	5-7/8	7-1/2
4	4-7/8	7-1/8	9
6	5-7/8	9	11
8	6-3/4	10-7/8	13-1/2
10	8-3/8	13-1/2	16
12	10	16-3/4	19



Flange Cut-in Kit

Size	EPDM Gasket	FKM Gasket	Std Pk	Mstr Pk	Disc Code
2	FCKE-020 **420.53**	FCKV-020 **443.58**	1	4	017
2-1/2	FCKE-025 **471.37**	FCKV-025 **500.84**	1	0	017
3	FCKE-030 **529.09**	FCKV-030 **559.55**	1	0	017
4	FCKE-040 **877.26**	FCKV-040 **921.29**	1	0	017
6	FCKE-060 **1450.42**	FCKV-060 **1728.95**	1	0	017
8	FCKE-080 **1758.00**	FCKV-080 **2119.16**	1	0	017
10	FCKE-100 **3057.58**	FCKV-100 **3277.35**	1	0	017
12	FCKE-120 **3784.98**	FCKV-120 **3898.81**	1	0	017

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Gauge Guards



Connections use Spears® Patented Special Reinforced (SR)
Female Threads on Pressure Inlet (1/4" or 1/2")

Pressure Rating
235 psi @ 73°F
16 BAR @ 22°C
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply
Rated for Full Vacuum Service

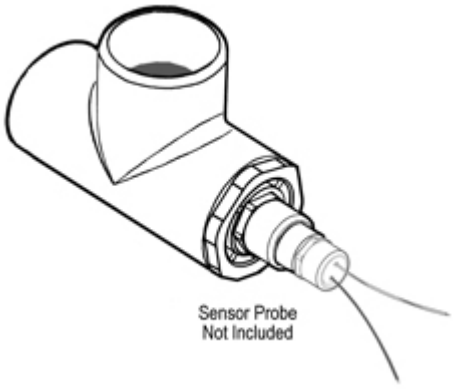
Gauge Guards are pre-filled with glycerin-water
on units with Factory Installed Gauges.
"No Gauge" units are to be filled by end user.

PVC GAUGE GUARDS

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Disc Code
PTFE Diaphragm					
No Gauge	G0004-002 **103.83**	G0004-005 **103.83**	1	18	624
0-30 in-Hg	G30V4-002 **175.28**	G30V4-005 **175.28**	1	18	624
0-15 psi	G0154-002 **165.69**	G0154-005 **165.69**	1	18	624
0-30 psi	G0304-002 **165.69**	G0304-005 **165.69**	1	18	624
0-60 psi	G0604-002 **165.69**	G0604-005 **165.69**	1	18	624
0-100 psi	G1004-002 **165.69**	G1004-005 **165.69**	1	18	624
0-160 psi	G1604-002 **165.69**	G1604-005 **165.69**	1	18	624
0-200 psi	G2004-002 **165.69**	G2004-005 **165.69**	1	18	624
0-300 psi	G3004-002 **165.69**	G3004-005 **165.69**	1	18	624
FKM Diaphragm					
No Gauge	G0003-002 **103.83**	G0003-005 **103.83**	1	18	624
0-30 in-Hg	G30V3-002 **175.28**	G30V3-005 **175.28**	1	18	624
0-15 psi	G0153-002 **165.69**	G0153-005 **165.69**	1	18	624
0-30 psi	G0303-002 **165.69**	G0303-005 **165.69**	1	18	624
0-60 psi	G0603-002 **165.69**	G0603-005 **165.69**	1	18	624
0-100 psi	G1003-002 **165.69**	G1003-005 **165.69**	1	18	624
0-160 psi	G1603-002 **165.69**	G1603-005 **165.69**	1	18	624
0-200 psi	G2003-002 **165.69**	G2003-005 **165.69**	1	18	624
0-300 psi	G3003-002 **165.69**	G3003-005 **165.69**	1	18	624
EPDM Diaphragm					
No Gauge	G0002-002 **99.63**	G0002-005 **99.63**	1	18	624
0-30 in-Hg	G30V2-002 **168.24**	G30V2-005 **168.24**	1	18	624
0-15 psi	G0152-002 **159.12**	G0152-005 **159.12**	1	18	624
0-30 psi	G0302-002 **159.12**	G0302-005 **159.12**	1	18	624
0-60 psi	G0602-002 **159.12**	G0602-005 **159.12**	1	18	624
0-100 psi	G1002-002 **159.12**	G1002-005 **159.12**	1	18	624
0-160 psi	G1602-002 **159.12**	G1602-005 **159.12**	1	18	624
0-200 psi	G2002-002 **159.12**	G2002-005 **159.12**	1	18	624

PVC GAUGE GUARDS (continued)

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Disc Code
EPDM Diaphragm					
0-300 psi	G3002-002 **159.12**	G3002-005 **159.12**	1	18	624



Use with a wide variety of commercial sensor probes including pressure, temperature, pH, ORP (REDOX), Conductivity, Dissolved Oxygen and other specialty electrodes that are used in industrial, municipal water, wastewater treatment, solid landfills, chemical manufacturing, electroplating, boilers and cooling towers, pulp and paper, DI water skids, pool & spa and other OEM applications. Features Spears® patented Special Reinforced (SR) female plastic thread connection that eliminates splitting from inadvertent over tightening.

- Centers Probe in Fluid Stream
- Suitable for Horizontal or Vertical Installations
- Available in 1/2" Through 8" Tee Configuration with 1/2", 3/4" or 1" NPT Connection

PVC Instrument Probe Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Special Reinforced					
803-005SR	**1/2**	25	0	086	7.12
803-095SR	**3/4X1/2X3/4**	15	0	086	13.19
803-007SR	**3/4**	15	0	086	11.27
803-113SR	**1X1/4X1**	15	0	086	30.93
803-122SR	**1X1/2X1**	15	0	086	12.11
803-126SR	**1X3/4X1**	15	0	086	16.95
803-010SR	**1**	15	0	086	13.21
803-142SR	**1-1/4X1/2X1-1/4**	10	0	086	20.92
803-149SR	**1-1/4X3/4X1-1/4**	10	0	086	21.16
803-159SR	**1-1/4X1X1-1/4**	10	0	086	21.82
803-177SR	**1-1/2X1/2X1-1/2**	10	0	086	23.93
803-188SR	**1-1/2X3/4X1-1/2**	10	0	086	24.41
803-197SR	**1-1/2X1X1-1/2**	10	0	086	25.41
803-221SR	**2X1/2X2**	10	0	086	34.03
803-227SR	**2X3/4X2**	15	0	086	35.61
803-233SR	**2X1X2**	4	0	086	36.59
803-333SR	**3X1/2X3**	5	0	086	50.87
803-334SR	**3X3/4X3**	5	0	086	52.53
803-335SR	**3X1X3**	5	0	086	53.97
803-415SR	**4X1/2X4**	4	0	086	79.11
803-416SR	**4X3/4X4**	4	0	086	82.42
803-417SR	**4X1X4**	4	0	086	85.11
803-523SR	**6X1/2X6**	2	0	086	162.76
803-524SR	**6X3/4X6**	2	0	086	167.78
803-525SR	**6X1X6**	2	0	086	170.51
803-573SR	**8X1/2X8**	1	0	086	335.07
803-574SR	**8X3/4X8**	1	0	086	340.11
803-575SR	**8X1X8**	1	0	086	344.76

True Union 2000 Industrial Ball Valves



Socket Style



SR Threaded Style



6" Lever Handle Style

Pressure Rating @ 73°F (23°C), Water

1/2" - 4"	235 psi
6" - 8"	150 psi
All Flanged	150 psi

Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service

Note: Standard 6" Valve uses lockout type Lever-Style Handle for proper leverage. Non-locking T-Handle is more compact, but will increase difficulty of operation.
True Union 2000 Industrial Ball Valves have Built-in Handle Lockouts (except 6" T-Handle Option)
All Valves Assembled with Silicone-Free, Water Soluble Lubricant
Contact Spears® for Pricing on Custom Elastomer Seals
See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

PVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded & Socket Ends					
1/2	1829-005 **49.69**	1839-005 **55.27**	1	18	600
3/4	1829-007 **58.80**	1839-007 **65.41**	1	18	600
1	1829-010 **70.02**	1839-010 **77.99**	1	12	600
1-1/4	1829-012 **96.86**	1839-012 **123.64**	1	8	600
1-1/2	1829-015 **116.67**	1839-015 **129.52**	1	8	600
2	1829-020 **153.96**	1839-020 **169.54**	1	4	600
Socket Ends					
2-1/2	1822-025 **295.95**	1832-025 **401.01**	1	0	601
3	1822-030 **390.18**	1832-030 **433.54**	1	0	601
4	1822-040 **659.24**	1832-040 **732.49**	1	0	601
6	1822-060 **1424.09**	1832-060 **1580.38**	1	0	612
8	1822-080 **1894.05**	1832-080 **2101.91**	1	0	612
8" Venturied valves are 6" ball valves fitted with 6x8 end connector adapters.					
Threaded Ends					
2-1/2	1821-025 **295.95**	1831-025 **401.01**	1	0	601
3	1821-030 **390.18**	1831-030 **433.54**	1	0	601
4	1821-040 **659.24**	1831-040 **732.49**	1	0	601
6	1821-060 **1424.09**	1831-060 **1580.38**	1	0	612
SR Threaded Ends					
1/2	1821-005SR **50.75**	1831-005SR **56.36**	1	18	600
3/4	1821-007SR **61.36**	1831-007SR **68.00**	1	18	600
1	1821-010SR **72.59**	1831-010SR **80.56**	1	12	600
1-1/4	1821-012SR **104.58**	1831-012SR **131.37**	1	8	600
1-1/2	1821-015SR **124.98**	1831-015SR **137.82**	1	8	600
2	1821-020SR **162.95**	1831-020SR **178.36**	1	4	600
2-1/2	1821-025SR **320.13**	1831-025SR **425.16**	1	0	601
3	1821-030SR **414.37**	1831-030SR **457.72**	1	0	601
4	1821-040SR **687.47**	1831-040SR **760.73**	1	0	601
6	1821-060SR **1464.37**	1831-060SR **1620.63**	1	0	612

PVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Spigot Ends					
1/2	1827-005 **49.69**	1837-005 **55.27**	1	18	600
3/4	1827-007 **58.80**	1837-007 **65.41**	1	18	600
1	1827-010 **70.02**	1837-010 **77.99**	1	12	600
1-1/4	1827-012 **96.86**	1837-012 **123.64**	1	8	600
1-1/2	1827-015 **116.67**	1837-015 **129.52**	1	8	600
2	1827-020 **153.96**	1837-020 **169.54**	1	4	600
2-1/2	1827-025 **295.95**	1837-025 **401.01**	1	0	601
3	1827-030 **390.18**	1837-030 **433.54**	1	0	601
4	1827-040 **659.24**	1837-040 **732.49**	1	0	601
6	1827-060 **1424.09**	1837-060 **1580.38**	1	0	612
Flanged Ends					
1/2	1823-005 **71.08**	1833-005 **75.81**	1	8	600
3/4	1823-007 **90.04**	1833-007 **97.95**	1	8	600
1	1823-010 **108.98**	1833-010 **117.21**	1	8	600
1-1/4	1823-012 **127.97**	1833-012 **142.17**	1	8	600
1-1/2	1823-015 **161.16**	1833-015 **175.36**	1	4	600
2	1823-020 **256.61**	1833-020 **272.17**	1	0	600
2-1/2	1823-025 **473.91**	1833-025 **481.75**	1	0	601
3	1823-030 **523.81**	1833-030 **650.35**	1	0	601
4	1823-040 **1053.20**	1833-040 **1220.83**	1	0	601
6	1823-060 **2242.47**	1833-060 **2600.11**	1	0	612
8	1823-080 **2982.48**	1833-080 **3458.14**	1	0	612
8" Venturied valves are 6" ball valves fitted with 6x8 end connector adapters.					

PVC 6" Industrial T-Handle Valve Option (Non–Locking)

NOTICE: T-Handle is more compact, but will greatly increase difficulty of operation.

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket Ends					
6	18226-060 **1424.09**	18326-060 **1580.38**	1	0	612

True Union 2000 Industrial Ball Valves

PVC 6" Industrial T-Handle Valve Option (Non–Locking)

NOTICE: T-Handle is more compact, but will greatly increase difficulty of operation.

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded Ends					
6	18216-060 **1424.09**	18316-060 **1580.38**	1	0	612
SR Threaded Ends					
6	18216-060SR **1464.37**	18316-060SR **1620.63**	1	0	612
Flanged Ends					
6	18236-060 **2242.47**	18336-060 **2600.11**	1	0	612

True Union 2000 Industrial Vented/Bleach Ball Valves



Pressure Rating @ 73°F (23°C), Water

1/2" - 4"	235 psi
6"	150 psi
Flanged	150 psi

Same True Union 2000 Industrial Ball Valve with Special Ball Vent Design for Sodium Hypochlorite (Bleach) and other Chemical Applications where entrapped fluids may form caustic crystalline residues and pressure build up from gases developed. Valve has a 1/8" vent hole in ball to equalize internal fluid pressures. Install valve with ball vent on the pressure (upstream) side when in closed position.

All Valves assembled with Silicone-Free, Water Soluble Lubricant

Contact Spears® for Pricing & Availability on Custom Elastomer Seals. See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

PVC True Union 2000 Industrial Vented/Bleach Ball Valves

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded & Socket Ends					
1/2	1829V-005 **58.45**	1839V-005 **65.06**	1	18	600
3/4	1829V-007 **69.17**	1839V-007 **76.94**	1	18	600
1	1829V-010 **82.39**	1839V-010 **91.75**	1	12	600
1-1/4	1829V-012 **113.97**	1839V-012 **145.45**	1	8	600
1-1/2	1829V-015 **137.25**	1839V-015 **152.38**	1	8	600
2	1829V-020 **181.12**	1839V-020 **199.46**	1	4	600
Socket Ends					
2-1/2	1822V-025 **348.17**	1832V-025 **471.76**	1	0	601
3	1822V-030 **390.18**	1832V-030 **510.03**	1	0	601
4	1822V-040 **659.24**	1832V-040 **861.75**	1	0	601
6	1822V-060 **1675.42**	1832V-060 **1975.46**	1	0	612
SR Threaded Ends					
1/2	1821V-005SR **59.72**	1831V-005SR **66.32**	1	18	600
3/4	1821V-007SR **72.18**	1831V-007SR **79.99**	1	18	600
1	1821V-010SR **85.41**	1831V-010SR **94.79**	1	12	600
1-1/4	1821V-012SR **123.04**	1831V-012SR **154.54**	1	8	600
1-1/2	1821V-015SR **147.04**	1831V-015SR **162.16**	1	8	600

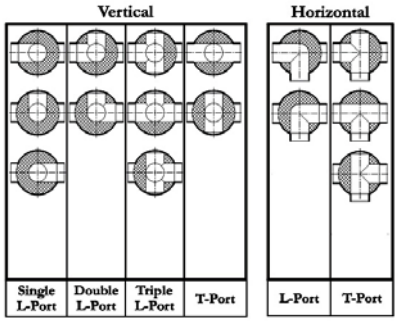
PVC True Union 2000 Industrial Vented/Bleach Ball Valves (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
SR Threaded Ends					
2	1821V-020SR **191.71**	1831V-020SR **209.82**	1	4	600
2-1/2	1821V-025SR **376.62**	1831V-025SR **500.19**	1	0	601
3	1821V-030SR **487.51**	1831V-030SR **538.48**	1	0	601
4	1821V-040SR **808.78**	1831V-040SR **894.98**	1	0	601
Flanged Ends					
1/2	1823V-005 **83.76**	1833V-005 **89.47**	1	8	600
3/4	1823V-007 **105.95**	1833V-007 **115.22**	1	8	600
1	1823V-010 **128.21**	1833V-010 **137.87**	1	8	600
1-1/4	1823V-012 **150.56**	1833V-012 **206.28**	1	8	600
1-1/2	1823V-015 **189.60**	1833V-015 **206.28**	1	4	600
2	1823V-020 **301.89**	1833V-020 **320.20**	1	0	600
2-1/2	1823V-025 **557.54**	1833V-025 **566.75**	1	0	601
3	1823V-030 **616.24**	1833V-030 **765.09**	1	0	601
4	1823V-040 **1239.06**	1833V-040 **1436.28**	1	0	601
6	1823V-060 **2638.22**	1833V-060 **3058.95**	1	0	612

True Union 2000 Industrial 3-Way Ball Valves

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
2-1/2" - 4" 150 psi
Flanged 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply
Vertical 3-Way or Horizontal Diverter Design
(No Branch Shut-off)
All Standard Carton Quantities are one
All Valves assembled with Silicone-Free,
Water Soluble Lubricant
See Ball Valve Accessories & Repair Kits Section
for Additional Options and Features

Ball Port Options



Ball port options viewed from top of valve



Horizontal Diverter Valve



Vertical 3-Way Valve

PVC Horizontal Diverter Ball Valves

Material		EPDM				FKM				Disc Code
Joint		Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Ball Port	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	L-Port	5022L1-005 102.54	5021L1-005SR 105.85	5027L1-005 102.54	5023L1-005 209.43	5032L1-005 111.22	5031L1-005SR 116.24	5037L1-005 111.22	5033L1-005 218.79	615
	T-Port	5022T1-005 102.54	5021T1-005SR 105.85	5027T1-005 102.54	5023T1-005 209.43	5032T1-005 111.22	5031T1-005SR 116.24	5037T1-005 111.22	5033T1-005 218.79	615
3/4	L-Port	5022L1-007 122.29	5021L1-007SR 126.36	5027L1-007 122.29	5023L1-007 219.13	5032L1-007 131.63	5031L1-007SR 135.73	5037L1-007 131.63	5033L1-007 231.24	615
	T-Port	5022T1-007 122.29	5021T1-007SR 126.36	5027T1-007 122.29	5023T1-007 219.13	5032T1-007 131.63	5031T1-007SR 135.73	5037T1-007 131.63	5033T1-007 231.24	615
1	L-Port	5022L1-010 148.27	5021L1-010SR 152.26	5027L1-010 148.27	5023L1-010 312.32	5032L1-010 163.35	5031L1-010SR 167.40	5037L1-010 163.35	5033L1-010 341.42	615
	T-Port	5022T1-010 148.27	5021T1-010SR 152.26	5027T1-010 148.27	5023T1-010 312.32	5032T1-010 163.35	5031T1-010SR 167.40	5037T1-010 163.35	5033T1-010 341.42	615
1-1/4	L-Port	5022L1-012 171.86	5021L1-012SR 179.63	5027L1-012 171.86	5023L1-012 590.69	5032L1-012 193.32	5031L1-012SR 201.44	5037L1-012 193.32	5033L1-012 625.67	615
	T-Port	5022T1-012 171.86	5021T1-012SR 179.63	5027T1-012 171.86	5023T1-012 590.69	5032T1-012 193.32	5031T1-012SR 201.44	5037T1-012 193.32	5033T1-012 625.67	615
1-1/2	L-Port	5022L1-015 200.95	5021L1-015SR 213.94	5027L1-015 200.95	5023L1-015 608.53	5032L1-015 220.00	5031L1-015SR 232.98	5037L1-015 220.00	5033L1-015 636.42	615
	T-Port	5022T1-015 200.95	5021T1-015SR 213.94	5027T1-015 200.95	5023T1-015 608.53	5032T1-015 220.00	5031T1-015SR 232.98	5037T1-015 220.00	5033T1-015 636.42	615
2	L-Port	5022L1-020 246.51	5021L1-020SR 259.48	5027L1-020 246.51	5023L1-020 790.23	5032L1-020 287.39	5031L1-020SR 301.48	5037L1-020 287.39	5033L1-020 829.91	615
	T-Port	5022T1-020 246.51	5021T1-020SR 259.48	5027T1-020 246.51	5023T1-020 790.23	5032T1-020 287.39	5031T1-020SR 301.48	5037T1-020 287.39	5033T1-020 829.91	615
2-1/2	L-Port	5022L1-025 831.12	5021L1-025SR 867.49	5027L1-025 831.12	5023L1-025 1387.52	5032L1-025 883.79	5031L1-025SR 920.15	5037L1-025 883.79	5033L1-025 1626.02	615
	T-Port	5022T1-025 831.12	5021T1-025SR 867.49	5027T1-025 831.12	5023T1-025 1387.52	5032T1-025 883.79	5031T1-025SR 920.15	5037T1-025 883.79	5033T1-025 1626.02	615
3	L-Port	5022L1-030 848.09	5021L1-030SR 886.21	5027L1-030 848.09	5023L1-030 1405.72	5032L1-030 897.64	5031L1-030SR 934.00	5037L1-030 897.64	5033L1-030 1633.48	615
	T-Port	5022T1-030 848.09	5021T1-030SR 886.21	5027T1-030 848.09	5023T1-030 1405.72	5032T1-030 897.64	5031T1-030SR 934.00	5037T1-030 897.64	5033T1-030 1633.48	615
4	L-Port	5022L1-040 1535.97	5021L1-040SR 1577.56	5027L1-040 1535.97	5023L1-040 2042.29	5032L1-040 1553.29	5031L1-040SR 1594.87	5037L1-040 1553.29	5033L1-040 2232.33	615
	T-Port	5022T1-040 1535.97	5021T1-040SR 1577.56	5027T1-040 1535.97	5023T1-040 2042.29	5032T1-040 1553.29	5031T1-040SR 1594.87	5037T1-040 1553.29	5033T1-040 2232.33	615

PVC Vertical 3-Way Ball Valves

Material		EPDM				FKM				Disc Code
Joint		Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Ball Port	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	L-Port	4722L1-005 102.03	4721L1-005SR 103.65	4727L1-005 102.03	4723L1-005 210.83	4732L1-005 110.51	4731L1-005SR 112.15	4737L1-005 110.51	4733L1-005 218.43	615
	Double L-Port	4722L2-005 203.20	4721L2-005SR 204.83	4727L2-005 203.20	4723L2-005 311.99	4732L2-005 211.68	4731L2-005SR 213.33	4737L2-005 211.68	4733L2-005 319.60	615
	Triple L-Port	4722L3-005 203.20	4721L3-005SR 204.83	4727L3-005 203.20	4723L3-005 311.99	4732L3-005 211.68	4731L3-005SR 213.33	4737L3-005 211.68	4733L3-005 319.60	615
	T-Port	4722T1-005 102.03	4721T1-005SR 103.65	4727T1-005 102.03	4723T1-005 210.83	4732T1-005 110.51	4731T1-005SR 112.15	4737T1-005 110.51	4733T1-005 218.43	615
3/4	L-Port	4722L1-007 119.68	4721L1-007SR 123.78	4727L1-007 119.68	4723L1-007 221.38	4732L1-007 130.43	4731L1-007SR 134.49	4737L1-007 130.43	4733L1-007 230.74	615
	Double L-Port	4722L2-007 220.86	4721L2-007SR 224.92	4727L2-007 220.86	4723L2-007 322.56	4732L2-007 231.60	4731L2-007SR 235.66	4737L2-007 231.60	4733L2-007 331.89	615
	Triple L-Port	4722L3-007 220.86	4721L3-007SR 224.92	4727L3-007 220.86	4723L3-007 322.56	4732L3-007 231.60	4731L3-007SR 235.66	4737L3-007 231.60	4733L3-007 331.89	615
	T-Port	4722T1-007 119.68	4721T1-007SR 123.78	4727T1-007 119.68	4723T1-007 221.38	4732T1-007 130.43	4731T1-007SR 134.49	4737T1-007 130.43	4733T1-007 230.74	615
1	L-Port	4722L1-010 145.49	4721L1-010SR 149.58	4727L1-010 145.49	4723L1-010 315.78	4732L1-010 161.98	4731L1-010SR 166.03	4737L1-010 161.98	4733L1-010 341.77	615
	Double L-Port	4722L2-010 246.69	4721L2-010SR 250.76	4727L2-010 246.69	4723L2-010 416.96	4732L2-010 263.12	4731L2-010SR 267.20	4737L2-010 263.12	4733L2-010 442.94	615
	Triple L-Port	4722L3-010 246.69	4721L3-010SR 250.76	4727L3-010 246.69	4723L3-010 416.96	4732L3-010 263.12	4731L3-010SR 267.20	4737L3-010 263.12	4733L3-010 442.94	615
	T-Port	4722T1-010 145.49	4721T1-010SR 149.58	4727T1-010 145.49	4723T1-010 315.78	4732T1-010 161.98	4731T1-010SR 166.03	4737T1-010 161.98	4733T1-010 341.77	615
1-1/4	L-Port	4722L1-012 175.99	4721L1-012SR 184.15	4727L1-012 175.99	4723L1-012 595.20	4732L1-012 207.36	4731L1-012SR 215.49	4737L1-012 207.36	4733L1-012 629.48	615
	Double L-Port	4722L2-012 277.17	4721L2-012SR 285.31	4727L2-012 277.17	4723L2-012 696.36	4732L2-012 308.53	4731L2-012SR 316.65	4737L2-012 308.53	4733L2-012 730.66	615
	Triple L-Port	4722L3-012 277.17	4721L3-012SR 285.31	4727L3-012 277.17	4723L3-012 696.36	4732L3-012 308.53	4731L3-012SR 316.65	4737L3-012 308.53	4733L3-012 730.66	615
	T-Port	4722T1-012 175.99	4721T1-012SR 184.15	4727T1-012 175.99	4723T1-012 595.20	4732T1-012 207.36	4731T1-012SR 215.49	4737T1-012 207.36	4733T1-012 629.48	615
1-1/2	L-Port	4722L1-015 203.52	4721L1-015SR 216.54	4727L1-015 203.52	4723L1-015 617.38	4732L1-015 223.11	4731L1-015SR 236.11	4737L1-015 223.11	4733L1-015 636.42	615
	Double L-Port	4722L2-015 304.71	4721L2-015SR 317.68	4727L2-015 304.71	4723L2-015 718.53	4732L2-015 324.26	4731L2-015SR 337.26	4737L2-015 324.26	4733L2-015 737.58	615
	Triple L-Port	4722L3-015 304.71	4721L3-015SR 317.68	4727L3-015 304.71	4723L3-015 718.53	4732L3-015 324.26	4731L3-015SR 337.26	4737L3-015 324.26	4733L3-015 737.58	615
	T-Port	4722T1-015 203.52	4721T1-015SR 216.54	4727T1-015 203.52	4723T1-015 617.38	4732T1-015 223.11	4731T1-015SR 236.11	4737T1-015 223.11	4733T1-015 636.42	615
2	L-Port	4722L1-020 249.61	4721L1-020SR 263.73	4727L1-020 249.61	4723L1-020 795.60	4732L1-020 289.81	4731L1-020SR 303.92	4737L1-020 289.81	4733L1-020 830.80	615
	Double L-Port	4722L2-020 350.76	4721L2-020SR 364.91	4727L2-020 350.76	4723L2-020 896.78	4732L2-020 390.98	4731L2-020SR 405.07	4737L2-020 390.98	4733L2-020 931.93	615
	Triple L-Port	4722L3-020 350.76	4721L3-020SR 364.91	4727L3-020 350.76	4723L3-020 896.78	4732L3-020 390.98	4731L3-020SR 405.07	4737L3-020 390.98	4733L3-020 931.93	615
	T-Port	4722T1-020 249.61	4721T1-020SR 263.73	4727T1-020 249.61	4723T1-020 795.60	4732T1-020 289.81	4731T1-020SR 303.92	4737T1-020 289.81	4733T1-020 830.80	615
2-1/2	L-Port	4722L1-025 877.91	4721L1-025SR 914.28	4727L1-025 877.91	4723L1-025 1393.58	4732L1-025 887.78	4731L1-025SR 924.17	4737L1-025 887.78	4733L1-025 1624.14	615
	Double L-Port	4722L2-025 979.05	4721L2-025SR 1015.43	4727L2-025 979.05	4723L2-025 1494.75	4732L2-025 988.94	4731L2-025SR 1025.31	4737L2-025 988.94	4733L2-025 1725.31	615
	Triple L-Port	4722L3-025 979.05	4721L3-025SR 1015.43	4727L3-025 979.05	4723L3-025 1494.75	4732L3-025 988.94	4731L3-025SR 1025.31	4737L3-025 988.94	4733L3-025 1725.31	615
	T-Port	4722T1-025 877.91	4721T1-025SR 914.28	4727T1-025 877.91	4723T1-025 1393.58	4732T1-025 887.78	4731T1-025SR 924.17	4737T1-025 887.78	4733T1-025 1624.14	615
3	L-Port	4722L1-030 895.91	4721L1-030SR 932.28	4727L1-030 895.91	4723L1-030 1412.80	4732L1-030 903.87	4731L1-030SR 940.25	4737L1-030 903.87	4733L1-030 1634.89	615
	Double L-Port	4722L2-030 997.07	4721L2-030SR 1033.46	4727L2-030 997.07	4723L2-030 1513.98	4732L2-030 1005.05	4731L2-030SR 1041.41	4737L2-030 1005.05	4733L2-030 1736.04	615
	Triple L-Port	4722L3-030 997.07	4721L3-030SR 1033.46	4727L3-030 997.07	4723L3-030 1513.98	4732L3-030 1005.05	4731L3-030SR 1041.41	4737L3-030 1005.05	4733L3-030 1736.04	615
	T-Port	4722T1-030 895.91	4721T1-030SR 932.28	4727T1-030 895.91	4723T1-030 1412.80	4732T1-030 903.87	4731T1-030SR 940.25	4737T1-030 903.87	4733T1-030 1634.89	615
4	L-Port	4722L1-040 1548.61	4721L1-040SR 1590.18	4727L1-040 1548.61	4723L1-040 2053.91	4732L1-040 1563.68	4731L1-040SR 1605.25	4737L1-040 1563.68	4733L1-040 2151.25	615
	Double L-Port	4722L2-040 1649.80	4721L2-040SR 1691.34	4727L2-040 1649.80	4723L2-040 2155.07	4732L2-040 1664.85	4731L2-040SR 1706.43	4737L2-040 1664.85	4733L2-040 2252.42	615
	Triple L-Port	4722L3-040 1649.80	4721L3-040SR 1691.34	4727L3-040 1649.80	4723L3-040 2155.07	4732L3-040 1664.85	4731L3-040SR 1706.43	4737L3-040 1664.85	4733L3-040 2252.42	615
	T-Port	4722T1-040 1548.61	4721T1-040SR 1590.18	4727T1-040 1548.61	4723T1-040 2053.91	4732T1-040 1563.68	4731T1-040SR 1605.25	4737T1-040 1563.68	4733T1-040 2151.25	615

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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Tee-Style "Zero Dead-Leg" Ball Valves



Valves are produced to order in Ball Valve sizes 1/2" – 2". Tee Valves can be custom produced in any standard Tee and Valve size combination.

Pressure Rating @ 73°F (23°C), Water
Valve Sizes 1/2" - 2" (20mm - 63mm) = 235 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply

Additional Notes

The Tee Valve is assembled with socket end connector. Tee Valves are a non-stock configuration. All orders are non-cancelable, non-returnable.

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Mainline Socket Tee x Valve Socket					
1/2	182901-005 **163.19**	183901-005 **175.80**	1	12	263
3/4	182901-007 **178.35**	183901-007 **192.79**	1	8	263
1	182901-010 **181.71**	183901-010 **203.39**	1	8	263
2	182901-020 **301.16**	183901-020 **351.61**	1	0	263
3/4X1/2	182901-101 **165.91**	183901-101 **178.48**	1	12	263
1X1/2	182901-130 **171.36**	183901-130 **183.99**	1	8	263
1X3/4	182901-131 **181.71**	183901-131 **203.39**	1	8	263
1-1/4X1/2	182901-166 **180.55**	183901-166 **193.15**	1	8	263
1-1/4X3/4	182901-167 **185.06**	183901-167 **199.53**	1	8	263
1-1/4X1	182901-168 **197.72**	183901-168 **219.42**	1	8	263
1-1/2X1/2	182901-209 **180.55**	183901-209 **193.17**	1	8	263
1-1/2X3/4	182901-210 **185.06**	183901-210 **199.53**	1	8	263
1-1/2X1	182901-211 **197.72**	183901-211 **219.42**	1	8	263
2X1/2	182901-247 **233.48**	183901-247 **246.17**	1	8	263
2X3/4	182901-248 **240.39**	183901-248 **254.80**	1	8	263
2X1	182901-249 **250.64**	183901-249 **272.35**	1	8	263
2X1-1/2	182901-251 **309.25**	183901-251 **336.34**	1	8	263
3X1/2	182901-333 **238.23**	183901-333 **250.85**	1	0	263
3X1	182901-335 **255.26**	183901-335 **276.96**	1	4	263
3X1-1/2	182901-337 **292.86**	183901-337 **319.97**	1	0	263
3X2	182901-338 **318.44**	183901-338 **368.92**	1	0	263
4X1	182901-417 **295.06**	183901-417 **316.75**	1	0	263
4X1-1/2	182901-419 **332.68**	183901-419 **359.77**	1	0	263
4X2	182901-420 **392.35**	183901-420 **442.83**	1	0	263
6X2	182901-528 **461.26**	183901-528 **511.75**	1	0	263
8X2	182901-578 **703.81**	183901-578 **754.31**	1	0	263

PVC Metric

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Mainline Socket Tee x Valve Socket					
20	182901M-020 **163.19**	183901M-020 **175.80**	1	8	263

PVC Metric (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Mainline Socket Tee x Valve Socket					
25	182901M-025 **178.35**	183901M-025 **192.79**	1	8	263
32	182901M-032 **181.71**	183901M-032 **203.39**	1	8	263
40	182901M-040 **252.48**	183901M-040 **270.74**	1	8	263
50	182901M-050 **264.35**	183901M-050 **342.67**	1	8	263
63	182901M-063 **301.16**	183901M-063 **351.61**	1	8	263

True Union 2000 Standard Ball Valves



Socket Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" = 235 psi
2-1/2" - 4" = 150 psi
Flanged = 150 psi

Maximum Service Temperature
PVC = 140°F (60°C)

Temperature/Pressure De-ratings Apply
All Valves Assembled with Silicone-Free, Water Soluble Lubricant
See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

PVC Standard

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket & Threaded Ends					
1/2	3629-005 **39.77**	3639-005 **44.23**	1	18	608
3/4	3629-007 **47.03**	3639-007 **52.32**	1	18	608
1	3629-010 **56.02**	3639-010 **62.40**	1	12	608
1-1/4	3629-012 **77.48**	3639-012 **98.91**	1	8	608
1-1/2	3629-015 **93.35**	3639-015 **103.62**	1	8	608
2	3629-020 **123.18**	3639-020 **135.62**	1	4	608
Socket Ends					
2-1/2	3622-025 **235.95**	3632-025 **320.80**	1	0	609
3	3622-030 **312.14**	3632-030 **346.81**	1	0	609
4	3622-040 **527.23**	3632-040 **586.01**	1	0	609
Threaded Ends					
2-1/2	3621-025 **235.95**	3631-025 **320.80**	1	0	609
3	3621-030 **312.14**	3631-030 **346.81**	1	0	609
4	3621-040 **527.23**	3631-040 **586.01**	1	0	609
SR Threaded Ends					
1/2	3621-005SR **40.63**	3631-005SR **45.08**	1	18	608
3/4	3621-007SR **49.06**	3631-007SR **54.39**	1	18	608
1	3621-010SR **58.06**	3631-010SR **64.44**	1	18	608
1-1/4	3621-012SR **83.67**	3631-012SR **105.08**	1	12	608
1-1/2	3621-015SR **99.98**	3631-015SR **110.24**	1	8	608
2	3621-020SR **130.35**	3631-020SR **142.81**	1	8	608
2-1/2	3621-025SR **256.11**	3631-025SR **340.14**	1	0	609
3	3621-030SR **331.52**	3631-030SR **366.17**	1	0	609
4	3621-040SR **550.00**	3631-040SR **608.60**	1	0	609
Spigot Ends					
1/2	3627-005 **39.77**	3637-005 **44.23**	1	18	608
3/4	3627-007 **47.03**	3637-007 **52.32**	1	18	608
1	3627-010 **56.02**	3637-010 **62.40**	1	12	608
1-1/4	3627-012 **77.48**	3637-012 **98.91**	1	12	608
1-1/2	3627-015 **93.35**	3637-015 **103.62**	1	8	608

PVC Standard (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Spigot Ends					
2	3627-020 **123.18**	3637-020 **135.62**	1	8	608
2-1/2	3627-025 **236.74**	3637-025 **320.80**	1	0	609
3	3627-030 **312.14**	3637-030 **346.81**	1	0	609
4	3627-040 **527.23**	3637-040 **586.01**	1	0	609
Flanged Ends					
1/2	3623-005 **56.87**	3633-005 **60.65**	1	8	608
3/4	3623-007 **72.05**	3633-007 **78.36**	1	8	608
1	3623-010 **87.18**	3633-010 **93.75**	1	8	608
1-1/4	3623-012 **102.35**	3633-012 **113.76**	1	4	608
1-1/2	3623-015 **128.93**	3633-015 **140.29**	1	4	608
2	3623-020 **205.28**	3633-020 **217.74**	1	0	608
2-1/2	3623-025 **379.14**	3633-025 **385.41**	1	0	609
3	3623-030 **392.87**	3633-030 **520.28**	1	0	609
4	3623-040 **842.57**	3633-040 **976.66**	1	0	609

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Industrial Valve

Complete universal replacement valve for domestic and import PVC valve. See separate catalog listing for retrofit replacement of older Spears® valves.

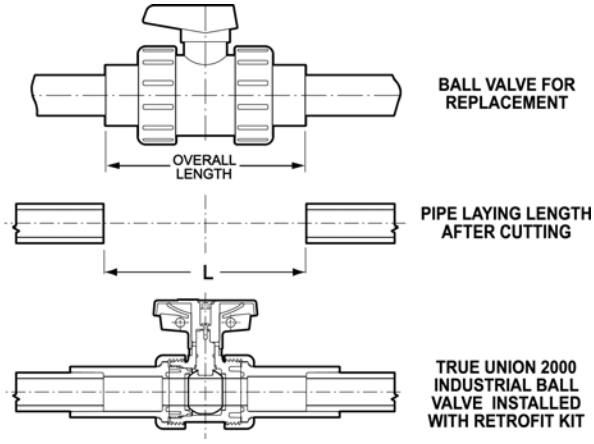
Retrofit valve consists of Spears® Industrial True Union 2000 Ball Valve supplied with factory installed extended-socket end connectors. Simply cut out old valve to specified dimensions and install Retrofit Valve end connectors.

Pressure Rating @ 73°F (23°C), Water
1/2" - 4" = 235 psi

All Valves Assembled with Silicone-Free, Water Soluble Lubricant

Suitable for Vacuum Service

Retrofit End Connector Sets without valve are also available - See Ball Valve Accessories & Repair Kits



Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	4-29/32	5-7/16	6-3/32	7-1/4	7-1/2	8-17/32	10-3/4	11-7/16	14-15/16

PVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1822R-005 **49.69**	1832R-005 **55.27**	1	18	600
3/4	1822R-007 **58.80**	1832R-007 **65.41**	1	18	600
1	1822R-010 **70.02**	1832R-010 **77.99**	1	12	600
1-1/4	1822R-012 **96.86**	1832R-012 **123.64**	1	8	600
1-1/2	1822R-015 **116.67**	1832R-015 **129.52**	1	8	600
2	1822R-020 **153.96**	1832R-020 **169.54**	1	4	600
2-1/2	1822R-025 **295.95**	1832R-025 **401.01**	1	0	601
3	1822R-030 **390.18**	1832R-030 **433.54**	1	0	601
4	1822R-040 **659.24**	1832R-040 **732.49**	1	0	601



Industrial Valve

Complete replacement valve for older Spears® 2300 Series Regular True Union Ball Valves. See separate catalog listing for replacement of other brand valves.

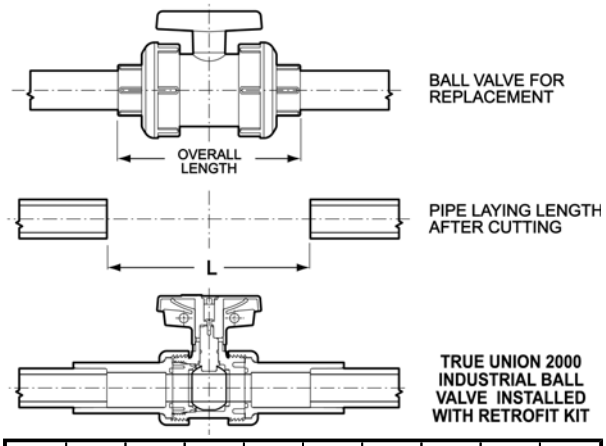
Retrofit valve consists of Spears® Industrial True Union 2000 Ball Valve supplied with factory installed extended-socket end connectors. Simply cut out old valve to specified dimensions and install Retrofit Valve end connectors.

Pressure Rating @ 73°F (23°C), Water
1/2" - 4" 235 psi

All Valves Assembled with Silicone-Free, Water Soluble Lubricant

Suitable for Vacuum Service

Retrofit End Connector Sets without valve are also available - See Ball Valve Accessories & Repair Kits



Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	5-5/16	6-1/4	6-11/16	7-1/8	8-3/16	8-15/16	12	12-1/16	13-3/16

PVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1822RS-005 **49.69**	1832RS-005 **55.27**	1	18	600
3/4	1822RS-007 **58.80**	1832RS-007 **65.41**	1	18	600
1	1822RS-010 **70.02**	1832RS-010 **77.99**	1	12	600
1-1/4	1822RS-012 **96.86**	1832RS-012 **123.64**	1	8	600
1-1/2	1822RS-015 **116.67**	1832RS-015 **129.52**	1	8	600
2	1822RS-020 **153.96**	1832RS-020 **169.54**	1	4	600
2-1/2	1822RS-025 **295.95**	1832RS-025 **401.01**	1	0	601
3	1822RS-030 **390.18**	1832RS-030 **433.54**	1	0	601
4	1822RS-040 **659.24**	1832RS-040 **732.49**	1	0	601

True Union 2000 Standard Retrofit Ball Valves - Replaces Other Brand Valves



Standard Valve

Complete universal replacement valve for domestic and import PVC valves. See separate catalog listing for retrofit replacement of older Spears® valves.

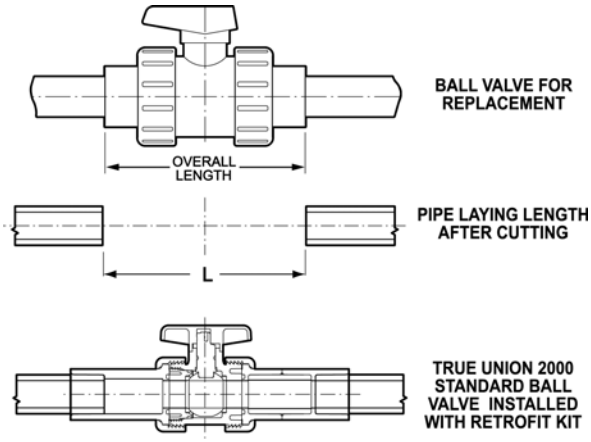
Retrofit valve consists of Spears® Standard True Union 2000 Ball Valve supplied with factory installed extended-socket end connectors. Simply cut out old valve to specified dimensions and install Retrofit Valve end connectors.

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
2-1/2" - 4" 150 psi

All Valves Assembled with Silicone-Free, Water Soluble Lubricant.

Suitable for Vacuum Service.

Retrofit End Connector Sets without valve are also available - See Ball Valve Accessories & Repair Kits



Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	4-29/32	5-7/16	6-3/32	7-1/4	7-1/2	8-17/32	10-3/4	11-7/16	14-15/16

PVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	3622R-005 **39.77**	3632R-005 **44.23**	1	18	608
3/4	3622R-007 **47.03**	3632R-007 **52.32**	1	12	608
1	3622R-010 **56.02**	3632R-010 **62.40**	1	8	608
1-1/4	3622R-012 **77.48**	3632R-012 **98.91**	1	8	608
1-1/2	3622R-015 **93.35**	3632R-015 **103.62**	1	8	608

PVC - Socket Ends (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	3622R-020 **123.18**	3632R-020 **135.62**	1	4	608
2-1/2	3622R-025 **235.95**	3632R-025 **320.80**	1	0	609
3	3622R-030 **312.14**	3632R-030 **346.81**	1	0	609
4	3622R-040 **527.23**	3632R-040 **586.01**	1	0	609

True Union 2000 Standard Retrofit Ball Valves - Replaces Spears® "Regular Style" Valves



Standard Valve

Complete replacement valve for older Spears® 2300 Series Regular True Union Ball Valves. See separate catalog listing for replacement of other brand valves.

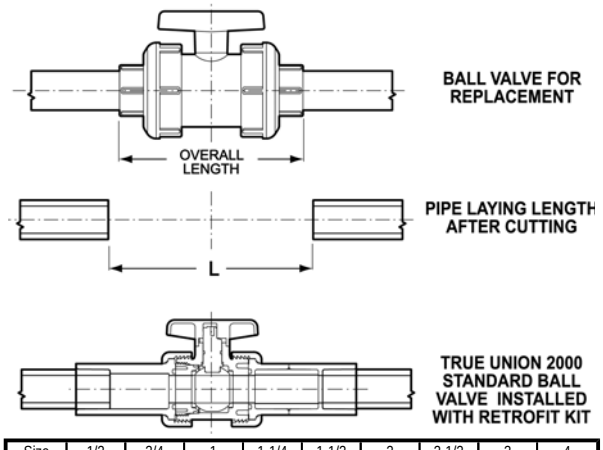
Retrofit valve consists of Spears® Standard True Union 2000 Ball Valve supplied with factory installed extended-socket end connectors. Simply cut out old valve to specified dimensions and install Retrofit Valve end connectors.

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
2-1/2" - 4" 150 psi

All Valves Assembled with Silicone-Free, Water Soluble Lubricant

Suitable for Vacuum Service

Retrofit End Connector Sets without valve are also available - See Ball Valve Accessories & Repair Kits



Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	5-5/16	6-1/4	6-11/16	7-1/8	8-3/16	8-15/16	12	12-1/16	13-3/16

PVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	3622RS-005 **39.77**	3632RS-005 **44.23**	1	18	608
3/4	3622RS-007 **47.03**	3632RS-007 **52.32**	1	18	608
1	3622RS-010 **56.02**	3632RS-010 **62.40**	1	12	608
1-1/4	3622RS-012 **77.48**	3632RS-012 **98.91**	1	8	608

PVC - Socket Ends (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	3622RS-015 **93.35**	3632RS-015 **103.62**	1	8	608
2	3622RS-020 **123.18**	3632RS-020 **135.62**	1	4	608
2-1/2	3622RS-025 **235.95**	3632RS-025 **320.80**	1	0	609
3	3622RS-030 **312.14**	3632RS-030 **346.81**	1	0	609
4	3622RS-040 **527.23**	3632RS-040 **586.01**	1	0	609

True Union Ball Valves (Regular Style)



Socket/Threaded Style



Flanged Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
2-1/2" - 6" 150 psi
Flanged 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service
All Valves assembled with Silicone-Free, Water Soluble Lubricant.

6" Venturied Valves are 4" Ball Valves equipped with 4x6 End Connectors.

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket & Threaded Ends					
1/2	2329-005 **57.23**	2339-005 **63.68**	1	18	230
3/4	2329-007 **67.69**	2339-007 **75.34**	1	12	230
1	2329-010 **80.64**	2339-010 **89.82**	1	8	230
1-1/4	2329-012 **111.55**	2339-012 **142.38**	1	8	230
1-1/2	2329-015 **134.40**	2339-015 **149.16**	1	8	230
2	2329-020 **177.31**	2339-020 **195.25**	1	4	230
Socket Ends					
2-1/2	2322-025 **323.80**	2332-025 **438.75**	1	0	230
3	2322-030 **426.91**	2332-030 **474.35**	1	0	230
4	2322-040 **721.29**	2332-040 **801.42**	1	0	230
Socket Venturied Ends					
6 VENTURIED	2322-060 **962.36**	2332-060 **1048.55**	1	0	231
Threaded Ends					
2-1/2	2321-025 **323.80**	2331-025 **438.75**	1	0	230
3	2321-030 **426.91**	2331-030 **474.35**	1	0	230

PVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded Ends					
4	2321-040 **721.29**	2331-040 **801.42**	1	0	230
Flanged Ends					
1/2	2323-005 **81.87**	2333-005 **87.34**	6	0	230
3/4	2323-007 **103.72**	2333-007 **112.80**	5	0	230
1	2323-010 **125.55**	2333-010 **134.96**	5	0	230
1-1/4	2323-012 **147.37**	2333-012 **163.75**	2	0	230
1-1/2	2323-015 **185.60**	2333-015 **201.94**	3	0	230
2	2323-020 **295.56**	2333-020 **313.45**	2	0	230
2-1/2	2323-025 **518.53**	2333-025 **527.07**	1	0	230
3	2323-030 **573.11**	2333-030 **711.55**	1	0	230
4	2323-040 **1152.32**	2333-040 **1335.74**	1	0	230
Flanged Venturied Ends					
6 VENTURIED	2323-060 **1680.55**	2333-060 **1723.61**	1	0	231

Single Entry Ball Valves

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
3" - 4" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service
All Valves Assembled with Silicone-Free, Water Soluble Lubricant. See Ball Valve Accessories & Repair Kits Section for Additional Options and Features



PVC Gray – Socket/Threaded Style

PVC Gray

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded Ends						
1/2	2411-005G 20.88	2421-005G 23.15	2431-005G 25.75	10	120	240
3/4	2411-007G 26.31	2421-007G 29.26	2431-007G 32.49	10	80	240

PVC Gray (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded Ends						
1	2411-010G 30.95	2421-010G 34.35	2431-010G 38.18	10	0	240
1-1/4	2411-012G 42.98	2421-012G 47.78	2431-012G 53.02	6	0	240

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Single Entry Ball Valves

PVC Gray (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded Ends						
1-1/2	2411-015G 54.11	2421-015G 63.38	2431-015G 70.48	5	0	240
2	2411-020G 62.65	2421-020G 69.62	2431-020G 77.32	5	0	240
3	2411-030G 218.37	2421-030G 270.83	2431-030G 312.31	1	0	240
4	2411-040G 461.53	2421-040G 508.53	2431-040G 552.76	1	0	240
Socket Ends						
1/2	2412-005G 20.88	2422-005G 23.15	2432-005G 25.75	10	120	240
3/4	2412-007G 26.31	2422-007G 29.26	2432-007G 32.49	10	80	240

PVC Gray (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket Ends						
1	2412-010G 30.95	2422-010G 34.35	2432-010G 38.18	10	0	240
1-1/4	2412-012G 42.98	2422-012G 47.78	2432-012G 53.02	5	0	240
1-1/2	2412-015G 54.17	2422-015G 63.38	2432-015G 70.48	5	0	240
2	2412-020G 62.65	2422-020G 69.62	2432-020G 77.32	5	0	240
3	2412-030G 218.37	2422-030G 270.83	2432-030G 312.31	1	0	240
4	2412-040G 461.53	2422-040G 508.53	2432-040G 552.76	1	0	240

Compact 2000 Ball Valves



Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply
All Valves Assembled with Silicone-Free, Water Soluble Lubricants.
Rated for Vacuum Service
Compact 2000 Ball Valves are a Maintenance-Free, Sealed Unit (non-repairable).
See Ball Valve Accessories & Repair Kits Section for Additional Options and Features.

PVC 2000 Compact Ball Valve

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket Ends					
1/2	6622-005 **21.17**	6632-005 **23.83**	10	120	210
3/4	6622-007 **28.88**	6632-007 **29.57**	10	80	210
1	6622-010 **31.53**	6632-010 **35.36**	10	0	210
1-1/4	6622-012 **47.43**	6632-012 **54.81**	6	0	210
1-1/2	6622-015 **56.49**	6632-015 **62.83**	5	0	210
2	6622-020 **75.42**	6632-020 **84.74**	8	0	210
Threaded Ends					
1/2	6621-005 **21.17**	6631-005 **23.83**	10	120	210
3/4	6621-007 **28.88**	6631-007 **29.57**	10	80	210
1	6621-010 **31.53**	6631-010 **35.36**	10	0	210
1-1/4	6621-012 **51.92**	6631-012 **54.81**	6	0	210
1-1/2	6621-015 **56.49**	6631-015 **62.83**	5	0	210
2	6621-020 **75.42**	6631-020 **84.74**	8	0	210
Flanged Ends					
1/2	6623-005 **44.58**	6633-005 **46.84**	10	120	210
3/4	6623-007 **50.35**	6633-007 **52.11**	10	120	210
1	6623-010 **65.61**	6633-010 **69.13**	10	120	210
1-1/4	6623-012 **81.93**	6633-012 **87.89**	10	120	210

PVC 2000 Compact Ball Valve (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Flanged Ends					
1-1/2	6623-015 **99.12**	6633-015 **107.74**	10	120	210
2	6623-020 **132.27**	6633-020 **138.07**	10	120	210

Compact Ball Valves (Regular Style)



Socket/Threaded Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
3" - 6" 150 psi
Flanged 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service

All Valves Assembled with Silicone-Free, Water Soluble Lubricants. See Ball Valve Accessories & Repair Kits Section for Additional Options & Features

Note: Standard 6" Valve uses Lever-Style Handle for proper leverage.
T-Handle option is more compact but will increase difficulty of operation.

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket Ends					
1/2	2122-005 **22.27**	2132-005 **25.08**	10	80	210
3/4	2122-007 **30.40**	2132-007 **31.13**	10	0	210
1	2122-010 **33.17**	2132-010 **37.24**	10	0	210
1-1/4	2122-012 **59.48**	2132-012 **66.13**	6	0	210
1-1/2	2122-015 **73.65**	2132-015 **76.96**	5	0	210
2	2122-020 **79.38**	2132-020 **89.20**	6	0	210
3	2122-030 **258.01**	2132-030 **289.86**	1	4	211
4	2122-040 **396.95**	2132-040 **571.38**	1	0	211
6 (Lever Handle)	2122-060 **515.51**	2132-060 **742.05**	1	0	211
6 (Tee Handle)	21226-060 **515.51**	21326-060 **742.05**	1	0	211
Threaded Ends					
1/2	2121-005 **22.27**	2131-005 **25.08**	10	80	210
3/4	2121-007 **30.40**	2131-007 **31.13**	10	0	210
1	2121-010 **33.17**	2131-010 **37.24**	10	0	210
1-1/4	2121-012 **59.48**	2131-012 **66.13**	6	0	210
1-1/2	2121-015 **73.65**	2131-015 **76.96**	5	0	210
2	2121-020 **79.38**	2131-020 **89.20**	6	0	210
3	2121-030 **258.01**	2131-030 **289.86**	1	4	211
4	2121-040 **396.95**	2131-040 **571.38**	1	0	211
Flanged Ends					
1/2	2123-005 **49.24**	2133-005 **52.45**	1	8	210
3/4	2123-007 **59.58**	2133-007 **61.95**	1	8	210
1	2123-010 **65.73**	2133-010 **69.78**	1	8	210
1-1/4	2123-012 **93.05**	2133-012 **99.69**	1	8	210
1-1/2	2123-015 **107.66**	2133-015 **112.73**	1	4	210
2	2123-020 **124.97**	2133-020 **134.69**	1	0	210
3	2123-030 **335.73**	2133-030 **367.59**	1	0	211
4	2123-040 **495.22**	2133-040 **669.64**	1	0	211
6 (Lever Handle)	2123-060 **953.51**	2133-060 **1049.57**	1	0	211

PVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Flanged Ends					
6 (Tee Handle)	21236-060 **953.51**	21336-060 **1049.57**	1	0	211

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Utility Ball Valves



Pressure Rating @ 73°F (23°C), Water
1/2" - 6" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply

All Valves Assembled with Silicone-Free, Water Soluble Lubricant

PVC w/EPDM O-ring Seal

Size	Threaded Ends	Socket Ends	Std Pk	Mstr Pk	Disc Code
PVC Gray					
1/2	2621-005G **9.37**	2622-005G **9.37**	50	0	215
3/4	2621-007G **11.12**	2622-007G **11.12**	25	0	215
1	2621-010G **15.12**	2622-010G **15.12**	25	0	215
1-1/4	2621-012G **20.03**	2622-012G **20.03**	20	0	215
1-1/2	2621-015G **30.57**	2622-015G **30.57**	20	0	215

PVC w/EPDM O-ring Seal (continued)

Size	Threaded Ends	Socket Ends	Std Pk	Mstr Pk	Disc Code
PVC Gray					
2	2621-020G **38.64**	2622-020G **38.64**	8	0	215
2-1/2	2621-025G **66.14**	2622-025G **66.14**	6	0	214
3	2621-030G **118.62**	2622-030G **118.62**	1	4	214
4	2621-040G **217.41**	2622-040G **217.41**	1	0	214

Lab Ball Valves



Socket/Threaded Valve Only

Pressure Rating @ 73°F (23°C), Water
1/4" - 3/8" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service

All Valves Assembled with Silicone-Free, Water Soluble Lubricant

Valve & Adapters includes:
1 - Threaded 1/4" Valve
2 - O-ring Sealed 1/4" MPT x Mipt Adapters
2 - EPDM or FKM O-rings (AS568-013 size)
1 - End Connector Wrench
2 - O-ring Sealed 1/4" MPT x 3/8" I.D. Tubing Barb Adapters
- OR -
2 - O-ring Sealed 1/4" MPT x 1/4" I.D. Tubing Barb Adapters



Valve & Adapters

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Valve & Adapters Threaded Ends					
1/4X3/8T	1529-002 **25.75**	1539-002 **26.92**	1	25	218
1/4X1/4T	1529-002A **25.75**	1539-002A **26.92**	1	25	218
Valve only Threaded Ends					
1/4	1521-002 **20.58**	1531-002 **22.91**	50	200	218
3/8	1521-003 **28.93**	1531-003 **32.07**	50	200	218
Valve only Socket Ends					
1/4	1522-002 **20.58**	1532-002 **23.28**	50	200	218
3/8	1522-003 **28.93**	1532-003 **32.07**	50	200	218

True Union 2000 Industrial Ball Check Valves



Socket Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 4" 235 psi
6" - 8" 150 psi
All Flanged 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service

All Valves assembled with Silicone-Free, Water Soluble Lubricant
Contact Spears® for Pricing & Availability on Custom Elastomer Seals
See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

General Installation Information: Ball check valves may be installed in either horizontal or vertical position. A minimum of ten (10) pipe diameters' distance maintained from any pump or other source of turbulence. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of flow.

PVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket & Threaded Ends					
1/2	4529-005 **56.36**	4539-005 **63.52**	1	18	604
3/4	4529-007 **67.20**	4539-007 **70.93**	1	18	604
1	4529-010 **79.93**	4539-010 **89.09**	1	18	604
1-1/4	4529-012 **116.72**	4539-012 **131.00**	1	12	604
1-1/2	4529-015 **134.05**	4539-015 **148.78**	1	8	604
2	4529-020 **183.02**	4539-020 **203.51**	1	8	604
Socket Ends					
2-1/2	4522-025 **443.72**	4532-025 **472.58**	1	0	605
3	4522-030 **564.68**	4532-030 **632.98**	1	0	605
4	4522-040 **832.33**	4532-040 **876.92**	1	0	605
6	4522-060 **1636.75**	4532-060 **1813.96**	1	0	558
8	4522-080 **2181.25**	4532-080 **2417.89**	1	0	559
8" Venturied valves are 6" ball check valves fitted with 6x8 end connector adapters.					
Threaded Ends					
2-1/2	4521-025 **443.72**	4531-025 **472.58**	1	0	605
3	4521-030 **568.31**	4531-030 **637.46**	1	0	605
4	4521-040 **832.33**	4531-040 **876.92**	1	0	605
6	4521-060 **1636.75**	4531-060 **1813.96**	1	0	558
SR Threaded Ends					
1/2	4521-005SR **57.51**	4531-005SR **64.64**	1	18	604
3/4	4521-007SR **69.94**	4531-007SR **73.66**	1	18	604
1	4521-010SR **82.63**	4531-010SR **91.82**	1	18	604
1-1/4	4521-012SR **122.14**	4531-012SR **136.39**	1	12	604
1-1/2	4521-015SR **142.79**	4531-015SR **157.51**	1	8	604
2	4521-020SR **192.47**	4531-020SR **212.97**	1	8	604
2-1/2	4521-025SR **467.89**	4531-025SR **496.78**	1	0	605
3	4521-030SR **580.14**	4531-030SR **496.78**	1	0	605
4	4521-040SR **860.55**	4531-040SR **905.16**	1	0	605
6	4521-060SR **1683.47**	4531-060SR **1862.27**	1	0	558

PVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Spigot Ends					
1/2	4527-005 **56.36**	4537-005 **63.52**	1	18	604
3/4	4527-007 **67.20**	4537-007 **70.93**	1	18	604
1	4527-010 **79.93**	4537-010 **89.09**	1	12	604
1-1/4	4527-012 **116.72**	4537-012 **131.00**	1	12	604
1-1/2	4527-015 **134.05**	4537-015 **148.78**	1	8	604
2	4527-020 **183.02**	4537-020 **203.51**	1	8	604
2-1/2	4527-025 **443.72**	4537-025 **472.58**	1	0	605
3	4527-030 **502.43**	4537-030 **634.38**	1	0	605
4	4527-040 **832.33**	4537-040 **876.92**	1	0	605
6	4527-060 **1636.75**	4537-060 **1813.96**	1	0	558
Flanged Ends					
1/2	4523-005 **79.46**	4533-005 **99.73**	1	8	604
3/4	4523-007 **96.11**	4533-007 **119.60**	5	0	604
1	4523-010 **113.91**	4533-010 **139.17**	5	0	604
1-1/4	4523-012 **140.88**	4533-012 **182.12**	2	0	604
1-1/2	4523-015 **194.40**	4533-015 **211.28**	3	0	604
2	4523-020 **274.37**	4533-020 **280.87**	2	0	604
2-1/2	4523-025 **568.38**	4533-025 **661.89**	1	0	605
3	4523-030 **795.06**	4533-030 **924.53**	1	0	605
4	4523-040 **1076.19**	4533-040 **1249.16**	1	0	605
6	4523-060 **2577.57**	4533-060 **2989.97**	1	0	558
8	4523-080 **3347.48**	4533-080 **3891.12**	1	0	559
8" Venturied valves are 6" ball check valves fitted with 6x8 end connector adapters.					

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Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

True Union Ball Check Valves (Regular Style)



Socket/Threaded Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
2-1/2" - 6" 150 psi
Flanged 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service

All Valves assembled with Silicone-Free, Water Soluble Lubricant

6" Venturied Valves are 4" Ball Check Valves equipped with 4x6 End Connectors.

General Installation Information: Ball check valves may be installed in either horizontal or vertical position. A minimum of ten (10) pipe diameters' distance maintained from any pump or other source of turbulence. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of flow.

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket & Threaded Ends					
1/2	2229-005 **61.67**	2239-005 **69.49**	1	18	220
3/4	2229-007 **73.53**	2239-007 **77.62**	1	12	220
1	2229-010 **87.44**	2239-010 **97.48**	1	8	220
1-1/4	2229-012 **127.71**	2239-012 **143.32**	1	8	220
1-1/2	2229-015 **146.67**	2239-015 **162.78**	1	8	220
2	2229-020 **200.24**	2239-020 **222.66**	1	4	220
Socket Ends					
2-1/2	2222-025 **485.46**	2232-025 **517.04**	1	0	220
3	2222-030 **586.46**	2232-030 **681.48**	1	0	220
4	2222-040 **910.65**	2232-040 **959.46**	1	0	220
Socket Venturied Ends					
6 VENTURIED	2222-060 **1230.28**	2232-060 **1393.56**	1	0	221
Threaded Ends					
2-1/2	2221-025 **485.46**	2231-025 **517.04**	1	0	220
3	2221-030 **586.46**	2231-030 **681.48**	1	0	220
4	2221-040 **910.65**	2231-040 **959.46**	1	0	220
Flanged Ends					
1/2	2223-005 **86.95**	2233-005 **109.14**	6	0	220
3/4	2223-007 **105.15**	2233-007 **130.85**	5	0	220
1	2223-010 **124.63**	2233-010 **152.27**	5	0	220
1-1/4	2223-012 **154.15**	2233-012 **199.26**	2	0	220
1-1/2	2223-015 **212.68**	2233-015 **231.19**	3	0	220
2	2223-020 **300.19**	2233-020 **307.32**	2	0	220
2-1/2	2223-025 **621.87**	2233-025 **724.20**	1	0	220
3	2223-030 **869.88**	2233-030 **1011.54**	1	0	220
4	2223-040 **1177.48**	2233-040 **1366.73**	1	0	220
Flanged Venturied Ends					
6 VENTURIED	2223-060 **1473.61**	2233-060 **1644.16**	1	0	221

Foot Valve Screens

Convert Check Valve to Foot Valve using adapter - Fits all Socket Ball Check Valves or any IPS fitting socket or thread

Standard Foot Valve Screen



PVC/CPVC Spigot

Compact Foot Valve Screens



PVC Gray Spigot or Threaded

PE Black Threaded Only

Foot Valve Screens - PVC

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Spigot					
FVS-005	**1/2**	10	60	299	45.51
FVS-007	**3/4**	10	60	299	54.04
FVS-010	**1**	10	40	299	65.73
FVS-012	**1-1/4**	5	30	299	95.67
FVS-015	**1-1/2**	5	0	299	100.78
FVS-020	**2**	5	0	299	113.74
FVS-025	**2-1/2**	5	0	299	156.45
FVS-030	**3**	5	0	299	160.93
FVS-040	**4**	5	0	299	190.41
FVS-060	**6**	5	0	299	257.85

PVC Compact Foot Valve Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Spigot					
CFVS7-005	**1/2**	50	300	299	2.80
CFVS7-007	**3/4**	25	150	299	3.19
CFVS7-010	**1**	25	150	299	3.78
CFVS7-012	**1-1/4**	50	0	299	4.81
CFVS7-015	**1-1/2**	25	0	299	8.06
CFVS7-020	**2**	25	0	299	9.17

PVC Compact Foot Valve Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Threaded					
CFVS1-005	**1/2**	50	300	299	2.80
CFVS1-007	**3/4**	25	150	299	3.19
CFVS1-010	**1**	20	120	299	3.78
CFVS1-012	**1-1/4**	50	0	299	4.81
CFVS1-015	**1-1/2**	25	0	299	8.06
CFVS1-020	**2**	25	0	299	9.17

HDPE Black Compact Foot Valve Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Threaded					
CFVS1-005P	**1/2**	50	300	299	3.35
CFVS1-007P	**3/4**	25	150	299	4.03
CFVS1-010P	**1**	20	120	299	4.62
CFVS1-012P	**1-1/4**	50	0	299	5.31
CFVS1-015P	**1-1/2**	25	0	299	9.04
CFVS1-020P	**2**	25	0	299	10.14

Y-Check Valves



PVC Clear — Socket Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 150 psi
3" - 4" 90 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply



True Union Style

PVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1622-005 **88.61**	1632-005 **98.27**	1	18	627
3/4	1622-007 **95.05**	1632-007 **106.34**	1	18	627
1	1622-010 **104.72**	1632-010 **115.98**	1	12	627
1-1/4	1622-012 **164.32**	1632-012 **182.05**	1	8	627
1-1/2	1622-015 **178.81**	1632-015 **198.15**	1	8	627

PVC - Socket Ends (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	1622-020 **222.32**	1632-020 **246.49**	1	4	627
3	1622-030 **439.80**	1632-030 **488.12**	1	0	627
4	1622-040 **766.83**	1632-040 **852.22**	1	0	627

PVC - SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1621-005SR **91.83**	1631-005SR **101.51**	1	18	627

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PVC - SR Threaded Ends (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
3/4	1621-007SR **99.87**	1631-007SR **111.16**	1	12	627
1	1621-010SR **111.16**	1631-010SR **122.43**	1	8	627
1-1/4	1621-012SR **173.98**	1631-012SR **191.71**	1	8	627
1-1/2	1621-015SR **193.32**	1631-015SR **212.65**	1	4	627
2	1621-020SR **238.42**	1631-020SR **262.59**	1	0	627
3	1621-030SR **483.31**	1631-030SR **531.62**	1	0	627
4	1621-040SR **811.94**	1631-040SR **897.31**	1	0	627

PVC - Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1623-005 **115.98**	1633-005 **128.89**	1	8	627
3/4	1623-007 **127.26**	1633-007 **141.77**	1	4	627
1	1623-010 **148.98**	1633-010 **170.76**	1	8	627
1-1/4	1623-012 **236.81**	1633-012 **262.59**	1	4	627
1-1/2	1623-015 **251.33**	1633-015 **278.69**	1	4	627
2	1623-020 **336.69**	1633-020 **373.73**	1	0	627
3	1623-030 **658.88**	1633-030 **731.38**	1	0	627
4	1623-040 **1051.96**	1633-040 **1167.96**	1	0	627

PVC Clear - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1622-005CL **88.61**	1632-005CL **98.27**	1	18	628
3/4	1622-007CL **95.05**	1632-007CL **106.34**	1	18	628
1	1622-010CL **104.72**	1632-010CL **115.98**	1	12	628
1-1/4	1622-012CL **164.32**	1632-012CL **182.05**	1	8	628
1-1/2	1622-015CL **178.81**	1632-015CL **198.15**	1	8	628
2	1622-020CL **222.32**	1632-020CL **246.49**	1	4	628
3	1622-030CL **439.80**	1632-030CL **488.12**	1	0	628
4	1622-040CL **766.83**	1632-040CL **852.22**	1	0	628

PVC Clear - SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1621-005CLSR **91.83**	1631-005CLSR **101.51**	1	18	628
3/4	1621-007CLSR **99.87**	1631-007CLSR **111.16**	1	12	628
1	1621-010CLSR **111.16**	1631-010CLSR **122.43**	1	8	628
1-1/4	1621-012CLSR **173.98**	1631-012CLSR **191.71**	1	8	628
1-1/2	1621-015CLSR **193.32**	1631-015CLSR **212.65**	1	4	628
2	1621-020CLSR **238.42**	1631-020CLSR **262.59**	1	0	628
3	1621-030CLSR **483.31**	1631-030CLSR **531.62**	1	0	628
4	1621-040CLSR **811.94**	1631-040CLSR **897.31**	1	0	628

PVC Clear - Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1623-005CL **115.98**	1633-005CL **128.89**	1	8	628
3/4	1623-007CL **127.26**	1633-007CL **141.77**	1	8	628
1	1623-010CL **153.04**	1633-010CL **170.76**	1	8	628
1-1/4	1623-012CL **236.81**	1633-012CL **262.59**	1	4	628
1-1/2	1623-015CL **251.33**	1633-015CL **278.69**	1	4	628
2	1623-020CL **336.69**	1633-020CL **373.73**	1	0	628
3	1623-030CL **658.88**	1633-030CL **731.38**	1	0	628
4	1623-040CL **1051.96**	1633-040CL **1167.96**	1	0	628

PVC - True Union Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162A-005 **96.66**	163A-005 **106.34**	1	12	627
3/4	162A-007 **103.09**	163A-007 **115.98**	1	8	627
1	162A-010 **114.38**	163A-010 **125.64**	1	8	627
1-1/4	162A-012 **178.81**	163A-012 **198.15**	1	4	627
1-1/2	162A-015 **194.93**	163A-015 **215.88**	1	0	627
2	162A-020 **241.64**	163A-020 **267.41**	2	0	627
3	162A-030 **478.45**	163A-030 **521.96**	1	0	627
4	162A-040 **834.49**	163A-040 **926.32**	1	0	627

PVC - True Union Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162B-005 **96.66**	163B-005 **106.34**	1	12	627
3/4	162B-007 **103.09**	163B-007 **115.98**	1	8	627
1	162B-010 **114.38**	163B-010 **125.64**	1	8	627
1-1/4	162B-012 **177.22**	163B-012 **198.15**	1	4	627
1-1/2	162B-015 **194.93**	163B-015 **215.88**	1	0	627
2	162B-020 **241.64**	163B-020 **267.41**	2	0	627
3	162B-030 **478.45**	163B-030 **521.96**	1	0	627
4	162B-040 **834.49**	163B-040 **926.32**	1	0	627

PVC - True Union SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162B-005SR **99.87**	163B-005SR **109.55**	1	12	627
3/4	162B-007SR **107.93**	163B-007SR **119.22**	1	8	627
1	162B-010SR **119.22**	163B-010SR **132.11**	1	8	627
1-1/4	162B-012SR **188.48**	163B-012SR **207.80**	1	4	627
1-1/2	162B-015SR **211.03**	163B-015SR **231.98**	1	0	627
2	162B-020SR **259.37**	163B-020SR **286.74**	1	0	627
3	162B-030SR **525.17**	163B-030SR **578.35**	1	0	627
4	162B-040SR **881.20**	163B-040SR **974.63**	1	0	627

PVC Clear - True Union Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162A-005CL **96.66**	163A-005CL **106.34**	1	12	628
3/4	162A-007CL **103.09**	163A-007CL **115.98**	1	8	628
1	162A-010CL **114.38**	163A-010CL **125.64**	1	8	628
1-1/4	162A-012CL **178.81**	163A-012CL **198.15**	1	4	628
1-1/2	162A-015CL **194.93**	163A-015CL **215.88**	1	0	628
2	162A-020CL **241.64**	163A-020CL **267.41**	2	0	628
3	162A-030CL **478.45**	163A-030CL **521.96**	1	0	628
4	162A-040CL **834.49**	163A-040CL **926.32**	1	0	628

PVC Clear - True Union Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162B-005CL **96.66**	163B-005CL **106.34**	1	12	628
3/4	162B-007CL **103.09**	163B-007CL **115.98**	1	8	628
1	162B-010CL **114.38**	163B-010CL **125.64**	1	8	628
1-1/4	162B-012CL **178.81**	163B-012CL **198.15**	1	4	628
1-1/2	162B-015CL **194.93**	163B-015CL **215.88**	1	0	628
2	162B-020CL **241.64**	163B-020CL **267.41**	2	0	628
3	162B-030CL **478.45**	163B-030CL **521.96**	1	0	628
4	162B-040CL **834.49**	163B-040CL **926.32**	1	0	628

PVC Clear - True Union SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162B-005CLSR **99.87**	163B-005CLSR **109.55**	1	12	628
3/4	162B-007CLSR **107.93**	163B-007CLSR **119.22**	1	8	628
1	162B-010CLSR **119.22**	163B-010CLSR **132.11**	1	8	628
1-1/4	162B-012CLSR **188.48**	163B-012CLSR **207.80**	1	4	628
1-1/2	162B-015CLSR **211.03**	163B-015CLSR **231.98**	1	0	628
2	162B-020CLSR **259.37**	163B-020CLSR **286.74**	1	0	628
3	162B-030CLSR **525.17**	163B-030CLSR **578.35**	1	0	628
4	162B-040CLSR **881.20**	163B-040CLSR **974.63**	1	0	628

Butterfly Check Valves


Wafer


Flanged


Spigot


Threaded


Grooved

Pressure Rating @ 73°F (23°C), Water

2" - 8" 150 psi
10" - 16" 100 psi
18" - 24" 50 psi

Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply

General Installation Information: Butterfly Check Valve seating may be affected by normal system turbulence. Flow velocities should be limited to approximately 5 feet per second. Valves should be installed at least 5 pipe diameters away from any fitting, pump or other source of turbulence. If used as a foot valve, do not place near bottom of a tank. Butterfly type check valves should not be used in continuous cycling applications, such as with reciprocating pumps. This can result in premature failure of sealing membrane. In horizontal installations, always orient the Hinge Post Bolts visible on the external body in a vertical (top and bottom) position, perpendicular to flow. In vertical installations downstream from an elbow, flow velocities can be higher on the outer radius of the elbow. To avoid uneven butterfly plate loading, the Hinge Post Bolts should align with crotch and outer radius of elbow and NOT from side to side of the elbow.

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Wafer					
2	5420-020 **405.36**	5430-020 **446.66**	1	18	289
2-1/2	5420-025 **558.62**	5430-025 **615.63**	1	0	289
3	5420-030 **714.56**	5430-030 **787.42**	1	8	289
4	5420-040 **971.78**	5430-040 **1070.91**	1	4	289
6	5420-060 **1473.27**	5430-060 **1623.54**	1	0	289
8	5420-080 **2499.61**	5430-080 **2754.56**	1	0	289
10	5420-100 **4596.12**	5430-100 **5101.67**	1	0	289
12	5420-120 **6480.46**	5430-120 **7193.33**	1	0	289
14	5420-140 **9256.78**	**---**	1	0	289
16	5420-160 **12855.58**	**---**	1	0	289
18	5420-180 **16068.26**	**---**	1	0	289
20	5420-200 **20085.32**	**---**	1	0	289
24	5420-240 **28691.31**	**---**	1	0	289
Flanged Ends					
2	5423-020 **517.05**	5433-020 **556.04**	1	8	289
2-1/2	5423-025 **672.97**	5433-025 **732.75**	1	0	289
3	5423-030 **966.60**	5433-030 **1062.73**	1	0	289
4	5423-040 **1255.01**	5433-040 **1400.49**	1	0	289
6	5423-060 **2034.51**	5433-060 **2328.13**	1	0	289
8	5423-080 **2915.34**	5433-080 **3440.21**	1	0	289
10	5423-100 **5368.20**	5433-100 **6121.71**	1	0	289
12	5423-120 **7605.37**	5433-120 **8090.37**	1	0	289
14	5423-140 **10723.57**	5433-140 **11407.36**	4	0	289
16	5423-160 **15093.44**	5433-160 **16296.21**	1	0	289
18	5423-180 **19283.61**	5433-180 **20626.99**	1	0	289
20	5423-200 **25345.15**	5433-200 **27140.77**	1	0	289
24	5423-240 **33197.34**	5433-240 **35709.75**	1	0	289

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Spigot (Plain End)					
2	5427-020 **220.86**	5437-020 **259.83**	1	12	289
2-1/2	5427-025 **304.01**	5437-025 **363.79**	1	12	289
3	5427-030 **407.94**	5437-030 **504.07**	1	8	289
4	5427-040 **535.26**	5437-040 **680.78**	1	4	289
6	5427-060 **1138.06**	5437-060 **1431.68**	1	0	289
8	5427-080 **1696.74**	5437-080 **2221.57**	1	0	289
10	5427-100 **4149.55**	5437-100 **4903.06**	1	0	289
12	5427-120 **5620.22**	5437-120 **6588.52**	1	0	289
14	5427-140 **7500.69**	5437-140 **8618.72**	1	0	289
16	5427-160 **11284.86**	5437-160 **13230.73**	1	0	289
18	5427-180 **14106.08**	5437-180 **16536.92**	1	0	289
20	5427-200 **17632.13**	5437-200 **20669.82**	1	0	289
24	5427-240 **25188.72**	5437-240 **29527.29**	1	0	289
Threaded Ends					
2	5421A-020 **215.67**	5431A-020 **254.64**	1	4	289
2-1/2	5421A-025 **293.62**	5431A-025 **353.36**	1	8	289
3	5421A-030 **400.16**	5431A-030 **496.27**	1	8	289
4	5421A-040 **524.87**	5431A-040 **670.37**	1	4	289
6	5421A-060 **1117.29**	5431A-060 **1410.89**	1	0	289
8	5421A-080 **1678.56**	5431A-080 **2203.39**	1	0	289
10	5421A-100 **4141.06**	5431A-100 **4895.80**	1	0	289
12	5421A-120 **5613.29**	5431A-120 **6581.60**	1	0	289
Grooved Ends					
2	542G-020 **244.24**	543G-020 **283.21**	1	12	289
2-1/2	542G-025 **319.60**	543G-025 **379.35**	1	8	289
3	542G-030 **420.93**	543G-030 **517.05**	1	8	289
4	542G-040 **566.45**	543G-040 **711.95**	1	4	289
6	542G-060 **1184.84**	543G-060 **1478.47**	1	0	289

Butterfly Check Valves

PVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Grooved Ends					
8	542G-080 **1748.67**	543G-080 **2273.56**	1	0	289
10	542G-100 **4232.69**	543G-100 **4986.21**	1	0	289
12	542G-120 **5731.94**	543G-120 **6701.15**	1	0	289

Industrial Swing Check Valves



Threaded Bonnet on Sizes 3/4", 1" & 1-1/4"

Pressure Rating @ 73°F (23°C), Water
3/4" - 4" 150 psi
6" 100 psi
8" 70 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply
All Valves Assembled with Silicone-Free Lubricants



Bolted Bonnet on Sizes 1-1/2" & Up
(Valve Shown with Arrow Indicator Option)

General Installation Information: Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec.

Industrial Swing Check Valves

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
PVC					
3/4	4423-007 **489.87**	4433-007 **518.17**	1	12	108
1	4423-010 **564.53**	4433-010 **615.23**	1	4	108
1-1/4	4423-012 **706.16**	4433-012 **747.16**	1	0	108
1-1/2	4423-015 **774.14**	4433-015 **864.87**	1	0	108
2	4423-020 **891.23**	4433-020 **990.28**	1	0	108
2-1/2	4423-025 **1491.55**	4433-025 **1759.58**	1	0	110
3	4423-030 **1668.08**	4433-030 **2185.93**	1	0	110
4	4423-040 **2126.11**	4433-040 **2496.24**	1	0	110
6	4423-060 **4040.65**	4433-060 **4742.66**	1	0	110
8	4423-080 **7742.14**	4433-080 **9049.54**	1	0	110

Swing Check Valve With Arrow Indicator

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
PVC					
3/4	4423I-007 **497.92**	4433I-007 **526.24**	1	12	108
1	4423I-010 **572.57**	4433I-010 **641.02**	1	4	108
1-1/4	4423I-012 **731.22**	4433I-012 **803.54**	1	0	108
1-1/2	4423I-015 **848.02**	4433I-015 **803.54**	1	0	108
2	4423I-020 **918.19**	4433I-020 **1002.26**	1	0	108
2-1/2	4423I-025 **1500.05**	4433I-025 **1668.77**	1	0	110

Swing Check Valve With Arrow Indicator (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
PVC					
3	4423I-030 **1746.95**	4433I-030 **1668.77**	1	0	110
4	4423I-040 **2134.74**	4433I-040 **2536.97**	1	0	110
6	4423I-060 **4049.09**	4433I-060 **4781.72**	1	0	110
8	4423I-080 **7865.20**	4433I-080 **9095.78**	1	0	110

Swing Check Valve With Counter Balance

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
PVC					
3/4	4423CB-007 **774.86**	4433CB-007 **829.28**	1	8	108
1	4423CB-010 **866.79**	4433CB-010 **928.46**	1	4	108
1-1/4	4423CB-012 **1046.99**	4433CB-012 **1088.37**	1	0	108
1-1/2	4423CB-015 **1123.33**	4433CB-015 **1311.98**	1	0	108
2	4423CB-020 **1239.38**	4433CB-020 **1500.17**	1	0	108
2-1/2	4423CB-025 **1864.98**	4433CB-025 **2132.38**	1	0	110
3	4423CB-030 **2100.28**	4433CB-030 **2423.29**	1	0	110
4	4423CB-040 **2516.60**	4433CB-040 **2886.71**	1	0	110
6	4423CB-060 **4487.07**	4433CB-060 **4487.07**	1	0	110
8	4423CB-080 **8996.31**	4433CB-080 **9487.41**	1	0	110

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Industrial Swing Check Valve Accessory and Repair Kits

Repair Kits include:
- 1-Bonnet O-ring
- 1-Disc O-ring
- 1-Seat O-ring
- 1-Plug O-ring
- 1-Arm Plug O-ring

Industrial Swing Check Valve Repair Kits

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
3/4	SK-ERK-007 **26.29**	SK-VRK-007 **32.05**	1	10	299
1	SK-ERK-010 **34.34**	SK-VRK-010 **41.88**	1	10	299
1-1/2 & 1-1/4	SK-ERK-015 **82.11**	SK-VRK-015 **103.84**	1	10	299
2	SK-ERK-020 **88.15**	SK-VRK-020 **107.48**	1	10	299
2-1/2	SK-ERK-025 **93.22**	SK-VRK-025 **119.31**	1	10	299

Industrial Swing Check Valve Repair Kits (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
3	SK-ERK-030 **105.69**	SK-VRK-030 **128.97**	1	10	299
4	SK-ERK-040 **115.32**	SK-VRK-040 **140.62**	1	10	299
6	SK-ERK-060 **229.20**	SK-VRK-060 **270.57**	1	10	299
8	SK-ERK-080 **288.39**	SK-VRK-080 **349.87**	1	10	299

Diaphragm Check Valves



Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 100 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply
Santoprene™ TPE Seat

PVC Diaphragm Check Valves - Socket

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
6562-007	**3/4**	15	0	004	89.09

PVC Diaphragm Check Valves - Thread

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
6561-007	**3/4**	15	0	004	89.09

PVC In-line Adjustable Spring Check Valves



Fipt x Mipt



Mipt x Fipt



Fipt x Fipt

Pressure Rating @ 73°F (23°C), Water
200 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply

2 - 14 lbs. Adjustable Spring Tension
(5 to 32 feet of head)
Factory Preset to Approx. 5 psi
(12 feet of head)
Each full turn of adjustment nut = 1 psi
(2.3 feet of head)
Stainless Steel Adjustment Hardware
EPDM Seat

Standard Unit - Female Inlet x Male Outlet

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Fipt x Mipt (Inlet x Outlet)					
S1102-05	**1/2**	30	180	026	10.95
S1102-07	**3/4**	25	150	026	11.20
S1102-10	**1**	25	150	026	18.59
S1102-05-07	**1/2X3/4**	25	150	026	15.98

Male Inlet x Female Outlet Option

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Mipt x Fipt (Inlet x Outlet)					
S1101-05	**1/2**	30	180	026	10.95

Female Inlet x Female Outlet Option

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Fipt x Fipt (Inlet x Outlet)					
S1100-07	**3/4**	25	150	026	11.57

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Gate Valves



1/2" - 2" Socket/Threaded Style



2-1/2" - 3" Socket Style



4" Socket Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 200 psi
2-1/2" - 3" 150 psi
4" 235 psi
Flanged 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply

PP Gate-Wedge on PVC Valves
All Valves Assembled with Silicone-Free, Water Soluble Lubricant

See Gate Valve Accessories & Repair Kits Section for Additional Options and Features

PVC

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded Ends						
1/2	2011-005 24.19	2021-005 26.55	2031-005 29.24	12	0	200
3/4	2011-007 29.58	2021-007 32.56	2031-007 34.27	12	0	200
1	2011-010 35.06	2021-010 38.61	2031-010 42.51	12	0	200
1-1/4	2011-012 48.48	2021-012 53.35	2031-012 58.65	6	0	200
1-1/2	2011-015 61.86	2021-015 68.73	2031-015 74.84	6	0	200
2	2011-020 79.45	2021-020 87.47	2031-020 96.16	6	0	200
2-1/2	2011-025 439.27	2021-025 483.19	2031-025 531.53	1	0	201
SR Threaded Ends						
3	2011-030SR 439.27	2021-030SR 483.19	2031-030SR 531.53	1	0	201
4	2011-040SR 862.04	2021-040SR 957.83	2031-040SR 1053.58	1	0	201
Socket Ends						
1/2	2012-005 24.19	2022-005 26.55	2032-005 29.24	12	0	200
3/4	2012-007 29.58	2022-007 32.56	2032-007 34.27	12	0	200
1	2012-010 35.06	2022-010 38.61	2032-010 42.51	12	0	200
1-1/4	2012-012 48.48	2022-012 53.35	2032-012 58.65	6	0	200
1-1/2	2012-015 61.86	2022-015 68.73	2032-015 74.84	6	0	200
2	2012-020 79.45	2022-020 87.47	2032-020 96.16	6	0	200
2-1/2	2012-025 439.27	2022-025 483.19	2032-025 531.53	1	0	201
3	2012-030 439.27	2022-030 483.19	2032-030 531.53	1	0	201
4	2012-040 862.04	2022-040 957.83	2032-040 1053.58	1	0	201
Flanged Ends						
1/2	2013-005 117.13	2023-005 132.82	2033-005 152.23	4	0	200
3/4	2013-007 131.79	2023-007 149.14	2033-007 170.16	4	0	200
1	2013-010 144.72	2023-010 163.48	2033-010 187.76	4	0	200

PVC (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Flanged Ends						
1-1/4	2013-012 163.01	2023-012 187.15	2033-012 222.11	3	0	200
1-1/2	2013-015 190.27	2023-015 217.19	2033-015 255.16	3	0	200
2	2013-020 244.91	2023-020 257.32	2033-020 275.47	2	0	200
2-1/2	2013-025 549.07	2023-025 735.17	2033-025 808.67	1	0	201
3	2013-030 549.07	2023-030 735.17	2033-030 808.67	1	0	201
4	2013-040 1080.78	2023-040 1200.93	2033-040 1321.02	1	0	201

Plug Gate Valves



Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
Flanged 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply
Plug-Style PE Wedge on All Valves
Rated for Vacuum Service
All Valves Assembled with Silicone-Free,
Water Soluble Lubricants

PVC Socket Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	5212-005 24.19	5222-005 26.55	5232-005 29.24	12	0	200
3/4	5212-007 29.58	5222-007 32.56	5232-007 34.27	12	0	200
1	5212-010 35.06	5222-010 38.61	5232-010 42.51	12	0	200
1-1/4	5212-012 48.48	5222-012 53.35	5232-012 58.65	6	0	200
1-1/2	5212-015 61.86	5222-015 68.73	5232-015 74.84	6	0	200
2	5212-020 79.45	5222-020 87.47	5232-020 96.16	6	0	200

PVC SR Threaded Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	5211-005SR 26.92	5221-005SR 29.31	5231-005SR 31.95	12	0	200
3/4	5211-007SR 33.53	5221-007SR 36.51	5231-007SR 38.22	12	0	200
1	5211-010SR 40.51	5221-010SR 44.06	5231-010SR 47.94	12	0	200
1-1/4	5211-012SR 57.22	5221-012SR 62.08	5231-012SR 67.40	6	0	200
1-1/2	5211-015SR 76.83	5221-015SR 83.69	5231-015SR 89.78	6	0	200
2	5211-020SR 95.66	5221-020SR 103.65	5231-020SR 112.39	6	0	200

PVC Flanged Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	5213-005 117.13	5223-005 132.82	5233-005 152.23	4	0	200
3/4	5213-007 131.79	5223-007 149.14	5233-007 170.16	4	0	200
1	5213-010 144.72	5223-010 163.48	5233-010 187.76	4	0	200
1-1/4	5213-012 163.01	5223-012 187.15	5233-012 222.11	3	0	200
1-1/2	5213-015 190.27	5223-015 217.19	5233-015 255.16	3	0	200
2	5213-020 244.91	5223-020 257.32	5233-020 275.47	2	0	200
6	---	5223-060 2298.84	5233-060 2995.21	1	0	201

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Butterfly Valves



Lever Handle Style

Pressure Rating @ 73°F (23°C), Water
1-1/2" - 12" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply
See Butterfly Valve Accessories & Repair Kits Section for Additional Options and Features



Gear Operator Style

PVC

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311-015 280.63	722311-015 280.63	723311-015 585.92	1	0	250
2	721311-020 291.79	722311-020 291.79	723311-020 603.85	1	0	250
2-1/2	721311-025 309.78	722311-025 309.78	723311-025 612.84	1	0	250
3	721311-030 314.28	722311-030 314.28	723311-030 624.07	1	0	250
4	721311-040 363.69	722311-040 363.69	723311-040 781.22	1	0	250
6	721311-060 538.78	722311-060 538.78	723311-060 1248.15	1	0	250
8	721311-080 915.91	722311-080 915.91	723311-080 2114.67	1	0	250
Gear Operator						
1-1/2	721321-015 814.87	722321-015 814.87	723321-015 1034.89	1	0	250
2	721321-020 826.14	722321-020 826.14	723321-020 1055.11	1	0	250
2-1/2	721321-025 837.32	722321-025 837.32	723321-025 1095.48	1	0	250
3	721321-030 850.82	722321-030 850.82	723321-030 1158.38	1	0	250
4	721321-040 893.46	722321-040 893.46	723321-040 1311.01	1	0	250
6	721321-060 1073.08	722321-060 1073.08	723321-060 1782.43	1	0	250
8	721321-080 1450.18	722321-080 1450.18	723321-080 2648.97	1	0	250
10	721321-100 1961.99	722321-100 1961.99	723321-100 4328.08	1	0	250
12	721321-120 2702.82	722321-120 2702.82	723321-120 6218.33	1	0	250
Valve Only						
1-1/2	721301-015 244.71	722301-015 244.71	723301-015 511.81	1	0	250
2	721301-020 271.61	722301-020 271.61	723301-020 536.53	1	0	250
2-1/2	721301-025 280.63	722301-025 280.63	723301-025 554.46	1	0	250
3	721301-030 287.36	722301-030 287.36	723301-030 565.69	1	0	250
4	721301-040 332.24	722301-040 332.24	723301-040 709.37	1	0	250
6	721301-060 502.83	722301-060 502.83	723301-060 1149.38	1	0	250
8	721301-080 871.03	722301-080 871.03	723301-080 1939.57	1	0	250
10	721301-100 1746.49	722301-100 1746.49	723301-100 3883.62	1	0	250
12	721301-120 2253.85	722301-120 2253.85	723301-120 5544.83	1	0	250

Lug Insert Butterfly Valves



Spears® Standard Butterfly Valve
with Lug Inserts Factory Assembled

Note: Lug (insert) Valves require attention to flow direction for dead-end service. Flange must be installed on side of valve *opposite* the hex nut recesses for Single-Side installation. See "True Lug Butterfly Valves," where dead-end service is required in either direction.

Pressure Rating @ 73°F (23°C), Water
1-1/2" - 12" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply

See Butterfly Valve Accessories & Repair Kits Section for Additional Options and Features. Lug Valves Use Same Accessories, Repair Kits, and Overhaul Kits as Standard Butterfly Valves



PVC - Zinc-Plated Lug Inserts

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311K-015 446.91	722311K-015 446.91	723311K-015 639.06	1	0	250
2	721311K-020 456.87	722311K-020 456.87	723311K-020 663.27	1	0	250
2-1/2	721311K-025 483.92	722311K-025 483.92	723311K-025 684.60	1	0	250
3	721311K-030 491.04	722311K-030 491.04	723311K-030 723.88	1	0	250
4	721311K-040 862.51	722311K-040 862.51	723311K-040 1118.72	1	0	250
6	721311K-060 1128.66	722311K-060 1128.66	723311K-060 1599.79	1	0	250
8	721311K-080 1401.95	722311K-080 1401.95	723311K-080 2284.40	1	0	250
Gear Operator						
1-1/2	721321K-015 930.84	722321K-015 930.84	723321K-015 1117.29	1	0	250
2	721321K-020 950.76	722321K-020 950.76	723321K-020 1137.21	1	0	250
2-1/2	721321K-025 996.31	722321K-025 996.31	723321K-025 1178.47	1	0	250
3	721321K-030 1010.54	722321K-030 1010.54	723321K-030 1211.22	1	0	250
4	721321K-040 1391.98	722321K-040 1391.98	723321K-040 1733.58	1	0	250
6	721321K-060 1717.93	722321K-060 1717.93	723321K-060 2295.78	1	0	250
8	721321K-080 2018.23	722321K-080 2018.23	723321K-080 3011.71	1	0	250
10	721321K-100 3568.20	722321K-100 3568.20	723321K-100 5713.12	1	0	250
12	721321K-120 4111.91	722321K-120 4111.91	723321K-120 6867.40	1	0	250
Valve Only						
1-1/2	721301K-015 401.38	722301K-015 401.38	723301K-015 614.86	1	0	250
2	721301K-020 441.22	722301K-020 441.22	723301K-020 631.95	1	0	250
2-1/2	721301K-025 462.57	722301K-025 462.57	723301K-025 667.53	1	0	250
3	721301K-030 471.11	722301K-030 471.11	723301K-030 674.64	1	0	250
4	721301K-040 844.01	722301K-040 844.01	723301K-040 1094.52	1	0	250
6	721301K-060 1120.15	722301K-060 1120.15	723301K-060 1571.33	1	0	250
8	721301K-080 1376.32	722301K-080 1376.32	723301K-080 2253.08	1	0	250
10	721301K-100 2811.01	722301K-100 2811.01	723301K-100 4533.20	1	0	250
12	721301K-120 3240.84	722301K-120 3240.84	723301K-120 6488.80	1	0	250

PVC - SS Lug Inserts

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311G-015 509.54	722311G-015 509.54	723311G-015 768.59	1	0	250

PVC - SS Lug Inserts (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
2	721311G-020 515.24	722311G-020 515.24	723311G-020 775.68	1	0	250
2-1/2	721311G-025 566.47	722311G-025 566.47	723311G-025 807.01	1	0	250
3	721311G-030 572.17	722311G-030 572.17	723311G-030 815.56	1	0	250
4	721311G-040 1014.81	722311G-040 1014.81	723311G-040 1315.12	1	0	250
6	721311G-060 1329.36	722311G-060 1329.36	723311G-060 1881.61	1	0	250
8	721311G-080 1642.47	722311G-080 1642.47	723311G-080 2687.19	1	0	250
Gear Operator						
1-1/2	721321G-015 1039.01	722321G-015 1039.01	723321G-015 1305.16	1	0	250
2	721321G-020 1051.81	722321G-020 1051.81	723321G-020 1326.51	1	0	250
2-1/2	721321G-025 1107.33	722321G-025 1107.33	723321G-025 1386.29	1	0	250
3	721321G-030 1121.56	722321G-030 1121.56	723321G-030 1419.02	1	0	250
4	721321G-040 1635.37	722321G-040 1635.37	723321G-040 2036.74	1	0	250
6	721321G-060 2021.07	722321G-060 2021.07	723321G-060 2701.41	1	0	250
8	721321G-080 2374.05	722321G-080 2374.05	723321G-080 3450.06	1	0	250
10	721321G-100 4194.45	722321G-100 4194.45	723321G-100 6725.08	1	0	250
12	721321G-120 4834.94	722321G-120 4834.94	723321G-120 8360.43	1	0	250
Valve Only						
1-1/2	721301G-015 491.04	722301G-015 491.04	723301G-015 728.74	1	0	250
2	721301G-020 500.99	722301G-020 500.99	723301G-020 750.07	1	0	250
2-1/2	721301G-025 546.54	722301G-025 546.54	723301G-025 765.74	1	0	250
3	721301G-030 555.07	722301G-030 555.07	723301G-030 792.78	1	0	250
4	721301G-040 994.88	722301G-040 994.88	723301G-040 1286.65	1	0	250
6	721301G-060 1317.97	722301G-060 1317.97	723301G-060 1846.01	1	0	250
8	721301G-080 1622.57	722301G-080 1622.57	723301G-080 2651.60	1	0	250
10	721301G-100 3304.89	722301G-100 3304.89	723301G-100 5330.23	1	0	250
12	721301G-120 3811.58	722301G-120 3811.58	723301G-120 6649.64	1	0	250

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

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True Lug Butterfly Valves



Pressure Rating @ 73°F (23°C), Water

1-1/2" - 12" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply
See Butterfly Valve Accessories & Repair Kits
Section for Additional Options and Features

PVC - Zinc-Plated Lugs

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311Z-015 637.80	722311Z-015 637.80	723311Z-015 914.57	1	0	250
2	721311Z-020 652.32	722311Z-020 652.32	723311Z-020 950.06	1	0	250
2-1/2	721311Z-025 690.91	722311Z-025 690.91	723311Z-025 980.57	1	0	250
3	721311Z-030 701.45	722311Z-030 701.45	723311Z-030 993.40	1	0	250
4	721311Z-040 1233.73	722311Z-040 1233.73	723311Z-040 1599.16	1	0	250
6	721311Z-060 1614.42	722311Z-060 1614.42	723311Z-060 2286.72	1	0	250
8	721311Z-080 2003.91	722311Z-080 2003.91	723311Z-080 3264.42	1	0	250
Gear Operator						
1-1/2	721321Z-015 1035.86	722321Z-015 1035.86	723321Z-015 1316.49	1	0	250
2	721321Z-020 1057.96	722321Z-020 1057.96	723321Z-020 1339.41	1	0	250
2-1/2	721321Z-025 1108.71	722321Z-025 1108.71	723321Z-025 1388.58	1	0	250
3	721321Z-030 1121.72	722321Z-030 1121.72	723321Z-030 1423.33	1	0	250
4	721321Z-040 1638.38	722321Z-040 1638.38	723321Z-040 2039.96	1	0	250
6	721321Z-060 2021.85	722321Z-060 2021.85	723321Z-060 2702.67	1	0	250
8	721321Z-080 2375.36	722321Z-080 2375.36	723321Z-080 3544.83	1	0	250
10	721321Z-100 4197.85	722321Z-100 4197.85	723321Z-100 6723.55	1	0	250
12	721321Z-120 4838.20	722321Z-120 4838.20	723321Z-120 8080.51	1	0	250
Valve Only						
1-1/2	721301Z-015 573.36	722301Z-015 573.36	723301Z-015 879.98	1	0	250
2	721301Z-020 631.09	722301Z-020 631.09	723301Z-020 902.61	1	0	250
2-1/2	721301Z-025 664.28	722301Z-025 664.28	723301Z-025 954.40	1	0	250
3	721301Z-030 673.01	722301Z-030 673.01	723301Z-030 963.38	1	0	250
4	721301Z-040 1208.07	722301Z-040 1208.07	723301Z-040 1565.17	1	0	250
6	721301Z-060 1602.52	722301Z-060 1602.51	723301Z-060 2246.29	1	0	250
8	721301Z-080 1968.05	722301Z-080 1968.05	723301Z-080 3219.98	1	0	250
10	721301Z-100 4016.72	722301Z-100 4016.72	723301Z-100 6476.74	1	0	250
12	721301Z-120 4631.53	722301Z-120 4631.53	723301Z-120 7380.32	1	0	250

PVC - Stainless Steel Lugs

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311L-015 727.88	722311L-015 727.88	723311L-015 1099.09	1	0	250
2	721311L-020 736.22	722311L-020 736.22	723311L-020 1109.53	1	0	250
2-1/2	721311L-025 809.62	722311L-025 809.62	723311L-025 1153.64	1	0	250
3	721311L-030 818.03	722311L-030 818.03	723311L-030 1166.02	1	0	250
4	721311L-040 1451.39	722311L-040 1451.39	723311L-040 1878.96	1	0	250
6	721311L-060 1899.12	722311L-060 1899.12	723311L-060 2688.66	1	0	250
8	721311L-080 2348.03	722311L-080 2348.03	723311L-080 3840.49	1	0	250
Gear Operator						
1-1/2	721321L-015 1222.96	722321L-015 1222.96	723321L-015 1536.49	1	0	250
2	721321L-020 1239.15	722321L-020 1239.15	723321L-020 1562.08	1	0	250
2-1/2	721321L-025 1304.36	722321L-025 1304.36	723321L-025 1633.62	1	0	250
3	721321L-030 1319.63	722321L-030 1319.63	723321L-030 1672.00	1	0	250
4	721321L-040 1925.15	722321L-040 1925.15	723321L-040 2397.57	1	0	250
6	721321L-060 2378.57	722321L-060 2378.57	723321L-060 3179.59	1	0	250
8	721321L-080 2793.99	722321L-080 2793.99	723321L-080 4060.64	1	0	250
10	721321L-100 4936.32	722321L-100 4936.32	723321L-100 7912.26	1	0	250
12	721321L-120 5689.55	722321L-120 5689.55	723321L-120 9837.38	1	0	250
Valve Only						
1-1/2	721301L-015 701.03	722301L-015 701.03	723301L-015 1041.07	1	0	250
2	721301L-020 715.78	722301L-020 715.78	723301L-020 1072.65	1	0	250
2-1/2	721301L-025 781.48	722301L-025 781.48	723301L-025 1093.31	1	0	250
3	721301L-030 791.71	722301L-030 791.71	723301L-030 1133.39	1	0	250
4	721301L-040 1421.01	722301L-040 1421.01	723301L-040 1838.22	1	0	250
6	721301L-060 1882.91	722301L-060 1882.91	723301L-060 2637.41	1	0	250
8	721301L-080 2317.64	722301L-080 2317.64	723301L-080 3788.13	1	0	250
10	721301L-100 4720.77	722301L-100 4720.77	723301L-100 7614.92	1	0	250
12	721301L-120 5445.81	722301L-120 5445.81	723301L-120 9501.73	1	0	250

Large Diameter Butterfly Valves



Maximum Service Temperature
PVC = 140°F (60°C)
PP = 180°F (82°C)
Temperature/Pressure De-ratings Apply
Contact Spears® for Custom Produced Valve Sizes 30" to 60"



Pressure Rating @ 73°F (23°C), Water

Size	Psi
14	100
16	85
18	70
20	50
24	50

PVC - Gear Operator

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
14	722321-140 **6062.52**	723321-140 **14732.79**	1	0	251

Polypropylene - Gear Operator

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
16	722321-160P **24883.37**	723321-160P **26953.13**	1	0	257

Polypropylene - Gear Operator (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
18	722321-180P **27410.01**	723321-180P **31405.12**	1	0	257
20	722321-200P **30753.47**	723321-200P **37381.61**	1	0	257
24	722321-240P **34834.44**	723321-240P **50252.52**	1	0	257

Wafer Butterfly Valves



Lever Handle

Wafer Butterfly Valve laying lengths will directly replace common Cast Iron valves (matches Keystone Model 228 and Bray Series 30 Butterfly Valves).

IMPORTANT NOTE
All PVC valves have built-in Santoprene™ Thermoplastic Elastomer (TPE) Flange Gaskets for use with choice of Buna-N, EPDM, or FKM Seats.

Pressure Rating @ 73°F (23°C), Water
150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply



Gear Operator

PVC

Size	Buna-N Seat	EPDM Seat	FKM Seat	Std Pk	Mstr Pk	Disc Code
Lever Handle						
2	751311-020 291.79	752311-020 291.79	753311-020 603.85	1	0	250
2-1/2	751311-025 309.78	752311-025 309.78	753311-025 612.84	1	0	250
3	751311-030 314.28	752311-030 314.28	753311-030 624.07	1	0	250
4	751311-040 363.69	752311-040 363.69	753311-040 781.22	1	0	250
6	751311-060 538.78	752311-060 538.78	753311-060 1248.15	1	0	250
8	751311-080 915.91	752311-080 915.91	753311-080 2114.67	1	0	250
Gear Operator						
2	751321-020 826.14	752321-020 826.14	753321-020 1055.11	1	0	250
2-1/2	751321-025 837.32	752321-025 837.32	753321-025 1095.48	1	0	250
3	751321-030 850.82	752321-030 850.82	753321-030 1158.38	1	0	250
4	751321-040 893.46	752321-040 893.46	753321-040 1311.01	1	0	250
6	751321-060 1073.08	752321-060 1073.08	753321-060 1782.43	1	0	250
8	751321-080 1450.18	752321-080 1450.18	753321-080 2648.97	1	0	250

PVC (continued)

Size	Buna-N Seat	EPDM Seat	FKM Seat	Std Pk	Mstr Pk	Disc Code
Gear Operator						
10	751321-100 1954.23	752321-100 1954.23	753321-100 6120.40	1	0	250
12	751321-120 2370.75	752321-120 2370.75	753321-120 6807.60	1	0	250
Valve Only						
2	751301-020 271.61	752301-020 271.61	753301-020 536.53	1	0	250
2-1/2	751301-025 280.63	752301-025 280.63	753301-025 554.46	1	0	250
3	751301-030 287.36	752301-030 287.36	753301-030 565.69	1	0	250
4	751301-040 332.24	752301-040 332.24	753301-040 709.37	1	0	250
6	751301-060 502.83	752301-060 502.83	753301-060 1149.38	1	0	250
8	751301-080 871.03	752301-080 871.03	753301-080 1939.57	1	0	250
10	751301-100 1746.49	752301-100 1746.49	753301-100 3883.58	1	0	250
12	751301-120 2253.85	752301-120 2253.85	753301-120 5544.83	1	0	250

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Globe Valves



Pressure Rating @ 73°F (23°C), Water
2-1/2" - 6" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply
All Valves Assembled with Silicone-Free,
Water Soluble Lubricant
Suitable for Vacuum Service

Internal Repair Kit includes 1-Bonnet O–ring along with a factory assembled (required) internal component replacement unit consisting of Bonnet assembled with Stem/O-rings, Seat & Seal Carrier components. Install in valve using existing valve Bolts/Nuts/Washers, and Handle/Nut.

PVC Flanged Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2-1/2	6013-025 608.27	6023-025 643.73	6033-025 693.48	1	0	620
3	6013-030 697.26	6023-030 728.15	6033-030 810.33	1	0	620
4	6013-040 791.04	6023-040 945.64	6033-040 1039.07	1	0	620
6	6013-060 1216.55	6023-060 1454.71	6033-060 1483.69	1	0	620

PVC Internal Repair Kit

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2-1/2	GL-BRK-025 202.35	GL-ERK-025 489.42	GL-VRK-025 544.35	1	0	299
3	GL-BRK-030 225.51	GL-ERK-030 542.27	GL-VRK-030 604.42	1	0	299
4	GL-BRK-040 264.58	GL-ERK-040 635.91	GL-VRK-040 699.16	1	0	299
6	GL-BRK-060 576.49	GL-ERK-060 977.16	GL-VRK-060 997.16	1	0	299

Needle Valves



Pressure Rating @ 73°F (23°C), Water
PVC 235 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Solid PTFE Stem Seals
No Elastomer or Lubricants used
Valves include Panel Mounting Nut

PVC Needle Valve

Size	Threaded	Socket	SR Threaded	Std Pk	Mstr Pk	Disc Code
Globe Pattern						
1/4	5591-002 71.27	5592-002 71.27	---	1	18	218
3/8	5591-003 71.27	5592-003 71.27	---	1	18	218
1/2	5591-005 79.11	5592-005 79.11	5591-005SR 81.23	1	18	218
Angle Pattern						
1/4	5691-002 71.27	5692-002 71.27	---	1	18	218
3/8	5691-003 71.27	5692-003 71.27	---	1	18	218
1/2	5691-005 79.11	5692-005 79.11	5691-005SR 81.23	1	18	218

Diaphragm Valves



Socket/Threaded Style

Pressure Rating @ 73°F (23°C), Water

1/2" - 2"	235 psi
1/2" - 4" Flanged & Valves w/PTFE Diaphragms	150 psi
6"	100 psi
8"	75 psi



Flanged Style

Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply
No Lubricants in Media Contact Area
See Diaphragm Valve Repair Kits Section
for Additional Options and Features



Spigot Style

Contact Spears® for Pricing on
Additional Specialty Diaphragms

- Hypalon®
- Hypalon® backed PTFE
- PTFE Encapsulated O-rings
  (for True Union Style Valves)

PVC - Socket Ends (True Union Style Uses End Connector O-ring Seals)

Size	EPDM Seals & Diaphragm	FKM Seals & Diaphragm	EPDM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2729-005 **138.17**	2739-005 **153.52**	2729T-005 **220.23**	2739T-005 **244.36**	2739VT-005 **301.41**	1	12	270
3/4	2729-007 **156.82**	2739-007 **174.26**	2729T-007 **235.19**	2739T-007 **263.92**	2739VT-007 **325.84**	1	8	270
1	2729-010 **193.27**	2739-010 **212.38**	2729T-010 **339.29**	2739T-010 **351.71**	2739VT-010 **415.07**	1	8	270
1-1/4	2729-012 **289.32**	2739-012 **344.00**	2729T-012 **466.44**	2739T-012 **494.42**	2739VT-012 **559.41**	1	4	270
1-1/2	2729-015 **304.11**	2739-015 **351.93**	2729T-015 **497.96**	2739T-015 **522.87**	2739VT-015 **579.77**	1	4	270
2	2729-020 **359.78**	2739-020 **426.36**	2729T-020 **567.82**	2739T-020 **596.35**	2739VT-020 **727.21**	1	0	270

PVC - SR Threaded Ends (True Union Style Uses End Connector O-ring Seals)

Size	EPDM Seals & Diaphragm	FKM Seals & Diaphragm	EPDM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2721-005SR **138.17**	2731-005SR **153.52**	2721T-005SR **220.23**	2731T-005SR **244.36**	2731VT-005SR **301.41**	1	12	270
3/4	2721-007SR **156.82**	2731-007SR **174.26**	2721T-007SR **235.19**	2731T-007SR **263.92**	2731VT-007SR **325.84**	1	8	270
1	2721-010SR **193.27**	2731-010SR **212.38**	2721T-010SR **339.29**	2731T-010SR **351.71**	2731VT-010SR **415.07**	1	8	270
1-1/4	2721-012SR **289.32**	2731-012SR **344.00**	2721T-012SR **466.44**	2731T-012SR **494.42**	2731VT-012SR **559.41**	1	4	270
1-1/2	2721-015SR **304.11**	2731-015SR **351.93**	2721T-015SR **497.96**	2731T-015SR **522.87**	2731VT-015SR **579.77**	1	4	270
2	2721-020SR **359.78**	2731-020SR **426.36**	2721T-020SR **567.82**	2731T-020SR **596.35**	2731VT-020SR **727.21**	1	0	270

PVC - Spigot Ends

Size	EPDM Diaphragm	FKM Diaphragm	EPDM Backed PTFE Diaphragm	FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2727-005 **134.69**	2737-005 **149.64**	2797T-005 **212.65**	2797VT-005 **246.13**	1	12	270
3/4	2727-007 **151.76**	2737-007 **167.95**	2797T-007 **226.91**	2797VT-007 **270.23**	1	8	270
1	2727-010 **188.36**	2737-010 **205.13**	2797T-010 **331.25**	2797VT-010 **385.63**	1	8	270
1-1/4	2727-012 **280.05**	2737-012 **337.34**	2797T-012 **455.60**	2797VT-012 **506.20**	1	4	270
1-1/2	2727-015 **296.52**	2737-015 **343.13**	2797T-015 **485.58**	2797VT-015 **554.63**	1	4	270
2	2727-020 **348.61**	2737-020 **411.64**	2797T-020 **550.78**	2797VT-020 **677.99**	1	0	270

PVC - Flanged Ends

Size	EPDM Diaphragm	FKM Diaphragm	EPDM Backed PTFE Diaphragm	FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2723-005 **220.62**	2733-005 **238.83**	2793T-005 **301.41**	2793VT-005 **330.85**	4	0	270
3/4	2723-007 **247.91**	2733-007 **254.18**	2793T-007 **325.84**	2793VT-007 **367.59**	4	0	270
1	2723-010 **278.91**	2733-010 **311.92**	2793T-010 **415.07**	2793VT-010 **465.51**	4	0	270
1-1/4	2723-012 **378.85**	2733-012 **419.41**	2793T-012 **559.41**	2793VT-012 **617.51**	1	4	270
1-1/2	2723-015 **383.39**	2733-015 **428.03**	2793T-015 **579.77**	2793VT-015 **644.24**	1	4	270

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PVC - Flanged Ends (continued)

Size	EPDM Diaphragm	FKM Diaphragm	EPDM Backed PTFE Diaphragm	FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
2	2723-020 **455.72**	2733-020 **487.52**	2793T-020 **650.22**	2793VT-020 **743.36**	1	0	270
2-1/2	2723-025 **636.56**	2733-025 **727.61**	2793T-025 **1005.45**	2793VT-025 **1151.62**	1	0	271
3	2723-030 **851.09**	2733-030 **945.73**	2793T-030 **1318.47**	2793VT-030 **1458.88**	1	0	271
4	2723-040 **1178.95**	2733-040 **1285.62**	2793T-040 **1827.12**	2793VT-040 **2030.06**	1	0	271
6	2723-060 **2848.21**	2733-060 **3334.72**	2793T-060 **4731.41**	2793VT-060 **5199.41**	1	0	271
8	2723-080 **5694.80**	2733-080 **6000.89**	2793T-080 **7022.07**	2793VT-080 **7888.94**	1	0	271

Y-Pattern Valves



Socket Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 150 psi
3" - 4" 90 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply



True Union Style

PVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1722-005 **83.76**	1732-005 **88.61**	1	12	620
3/4	1722-007 **98.27**	1732-007 **104.72**	1	8	620
1	1722-010 **117.59**	1732-010 **125.64**	1	8	620
1-1/4	1722-012 **143.38**	1732-012 **157.88**	1	4	620
1-1/2	1722-015 **191.71**	1732-015 **202.98**	1	0	620
2	1722-020 **272.25**	1732-020 **289.99**	2	0	620
3	1722-030 **586.39**	1732-030 **637.95**	1	0	620
4	1722-040 **995.58**	1732-040 **1084.20**	1	0	620

PVC Clear - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1722-005CL **83.76**	1732-005CL **88.61**	1	12	621
3/4	1722-007CL **98.27**	1732-007CL **104.72**	1	8	621
1	1722-010CL **117.59**	1732-010CL **125.64**	1	8	621
1-1/4	1722-012CL **143.38**	1732-012CL **157.88**	1	4	621
1-1/2	1722-015CL **191.71**	1732-015CL **202.98**	1	0	621
2	1722-020CL **272.25**	1732-020CL **289.99**	2	0	621
3	1722-030CL **586.39**	1732-030CL **637.95**	1	0	621
4	1722-040CL **995.58**	1732-040CL **1084.20**	1	0	621

PVC - SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1721-005SR **86.99**	1731-005SR **91.83**	1	8	620
3/4	1721-007SR **103.09**	1731-007SR **109.55**	1	8	620
1	1721-010SR **124.05**	1731-010SR **132.11**	1	8	620
1-1/4	1721-012SR **169.14**	1731-012SR **178.81**	1	0	620
1-1/2	1721-015SR **207.80**	1731-015SR **217.48**	1	0	620
2	1721-020SR **293.20**	1731-020SR **307.71**	1	0	620
3	1721-030SR **629.88**	1731-030SR **681.44**	1	0	620
4	1721-040SR **1040.69**	1731-040SR **1129.28**	1	0	620

PVC Clear - SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1721-005CLSR **86.99**	1731-005CLSR **91.83**	1	8	621
3/4	1721-007CLSR **103.09**	1731-007CLSR **109.55**	1	8	621
1	1721-010CLSR **124.05**	1731-010CLSR **132.11**	1	8	621
1-1/4	1721-012CLSR **169.14**	1731-012CLSR **178.81**	1	0	621
1-1/2	1721-015CLSR **207.80**	1731-015CLSR **217.48**	1	0	621
2	1721-020CLSR **293.20**	1731-020CLSR **307.71**	1	0	621
3	1721-030CLSR **629.88**	1731-030CLSR **681.44**	1	0	621
4	1721-040CLSR **1040.69**	1731-040CLSR **1129.28**	1	0	621

PVC - Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1723-005 **117.59**	1733-005 **122.43**	1	8	620
3/4	1723-007 **135.32**	1733-007 **141.77**	1	4	620
1	1723-010 **159.47**	1733-010 **165.93**	1	4	620
1-1/4	1723-012 **186.86**	1733-012 **199.76**	1	0	620
1-1/2	1723-015 **235.20**	1733-015 **246.49**	1	0	620
2	1723-020 **330.23**	1733-020 **346.36**	1	0	620
3	1723-030 **644.40**	1733-030 **695.95**	1	0	620
4	1723-040 **1279.09**	1733-040 **1356.44**	1	0	620

PVC Clear - Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1723-005CL **117.59**	1733-005CL **122.43**	1	8	621
3/4	1723-007CL **135.32**	1733-007CL **141.77**	1	8	621
1	1723-010CL **159.47**	1733-010CL **165.93**	1	4	621
1-1/4	1723-012CL **186.86**	1733-012CL **199.76**	1	0	621
1-1/2	1723-015CL **235.20**	1733-015CL **246.49**	1	0	621
2	1723-020CL **330.23**	1733-020CL **346.36**	1	0	621
3	1723-030CL **644.40**	1733-030CL **695.95**	1	0	621
4	1723-040CL **1279.09**	1733-040CL **1356.44**	1	0	621

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC - True Union Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172A-005 **99.87**	173A-005 **104.72**	1	8	620
3/4	172A-007 **115.98**	173A-007 **122.43**	1	8	620
1	172A-010 **138.55**	173A-010 **148.21**	1	4	620
1-1/4	172A-012 **169.14**	173A-012 **185.27**	2	0	620
1-1/2	172A-015 **225.54**	173A-015 **238.42**	2	0	620
2	172A-020 **318.98**	173A-020 **341.54**	1	0	620
3	172A-030 **689.49**	173A-030 **749.12**	1	0	620
4	172A-040 **1171.18**	173A-040 **1274.31**	1	0	620

PVC - True Union Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172B-005 **99.87**	173B-005 **104.72**	1	8	620
3/4	172B-007 **115.98**	173B-007 **122.43**	1	8	620
1	172B-010 **138.55**	173B-010 **148.21**	1	4	620
1-1/4	172B-012 **169.14**	173B-012 **185.27**	2	0	620
1-1/2	172B-015 **225.54**	173B-015 **238.42**	1	0	620
2	172B-020 **318.98**	173B-020 **341.54**	1	0	620
3	172B-030 **689.49**	173B-030 **749.12**	1	0	620
4	172B-040 **1171.18**	173B-040 **1274.31**	1	0	620

PVC - True Union SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172B-005SR **103.09**	173B-005SR **107.93**	1	8	620
3/4	172B-007SR **120.82**	173B-007SR **128.89**	1	8	620
1	172B-010SR **146.60**	173B-010SR **154.66**	1	4	620
1-1/4	172B-012SR **199.76**	173B-012SR **211.03**	1	0	620
1-1/2	172B-015SR **244.86**	173B-015SR **256.15**	1	0	620
2	172B-020SR **344.75**	173B-020SR **362.47**	1	0	620
3	172B-030SR **741.03**	173B-030SR **802.25**	1	0	620
4	172B-040SR **1224.34**	173B-040SR **1329.06**	1	0	620

PVC Clear - True Union Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172A-005CL **99.87**	173A-005CL **104.72**	1	8	621
3/4	172A-007CL **115.98**	173A-007CL **122.43**	1	8	621
1	172A-010CL **138.55**	173A-010CL **148.21**	1	4	621
1-1/4	172A-012CL **169.14**	173A-012CL **185.27**	2	0	621
1-1/2	172A-015CL **225.54**	173A-015CL **238.42**	2	0	621
2	172A-020CL **318.98**	173A-020CL **341.54**	1	0	621
3	172A-030CL **689.49**	173A-030CL **749.12**	1	0	621
4	172A-040CL **1171.18**	173A-040CL **1274.31**	1	0	621

PVC Clear - True Union Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172B-005CL **99.87**	173B-005CL **104.72**	1	8	621
3/4	172B-007CL **115.98**	173B-007CL **122.43**	1	8	621
1	172B-010CL **138.55**	173B-010CL **148.21**	1	4	621
1-1/4	172B-012CL **169.14**	173B-012CL **185.27**	2	0	621
1-1/2	172B-015CL **225.54**	173B-015CL **238.42**	1	0	621
2	172B-020CL **318.98**	173B-020CL **341.54**	1	0	621
3	172B-030CL **689.49**	173B-030CL **749.12**	1	0	621
4	172B-040CL **1171.18**	173B-040CL **1274.31**	1	0	621

PVC Clear - True Union SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172B-005CLSR **103.09**	173B-005CLSR **107.93**	1	8	621
3/4	172B-007CLSR **120.82**	173B-007CLSR **128.89**	1	8	621
1	172B-010CLSR **146.60**	173B-010CLSR **154.66**	1	4	621
1-1/4	172B-012CLSR **199.76**	173B-012CLSR **211.03**	2	0	621
1-1/2	172B-015CLSR **244.86**	173B-015CLSR **256.15**	1	0	621
2	172B-020CLSR **344.75**	173B-020CLSR **362.47**	1	0	621
3	172B-030CLSR **741.03**	173B-030CLSR **802.25**	1	0	621
4	172B-040CLSR **1224.34**	173B-040CLSR **1329.06**	1	0	621



Socket/Spigot

All Filters are 2-1/2"x 2-1/2"
Inlet/Outlet Connection

Note: 2-1/2" Socket is also a 3" Spigot

Pressure Rating @ 73°F (23°C), Water
200 psi

Mesh Size Codes

Mesh Size	Size Code
1/16" Holes	16
1/32" Holes	32
50 Mesh	50
76 Mesh	76
100 Mesh	100
150 Mesh	150
200 Mesh	200

Note: Standard flow filtration path is internal to external. Reverse-flow filtration flows from external to internal side of filter screen.

100 GPM PVC Gray Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					
16	TF2-16 **722.18**	TF3-16 **775.85**	1	0	295
32	TF2-32 **738.46**	TF3-32 **793.40**	1	0	295
50	TF2-50 **836.89**	TF3-50 **947.41**	1	0	295
76	TF2-76 **1010.88**	TF3-76 **1086.13**	1	0	295
100	TF2-100 **918.88**	TF3-100 **987.20**	1	0	295
150	TF2-150 **951.77**	TF3-150 **1022.47**	1	0	295
200	TF2-200 **1033.93**	TF3-200 **1110.76**	1	0	295

Standard TF2-16, TF2-32, TF3-16, TF3-32, MTF2-16, MTF2-32, MTF3-16 & MTF3-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

50 GPM PVC Gray Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					
16	MTF2-16 **607.18**	MTF3-16 **652.27**	1	0	295
32	MTF2-32 **617.01**	MTF3-32 **662.93**	1	0	295
50	MTF2-50 **636.66**	MTF3-50 **684.02**	1	0	295
76	MTF2-76 **771.17**	MTF3-76 **828.54**	1	0	295
100	MTF2-100 **672.75**	MTF3-100 **722.68**	1	0	295
150	MTF2-150 **705.62**	MTF3-150 **758.12**	1	0	295
200	MTF2-200 **787.60**	MTF3-200 **846.25**	1	0	295

Standard TF2-16, TF2-32, TF3-16, TF3-32, MTF2-16, MTF2-32, MTF3-16 & MTF3-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

100 GPM PVC Gray Reverse Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					
16	TF2-16 **722.18**	TF3-16 **775.85**	1	0	295
32	TF2-32 **738.46**	TF3-32 **793.40**	1	0	295
50	TFR2-50 **836.89**	TFR3-50 **899.08**	1	0	295
76	TFR2-76 **1010.88**	TFR3-76 **1086.13**	1	0	295
100	TFR2-100 **918.88**	TFR3-100 **987.20**	1	0	295
150	TFR2-150 **951.77**	TFR3-150 **1022.47**	1	0	295
200	TFR2-200 **1033.93**	TFR3-200 **1110.76**	1	0	295

100 GPM PVC Gray Reverse Tee Filter (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					

Standard TF2-16, TF2-32, TF3-16, TF3-32, MTF2-16, MTF2-32, MTF3-16 & MTF3-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

50 GPM PVC Gray Reverse Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					
16	MTF2-16 **607.18**	MTF3-16 **652.27**	1	0	295
32	MTF2-32 **617.01**	MTF3-32 **662.93**	1	0	295
50	MTFR2-50 **636.66**	MTFR3-50 **684.02**	1	0	295
76	MTFR2-76 **771.17**	MTFR3-76 **828.54**	1	0	295
100	MTFR2-100 **672.75**	MTFR3-100 **722.68**	1	0	295
150	MTFR2-150 **705.62**	MTFR3-150 **758.12**	1	0	295
200	MTFR2-200 **787.60**	MTFR3-200 **846.25**	1	0	295

Standard TF2-16, TF2-32, TF3-16, TF3-32, MTF2-16, MTF2-32, MTF3-16 & MTF3-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

50 GPM Filter Replacement Screens for MTF Filters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-16-1	**1/16" Holes**	3	0	020	222.04
MFL-32-1	**1/32" Holes**	3	0	020	232.14
MFL-50-1	**50 Mesh**	3	0	020	252.33
MFL-76-1	**76 Mesh**	3	0	020	358.29
MFL-100-1	**100 Mesh**	3	0	020	277.57
MFL-150-1	**150 Mesh**	3	0	020	307.85
MFL-200-1	**200 Mesh**	3	0	020	378.46

NOTE: When ordering replacement screens for MTF Series Filters, please provide exact length of old screen within 1/64" to insure proper fit of new screen in your filter body.

100 GPM Reverse Flow Filter Replacement Screens for TFR Filters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-16-1	**1/16" Holes**	3	0	020	222.04
FL-32-1	**1/32" Holes**	3	0	020	242.22
FLR-50-1	**50 Mesh**	3	0	020	243.39
FLR-76-1	**76 Mesh**	3	0	020	474.37
FLR-100-1	**100 Mesh**	3	0	020	337.02
FLR-150-1	**150 Mesh**	3	0	020	383.52
FLR-200-1	**200 Mesh**	3	0	020	474.62

50 GPM Reverse Flow Filter Replacement Screens for MTFR Filters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-16-1	**1/16" Holes**	3	0	020	222.04

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50 GPM Reverse Flow Filter Replacement Screens for MTFR Filters (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-32-1	**1/32" Holes**	3	0	020	232.14
MFLR-50-1	**50 Mesh**	3	0	020	256.21
MFLR-76-1	**76 Mesh**	3	0	020	358.29
MFLR-100-1	**100 Mesh**	3	0	020	263.67
MFLR-150-1	**150 Mesh**	3	0	020	292.44
MFLR-200-1	**200 Mesh**	3	0	020	359.53

Y-Strainers



Socket



Flanged



SR Thread



True Union

Part numbers shown reflect a mesh size of 8. For different mesh sizes, substitute Mesh Code in part number as specified in chart below.

U.S. Standard Mesh Sieve No.	Sieve Opening Size (in.)	Part Number Mesh Code
8	0.094	8
12	0.062	12
20	0.033	20
30	0.024	30

Example: for 12 Mesh, specify

YS22P12-005

Additional Mesh Sizes available on request.

Pressure Rating @ 73°F (23°C), Water

1/2" - 2"	150 psi
3" - 4"	90 psi

Maximum Service Temperature

PVC = 140°F (60°C)

Temperature/Pressure De-ratings Apply

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PVC - Socket Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS22P8-005 **87.04**	YS22S8-005 **172.24**	YS32P8-005 **95.06**	YS32S8-005 **189.25**	1	18	102
3/4	YS22P8-007 **97.25**	YS22S8-007 **196.97**	YS32P8-007 **107.17**	YS32S8-007 **222.15**	1	18	102
1	YS22P8-010 **106.94**	YS22S8-010 **233.65**	YS32P8-010 **117.74**	YS32S8-010 **256.88**	1	12	102
1-1/4	YS22P8-012 **181.08**	YS22S8-012 **337.12**	YS32P8-012 **201.22**	YS32S8-012 **371.68**	1	8	102
1-1/2	YS22P8-015 **191.60**	YS22S8-015 **359.36**	YS32P8-015 **212.92**	YS32S8-015 **394.60**	1	8	102
2	YS22P8-020 **225.07**	YS22S8-020 **405.91**	YS32P8-020 **250.05**	YS32S8-020 **450.99**	1	4	102
3	YS22P8-030 **518.73**	YS22S8-030 **700.77**	YS32P8-030 **557.40**	YS32S8-030 **739.44**	1	0	102
4	YS22P8-040 **906.98**	YS22S8-040 **1135.74**	YS32P8-040 **976.26**	YS32S8-040 **1204.99**	1	0	102

PVC - SR Threaded Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS21P8-005SR **91.73**	YS21S8-005SR **176.94**	YS31P8-005SR **99.72**	YS31S8-005SR **193.93**	1	18	102
3/4	YS21P8-007SR **104.00**	YS21S8-007SR **203.71**	YS31P8-007SR **113.89**	YS31S8-007SR **228.94**	1	12	102
1	YS21P8-010SR **116.95**	YS21S8-010SR **243.69**	YS31P8-010SR **127.76**	YS31S8-010SR **266.94**	1	8	102
1-1/4	YS21P8-012SR **197.42**	YS21S8-012SR **353.45**	YS31P8-012SR **217.57**	YS31S8-012SR **388.01**	1	8	102
1-1/2	YS21P8-015SR **211.67**	YS21S8-015SR **379.44**	YS31P8-015SR **232.94**	YS31S8-015SR **414.79**	1	4	102
2	YS21P8-020SR **259.99**	YS21S8-020SR **440.82**	YS31P8-020SR **284.99**	YS31S8-020SR **485.93**	1	0	102
3	YS21P8-030SR **562.40**	YS21S8-030SR **744.27**	YS31P8-030SR **600.91**	YS31S8-030SR **1111.76**	1	0	102
4	YS21P8-040SR **952.08**	YS21S8-040SR **1180.84**	YS31P8-040SR **1250.13**	YS31S8-040SR **1250.13**	1	0	102

PVC - Flanged Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS23P8-005 **142.27**	YS23S8-005 **240.64**	YS33P8-005 **157.93**	YS33S8-005 **314.49**	1	8	102
3/4	YS23P8-007 **151.15**	YS23S8-007 **274.78**	YS33P8-007 **163.91**	YS33S8-007 **360.43**	1	8	102
1	YS23P8-010 **161.39**	YS23S8-010 **303.73**	YS33P8-010 **175.81**	YS33S8-010 **422.07**	1	8	102
1-1/4	YS23P8-012 **258.72**	YS23S8-012 **445.11**	YS33P8-012 **282.06**	YS33S8-012 **604.78**	1	4	102
1-1/2	YS23P8-015 **288.31**	YS23S8-015 **481.06**	YS33P8-015 **320.13**	YS33S8-015 **648.98**	1	4	102
2	YS23P8-020 **362.47**	YS23S8-020 **572.98**	YS33P8-020 **397.73**	YS33S8-020 **737.27**	1	0	102
3	YS23P8-030 **800.66**	YS23S8-030 **982.68**	YS33P8-030 **860.24**	YS33S8-030 **1042.78**	1	0	102
4	YS23P8-040 **1290.39**	YS23S8-040 **1519.16**	YS33P8-040 **1387.05**	YS33S8-040 **1615.79**	1	0	102

PVC Clear - Socket Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS22P8-005CL **87.04**	YS22S8-005CL **172.24**	YS32P8-005CL **95.06**	YS32S8-005CL **189.25**	1	18	103
3/4	YS22P8-007CL **97.25**	YS22S8-007CL **196.97**	YS32P8-007CL **107.17**	YS32S8-007CL **222.15**	1	18	103
1	YS22P8-010CL **106.94**	YS22S8-010CL **233.65**	YS32P8-010CL **117.74**	YS32S8-010CL **256.88**	1	12	103
1-1/4	YS22P8-012CL **181.08**	YS22S8-012CL **337.12**	YS32P8-012CL **201.22**	YS32S8-012CL **371.68**	1	8	103
1-1/2	YS22P8-015CL **191.60**	YS22S8-015CL **359.36**	YS32P8-015CL **212.92**	YS32S8-015CL **394.60**	1	8	103
2	YS22P8-020CL **225.07**	YS22S8-020CL **439.60**	YS32P8-020CL **250.05**	YS32S8-020CL **450.99**	1	4	103
3	YS22P8-030CL **518.73**	YS22S8-030CL **700.77**	YS32P8-030CL **557.40**	YS32S8-030CL **739.44**	1	0	103
4	YS22P8-040CL **906.98**	YS22S8-040CL **1135.74**	YS32P8-040CL **976.26**	YS32S8-040CL **1204.99**	1	0	103

PVC Clear - SR Threaded Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS21P8-005CLSR **91.73**	YS21S8-005CLSR **176.94**	YS31P8-005CLSR **99.72**	YS31S8-005CLSR **193.93**	1	18	103
3/4	YS21P8-007CLSR **104.00**	YS21S8-007CLSR **203.71**	YS31P8-007CLSR **113.89**	YS31S8-007CLSR **228.94**	1	12	103
1	YS21P8-010CLSR **116.95**	YS21S8-010CLSR **243.69**	YS31P8-010CLSR **127.76**	YS31S8-010CLSR **266.94**	1	8	103
1-1/4	YS21P8-012CLSR **197.42**	YS21S8-012CLSR **353.45**	YS31P8-012CLSR **217.57**	YS31S8-012CLSR **388.01**	1	8	103
1-1/2	YS21P8-015CLSR **211.67**	YS21S8-015CLSR **379.44**	YS31P8-015CLSR **232.94**	YS31S8-015CLSR **414.79**	1	4	103
2	YS21P8-020CLSR **259.99**	YS21S8-020CLSR **440.82**	YS31P8-020CLSR **284.99**	YS31S8-020CLSR **485.93**	1	0	103
3	YS21P8-030CLSR **562.40**	YS21S8-030CLSR **744.27**	YS31P8-030CLSR **600.91**	YS31S8-030CLSR **782.93**	1	0	103
4	YS21P8-040CLSR **952.08**	YS21S8-040CLSR **1180.84**	YS31P8-040CLSR **1250.13**	YS31S8-040CLSR **1250.13**	1	0	103

PVC Clear - Flanged Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS23P8-005CL **142.27**	YS23S8-005CL **240.64**	YS33P8-005CL **157.93**	YS33S8-005CL **314.49**	1	8	103
3/4	YS23P8-007CL **151.15**	YS23S8-007CL **274.78**	YS33P8-007CL **163.91**	YS33S8-007CL **360.43**	1	8	103
1	YS23P8-010CL **161.39**	YS23S8-010CL **303.73**	YS33P8-010CL **175.81**	YS33S8-010CL **422.07**	1	8	103
1-1/4	YS23P8-012CL **258.72**	YS23S8-012CL **445.11**	YS33P8-012CL **282.06**	YS33S8-012CL **604.78**	1	4	103
1-1/2	YS23P8-015CL **288.31**	YS23S8-015CL **481.06**	YS33P8-015CL **320.13**	YS33S8-015CL **648.98**	1	4	103
2	YS23P8-020CL **362.47**	YS23S8-020CL **572.98**	YS33P8-020CL **397.73**	YS33S8-020CL **737.27**	1	0	103
3	YS23P8-030CL **800.66**	YS23S8-030CL **982.68**	YS33P8-030CL **860.24**	YS33S8-030CL **1042.78**	1	0	103
4	YS23P8-040CL **1290.39**	YS23S8-040CL **1519.16**	YS33P8-040CL **1387.05**	YS33S8-040CL **1615.79**	1	0	103

PVC Gray - True Union Socket Ends

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2AP8-005 **91.63**	YS2AS8-005 **181.29**	YS3AP8-005 **100.07**	YS3AS8-005 **199.22**	1	12	102
3/4	YS2AP8-007 **102.36**	YS2AS8-007 **207.33**	YS3AP8-007 **112.80**	YS3AS8-007 **233.86**	1	8	102
1	YS2AP8-010 **112.54**	YS2AS8-010 **245.96**	YS3AP8-010 **123.91**	YS3AS8-010 **270.43**	1	8	102
1-1/4	YS2AP8-012 **190.62**	YS2AS8-012 **355.49**	YS3AP8-012 **211.82**	YS3AS8-012 **391.22**	1	4	102
1-1/2	YS2AP8-015 **201.71**	YS2AS8-015 **378.27**	YS3AP8-015 **224.11**	YS3AS8-015 **415.39**	1	0	102
2	YS2AP8-020 **236.91**	YS2AS8-020 **427.24**	YS3AP8-020 **263.23**	YS3AS8-020 **474.74**	1	0	102
3	YS2AP8-030 **546.04**	YS2AS8-030 **737.64**	YS3AP8-030 **586.73**	YS3AS8-030 **778.36**	1	0	102
4	YS2AP8-040 **954.72**	YS2AS8-040 **1195.52**	YS3AP8-040 **1027.61**	YS3AS8-040 **1268.42**	1	0	102

PVC Gray - True Union Threaded Ends

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2BP8-005 **91.63**	YS2BS8-005 **181.29**	YS3BP8-005 **100.07**	YS3BS8-005 **199.22**	1	12	102
3/4	YS2BP8-007 **102.36**	YS2BS8-007 **207.33**	YS3BP8-007 **112.80**	YS3BS8-007 **233.86**	1	8	102
1	YS2BP8-010 **112.54**	YS2BS8-010 **245.96**	YS3BP8-010 **123.91**	YS3BS8-010 **270.43**	1	8	102
1-1/4	YS2BP8-012 **190.62**	YS2BS8-012 **355.49**	YS3BP8-012 **211.82**	YS3BS8-012 **391.22**	1	4	102
1-1/2	YS2BP8-015 **201.71**	YS2BS8-015 **378.27**	YS3BP8-015 **224.11**	YS3BS8-015 **415.39**	1	0	102
2	YS2BP8-020 **236.91**	YS2BS8-020 **427.24**	YS3BP8-020 **263.23**	YS3BS8-020 **474.74**	1	0	102
3	YS2BP8-030 **546.04**	YS2BS8-030 **737.64**	YS3BP8-030 **586.73**	YS3BS8-030 **778.36**	1	0	102

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PVC Gray - True Union Threaded Ends (continued)

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
4	YS2BP8-040 **954.72**	YS2BS8-040 **1195.52**	YS3BP8-040 **1027.61**	YS3BS8-040 **1268.42**	1	0	102

PVC Gray - True Union SR Threaded Ends

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2BP8-005SR **96.54**	YS2BS8-005SR **186.22**	YS3BP8-005SR **104.99**	YS3BS8-005SR **204.16**	1	12	102
3/4	YS2BP8-007SR **109.49**	YS2BS8-007SR **214.43**	YS3BP8-007SR **119.88**	YS3BS8-007SR **240.98**	1	8	102
1	YS2BP8-010SR **123.08**	YS2BS8-010SR **256.48**	YS3BP8-010SR **134.45**	YS3BS8-010SR **280.98**	1	8	102
1-1/4	YS2BP8-012SR **207.80**	YS2BS8-012SR **372.05**	YS3BP8-012SR **229.01**	YS3BS8-012SR **408.42**	1	4	102
1-1/2	YS2BP8-015SR **222.80**	YS2BS8-015SR **399.41**	YS3BP8-015SR **245.21**	YS3BS8-015SR **436.62**	1	0	102
2	YS2BP8-020SR **273.66**	YS2BS8-020SR **464.01**	YS3BP8-020SR **300.00**	YS3BS8-020SR **511.52**	1	0	102
3	YS2BP8-030SR **591.82**	YS2BS8-030SR **783.44**	YS3BP8-030SR **632.51**	YS3BS8-030SR **824.15**	1	0	102
4	YS2BP8-040SR **1002.22**	YS2BS8-040SR **1243.00**	YS3BP8-040SR **1075.13**	YS3BS8-040SR **1315.92**	1	0	102

PVC Clear - True Union Socket Ends

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2AP8-005CL **91.63**	YS2AS8-005CL **181.29**	YS3AP8-005CL **100.07**	YS3AS8-005CL **199.22**	1	12	103
3/4	YS2AP8-007CL **102.36**	YS2AS8-007CL **207.33**	YS3AP8-007CL **112.80**	YS3AS8-007CL **233.86**	1	8	103
1	YS2AP8-010CL **112.54**	YS2AS8-010CL **245.96**	YS3AP8-010CL **123.91**	YS3AS8-010CL **270.43**	1	8	103
1-1/4	YS2AP8-012CL **190.62**	YS2AS8-012CL **354.86**	YS3AP8-012CL **211.82**	YS3AS8-012CL **391.22**	1	4	103
1-1/2	YS2AP8-015CL **201.71**	YS2AS8-015CL **378.27**	YS3AP8-015CL **224.11**	YS3AS8-015CL **415.39**	1	0	103
2	YS2AP8-020CL **236.91**	YS2AS8-020CL **427.24**	YS3AP8-020CL **263.23**	YS3AS8-020CL **474.74**	1	0	103
3	YS2AP8-030CL **546.04**	YS2AS8-030CL **737.64**	YS3AP8-030CL **586.73**	YS3AS8-030CL **778.36**	1	0	103
4	YS2AP8-040CL **954.72**	YS2AS8-040CL **1195.52**	YS3AP8-040CL **1027.61**	YS3AS8-040CL **1268.42**	1	0	103

PVC Clear - True Union Threaded Ends

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM	Std Pk	Mstr Pk	Disc Code
1/2	YS2BP8-005CL **91.63**	YS2BS8-005CL **181.29**	YS3BP8-005CL **100.07**	YS3BS8-005CL **199.22**	1	12	103
3/4	YS2BP8-007CL **102.36**	YS2BS8-007CL **207.33**	YS3BP8-007CL **112.80**	YS3BS8-007CL **233.86**	1	8	103
1	YS2BP8-010CL **112.54**	YS2BS8-010CL **245.97**	YS3BP8-010CL **123.91**	YS3BS8-010CL **270.43**	1	8	103
1-1/4	YS2BP8-012CL **190.62**	YS2BS8-012CL **354.86**	YS3BP8-012CL **211.82**	YS3BS8-012CL **391.22**	1	4	103
1-1/2	YS2BP8-015CL **201.71**	YS2BS8-015CL **378.27**	YS3BP8-015CL **224.11**	YS3BS8-015CL **415.39**	1	0	103
2	YS2BP8-020CL **236.91**	YS2BS8-020CL **427.24**	YS3BP8-020CL **263.23**	YS3BS8-020CL **474.74**	1	0	103
3	YS2BP8-030CL **546.04**	YS2BS8-030CL **737.64**	YS3BP8-030CL **586.73**	YS3BS8-030CL **778.36**	1	0	103
4	YS2BP8-040CL **954.72**	YS2BS8-040CL **1195.52**	YS3BP8-040CL **1027.61**	YS3BS8-040CL **1268.42**	1	0	103

PVC Clear - True Union SR Threaded Ends

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2BP8-005CLSR **96.54**	YS2BS8-005CLSR **186.22**	YS3BP8-005CLSR **104.99**	YS3BS8-005CLSR **204.16**	1	12	103
3/4	YS2BP8-007CLSR **109.49**	YS2BS8-007CLSR **214.43**	YS3BP8-007CLSR **119.88**	YS3BS8-007CLSR **240.98**	1	8	103
1	YS2BP8-010CLSR **123.08**	YS2BS8-010CLSR **256.48**	YS3BP8-010CLSR **134.45**	YS3BS8-010CLSR **280.98**	1	8	103
1-1/4	YS2BP8-012CLSR **207.80**	YS2BS8-012CLSR **372.05**	YS3BP8-012CLSR **229.01**	YS3BS8-012CLSR **408.42**	1	4	103
1-1/2	YS2BP8-015CLSR **222.80**	YS2BS8-015CLSR **399.41**	YS3BP8-015CLSR **245.21**	YS3BS8-015CLSR **436.62**	1	0	103

PVC Clear - True Union SR Threaded Ends (continued)

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
2	YS2BP8-020CLSR **273.66**	YS2BS8-020CLSR **464.01**	YS3BP8-020CLSR **300.00**	YS3BS8-020CLSR **511.52**	1	0	103
3	YS2BP8-030CLSR **591.82**	YS2BS8-030CLSR **783.44**	YS3BP8-030CLSR **632.51**	YS3BS8-030CLSR **824.15**	1	0	103
4	YS2BP8-040CLSR **1002.22**	YS2BS8-040CLSR **1243.00**	YS3BP8-040CLSR **1075.13**	YS3BS8-040CLSR **1315.92**	1	0	103

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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Basket Strainers



Pressure Rating @ 73°F (23°C), Water	
1/2"-8"	150 psi
10"-12"	50 psi

Maximum Service Temperature

PVC = 140°F (60°C)

Temperature/Pressure De-ratings Apply

Important Ordering Information - Column headings indicate Elastomer seal type and Strainer Basket screen material. All Part Numbers shown designate 1/8" perforated (#6 Mesh Code) Strainer Basket Screens. To order other screen perforation sizing, replace the number "6" preceding the dash-separator with the corresponding Mesh Code from chart. Pricing is the same for all listed Mesh Codes.

Perforation Size	Mesh Code
1/16"	12
3/32"	8
1/8"	6
3/16"	4
1/4"	3
3/8"	2

Example: To order a 1/16" screen perforation in listed part number BS22P6-020, change the part number to BS22P12-020

Contact Spears® for additional perforations & wire mesh sizes

PVC - Socket Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	BS22P6-005 **407.06**	BS22S6-005 **650.98**	BS32P6-005 **428.48**	BS32S6-005 **672.40**	1	2	295
3/4	BS22P6-007 **407.06**	BS22S6-007 **650.98**	BS32P6-007 **428.48**	BS32S6-007 **672.40**	1	2	295
1	BS22P6-010 **650.98**	BS22S6-010 **650.98**	BS32P6-010 **428.48**	BS32S6-010 **672.40**	1	2	295
1-1/4	BS22P6-012 **745.59**	BS22S6-012 **1069.75**	BS32P6-012 **837.53**	BS32S6-012 **1202.23**	1	0	295
1-1/2	BS22P6-015 **745.59**	BS22S6-015 **1069.75**	BS32P6-015 **837.53**	BS32S6-015 **1202.23**	1	0	295
2	BS22P6-020 **745.59**	BS22S6-020 **1069.75**	BS32P6-020 **837.53**	BS32S6-020 **1202.23**	1	0	295
2-1/2	BS22P6-025 **1410.09**	BS22S6-025 **1973.29**	BS32P6-025 **1585.14**	BS32S6-025 **2217.25**	1	0	295
3	BS22P6-030 **1720.49**	BS22S6-030 **2283.11**	BS32P6-030 **1933.19**	BS32S6-030 **2565.33**	1	0	295
4	BS22P6-040 **2278.44**	BS22S6-040 **2925.52**	BS32P6-040 **2560.03**	BS32S6-040 **3278.08**	1	0	295
6	BS22P6-060 **3252.76**	BS22S6-060 **4372.12**	BS32P6-060 **3654.91**	BS32S6-060 **4918.53**	1	0	295
8	BS22P6-080 **4335.63**	BS22S6-080 **5857.16**	BS32P6-080 **4872.53**	BS32S6-080 **6582.47**	1	0	295
10	BS22P6-100 **8308.63**	BS22S6-100 **10482.52**	BS32P6-100 **9086.61**	BS32S6-100 **11527.94**	1	0	295
12	BS22P6-120 **10294.12**	BS22S6-120 **13187.22**	BS32P6-120 **11321.27**	BS32S6-120 **14568.98**	1	0	295

PVC - Flanged Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	BS23P6-005 **469.23**	BS23S6-005 **713.14**	BS33P6-005 **492.76**	BS33S6-005 **736.67**	1	0	295
3/4	BS23P6-007 **469.23**	BS23S6-007 **713.14**	BS33P6-007 **492.76**	BS33S6-007 **736.67**	1	0	295
1	BS23P6-010 **469.23**	BS23S6-010 **713.14**	BS33P6-010 **492.76**	BS33S6-010 **736.67**	1	0	295
1-1/4	BS23P6-012 **886.35**	BS23S6-012 **1211.54**	BS33P6-012 **996.79**	BS33S6-012 **1361.48**	1	0	295
1-1/2	BS23P6-015 **886.35**	BS23S6-015 **1186.03**	BS33P6-015 **996.79**	BS33S6-015 **1361.48**	1	0	295
2	BS23P6-020 **886.35**	BS23S6-020 **1211.54**	BS33P6-020 **996.79**	BS33S6-020 **1361.48**	1	0	295

PVC - Flanged Ends (continued)

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
2-1/2	BS23P6-025 **1626.86**	BS23S6-025 **2189.51**	BS33P6-025 **1828.06**	BS33S6-025 **2460.18**	1	0	295
3	BS23P6-030 **2065.51**	BS23S6-030 **2627.33**	BS33P6-030 **2320.78**	BS33S6-030 **2951.88**	1	0	295
4	BS23P6-040 **2691.94**	BS23S6-040 **3332.17**	BS33P6-040 **3024.81**	BS33S6-040 **3744.05**	1	0	295
6	BS23P6-060 **5745.36**	BS23S6-060 **6864.52**	BS33P6-060 **6455.43**	BS33S6-060 **7712.97**	1	0	295
8	BS23P6-080 **7571.16**	BS23S6-080 **9134.80**	BS33P6-080 **8507.20**	BS33S6-080 **10217.09**	1	0	295
10	BS23P6-100 **10093.94**	BS23S6-100 **12267.65**	BS33P6-100 **11341.56**	BS33S6-100 **13783.89**	1	0	295
12	BS23P6-120 **13812.05**	BS23S6-120 **16707.00**	BS33P6-120 **15519.16**	BS33S6-120 **18771.91**	1	0	295

PVC - Spigot Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	BS27P6-005 **407.06**	BS27S6-005 **650.98**	BS37P6-005 **428.48**	BS37S6-005 **672.40**	1	0	295
3/4	BS27P6-007 **407.06**	BS27S6-007 **650.98**	BS37P6-007 **428.48**	BS37S6-007 **672.40**	1	0	295
1	BS27P6-010 **407.06**	BS27S6-010 **650.98**	BS37P6-010 **428.48**	BS37S6-010 **672.40**	1	0	295
1-1/4	BS27P6-012 **745.59**	BS27S6-012 **1069.75**	BS37P6-012 **837.53**	BS37S6-012 **1202.23**	1	0	295
1-1/2	BS27P6-015 **745.59**	BS27S6-015 **1069.75**	BS37P6-015 **837.53**	BS37S6-015 **1202.23**	1	0	295
2	BS27P6-020 **745.59**	BS27S6-020 **1069.75**	BS37P6-020 **837.53**	BS37S6-020 **1202.23**	1	0	295
2-1/2	BS27P6-025 **1410.09**	BS27S6-025 **1973.32**	BS37P6-025 **1585.14**	BS37S6-025 **2217.25**	1	0	295
3	BS27P6-030 **1720.49**	BS27S6-030 **2283.11**	BS37P6-030 **1933.19**	BS37S6-030 **2565.33**	1	0	295
4	BS27P6-040 **2278.44**	BS27S6-040 **2925.52**	BS37P6-040 **2560.03**	BS37S6-040 **3278.08**	1	0	295
6	BS27P6-060 **3252.76**	BS27S6-060 **4372.12**	BS37P6-060 **3654.91**	BS37S6-060 **4918.53**	1	0	295
8	BS27P6-080 **4335.63**	BS27S6-080 **5857.16**	BS37P6-080 **4872.53**	BS37S6-080 **6582.47**	1	0	295
10	BS27P6-100 **8308.63**	BS27S6-100 **10482.52**	BS37P6-100 **9086.61**	BS37S6-100 **11527.94**	1	0	295
12	BS27P6-120 **10294.12**	BS27S6-120 **13187.22**	BS37P6-120 **11321.27**	BS37S6-120 **14568.98**	1	0	295

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Duplex Basket Strainers

Custom configured and produced to order, Spears® Duplex Basket Strainer provides individual isolation of strainers for servicing and cleaning without shutting down the line. A center handle on the Duplex unit control valves allows selection of either strainer unit for isolation. Each Basket Strainer features a convenient quick release clamp cap equipped with safety pressure gauge and pressure release ball valve for safer system operation and strainer cleaning. Additional drain plug allows complete drain and flush of unit.



Multi-Featured Options:

- No Flow Shutdown Required
- Sizes 1/2 - 4" Constructed from Corrosion Resistant PVC or CPVC
- True Union Socket, Thread, or Flanged Connections
- Uses Spears® Standard Basket Strainers Configurations
- Simple Single-Throw Lever Operation
- Select EPDM or FKM Seal Options
- Multiple Strainer Mesh Options in Plastic or Stainless Steel
  (see Industrial Basket Strainer options in this catalog)

Pressure Rating @ 73°F (23°C), Water
1/2" - 4" 150 psi

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply

CONTACT SPEARS® FOR ADDITIONAL CUSTOM OPTIONS, SELECTION ASSISTANCE & PRICING

Suction Strainers



Pressure Rating @ 73°F (23°C), Water 50 psi

Maximum Service Temperature PVC = 140°F (60°C)

Temperature/Pressure De-ratings Apply

Suction Strainer is a special Basket Strainer design that reduces pressure drop, a critical element in suction line applications. While same-size (inlet/outlet) units are available, enlarged inlet on reducing sizes performs best in suction line applications. The internal Strainer Basket is bottom-drained for direct flushing through a 360° adjustable side mounted Discharge Valve Assembly (included). Bolt-on Bonnet is fitted with Top Sight-Glass.

Standard units listed have EPDM Seals and Stainless Steel 3/16" Perforated Screen (4–mesh). Contact Spears® for other Mesh Code or Elastomer seal options required.

PVC Suction Strainer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Flanged End					
SS23BS4SG-040	**4**	1	0	295	2980.31
SS23BS4SG-420	**4X2**	1	0	295	2838.95
SS23BS4SG-421	**4X2-1/2**	1	0	295	2850.05
SS23BS4SG-422	**4X3**	1	0	295	2857.31
SS23BS4SG-060	**6**	1	0	295	3887.53
SS23BS4SG-532	**6X4**	1	0	295	3755.69
SS23BS4SG-080	**8**	1	0	295	4269.93
SS23BS4SG-582	**8X4**	1	0	295	3882.68
SS23BS4SG-585	**8X6**	1	0	295	3905.21
SS23BS4SG-100	**10**	1	0	295	4776.56
SS23BS4SG-626	**10X6**	1	0	295	4648.64
SS23BS4SG-628	**10X8**	1	0	295	4701.59
SS23BS4SG-120	**12**	1	0	295	5251.89
SS23BS4SG-668	**12X8**	1	0	295	5124.93
SS23BS4SG-670	**12X10**	1	0	295	5168.08

Suction Strainer Stainless Steel Baskets 3/16" Perforation

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
SSS4-040	**4**	1	4	299	826.49
SSS4-060	**6**	1	2	299	879.25
SSS4-080	**8**	1	2	299	1101.83
SSS4-100	**10**	1	0	299	1197.65
SSS4-120	**12**	1	2	299	1468.25

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC Schedule 40 Plain End

10' Lengths, Price Per Foot



List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PD-400-001C-10	1/8	10	0	745	3.38
PD-400-002C-10	1/4	250	0	745	4.23
PD-400-003C-10	3/8	250	0	745	5.97
PD-400-005C-10	1/2	10	0	745	1.78
PD-400-007C-10	3/4	10	0	745	2.37
PD-400-010C-10	1	10	0	745	3.46
PD-400-012C-10	1-1/4	10	0	745	4.68
PD-400-015C-10	1-1/2	10	0	745	5.61
PD-400-020C-10	2	10	0	745	7.52
PD-400-025C-10	2-1/2	10	0	745	11.88
PD-400-030C-10	3	10	0	745	15.52
PD-400-040C-10	4	10	0	745	22.11
PD-400-060C-10	6	10	0	745	40.80
PD-400-080C-10	8	10	0	745	66.44
PD-400-100C-10	10	10	0	745	113.62
PD-400-120C-10	12	10	0	745	150.09
PD-400-140C-10	14	10	0	945	343.30
PD-400-160C-10	16	10	0	945	448.15
PD-400-180C-10	18	10	0	945	584.66
PD-400-200C-10	20	10	0	945	686.11
PD-400-240C-10	24	10	0	945	955.60

20' Lengths, Price Per Foot

List Price Per Foot

PD-400-001C	1/8	20	0	745	3.38
PD-400-002C	1/4	500	0	745	4.23
PD-400-003C	3/8	500	0	745	5.97
PD-400-005C	1/2	20	0	745	1.78
PD-400-007C	3/4	20	0	745	2.37
PD-400-010C	1	20	0	745	3.46
PD-400-012C	1-1/4	20	0	745	4.68
PD-400-015C	1-1/2	20	0	745	5.61
PD-400-020C	2	20	0	745	7.52
PD-400-025C	2-1/2	20	0	745	11.88
PD-400-030C	3	20	0	745	15.52
PD-400-040C	4	20	0	745	22.11
PD-400-050C	5	20	0	745	33.69
PD-400-060C	6	20	0	745	40.80
PD-400-080C	8	20	0	745	66.44
PD-400-100C	10	20	0	745	113.62
PD-400-120C	12	20	0	745	150.09
PD-400-140C	14	20	0	945	361.37
PD-400-160C	16	20	0	945	471.74
PD-400-180C	18	20	0	945	615.43
PD-400-200C	20	20	0	945	722.22
PD-400-240C	24	20	0	945	1005.89

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.
- See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

CPVC Schedule 40 Plain End (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

20' Lengths, Price Per Foot

ASTM D-1784 ASTM F-441		Schedule 40 CPVC Plain End Pipe				
Size	Max Work Pressure	Avg OD	Min Wall	10' Length Skid Quantity FT/Pieces	20' Length Skid Quantity FT/Pieces	Weight Per FT
1/8"	910	0.405	0.068	2850/285	5700/285	.056
1/4"	790	0.540	0.088	2850/285	5700/285	.096
3/8"	620	0.675	0.091	2850/285	5700/285	.128
1/2"	600	0.840	0.109	2430/243	4860/243	.185
3/4"	480	1.050	0.113	1540/154	3080/154	.246
1"	450	1.315	0.133	2520/252	5040/252	.362
1-1/4"	370	1.660	0.140	1230/123	2460/123	.489
1-1/2"	330	1.900	0.145	1720/172	3440/172	.585
2"	280	2.375	0.154	1230/123	2460/123	.783
2-1/2"	300	2.875	0.203	540/54	1080/54	1.237
3"	260	3.500	0.216	460/46	920/46	1.619
4"	220	4.500	0.237	340/34	680/34	2.306
6"	180	6.625	0.280	170/17	340/17	4.603
8"	160	8.625	0.322	90/9	180/9	6.136
10"	140	10.750	0.365	110/11	220/11	8.886
12"	130	12.750	0.406	80/8	160/8	11.751

CPVC Schedule 80 Plain End

10' Lengths, Price Per Foot



List Price Per Foot

PD-800-001C-10	1/8	250	0	745	4.19
PD-800-002C-10	1/4	250	0	745	4.83
PD-800-003C-10	3/8	250	0	745	6.58
PD-800-005C-10	1/2	10	0	745	2.08
PD-800-007C-10	3/4	10	0	745	2.83
PD-800-010C-10	1	10	0	745	4.17
PD-800-012C-10	1-1/4	10	0	745	5.74
PD-800-015C-10	1-1/2	10	0	745	6.97
PD-800-020C-10	2	10	0	745	9.65
PD-800-025C-10	2-1/2	10	0	745	14.72
PD-800-030C-10	3	10	0	745	19.73
PD-800-040C-10	4	10	0	745	28.84
PD-800-060C-10	6	10	0	745	56.13
PD-800-080C-10	8	10	0	745	93.08
PD-800-100C-10	10	10	0	745	168.81
PD-800-120C-10	12	10	0	745	232.06
PD-800-140C-10	14	10	0	945	564.37
PD-800-160C-10	16	10	0	945	725.80
PD-800-180C-10	18	10	0	945	913.81
PD-800-200C-10	20	10	0	945	1151.01
PD-800-240C-10	24	10	0	945	1633.08

20' Lengths, Price Per Foot

List Price Per Foot

PD-800-001C	1/8	500	0	745	4.19
PD-800-002C	1/4	500	0	745	4.83
PD-800-003C	3/8	500	0	745	6.58
PD-800-005C	1/2	20	0	745	2.08
PD-800-007C	3/4	20	0	745	2.83
PD-800-010C	1	20	0	745	4.17
PD-800-012C	1-1/4	20	0	745	5.74
PD-800-015C	1-1/2	20	0	745	6.97
PD-800-020C	2	20	0	745	9.65
PD-800-025C	2-1/2	20	0	745	14.72
PD-800-030C	3	20	0	745	19.73
PD-800-040C	4	20	0	745	28.84
PD-800-050C	5	20	0	745	39.64
PD-800-060C	6	20	0	745	56.13
PD-800-080C	8	20	0	745	93.08
PD-800-100C	10	20	0	745	168.81
PD-800-120C	12	20	0	745	232.06
PD-800-140C	14	20	0	945	564.37
PD-800-160C	16	20	0	945	725.80

CPVC Schedule 80 Plain End (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
20' Lengths, Price Per Foot					
PD-800-180C	**18**	20	0	945	913.81
PD-800-200C	**20**	20	0	945	1151.01
PD-800-240C	**24**	20	0	945	1633.08

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.
- See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

ASTM D-1784 ASTM F-441		Schedule 80 CPVC Plain End Pipe				
Size	Max Work Pressure	Avg OD	Min Wall	10' Length Skid Quantity FT/Pieces	20' Length Skid Quantity FT/Pieces	Weight Per FT
1/8"	1230	0.405	0.095	2850/285	5700/285	.069
1/4"	1130	0.540	0.119	2850/285	5700/285	.117
3/8"	920	0.675	0.126	2850/285	5700/285	.162
1/2"	850	0.840	0.147	2430/243	4860/243	.231
3/4"	690	1.050	0.154	1540/154	3080/154	.314
1"	630	1.315	0.179	2520/252	5040/252	.462
1-1/4"	520	1.660	0.191	1230/123	2460/123	.636
1-1/2"	470	1.900	0.200	1720/172	3440/172	.773
2"	400	2.375	0.218	1230/123	2460/123	1.071
2-1/2"	420	2.875	0.276	540/54	1080/54	1.631
3"	370	3.500	0.300	460/46	920/46	2.187
4"	320	4.500	0.337	340/34	680/34	3.198
6"	280	6.625	0.432	170/17	340/17	6.106
8"	250	8.625	0.500	90/9	180/9	9.322
10"	230	10.750	0.593	110/11	220/11	14.095
12"	230	12.750	0.687	80/8	160/8	19.392

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Professional grade solvent cements developed for contractors' essential needs in joining PVC, CPVC and ABS pipe and fittings.

- NSF® Certified & Listed for use in piping applications such as potable water, turf, irrigation, pool & spa, industrial, plumbing, DWV, and/or sewer, plus special applications including fire protection, chemical waste, and ultra-pure water.
- Meets ASTM Standards for solvent cements and primers used for plastic pipe installation.
- Environmentally friendly. LEED® Compliant (Leadership in Energy and Environmental Design). Credit can be gained through the use of Spears® Low VOC products. This program, developed by the US Green Building Council, uses SCAQMD Rule 1168 as a benchmark to qualify one credit toward LEED® certification for green building.

CPVC Low VOC Cements

Heavy bodied cements are specifically formulated for CPVC plastic pipe and fittings including a variety of One-Step (no primer required) CPVC specialty cements. These products are ideal for use in hot/cold water plumbing systems, water treatment and chemical plants, as well as industrial piping systems.

- Low VOC emissions comply with *SCAQMD Rule 1168/316A*
- 2-Year Shelf Life

CPVC-24 GRAY/ORANGE: Heavy bodied, medium setting CPVC cement for all classes and schedules with interference fit through 24" diameter. High-strength, chemical-resistant solvent cement for use with CPVC piping systems carrying acids, bases, salts, and sodium hypochlorite. Ideal for use in waste water plants. Recommended for use on PVC industrial piping systems for chemical applications; best choice for both PVC and CPVC fume & air duct systems. Listings: ASTM F493, NSF®-PW, DWV, SW, U.P. Code.



The Most Chemically Resistant Cement Available for Both PVC & CPVC Applications

CPVC-24 Gray Heavy Body CPVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CPVC24G-005	**1/4 Pint**	24	0	707	9.01
CPVC24G-010	**1/2 Pint**	24	0	707	14.34
CPVC24G-020	**Pint**	12	0	707	26.09
CPVC24G-030	**Quart**	12	0	707	46.08
CPVC24G-040	**Gallon**	6	0	707	159.13



CPVC-24 Orange Heavy Body CPVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CPVC24O-005	**1/4 Pint**	24	0	707	9.01
CPVC24O-010	**1/2 Pint**	24	0	707	14.34
CPVC24O-020	**Pint**	12	0	707	26.09
CPVC24O-030	**Quart**	12	0	707	46.08
CPVC24O-040	**Gallon**	6	0	707	159.13

Spears® Low VOC Primers & Cleaners

Primers are used for the surface preparation of plastic pipe and fittings, which is necessary for the proper solvent welding of these materials. Cleaner aids in pre-cleaning to remove oil and grease. All Spears® Primers and Cleaners are low VOC products, which are environmentally friendly with lower emissions and reduced odor, surpassing the most stringent regulations and comply with *SCAQMD Rule 1168/316A*.

PRIMER-70 INDUSTRIAL GRADE PURPLE/CLEAR: Premium, industrial strength primer essential for proper softening and preparation of PVC and CPVC pipe and fitting surfaces. Specially recommended for use on Schedule 80 (150 psi and higher) and large size pipe. Excellent for cold weather applications. Listings: ASTM F656, NSF®-PW, DWV, SW, U.P. Code (Purple Only).



PRIMER-70 Clear Industrial Strength Primer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PRIM70C-005	**1/4 Pint**	24	0	709	7.89
PRIM70C-010	**1/2 Pint**	24	0	709	10.75
PRIM70C-020	**Pint**	12	0	709	21.51
PRIM70C-030	**Quart**	12	0	709	34.83
PRIM70C-040	**Gallon**	6	0	709	114.44



PRIMER-70 Purple Industrial Strength Primer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PRIM70P-005	**1/4 Pint**	24	0	709	7.89
PRIM70P-010	**1/2 Pint**	24	0	709	10.75
PRIM70P-020	**Pint**	12	0	709	21.51
PRIM70P-030	**Quart**	12	0	709	34.83
PRIM70P-040	**Gallon**	6	0	709	114.44

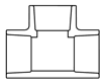
CLEANER-65 CLEAR CLEANER: Water-thin cleaner recommended for use before priming of pipe and fittings to remove dirt, oil and grease from the bonding surfaces of PVC, CPVC, ABS and Styrene.



CLEANER-65 Clear Cleaner

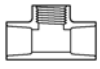
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CLEAN65-005	**1/4 Pint**	24	0	709	5.82
CLEAN65-010	**1/2 Pint**	24	0	709	8.67
CLEAN65-020	**Pint**	12	0	709	15.06
CLEAN65-030	**Quart**	12	0	709	22.12
CLEAN65-040	**Gallon**	6	0	709	70.83

Tee
Soc



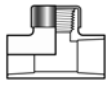
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
801-002C	1/4	50	300	090	14.16
801-003C	3/8	25	150	090	14.16
801-005C	1/2	25	200	090	14.16
801-007C	3/4	15	120	090	14.41
801-010C	1	15	0	090	17.66
801-012C	1-1/4	10	0	090	37.25
801-015C	1-1/2	10	0	090	42.67
801-020C	2	10	0	090	47.49
801-025C	2-1/2	10	0	090	120.91
801-030C	3	5	0	090	120.91
801-040C	4	5	0	090	160.91
801-050C	5	5	0	090	397.78
801-060C	6	2	0	090	418.74
801-080C	8	2	0	090	1199.48
801-100C	10	1	0	091	2372.94
801-100CF	10	1	0	097	1764.54
801-120C	12	1	0	091	3667.31
801-120CF	12	1	0	097	2408.22
801-140C	14	1	0	095	5452.66
801-140CF	14	1	0	097	6291.51
801-160CF	16	1	0	097	8987.85
801-180CF	18	1	0	097	10535.60
801-200CF	20	1	0	097	15941.67
801-240CF	24	1	0	097	22376.02

Tee
Soc x Fipt



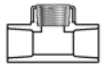
802-002C	1/4	25	150	090	35.94
802-005C	1/2	20	120	090	35.94
802-007C	3/4	20	160	090	47.93
802-010C	1	15	0	090	59.91
802-012C	1-1/4	15	0	090	70.41
802-015C	1-1/2	10	0	090	70.41
802-020C	2	10	0	090	88.43
802-030C	3	5	0	090	105.39
802-040C	4	5	0	090	198.01
802-060CF	6	1	2	097	405.25

Special Reinforced Tee
Soc x SR Fipt - Stainless Steel Collar



802-005CSR	1/2	50	0	096	19.67
802-007CSR	3/4	15	120	096	28.75
802-010CSR	1	15	0	096	36.17
802-012CSR	1-1/4	15	0	096	41.96
802-015CSR	1-1/2	10	0	096	41.96
802-020CSR	2	10	0	096	68.59
802-030CSR	3	5	0	096	98.78
802-040CSR	4	5	0	096	186.09

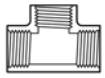
Transition Tee
Soc x Fipt With Brass Thread Insert



802-005CBR	1/2	20	140	096	58.38
802-007CBR	3/4	25	0	096	116.75

Not intended to convey or dispense water for human consumption through drinking or cooking

Tee
Fipt

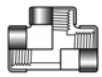


805-002C	1/4	25	150	090	31.46

Tee (continued)
Fipt

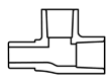
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
805-003C	3/8	25	150	090	31.46
805-005C	1/2	20	120	090	31.46
805-007C	3/4	15	120	090	45.32
805-010C	1	15	0	090	48.81
805-012C	1-1/4	10	0	090	49.09
805-015C	1-1/2	10	0	090	51.55
805-020C	2	10	0	090	57.26
805-025C	2-1/2	5	0	090	281.52
805-030C	3	5	0	090	326.63
805-040C	4	5	0	090	773.80

Special Reinforced Tee
SR Fipt - Stainless Steel Collar



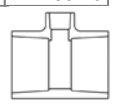
805-002CSR	1/4	20	160	096	17.60
805-003CSR	3/8	25	150	096	17.60
805-005CSR	1/2	25	150	096	23.55
805-007CSR	3/4	25	100	096	26.98
805-010CSR	1	15	0	096	40.29
805-015CSR	1-1/2	10	0	096	42.78
805-020CSR	2	10	0	096	50.94

Street Tee
Spig x Soc x Soc



844-005C	1/2	25	200	090	17.72
844-007C	3/4	15	120	090	18.02
844-010C	1	15	0	090	22.08
844-012C	1-1/4	10	0	090	46.55
844-015C	1-1/2	10	0	090	53.36
844-020C	2	10	0	090	59.40

Reducing Tee
Soc



801-101C	3/4X1/2	15	120	090	31.59
801-130C	1X1/2	15	0	090	36.41
801-131C	1X3/4	15	0	090	36.41
801-158C	1-1/4X1X1	15	0	090	45.16
801-159C	1-1/4X1X1-1/4	15	0	090	45.16
801-166C[1]	1-1/4X1/2	10	0	090	83.49
801-167C	1-1/4X3/4	12	0	090	71.25
801-168C	1-1/4X1	15	0	090	71.25
801-202C	1-1/2X1-1/4X1	10	0	090	71.25
801-209C	1-1/2X1/2	10	0	090	74.42
801-210C	1-1/2X3/4	15	0	090	74.42
801-211C	1-1/2X1	10	0	090	74.42
801-212C	1-1/2X1-1/4	10	0	090	74.42
801-247C	2X1/2	10	0	090	88.65
801-248C	2X3/4	10	0	090	88.65
801-249C	2X1	10	0	090	88.65
801-250C[1]	2X1-1/4	10	0	090	122.83
801-251C	2X1-1/2	10	0	090	88.65
801-254C[1]	2X2X4	1	0	090	343.50
801-287C	2-1/2X1/2	10	0	090	101.80
801-288C	2-1/2X3/4	10	0	090	101.80
801-289C	2-1/2X1	10	0	090	101.80
801-290C	2-1/2X1-1/4	10	0	090	101.80
801-291C	2-1/2X1-1/2	10	0	090	101.80
801-292C	2-1/2X2	10	0	090	105.37
801-333C[1]	3X1/2	5	0	090	224.08
801-334C[1]	3X3/4	5	0	090	224.08
801-335C	3X3X1	5	0	090	180.88
801-336C[1]	3X1-1/4	5	0	090	216.95
801-337C	3X3X1-1/2	5	0	090	180.88

Reducing Tee (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
801-338C	3X2	5	0	090	180.88
801-339C	3X2-1/2	6	0	090	180.88
801-415C[1]	4X1/2	5	0	090	275.08
801-416C[1]	4X3/4	5	0	090	275.08
801-417C[1]	4X1	4	0	090	275.08
801-418C[1]	4X1-1/4	5	0	090	275.08
801-419C	4X1-1/2	5	0	090	275.08
801-420C	4X2	5	0	090	228.62
801-421C[1]	4X2-1/2	5	0	090	307.64
801-422C	4X3	5	0	090	228.62
801-426C[1]	4X6	4	0	090	792.52
801-484C[1]	5X1-1/2	4	0	090	591.60
801-486C[1]	5X2	4	0	090	664.51
801-488C[1]	5X3	1	0	090	660.40
801-490C[1]	5X4	4	0	090	585.88
801-525C	6X1	4	0	090	786.36
801-525CF	6X1	1	3	097	357.62
801-526C[1]	6X1-1/4	4	0	090	786.36
801-526CF	6X1-1/4	1	3	097	435.61
801-527C[1]	6X1-1/2	4	0	090	786.36
801-527CF	6X1-1/2	1	4	097	407.57
801-528C[1]	6X2	4	0	090	730.62
801-528CF	6X2	1	4	097	427.16
801-529C[1]	6X2-1/2	4	0	090	806.60
801-529CF	6X2-1/2	1	3	097	445.66
801-530C[1]	6X3	5	0	090	730.62
801-530CF	6X3	1	3	097	467.13
801-532C	6X4	5	0	090	645.69
801-575CF	8X1	1	2	097	501.51
801-576CF	8X1-1/4	1	0	097	509.48
801-577CF	8X1-1/2	1	0	097	513.26
801-578C[1]	8X2	2	0	090	1365.04
801-578CF	8X2	1	2	097	570.99
801-579CF	8X2-1/2	1	2	097	620.56
801-580C[1]	8X3	2	0	090	1365.04
801-580CF	8X3	1	2	097	700.25
801-582C[1]	8X4	2	0	090	1365.04
801-582CF	8X4	1	2	097	753.47
801-585C	8X6	2	0	090	1185.29
801-618CF	10X1	1	0	097	781.60
801-619CF	10X1-1/4	1	0	097	792.82
801-620CF	10X1-1/2	1	0	097	829.38
801-621C[1]	10X2	1	0	091	2389.55
801-621CF	10X2	1	0	097	788.14
801-622CF	10X2-1/2	1	0	097	977.49
801-623C[1]	10X3	1	0	091	2267.66
801-623CF	10X3	1	0	097	1062.07
801-624C[1]	10X4	1	0	091	2267.66
801-624CF	10X4	1	0	097	1122.64
801-626C	10X6	1	0	091	2088.20
801-626CF	10X6	1	0	097	1230.57
801-628C[1]	10X8	1	0	091	3416.27
801-628CF	10X8	1	0	097	1427.35
801-661CF	12X2	1	0	097	1337.52
801-662CF	12X2-1/2	1	0	097	1402.63
801-663CF	12X3	1	0	097	1475.21
801-664C[1]	12X4	1	0	091	4113.36
801-664CF	12X4	1	0	097	1536.16
801-666C[1]	12X6	1	0	091	3852.78
801-666CF	12X6	1	0	097	1666.85
801-668C	12X8	1	0	091	3262.88
801-668CF	12X8	1	0	097	1866.06
801-670C[1]	12X10	1	0	091	4979.23
801-670CF	12X10	1	0	097	2153.63
801-691CF	14X2	1	0	097	2763.20

Reducing Tee (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
801-692CF	14X2-1/2	1	0	097	2771.35
801-693CF	14X3	1	0	097	3981.56
801-694CF	14X4	1	0	097	4126.61
801-696CF	14X6	1	0	097	4494.16
801-698C[1]	14X8	1	0	095	4004.50
801-698CF	14X8	1	0	097	4848.62
801-700C[1]	14X10	1	0	095	4272.50
801-700CF	14X10	1	0	097	5303.43
801-702C	14X12	1	0	095	4791.60
801-702CF	14X12	1	0	097	5830.46
801-751CF	16X2	1	0	097	3917.61
801-752CF	16X2-1/2	1	0	097	3973.69
801-753CF	16X3	1	0	097	4083.53
801-754CF	16X4	1	0	097	4235.22
801-756CF	16X6	1	0	097	5515.57
801-758CF	16X8	1	0	097	6165.58
801-760CF	16X10	1	0	097	6673.76
801-762CF	16X12	1	0	097	7464.55
801-764CF	16X14	1	0	097	8293.18
801-781CF	18X2	1	0	097	5325.66
801-783CF	18X3	1	0	097	5516.85
801-784CF	18X4	1	0	098	5320.01
801-786CF	18X6	1	0	097	7198.72
801-788CF	18X8	1	0	097	7729.63
801-790CF	18X10	1	0	097	8307.51
801-792CF	18X12	1	0	097	8883.53
801-794CF	18X14	1	0	097	9375.15
801-796CF	18X16	1	0	097	9898.45
801-814CF	20X4	1	0	097	10953.03
801-816CF	20X6	1	0	097	13033.84
801-818CF	20X8	1	0	097	13457.20
801-820CF	20X10	1	0	097	14627.86
801-822CF	20X12	1	0	097	15337.88
801-824CF	20X14	1	0	097	17087.84
801-826CF	20X16	1	0	097	18458.91
801-828CF	20X18	1	0	097	19610.53
801-904CF	24X4	1	0	097	13573.93
801-906CF	24X6	1	0	097	14639.59
801-908CF	24X8	1	0	097	14988.65
801-910CF	24X10	1	0	097	15797.55
801-912CF	24X12	1	0	097	16604.60
801-914CF	24X14	1	0	097	18044.21
801-916CF	24X16	1	0	097	21191.27
801-918CF	24X18	1	0	097	23557.84
801-920CF	24X20	1	0	097	26163.93

[1] Sized with Bushing

Reducing Tee

Soc x Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
802-101C	3/4X1/2	15	60	090	22.28
802-130C	1X1/2	50	0	090	44.73
802-131C	1X3/4	15	0	090	44.73
802-166C	1-1/4X1/2	25	0	090	77.08
802-167C[1]	1-1/4X3/4	15	0	090	77.08
802-168C	1-1/4X1	10	0	090	77.08
802-209C[1]	1-1/2X1/2	25	0	090	113.98
802-210C[1]	1-1/2X3/4	20	0	090	113.98
802-211C[1]	1-1/2X1	10	0	090	113.98
802-212C	1-1/2X1-1/4	10	0	090	113.98
802-247C	2X1/2	10	0	090	143.03
802-248C	2X3/4	10	0	090	143.03
802-249C	2X1	10	0	090	143.03

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Reducing Tee (continued)
Soc x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
802-250C[1]	2X1-1/4	10	0	090	143.03
802-251C[1]	2X1-1/2	10	0	090	143.03
802-287C	2-1/2X1/2	10	0	090	187.88
802-288C[1]	2-1/2X3/4	10	0	090	187.88
802-289C[1]	2-1/2X1	10	0	090	187.88
802-290C[1]	2-1/2X1-1/4	10	0	090	187.88
802-291C[1]	2-1/2X1-1/2	10	0	090	187.88
802-292C[1]	2-1/2X2	10	0	090	207.39
802-333C[1]	3X1/2	5	0	090	317.84
802-334C[1]	3X3/4	5	0	090	317.84
802-335C[1]	3X1	5	0	090	317.84
802-336C[1]	3X1-1/4	5	0	090	317.84
802-337C[1]	3X1-1/2	5	0	090	317.84
802-338C[1]	3X2	5	0	090	317.84
802-339C[1]	3X2-1/2	5	0	090	317.84
802-415C[1]	4X1/2	5	0	090	532.29
802-416C[1]	4X3/4	5	0	090	532.29
802-417C[1]	4X1	5	0	090	532.29
802-418C[1]	4X1-1/4	5	0	090	532.29
802-419C[1]	4X1-1/2	5	0	090	532.29
802-420C[1]	4X2	5	0	090	532.29
802-421C[1]	4X2-1/2	5	0	090	532.29
802-422C[1]	4X3	5	0	090	532.29
802-525C[1]	6X1	4	0	090	1037.86
802-526C	6X1-1/4	4	0	090	1037.86
802-527C	6X1-1/2	4	0	090	1037.86
802-528C[1]	6X2	4	0	090	1037.86
802-529C[1]	6X2-1/2	4	0	090	1037.86
802-530C[1]	6X3	4	0	090	1037.86
802-532C[1]	6X4	2	0	090	1191.34
802-578C[1]	8X2	2	0	090	1973.55
802-580C[1]	8X3	2	0	090	1973.55
802-582C[1]	8X4	2	0	090	1973.55
802-621C[1]	10X2	1	0	091	2894.89
802-623C[1]	10X3	1	0	091	2894.89
802-624C[1]	10X4	1	0	091	2894.89
802-661C[1]	12X2	2	0	091	4803.17
802-663C[1]	12X3	2	0	091	4803.17
802-664C[1]	12X4	1	0	091	4803.17

[1] Sized with Bushing

Reducing Tee
Soc x Fipt x Soc



803-095C	3/4X1/2X3/4	50	0	090	19.94

Special Reinforced Reducing Tee
Soc x SR Fipt - Stainless Steel Collar



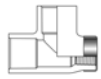
802-072CSR	1/2X1/4	25	200	096	19.67
802-098CSR	3/4X1/4	25	100	096	26.29
802-101CSR	3/4X1/2	50	0	096	26.29
802-128CSR[1]	1X1/4	15	0	096	40.60
802-130CSR	1X1/2	50	0	096	16.06
802-131CSR	1X3/4	15	0	096	40.60
802-164CSR[1]	1-1/4X1/4	5	0	096	53.99
802-166CSR	1-1/4X1/2	15	0	096	42.77
802-168CSR	1-1/4X1	10	0	096	43.64
802-207CSR[1]	1-1/2X1/4	15	0	096	77.31
802-211CSR	1-1/2X1	10	0	096	51.24
802-212CSR	1-1/2X1-1/4	10	0	096	51.24
802-245CSR[1]	2X1/4	10	0	096	88.80
802-247CSR	2X1/2	10	0	096	79.93
802-248CSR	2X3/4	10	0	096	88.80
802-287CSR	2-1/2X1/2	10	0	096	61.07

Special Reinforced Reducing Tee (continued)
Soc x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
802-331CSR[1]	3X1/4	5	0	096	169.62
802-413CSR[1]	4X1/4	5	0	096	184.06

[1] Sized with Bushing

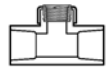
Special Reinforced Reducing Tee
Soc x SR Fipt - Stainless Steel Collar x Soc



(See also Gauge & Instrument Fittings for additional configurations)

803-095CSR	3/4X1/2X3/4	15	0	096	16.20

Transition Reducing Tee
Soc x Fipt With Brass Thread Insert



802-101CBR	3/4X1/2	50	0	096	72.36

Not intended to convey or dispense water for human consumption through drinking or cooking

90° Ell
Soc



806-002C	1/4	50	300	090	15.41
806-003C	3/8	25	150	090	15.41
806-005C	1/2	20	240	090	6.04
806-007C	3/4	20	160	090	7.71
806-010C	1	25	0	090	12.24
806-012C	1-1/4	10	0	090	26.48
806-015C	1-1/2	10	0	090	29.54
806-020C	2	25	0	090	35.65
806-025C	2-1/2	5	0	090	82.11
806-030C	3	5	0	090	92.97
806-040C	4	5	0	090	167.44
806-050C	5	4	0	090	319.64
806-050CF	5	1	4	097	420.87
806-060C	6	4	0	090	336.46
806-080C	8	2	0	090	823.36
806-080CF	8	1	0	097	597.17
806-100C	10	1	0	091	2200.33
806-100CF	10	1	0	097	1308.26
806-120C	12	1	0	091	2977.04
806-120CF	12	1	0	097	2408.47
806-140C	14	1	0	095	4649.16
806-140CF	14	1	0	097	5991.56
806-160CF	16	1	0	097	8179.48
806-180CF	18	1	0	097	10246.01
806-200CF	20	1	0	097	11778.03
806-240CF	24	1	0	097	21320.83

Sweep 90° Ell
Soc



806-005SC	1/2	25	150	090	11.88
806-007SC	3/4	25	100	090	15.32
806-010SC	1	25	0	090	24.61
806-012SC	1-1/4	25	0	090	32.52
806-015SC	1-1/2	25	0	090	34.93
806-020SC	2	25	0	090	42.32

Long Sweep 90° Ell
Soc



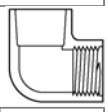
806-005LSCF	1/2	25	0	097	54.77
806-007LSCF	3/4	25	0	097	61.35
806-010LSCF	1	25	0	097	69.37
806-012LSCF	1-1/4	25	0	097	72.68
806-015LSCF	1-1/2	25	0	097	81.15

Long Sweep 90° Ell (continued)
Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
806-020LSCF	2	10	0	097	113.84
806-030LSCF	3	1	5	097	157.94
806-040LSCF	4	1	4	097	195.38
806-060LSCF	6	1	2	097	288.13

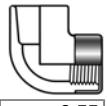
Not Listed for Electrical Conduit Use

90° Ell
Soc x Fipt



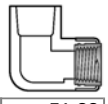
807-002C	1/4	25	450	090	13.65
807-003C	3/8	25	150	090	13.65
807-005C	1/2	20	120	090	15.94
807-007C	3/4	20	160	090	18.72
807-010C	1	20	0	090	24.51
807-012C	1-1/4	10	0	090	35.94
807-015C	1-1/2	10	0	090	54.44
807-020C	2	10	0	090	69.88
807-030C	3	5	0	090	84.23
807-040C	4	5	0	090	159.28

Special Reinforced 90° Ell
Soc x SR Fipt - Stainless Steel Collar



807-005CSR	1/2	20	240	096	9.55
807-007CSR	3/4	75	0	096	11.22
807-010CSR	1	50	0	096	13.51
807-015CSR	1-1/2	10	0	096	33.53
807-020CSR	2	10	0	096	41.95
807-030CSR	3	5	0	096	61.06
807-040CSR	4	5	0	096	112.74

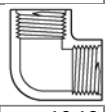
Transition 90° Ell
Soc x Fipt With Brass Thread Insert



807-005CBR	1/2	20	240	096	51.33
807-007CBR	3/4	20	160	096	89.61

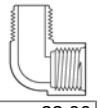
Not intended to convey or dispense water for human consumption through drinking or cooking

90° Ell
Fipt



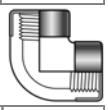
808-002C	1/4	25	450	090	16.19
808-003C	3/8	25	150	090	16.19
808-005C	1/2	20	120	090	9.40
808-007C	3/4	20	120	090	14.05
808-010C	1	15	120	090	19.73
808-012C	1-1/4	10	0	090	38.00
808-015C	1-1/2	10	0	090	40.89
808-020C	2	10	0	090	54.81
808-025C	2-1/2	5	0	090	170.09
808-030C	3	5	0	090	182.39
808-040C	4	5	0	090	285.41

90° Street Ell
Mipt x Fipt



812-002C	1/4	50	300	090	23.06
812-010C	1	50	0	090	28.95

Special Reinforced 90° Ell
SR Fipt - Stainless Steel Collar



808-003CSR	3/8	25	150	096	5.77

Special Reinforced 90° Ell (continued)
SR Fipt - Stainless Steel Collar

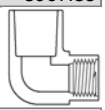
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
808-005CSR	1/2	20	120	096	5.77
808-007CSR	3/4	20	160	096	8.45
808-010CSR	1	50	0	096	10.83
808-012CSR	1-1/4	25	0	096	20.84
808-015CSR	1-1/2	10	0	096	24.54
808-020CSR	2	10	0	096	32.87

90° Street Ell
Spig x Soc



809-005C	1/2	50	200	090	7.58
809-007C	3/4	50	0	090	9.64
809-010C	1	50	0	090	15.32
809-012C	1-1/4	25	0	090	33.12
809-015C	1-1/2	10	0	090	36.96
809-020C	2	25	0	090	44.62
809-025C	2-1/2	5	0	090	90.06
809-030C	3	5	0	090	123.98
809-040C	4	4	0	090	223.26
809-060C	6	2	0	090	448.62
809-080C	8	2	0	090	1097.82
809-100C	10	1	0	091	2933.45
809-120C	12	1	0	091	3967.85

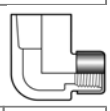
Reducing 90° Ell
Soc x Fipt



807-101C	3/4X1/2	10	60	090	15.29
807-130C[1]	1X1/2	10	80	090	21.85
807-131C[1]	1X3/4	10	80	090	21.85

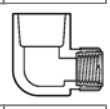
[1] Sized with Bushing

Special Reinforced Reducing 90° Ell
Soc x SR Fipt - Stainless Steel Collar



807-101CSR	3/4X1/2	50	0	096	12.17
807-130CSR	1X1/2	50	0	096	13.12

Transition Reducing 90° Ell
Soc x Fipt With Brass Thread Insert



807-101CBR	3/4X1/2	20	120	096	64.19

Not intended to convey or dispense water for human consumption through drinking or cooking

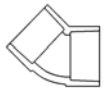
60° Ell
Soc



824-005CF	1/2	1	25	097	93.12
824-007CF	3/4	1	25	097	111.20
824-010CF	1	1	15	097	105.31
824-012CF	1-1/4	1	16	097	107.84
824-015CF	1-1/2	1	15	097	116.77
824-020CF	2	1	16	097	147.07
824-025CF	2-1/2	1	10	097	168.32
824-030CF	3	1	4	097	288.79
824-040CF	4	1	4	097	346.66
824-060CF	6	1	4	097	481.09
824-080CF	8	1	2	097	728.94
824-100CF	10	1	0	097	1467.44
824-120CF	12	1	0	097	2268.25
824-140CF	14	1	0	097	5468.05
824-160CF	16	1	0	097	7676.98
824-180CF	18	1	0	097	10650.42

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

45° Ell
Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
817-002C	1/4	25	450	090	22.92
817-003C	3/8	25	150	090	22.92
817-005C	1/2	20	120	090	7.39
817-007C	3/4	20	120	090	10.67
817-010C	1	15	120	090	16.97
817-012C	1-1/4	10	80	090	33.33
817-015C	1-1/2	10	0	090	34.22
817-020C	2	10	0	090	38.38
817-025C	2-1/2	5	0	090	78.43
817-030C	3	5	0	090	100.78
817-040C	4	5	0	090	138.35
817-050C	5	4	0	090	404.88
817-060C	6	4	0	090	426.20
817-080C	8	2	0	090	886.72
817-100C	10	1	0	091	1682.66
817-100CF	10	1	2	097	1016.13
817-120C	12	1	0	091	2960.35
817-120CF	12	1	0	097	1426.75
817-140C	14	1	0	095	3300.74
817-140CF	14	1	0	097	2984.57
817-160CF	16	1	0	097	4356.18
817-180CF	18	1	0	097	6741.28
817-200CF	20	1	0	097	8918.20
817-240CF	24	1	0	097	10755.98

45° Ell
Fipt



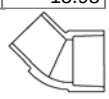
819-002C	1/4	25	450	090	21.54
819-003C	3/8	25	150	090	21.54
819-005C	1/2	25	150	090	20.40
819-007C	3/4	10	60	090	22.41
819-010C	1	10	60	090	24.66
819-012C	1-1/4	10	80	090	42.13
819-015C	1-1/2	10	0	090	42.13
819-020C	2	10	0	090	55.62
819-025C	2-1/2	5	0	090	105.44
819-030C	3	5	0	090	151.87
819-040C	4	5	0	090	238.88

Special Reinforced 45° Ell
SR Fipt - Stainless Steel Collar



819-005CSR	1/2	25	150	096	10.79
819-007CSR	3/4	10	120	096	13.19
819-010CSR	1	10	60	096	15.98

45° Street Ell
Spig x Soc

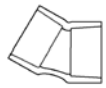


827-005C	1/2	50	400	090	7.39
827-007C	3/4	50	0	090	10.67
827-010C	1	50	0	090	16.97
827-012C	1-1/4	25	0	090	33.33
827-015C	1-1/2	25	0	090	34.17
827-020C	2	10	0	090	38.38
827-025C	2-1/2	12	0	090	84.94
827-030C	3	10	0	090	100.78
827-040C	4	5	0	090	138.35
827-060C	6	4	0	090	501.41
827-080C	8	2	0	090	1043.18
827-100C	10	1	0	091	1979.60
827-120C	12	1	0	091	3482.75

45° Street Ell (continued)
Spig x Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
827-140CF	14	1	0	097	4266.85
827-160CF	16	1	0	097	5457.93
827-180CF	18	1	0	097	7963.73

30° Ell
Soc



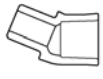
815-005CF	1/2	1	25	097	32.47
815-007CF	3/4	1	25	097	33.47
815-010CF	1	1	20	097	46.29
815-012CF	1-1/4	1	15	097	49.37
815-015CF	1-1/2	1	25	097	53.23
815-020CF	2	25	0	097	100.06
815-025CF	2-1/2	1	18	097	111.81
815-030CF	3	1	10	097	124.71
815-040CF	4	1	18	097	162.85
815-060C	6	5	0	090	501.41
815-080CF	8	1	3	097	593.97
815-100CF	10	1	2	097	985.97
815-120CF	12	1	2	097	1298.61
815-140CF	14	1	0	097	2757.37
815-160CF	16	1	0	097	3881.69
815-180CF	18	1	0	097	5627.37

22-1/2° Ell
Soc



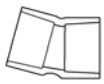
816-005C	1/2	20	240	090	8.71
816-007C	3/4	20	240	090	12.54
816-010C	1	20	160	090	19.97
816-012C	1-1/4	20	0	090	39.19
816-015C	1-1/2	20	0	090	40.27
816-020C	2	20	0	090	45.16
816-025C	2-1/2	5	0	090	113.34
816-025CF	2-1/2	1	18	097	111.81
816-030C	3	5	0	090	118.57
816-040C	4	4	0	090	162.76
816-060C	6	4	0	090	501.41
816-060CF	6	1	8	097	312.57
816-080C	8	4	0	090	1043.18
816-080CF	8	1	4	097	593.97
816-100CF	10	1	2	097	985.97
816-120CF	12	1	2	097	1298.61
816-140CF	14	1	0	097	2757.37
816-160CF	16	1	0	097	3881.69
816-180CF	18	1	0	097	5627.37

22-1/2° Street Ell
Spig x Soc



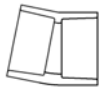
842-005C	1/2	50	400	090	9.91
842-007C	3/4	50	0	090	15.46
842-010C	1	50	0	090	24.19
842-012C	1-1/4	20	0	090	30.29
842-015C	1-1/2	25	0	090	43.55
842-020C	2	20	0	090	54.92
842-025C	2-1/2	5	0	090	100.83
842-030C	3	5	0	090	146.44
842-040C	4	4	0	090	187.79
842-060C	6	1	6	090	619.23
842-080C	8	1	2	090	1298.25
842-100CF	10	1	2	097	1001.75
842-120CF	12	1	2	097	1328.65

15° Ell
Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
818-005CF	1/2	1	25	097	32.47
818-007CF	3/4	1	23	097	33.47
818-010CF	1	1	20	097	46.29
818-012CF	1-1/4	1	15	097	49.37
818-015CF	1-1/2	1	25	097	53.23
818-020CF	2	1	25	097	100.06
818-025CF	2-1/2	1	18	097	111.81
818-030CF	3	1	35	097	124.71
818-040CF	4	1	18	097	162.85
818-060CF	6	1	8	097	312.57
818-080CF	8	1	3	097	593.97
818-100CF	10	1	2	097	985.97
818-120CF	12	1	0	097	1298.61
818-140CF	14	1	0	097	2757.37
818-160CF	16	1	0	097	3881.69
818-180CF	18	1	0	097	5627.37

11-1/4° Ell
Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
811-005CF	1/2	1	52	097	32.47
811-007CF	3/4	1	20	097	33.47
811-010CF	1	1	50	097	46.29
811-012CF	1-1/4	1	26	097	49.37
811-015C	1-1/2	25	0	090	36.92
811-020C	2	10	0	090	45.16
811-025CF	2-1/2	1	25	097	111.81
811-030C	3	10	0	090	118.57
811-040C	4	4	0	090	162.76
811-060CF	6	1	5	097	312.57
811-080CF	8	1	3	097	593.97
811-100CF	10	1	2	097	985.97
811-120CF	12	1	2	097	1298.61
811-140CF	14	1	0	097	2757.37
811-160CF	16	1	0	097	3881.69
811-180CF	18	1	0	097	5627.37

Wye
Soc



1/2" - 2" - 235 psi Maximum Internal Pressure Rating @ 73°F (23°C)
2-1/2" - 6" - 150 psi Maximum Internal Pressure Rating @ 73°F (23°C)
8" - Larger & All Fabricated Sizes - 100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
875-005C	1/2	25	100	090	16.41
875-007C	3/4	25	0	090	16.95
875-010C	1	20	0	090	28.56
875-012C	1-1/4	20	0	090	43.25
875-015C	1-1/2	20	0	090	46.49
875-020C	2	10	0	090	113.85
875-025C[1]	2-1/2	6	0	090	802.56
875-030C	3	5	0	090	561.37
875-040C	4	4	0	090	593.51
875-060C	6	3	0	090	812.32
875-080C	8	1	0	090	1387.25
875-080CF*	8	1	0	097	1213.35
875-100CF*	10	1	0	097	2084.38
875-120CF*	12	1	0	097	2903.25
875-140CF*	14	1	0	097	10093.83
875-160CF*	16	1	0	097	12660.95
875-180CF*	18	1	0	097	18372.52

Wye (continued)
Soc

[1] Sized with Bushing

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

Reducing Wye
Soc



1/2" - 2" - 235 psi Maximum Internal Pressure Rating @ 73°F (23°C)
3" - 6" - 150 psi Maximum Internal Pressure Rating @ 73°F (23°C)
8" - Larger & All Fabricated Sizes - 100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
875-101C[1]	3/4X1/2	25	0	090	24.23
875-130C[1]	1X1/2	20	0	090	39.93
875-131C[1]	1X3/4	20	0	090	39.93
875-166C[1]	1-1/4X1/2	20	0	090	72.78
875-167C[1]	1-1/4X3/4	20	0	090	72.78
875-168C[1]	1-1/4X1	20	0	090	72.78
875-209C[1]	1-1/2X1/2	20	0	090	79.83
875-210C[1]	1-1/2X3/4	20	0	090	79.83
875-211C[1]	1-1/2X1	20	0	090	79.83
875-212C[1]	1-1/2X1-1/4	20	0	090	79.83
875-247C[1]	2X1/2	10	0	090	157.96
875-248C[1]	2X3/4	10	0	090	157.96
875-249C[1]	2X1	10	0	090	157.96
875-250C[1]	2X1-1/4	10	0	090	157.96
875-251C[1]	2X1-1/2	10	0	090	157.96
875-335C[1]	3X1	5	0	090	649.75
875-336C[1]	3X1-1/4	5	0	090	649.75
875-337C[1]	3X1-1/2	5	0	090	649.75
875-338C[1]	3X2	4	0	090	649.75
875-339C[1]	3X2-1/2	5	0	090	649.75
875-420C	4X2	4	0	090	657.03
875-422C[1]	4X3	4	0	090	657.03
875-528C[1]	6X2	5	0	090	832.20
875-528CF*	6X2	1	3	097	652.93
875-530C[1]	6X3	5	0	090	832.04
875-530CF*	6X3	1	2	097	725.94
875-532C	6X4	5	0	090	635.33
875-578C[1]	8X2	1	0	090	2200.71
875-578CF*	8X2	1	2	097	877.71
875-579CF*	8X2-1/2	1	2	097	919.94
875-580C[1]	8X3	1	0	090	2200.71
875-580CF*	8X3	1	2	097	899.54
875-582C	8X4	2	0	090	2200.71
875-582CF*	8X4	1	2	097	923.86
875-585C[1]	8X6	1	0	090	2016.79
875-585CF*	8X6	1	0	097	1041.03
875-621CF*	10X2	1	0	097	977.78
875-623CF*	10X3	1	0	097	1040.93
875-624CF*	10X4	1	0	097	1272.08
875-626C	10X6	1	0	091	2273.47
875-626CF*	10X6	1	0	097	1444.36
875-628C	10X8	1	0	091	2393.72
875-628CF*	10X8	1	0	097	1700.86
875-661CF*	12X2	1	0	097	1613.25
875-663CF*	12X3	1	0	097	1694.85
875-664CF*	12X4	1	0	097	1933.34
875-666CF*	12X6	1	0	097	2011.19
875-668CF*	12X8	1	0	097	2122.81
875-670CF*	12X10	1	0	097	2613.59
875-694CF*	14X4	1	0	097	4327.35
875-696CF*	14X6	1	0	097	4753.01
875-698CF*	14X8	1	0	097	5141.54
875-702CF*	14X12	1	0	097	6263.59
875-754CF*	16X4	1	0	097	5445.08

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Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Reducing Wye (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
875-756CF*	**16X6**	1	0	097	5733.40
875-758CF*	**16X8**	1	0	097	6657.34
875-760CF*	**16X10**	1	0	097	7481.91
875-762CF*	**16X12**	1	0	097	8114.48
875-764CF*	**16X14**	1	0	097	10207.76
875-784CF*	**18X4**	1	0	097	7279.23
875-786CF*	**18X6**	1	0	097	7812.35
875-788CF*	**18X8**	1	0	097	8672.77
875-790CF*	**18X10**	1	0	097	9561.44
875-792CF*	**18X12**	1	0	097	10515.23
875-794CF*	**18X14**	1	0	097	13388.92
875-796CF*	**18X16**	1	0	097	14909.73

[1] Sized with Bushing

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

Double Wye



Soc

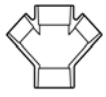
100 psi Maximum internal Pressure Rating @ 73°F (23°C)

876-020CF*	**2**	1	4	097	472.51
876-030CF*	**3**	1	4	097	602.69
876-040CF*	**4**	1	2	097	1033.38
876-060CF*	**6**	1	0	097	1801.69
876-080CF*	**8**	1	0	097	3231.25
876-100CF*	**10**	1	0	097	3506.62
876-120CF*	**12**	1	0	097	5253.80

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

For larger sizes please contact your Regional Spears® Distribution Center.

Reducing Double Wye



Soc

Size 3" is 150 psi, all Fabricated Sizes- 100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

876-338C	**3X2**	5	0	090	699.94
876-420CF*	**4X2**	1	2	097	880.53
876-421CF*	**4X2-1/2**	1	2	097	931.82
876-422CF*	**4X3**	1	2	097	1003.23
876-528CF*	**6X2**	1	3	097	1497.52
876-529CF*	**6X2-1/2**	1	2	097	1516.17
876-530CF*	**6X3**	1	2	097	1540.84
876-532CF*	**6X4**	1	0	097	1711.15
876-578CF*	**8X2**	1	2	097	2559.19
876-579CF*	**8X2-1/2**	1	2	097	2597.01
876-580CF*	**8X3**	1	2	097	2617.57
876-582CF*	**8X4**	1	0	097	2817.99
876-585CF*	**8X6**	1	0	097	2970.78
876-621CF*	**10X2**	1	0	097	3085.49
876-622CF*	**10X2-1/2**	1	0	097	3149.83
876-623CF*	**10X3**	1	0	097	3205.75
876-624CF*	**10X4**	1	0	097	3279.87
876-626CF*	**10X6**	1	0	097	3511.80
876-628CF*	**10X8**	1	0	097	3688.53
876-661CF*	**12X2**	1	0	097	3321.92
876-662CF*	**12X2-1/2**	1	0	097	3481.19
876-663CF*	**12X3**	1	0	097	3542.61
876-666CF*	**12X6**	1	0	097	4019.55
876-668CF*	**12X8**	1	0	097	4560.37
876-664CF*	**12X4**	1	0	097	3672.34
876-670CF*	**12X10**	1	0	097	4965.55

Reducing Double Wye (continued)

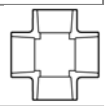
Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

For larger sizes please contact your Regional Spears® Distribution Center.

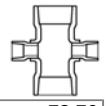
Cross



Soc

820-002C	**1/4**	25	150	090	60.36
820-005C	**1/2**	50	0	090	60.36
820-007C	**3/4**	50	0	090	63.53
820-010C	**1**	50	0	090	70.41
820-012C	**1-1/4**	25	0	090	75.34
820-015C	**1-1/2**	25	0	090	81.88
820-020C	**2**	10	0	090	106.21
820-025C	**2-1/2**	10	0	090	141.60
820-030C	**3**	5	0	090	180.33
820-040C	**4**	3	0	090	322.13
820-060CF	**6**	1	0	097	846.53
820-080CF	**8**	1	0	097	1610.20
820-100CF	**10**	1	0	097	2395.27
820-120CF	**12**	1	0	097	3403.32
820-140CF	**14**	1	0	097	9196.80
820-160CF	**16**	1	0	097	10962.05
820-180CF	**18**	1	0	097	14738.01

Reducing Cross



Soc

820-101C[1]	**3/4X1/2**	50	0	090	78.76
820-130C[1]	**1X1/2**	25	0	090	93.43
820-131C	**1X3/4**	20	0	090	93.43
820-166C[1]	**1-1/4X1/2**	25	0	090	83.58
820-167C	**1-1/4X3/4**	25	0	090	67.80
820-168C[1]	**1-1/4X1**	25	0	090	134.18
820-209C[1]	**1-1/2X1/2**	20	0	090	148.27
820-210C	**1-1/2X3/4**	15	0	090	148.27
820-211C[1]	**1-1/2X1**	25	0	090	148.27
820-212C[1]	**1-1/2X1-1/4**	25	0	090	148.27
820-247C[1]	**2X1/2**	10	0	090	191.97
820-248C[1]	**2X3/4**	10	0	090	191.97
820-249C[1]	**2X1**	10	0	090	191.97
820-250C[1]	**2X1-1/4**	10	0	090	191.97
820-251C[1]	**2X1-1/2**	10	0	090	191.97
820-289C	**2-1/2X1**	15	0	090	130.53
820-290C[1]	**2-1/2X1-1/4**	10	0	090	246.24
820-291C[1]	**2-1/2X1-1/2**	8	0	090	246.24
820-292C[1]	**2-1/2X2**	10	0	090	246.24
820-335C[1]	**3X1**	4	0	090	339.07
820-336C[1]	**3X1-1/4**	4	0	090	339.07
820-337C[1]	**3X1-1/2**	4	0	090	339.07
820-338C[1]	**3X2**	4	0	090	339.07
820-339C[1]	**3X2-1/2**	4	0	090	339.07
820-420C[1]	**4X2**	3	0	090	500.11
820-422C[1]	**4X3**	3	0	090	500.11
820-420CF	**4X2**	1	3	097	491.43
820-528CF	**6X2**	1	2	097	770.93
820-530CF	**6X3**	1	2	097	870.96
820-532CF	**6X4**	1	2	097	892.04
820-578CF	**8X2**	1	0	097	1004.62
820-580CF	**8X3**	1	0	097	1054.41
820-582CF	**8X4**	1	0	097	987.42
820-585CF	**8X6**	1	0	097	1297.36
820-621CF	**10X2**	1	0	097	1204.62
820-623CF	**10X3**	1	0	097	1295.17

Reducing Cross (continued)

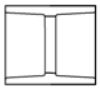
Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
820-624CF	10X4	1	0	097	1354.00
820-626CF	10X6	1	0	097	1617.54
820-628CF	10X8	1	0	097	1872.68
820-661CF	12X2	1	0	097	1470.85
820-663CF	12X3	1	0	097	1616.36
820-664CF	12X4	1	0	097	1706.59
820-666CF	12X6	1	0	097	1982.00
820-668CF	12X8	1	0	097	2311.97
820-670CF	12X10	1	0	097	2751.45
820-691CF	14X2	1	0	097	2832.47
820-693CF	14X3	1	0	097	2991.55
820-694CF	14X4	1	0	097	3124.42
820-696CF	14X6	1	0	097	4297.97
820-698CF	14X8	1	0	097	4887.06
820-700CF	14X10	1	0	097	5441.75
820-702CF	14X12	1	0	097	6203.71
820-751CF	16X2	1	0	097	4022.87
820-753CF	16X3	1	0	097	4191.95
820-754CF	16X4	1	0	097	4355.78
820-756CF	16X6	1	0	097	5783.51
820-758CF	16X8	1	0	097	6392.65
820-762CF	16X12	1	0	097	7493.28
820-764CF	16X14	1	0	097	9825.52
820-781CF	18X2	1	0	097	5388.40
820-783CF	18X3	1	0	097	5593.63
820-784CF	18X4	1	0	097	6502.03
820-786CF	18X6	1	0	097	7443.87
820-788CF	18X8	1	0	097	8128.11
820-790CF	18X10	1	0	097	8913.55
820-792CF	18X12	1	0	097	9678.52
820-794CF	18X14	1	0	097	12024.76
820-796CF	18X16	1	0	097	13482.28

[1] Sized with Bushing

Coupling

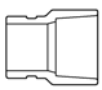
Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
829-002C	1/4	25	450	090	16.41
829-003C	3/8	25	150	090	16.41
829-005C	1/2	25	150	090	6.38
829-007C	3/4	15	90	090	8.92
829-010C	1	15	90	090	12.01
829-012C	1-1/4	10	60	090	17.99
829-015C	1-1/2	10	40	090	22.64
829-020C	2	20	0	090	26.32
829-025C	2-1/2	10	0	090	58.57
829-030C	3	5	0	090	63.64
829-040C	4	5	0	090	83.40
829-050C	5	6	0	090	186.61
829-060C	6	4	0	090	196.43
829-080C	8	4	0	090	530.87
829-100C	10	1	0	091	667.77
829-120C	12	1	0	091	782.13
829-140C	14	1	0	095	995.19
829-140CF	14	1	0	097	2195.46
829-160CF	16	1	0	097	3371.26
829-180CF	18	1	0	097	4169.98
829-200CF	20	1	0	097	5841.00
829-240CF	24	1	0	097	7299.48

Grooved Coupling Adapter

Groove x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
833-012C	1-1/4	10	60	090	28.71

Grooved Coupling Adapter (continued)

Groove x Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
833-015C	1-1/2	10	80	090	37.85
833-020C	2	5	40	090	49.20
833-025C	2-1/2	5	0	090	80.92
833-030C	3	5	0	090	99.77
833-040C	4	5	0	090	169.78
833-050CF	5	1	7	097	187.87
833-060C	6	5	0	090	242.87
833-080CF	8	1	4	097	306.32
833-100CF	10	1	0	097	480.74
833-120CF	12	1	0	097	678.01

Coupling

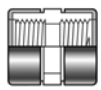
Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
830-002C	1/4	25	450	090	20.62
830-003C	3/8	25	150	090	20.62
830-005C	1/2	25	150	090	16.97
830-007C	3/4	25	150	090	27.41
830-010C	1	15	90	090	31.12
830-012C	1-1/4	10	60	090	33.00
830-015C	1-1/2	10	80	090	35.46
830-020C	2	10	0	090	41.80
830-025C	2-1/2	5	0	090	75.01
830-030C	3	5	0	090	87.32
830-040C	4	5	0	090	177.99
830-060CF	6	1	8	097	242.58

Special Reinforced Coupling

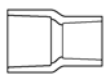
SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
830-005CSR	1/2	25	300	096	9.31
830-007CSR	3/4	25	300	096	15.04
830-010CSR	1	25	200	096	17.08
830-012CSR	1-1/4	10	120	096	18.15
830-015CSR	1-1/2	10	80	096	19.46
830-020CSR	2	10	0	096	23.00

Reducer Coupling

Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
829-101C	3/4X1/2	50	400	090	16.69
829-130C	1X1/2	25	200	090	23.81
829-131C	1X3/4	25	200	090	23.81
829-166C	1-1/4X1/2	25	0	090	54.52
829-167C	1-1/4X3/4	25	0	090	54.52
829-168C	1-1/4X1	25	0	090	54.52
829-209C	1-1/2X1/2	25	0	090	54.08
829-210C	1-1/2X3/4	25	0	090	54.08
829-211C	1-1/2X1	25	0	090	54.08
829-212C	1-1/2X1-1/4	25	0	090	54.08
829-247C	2X1/2	25	0	090	71.52
829-248C	2X3/4	10	80	090	71.52
829-249C	2X1	25	0	090	71.52
829-250C	2X1-1/4	10	0	090	71.52
829-251C	2X1-1/2	10	40	090	71.52
829-291C	2-1/2X1-1/2	10	0	090	81.43
829-292C	2-1/2X2	10	0	090	81.43
829-335C[1]	3X1	8	0	090	201.41
829-336C[1]	3X1-1/4	6	0	090	207.57
829-337C[1]	3X1-1/2	8	0	090	207.57
829-338C	3X2	8	0	090	164.54
829-339C	3X2-1/2	5	0	090	165.23
829-339CF	3X2-1/2	1	9	097	156.98
829-416C[1]	4X3/4	4	0	090	237.27
829-417C[1]	4X1	4	0	090	237.27

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

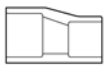
Reducer Coupling (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
829-419C[1]	4X1-1/2	4	0	090	237.27
829-420C	4X2	6	0	090	196.28
829-421C	4X2-1/2	4	0	090	196.28
829-422C	4X3	4	0	090	196.28
829-488CF	5X3	1	6	097	193.67
829-490CF	5X4	1	6	097	122.16
829-528C[1]	6X2	6	0	090	519.26
829-529C[1]	6X2-1/2	4	0	090	611.96
829-530C[1]	6X3	12	0	090	529.88
829-532C	6X4	4	0	090	445.86
829-580CF	8X3	1	6	097	472.21
829-582C[1]	8X4	2	0	090	809.06
829-582CF	8X4	1	4	097	418.63
829-585C	8X6	2	0	090	772.53
829-621CF	10X2	1	0	097	874.77
829-623CF	10X3	1	2	097	733.64
829-624CF	10X4	1	2	097	705.16
829-625CF	10X5	1	2	097	760.05
829-626C	10X6	1	0	091	1201.39
829-626CF	10X6	1	2	097	542.96
829-628C	10X8	1	0	091	1201.39
829-628CF	10X8	1	4	097	711.46
829-664CF	12X4	1	2	097	1569.53
829-665CF	12X5	1	0	097	1568.44
829-666CF	12X6	1	0	097	1459.73
829-668C	12X8	1	0	091	1308.97
829-668CF	12X8	1	0	097	1117.05
829-670CF	12X10	1	2	097	595.68
829-694CF	14X4	1	0	097	2278.63
829-696CF	14X6	1	0	097	2151.97
829-698CF	14X8	1	0	097	1791.60
829-700CF	14X10	1	0	097	1533.43
829-702CF	14X12	1	0	097	1341.43
829-754CF	16X4	1	0	097	2807.12
829-756CF	16X6	1	0	097	2889.01
829-758CF	16X8	1	0	097	3302.15
829-760CF	16X10	1	0	097	3162.98
829-762CF	16X12	1	0	097	2997.72
829-764CF	16X14	1	0	097	2663.35
829-783CF	18X3	1	0	097	5784.52
829-784CF	18X4	1	0	097	5739.07
829-786CF	18X6	1	0	097	5696.24
829-788CF	18X8	1	0	097	5572.34
829-790CF	18X10	1	0	097	5538.84
829-792CF	18X12	1	0	097	5444.07
829-794CF	18X14	1	0	097	5358.60
829-796CF	18X16	1	0	097	3911.68
829-818CF	20X8	1	0	097	5527.60
829-826CF	20X16	1	0	097	6318.89
829-828CF	20X18	1	0	097	5855.48
829-906CF	24X6	1	0	097	9250.31
829-918CF	24X18	1	0	097	12982.88
829-920CF	24X20	1	0	097	11684.48

[1] Sized with Bushing

Eccentric Reducer Coupling



Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
829-101CFE	3/4X1/2	1	15	097	37.02
829-130CFE	1X1/2	1	16	097	40.16
829-131CFE	1X3/4	1	15	097	38.64
829-168CFE	1-1/4X1	1	12	097	41.98
829-209CFE	1-1/2X1/2	1	10	097	66.49
829-210CFE	1-1/2X3/4	1	10	097	79.79
829-212CFE	1-1/2X1-1/4	1	20	097	43.98

Eccentric Reducer Coupling (continued)

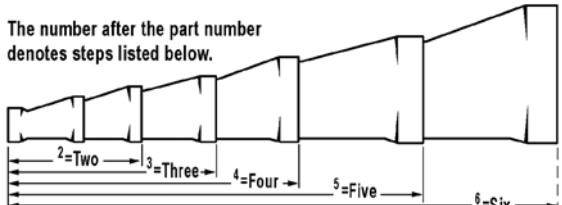
Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
829-249CFE	2X1	1	25	097	60.15
829-250CFE	2X1-1/4	1	25	097	54.75
829-251CFE	2X1-1/2	1	10	097	53.46
829-290CFE[2]	2-1/2X1-1/4	1	10	097	91.27
829-291CFE[2]	2-1/2X1-1/2	1	20	097	91.08
829-292CFE	2-1/2X2	1	10	097	64.68
829-335CFE[2]	3X1	1	10	097	142.22
829-336CFE[2]	3X1-1/4	1	10	097	135.81
829-337CFE[2]	3X1-1/2	1	10	097	133.58
829-338CFE	3X2	1	20	097	86.60
829-339CFE	3X2-1/2	1	10	097	173.91
829-417CFE[3]	4X1	1	18	097	219.44
829-418CFE[3]	4X1-1/4	1	6	097	223.46
829-419CFE[3]	4X1-1/2	1	6	097	211.48
829-420CFE[2]	4X2	1	10	097	193.54
829-421CFE[2]	4X2-1/2	1	6	097	178.65
829-422CFE	4X3	1	10	097	125.27
829-490CFE	5X4	1	8	097	148.45
829-528CFE[3]	6X2	1	6	097	391.13
829-529CFE[3]	6X2-1/2	1	4	097	364.35
829-530CFE[2]	6X3	1	6	097	312.38
829-532CFE	6X4	1	10	097	265.92
829-578CFE[4]	8X2	1	0	097	777.20
829-580CFE[3]	8X3	1	2	097	701.37
829-582CFE[2]	8X4	1	2	097	667.32
829-583CFE[2]	8X5	1	2	097	594.73
829-585CFE	8X6	1	4	097	578.72
829-624CFE[3]	10X4	1	0	097	1385.20
829-625CFE[3]	10X5	1	0	097	1226.56
829-626CFE[2]	10X6	1	2	097	1187.62
829-628CFE	10X8	1	2	097	853.23
829-664CFE[4]	12X4	1	0	097	2495.13
829-666CFE[3]	12X6	1	0	097	1630.43
829-668CFE[2]	12X8	1	0	097	1554.99
829-670CFE	12X10	1	0	097	1391.57
829-696CFE[3]	14X6	1	0	097	2699.17
829-698CFE[2]	14X8	1	0	097	2646.46
829-700CFE	14X10	1	0	097	1886.47
829-702CFE	14X12	1	0	097	1722.29
829-756CFE[5]	16X6	1	0	097	4930.12
829-758CFE[4]	16X8	1	0	097	4766.78
829-760CFE[3]	16X10	1	0	097	4679.29
829-762CFE[2]	16X12	1	0	097	4495.34
829-764CFE	16X14	1	0	097	4135.80
829-786CFE[6]	18X6	1	0	097	9506.57
829-788CFE[5]	18X8	1	0	097	9374.63
829-790CFE[4]	18X10	1	0	097	9011.52
829-792CFE[3]	18X12	1	0	097	8332.43
829-794CFE[2]	18X14	1	0	097	7739.49
829-796CFE	18X16	1	0	097	5932.67

Eccentric Reducer Coupling Footnotes

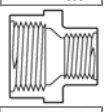
Multi-Step Configurations

The number after the part number denotes steps listed below.



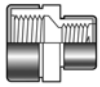
Example: 829-582CFE[2] ([2]= 2 Step)

Reducer Coupling
Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
830-101C	3/4X1/2	50	200	090	27.80

Special Reinforced Reducer Coupling
SR Fipt - Stainless Steel Collar



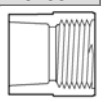
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
830-101CSR	3/4X1/2	50	200	096	16.68
830-130CSR	1X1/2	50	0	096	20.14
830-131CSR	1X3/4	25	200	096	20.14
830-168CSR	1-1/4X1	25	0	096	27.39
830-210CSR	1-1/2X3/4	25	0	096	39.17
830-211CSR	1-1/2X1	10	80	096	39.17
830-212CSR	1-1/2X1-1/4	10	80	096	39.17
830-249CSR	2X1	25	0	096	96.42
830-251CSR	2X1-1/2	15	0	096	96.42

Fabricated Repair Coupling
Gasket



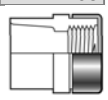
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
828-020CF	2	1	5	097	129.34
828-030CF	3	1	5	097	164.76
828-040CF	4	1	4	097	205.29
828-060CF	6	1	2	097	237.88
828-080CF	8	1	2	097	639.58
828-100CF	10	1	0	097	689.98
828-120CF	12	1	0	097	907.87
828-140CF	14	1	0	097	2672.22
828-160CF	16	1	0	097	3783.44

Female Adapter
Soc x Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
835-002C	1/4	25	450	090	20.82
835-003C	3/8	25	150	090	20.82
835-005C	1/2	25	150	090	10.32
835-007C	3/4	15	90	090	10.22
835-010C	1	15	90	090	25.17
835-012C	1-1/4	10	120	090	25.77
835-015C	1-1/2	10	80	090	30.02
835-020C	2	10	0	090	51.74
835-025C	2-1/2	5	0	090	99.24
835-030C	3	5	0	090	203.62
835-040C	4	5	0	090	338.92
835-060C	6	6	0	090	481.18
835-060CF	6	1	8	097	304.80
835-080C	8	3	0	090	760.28
835-080CF	8	1	6	097	383.40
835-100CF	10	1	2	097	557.13
835-120CF	12	1	0	097	721.95

Special Reinforced Female Adapter
Soc x SR Fipt - Stainless Steel Collar

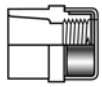


Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
835-002CSR	1/4	25	450	096	13.06
835-003CSR	3/8	25	300	096	13.06
835-005CSR	1/2	25	300	096	5.61
835-007CSR	3/4	25	150	096	6.06
835-010CSR	1	25	200	096	13.82
835-012CSR	1-1/4	10	60	096	14.18
835-015CSR	1-1/2	10	80	096	16.46
835-020CSR	2	10	0	096	23.39
835-025CSR	2-1/2	5	0	096	54.39
835-030CSR	3	15	0	096	111.75

Special Reinforced Female Adapter (continued)
Soc x SR Fipt - Stainless Steel Collar

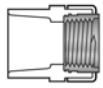
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
835-040CSR	4	5	0	096	185.99
835-060CSR	6	6	0	096	290.55

Encapsulated Special Reinforced (SR) Female Adapter
Soc x ESR Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
835-002CESR	1/4	25	450	096	16.57
835-003CESR	3/8	25	300	096	16.57
835-005CESR	1/2	25	300	096	8.60
835-007CESR	3/4	25	300	096	9.08
835-010CESR	1	25	200	096	20.01
835-012CESR	1-1/4	10	80	096	20.48
835-015CESR	1-1/2	10	0	096	26.52
835-020CESR	2	10	0	096	41.22

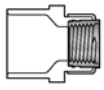
Transition Female Adapter
Soc x Fipt With Brass Thread Insert



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
835-005CBR	1/2	25	150	096	31.64
835-007CBR	3/4	15	90	096	65.48
835-010CBR	1	15	90	096	114.92
835-012CBR	1-1/4	15	60	096	187.47
835-015CBR	1-1/2	10	80	096	247.18
835-020CBR	2	8	32	096	308.72

Not intended to convey or dispense water for human consumption through drinking or cooking

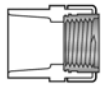
Transition Reducing Female Adapter
Soc x Fipt With Brass Thread Insert



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
835-101CBR	3/4X1/2	50	0	096	45.81

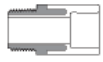
Not intended to convey or dispense water for human consumption through drinking or cooking

Transition Female Adapter
Soc x Fipt With Type 316 Stainless Steel Thread Insert



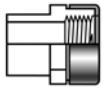
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
835-005CSS	1/2	25	150	096	62.13
835-007CSS	3/4	15	90	096	86.74
835-010CSS	1	15	90	096	151.81
835-012CSS	1-1/4	15	0	096	246.72
835-015CSS	1-1/2	10	60	096	321.87
835-020CSS	2	8	32	096	376.68

Transition Male Adapter w/Brass Thread
Brass Mipt x Socket



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
836-005CBR	1/2	40	160	096	70.14
836-007CBR	3/4	40	160	096	98.75
836-010CBR	1	10	60	096	171.99
836-012CBR	1-1/4	10	60	096	279.76
836-015CBR	1-1/2	10	40	096	363.71
836-020CBR	2	8	32	096	426.20

Special Reinforced Spigot Female Adapter
Spig x SR Fipt - Stainless Steel Collar



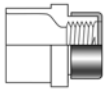
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
878-005CSR	1/2	50	600	096	5.98
878-007CSR	3/4	25	300	096	6.31
878-010CSR	1	50	0	096	14.19
878-012CSR	1-1/4	25	0	096	14.68
878-015CSR	1-1/2	25	0	096	17.04
878-020CSR	2	15	0	096	31.04
878-030CSR	3	5	0	096	113.15

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Special Reinforced Spigot Female Adapter (continued)
Spig x SR Fipt - Stainless Steel Collar

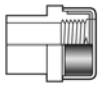
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
878-040CSR	4	5	0	096	189.95

Special Reinforced Reducing Female Adapter
Soc x SR Fipt - Stainless Steel Collar



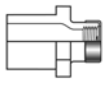
835-074CSR	1/2X3/4	50	400	096	6.06
835-101CSR	3/4X1/2	50	400	096	6.06
835-102CSR	3/4X1	50	0	096	13.82
835-130CSR	1X1/2	50	0	096	13.82
835-131CSR	1X3/4	25	200	096	13.82

Encapsulated Special Reinforced (SR) Female Adapter
Spig x ESR Fipt



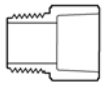
878-005CESR	1/2	50	600	096	8.85
878-007CESR	3/4	25	300	096	9.42
878-010CESR	1	50	0	096	20.20
878-012CESR	1-1/4	25	0	096	20.75
878-015CESR	1-1/2	25	0	096	27.05
878-020CESR	2	15	0	096	41.81

Special Reinforced Reducing Spigot Female Adapter
Spig x SR Fipt - Stainless Steel Collar



878-072CSR	1/2X1/4	25	450	096	17.14
878-098CSR	3/4X1/4	50	400	096	19.95
878-128CSR	1X1/4	50	400	096	22.33

Male Adapter
Mipt x Soc



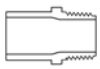
836-005C	1/2	25	150	090	8.24
836-007C	3/4	25	150	090	10.05
836-102C	3/4X1	25	0	090	37.01
836-131C	1X3/4	25	0	090	35.15
836-010C	1	20	240	090	16.94
836-012C	1-1/4	10	60	090	24.97
836-015C	1-1/2	10	120	090	33.74
836-020C	2	10	80	090	45.77
836-025C	2-1/2	5	0	090	124.80
836-030C	3	5	0	090	167.71
836-040C	4	5	0	090	283.52
836-060C	6	5	0	090	406.34
836-060CF	6	1	8	097	287.99
836-080CF	8	1	2	097	367.68
836-100CF	10	1	2	097	681.27
836-120CF	12	1	0	097	792.82

Reinforced Male Adapter
R Mipt x Soc - Stainless Steel Sleeve



836-005CR	1/2	25	150	096	8.62
836-007CR	3/4	25	300	096	9.87
836-010CR	1	10	120	096	11.71

Male Adapter
Spig x Mipt

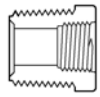


861-005C	1/2	50	300	090	10.04
861-007C	3/4	25	150	090	12.47
861-010C	1	50	0	090	21.16
861-131C	1X3/4	50	200	090	24.72
861-012C	1-1/4	25	200	090	24.00

Male Adapter (continued)
Spig x Mipt

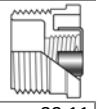
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
861-015C	1-1/2	25	0	090	26.49
861-020C	2	25	0	090	31.00

Reducer (T.T.) Bushing Flush Style
Mipt x Fipt



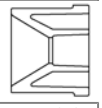
839-041C	1/4X1/8	25	500	090	19.25
839-052C	3/8X1/4	50	450	090	19.25
839-072C	1/2X1/4	50	300	090	19.25
839-073C	1/2X3/8	50	600	090	19.25
839-098C	3/4X1/4	50	300	090	21.22
839-099C	3/4X3/8	50	300	090	21.22
839-101C	3/4X1/2	50	300	090	9.13
839-128C	1X1/4	25	150	090	22.92
839-129C	1X3/8	50	600	090	22.92
839-130C	1X1/2	50	300	090	15.38
839-131C	1X3/4	50	700	090	15.38
839-166C	1-1/4X1/2	25	150	090	30.55
839-167C	1-1/4X3/4	25	150	090	30.55
839-168C	1-1/4X1	25	300	090	30.31
839-209C	1-1/2X1/2	25	300	090	36.79
839-210C	1-1/2X3/4	25	300	090	36.79
839-211C	1-1/2X1	25	300	090	36.79
839-212C	1-1/2X1-1/4	25	300	090	36.51
839-247C	2X1/2	10	60	090	40.69
839-248C	2X3/4	10	60	090	40.69
839-249C	2X1	10	60	090	40.69
839-250C	2X1-1/4	10	60	090	40.69
839-251C	2X1-1/2	10	60	090	36.51
839-292C	2-1/2X2	10	40	090	97.82
839-337C	3X1-1/2	10	0	090	131.60
839-338C	3X2	10	0	090	131.60
839-339C	3X2-1/2	10	0	090	131.60
839-420C	4X2	6	0	090	226.13
839-422C	4X3	6	0	090	226.13
839-530C	6X3	5	0	090	816.33
839-532C	6X4	5	0	090	816.33

Special Reinforced Reducing Bushing
Mipt x SR Fipt - Stainless Steel Collar



839-209CSR	1-1/2X1/2	25	300	096	22.11
839-210CSR	1-1/2X3/4	25	300	096	22.11
839-247CSR	2X1/2	10	60	096	24.43
839-248CSR	2X3/4	10	60	096	24.43
839-249CSR	2X1	10	120	096	24.43
839-420CSR	4X2	6	0	096	135.66

Reducer Bushing Flush Style
Spig x Soc



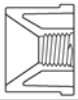
837-052C	3/8X1/4	50	450	090	13.34
837-072C	1/2X1/4	50	300	090	13.34
837-073C	1/2X3/8	50	300	090	13.34
837-101C	3/4X1/2	50	300	090	6.80
837-129C[1]	1X3/8	50	0	090	23.18
837-130C	1X1/2	50	400	090	10.57
837-131C	1X3/4	50	300	090	10.57
837-166C	1-1/4X1/2	25	300	090	28.06
837-167C	1-1/4X3/4	25	150	090	28.06
837-168C	1-1/4X1	25	150	090	28.06
837-209C	1-1/2X1/2	25	200	090	31.73
837-210C	1-1/2X3/4	25	200	090	31.73
837-211C	1-1/2X1	25	200	090	31.73
837-212C	1-1/2X1-1/4	25	200	090	31.73

Reducer Bushing Flush Style (continued)
Spig x Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
837-247C	2X1/2	10	120	090	40.95
837-248C	2X3/4	10	60	090	40.95
837-249C	2X1	10	120	090	40.95
837-250C	2X1-1/4	10	60	090	40.95
837-251C	2X1-1/2	10	60	090	40.95
837-289C[1]	2-1/2X1	10	80	090	70.42
837-290C	2-1/2X1-1/4	10	80	090	49.87
837-291C	2-1/2X1-1/2	10	40	090	49.87
837-292C	2-1/2X2	15	0	090	49.87
837-334C[1]	3X3/4	10	0	090	86.86
837-335C	3X1	10	0	090	75.98
837-336C	3X1-1/4	10	0	090	75.98
837-337C	3X1-1/2	10	0	090	75.98
837-338C	3X2	10	0	090	75.98
837-339C	3X2-1/2	15	0	090	75.98
837-420C	4X2	6	0	090	84.01
837-421C[1]	4X2-1/2	6	0	090	84.01
837-422C	4X3	6	0	090	84.01
837-490C	5X4	4	0	090	158.80
837-528C	6X2	5	0	090	180.23
837-529C[1]	6X2-1/2	5	0	090	261.44
837-530C	6X3	5	0	090	180.23
837-532C	6X4	5	0	090	178.97
837-578C[1]	8X2	4	0	090	777.03
837-580C[1]	8X3	4	0	090	777.03
837-582C	8X4	4	0	090	777.03
837-585C	8X6	4	0	090	589.20
837-621C[1]	10X2	2	0	091	1294.45
837-623C[1]	10X3	2	0	091	1294.45
837-624C[1]	10X4	4	0	091	1294.45
837-626C	10X6	4	0	091	1042.82
837-628C	10X8	4	0	091	1042.82
837-628CF	10X8	1	6	097	902.45
837-663CF	12X3	1	2	097	1461.81
837-664C[1]	12X4	2	0	091	2125.43
837-666CF	12X6	1	2	097	1250.18
837-668C	12X8	2	0	091	1314.74
837-670CF	12X10	1	3	097	941.39
837-696CF	14X6	1	3	097	3300.05
837-698CF	14X8	1	3	097	2300.68
837-700CF	14X10	1	3	097	1868.05
837-702CF	14X12	1	3	097	1353.71
837-756CF	16X6	1	2	097	5202.65
837-758CF	16X8	1	0	097	4863.02
837-760CF	16X10	1	0	097	3888.04
837-762CF	16X12	1	2	097	1977.99
837-764CF	16X14	1	2	097	1883.56
837-788CF	18X8	1	0	097	5762.54
837-796CF	18X16	1	0	097	2102.81

[1] Sized with Bushing

Reducer Bushing Flush Style
Spig x Fipt

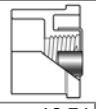


Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
838-052C	3/8X1/4	50	450	090	14.34
838-071C	1/2X1/8	50	300	090	14.34
838-072C	1/2X1/4	50	600	090	14.34
838-073C	1/2X3/8	50	300	090	14.34
838-098C	3/4X1/4	50	600	090	15.99
838-099C	3/4X3/8	50	600	090	15.99
838-101C	3/4X1/2	50	600	090	7.42
838-129C	1X3/8	50	400	090	21.23
838-130C	1X1/2	50	400	090	9.41
838-131C	1X3/4	50	400	090	9.41
838-166C	1-1/4X1/2	25	150	090	30.39

Reducer Bushing Flush Style (continued)
Spig x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
838-167C	1-1/4X3/4	25	300	090	30.39
838-168C	1-1/4X1	25	300	090	30.39
838-207C	1-1/2X1/4	25	200	090	37.43
838-209C	1-1/2X1/2	25	200	090	37.43
838-210C	1-1/2X3/4	25	200	090	37.43
838-211C	1-1/2X1	25	200	090	37.43
838-212C	1-1/2X1-1/4	25	200	090	37.43
838-247C	2X1/2	10	120	090	51.46
838-248C	2X3/4	10	60	090	51.46
838-249C	2X1	10	120	090	51.46
838-250C	2X1-1/4	10	120	090	51.46
838-251C	2X1-1/2	10	120	090	51.46
838-287C	2-1/2X1/2	10	0	090	82.33
838-288C	2-1/2X3/4	10	40	090	82.33
838-289C	2-1/2X1	10	40	090	82.33
838-290C	2-1/2X1-1/4	10	0	090	82.33
838-291C	2-1/2X1-1/2	10	40	090	81.77
838-292C	2-1/2X2	10	40	090	81.77
838-334C	3X3/4	10	0	090	217.84
838-335C	3X1	10	0	090	217.84
838-336C	3X1-1/4	10	0	090	190.57
838-337C	3X1-1/2	10	0	090	190.57
838-338C	3X2	10	0	090	182.27
838-339C	3X2-1/2	10	0	090	183.75
838-420C	4X2	6	0	090	371.41
838-421C	4X2-1/2	6	0	090	371.41
838-422C	4X3	6	0	090	371.41
838-530C	6X3	5	0	090	748.81
838-532C	6X4	5	0	090	748.81

Special Reinforced Reducer Bushing
Spig x SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
838-128CSR	1X1/4	25	150	096	12.74
838-207CSR	1-1/2X1/4	25	200	096	21.55
838-209CSR	1-1/2X1/2	10	120	096	22.46
838-210CSR	1-1/2X3/4	10	120	096	22.46
838-247CSR	2X1/2	10	80	096	30.86
838-248CSR	2X3/4	10	80	096	30.86
838-249CSR	2X1	10	80	096	30.86
838-334CSR	3X3/4	10	0	096	130.68
838-335CSR	3X1	10	0	096	130.68
838-336CSR	3X1-1/4	10	0	096	130.68
838-337CSR	3X1-1/2	10	0	096	130.68
838-528CSR	6X2	5	0	096	449.27
838-530CSR	6X3	5	0	096	449.27

Cap
Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
847-002C	1/4	25	450	090	10.98
847-003C	3/8	25	450	090	10.98
847-005C	1/2	25	150	090	9.94
847-007C	3/4	25	300	090	14.16
847-010C	1	15	90	090	25.05
847-012C	1-1/4	10	60	090	27.41
847-015C	1-1/2	10	60	090	27.41
847-020C	2	10	80	090	28.91
847-025C	2-1/2	5	40	090	97.32
847-030C	3	5	0	090	106.67
847-040C	4	5	0	090	108.43
847-060C	6	4	0	090	358.80
847-080C	8	3	0	090	1088.83
847-100CF	10	1	5	097	909.66
847-120CF	12	1	4	097	996.98

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Cap (continued)
Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
847-140CF	14	1	2	097	3058.07
847-160CF	16	1	2	097	4497.65

Cap
Fipt



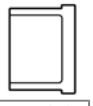
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
848-002C	1/4	25	450	090	12.85
848-003C	3/8	25	450	090	12.85
848-005C	1/2	25	150	090	11.04
848-007C	3/4	25	300	090	18.27
848-010C	1	15	90	090	25.58
848-012C	1-1/4	10	60	090	45.62
848-015C	1-1/2	10	120	090	46.74
848-020C	2	10	80	090	67.33
848-025C	2-1/2	5	40	090	155.79
848-030C	3	5	0	090	204.38
848-040C	4	5	0	090	296.89

Special Reinforced Cap
SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
848-002CSR	1/4	25	500	096	7.06
848-003CSR	3/8	25	450	096	7.06
848-007CSR	3/4	25	300	096	11.00
848-030CSR	3	5	0	096	122.80

Plug
Spig



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
849-005C	1/2	50	300	090	12.65
849-007C	3/4	50	300	090	15.61
849-010C	1	50	200	090	17.61
849-012C	1-1/4	25	100	090	22.46
849-015C	1-1/2	10	120	090	24.64
849-020C	2	10	120	090	33.01
849-025CF[4]	2-1/2	1	8	097	39.16
849-030CF[4]	3	1	4	097	90.04
849-040CF[4]	4	1	4	097	111.11
849-060CF[4]	6	1	6	097	137.95
849-080CF[4]	8	1	6	097	370.53
849-100CF[4]	10	1	2	097	737.22
849-120CF[4]	12	1	0	097	1428.84

[4] Plug fabricated using Cap and pipe spigot.

Plug
Mipt

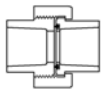


Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
850-002C	1/4	50	900	090	10.34
850-003C	3/8	50	450	090	10.34
850-005C	1/2	50	500	090	8.98
850-007C	3/4	25	300	090	11.37
850-010C	1	15	180	090	18.71
850-012C	1-1/4	25	150	090	28.26
850-015C	1-1/2	25	150	090	23.44
850-020C	2	10	120	090	31.91
850-025C	2-1/2	5	30	090	54.17
850-030C	3	5	40	090	58.01
850-040C	4	5	0	090	102.93
850-060C	6	6	0	090	144.54
850-060CF[4]	6	1	2	097	373.23
850-080CF[4]	8	1	2	097	716.63
850-100CF[4]	10	1	3	097	1034.35
850-120CF[4]	12	1	0	097	1577.71

Plug (continued)
Mipt

[4] Plug fabricated using Cap and threaded pipe.

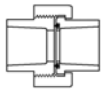
Union 2000
Soc with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
857-002C	1/4	25	150	090	41.15
857-003C	3/8	25	150	090	41.15
8057-005C	1/2	20	120	090	27.38
8057-007C	3/4	20	80	090	28.60
8057-010C	1	15	90	090	34.33
8057-012C	1-1/4	10	0	090	69.46
8057-015C	1-1/2	10	0	090	70.73
8057-020C	2	5	0	090	117.24
8057-025C	2-1/2	5	0	090	192.28
8057-030C	3	5	0	090	243.34
8057-040C	4	4	0	090	310.89
8057-060C	6	1	0	090	690.87

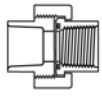
Union 2000
Soc with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
897-002C	1/4	25	150	090	40.65
897-003C	3/8	25	150	090	40.65
8097-005C	1/2	20	120	090	27.29
8097-007C	3/4	20	80	090	28.26
8097-010C	1	15	90	090	33.86
8097-012C	1-1/4	10	0	090	68.57
8097-015C	1-1/2	10	0	090	69.87
8097-020C	2	5	0	090	115.80
8097-025C	2-1/2	5	0	090	191.78
8097-030C	3	5	0	090	240.34
8097-040C	4	4	0	090	307.36
8097-060C	6	1	0	090	683.02

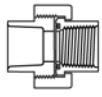
Union 2000
Soc x Fipt with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8059-005C	1/2	20	120	090	31.17
8059-007C	3/4	20	80	090	54.39
8059-010C	1	15	90	090	75.07
8059-012C	1-1/4	10	0	090	142.99
8059-015C	1-1/2	10	0	090	142.99
8059-020C	2	5	0	090	161.65
8059-025C	2-1/2	5	0	090	262.44
8059-030C	3	5	0	090	310.41
8059-040C	4	4	0	090	358.95
8059-060C	6	1	0	090	797.67

Union 2000
Soc x Fipt with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8099-005C	1/2	20	120	090	30.40
8099-007C	3/4	20	80	090	53.75
8099-010C	1	15	90	090	74.14
8099-012C	1-1/4	10	0	090	141.22
8099-015C	1-1/2	10	0	090	141.22
8099-020C	2	5	0	090	159.65
8099-025C	2-1/2	5	0	090	228.69
8099-030C	3	5	0	090	306.60

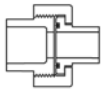
Union 2000 (continued)
Soc x Fipt with EPDM O-ring Seal

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8099-040C	**4**	4	0	090	353.68
8099-060C	**6**	1	0	090	785.98

Union 2000 (continued)
Fipt with EPDM O-ring Seal

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8098-040C	**4**	4	0	090	496.19
8098-060C	**6**	1	0	090	1102.63

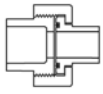
Union 2000
Soc x Spig with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8056-005C	**1/2**	20	160	090	27.38
8056-007C	**3/4**	20	160	090	28.60
8056-010C	**1**	15	90	090	34.33
8056-012C	**1-1/4**	10	0	090	69.46
8056-015C	**1-1/2**	10	0	090	70.73
8056-020C	**2**	5	0	090	117.24
8056-025C	**2-1/2**	5	0	090	214.22
8056-030C	**3**	5	0	090	243.34
8056-040C	**4**	4	0	090	310.89
8056-060C	**6**	1	0	090	690.87

Union 2000
Soc x Spig with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8096-005C	**1/2**	20	160	090	27.29
8096-007C	**3/4**	20	80	090	28.26
8096-010C	**1**	15	90	090	33.86
8096-012C	**1-1/4**	10	0	090	68.57
8096-015C	**1-1/2**	10	0	090	69.87
8096-020C	**2**	5	0	090	115.80
8096-025C	**2-1/2**	5	0	090	191.78
8096-030C	**3**	5	0	090	240.34
8096-040C	**4**	4	0	090	307.36
8096-060C	**6**	1	0	090	683.02

Union 2000
Fipt with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

858-002C	**1/4**	25	150	090	46.27
858-003C	**3/8**	25	150	090	46.27
8058-005C	**1/2**	20	120	090	29.33
8058-007C	**3/4**	20	80	090	51.83
8058-010C	**1**	15	90	090	71.47
8058-012C	**1-1/4**	10	0	090	136.18
8058-015C	**1-1/2**	10	0	090	136.18
8058-020C	**2**	5	0	090	153.93
8058-025C	**2-1/2**	5	0	090	247.99
8058-030C	**3**	5	0	090	470.55
8058-040C	**4**	4	0	090	505.82
8058-060C	**6**	1	0	090	1124.07

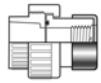
Union 2000
Fipt with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

898-002C	**1/4**	25	150	090	45.72
898-003C	**3/8**	25	100	090	45.72
8098-005C	**1/2**	20	120	090	28.96
8098-007C	**3/4**	20	80	090	51.19
8098-010C	**1**	15	90	090	70.59
8098-012C	**1-1/4**	10	0	090	134.60
8098-015C	**1-1/2**	10	0	090	134.60
8098-020C	**2**	5	0	090	152.06
8098-025C	**2-1/2**	5	0	090	214.22
8098-030C	**3**	5	0	090	426.21

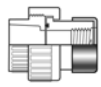
Special Reinforced Union 2000
Soc x SR Fipt with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8059-005CSR	**1/2**	25	200	096	16.13
8059-007CSR	**3/4**	20	160	096	28.45
8059-010CSR	**1**	15	90	096	39.20
8059-012CSR	**1-1/4**	10	0	096	74.74
8059-015CSR	**1-1/2**	10	0	096	81.24
8059-020CSR	**2**	5	0	096	84.58
8059-025CSR	**2-1/2**	5	0	096	146.45
8059-030CSR	**3**	5	0	096	237.94
8059-040CSR	**4**	4	0	096	277.60
8059-060CSR	**6**	1	0	096	616.95

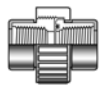
Special Reinforced Union 2000
Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8099-005CSR	**1/2**	20	160	096	15.81
8099-007CSR	**3/4**	20	160	096	28.07
8099-010CSR	**1**	15	90	096	38.87
8099-012CSR	**1-1/4**	10	0	096	73.64
8099-015CSR	**1-1/2**	10	0	096	80.09
8099-020CSR	**2**	5	0	096	84.34
8099-025CSR	**2-1/2**	5	0	096	144.66
8099-030CSR	**3**	5	0	096	234.95
8099-040CSR	**4**	4	0	096	275.93
8099-060CSR	**6**	1	0	096	613.20

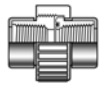
Special Reinforced Union 2000
SR Fipt with FKM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8058-005CSR	**1/2**	20	160	096	16.55
8058-007CSR	**3/4**	20	80	096	28.85
8058-010CSR	**1**	15	90	096	39.65
8058-012CSR	**1-1/4**	10	0	096	74.74
8058-015CSR	**1-1/2**	10	0	096	81.56
8058-020CSR	**2**	5	0	096	85.94
8058-030CSR	**3**	5	0	096	242.85
8058-040CSR	**4**	4	0	096	284.51
8058-060CSR	**6**	1	0	096	640.73

Special Reinforced Union 2000
SR Fipt with EPDM O-ring Seal - Stainless Steel Collar

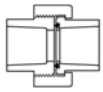


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8098-005CSR	**1/2**	20	160	096	16.00
8098-007CSR	**3/4**	20	80	096	28.59
8098-010CSR	**1**	15	90	096	39.20
8098-012CSR	**1-1/4**	10	0	096	74.01
8098-015CSR	**1-1/2**	10	0	096	80.93
8098-020CSR	**2**	5	0	096	85.09
8098-025CSR	**2-1/2**	5	0	096	147.05
8098-030CSR	**3**	5	0	096	239.09
8098-040CSR	**4**	4	0	096	276.79
8098-060CSR	**6**	1	0	096	615.09

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

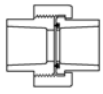
Union (Old Style)
Soc with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
857-005C	1/2	15	90	090	27.38
857-007C	3/4	10	60	090	28.60
857-010C	1	10	40	090	34.33
857-012C	1-1/4	5	20	090	69.46
857-015C	1-1/2	5	0	090	70.73
857-020C	2	5	0	090	117.24
857-025C	2-1/2	5	0	090	192.28
857-030C	3	5	0	090	243.34
857-040C	4	4	0	090	310.89

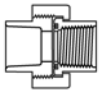
Union (Old Style)
Soc with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
897-005C	1/2	15	90	090	27.29
897-007C	3/4	10	60	090	28.26
897-010C	1	10	40	090	33.86
897-012C	1-1/4	5	20	090	68.57
897-015C	1-1/2	5	0	090	69.87
897-020C	2	5	0	090	115.80
897-025C	2-1/2	5	0	090	191.78
897-030C	3	5	0	090	240.34
897-040C	4	4	0	090	307.36

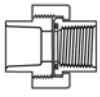
Union (Old Style)
Soc x Fipt with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
859-005C	1/2	15	90	090	31.17
859-007C	3/4	10	40	090	54.39
859-010C	1	10	40	090	75.07
859-012C	1-1/4	5	20	090	142.99
859-015C	1-1/2	5	0	090	142.99
859-020C	2	5	0	090	161.65
859-025C	2-1/2	5	0	090	262.44
859-030C	3	5	0	090	310.41
859-040C	4	4	0	090	358.95

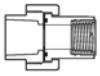
Union (Old Style)
Soc x Fipt with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
899-005C	1/2	15	90	090	30.40
899-007C	3/4	10	60	090	53.75
899-010C	1	10	40	090	74.14
899-012C	1-1/4	5	20	090	141.22
899-015C	1-1/2	5	0	090	141.22
899-020C	2	5	0	090	159.65
899-025C	2-1/2	5	0	090	228.69
899-030C	3	5	0	090	306.60
899-040C	4	4	0	090	353.68

Union
Soc x Fipt with Brass Thread Insert & FKM O-ring Seal



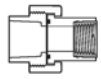
235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
859-007CBR	3/4	10	20	096	146.17
859-010CBR	1	10	0	096	162.80
859-012CBR	1-1/4	5	0	096	272.91
859-015CBR	1-1/2	5	0	096	310.13
859-020CBR	2	5	0	096	350.51

Union (continued)
Soc x Fipt with Brass Thread Insert & FKM O-ring Seal

Not intended to convey or dispense water for human consumption through drinking or cooking

Union
Soc x Fipt with Brass Thread Insert & EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
899-007CBR	3/4	10	40	096	143.69
899-010CBR	1	10	0	096	160.80
899-012CBR	1-1/4	5	20	096	269.46
899-015CBR	1-1/2	5	0	096	306.17
899-020CBR	2	5	0	096	346.21

Not intended to convey or dispense water for human consumption through drinking or cooking

Union (Old Style)
Fipt with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
858-005C	1/2	15	90	090	29.33
858-007C	3/4	10	60	090	51.83
858-010C	1	10	40	090	71.47
858-012C	1-1/4	5	20	090	136.18
858-015C	1-1/2	5	0	090	136.18
858-020C	2	5	0	090	153.93
858-025C	2-1/2	5	0	090	247.99
858-030C	3	5	0	090	470.55
858-040C	4	4	0	090	505.82

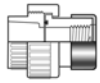
Union (Old Style)
Fipt with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
898-005C	1/2	15	90	090	28.96
898-007C	3/4	10	60	090	51.19
898-010C	1	10	40	090	70.59
898-012C	1-1/4	5	20	090	134.60
898-015C	1-1/2	5	0	090	134.60
898-020C	2	5	0	090	152.06
898-025C	2-1/2	5	0	090	214.22
898-030C	3	5	0	090	426.21
898-040C	4	4	0	090	496.19

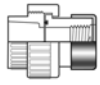
Special Reinforced Union (Old Style)
Soc x SR Fipt with FKM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
859-002CSR	1/4	25	150	096	25.38
859-003CSR	3/8	25	100	096	25.38
859-005CSR	1/2	10	60	096	16.13
859-007CSR	3/4	10	40	096	28.45
859-010CSR	1	10	40	096	39.20
859-012CSR	1-1/4	5	20	096	74.74
859-015CSR	1-1/2	5	0	096	81.24
859-020CSR	2	5	0	096	84.58
859-030CSR	3	5	0	096	237.94
859-040CSR	4	4	0	096	277.60

Special Reinforced Union (Old Style)
Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
899-002CSR	1/4	25	150	096	25.21
899-003CSR	3/8	25	100	096	25.21

Special Reinforced Union (Old Style) (continued)

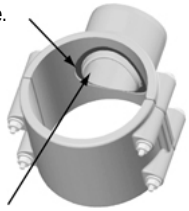
Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
899-005CSR	**1/2**	10	60	096	15.81
899-007CSR	**3/4**	10	40	096	28.07
899-010CSR	**1**	10	40	096	38.87
899-012CSR	**1-1/4**	5	20	096	73.64
899-015CSR	**1-1/2**	5	0	096	80.09
899-020CSR	**2**	5	0	096	84.34
899-030CSR	**3**	5	0	096	234.95
899-040CSR	**4**	4	0	096	275.93

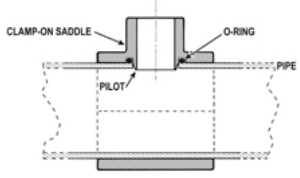
Spears® Two-Piece Clamp-On Saddle Design Clamps onto Pipe for Quick and Easy Installation



O-ring seal provides positive, trouble-free sealing to pipe.

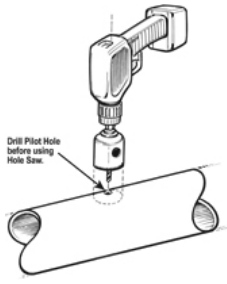


Special pilot engages with hole in pipe to prevent saddle dislocation.



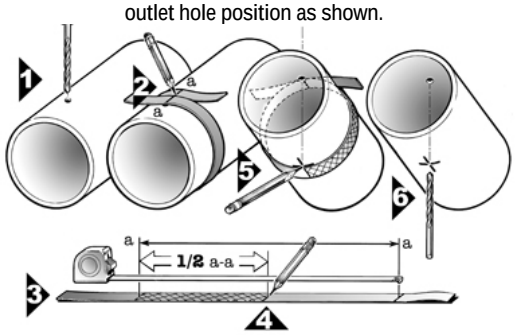
Clamp-On Saddle Installation Instructions

1. Using a standard industrial grade hole-saw, cut specified hole in desired position on pipe according to recommended hole saw size engraved on the saddle. Note: Care must be taken to deburr hole and remove all residue from hole area to assure tight fit and avoid leakage.
2. Fully seat O-ring in groove on underside of saddle outlet component. Position over hole and fully seat saddle onto pipe. Note: Certain saddle outlets are piloted. Be sure pilot lip fully engages with hole in pipe.
3. Place strap component opposite outlet and secure with bolts (4), nuts (4) and washers (8). Important: Washers MUST be placed under each bolt head (1) and under each nut (1) to avoid damage to saddle.
4. Tighten bolts to specified torque.



Saddle Size	2	3	4	6 & up
Recommended Bolt-Torque - ft/lb	8	8	8	10

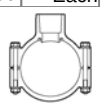
For Double Outlet Saddle Installation — Determine second outlet hole position as shown.



Spears® Hot-Tap Saddles Designed for Adding Branch Connections to Piping Systems Under Live ("Hot") Pressure

Hot-Tap Saddle branch outlets are either 3/4" socket (with 1" Spigot O.D.) or 1-1/2" socket (with 2" Spigot O.D.) in saddle sizes 2" through 6" to fit IPS pipe using a built-in O-ring seal. Internal cutter is operated using conventional ratchet and drive extension and permanently retains coupon cut from pipe. Maximum operating pressure at 73°F (23°C) is 235 psi for saddle sizes 2" - 4", 200 psi for 6" saddles and 150 psi for 8" saddles. See packaged Installation Instructions for details.

CPVC Gray Clamp-On Saddle x Soc Single Outlet



with FKM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
866V-247C	2X1/2	3/4	1	10	096	56.69
866V-248C	2X3/4	7/8	1	10	096	56.69
866V-249C	2X1	1-1/8	1	10	096	56.69
866V-250C	2X1-1/4	1-1/2	1	10	096	56.69
866V-251C	2X1-1/2	1-1/2	1	10	096	56.69
866V-291C	2-1/2X1-1/2	1-/34	1	10	096	78.78
866V-333C[1]	3X1/2	7/8	1	10	096	78.78
866V-334C	3X3/4	7/8	1	10	096	78.78
866V-335C	3X1	1-1/8	1	10	096	78.78
866V-336C[1]	3X1-1/4	2-1/4	1	10	096	78.78
866V-337C[1]	3X1-1/2	2-1/4	1	10	096	78.78
866V-338C	3X2	2-1/4	1	10	096	78.78

CPVC Gray Clamp-On Saddle x Soc Single Outlet (continued)

with FKM O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
866V-415C[1]	4X1/2	1-1/8	1	10	096	94.68
866V-416C[1]	4X3/4	1-1/8	1	10	096	94.68
866V-417C	4X1	1-1/8	1	8	096	94.68
866V-418C[1]	4X1-1/4	1-3/4	1	8	096	94.68
866V-419C	4X1-1/2	1-3/4	1	8	096	94.68
866V-420C	4X2	2-1/4	1	8	096	94.68
866V-421C[1]	4X2-1/2	3	1	4	096	101.65
866V-422C	4X3	3	1	4	096	110.83
866V-523C[1]	6X1/2	1-1/8	1	4	096	157.83
866V-524C[1]	6X3/4	1-1/8	1	4	096	157.83
866V-525C	6X1	1-1/8	1	4	096	157.83
866V-526C[1]	6X1-1/4	2-1/4	1	4	096	157.83
866V-527C[1]	6X1-1/2	2-1/4	1	4	096	157.83
866V-528C	6X2	2-1/4	1	4	096	157.83

CPVC Gray Clamp-On Saddle x Soc Single Outlet (continued)

with FKM O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
866V-529C[1]	6X2-1/2	3	1	4	096	170.81
866V-530C	6X3	3	1	4	096	181.83
866V-532C	6X4	4	1	4	096	193.74
866V-573C[1]	8X1/2	4	1	0	096	336.63
866V-574C[1]	8X3/4	4	1	0	096	336.63
866V-575C[1]	8X1	4	1	0	096	336.63
866V-576C[1]	8X1-1/4	4	1	0	096	336.63
866V-577C[1]	8X1-1/2	4	1	0	096	336.63
866V-578C[1]	8X2	4	1	0	096	336.63
866V-579C[1]	8X2-1/2	4	1	0	096	370.35
866V-580C[1]	8X3	4	1	0	096	388.59
866V-582C	8X4	4	1	0	096	423.16
866V-585C	8X6	6	1	0	096	581.80
866V-624C	10X4	4	1	0	096	544.26
866V-626C	10X6	6	1	0	096	625.79
866V-664C	12X4	4	1	0	096	682.22
866V-666C	12X6	6	1	0	096	723.15

[1]Outlet-sized with Bushing

CPVC Gray Clamp-On Saddle x Soc Single Outlet



with FKM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
866SV-247C	2X1/2	3/4	1	10	096	86.53
866SV-248C	2X3/4	7/8	1	10	096	86.53
866SV-249C	2X1	1-1/8	1	10	096	86.53
866SV-250C	2X1-1/4	1-1/2	1	10	096	86.53
866SV-251C	2X1-1/2	1-1/2	1	10	096	86.53
866SV-291C	2-1/2X1-1/2	1-3/4	1	10	096	115.91
866SV-333C[1]	3X1/2	7/8	1	10	096	115.91
866SV-334C	3X3/4	7/8	1	10	096	115.91
866SV-335C	3X1	1-1/8	1	10	096	115.91
866SV-336C[1]	3X1-1/4	2-1/4	1	10	096	115.91
866SV-337C[1]	3X1-1/2	2-1/4	1	10	096	115.91
866SV-338C	3X2	2-1/4	1	10	096	115.91
866SV-415C[1]	4X1/2	1-1/8	1	10	096	149.72
866SV-416C[1]	4X3/4	1-1/8	1	10	096	149.72
866SV-417C	4X1	1-1/8	1	8	096	149.72
866SV-418C[1]	4X1-1/4	1-3/4	1	8	096	149.72
866SV-419C	4X1-1/2	1-3/4	1	8	096	149.72
866SV-420C	4X2	2-1/4	1	8	096	149.72
866SV-421C[1]	4X2-1/2	3	1	4	096	158.46
866SV-422C	4X3	3	1	4	096	166.53
866SV-523C[1]	6X1/2	1-1/8	1	4	096	238.38
866SV-524C[1]	6X3/4	1-1/8	1	4	096	238.38
866SV-525C	6X1	1-1/8	1	4	096	238.38
866SV-526C[1]	6X1-1/4	2-1/4	1	4	096	238.38
866SV-527C[1]	6X1-1/2	2-1/4	1	4	096	238.38
866SV-528C	6X2	2-1/4	1	4	096	238.38
866SV-529C[1]	6X2-1/2	3	1	4	096	247.84
866SV-530C	6X3	3	1	4	096	256.44
866SV-532C	6X4	4	1	4	096	272.57
866SV-573C[1]	8X1/2	4	1	0	096	439.84
866SV-574C[1]	8X3/4	4	1	0	096	439.84
866SV-575C[1]	8 X 1	4	1	0	096	439.84
866SV-576C[1]	8X1-1/4	4	1	0	096	439.84
866SV-577C[1]	8X1-1/2	4	1	0	096	439.84
866SV-578C[1]	8 X 2	4	1	0	096	439.84
866SV-579C[1]	8X2-1/2	4	1	0	096	465.56
866SV-580C[1]	8X3	4	1	0	096	508.13
866SV-582C	8X4	4	1	0	096	538.59
866SV-585C	8X6	6	1	0	096	597.76
866SV-624C	10X4	4	1	0	096	711.28
866SV-626C	10X6	6	1	0	096	818.09

CPVC Gray Clamp-On Saddle x Soc Single Outlet (continued)

with FKM O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
866SV-664C	12X4	4	1	0	096	891.57
866SV-666C	12X6	6	1	0	096	1034.33

[1]Outlet-sized with Bushing

CPVC Gray Clamp-On Saddle x Soc Single Outlet



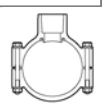
with EPDM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
866-247C	2X1/2	3/4	1	10	096	53.87
866-248C	2X3/4	7/8	1	10	096	53.87
866-249C	2X1	1-1/8	1	10	096	53.87
866-250C	2X1-1/4	1-1/2	1	10	096	53.87
866-251C	2X1-1/2	1-1/2	1	10	096	53.87
866-291C	2-1/2X1-1/2	1-3/4	1	10	096	72.17
866-333C[1]	3X1/2	7/8	1	10	096	72.17
866-334C	3X3/4	7/8	1	10	096	72.17
866-335C	3X1	1-1/8	1	10	096	72.17
866-336C[1]	3X1-1/4	2-1/4	1	10	096	72.17
866-337C[1]	3X1-1/2	2-1/4	1	10	096	72.17
866-338C	3X2	2-1/4	1	10	096	72.17
866-415C[1]	4X1/2	1-1/8	1	10	096	87.75
866-416C[1]	4X3/4	1-1/8	1	10	096	87.75
866-417C	4X1	1-1/8	1	8	096	87.75
866-418C[1]	4X1-1/4	1-3/4	1	8	096	87.75
866-419C	4X1-1/2	1-3/4	1	8	096	87.75
866-420C	4X2	2-1/4	1	8	096	87.75
866-421C[1]	4X2-1/2	3	1	4	096	96.38
866-422C	4X3	3	1	4	096	107.43
866-523C[1]	6X1/2	1-1/8	1	4	096	146.44
866-524C[1]	6X3/4	1-1/8	1	4	096	146.44
866-525C	6X1	1-1/8	1	4	096	146.44
866-526C[1]	6X1-1/4	2-1/4	1	4	096	146.44
866-527C[1]	6X1-1/2	2-1/4	1	4	096	146.44
866-528C	6X2	2-1/4	1	4	096	146.44
866-529C[1]	6X2-1/2	3	1	4	096	159.19
866-530C	6X3	3	1	4	096	170.76
866-532C	6X4	4	1	4	096	182.49
866-573C[1]	8X1/2	4	1	0	096	322.01
866-574C[1]	8X3/4	4	1	0	096	322.01
866-575C[1]	8X1	4	1	0	096	322.01
866-576C[1]	8X1-1/4	4	1	0	096	322.01
866-577C[1]	8X1-1/2	4	1	0	096	322.01
866-578C[1]	8X2	4	1	0	096	322.01
866-579C[1]	8X2-1/2	4	1	0	096	354.19
866-580C[1]	8X3	4	1	0	096	371.99
866-582C	8X4	4	1	0	096	394.27
866-585C	8X6	6	1	0	096	437.61
866-624C	10X4	4	1	0	096	520.69
866-626C	10X6	4	1	0	096	598.87
866-664C	12X4	4	1	0	096	652.81
866-666C	12X6	6	1	0	096	757.21

[1]Outlet-sized with Bushing

CPVC Gray Clamp-On Saddle x Soc Single Outlet



with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
866S-247C	2X1/2	3/4	1	10	096	83.87
866S-248C	2X3/4	7/8	1	10	096	83.87
866S-249C	2X1	1-1/8	1	10	096	83.87
866S-250C	2X1-1/4	1-1/2	1	10	096	83.87
866S-251C	2X1-1/2	1-1/2	1	10	096	83.87
866S-291C	2-1/2X1-1/2	1-3/4	1	10	096	111.81
866S-333C[1]	3X1/2	7/8	1	10	096	111.81

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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

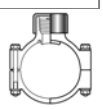
CPVC Gray Clamp-On Saddle x Soc Single Outlet (continued)

with EPDM O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
866S-334C	3X3/4	7/8	1	10	096	111.81
866S-335C	3X1	1-1/8	1	10	096	111.81
866S-336C[1]	3X1-1/4	2-1/4	1	10	096	111.81
866S-337C[1]	3X1-1/2	2-1/4	1	10	096	111.81
866S-338C	3X2	2-1/4	1	10	096	111.81
866S-415C[1]	4X1/2	1-1/8	1	10	096	143.04
866S-416C[1]	4X3/4	1-1/8	1	10	096	143.04
866S-417C	4X1	1-1/8	1	8	096	143.04
866S-418C[1]	4X1-1/4	1-3/4	1	8	096	143.04
866S-419C	4X1-1/2	1-3/4	1	8	096	143.04
866S-420C	4X2	2-1/4	1	8	096	143.04
866S-421C[1]	4X2-1/2	3	1	4	096	149.07
866S-422C	4X3	3	1	4	096	156.73
866S-523C[1]	6X1/2	1-1/8	1	4	096	225.40
866S-524C[1]	6X3/4	1-1/8	1	4	096	225.40
866S-525C	6X1	1-1/8	1	4	096	225.40
866S-526C[1]	6X1-1/4	2-1/4	1	4	096	225.40
866S-527C[1]	6X1-1/2	2-1/4	1	4	096	225.40
866S-528C	6X2	2-1/4	1	4	096	225.40
866S-529C[1]	6X2-1/2	3	1	4	096	238.58
866S-530C	6X3	3	1	4	096	253.05
866S-532C	6X4	4	1	4	096	264.72
866S-573C[1]	8X1/2	4	1	0	096	423.32
866S-574C[1]	8X3/4	4	1	0	096	423.32
866S-575C[1]	8X1	4	1	0	096	423.32
866S-576C[1]	8X1-1/4	4	1	0	096	423.32
866S-577C[1]	8X1-1/2	4	1	0	096	423.32
866S-578C[1]	8 X 2	4	1	0	096	423.32
866S-579C[1]	8X2-1/2	4	1	0	096	465.56
866S-580C[1]	8X3	4	1	0	096	488.87
866S-582C	8X4	4	1	0	096	518.21
866S-585C	8X6	6	1	0	096	575.04
866S-624C	10X4	4	1	0	096	684.27
866S-626C	10X6	6	1	0	096	786.97
866S-664C	12X4	4	1	0	096	857.68
866S-666C	12X6	6	1	0	096	994.95

[1]Outlet-sized with Bushing

CPVC Gray Clamp-On Saddle x SR Thread Single Outlet



with FKM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

867V-247CSR	2X1/2	3/4	1	10	096	64.91
867V-248CSR	2X3/4	7/8	1	10	096	64.91
867V-249CSR	2X1	1-1/8	1	10	096	64.91
867V-250CSR	2X1-1/4	1-1/2	1	10	096	64.91
867V-251CSR	2X1-1/2	1-1/2	1	10	096	64.91
867V-291CSR	2-1/2X1-1/2	1-3/4	1	10	096	90.57
867V-333CSR[1]	3X1/2	7/8	1	10	096	90.57
867V-334CSR	3X3/4	7/8	1	10	096	90.57
867V-335CSR	3X1	1-1/8	1	10	096	90.57
867V-336CSR[1]	3X1-1/4	2-1/4	1	10	096	90.57
867V-337CSR[1]	3X1-1/2	2-1/4	1	10	096	90.57
867V-338CSR	3X2	2-1/4	1	10	096	90.57
867V-415CSR[1]	4X1/2	1-1/8	1	10	096	112.95
867V-416CSR[1]	4X3/4	1-1/8	1	10	096	112.95
867V-417CSR	4X1	1-1/8	1	8	096	112.95
867V-418CSR[1]	4X1-1/4	1-3/4	1	8	096	112.95
867V-419CSR	4X1-1/2	1-3/4	1	8	096	112.95
867V-420CSR	4X2	2-1/4	1	8	096	112.95
867V-421CSR[1]	4X2-1/2	3	1	4	096	121.83
867V-422CSR	4X3	3	1	4	096	134.12
867V-523CSR[1]	6X1/2	1-1/8	1	4	096	188.72
867V-524CSR[1]	6X3/4	1-1/8	1	4	096	188.72

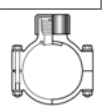
CPVC Gray Clamp-On Saddle x SR Thread Single Outlet (continued)

with FKM O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
867V-525CSR	6X1	1-1/8	1	4	096	188.72
867V-526CSR[1]	6X1-1/4	2-1/4	1	4	096	188.72
867V-527CSR[1]	6X1-1/2	2-1/4	1	4	096	188.72
867V-528CSR	6X2	2-1/4	1	4	096	188.72
867V-529CSR[1]	6X2-1/2	3	1	4	096	202.08
867V-530CSR	6X3	3	1	4	096	209.36
867V-532CSR	6X4	4	1	4	096	224.25
867V-573CSR[1]	8X1/2	4	1	0	096	376.20
867V-574CSR[1]	8X3/4	4	1	0	096	376.20
867V-575CSR[1]	8X1	4	1	0	096	376.20
867V-576CSR[1]	8X1-1/4	4	1	0	096	376.20
867V-577CSR[1]	8X1-1/2	4	1	0	096	376.20
867V-578CSR[1]	8X2	4	1	0	096	376.20
867V-579CSR[1]	8X2-1/2	4	1	0	096	413.79
867V-580CSR[1]	8X3	4	1	0	096	434.52
867V-582CSR	8X4	4	1	0	096	462.31
867V-585CSR	8X6	6	1	0	096	476.68
867V-624CSR	10X4	4	1	0	096	550.02
867V-626CSR	10X6	6	1	0	096	632.49
867V-664CSR	12X4	4	1	0	096	688.06
867V-666CSR	12X6	6	1	0	096	799.87

[1]Outlet-sized with Bushing

CPVC Gray Clamp-On Saddle x SR Thread Single Outlet



with FKM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

867SV-245CSR[1]	2X1/4	1-1/8	1	10	096	112.88
867SV-247CSR	2X1/2	3/4	1	10	096	107.72
867SV-248CSR	2X3/4	7/8	1	10	096	107.72
867SV-249CSR	2X1	1-1/8	1	10	096	107.72
867SV-250CSR	2X1-1/4	1-1/2	1	10	096	107.72
867SV-251CSR	2X1-1/2	1-1/2	1	10	096	107.72
867SV-291CSR	2-1/2X1-1/2	1-3/4	1	10	096	144.71
867SV-331CSR[1]	3X1/4	1-1/8	1	10	096	152.98
867SV-333CSR[1]	3X1/2	7/8	1	10	096	144.71
867SV-334CSR	3X3/4	7/8	1	10	096	144.71
867SV-335CSR	3X1	1-1/8	1	10	096	144.71
867SV-336CSR[1]	3X1-1/4	2-1/4	1	10	096	144.71
867SV-337CSR[1]	3X1-1/2	2-1/4	1	10	096	144.71
867SV-338CSR	3X2	2-1/4	1	10	096	144.71
867SV-413CSR[1]	4X1/4	1-1/8	1	8	096	182.83
867SV-415CSR[1]	4X1/2	1-1/8	1	10	096	182.83
867SV-416CSR[1]	4X3/4	1-1/8	1	10	096	182.83
867SV-417CSR	4X1	1-1/8	1	8	096	182.83
867SV-418CSR[1]	4X1-1/4	1-3/4	1	8	096	182.83
867SV-419CSR	4X1-1/2	1-3/4	1	8	096	182.83
867SV-420CSR	4X2	2-1/4	1	8	096	182.83
867SV-421CSR[1]	4X2-1/2	3	1	4	096	190.21
867SV-422CSR	4X3	3	1	4	096	200.52
867SV-521CSR[1]	6X1/4	1-1/8	1	4	096	316.48
867SV-523CSR[1]	6X1/2	1-1/8	1	4	096	304.72
867SV-524CSR[1]	6X3/4	1-1/8	1	4	096	304.72
867SV-525CSR	6X1	1-1/8	1	4	096	304.72
867SV-526CSR[1]	6X1-1/4	2-1/4	1	4	096	304.72
867SV-527CSR[1]	6X1-1/2	2-1/4	1	4	096	304.72
867SV-528CSR	6X2	2-1/4	1	4	096	304.72
867SV-529CSR[1]	6X2-1/2	3	1	4	096	319.23
867SV-530CSR	6X3	3	1	4	096	332.09
867SV-532CSR	6X4	4	1	4	096	355.49
867SV-571CSR[1]	8X1/4	4	1	0	096	538.42
867SV-573CSR[1]	8X1/2	4	1	0	096	524.93
867SV-574CSR[1]	8X3/4	4	1	0	096	524.93
867SV-575CSR[1]	8X1	4	1	0	096	524.93

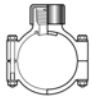
CPVC Gray Clamp-On Saddle x SR Thread Single Outlet (continued)

with FKM O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
867SV-576CSR[1]	8X1-1/4	4	1	0	096	524.93
867SV-577CSR[1]	8X1-1/2	4	1	0	096	524.93
867SV-578CSR[1]	8X2	4	1	0	096	524.93
867SV-579CSR[1]	8X2-1/2	4	1	0	096	577.46
867SV-580CSR[1]	8X3	4	1	0	096	606.36
867SV-582CSR	8X4	4	1	0	096	642.81
867SV-585CSR	8X6	6	1	0	096	676.71
867SV-624CSR	10X4	4	1	0	096	764.96
867SV-626CSR	10X6	6	1	0	096	879.68
867SV-664CSR	12X4	4	1	0	096	958.82
867SV-666CSR	12X6	6	1	0	096	1112.24

[1]Outlet-sized with Bushing

CPVC Gray Clamp-On Saddle x SR Thread Single Outlet



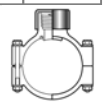
with EPDM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
867-247CSR	2X1/2	3/4	1	10	096	56.35
867-248CSR	2X3/4	7/8	1	10	096	56.35
867-249CSR	2X1	1-1/8	1	10	096	56.35
867-250CSR	2X1-1/4	1-1/2	1	10	096	56.35
867-251CSR	2X1-1/2	1-1/2	1	10	096	56.35
867-291CSR	2-1/2X1-1/2	1-3/4	1	10	096	77.01
867-333CSR[1]	3X1/2	7/8	1	10	096	77.01
867-334CSR	3X3/4	7/8	1	10	096	77.01
867-335CSR	3X1	1-1/8	1	10	096	77.01
867-336CSR[1]	3X1-1/4	2-1/4	1	10	096	77.01
867-337CSR[1]	3X1-1/12	2-1/4	1	10	096	77.01
867-338CSR	3X2	2-1/4	1	10	096	77.01
867-415CSR[1]	4X1/2	1-1/8	1	10	096	96.99
867-416CSR[1]	4X3/4	1-1/8	1	10	096	96.99
867-417CSR	4X1	1-1/8	1	8	096	96.99
867-418CSR[1]	4X1-1/4	1-3/4	1	8	096	96.99
867-419CSR	4X1-1/2	1-3/4	1	8	096	96.99
867-420CSR	4X2	2-1/4	1	8	096	96.99
867-421CSR[1]	4X2-1/2	3	1	4	096	107.62
867-422CSR	4X3	3	1	4	096	116.16
867-523CSR[1]	6X1/2	1-1/8	1	4	096	161.62
867-524CSR[1]	6X3/4	1-1/8	1	4	096	161.62
867-525CSR	6X1	1-1/8	1	4	096	161.62
867-526CSR[1]	6X1-1/4	2-1/4	1	4	096	161.62
867-527CSR[1]	6X1-1/2	2-1/4	1	4	096	161.62
867-528CSR	6X2	2-1/4	1	4	096	161.62
867-529CSR[1]	6X2-1/2	3	1	4	096	171.02
867-530CSR	6X3	3	1	4	096	180.84
867-532CSR	6X4	4	1	4	096	196.66
867-573CSR[1]	8X1/2	4	1	0	096	341.54
867-574CSR	8X3/4	4	1	0	096	341.54
867-575CSR[1]	8X1	4	1	0	096	341.54
867-576CSR[1]	8X1-1/4	4	1	0	096	341.54
867-577CSR[1]	8X1-1/2	4	1	0	096	341.54
867-578CSR[1]	8X2	4	1	0	096	341.54
867-579CSR[1]	8X2-1/2	4	1	0	096	375.68
867-580CSR[1]	8X3	4	1	0	096	398.22
867-582CSR	8X4	4	1	0	096	422.21
867-585CSR	8X6	6	1	0	096	438.98
867-624CSR	10X4	4	1	0	096	502.46
867-626CSR	10X6	6	1	0	096	577.79
867-664CSR	12X4	4	1	0	096	629.83
867-666CSR	12X6	6	1	0	096	730.55

[1]Outlet-sized with Bushing

CPVC Gray Clamp-On Saddle x SR Thread Single Outlet



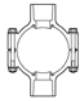
with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
867S-245CSR[1]	2X1/4	1-1/8	1	10	096	99.36
867S-247CSR	2X1/2	3/4	1	10	096	96.75
867S-248CSR	2X3/4	7/8	1	10	096	96.75
867S-249CSR	2X1	1-1/8	1	10	096	96.75
867S-250CSR	2X1-1/4	1-1/2	1	10	096	96.75
867S-251CSR	2X1-1/2	1-1/2	1	10	096	96.75
867S-291CSR	2-1/2X1-1/2	1-3/4	1	10	096	129.51
867S-331CSR[1]	3X1/4	1-1/8	1	10	096	133.62
867S-333CSR[1]	3X1/2	7/8	1	10	096	129.51
867S-334CSR	3X3/4	7/8	1	10	096	129.51
867S-335CSR	3X1	1-1/8	1	10	096	129.51
867S-336CSR[1]	3X1-1/4	2-1/4	1	10	096	129.51
867S-337CSR[1]	3X1-1/2	2-1/4	1	10	096	129.51
867S-338CSR	3X2	2-1/4	1	10	096	129.51
867S-413CSR[1]	4X1/4	1-1/8	1	8	096	167.96
867S-415CSR[1]	4X1/2	1-1/8	1	10	096	162.99
867S-416CSR[1]	4X3/4	1-1/8	1	10	096	162.99
867S-417CSR	4X1	1-1/8	1	8	096	162.99
867S-418CSR[1]	4X1-1/4	1-3/4	1	8	096	162.99
867S-419CSR	4X1-1/2	1-3/4	1	8	096	162.99
867S-420CSR	4X2	2-1/4	1	8	096	162.99
867S-421CSR[1]	4X2-1/2	3	1	4	096	172.83
867S-422CSR	4X3	3	1	4	096	180.95
867S-521CSR[1]	6X1/4	1-1/8	1	8	096	281.78
867S-523CSR[1]	6X1/2	1-1/8	1	4	096	271.65
867S-524CSR[1]	6X3/4	1-1/8	1	4	096	271.65
867S-525CSR	6X1	1-1/8	1	4	096	271.65
867S-526CSR[1]	6X1-1/4	2-1/4	1	4	096	271.65
867S-527CSR[1]	6X1-1/2	2-1/4	1	4	096	271.65
867S-528CSR	6X2	2-1/4	1	4	096	271.65
867S-529CSR[1]	6X2-1/2	3	1	4	096	282.51
867S-530CSR	6X3	3	1	4	096	291.98
867S-532CSR	6X4	4	1	4	096	304.85
867S-571CSR[1]	8X1/4	4	1	0	096	500.37
867S-573CSR	8X1/2	4	1	0	096	482.60
867S-574CSR[1]	8X3/4	4	1	0	096	482.60
867S-575CSR[1]	8X1	4	1	0	096	482.60
867S-576CSR[1]	8X1-1/4	4	1	0	096	482.60
867S-577CSR[1]	8X1-1/2	4	1	0	096	482.60
867S-578CSR[1]	8X2	4	1	0	096	482.60
867S-579CSR[1]	8X2-1/2	4	1	0	096	530.84
867S-580CSR[1]	8X3	4	1	0	096	557.34
867S-582CSR	8X4	4	1	0	096	590.77
867S-585CSR	8X6	6	1	0	096	619.69
867S-624CSR	10X4	4	1	0	096	703.02
867S-626CSR	10X6	6	1	0	096	808.48
867S-664CSR	12X4	4	1	0	096	881.24
867S-666CSR	12X6	6	1	0	096	1022.27

[1]Outlet-sized with Bushing

CPVC Gray Clamp-On Saddle x Soc Double Outlet



with FKM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
868V-247C	2X1/2	3/4	1	10	096	77.12
868V-248C	2X3/4	7/8	1	10	096	77.12
868V-249C	2X1	1-1/8	1	10	096	77.12
868V-250C	2X1-1/4	1-1/2	1	10	096	77.12
868V-251C	2X1-1/2	1-1/2	1	10	096	77.12
868V-291C	2-1/2X1-1/2	1-3/4	1	10	096	94.31
868V-333C[1]	3X1/2	7/8	1	10	096	94.31
868V-334C	3X3/4	7/8	1	10	096	94.31

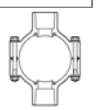
NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC Gray Clamp-On Saddle x Soc Double Outlet (continued)
with FKM O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
868V-335C	3X1	1-1/8	1	10	096	94.31
868V-336C[1]	3X1-1/4	2-1/4	1	10	096	94.31
868V-337C[1]	3X1-1/2	2-1/4	1	10	096	94.31
868V-338C[1]	3X2	2-1/4	1	10	096	94.31
868V-415C[1]	4X1/2	1-1/8	1	10	096	126.97
868V-416C[1]	4X3/4	1-1/8	1	10	096	126.97
868V-417C	4X1	1-1/8	1	8	096	126.97
868V-418C[1]	4X1-1/4	1-3/4	1	8	096	126.97
868V-419C	4X1-1/2	1-3/4	1	8	096	126.97
868V-420C	4X2	2-1/4	1	8	096	126.97
868V-421C[1]	4X2-1/2	3	1	4	096	132.66
868V-422C	4X3	3	4	0	096	144.78
868V-523C[1]	6X1/2	1-1/8	1	4	096	205.42
868V-524C[1]	6X3/4	1-1/8	1	4	096	205.42
868V-525C	6X1	1-1/8	1	4	096	205.42
868V-526C[1]	6X1-1/4	2-1/4	1	4	096	205.42
868V-527C[1]	6X1-1/2	2-1/4	1	4	096	205.42
868V-528C	6X2	2-1/4	1	4	096	205.42
868V-529C	6X2-1/2	3	1	4	096	237.92
868V-530C	6X3	3	1	4	096	250.85
868V-532C	6X4	4	1	4	096	261.71
868V-573C[1]	8X1/2	4	1	0	096	397.71
868V-574C[1]	8X3/4	4	1	0	096	397.71
868V-575C[1]	8X1	4	1	0	096	397.71
868V-576C[1]	8X1-1/4	4	1	0	096	397.71
868V-577C[1]	8X1-1/2	4	1	0	096	397.71
868V-578C[1]	8X2	4	1	0	096	397.71
868V-579C[1]	8X2-1/2	4	1	0	096	437.44
868V-580C[1]	8X3	4	1	0	096	459.28
868V-582C	8X4	4	1	0	096	486.80
868V-585C	8X6	6	1	0	096	540.39
868V-624C	10X4	4	1	0	096	642.99
868V-626C	10X6	6	1	0	096	739.67
868V-664C	12X4	4	1	0	096	806.07
868V-666C	12X6	6	1	0	096	934.91

[1]Outlet-sized with Bushing

CPVC Gray Clamp-On Saddle x Soc Double Outlet
with FKM O-ring Seal & SS Hardware



2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

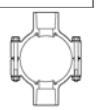
868SV-247C	2X1/2	3/4	1	10	096	117.68
868SV-248C	2X3/4	7/8	1	10	096	117.68
868SV-249C	2X1	1-1/8	1	10	096	117.68
868SV-250C	2X1-1/4	1-1/2	1	10	096	117.68
868SV-251C	2X1-1/2	1-1/2	1	10	096	117.68
868SV-291C	2-1/2X1-1/2	1-3/4	1	10	096	156.56
868SV-333C[1]	3X1/2	7/8	1	10	096	156.56
868SV-334C	3X3/4	7/8	1	10	096	156.56
868SV-335C	3X1	1-1/8	1	10	096	156.56
868SV-336C[1]	3X1-1/4	2-1/4	1	10	096	156.56
868SV-337C[1]	3X1-1/2	2-1/4	1	10	096	156.56
868SV-338C	3X2	2-1/4	1	10	096	156.56
868SV-415C[1]	4X1/2	1-1/8	1	10	096	198.96
868SV-416C[1]	4X3/4	1-1/8	1	10	096	198.96
868SV-417C	4X1	1-1/8	1	8	096	198.96
868SV-418C[1]	4X1-1/4	1-3/4	1	8	096	198.96
868SV-419C	4X1-1/2	1-3/4	1	8	096	198.96
868SV-420C	4X2	2-1/4	1	8	096	198.96
868SV-421C[1]	4X2-1/2	3	1	4	096	207.01
868SV-422C	4X3	3	4	0	096	220.53
868SV-523C[1]	6X1/2	1-1/8	1	4	096	330.94
868SV-524C[1]	6X3/4	1-1/8	1	4	096	330.94
868SV-525C	6X1	1-1/8	1	4	096	330.94

CPVC Gray Clamp-On Saddle x Soc Double Outlet (continued)
with FKM O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
868SV-526C[1]	6X1-1/4	2-1/4	1	4	096	330.94
868SV-527C[1]	6X1-1/2	2-1/4	1	4	096	330.94
868SV-528C	6X2	2-1/4	1	4	096	330.94
868SV-529C[1]	6X2-1/2	3	1	4	096	341.12
868SV-530C	6X3	3	1	4	096	356.87
868SV-532C	6X4	4	1	4	096	365.36
868SV-573C[1]	8X1/2	4	1	0	096	558.61
868SV-574C[1]	8X3/4	4	1	0	096	558.61
868SV-575C[1]	8X1	4	1	0	096	558.61
868SV-576C[1]	8X1-1/4	4	1	0	096	558.61
868SV-577C[1]	8X1-1/2	4	1	0	096	558.61
868SV-578C[1]	8X2	4	1	0	096	558.61
868SV-579C[1]	8X2-1/2	4	1	0	096	614.26
868SV-580C[1]	8X3	4	1	0	096	645.14
868SV-582C	8X4	4	1	0	096	683.79
868SV-585C	8X6	6	1	0	096	759.11
868SV-624C	10X4	4	1	0	096	903.35
868SV-626C	10X6	6	1	0	096	1038.97
868SV-664C	12X4	4	1	0	096	1132.21
868SV-666C	12X6	6	1	0	096	1313.51

[1]Outlet-sized with Bushing

CPVC Gray Clamp-On Saddle x Soc Double Outlet
with EPDM O-ring Seal & Zinc-Plated Hardware



2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

868-247C	2X1/2	3/4	1	10	096	64.69
868-248C	2X3/4	7/8	1	10	096	64.69
868-249C	2X1	1-1/8	1	10	096	64.69
868-250C	2X1-1/4	1-1/2	1	10	096	64.69
868-251C	2X1-1/2	1-1/2	1	10	096	64.69
868-291C	2-1/2X1-1/2	1-3/4	1	10	096	88.82
868-333C[1]	3X1/2	7/8	1	10	096	88.82
868-334C	3X3/4	7/8	1	10	096	88.82
868-335C	3X1	1-1/8	1	10	096	88.82
868-336C[1]	3X1-1/4	2-1/4	1	10	096	88.82
868-337C[1]	3X1-1/2	2-1/4	1	10	096	88.82
868-338C	3X2	2-1/4	1	10	096	88.82
868-415C[1]	4X1/2	1-1/8	1	10	096	111.47
868-416C[1]	4X3/4	1-1/8	1	10	096	111.47
868-417C	4X1	1-1/8	1	8	096	111.47
868-418C[1]	4X1-1/4	1-3/4	1	8	096	111.47
868-419C	4X1-1/2	1-3/4	1	8	096	111.47
868-420C	4X2	2-1/4	1	8	096	111.47
868-421C[1]	4X2-1/2	3	1	4	096	117.38
868-422C	4X3	3	1	4	096	127.59
868-523C[1]	6X1/2	1-1/8	1	4	096	186.11
868-524C[1]	6X3/4	1-1/8	1	4	096	186.11
868-525C	6X1	1-1/8	1	4	096	186.11
868-526C[1]	6X1-1/4	2-1/4	1	4	096	186.11
868-527C[1]	6X1-1/2	2-1/4	1	4	096	186.11
868-528C	6X2	2-1/4	1	4	096	186.11
868-529C[1]	6X2-1/2	3	1	4	096	197.85
868-530C	6X3	3	1	4	096	209.16
868-532C	6X4	4	1	4	096	215.91
868-573C[1]	8X1/2	4	1	0	096	372.93
868-574C[1]	8X3/4	4	1	0	096	372.93
868-575C[1]	8X1	4	1	0	096	372.93
868-576C[1]	8X1-1/4	4	1	0	096	372.93
868-577C[1]	8X1-1/2	4	1	0	096	372.93
868-578C[1]	8X2	4	1	0	096	372.93
868-579C[1]	8X2-1/2	4	1	0	096	410.17
868-580C[1]	8X3	4	1	0	096	430.73
868-582C	8X4	4	1	0	096	456.53

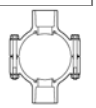
CPVC Gray Clamp-On Saddle x Soc Double Outlet (continued)

with EPDM O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
868-585C	8X6	6	1	0	096	506.75
868-624C	10X4	4	1	0	096	603.08
868-626C	10X6	6	1	0	096	693.48
868-664C	12X4	4	1	0	096	755.84
868-666C	12X6	6	1	0	096	876.94

[1]Outlet-sized with Bushing

CPVC Gray Clamp-On Saddle x Soc Double Outlet



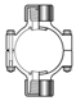
with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
868S-247C	2X1/2	3/4	1	10	096	102.31
868S-248C	2X3/4	7/8	1	10	096	102.31
868S-249C	2X1	1-1/8	1	10	096	102.31
868S-250C	2X1-1/4	1-1/2	1	10	096	102.31
868S-251C	2X1-1/2	1-1/2	1	10	096	102.31
868S-291C	2-1/2X1-1/2	1-3/4	1	10	096	136.07
868S-333C[1]	3X1/2	7/8	1	10	096	136.07
868S-334C	3X3/4	7/8	1	10	096	136.07
868S-335C	3X1	1-1/8	1	10	096	136.07
868S-336C[1]	3X1-1/4	2-1/4	1	10	096	136.07
868S-337C[1]	3X1-1/2	2-1/4	1	10	096	136.07
868S-338C	3X2	2-1/4	1	10	096	136.07
868S-415C[1]	4X1/2	1-1/8	1	10	096	174.37
868S-416C[1]	4X3/4	1-1/8	1	10	096	174.37
868S-417C	4X1	1-1/8	1	8	096	174.37
868S-418C[1]	4X1-1/4	1-3/4	1	8	096	174.37
868S-419C	4X1-1/2	1-3/4	1	8	096	174.37
868S-420C	4X2	2-1/4	1	8	096	174.37
868S-421C[1]	4X2-1/2	3	1	4	096	182.49
868S-422C	4X3	3	4	0	096	190.85
868S-523C[1]	6X1/2	1-1/8	1	4	096	291.20
868S-524C[1]	6X3/4	1-1/8	1	4	096	291.20
868S-525C	6X1	1-1/8	1	4	096	291.20
868S-526C[1]	6X1-1/4	2-1/4	1	4	096	291.20
868S-527C[1]	6X1-1/2	2-1/4	1	4	096	291.20
868S-528C	6X2	2-1/4	1	4	096	291.20
868S-529C[1]	6X2-1/2	3	1	4	096	305.64
868S-530C	6X3	3	1	4	096	313.02
868S-532C	6X4	4	1	4	096	324.42
868S-573C[1]	8X1/2	4	1	0	096	507.62
868S-574C[1]	8X3/4	4	1	0	096	507.62
868S-575C[1]	8X1	4	1	0	096	507.62
868S-576C[1]	8X1-1/4	4	1	0	096	507.62
868S-577C[1]	8X1-1/2	4	1	0	096	507.62
868S-578C[1]	8X2	4	1	0	096	507.62
868S-579C[1]	8X2-1/2	4	1	0	096	558.37
868S-580C[1]	8X3	4	1	0	096	586.31
868S-582C	8X4	4	1	0	096	621.48
868S-585C	8X6	6	1	0	096	689.98
868S-624C	10X4	4	1	0	096	821.03
868S-626C	10X6	6	1	0	096	944.20
868S-664C	12X4	4	1	0	096	1029.17
868S-666C	12X6	6	1	0	096	1193.79

[1]Outlet-sized with Bushing

CPVC Gray Clamp-On Saddle x SR Thread Double Outlet



with FKM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
869V-247CSR	2X1/2	3/4	1	10	096	86.27
869V-248CSR	2X3/4	7/8	1	10	096	86.27
869V-249CSR	2X1	1-1/8	1	10	096	86.27
869V-250CSR	2X1-1/4	1-1/2	1	10	096	86.27

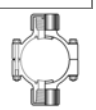
CPVC Gray Clamp-On Saddle x SR Thread Double Outlet (continued)

with FKM O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
869V-251CSR	2X1-1/2	1-1/2	1	10	096	86.27
869V-291CSR	2-1/2X1-1/2	1-3/4	1	10	096	118.29
869V-333CSR[1]	3X1/2	7/8	1	10	096	118.29
869V-334CSR	3X3/4	7/8	1	10	096	118.29
869V-335CSR	3X1	1-1/8	1	10	096	118.29
869V-336CSR[1]	3X1-1/4	2-1/4	1	10	096	118.29
869V-337CSR[1]	3X1-1/2	2-1/4	1	10	096	118.29
869V-338CSR	3X2	2-1/4	1	10	096	118.29
869V-415CSR[1]	4X1/2	4-1/2	1	10	096	144.77
869V-416CSR[1]	4X3/4	1-1/8	1	10	096	144.77
869V-417CSR	4X1	1-1/8	1	8	096	144.77
869V-418CSR[1]	4X1-1/4	1-3/4	1	8	096	144.77
869V-419CSR	4X1-1/2	1-3/4	1	8	096	144.77
869V-420CSR	4X2	2-1/4	1	8	096	144.77
869V-421CSR[1]	4X2-1/2	3	1	4	096	155.48
869V-422CSR	4X3	3	4	0	096	163.75
869V-523CSR[1]	6X1/2	1-1/8	1	4	096	240.05
869V-524CSR[1]	6X3/4	1-1/8	1	4	096	240.05
869V-525CSR	6X1	1-1/8	1	4	096	240.05
869V-526CSR[1]	6X1-1/4	2-1/4	1	4	096	240.05
869V-527CSR[1]	6X1-1/2	2-1/4	1	4	096	240.05
869V-528CSR	6X2	2-1/4	1	4	096	240.05
869V-529CSR[1]	6X2-1/2	3	1	4	096	252.13
869V-530CSR	6X3	3	1	4	096	262.54
869V-532CSR	6X4	4	1	4	096	278.09
869V-573CSR[1]	8X1/2	4	1	0	096	442.09
869V-574CSR[1]	8X3/4	4	1	0	096	442.09
869V-575CSR[1]	8X1	4	1	0	096	442.09
869V-576CSR[1]	8X1-1/4	4	1	0	096	442.09
869V-577CSR[1]	8X1-1/2	4	1	0	096	442.09
869V-578CSR[1]	8X2	4	1	0	096	442.09
869V-579CSR[1]	8X2-1/2	4	1	0	096	486.29
869V-580CSR[1]	8X3	4	1	0	096	510.56
869V-582CSR	8X4	4	1	0	096	541.18
869V-585CSR	8X6	6	1	0	096	598.60
869V-624CSR	10X4	4	1	0	096	643.86
869V-626CSR	10X6	6	1	0	096	740.54
869V-664CSR	12X4	4	1	0	096	807.25
869V-666CSR	12X6	6	1	0	096	936.28

[1]Outlet-sized with Bushing

CPVC Gray Clamp-On Saddle x SR Thread Double Outlet



with FKM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
869SV-247CSR	2X1/2	3/4	1	10	096	126.97
869SV-248CSR	2X3/4	7/8	1	10	096	126.97
869SV-249CSR	2X1	1-1/8	1	10	096	126.97
869SV-250CSR	2X1-1/4	1-1/2	1	10	096	126.97
869SV-251CSR	2X1-1/2	1-1/2	1	10	096	126.97
869SV-291CSR	2-1/2X1-1/2	1-1/2	1	10	096	160.91
869SV-333CSR[1]	3X1/2	7/8	1	10	096	160.91
869SV-334CSR	3X3/4	7/8	1	10	096	160.91
869SV-335CSR	3X1	1-1/8	1	10	096	160.91
869SV-336CSR[1]	3X1-1/4	2-1/4	1	10	096	160.91
869SV-337CSR[1]	3X1-1/2	2-1/4	1	10	096	160.91
869SV-338CSR	3X2	2-1/4	1	10	096	160.91
869SV-415CSR[1]	4X1/2	1-1/8	1	10	096	211.29
869SV-416CSR[1]	4X3/4	1-1/8	1	10	096	211.29
869SV-417CSR	4X1	1-1/8	1	8	096	211.29
869SV-418CSR[1]	4X1-1/4	1-3/4	1	8	096	211.29
869SV-419CSR	4X1-1/2	1-3/4	1	8	096	211.29
869SV-420CSR	4X2	2-1/4	1	8	096	211.29
869SV-421CSR[1]	4X2-1/2	3	1	4	096	221.83

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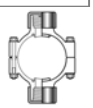
CPVC Gray Clamp-On Saddle x SR Thread Double Outlet (continued)

with FKM O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
869SV-422CSR	4X3	3	4	0	096	237.65
869SV-523CSR[1]	6X1/2	1-1/8	1	4	096	377.55
869SV-524CSR[1]	6X3/4	1-1/8	1	4	096	377.55
869SV-525CSR	6X1	1-1/8	1	4	096	377.55
869SV-526CSR[1]	6X1-1/4	2-1/4	1	4	096	377.55
869SV-527CSR[1]	6X1-1/2	2-1/4	1	4	096	377.55
869SV-528CSR	6X2	2-1/4	1	4	096	377.55
869SV-529CSR[1]	6X2-1/2	3	1	4	096	392.06
869SV-530CSR	6X3	3	1	4	096	404.49
869SV-532CSR	6X4	4	1	4	096	413.76
869SV-573CSR[1]	8X1/2	4	1	0	096	618.39
869SV-574CSR[1]	8X3/4	4	1	0	096	618.39
869SV-575CSR[1]	8X1	4	1	0	096	618.39
869SV-576CSR[1]	8X1-1/4	4	1	0	096	618.39
869SV-577CSR[1]	8X1-1/2	4	1	0	096	618.39
869SV-578CSR[1]	8X2	4	1	0	096	618.39
869SV-579CSR[1]	8X2-1/2	4	1	0	096	680.14
869SV-580CSR[1]	8X3	4	1	0	096	701.67
869SV-582CSR	8X4	4	1	0	096	757.04
869SV-585CSR	8X6	6	1	0	096	808.81
869SV-624CSR	10X4	4	1	0	096	900.86
869SV-626CSR	10X6	6	1	0	096	1036.04
869SV-664CSR	12X4	4	1	0	096	1129.27
869SV-666CSR	12X6	6	1	0	096	1310.06

[1]Outlet-sized with Bushing

CPVC Gray Clamp-On Saddle x SR Thread Double Outlet



with EPDM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
869-247CSR	2X1/2	3/4	1	10	096	74.96
869-248CSR	2X3/4	7/8	1	10	096	74.96
869-249CSR	2X1	1-1/8	1	10	096	74.96
869-250CSR	2X1-1/4	1-1/2	1	10	096	74.96
869-251CSR	2X1-1/2	1-1/2	1	10	096	74.96
869-291CSR	2-1/2X1-1/2	1-3/4	1	10	096	101.22
869-333CSR[1]	3X1/2	7/8	1	10	096	101.22
869-334CSR	3X3/4	7/8	1	10	096	101.22
869-335CSR	3X1	1-1/8	1	10	096	101.22
869-336CSR[1]	3X1-1/4	1-1/8	1	10	096	101.22
869-337CSR[1]	3X1-1/2	2-1/4	1	10	096	101.22
869-338CSR	3X2	2-1/4	1	10	096	101.22
869-415CSR[1]	4X1/2	1-1/8	1	10	096	125.65
869-416CSR[1]	4X3/4	1-1/8	1	10	096	125.65
869-417CSR	4X1	1-1/8	1	8	096	125.65
869-418CSR[1]	4X1-1/4	1-3/4	1	8	096	125.65
869-419CSR	4X1-1/2	1-3/4	1	8	096	125.65
869-420CSR	4X2	2-1/4	1	8	096	125.65
869-421CSR[1]	4X2-1/2	3	1	4	096	138.96
869-422CSR	4X3	3	1	4	096	150.38
869-523CSR[1]	6X1/2	1-1/8	1	4	096	205.25
869-524CSR[1]	6X3/4	1-1/8	1	4	096	205.25
869-525CSR	6X1	1-1/8	1	4	096	205.25
869-526CSR[1]	6X1-1/4	2-1/4	1	4	096	205.25
869-527CSR[1]	6X1-1/2	2-1/4	1	4	096	205.25
869-528CSR	6X2	2-1/4	1	4	096	205.25
869-529CSR[1]	6X2-1/2	3	1	4	096	219.69
869-530CSR	6X3	3	1	4	096	237.69
869-532CSR	6X4	4	1	4	096	252.07
869-573CSR[1]	8X1/2	4	1	0	096	397.37
869-574CSR[1]	8X3/4	4	1	0	096	397.37
869-575CSR[1]	8X1	4	1	0	096	397.37
869-576CSR[1]	8X1-1/4	4	1	0	096	397.37
869-577CSR[1]	8X1-1/2	4	1	0	096	397.37

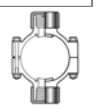
CPVC Gray Clamp-On Saddle x SR Thread Double Outlet (continued)

with EPDM O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
869-578CSR[1]	8X2	4	1	0	096	397.37
869-579CSR[1]	8X2-1/2	4	1	0	096	437.18
869-580CSR[1]	8X3	4	1	0	096	459.13
869-582CSR	8X4	4	1	0	096	486.62
869-585CSR	8X6	6	1	0	096	525.81
869-624CSR	10X4	4	1	0	096	578.99
869-626CSR	10X6	6	1	0	096	665.96
869-664CSR	12X4	4	1	0	096	725.91
869-666CSR	12X6	6	1	0	096	842.03

[1]Outlet-sized with Bushing

CPVC Gray Clamp-On Saddle x SR Thread Double Outlet



with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
869S-247CSR	2X1/2	3/4	1	10	096	120.48
869S-248CSR	2X3/4	7/8	1	10	096	120.48
869S-249CSR	2X1	1-1/8	1	10	096	120.48
869S-250CSR	2X1-1/4	1-1/2	1	10	096	120.48
869S-251CSR	2X1-1/2	1-1/2	1	10	096	120.48
869S-291CSR	2-1/2X1-1/2	1-/34	1	10	096	158.89
869S-333CSR[1]	3X1/2	7/8	1	10	096	158.89
869S-334CSR	3X3/4	7/8	1	10	096	158.89
869S-335CSR	3X1	1-1/8	1	10	096	158.89
869S-336CSR[1]	3X1-1/4	2-1/4	1	10	096	158.89
869S-337CSR[1]	3X1-1/2	2-1/4	1	10	096	158.89
869S-338CSR	3X2	2-1/4	1	10	096	158.89
869S-415CSR[1]	4X1/2	1-1/8	1	10	096	198.95
869S-416CSR[1]	4X3/4	1-1/8	1	10	096	198.95
869S-417CSR	4X1	1-1/8	1	8	096	198.95
869S-418CSR[1]	4X1-1/4	1-3/4	1	8	096	198.95
869S-419CSR	4X1-1/2	1-3/4	1	8	096	198.95
869S-420CSR	4X2	2-1/4	1	8	096	198.95
869S-421CSR[1]	4X2-1/2	3	1	4	096	213.72
869S-422CSR	4X3	3	4	0	096	229.08
869S-523CSR[1]	6X1/2	1-1/8	1	4	096	335.07
869S-524CSR[1]	6X3/4	1-1/8	1	4	096	335.07
869S-525CSR	6X1	1-1/8	1	4	096	335.07
869S-526CSR[1]	6X1-1/4	2-1/4	1	4	096	335.07
869S-527CSR[1]	6X1-1/2	2-1/4	1	4	096	335.07
869S-528CSR	6X2	2-1/4	1	4	096	335.07
869S-529CSR[1]	6X2-1/2	3	1	4	096	342.60
869S-530CSR	6X3	3	1	4	096	357.74
869S-532CSR	6X4	4	1	4	096	367.73
869S-573CSR[1]	8X1/2	4	1	0	096	563.97
869S-574CSR[1]	8X3/4	4	1	0	096	563.97
869S-575CSR[1]	8X1	4	1	0	096	563.97
869S-576CSR[1]	8X1-1/4	4	1	0	096	563.97
869S-577CSR[1]	8X1-1/2	4	1	0	096	563.97
869S-578CSR[1]	8X2	4	1	0	096	563.97
869S-579CSR[1]	8X2-1/2	4	1	0	096	620.31
869S-580CSR[1]	8X3	4	1	0	096	651.25
869S-582CSR	8X4	4	1	0	096	690.38
869S-585CSR	8X6	6	1	0	096	725.01
869S-624CSR	10X4	4	1	0	096	821.56
869S-626CSR	10X6	6	1	0	096	944.72
869S-664CSR	12X4	4	1	0	096	1029.85
869S-666CSR	12X6	6	1	0	096	1194.49

[1]Outlet-sized with Bushing

Clamp-On & Hot-Tap Saddles

CPVC Gray Hot-Tap Saddle

EPDM Saddle x Soc (Spigot) Zinc Plated Bolts



2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HT2-248C	**2X3/4 (1)**	1	5	050	85.15
HT2-251C	**2X1-1/2 (2)**	1	5	050	175.76
HT2-288C	**2-1/2X3/4 (1)**	1	5	050	90.89
HT2-291C	**2-1/2X1-1/2 (2)**	1	5	050	181.63
HT2-334C	**3X3/4 (1)**	1	5	050	104.14
HT2-337C	**3X1-1/2 (2)**	1	5	050	200.31
HT2-416C	**4X3/4 (1)**	1	5	050	120.32
HT2-419C	**4X1-1/2 (2)**	1	0	050	211.79
HT2-524C	**6X3/4 (1)**	1	5	050	135.31
HT2-527C	**6X1-1/2 (2)**	1	0	050	225.46
HT2-574C	**8X3/4 (1)**	1	5	050	124.62
HT2-577C	**8X1-1/2 (2)**	1	0	050	232.81

CPVC Gray Hot-Tap Saddle

FKM Saddle x Soc (Spigot) SS316 Bolts



2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HT3S-248C	**2X3/4 (1)**	1	5	050	144.14
HT3S-251C	**2X-1-1/2 (2)**	1	5	050	297.08
HT3S-288C	**2-1/2X3/4 (1)**	1	5	050	153.83
HT3S-291C	**2-1/2X1-1/2 (2)**	1	5	050	306.65
HT3S-334C	**3X3/4 (1)**	1	5	050	175.61
HT3S-337C	**3X1-1/2 (2)**	1	5	050	345.04
HT3S-416C	**4X3/4 (1)**	1	5	050	203.26
HT3S-419C	**4X1-1/2 (2)**	1	0	050	358.13
HT3S-524C	**6X3/4 (1)**	1	5	050	228.71
HT3S-527C	**6X1-1/2 (2)**	1	0	050	380.03
HT3S-574C	**8X3/4 (1)**	1	0	050	247.23
HT3S-577C	**8X1-1/2 (2)**	1	5	050	410.85

CPVC Gray Hot-Tap Saddle

EPDM Saddle x Soc (Spigot) SS316 Bolts



2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HT2S-248C	**2X3/4 (1)**	1	5	050	132.36
HT2S-251C	**2X1-1/2 (2)**	1	5	050	273.56
HT2S-288C	**2-1/2X3/4 (1)**	1	5	050	141.48
HT2S-291C	**2-1/2X1-1/2 (2)**	1	5	050	282.82
HT2S-334C	**3X3/4 (1)**	1	5	050	162.23
HT2S-337C	**3X-1/2 (2)**	1	5	050	311.80
HT2S-416C	**4X3/4 (1)**	1	5	050	187.38
HT2S-419C	**4X1-1/2 (2)**	1	0	050	329.75
HT2S-524C	**6X3/4 (1)**	1	5	050	210.32
HT2S-527C	**6X1-1/2 (2)**	1	0	050	350.92
HT2S-574C	**8X3/4 (1)**	1	0	050	227.38
HT2S-577C	**8X1-1/2 (2)**	1	0	050	379.45

CPVC Gray Hot-Tap Saddle

EPDM with Stainless Steel Cutter & Bolts



2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HTS2S-248C	**2X3/4 (1)**	1	5	050	407.25
HTS2S-251C	**2X1-1/2 (2)**	1	5	050	603.55
HTS2S-288C	**2-1/2X3/4 (1)**	1	5	050	435.76
HTS2S-291C	**2-1/2X1-1/2 (2)**	1	5	050	604.52
HTS2S-334C	**3X3/4 (1)**	1	5	050	415.62
HTS2S-337C	**3X1-1/2 (2)**	1	5	050	621.38
HTS2S-416C	**4X3/4 (1)**	1	5	050	442.54
HTS2S-419C	**4X1-1/2 (2)**	1	0	050	636.83
HTS2S-524C	**6X3/4 (1)**	1	5	050	515.85
HTS2S-527C	**6X1-1/2 (2)**	1	0	050	719.88
HTS2S-574C	**8X3/4 (1)**	1	0	050	715.60
HTS2S-577C	**8X1-1/2 (2)**	1	0	050	852.33

CPVC Gray Hot-Tap Saddle

FKM Saddle x Soc (Spigot) Zinc Plated Bolts



2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HT3-248C	**2X3/4 (1)**	1	5	050	92.52
HT3-251C	**2X1-1/2 (2)**	1	5	050	190.75
HT3-288C	**2-1/2X3/4 (1)**	1	5	050	98.84
HT3-291C	**2-1/2X1-1/2 (2)**	1	5	050	197.07
HT3-334C	**3X3/4 (1)**	1	5	050	112.95
HT3-337C	**3X1-1/2 (2)**	1	5	050	217.66
HT3-416C	**4X3/4 (1)**	1	5	050	203.26
HT3-419C	**4X1-1/2 (2)**	1	0	050	230.02
HT3-524C	**6X3/4 (1)**	1	5	050	146.92
HT3-527C	**6X1-1/2 (2)**	1	0	050	244.14
HT3-574C	**8X3/4 (1)**	1	0	050	158.83
HT3-577C	**8X1-1/2 (2)**	1	0	050	295.93

CPVC Gray Hot-Tap Saddle

FKM with Stainless Steel Cutter & Bolts



2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HTS3S-248C	**2X3/4 (1)**	1	5	050	413.63
HTS3S-251C	**2X1-1/2 (2)**	1	5	050	612.74
HTS3S-288C	**2-1/2X3/4 (1)**	1	5	050	442.68
HTS3S-291C	**2-1/2X1-1/2 (2)**	1	5	050	615.15
HTS3S-334C	**3X3/4 (1)**	1	5	050	380.64
HTS3S-337C	**3X1-1/2 (2)**	1	5	050	632.17
HTS3S-416C	**4X3/4 (1)**	1	5	050	450.88
HTS3S-419C	**4X1-1/2 (2)**	1	0	050	652.81
HTS3S-524C	**6X3/4 (1)**	1	5	050	523.92
HTS3S-527C	**6X1-1/2 (2)**	1	0	050	735.84
HTS3S-574C	**8X3/4 (1)**	1	0	050	731.43
HTS3S-577C	**8X1-1/2 (2)**	1	0	050	859.96

Glue-on Saddles

Saddle

IPS O.D. x Socket Schedule 80



Non Pressure Rated

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3963-528C	**6X2**	1	5	099	96.52
3963-530C	**6X3**	1	5	099	109.35

Saddle (continued)

IPS O.D. x Socket Schedule 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3963-532C	**6X4**	1	10	099	133.83
3963-578C	**8X2**	1	5	099	146.48
3963-580C	**8X3**	1	8	099	162.61
3963-582C	**8X4**	1	5	099	209.04
3963-585C	**8X6**	1	0	099	239.28
3963-621C	**10X2**	1	5	099	163.84

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Saddle (continued)

IPS O.D. x Socket Schedule 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3963-623C	10X3	1	8	099	180.42
3963-624C	10X4	1	5	099	221.59
3963-626C	10X6	1	5	099	271.57
3963-628C	10X8	1	5	099	300.38
3963-661C	12X2	1	10	099	180.34
3963-663C	12X3	1	8	099	210.61
3963-664C	12X4	1	8	099	252.14
3963-666C	12X6	1	0	099	292.33
3963-668C	12X8	1	4	099	368.58
3963-670C	12X10	1	0	099	576.45
3963-693C	14X3	1	8	099	226.63
3963-694C	14X4	1	5	099	293.46
3963-696C	14X6	1	10	099	342.97
3963-698C	14X8	1	4	099	408.45
3963-700C	14X10	1	3	099	717.76
3963-702C	14X12	1	4	099	841.72
3963-751C	16X2	1	5	099	217.93
3963-753C	16X3	1	8	099	272.94
3963-754C	16X4	1	10	099	342.56
3963-756C	16X6	1	3	099	464.24
3963-758C	16X8	1	3	099	582.65
3963-760C	16X10	1	0	099	800.91
3963-762C	16X12	1	0	099	1122.84
3963-764C	16X14	1	0	099	1291.16
3963-781C	18X2	1	5	409	265.43
3963-783C	18X3	1	4	099	298.60
3963-784C	18X4	1	5	099	435.14
3963-786C	18X6	1	5	099	596.49
3963-788C	18X8	1	5	099	673.21
3963-790C	18X10	1	0	099	878.13
3963-792C	18X12	1	0	099	1261.44
3963-794C	18X14	1	0	099	1379.15
3963-796C	18X16	1	0	099	1592.36
3963-811C	20X2	1	0	099	279.52
3963-813C	20X3	1	4	099	323.26
3963-814C	20X4	1	4	099	485.51
3963-816C	20X6	1	0	099	644.74
3963-818C	20X8	1	0	099	794.62
3963-820C	20X10	1	5	099	971.47
3963-822C	20X12	1	0	099	1311.81
3963-824C	20X14	1	0	099	1530.77
3963-826C	20X16	1	0	099	1706.20
3963-828C	20X18	1	0	099	1860.54
3963-901C	24X2	1	5	099	306.38
3963-903C	24X3	1	5	099	511.17
3963-904C	24X4	1	5	099	593.53
3963-906C	24X6	1	5	099	844.41
3963-908C	24X8	1	5	099	992.65
3963-910C	24X10	1	5	099	1228.37
3963-912C	24X12	1	0	099	1392.32
3963-914C	24X14	1	0	099	1626.20
3963-916C	24X16	1	0	099	1799.68
3963-918C	24X18	1	0	099	1993.79
3963-920C	24X20	1	0	099	2374.32

Stub Saddle

IPS O.D. x Socket Schedule 80



Non Pressure Rated

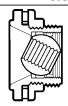
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3965-528C	6X2	1	10	099	121.51
3965-530C	6X3	1	3	099	130.54
3965-532C	6X4	1	5	099	162.23
3965-578C	8X2	1	5	099	151.88
3965-580C	8X3	1	4	099	99.66
3965-582C	8X4	1	5	099	225.85

Stub Saddle (continued)

IPS O.D. x Socket Schedule 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3965-585C	8X6	1	4	099	284.15
3965-621C	10X2	1	6	099	173.63
3965-623C	10X3	1	5	099	194.99
3965-624C	10X4	1	4	099	237.05
3965-626C	10X6	1	4	099	183.15
3965-628C	10X8	1	4	099	305.19
3965-661C	12X2	1	2	099	196.68
3965-663C	12X3	1	2	099	232.84
3965-664C	12X4	1	2	099	271.20
3965-666C	12X6	1	2	099	316.22
3965-668C	12X8	1	2	099	405.86
3965-670C	12X10	1	2	099	717.61
3965-691C	14X2	1	10	099	211.73
3965-693C	14X3	1	0	099	259.13
3965-694C	14X4	1	5	099	307.55
3965-696C	14X6	1	2	099	395.87
3965-700C	14X10	1	0	099	799.58
3965-702C	14X12	1	0	099	982.35
3965-751C	16X2	1	5	099	244.96
3965-753C	16X3	1	4	099	279.17
3965-754C	16X4	1	3	099	367.75
3965-756C	16X6	1	2	099	492.93
3965-758C	16X8	1	0	099	621.68
3965-760C	16X10	1	0	099	835.56
3965-762C	16X12	1	0	099	1165.87
3965-764C	16X14	1	0	099	1584.51
3965-781C	18X2	1	2	099	280.42
3965-783C	18X3	1	0	099	311.89
3965-784C	18X4	1	0	099	460.82
3965-786C	18X6	1	2	099	625.34
3965-788C	18X8	1	0	099	688.75
3965-790C	18X10	1	0	099	1002.81
3965-792C	18X12	1	0	099	1953.57
3965-794C	18X14	1	0	099	2508.54
3965-796C	18X16	1	0	099	3213.57
3965-811C	20X2	1	0	099	293.99
3965-813C	20X3	1	2	099	333.03
3965-814C	20X4	1	0	099	503.89
3965-816C	20X6	1	0	099	669.20
3965-818C	20X8	1	0	099	831.65
3965-820C	20X10	1	0	099	1138.05
3965-822C	20X12	1	0	099	2092.63
3965-824C	20X14	1	0	099	2714.15
3965-826C	20X16	1	0	099	3436.73
3965-828C	20X18	1	0	099	4189.82
3965-901C	24X2	1	5	099	324.05
3965-903C	24X3	1	2	099	542.97
3965-904C	24X4	1	5	099	636.11
3965-906C	24X6	1	3	099	897.73
3965-908C	24X8	1	0	099	1051.60
3965-910C	24X10	1	0	099	1317.91
3965-912C	24X12	1	0	099	2259.86
3965-914C	24X14	1	0	099	2856.87
3965-916C	24X16	1	0	099	3504.23
3965-918C	24X18	1	0	099	4273.22
3965-920C	24X20	1	0	099	5508.66

CPVC Self Aligning Tank Adapter with Neoprene Gasket

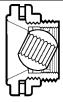


Fipt

75 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8172SA-010C	1	5	0	101	211.31
8172SA-020C	2	4	0	101	318.92
8172SA-030C	3	2	0	101	496.95

CPVC Self Aligning Tank Adapter with EPDM Gasket

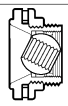


Fipt

75 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8172ESA-010C	1	5	0	101	222.15
8172ESA-020C	2	4	0	101	336.43
8172ESA-030C	3	2	0	101	523.27

CPVC Self Aligning Tank Adapter with FKM Gasket

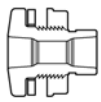


Fipt

75 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8172VSA-010C	1	5	0	101	439.07
8172VSA-020C	2	4	0	101	664.61
8172VSA-030C	3	2	0	101	1032.62

CPVC New Style Standard Tank Adapters with Neoprene Gaskets

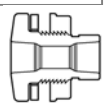


Soc

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8170-002C	1/4	25	150	101	48.33
8170-003C	3/8	25	150	101	48.33
8170-005C	1/2	25	0	101	48.33
8170-007C	3/4	25	0	101	57.49
8170-010C	1	25	0	101	64.53
8170-012C	1-1/4	20	0	101	82.31
8170-015C	1-1/2	20	0	101	89.62
8170-020C	2	15	0	101	126.52
8170-025C	2-1/2	4	0	101	185.95
8170-030C	3	4	0	101	221.34
8170-040C	4	2	0	101	368.87
8170-060C	6	1	0	101	1014.41
8170-080C	8	1	0	101	2254.08

CPVC New Style Standard Tank Adapters with EPDM Gaskets

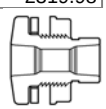


Soc

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8170E-002C	1/4	25	150	101	54.97
8170E-003C	3/8	25	150	101	54.97
8170E-005C	1/2	25	0	101	54.97
8170E-007C	3/4	25	0	101	61.69
8170E-010C	1	25	0	101	71.64
8170E-012C	1-1/4	20	0	101	90.66
8170E-015C	1-1/2	20	0	101	95.12
8170E-020C	2	15	0	101	137.14
8170E-025C	2-1/2	4	0	101	194.80
8170E-030C	3	4	0	101	231.92
8170E-040C	4	2	0	101	384.98
8170E-060C	6	1	0	101	1056.68
8170E-080C	8	1	0	101	2319.98

CPVC New Style Standard Tank Adapters with FKM Gaskets



Soc

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

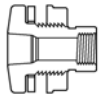
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8170V-002C	1/4	25	150	101	72.08

CPVC New Style Standard Tank Adapters with FKM Gaskets (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8170V-003C	3/8	25	150	101	72.08
8170V-005C	1/2	25	0	101	72.08
8170V-007C	3/4	25	0	101	82.92
8170V-010C	1	25	0	101	95.98
8170V-012C	1-1/4	20	0	101	117.93
8170V-015C	1-1/2	20	0	101	122.94
8170V-020C	2	15	0	101	186.12
8170V-025C	2-1/2	4	0	101	267.89
8170V-030C	3	4	0	101	318.92
8170V-040C	4	2	0	101	706.39
8170V-060C	6	1	0	101	1775.27
8170V-080C	8	1	0	101	4152.82

CPVC New Style Standard Tank Adapters with Neoprene Gaskets

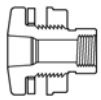


Soc x Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8171-002C	1/4	25	150	101	48.33
8171-003C	3/8	25	200	101	48.33
8171-005C	1/2	25	0	101	48.33
8171-007C	3/4	25	0	101	57.49
8171-010C	1	25	0	101	64.53
8171-012C	1-1/4	20	0	101	82.31
8171-015C	1-1/2	20	0	101	89.62
8171-020C	2	15	0	101	126.52
8171-025C	2-1/2	4	0	101	185.95
8171-030C	3	4	0	101	221.34
8171-040C	4	2	0	101	368.87
8171-060C	6	1	0	101	1014.41

CPVC New Style Standard Tank Adapters with EPDM Gaskets

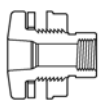


Soc x Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8171E-002C	1/4	25	150	101	54.97
8171E-003C	3/8	25	200	101	54.97
8171E-005C	1/2	25	0	101	54.97
8171E-007C	3/4	25	0	101	61.69
8171E-010C	1	25	0	101	71.64
8171E-012C	1-1/4	20	0	101	90.66
8171E-015C	1-1/2	20	0	101	95.12
8171E-020C	2	15	0	101	137.14
8171E-025C	2-1/2	4	0	101	194.80
8171E-030C	3	4	0	101	231.92
8171E-040C	4	2	0	101	384.98
8171E-060C	6	1	0	101	1056.67

CPVC New Style Standard Tank Adapters with FKM Gaskets



Soc x Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8171V-002C	1/4	25	150	101	72.08
8171V-003C	3/8	25	200	101	72.08
8171V-005C	1/2	25	0	101	72.08
8171V-007C	3/4	25	0	101	82.92
8171V-010C	1	25	0	101	95.98
8171V-012C	1-1/4	20	0	101	117.93
8171V-015C	1-1/2	20	0	101	122.94
8171V-020C	2	15	0	101	186.12
8171V-025C	2-1/2	4	0	101	267.93
8171V-030C	3	4	0	101	318.92
8171V-040C	4	2	0	101	706.39
8171V-060C	6	1	0	101	1775.27

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC New Style Special Reinforced (SR) Threaded Tank Adapters with Neoprene Gaskets



Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8171-002CSR	1/4	25	150	101	49.80
8171-003CSR	3/8	25	200	101	49.80
8171-005CSR	1/2	25	0	101	49.80
8171-007CSR	3/4	25	0	101	59.60
8171-010CSR	1	25	0	101	67.42
8171-012CSR	1-1/4	20	0	101	86.97
8171-015CSR	1-1/2	20	0	101	97.64
8171-020CSR	2	15	0	101	135.02
8171-025CSR	2-1/2	4	0	101	205.39
8171-030CSR	3	4	0	101	244.46
8171-040CSR	4	2	0	101	392.88
8171-060CSR	6	1	0	101	1037.65

CPVC New Style Special Reinforced (SR) Threaded Tank Adapters with EPDM Gaskets



Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8171E-002CSR	1/4	25	150	101	56.44
8171E-003CSR	3/8	25	200	101	56.44
8171E-005CSR	1/2	25	0	101	56.44
8171E-007CSR	3/4	25	0	101	63.79
8171E-010CSR	1	25	0	101	76.27
8171E-012CSR	1-1/4	20	0	101	95.32
8171E-015CSR	1-1/2	20	0	101	103.13
8171E-020CSR	2	15	0	101	145.79
8171E-025CSR	2-1/2	4	0	101	214.24
8171E-030CSR	3	4	0	101	255.05
8171E-040CSR	4	2	0	101	408.93
8171E-060CSR	6	2	0	101	1079.93

CPVC New Style Special Reinforced (SR) Threaded Tank Adapters with FKM Gaskets

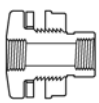


Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8171V-002CSR	1/4	25	150	101	73.54
8171V-003CSR	3/8	25	200	101	73.54
8171V-005CSR	1/2	25	0	101	73.54
8171V-007CSR	3/4	25	0	101	85.01
8171V-010CSR	1	25	0	101	98.89
8171V-012CSR	1-1/4	20	0	101	122.59
8171V-015CSR	1-1/2	20	0	101	130.91
8171V-020CSR	2	15	0	101	194.93
8171V-025CSR	2-1/2	4	0	101	287.26
8171V-030CSR	3	4	0	101	342.05
8171V-040CSR	4	2	0	101	730.36
8171V-060CSR	6	2	0	101	1803.22

CPVC New Style Standard Tank Adapters with Neoprene Gaskets



Fipt

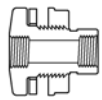
150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8172-002C	1/4	25	150	101	64.53
8172-003C	3/8	25	200	101	64.53
8172-005C	1/2	25	0	101	64.53
8172-007C	3/4	25	0	101	74.51
8172-010C	1	25	0	101	81.51
8172-012C	1-1/4	20	0	101	115.07
8172-015C	1-1/2	20	0	101	125.78
8172-020C	2	15	0	101	156.77
8172-025C	2-1/2	4	0	101	220.62
8172-030C	3	4	0	101	262.63
8172-040C	4	2	0	101	414.96
8172-060C	6	1	0	101	1152.74

CPVC New Style Standard Tank Adapters with Neoprene Gaskets (continued)

Fipt

CPVC New Style Standard Tank Adapters with EPDM Gaskets

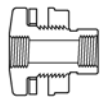


Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8172E-002C	1/4	25	150	101	67.07
8172E-003C	3/8	25	200	101	67.07
8172E-005C	1/2	25	0	101	67.07
8172E-007C	3/4	25	0	101	79.08
8172E-010C	1	25	0	101	85.21
8172E-012C	1-1/4	20	0	101	119.71
8172E-015C	1-1/2	20	0	101	136.61
8172E-020C	2	15	0	101	168.84
8172E-025C	2-1/2	4	0	101	248.22
8172E-030C	3	4	0	101	295.54
8172E-040C	4	2	0	101	492.03
8172E-060C	6	1	0	101	1170.14

CPVC New Style Standard Tank Adapters with FKM Gaskets

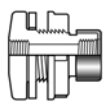


Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8172V-002C	1/4	25	150	101	103.79
8172V-003C	3/8	25	200	101	103.79
8172V-005C	1/2	25	0	101	103.79
8172V-007C	3/4	25	0	101	116.99
8172V-010C	1	25	0	101	134.62
8172V-012C	1-1/4	20	0	101	165.14
8172V-015C	1-1/2	20	0	101	170.87
8172V-020C	2	15	0	101	266.18
8172V-025C	2-1/2	4	0	101	377.73
8172V-030C	3	4	0	101	449.64
8172V-040C	4	2	0	101	1182.45
8172V-060C	6	1	0	101	2167.27

CPVC New Style Special Reinforced (SR) Threaded Tank Adapters with Neoprene Gaskets

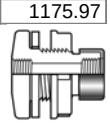


Fipt x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8172-002CSR	1/4	25	150	101	65.97
8172-003CSR	3/8	25	200	101	65.97
8172-005CSR	1/2	25	0	101	65.97
8172-007CSR	3/4	25	0	101	76.61
8172-010CSR	1	25	0	101	84.41
8172-012CSR	1-1/4	20	0	101	119.75
8172-015CSR	1-1/2	20	0	101	133.78
8172-020CSR	2	15	0	101	165.40
8172-025CSR	2-1/2	4	0	101	240.05
8172-030CSR	3	4	0	101	285.78
8172-040CSR	4	2	0	101	438.93
8172-060CSR	6	2	0	101	1175.97

CPVC New Style Special Reinforced (SR) Threaded Tank Adapters with EPDM Gaskets



Fipt x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8172E-002CSR	1/4	25	150	101	68.55
8172E-003CSR	3/8	25	200	101	68.55
8172E-005CSR	1/2	25	0	101	68.55
8172E-007CSR	3/4	25	0	101	81.17

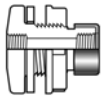
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

CPVC New Style Special Reinforced (SR) Threaded Tank Adapters with EPDM Gaskets (continued)

Fipt x SR Fipt - Stainless Steel Collar

8172E-010CSR	**1**	25	0	101	88.12
8172E-012CSR	**1-1/4**	20	0	101	124.38
8172E-015CSR	**1-1/2**	20	0	101	144.60
8172E-020CSR	**2**	15	0	101	177.48
8172E-025CSR	**2-1/2**	4	0	101	267.74
8172E-030CSR	**3**	4	0	101	318.73
8172E-040CSR	**4**	2	0	101	515.99
8172E-060CSR	**6**	2	0	101	1193.37

CPVC New Style Special Reinforced (SR) Threaded Tank Adapters with FKM Gaskets

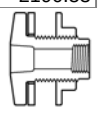


Fipt x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172V-002CSR	**1/4**	25	150	101	105.26
8172V-003CSR	**3/8**	25	200	101	105.26
8172V-005CSR	**1/2**	25	0	101	105.26
8172V-007CSR	**3/4**	25	0	101	119.08
8172V-010CSR	**1**	25	0	101	137.53
8172V-012CSR	**1-1/4**	20	0	101	169.80
8172V-015CSR	**1-1/2**	20	0	101	178.83
8172V-020CSR	**2**	15	0	101	274.84
8172V-025CSR	**2-1/2**	4	0	101	397.14
8172V-030CSR	**3**	4	0	101	472.79
8172V-040CSR	**4**	2	0	101	1206.41
8172V-060CSR	**6**	2	0	101	2190.53

Tank Adapter with Neoprene Gasket (Old Style)

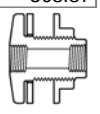


Soc x Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

871-005C	**1/2**	25	0	101	48.33
871-007C	**3/4**	25	0	101	57.49
871-010C	**1**	25	0	101	64.53
871-012C	**1-1/4**	20	0	101	82.31
871-015C	**1-1/2**	20	0	101	89.62
871-020C	**2**	15	0	101	126.52
871-030C	**3**	4	0	101	221.34
871-040C	**4**	2	0	101	368.87

Tank Adapter with Neoprene Gasket (Old Style)



Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

872-005C	**1/2**	25	0	101	64.53
872-007C	**3/4**	25	0	101	74.51
872-010C	**1**	25	0	101	81.51
872-012C	**1-1/4**	20	0	101	115.07
872-015C	**1-1/2**	20	0	101	125.78
872-020C	**2**	15	0	101	156.77
872-030C	**3**	4	0	101	262.63
872-040C	**4**	2	0	101	414.96

Neoprene Tank Adapter Gasket Only (New Style)



3N-002	**1/4**	100	0	901	2.71
3N-003	**3/8**	50	0	901	2.71
3N-005	**1/2**	10	0	901	2.71
3N-007	**3/4**	10	0	901	2.91
3N-010	**1**	10	0	901	3.09
3N-012	**1-1/4**	10	0	901	4.27
3N-015	**1-1/2**	10	0	901	5.01
3N-020	**2**	10	0	901	6.56

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Neoprene Tank Adapter Gasket Only (New Style) (continued)

3N-025	**2-1/2**	10	0	901	6.84
3N-030	**3**	10	0	901	7.14
3N-040	**4**	10	0	901	19.75
2N-060	**6**	10	0	901	24.67
3N-080	**8**	10	0	901	113.14

EPDM Tank Adapter Gasket Only (New Style)



3E-002	**1/4**	10	0	901	3.15
3E-003	**3/8**	10	0	901	3.15
3E-005	**1/2**	10	0	901	3.15
3E-007	**3/4**	10	0	901	3.25
3E-010	**1**	10	0	901	5.64
3E-012	**1-1/4**	10	0	901	8.26
3E-015	**1-1/2**	10	0	901	8.48
3E-020	**2**	10	0	901	9.71
3E-025	**2-1/2**	10	0	901	13.76
3E-030	**3**	10	0	901	14.79
3E-040	**4**	10	0	901	22.28
2E-060	**6**	10	0	901	40.22
3E-080	**8**	10	0	901	145.99

FKM Tank Adapter Gasket Only (New Style)



3V-002	**1/4**	10	0	901	11.53
3V-003	**3/8**	10	0	901	13.59
3V-005	**1/2**	10	0	901	20.28
3V-007	**3/4**	10	0	901	25.12
3V-010	**1**	10	0	901	34.34
3V-012	**1-1/4**	10	0	901	54.61
3V-015	**1-1/2**	10	0	901	58.99
3V-020	**2**	10	0	901	94.48
3V-025	**2-1/2**	10	0	901	104.38
3V-030	**3**	10	0	901	108.76
3V-040	**4**	10	0	901	246.09
2V-060	**6**	10	0	901	616.03
3V-080	**8**	10	0	901	1033.18

Neoprene Tank Adapter Gasket Only (Old Style)



2N-005	**1/2**	10	0	901	2.71
2N-007	**3/4**	10	0	901	2.91
2N-010	**1**	10	0	901	3.09
2N-015	**1-1/4 OR 1-1/2**	10	0	901	5.01
2N-020	**2**	10	0	901	6.56
2N-030	**3**	10	0	901	7.14
2N-040	**4**	10	0	901	19.75

EPDM Tank Adapter Gasket Only (Old Style)



2E-005	**1/2**	10	0	901	3.15
2E-007	**3/4**	10	0	901	3.25
2E-010	**1**	10	0	901	5.64
2E-015	**1-1/4 OR 1-1/2**	10	0	901	8.48
2E-020	**2**	10	0	901	9.71
2E-030	**3**	10	0	901	14.79
2E-040	**4**	10	0	901	22.28

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Tank Adapters

Wrench Sets (New Style)

Body Wrench & Nut Wrench



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
TAW-002	1/4	1	25	299	21.89
TAW-003	3/8	1	25	299	21.89
TAW-005	1/2	1	25	299	21.89
TAW-007	3/4	1	25	299	22.32
TAW-010	1	1	25	299	23.21
TAW-012	1-1/4	1	20	299	26.18
TAW-015	1-1/2	1	20	299	28.40
TAW-020	2	1	10	299	32.35
TAW-025	2-1/2	1	10	299	35.79
TAW-030	3	1	10	299	39.44
TAW-040	4	1	10	299	42.26

Individual Body Wrench (New Style)



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
TAW1-002	1/4	500	0	299	12.28
TAW1-003	3/8	400	0	299	12.28
TAW1-005	1/2	250	0	299	12.28
TAW1-007	3/4	220	0	299	12.52
TAW1-010	1	200	0	299	13.03
TAW1-012	1-1/4	300	0	299	14.76

Individual Body Wrench (New Style) (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
TAW1-015	1-1/2	150	0	299	15.89
TAW1-020	2	100	0	299	17.25
TAW1-025	2-1/2	80	0	299	18.03
TAW1-030	3	74	0	299	22.61
TAW1-040	4	35	0	299	23.26

Individual Nut Wrench (New Style)



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
TAW2-002	1/4	300	0	299	12.28
TAW2-003	3/8	250	0	299	12.28
TAW2-005	1/2	200	0	299	12.28
TAW2-007	3/4	160	0	299	12.52
TAW2-010	1	110	0	299	13.03
TAW2-012	1-1/4	200	0	299	14.76
TAW2-015	1-1/2	120	0	299	15.89
TAW2-020	2	100	0	299	17.25
TAW2-025	2-1/2	50	0	299	18.03
TAW2-030	3	40	0	299	22.61
TAW2-040	4	35	0	299	23.26

Expansion Joints

CPVC Fabricated Expansion Joints

6" Travel with FKM O-rings



1/2" - 2" 235 psi @ 73°F (23°C)
2-1/2" - 12" 150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
826-005X6C	1/2	10	0	085	387.05
826-007X6C	3/4	6	0	085	423.54
826-010X6C	1	5	0	085	457.80
826-012X6C	1-1/4	4	0	085	480.84
826-015X6C	1-1/2	4	0	085	524.06
826-020X6C	2	2	0	085	664.05
826-025X6C	2-1/2	1	0	085	788.00
826-030X6C	3	1	0	085	915.43
826-040X6C	4	1	0	085	1350.14
826-060X6C	6	1	0	085	1451.36
826-080X6C	8	1	0	085	2753.19
826-100X6C	10	1	0	085	3514.77
826-120X6C	12	1	0	085	4662.63

EPDM O-rings available on special order. Add an "E" preceding the dash (-) separator, e.g. 826E-005X6C

CPVC Fabricated Expansion Joints

12" Travel with FKM O-rings



1/2" - 2" 235 psi @ 73°F (23°C)
2-1/2" - 12" 150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
826-005X12C	1/2	10	0	085	394.20
826-007X12C	3/4	6	0	085	452.06
826-010X12C	1	5	0	085	482.24
826-012X12C	1-1/4	4	0	085	539.76
826-015X12C	1-1/2	4	0	085	605.32
826-020X12C	2	2	0	085	772.65
826-025X12C	2 -1/2	1	0	085	1169.72
826-030X12C	3	1	0	085	940.04
826-040X12C	4	1	0	085	1557.18

CPVC Fabricated Expansion Joints (continued)

12" Travel with FKM O-rings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
826-060X12C	6	1	0	085	1715.44
826-080X12C	8	1	0	085	3284.37
826-100X12C	10	1	0	085	3847.76

EPDM O-rings available on special order. Add an "E" preceding the dash (-) separator, e.g. 826E-005X12C

CPVC Elastomer Expansion Joint

with EPDM Bellows Soc



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
EJ22-007C	3/4	10	0	085	205.88
EJ22-010C	1	10	0	085	234.92
EJ22-012C	1-1/4	15	0	085	256.68
EJ22-015C	1-1/2	10	0	085	314.45
EJ22-020C	2	8	0	085	392.46
EJ22-025C	2-1/2	4	0	085	573.51
EJ22-030C	3	2	0	085	779.00

CPVC Elastomer Expansion Joint

with EPDM Bellows SR Fipt - Stainless Steel Collar



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
EJ21-007CSR	3/4	10	0	085	208.22
EJ21-010CSR	1	10	0	085	239.45
EJ21-012CSR	1-1/4	15	0	085	264.60
EJ21-015CSR	1-1/2	10	0	085	337.27
EJ21-020CSR	2	8	0	085	445.81
EJ21-025CSR	2-1/2	4	0	085	619.13
EJ21-030CSR	3	2	0	085	824.60

Flange One Piece
Soc



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
851-005C	1/2	25	0	090	26.87
851-007C	3/4	25	0	090	27.49
851-010C	1	15	0	090	30.02
851-012C	1-1/4	15	0	090	36.64
851-015C	1-1/2	20	0	090	40.67
851-020C	2	10	0	090	49.23
851-025C	2-1/2	10	0	090	102.01
851-030C	3	10	0	090	106.67
851-040C	4	5	0	090	144.12
851-050C	5	5	0	090	264.12
851-060C	6	5	0	090	245.51
851-080C	8	2	0	090	560.85

Flange One Piece
Fipt



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
852-005C	1/2	25	0	090	37.57
852-007C	3/4	25	0	090	45.55
852-010C	1	15	0	090	49.71
852-012C	1-1/4	15	0	090	68.99
852-015C	1-1/2	20	0	090	73.03
852-020C	2	10	0	090	74.37
852-025C	2-1/2	10	0	090	120.72
852-030C	3	10	0	090	119.78
852-040C	4	5	0	090	186.21

Special Reinforced Flange One Piece Threaded
SR Fipt - Stainless Steel Collar



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
852-005CSR	1/2	25	0	096	20.65
852-007CSR	3/4	25	0	096	25.05
852-010CSR	1	15	0	096	27.41
852-012CSR	1-1/4	15	0	096	37.93
852-015CSR	1-1/2	15	0	096	40.21
852-020CSR	2	10	0	096	41.19
852-025CSR	2-1/2	10	0	096	66.27
852-030CSR	3	10	0	096	65.76
852-040CSR	4	5	0	096	123.22

Blind Flange



1/2" - 12" Molded - 150 psi Maximum Internal Pressure Rating @ 73°F (23°C)
14" - 24" Fabricated - 50 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
853-005C	1/2	25	100	090	40.28
853-007C	3/4	25	0	090	43.67
853-010C	1	20	0	090	54.44
853-012C	1-1/4	20	0	090	61.60
853-015C	1-1/2	15	0	090	86.21
853-020C	2	10	0	090	90.57
853-025C	2-1/2	10	0	090	137.01
853-030C	3	10	0	090	170.33
853-040C	4	8	0	090	230.72
853-060C	6	5	0	090	387.01
853-080C	8	5	0	090	717.85
853-100C	10	3	0	091	1294.36
853-120C	12	2	0	091	2174.52
853-140CF	14	1	0	097	2527.08
853-160CF	16	1	0	097	3918.21
853-180CF	18	1	0	097	4830.15

Blind Flange (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
853-200CF	20	1	0	097	5175.66
853-240CF	24	1	0	097	6297.71

Flange Van Stone Style with Plastic Ring
Soc



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
854-005C	1/2	25	0	090	27.05
854-007C	3/4	25	0	090	27.66
854-010C	1	15	0	090	30.21
854-012C	1-1/4	15	0	090	36.88
854-015C	1-1/2	20	0	090	40.95
854-020C	2	10	0	090	49.59
854-025C	2-1/2	10	0	090	102.73
854-030C	3	10	0	090	107.56
854-040C	4	5	0	090	145.25
854-050C	5	5	0	090	247.51
854-060C	6	5	0	090	247.51
854-080C	8	2	0	090	744.72
854-100C	10	2	0	091	1792.81
854-120C	12	2	0	091	2690.18
854-140C	14	1	0	095	3031.38
854-160C	16	1	0	095	3789.24
854-180C	18	1	0	095	6151.38

Flange Van Stone Style with Plastic Ring
Spig



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
856-005C	1/2	25	0	090	31.28
856-007C	3/4	25	0	090	33.58
856-010C	1	15	0	090	38.13
856-012C	1-1/4	15	0	090	47.18
856-015C	1-1/2	15	0	090	52.17
856-020C	2	10	0	090	73.02
856-025C	2-1/2	10	0	090	114.37
856-030C	3	10	0	090	125.24
856-040C	4	5	0	090	128.88
856-060C	6	4	0	090	281.40
856-080C	8	2	0	090	573.59
856-100C	10	2	0	091	1926.06
856-120C	12	2	0	091	2893.23
856-140CF	14	1	0	097	3078.41
856-160CF	16	1	0	097	3813.33

Flange Van Stone Style with Plastic Solid Ring
Soc



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S854-030C	3	10	0	090	153.63
S854-040C	4	5	0	090	207.55
S854-060C	6	4	0	090	353.57
S854-080C	8	2	0	090	1063.86
S854-100C	10	2	0	091	2561.17
S854-120C	12	2	0	091	3843.11

Flange Van Stone Style Class 300 Bolt Pattern Fabricated with Plastic Ring
Soc



Molded with fabricated ring - 150 psi = maximum internal pressure rating @ 73°F (23° C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
854-005CL300C	1/2	1	25	097	205.84
854-007CL300C	3/4	1	25	097	275.78
854-010CL300C	1	1	15	097	336.27

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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Pipe Flanges

Flange Van Stone Style Class 300 Bolt Pattern Fabricated with Plastic Ring (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
854-012CL300C	1-1/4	1	15	097	357.25
854-015CL300C	1-1/2	1	20	097	370.95
854-020CL300C	2	1	10	097	412.06
854-025CL300C	2-1/2	1	10	097	490.33
854-030CL300C	3	1	10	097	532.87
854-040CL300C	4	1	5	097	840.37
854-060CL300C	6	1	4	097	1586.91
854-080CL300C	8	1	3	097	1826.03
854-100CL300C	10	1	2	097	2064.60
854-120CL300C	12	1	0	097	2579.31
854-140CL300C	14	1	0	097	2864.68
854-160CL300C	16	1	0	097	3014.23

Flange Van Stone Style with Plastic Ring



Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
855-005C	1/2	25	0	090	37.82
855-007C	3/4	25	0	090	45.84
855-010C	1	15	0	090	50.05
855-012C	1-1/4	15	0	090	68.88
855-015C	1-1/2	20	0	090	73.55
855-020C	2	10	0	090	74.93
855-025C	2-1/2	10	0	090	120.63
855-030C	3	10	0	090	120.63
855-040C	4	5	0	090	187.54
855-060C[1]	6	1	0	090	317.48
855-080C[1]	8	1	2	090	487.97
855-080CF	8	1	2	097	433.74

1 - Flange assembled with molded Female Adapter

CPVC FLANGE One Piece*



ASTM Socket x Multi-bolt Pattern Ring

150 psi Maximum Internal Presure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
M851-100C	10	2	0	091	518.75
M851-120C	12	2	0	091	799.50

Hubs fit 10" and 12" ASTM IPS pipe. Rings are manufactured to accept bolt patterns in size 10" and 12" in ANSI Class 150, B.S. 4504 PN10, B.S. 4504 PN16, B.S. 10 Table E for size 10". Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

Flange Van Stone Style with Plasic Ring ASTM



Soc x Multi-bolt Pattern Ring

150 psi Maximum Internal Presure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
M854-020C	2	10	0	090	48.63
M854-060C	6	4	0	090	247.51
M854-080C	8	2	0	090	744.72

CPVC FLANGE* Van Stone Style



ASTM Socket x DIN PN 10/16 Drilling

150 psi Maximum Internal Presure Rating @ 73°F (23°C)

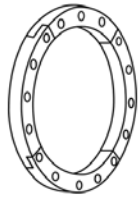
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
854-030CDIN	3	10	0	090	107.56
854-040CDIN	4	5	0	090	145.25

* Hubs fit 3" or 4" ASTM IPS Pipe. Rings are manufactured to DIN 8063-4 PN 10 and PN 16 bolt patterns.

Van Stone Style Flange Replacement Split Rings

Application & Use of Van Stone Style Flange Replacement Split Rings

Designed for easy Van Stone style flange ring replacement in the event of system modification, repair, or improper assembly without having to remove existing flange hub. Split rings are made as a direct replacement of existing one-piece rings used on Spears® brand only of Van Stone style flanges with ANSI Class 150 bolt pattern plastic rings. Remove old ring to be replaced then simply place the split ring sections around hub and install flange bolts (not included) through special designed section overlap to hold in position. Install appropriate user supplied bolts, washers and gasket (see Flange Gasket and Bolt Hardware Kits in this catalog); torque to specifications according to normal flange assembly. Split rings are a set of either 2-pieces or 4-pieces (illustrated) sections depending on size, in regular PVC, Glass Filled PVC, or CPVC for flange type and sizes listed.



CPVC Flange Replacement Split Rings



For Spears® Flanges with CPVC Rings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
854-005-1SC	1/2	25	0	090	78.55
854-007-1SC	3/4	10	0	090	83.38
854-010-1SC	1	10	0	090	93.25
854-012-1SC	1-1/4	10	0	090	95.06
854-015-1SC	1-1/2	20	0	090	97.40
854-020-1SC	2	40	0	090	129.27
854-025-1SC	2-1/2	10	0	090	149.54
854-030-1SC	3	10	0	090	165.79
854-040-1SC	4	10	0	090	175.58
854-050-1SC	5	10	0	090	240.72
854-060-1SC	6	5	0	090	284.84

CPVC Flange Replacement Split Rings (continued)

For Spears® Flanges with CPVC Rings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
854-080-1SC	8	4	0	090	325.43
854-100-1SC	10	4	0	091	410.81
854-120-1SC	12	2	0	091	509.17
854-140-1SC	14	1	0	091	697.42
854-160-1SC	16	1	0	095	866.39
854-180-1SC	18	1	0	095	941.00
854-200-1SC	20	1	0	097	5998.99
854-240-1SC	24	1	0	097	6119.36

Fits 854-xxxC Socket, 855-xxxC Threaded, and 856-xxxC Spigot hub configurations

Flange Insulating Joints

Flange Insulating Joints - Class 150 Bolt Pattern



PP Flange Spacer with PVC Bolt Isolators

Size = Nominal Flange Diameter x Thickness (in.)
For Dielectric Insulation Between Dissimilar Metal Flanges
300 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
IJ-030-010P	**3X1**	1	0	016	460.69
IJ-040-010P	**4X1**	1	0	016	514.74
IJ-060-010P	**6X1**	1	0	016	611.82
IJ-080-010P	**8X1**	1	0	016	710.06
IJ-100-010P	**10X1**	1	0	016	1443.20
IJ-120-010P	**12X1**	1	0	016	1563.13
IJ-140-010P	**14X1**	1	0	016	2025.46
IJ-160-010P	**16X1**	1	0	016	2573.78
IJ-180-010P	**18X1**	1	0	016	3445.23
IJ-200-010P	**20X1**	1	0	016	4447.74
IJ-240-010P	**24X1**	1	0	016	6177.09

Flange Insulating Joints - Class 300 Bolt Pattern



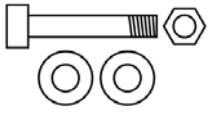
PP Flange Spacer with PVC Bolt Isolators

Size = Nominal Flange Diameter x Thickness (in.)
For Dielectric Insulation Between Dissimilar Metal Flanges
300 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
IJ300-030-010P	**3X1**	1	0	016	678.67
IJ300-040-010P	**4X1**	1	0	016	754.83
IJ300-060-010P	**6X1**	1	0	016	1156.18
IJ300-080-010P	**8X1**	1	0	016	1442.38
IJ300-100-010P	**10X1**	1	0	016	2392.84
IJ300-120-010P	**12X1**	1	0	016	3144.45
IJ300-140-010P	**14X1**	1	0	016	3961.23
IJ300-160-010P	**16X1**	1	0	016	4223.97
IJ300-180-010P	**18X1**	1	0	016	5278.95
IJ300-200-010P	**20X1**	1	0	016	6116.11
IJ300-240-010P	**24X1**	1	0	016	7509.49

Flange Bolt Kits

Bolt Kit Selection Guide



Order Gaskets & Bolt Kits Separately

- Kit Contains All Bolts, Nuts, & Flat Washers for Specified Flange Size
- For Connecting Two (2) Mating Spears® Flanges
- Pre-coated, Anti-seize Lubricated Bolts
- Available in Zinc Coated Steel, Type 304 Stainless Steel or Type 316 Stainless Steel

Flange Size	Bolts[1] Per Kit	Diameter (in.-TPI)	Length (in.)	Hardware Kit Part Number		
				Zinc	316 SS	304 SS
1/2 & 3/4	4	1/2-13	2	HK-005	HK1-005	HK2-005
1 & 1-1/4	4	1/2-13	2-1/4	HK-010	HK1-010	HK2-010
1-1/2	4	1/2-13	2-1/2	HK-015	HK1-015	HK2-015
2	4	5/8-11	3	HK-020	HK1-020	HK2-020
2-1/2	4	5/8-11	3-1/4	HK-025	HK1-025	HK2-025
3	4	5/8-11	3-1/2	HK-030	HK1-030	HK2-030
4	8	5/8-11	3-1/2	HK-040	HK1-040	HK2-040
5 & 6	8	3/4-10	4	HK-060	HK1-060	HK2-060
8	8	3/4-10	4-1/2	HK-080	HK1-080	HK2-080
10 & 12	12	7/8-9	5	HK-120	HK1-120	HK2-120

1 - Each Bolt includes Nut & two (2) Flat Washers

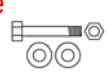
Zinc Plated Steel Flange Bolt Hardware Kits



For Connection of 2-Spears® Flanges Inlcudes Bolts, Nuts & Flat Washers

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HK-005	**1/2**	1	10	017	10.03
HK-010	**3/4 & 1**	1	10	017	12.54
HK-015	**1-1/4 & 1-1/2**	1	10	017	18.85
HK-020	**2**	1	10	017	25.23
HK-025	**2-1/2**	1	10	017	30.25
HK-030	**3**	1	10	017	34.81
HK-040	**4**	1	5	017	72.12
HK-060	**5 & 6**	1	5	017	80.21
HK-080	**8**	1	0	017	94.00
HK-120	**10 & 12**	1	0	017	127.18

Type 316 Stainless Steel Flange Bolt Hardware Kits



For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HK1-005	**1/2**	1	10	017	30.11
HK1-010	**3/4 & 1**	1	10	017	43.37
HK1-015	**1-1/4 & 1-1/2**	1	10	017	47.78
HK1-020	**2**	1	10	017	57.46
HK1-025	**2-1/2**	1	10	017	61.59
HK1-030	**3**	1	10	017	81.26
HK1-040	**4**	1	5	017	162.96
HK1-060	**5 & 6**	1	5	017	212.54
HK1-080	**8**	1	0	017	266.69
HK1-120	**10 & 12**	1	0	017	542.58

Type 304 Stainless Steel Flange Bolt Hardware Kits



For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HK2-005	**1/2**	1	10	017	26.34

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Flange Bolt Kits

Type 304 Stainless Steel Flange Bolt Hardware Kits (continued)

For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HK2-010	**3/4 & 1**	1	10	017	37.57
HK2-015	**1-1/4 & 1-1/2**	1	10	017	44.26
HK2-020	**2**	1	10	017	52.06
HK2-025	**2-1/2**	1	10	017	55.20
HK2-030	**3**	1	10	017	68.55
HK2-040	**4**	1	5	017	137.09

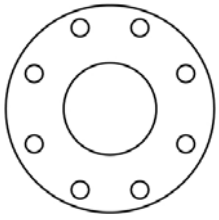
Type 304 Stainless Steel Flange Bolt Hardware Kits (continued)

For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
HK2-060	**5 & 6**	1	5	017	144.51
HK2-080	**8**	1	0	017	190.02
HK2-120	**10 & 12**	1	0	017	336.78

Full-Faced Flange Gaskets

Gasket Selection Guide



Order Gaskets & Bolt Kits Separately

- 1/8" Full-Face design with ANSI Class 150 Bolt Patterns
- Pressure rated to 150 psi @ 73°F
- Available in Buna-N, EPDM, or FKM

Flange Size	Bolt Holes	Gasket Part Number		
		Buna-N	EPDM	FKM
1/2	4	GK1-005	GK2-005	GK3-005
3/4	4	GK1-007	GK2-007	GK3-007
1	4	GK1-010	GK2-010	GK3-010
1-1/4	4	GK1-012	GK2-012	GK3-012
1-1/2	4	GK1-015	GK2-015	GK3-015
2	4	GK1-020	GK2-020	GK3-020
2-1/2	4	GK1-025	GK2-025	GK3-025
3	4	GK1-030	GK2-030	GK3-030
4	8	GK1-040	GK2-040	GK3-040
5	8	GK1-050	GK2-050	GK3-050
6	8	GK1-060	GK2-060	GK3-060
8	8	GK1-080	GK2-080	GK3-080
10	12	GK1-100	GK2-100	GK3-100
12	12	GK1-120	GK2-120	GK3-120

Buna-N Full-Faced Flange Gaskets

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK1-005	**1/2**	1	25	017	3.22
GK1-007	**3/4**	1	25	017	3.69
GK1-010	**1**	1	25	017	3.80
GK1-012	**1-1/4**	1	25	017	3.89
GK1-015	**1-1/2**	1	25	017	4.18
GK1-020	**2**	1	25	017	4.67
GK1-025	**2-1/2**	1	25	017	5.14
GK1-030	**3**	1	25	017	7.91
GK1-040	**4**	1	25	017	8.84
GK1-050	**5**	1	25	017	10.48
GK1-060	**6**	1	25	017	10.77
GK1-080	**8**	1	25	017	14.20
GK1-100	**10**	1	25	017	18.02
GK1-120	**12**	1	25	017	24.31
GK1-140	**14**	1	25	017	47.02
GK1-160	**16**	1	25	017	226.21
GK1-180	**18**	1	25	017	257.63
GK1-240	**24**	1	25	017	311.31

EPDM Full-Faced Flange Gaskets

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK2-005	**1/2**	1	25	017	4.27
GK2-007	**3/4**	1	25	017	4.55
GK2-010	**1**	1	25	017	4.75
GK2-012	**1-1/4**	1	25	017	4.99
GK2-015	**1-1/2**	1	25	017	5.36
GK2-020	**2**	1	25	017	6.54
GK2-025	**2-1/2**	1	25	017	7.85
GK2-030	**3**	1	25	017	11.54

EPDM Full-Faced Flange Gaskets (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK2-040	**4**	1	25	017	13.14
GK2-050	**5**	1	25	017	16.43
GK2-060	**6**	1	25	017	17.24
GK2-080	**8**	1	25	017	22.97
GK2-100	**10**	1	25	017	29.93
GK2-120	**12**	1	25	017	41.18
GK2-140	**14**	1	25	017	100.45
GK2-160	**16**	1	25	017	178.22
GK2-180	**18**	1	25	017	208.16
GK2-200	**20**	1	25	017	241.60
GK2-240	**24**	1	25	017	364.73

FKM Full-Faced Flange Gaskets

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK3-005	**1/2**	1	25	017	15.25
GK3-007	**3/4**	1	25	017	18.11
GK3-010	**1**	1	25	017	20.01
GK3-012	**1-1/4**	1	5	017	22.59
GK3-015	**1-1/2**	1	25	017	28.49
GK3-020	**2**	1	25	017	39.83
GK3-025	**2-1/2**	1	25	017	53.27
GK3-030	**3**	1	25	017	119.04
GK3-040	**4**	1	25	017	137.42
GK3-050	**5**	1	25	017	160.20
GK3-060	**6**	1	25	017	181.75
GK3-080	**8**	1	25	017	258.94
GK3-100	**10**	1	25	017	344.42
GK3-120	**12**	1	25	017	485.28
GK3-140	**14**	1	25	017	711.26
GK3-160	**16**	1	25	017	810.63

FKM Full-Faced Flange Gaskets (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK3-180	**18**	1	25	017	912.00
GK3-240	**24**	1	25	017	1160.91

CPVC Cut-in Kit

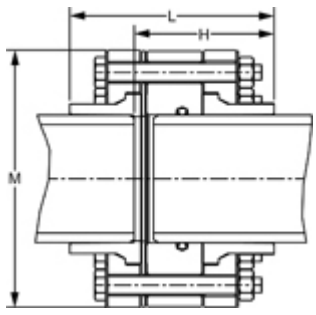
When planned system changes are needed, system downtime can be a major concern. Spears® Flange Cut-in Kit minimizes downtime for actual cut-in to allow new connection in just minutes. Kit provides all necessary components to create a flanged joint for connection to system alterations in just minutes. Special Flange Hub can be cemented to piping and allowed to cure before shutting down and cutting into system. This allows immediate joining to mating flange (included) that can also be pre-assembled to desired alteration piping.

Kit includes special Split Flange Socket Hub, O-ring Sealed Hub Body, Stainless Steel Clamp, Split Ring, Full-Faced EPDM or FKM Gasket, Mating Flange Hub & Ring, and complete set of Stainless Steel Bolts, Flat Washers and anti-seize Brass Nuts to make the final joint. Available for IPS Pipe Sizes 2" - 12".



Pressure Rated to 150 psi @ 73°F (22°C)
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

Size (in.)	H	L	M
2	2-3/8	4-7/8	6
2-1/2	3-3/4	5-1/2	7
3	4	5-7/8	7-1/2
4	4-7/8	7-1/8	9
6	5-7/8	9	11
8	6-3/4	10-7/8	13-1/2
10	8-3/8	13-1/2	16
12	10	16-3/4	19



Flange Cut-in Kit

Size	EPDM Gasket	FKM Gasket	Std Pk	Mstr Pk	Disc Code
2	FCKE-020C **693.79**	FCKV-020C **732.07**	1	4	017
2-1/2	FCKE-025C **739.29**	FCKV-025C **800.29**	1	0	017
3	FCKE-030C **805.37**	FCKV-030C **836.33**	1	0	017
4	FCKE-040C **1232.08**	FCKV-040C **1279.94**	1	0	017
6	FCKE-060C **1995.37**	FCKV-060C **2273.05**	1	0	017
8	FCKE-080C **2532.21**	FCKV-080C **2884.84**	1	0	017
10	FCKE-100C **4101.17**	FCKV-100C **4237.68**	1	0	017
12	FCKE-120C **4880.05**	FCKV-120C **5094.11**	1	0	017

Gauge Guards



Connections use Spears® Patented Special Reinforced (SR) Female Threads on Pressure Inlet (1/4" or 1/2")

Pressure Rating
235 psi @ 73°F
16 BAR @ 22°C
Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Rated for Full Vacuum Service

Gauge Guards are pre-filled with glycerin-water on units with Factory Installed Gauges.
"No Gauge" units are to be filled by end user.

CPVC GAUGE GUARDS

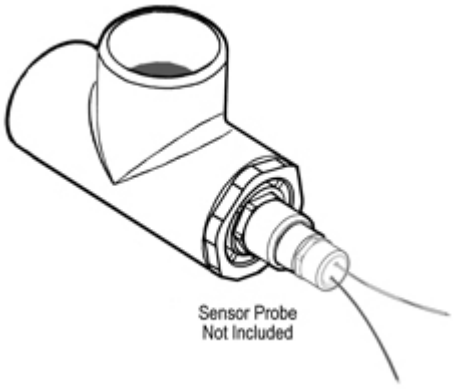
Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Disc Code
PTFE Diaphragm					
No Gauge	G0004-002C **134.98**	G0004-005C **134.98**	1	18	625
0-30 in-Hg	G30V4-002C **227.88**	G30V4-005C **227.88**	1	18	625
0-15 psi	G0154-002C **215.43**	G0154-005C **215.43**	1	18	625
0-30 psi	G0304-002C **215.43**	G0304-005C **215.43**	1	18	625
0-60 psi	G0604-002C **215.43**	G0604-005C **215.43**	1	18	625
0-100 psi	G1004-002C **215.43**	G1004-005C **215.43**	1	18	625
0-160 psi	G1604-002C **215.43**	G1604-005C **215.43**	1	18	625
0-200 psi	G2004-002C **215.43**	G2004-005C **215.43**	1	18	625
0-300 psi	G3004-002C **215.43**	G3004-005C **215.43**	1	18	625
FKM Diaphragm					
No Gauge	G0003-002C **134.98**	G0003-005C **134.98**	1	18	625
0-30 in-Hg	G30V3-002C **227.88**	G30V3-005C **227.88**	1	18	625
0-15 psi	G0153-002C **215.43**	G0153-005C **215.43**	1	18	625
0-30 psi	G0303-002C **215.43**	G0303-005C **215.43**	1	18	625
0-60 psi	G0603-002C **215.43**	G0603-005C **215.43**	1	18	625
0-100 psi	G1003-002C **215.43**	G1003-005C **215.43**	1	18	625
0-160 psi	G1603-002C **215.43**	G1603-005C **215.43**	1	18	625
0-200 psi	G2003-002C **215.43**	G2003-005C **215.43**	1	18	625
0-300 psi	G3003-002C **215.43**	G3003-005C **215.43**	1	18	625
EPDM Diaphragm					
No Gauge	G0002-002C **129.60**	G0002-005C **129.60**	1	18	625
0-30 in-Hg	G30V2-002C **218.74**	G30V2-005C **218.74**	1	18	625
0-15 psi	G0152-002C **206.91**	G0152-005C **206.91**	1	18	625
0-30 psi	G0302-002C **206.91**	G0302-005C **206.91**	1	18	625
0-60 psi	G0602-002C **206.91**	G0602-005C **206.91**	1	18	625
0-100 psi	G1002-002C **206.91**	G1002-005C **206.91**	1	18	625
0-160 psi	G1602-002C **206.91**	G1602-005C **206.91**	1	18	625
0-200 psi	G2002-002C **206.91**	G2002-005C **206.91**	1	18	625

CPVC GAUGE GUARDS (continued)

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Disc Code
EPDM Diaphragm					
0-300 psi	G3002-002C **206.91**	G3002-005C **206.91**	1	18	625

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Use with a wide variety of commercial sensor probes including pressure, temperature, pH, ORP (REDOX), Conductivity, Dissolved Oxygen and other specialty electrodes that are used in industrial, municipal water, wastewater treatment, solid landfills, chemical manufacturing, electroplating, boilers and cooling towers, pulp and paper, DI water skids, pool & spa and other OEM applications. Features Spears® patented Special Reinforced (SR) female plastic thread connection that eliminates splitting from inadvertent over tightening.

- Centers Probe in Fluid Stream
- Suitable for Horizontal or Vertical Installations
- Available in 1/2" Through 8" Tee Configuration with 1/2", 3/4" or 1" NPT Connection

CPVC Instrument Probe Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Special Reinforced					
803-005CSR	**1/2**	25	0	096	10.94
803-095CSR	**3/4X1/2X3/4**	15	0	096	16.20
803-007CSR	**3/4**	15	0	096	17.36
803-113CSR	**1X1/4X1**	15	0	096	49.11
803-122CSR	**1X1/2X1**	15	0	096	18.62
803-126CSR	**1X3/4X1**	15	0	096	26.07
803-010CSR	**1**	15	0	096	20.34
803-142CSR	**1-1/4X1/2X1-1/4**	10	0	096	32.17
803-149CSR	**1-1/4X3/4X1-1/4**	10	0	096	32.53
803-159CSR	**1-1/4X1X1-1/4**	10	0	096	35.69
803-177CSR	**1-1/2X1/2X1-1/2**	10	0	096	36.68
803-188CSR	**1-1/2X3/4X1-1/2**	10	0	096	39.29
803-197CSR	**1-1/2X1X1-1/2**	10	0	096	38.99
803-221CSR	**2X1/2X2**	10	0	096	48.76
803-227CSR	**2X3/4X2**	10	0	096	54.79
803-233CSR	**2X1X2**	10	0	096	55.39
803-333CSR	**3X1/2X3**	5	0	096	78.24
803-334CSR	**3X3/4X3**	5	0	096	81.71
803-335CSR	**3X1X3**	5	0	096	82.87
803-415CSR	**4X1/2X4**	4	0	096	119.04
803-416CSR	**4X3/4X4**	4	0	096	126.79
803-417CSR	**4X1X4**	4	0	096	129.11
803-523CSR	**6X1/2X6**	2	0	096	250.40
803-524CSR	**6X3/4X6**	2	0	096	258.13
803-525CSR	**6X1X6**	2	0	096	265.63
803-573CSR	**8X1/2X8**	1	0	096	527.58
803-574CSR	**8X3/4X8**	1	0	096	534.08
803-575CSR	**8X1X8**	1	0	096	548.47

True Union 2000 Industrial Ball Valves



Socket Style



SR Threaded Style



6" Lever Handle Style

All Valves Assembled with Silicone-Free, Water Soluble Lubricant
Contact Spears® for Pricing on Custom Elastomer Seals
See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

Pressure Rating @ 73°F (23°C), Water

1/2" - 4"	235 psi
6" - 8"	150 psi
All Flanged	150 psi

Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service

Note: Standard 6" Valve uses lockout type Lever-Style Handle for proper leverage.
Non-locking T-Handle is more compact, but will increase difficulty of operation.
True Union 2000 Industrial Ball Valves have Built-in Handle Lockouts (except 6" T-Handle Option)

CPVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded & Socket Ends					
1/2	1829-005C **65.63**	1839-005C **72.93**	1	18	602
3/4	1829-007C **82.65**	1839-007C **91.86**	1	18	602
1	1829-010C **98.40**	1839-010C **109.33**	1	12	602
1-1/4	1829-012C **156.43**	1839-012C **173.86**	1	8	602
1-1/2	1829-015C **165.21**	1839-015C **183.57**	1	8	602
2	1829-020C **220.95**	1839-020C **254.00**	1	4	602
Socket Ends					
2-1/2	1822-025C **495.39**	1832-025C **550.40**	1	0	603
3	1822-030C **579.22**	1832-030C **643.63**	1	0	603
4	1822-040C **1049.59**	1832-040C **1166.19**	1	0	603
6	1822-060C **2234.41**	1832-060C **2482.51**	1	0	613
8	1822-080C **2971.79**	1832-080C **3301.76**	1	0	613
8" Venturied valves are 6" ball valves fitted with 6x8 end connector adapters.					
Threaded Ends					
2-1/2	1821-025C **495.39**	1831-025C **550.40**	1	0	603
3	1821-030C **579.22**	1831-030C **643.63**	1	0	603
4	1821-040C **1049.59**	1831-040C **1166.19**	1	0	603
6	1821-060C **2234.41**	1831-060C **2482.51**	1	0	613
SR Threaded Ends					
1/2	1821-005CSR **66.68**	1831-005CSR **73.99**	1	18	602
3/4	1821-007CSR **85.23**	1831-007CSR **94.43**	1	18	602
1	1821-010CSR **100.98**	1831-010CSR **111.88**	1	12	602
1-1/4	1821-012CSR **164.17**	1831-012CSR **181.60**	1	8	602
1-1/2	1821-015CSR **173.53**	1831-015CSR **191.85**	1	8	602
2	1821-020CSR **229.95**	1831-020CSR **263.00**	1	4	602
2-1/2	1821-025CSR **519.58**	1831-025CSR **574.58**	1	0	603
3	1821-030CSR **603.40**	1831-030CSR **667.80**	1	0	603
4	1821-040CSR **1077.80**	1831-040CSR **1194.44**	1	0	603
6	1821-060CSR **2295.64**	1831-060CSR **2543.73**	1	0	613

CPVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Spigot Ends					
1/2	1827-005C **65.63**	1837-005C **72.93**	1	18	602
3/4	1827-007C **82.65**	1837-007C **91.86**	1	18	602
1	1827-010C **98.40**	1837-010C **109.33**	1	12	602
1-1/4	1827-012C **156.43**	1837-012C **173.86**	1	8	602
1-1/2	1827-015C **165.21**	1837-015C **183.57**	1	8	602
2	1827-020C **220.95**	1837-020C **254.00**	1	4	602
2-1/2	1827-025C **495.39**	1837-025C **550.40**	1	0	603
3	1827-030C **579.22**	1837-030C **643.63**	1	0	603
4	1827-040C **1049.59**	1837-040C **1166.19**	1	0	603
6	1827-060C **2234.41**	1837-060C **2482.51**	1	0	613
Flanged Ends					
1/2	1823-005C **111.36**	1833-005C **113.76**	1	8	602
3/4	1823-007C **136.51**	1833-007C **142.17**	1	8	602
1	1823-010C **156.26**	1833-010C **165.88**	1	8	602
1-1/4	1823-012C **233.48**	1833-012C **241.68**	1	8	602
1-1/2	1823-015C **256.82**	1833-015C **265.38**	1	4	602
2	1823-020C **357.38**	1833-020C **425.63**	1	0	602
2-1/2	1823-025C **667.02**	1833-025C **800.64**	1	0	603
3	1823-030C **975.47**	1833-030C **997.72**	1	0	603
4	1823-040C **1710.82**	1833-040C **1779.24**	1	0	603
6	1823-060C **3644.03**	1833-060C **3789.02**	1	0	613
8	1823-080C **4846.55**	1833-080C **5039.38**	1	0	613
8" Venturied valves are 6" ball valves fitted with 6x8 end connector adapters.					

CPVC 6" Industrial T-Handle Valve Option (Non-Locking) NOTICE: T-Handle is more compact, but will greatly increase difficulty of operation.

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket Ends					
6	18226-060C **2234.41**	18326-060C **2482.51**	1	0	613

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Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

True Union 2000 Industrial Ball Valves

CPVC 6" Industrial T-Handle Valve Option (Non-Locking) NOTICE: T-Handle is more compact, but will greatly increase difficulty of operation.

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded Ends					
6	18216-060C **2234.41**	18316-060C **2482.51**	1	0	613
SR Threaded Ends					
6	18216-060CSR **2295.64**	18316-060CSR **2543.73**	1	0	613
Flanged Ends					
6	18236-060C **3644.03**	18336-060C **3789.02**	1	0	613

True Union 2000 Industrial Vented/Bleach Ball Valves



Pressure Rating @ 73°F (23°C), Water

1/2" - 4"	235 psi
6"	150 psi
Flanged	150 psi

Same True Union 2000 Industrial Ball Valve with Special Ball Vent Design for Sodium Hypochlorite (Bleach) and other Chemical Applications where entrapped fluids may form caustic crystalline residues and pressure build up from gases developed. Valve has a 1/8" vent hole in ball to equalize internal fluid pressures. Install valve with ball vent on the pressure (upstream) side when in closed position.

All Valves assembled with Silicone-Free, Water Soluble Lubricant

Contact Spears® for Pricing & Availability on Custom Elastomer Seals. See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

CPVC True Union 2000 Industrial Vented/Bleach Ball Valves

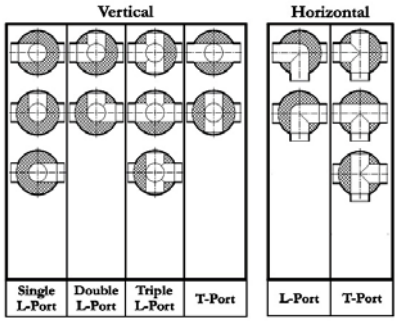
Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded & Socket Ends					
1/2	1829V-005C **77.20**	1839V-005C **85.79**	1	18	602
3/4	1829V-007C **97.23**	1839V-007C **108.07**	1	18	602
1	1829V-010C **115.77**	1839V-010C **128.62**	1	12	602
1-1/4	1829V-012C **184.04**	1839V-012C **204.57**	1	8	602
1-1/2	1829V-015C **194.37**	1839V-015C **215.96**	1	8	602
2	1829V-020C **259.96**	1839V-020C **298.81**	1	4	602
Socket Ends					
2-1/2	1822V-025C **582.81**	1832V-025C **647.51**	1	0	603
3	1822V-030C **681.44**	1832V-030C **757.19**	1	0	603
4	1822V-040C **1234.79**	1832V-040C **1372.00**	1	0	603
6	1822V-060C **2628.74**	1832V-060C **2920.60**	1	0	613
SR Threaded Ends					
1/2	1821V-005CSR **78.43**	1831V-005CSR **87.05**	1	18	602
3/4	1821V-007CSR **100.28**	1831V-007CSR **111.07**	1	18	602
1	1821V-010CSR **118.77**	1831V-010CSR **131.62**	1	12	602
1-1/4	1821V-012CSR **193.12**	1831V-012CSR **213.65**	1	8	602
1-1/2	1821V-015CSR **204.15**	1831V-015CSR **225.73**	1	8	602

CPVC True Union 2000 Industrial Vented/Bleach Ball Valves (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
SR Threaded Ends					
2	1821V-020CSR **270.54**	1831V-020CSR **309.41**	1	4	602
2-1/2	1821V-025CSR **611.26**	1831V-025CSR **675.97**	1	0	603
3	1821V-030CSR **709.89**	1831V-030CSR **785.65**	1	0	603
4	1821V-040CSR **1268.01**	1831V-040CSR **1405.23**	1	0	603
Flanged Ends					
1/2	1823V-005C **131.00**	1833V-005C **133.82**	1	8	602
3/4	1823V-007C **160.59**	1833V-007C **167.29**	1	8	602
1	1823V-010C **183.84**	1833V-010C **195.16**	1	8	602
1-1/4	1823V-012C **274.69**	1833V-012C **284.33**	1	8	602
1-1/2	1823V-015C **302.14**	1833V-015C **312.22**	1	4	602
2	1823V-020C **420.45**	1833V-020C **500.73**	1	0	602
2-1/2	1823V-025C **784.74**	1833V-025C **941.93**	1	0	603
3	1823V-030C **1147.61**	1833V-030C **1173.76**	1	0	603
4	1823V-040C **2093.21**	1833V-040C **2093.23**	1	0	603
6	1823V-060C **4457.67**	1833V-060C **4457.67**	1	0	613

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
2-1/2" - 4" 150 psi
Flanged 150 psi
Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Vertical 3-Way or Horizontal Diverter Design
(No Branch Shut-off)
All Standard Carton Quantities are one
All Valves assembled with Silicone-Free,
Water Soluble Lubricant
See Ball Valve Accessories & Repair Kits Section
for Additional Options and Features

Ball Port Options



Ball port options viewed from top of valve



Horizontal Diverter Valve



Vertical 3-Way Valve

CPVC Horizontal Diverter Ball Valves

Material		EPDM				FKM				Disc Code
Joint		Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Ball Port	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	L-Port	5022L1-005C 157.82	5021L1-005CSR 162.83	5027L1-005C 157.82	5023L1-005C 322.20	5032L1-005C 170.98	5031L1-005CSR 178.77	5037L1-005C 170.98	5033L1-005C 336.56	617
	T-Port	5022T1-005C 157.82	5021T1-005CSR 162.83	5027T1-005C 157.82	5023T1-005C 322.20	5032T1-005C 170.98	5031T1-005CSR 178.77	5037T1-005C 170.98	5033T1-005C 336.56	617
3/4	L-Port	5022L1-007C 188.12	5021L1-007CSR 194.37	5027L1-007C 188.12	5023L1-007C 337.09	5032L1-007C 202.49	5031L1-007CSR 208.73	5037L1-007C 202.49	5033L1-007C 355.80	617
	T-Port	5022T1-007C 188.12	5021T1-007CSR 194.37	5027T1-007C 188.12	5023T1-007C 337.09	5032T1-007C 202.49	5031T1-007CSR 208.73	5037T1-007C 202.49	5033T1-007C 355.80	617
1	L-Port	5022L1-010C 228.12	5021L1-010CSR 234.21	5027L1-010C 228.12	5023L1-010C 480.34	5032L1-010C 251.35	5031L1-010CSR 257.40	5037L1-010C 251.35	5033L1-010C 525.21	617
	T-Port	5022T1-010C 228.12	5021T1-010CSR 234.21	5027T1-010C 228.12	5023T1-010C 480.34	5032T1-010C 251.35	5031T1-010CSR 257.40	5037T1-010C 251.35	5033T1-010C 525.21	617
1-1/4	L-Port	5022L1-012C 264.35	5021L1-012CSR 276.29	5027L1-012C 264.35	5023L1-012C 908.74	5032L1-012C 296.38	5031L1-012CSR 309.89	5037L1-012C 296.38	5033L1-012C 962.62	617
	T-Port	5022T1-012C 264.35	5021T1-012CSR 276.29	5027T1-012C 264.35	5023T1-012C 908.74	5032T1-012C 296.38	5031T1-012CSR 309.89	5037T1-012C 296.38	5033T1-012C 962.62	617
1-1/2	L-Port	5022L1-015C 309.22	5021L1-015CSR 329.13	5027L1-015C 309.22	5023L1-015C 936.25	5032L1-015C 338.44	5031L1-015CSR 358.39	5037L1-015C 338.44	5033L1-015C 979.05	617
	T-Port	5022T1-015C 309.22	5021T1-015CSR 329.13	5027T1-015C 309.22	5023T1-015C 936.25	5032T1-015C 338.44	5031T1-015CSR 358.39	5037T1-015C 338.44	5033T1-015C 979.05	617
2	L-Port	5022L1-020C 379.35	5021L1-020CSR 399.20	5027L1-020C 379.35	5023L1-020C 1215.68	5032L1-020C 442.12	5031L1-020CSR 463.73	5037L1-020C 442.12	5033L1-020C 1276.82	617
	T-Port	5022T1-020C 379.35	5021T1-020CSR 399.20	5027T1-020C 379.35	5023T1-020C 1215.68	5032T1-020C 442.12	5031T1-020CSR 463.73	5037T1-020C 442.12	5033T1-020C 1276.82	617
2-1/2	L-Port	5022L1-025C 1278.73	5021L1-025CSR 1334.51	5027L1-025C 1278.73	5023L1-025C 2134.61	5032L1-025C 1359.63	5031L1-025CSR 1415.62	5037L1-025C 1359.63	5033L1-025C 2501.60	617
	T-Port	5022T1-025C 1278.73	5021T1-025CSR 1334.51	5027T1-025C 1278.73	5023T1-025C 2134.61	5032T1-025C 1359.63	5031T1-025CSR 1415.62	5037T1-025C 1359.63	5033T1-025C 2501.60	617
3	L-Port	5022L1-030C 1304.72	5021L1-030CSR 1363.43	5027L1-030C 1304.72	5023L1-030C 2163.38	5032L1-030C 1380.93	5031L1-030CSR 1436.91	5037L1-030C 1380.93	5033L1-030C 2513.13	617
	T-Port	5022T1-030C 1304.72	5021T1-030CSR 1363.43	5027T1-030C 1304.72	5023T1-030C 2163.38	5032T1-030C 1380.93	5031T1-030CSR 1436.91	5037T1-030C 1380.93	5033T1-030C 2513.13	617
4	L-Port	5022L1-040C 2362.94	5021L1-040CSR 2426.84	5027L1-040C 2362.94	5023L1-040C 3142.08	5032L1-040C 2389.62	5031L1-040CSR 2453.65	5037L1-040C 2389.62	5033L1-040C 3434.33	617
	T-Port	5022T1-040C 2362.94	5021T1-040CSR 2426.84	5027T1-040C 2362.94	5023T1-040C 3142.08	5032T1-040C 2389.62	5031T1-040CSR 2453.65	5037T1-040C 2389.62	5033T1-040C 3434.33	617

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC Vertical 3-Way Ball Valves

Material		EPDM				FKM				Disc Code
Joint		Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Ball Port	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	L-Port	4722L1-005C 156.94	4721L1-005CSR 159.53	4727L1-005C 156.94	4723L1-005C 324.26	4732L1-005C 169.93	4731L1-005CSR 172.52	4737L1-005C 169.93	4733L1-005C 336.06	617
	Double L-Port	4722L2-005C 312.67	4721L2-005CSR 315.08	4727L2-005C 312.67	4723L2-005C 480.00	4732L2-005C 325.66	4731L2-005CSR 328.09	4737L2-005C 325.66	4733L2-005C 491.61	617
	Triple L-Port	4722L3-005C 312.67	4721L3-005CSR 315.08	4727L3-005C 312.67	4723L3-005C 480.00	4732L3-005C 325.66	4731L3-005CSR 328.09	4737L3-005C 325.66	4733L3-005C 491.61	617
	T-Port	4722T1-005C 156.94	4721T1-005CSR 159.53	4727T1-005C 156.94	4723T1-005C 324.26	4732T1-005C 169.93	4731T1-005CSR 172.52	4737T1-005C 169.93	4733T1-005C 336.06	617
3/4	L-Port	4722L1-007C 184.15	4721L1-007CSR 190.54	4727L1-007C 184.15	4723L1-007C 340.56	4732L1-007C 200.60	4731L1-007CSR 207.00	4737L1-007C 200.60	4733L1-007C 354.93	617
	Double L-Port	4722L2-007C 339.86	4721L2-007CSR 345.92	4727L2-007C 339.86	4723L2-007C 496.13	4732L2-007C 356.32	4731L2-007CSR 362.56	4737L2-007C 356.32	4733L2-007C 510.48	617
	Triple L-Port	4722L3-007C 339.86	4721L3-007CSR 345.92	4727L3-007C 339.86	4723L3-007C 496.13	4732L3-007C 356.32	4731L3-007CSR 362.56	4737L3-007C 356.32	4733L3-007C 510.48	617
	T-Port	4722T1-007C 184.15	4721T1-007CSR 190.54	4727T1-007C 183.68	4723T1-007C 340.56	4732T1-007C 200.60	4731T1-007CSR 207.00	4737T1-007C 200.60	4733T1-007C 354.93	617
1	L-Port	4722L1-010C 223.81	4721L1-010CSR 230.05	4727L1-010C 223.81	4723L1-010C 485.72	4732L1-010C 249.27	4731L1-010CSR 255.51	4737L1-010C 249.27	4733L1-010C 525.73	617
	Double L-Port	4722L2-010C 379.52	4721L2-010CSR 385.76	4727L2-010C 379.52	4723L2-010C 641.43	4732L2-010C 404.81	4731L2-010CSR 411.07	4737L2-010C 404.81	4733L2-010C 681.45	617
	Triple L-Port	4722L3-010C 379.52	4721L3-010CSR 385.76	4727L3-010C 379.52	4723L3-010C 641.43	4732L3-010C 404.81	4731L3-010CSR 411.07	4737L3-010C 404.81	4733L3-010C 681.45	617
	T-Port	4722T1-010C 223.81	4721T1-010CSR 230.05	4727T1-010C 223.81	4723T1-010C 485.72	4732T1-010C 249.27	4731T1-010CSR 255.51	4737T1-010C 249.27	4733T1-010C 525.73	617
1-1/4	L-Port	4722L1-012C 270.75	4721L1-012CSR 283.21	4727L1-012C 270.75	4723L1-012C 915.65	4732L1-012C 319.07	4731L1-012CSR 331.55	4737L1-012C 319.07	4733L1-012C 968.48	617
	Double L-Port	4722L2-012C 426.29	4721L2-012CSR 438.77	4727L2-012C 426.29	4723L2-012C 1071.22	4732L2-012C 474.62	4731L2-012CSR 487.97	4737L2-012C 474.62	4733L2-012C 730.66	617
	Triple L-Port	4722L3-012C 426.29	4721L3-012CSR 438.77	4727L3-012C 426.29	4723L3-012C 1071.22	4732L3-012C 474.62	4731L3-012CSR 487.97	4737L3-012C 474.62	4733L3-012C 1124.04	617
	T-Port	4722T1-012C 270.75	4721T1-012CSR 283.21	4727T1-012C 270.75	4723T1-012C 915.65	4732T1-012C 319.07	4731T1-012CSR 331.55	4737T1-012C 319.07	4733T1-012C 968.48	617
1-1/2	L-Port	4722L1-015C 313.00	4721L1-015CSR 333.11	4727L1-015C 313.00	4723L1-015C 949.80	4732L1-015C 343.15	4731L1-015CSR 363.23	4737L1-015C 343.15	4733L1-015C 979.05	617
	Double L-Port	4722L2-015C 468.76	4721L2-015CSR 488.65	4727L2-015C 468.76	4723L2-015C 1105.32	4732L2-015C 498.89	4731L2-015CSR 558.62	4737L2-015C 498.89	4733L2-015C 1134.78	617
	Triple L-Port	4722L3-015C 468.76	4721L3-015CSR 488.65	4727L3-015C 468.76	4723L3-015C 1105.32	4732L3-015C 498.89	4731L3-015CSR 558.62	4737L3-015C 498.89	4733L3-015C 1134.78	617
	T-Port	4722T1-015C 313.00	4721T1-015CSR 333.11	4727T1-015C 313.00	4723T1-015C 949.80	4732T1-015C 343.15	4731T1-015CSR 363.23	4737T1-015C 343.15	4733T1-015C 979.05	617
2	L-Port	4722L1-020C 384.04	4721L1-020CSR 405.67	4727L1-020C 384.04	4723L1-020C 1223.99	4732L1-020C 445.86	4731L1-020CSR 467.52	4737L1-020C 445.86	4733L1-020C 1278.04	617
	Double L-Port	4722L2-020C 539.61	4721L2-020CSR 561.41	4727L2-020C 539.61	4723L2-020C 1332.96	4732L2-020C 601.44	4731L2-020CSR 623.06	4737L2-020C 601.44	4733L2-020C 1433.76	617
	Triple L-Port	4722L3-020C 539.61	4721L3-020CSR 561.41	4727L3-020C 539.61	4723L3-020C 1332.96	4732L3-020C 601.44	4731L3-020CSR 623.06	4737L3-020C 601.44	4733L3-020C 1433.76	617
	T-Port	4722T1-020C 384.04	4721T1-020CSR 405.67	4727T1-020C 384.04	4723T1-020C 1223.99	4732T1-020C 445.86	4731T1-020CSR 467.52	4737T1-020C 445.86	4733T1-020C 1278.04	617
2-1/2	L-Port	4722L1-025C 1350.63	4721L1-025CSR 1406.56	4727L1-025C 1350.63	4723L1-025C 2143.79	4732L1-025C 1365.85	4731L1-025CSR 1421.81	4737L1-025C 1365.85	4733L1-025C 2498.75	617
	Double L-Port	4722L2-025C 1506.17	4721L2-025CSR 1544.08	4727L2-025C 1506.17	4723L2-025C 2299.54	4732L2-025C 1521.42	4731L2-025CSR 1577.38	4737L2-025C 1521.42	4733L2-025C 2654.31	617
	Triple L-Port	4722L3-025C 1506.17	4721L3-025CSR 1544.08	4727L3-025C 1506.17	4723L3-025C 2299.54	4732L3-025C 1521.42	4731L3-025CSR 1577.38	4737L3-025C 1521.42	4733L3-025C 2654.31	617
	T-Port	4722T1-025C 1350.63	4721T1-025CSR 1406.56	4727T1-025C 1350.63	4723T1-025C 2143.79	4732T1-025C 1365.85	4731T1-025CSR 1421.81	4737T1-025C 1365.85	4733T1-025C 2498.75	617
3	L-Port	4722L1-030C 1378.33	4721L1-030CSR 1434.28	4727L1-030C 1378.33	4723L1-030C 2173.62	4732L1-030C 1390.47	4731L1-030CSR 1446.60	4737L1-030C 1390.47	4733L1-030C 2515.20	617
	Double L-Port	4722L2-030C 1533.91	4721L2-030CSR 1571.82	4727L2-030C 1533.91	4723L2-030C 2329.15	4732L2-030C 1546.18	4731L2-030CSR 1602.15	4737L2-030C 1546.18	4733L2-030C 2670.75	617
	Triple L-Port	4722L3-030C 1533.91	4721L3-030CSR 1571.82	4727L3-030C 1533.91	4723L3-030C 2329.15	4732L3-030C 1546.18	4731L3-030CSR 1602.15	4737L3-030C 1546.18	4733L3-030C 2670.75	617
	T-Port	4722T1-030C 1378.33	4721T1-030CSR 1434.28	4727T1-030C 1378.33	4723T1-030C 2173.62	4732T1-030C 1390.47	4731T1-030CSR 1446.60	4737T1-030C 1390.47	4733T1-030C 2515.20	617
4	L-Port	4722L1-040C 2382.52	4721L1-040CSR 2446.43	4727L1-040C 2382.52	4723L1-040C 3191.12	4732L1-040C 2405.72	4731L1-040CSR 2469.64	4737L1-040C 2405.72	4733L1-040C 3309.60	617
	Double L-Port	4722L2-040C 2538.05	4721L2-040CSR 2601.98	4727L2-040C 2538.05	4723L2-040C 3315.47	4732L2-040C 2561.27	4731L2-040CSR 2625.20	4737L2-040C 2561.27	4733L2-040C 3465.15	617
	Triple L-Port	4722L3-040C 2538.05	4721L3-040CSR 2601.98	4727L3-040C 2538.05	4723L3-040C 3315.47	4732L3-040C 2561.27	4731L3-040CSR 2625.20	4737L3-040C 2561.27	4733L3-040C 3465.15	617
	T-Port	4722T1-040C 2382.52	4721T1-040CSR 2446.43	4727T1-040C 2382.52	4723T1-040C 3191.12	4732T1-040C 2405.72	4731T1-040CSR 2469.64	4737T1-040C 2405.72	4733T1-040C 3309.60	617

Tee-Style "Zero Dead-Leg" Ball Valves



Valves are produced to order in Ball Valve sizes 1/2" – 2". Tee Valves can be custom produced in any standard Tee and Valve size combination.

Pressure Rating @ 73°F (23°C), Water
Valve Sizes 1/2" - 2" (20mm - 63mm) = 235 psi
Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

Additional Notes

The Tee Valve is assembled with socket end connector. Tee Valves are a non-stock configuration. All orders are non-cancelable, non-returnable.

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Mainline Socket Tee x Valve Socket					
1/2	182901-005C **251.47**	183901-005C **263.35**	1	12	264
3/4	182901-007C **274.80**	183901-007C **288.40**	1	8	264
1	182901-010C **279.99**	183901-010C **300.41**	1	8	264
2	182901-020C **305.92**	183901-020C **353.36**	1	0	264
3/4X1/2	182901-101C **255.63**	183901-101C **267.48**	1	12	264
1X1/2	182901-130C **231.83**	183901-130C **277.07**	1	8	264
1X3/4	182901-131C **279.99**	183901-131C **293.61**	1	8	264
1-1/4X1/2	182901-166C **283.69**	183901-166C **295.58**	1	8	264
1-1/4X3/4	182901-167C **285.19**	183901-167C **298.78**	1	8	264
1-1/4X1	182901-168C **326.88**	183901-168C **347.29**	1	8	264
1-1/2X1/2	182901-209C **318.65**	183901-209C **329.88**	1	8	264
1-1/2X3/4	182901-210C **327.88**	183901-210C **335.95**	1	8	264
1-1/2X1	182901-211C **339.20**	183901-211C **347.29**	1	8	264
2X1/2	182901-247C **363.89**	183901-247C **375.75**	1	8	264
2X3/4	182901-248C **392.64**	183901-248C **406.24**	1	8	264
2X1	182901-249C **413.22**	183901-249C **433.63**	1	8	264
2X1-1/2	182901-251C **485.20**	183901-251C **510.64**	1	0	264
3X1/2	182901-333C **479.02**	183901-333C **490.88**	1	8	264
3X1	182901-335C **501.63**	183901-335C **522.04**	1	0	264
3X1-1/2	182901-337C **571.54**	183901-337C **596.99**	1	0	264
3X2	182901-338C **627.05**	183901-338C **674.49**	1	0	264
4X1	182901-417C **616.77**	183901-417C **637.18**	1	0	264
4X1-1/2	182901-419C **686.65**	183901-419C **712.13**	1	0	264
4X2	182901-420C **818.23**	183901-420C **865.67**	1	0	264
6X2	182901-528C **1068.74**	183901-528C **1116.17**	1	0	264
8X2	182901-578C **1576.85**	183901-578C **1624.31**	1	0	264

CPVC Metric

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Mainline Socket Tee x Valve Socket					
20	182901M-020C **251.47**	183901M-020C **263.35**	1	8	264

CPVC Metric (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Mainline Socket Tee x Valve Socket					
25	182901M-025C **292.34**	183901M-025C **288.40**	1	8	263
32	182901M-032C **279.99**	183901M-032C **300.41**	1	8	264
40	182901M-040C **283.87**	183901M-040C **302.98**	1	8	264
50	182901M-050C **288.93**	183901M-050C **340.43**	1	8	264
63	182901M-063C **305.92**	183901M-063C **353.36**	1	8	264

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

True Union 2000 Standard Ball Valves



Socket Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" = 235 psi
2-1/2" - 4" = 150 psi
Flanged = 150 psi

Maximum Service Temperature
CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply
All Valves Assembled with Silicone-Free, Water Soluble Lubricant
See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

CPVC Standard

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket & Threaded Ends					
1/2	3629-005C **52.48**	3639-005C **58.36**	1	18	610
3/4	3629-007C **66.13**	3639-007C **73.49**	1	18	610
1	3629-010C **78.73**	3639-010C **87.47**	1	12	610
1-1/4	3629-012C **125.16**	3639-012C **139.11**	1	8	610
1-1/2	3629-015C **132.16**	3639-015C **146.85**	1	8	610
2	3629-020C **176.78**	3639-020C **203.21**	1	4	610
Socket Ends					
2-1/2	3622-025C **396.31**	3632-025C **440.32**	1	0	611
3	3622-030C **463.39**	3632-030C **514.91**	1	0	611
4	3622-040C **839.66**	3632-040C **932.96**	1	0	611
Threaded Ends					
2-1/2	3621-025C **396.31**	3631-025C **440.32**	1	0	611
3	3621-030C **463.39**	3631-030C **514.91**	1	0	611
4	3621-040C **839.66**	3631-040C **932.96**	1	0	611
SR Threaded Ends					
1/2	3621-005CSR **53.34**	3631-005CSR **59.19**	1	18	610
3/4	3621-007CSR **68.21**	3631-007CSR **75.56**	1	18	610
1	3621-010CSR **80.77**	3631-010CSR **89.48**	1	18	610
1-1/4	3621-012CSR **131.34**	3631-012CSR **145.26**	1	12	610
1-1/2	3621-015CSR **138.17**	3631-015CSR **153.47**	1	8	610
2	3621-020CSR **183.94**	3631-020CSR **210.39**	1	8	610
2-1/2	3621-025CSR **415.65**	3631-025CSR **459.67**	1	0	611
3	3621-030CSR **482.73**	3631-030CSR **534.25**	1	0	611
4	3621-040CSR **862.26**	3631-040CSR **956.28**	1	0	611
Spigot Ends					
1/2	3627-005C **52.48**	3637-005C **58.36**	1	18	610
3/4	3627-007C **66.13**	3637-007C **73.49**	1	18	610
1	3627-010C **78.73**	3637-010C **87.47**	1	12	610
1-1/4	3627-012C **125.16**	3637-012C **139.11**	1	12	610
1-1/2	3627-015C **132.16**	3637-015C **146.85**	1	8	610
2	3627-020C **176.78**	3637-020C **203.21**	1	8	610

CPVC Standard (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Spigot Ends					
2-1/2	3627-025C **396.31**	3637-025C **440.32**	1	0	611
3	3627-030C **463.39**	3637-030C **514.91**	1	0	611
4	3627-040C **839.66**	3637-040C **932.96**	1	0	611
Flanged Ends					
1/2	3623-005C **89.08**	3633-005C **91.01**	1	8	610
3/4	3623-007C **109.19**	3633-007C **113.80**	1	8	610
1	3623-010C **125.01**	3633-010C **132.71**	1	8	610
1-1/4	3623-012C **186.79**	3633-012C **193.34**	1	4	610
1-1/2	3623-015C **205.47**	3633-015C **212.31**	1	4	610
2	3623-020C **285.91**	3633-020C **340.49**	1	0	610
2-1/2	3623-025C **533.62**	3633-025C **640.52**	1	0	611
3	3623-030C **731.60**	3633-030C **798.18**	1	0	611
4	3623-040C **1368.66**	3633-040C **1423.40**	1	0	611



Industrial Valve

Complete universal replacement valve for domestic and import CPVC valve. See separate catalog listing for retrofit replacement of older Spears® valves.

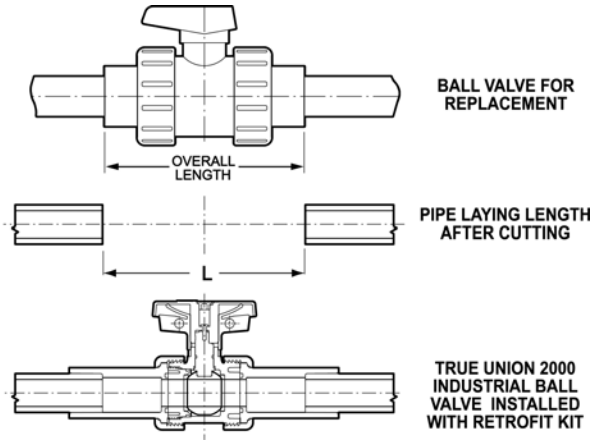
Retrofit valve consists of Spears® Industrial True Union 2000 Ball Valve supplied with factory installed extended-socket end connectors. Simply cut out old valve to specified dimensions and install Retrofit Valve end connectors.

Pressure Rating @ 73°F (23°C), Water 1/2" - 4" = 235 psi

All Valves Assembled with Silicone-Free, Water Soluble Lubricant

Suitable for Vacuum Service

Retrofit End Connector Sets without valve are also available - See Ball Valve Accessories & Repair Kits



Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	4-29/32	5-7/16	6-3/32	7-1/4	7-1/2	8-17/32	10-3/4	11-7/16	14-15/16

CPVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1822R-005C **65.63**	1832R-005C **72.93**	1	18	602
3/4	1822R-007C **82.65**	1832R-007C **91.86**	1	18	602
1	1822R-010C **98.40**	1832R-010C **109.33**	1	12	602
1-1/4	1822R-012C **156.43**	1832R-012C **173.86**	1	8	602
1-1/2	1822R-015C **165.21**	1832R-015C **183.57**	1	8	602
2	1822R-020C **220.95**	1832R-020C **254.00**	1	4	602
2-1/2	1822R-025C **495.39**	1832R-025C **550.40**	1	0	603
3	1822R-030C **579.22**	1832R-030C **643.63**	1	0	603
4	1822R-040C **1049.59**	1832R-040C **1166.19**	1	0	603



Industrial Valve

Complete replacement valve for older Spears® 2300 Series Regular True Union Ball Valves. See separate catalog listing for replacement of other brand valves.

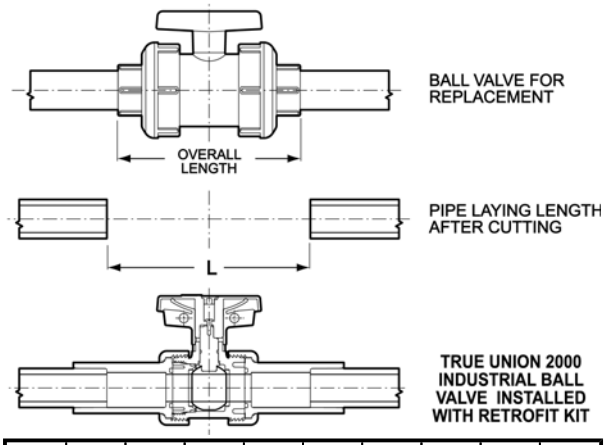
Retrofit valve consists of Spears® Industrial True Union 2000 Ball Valve supplied with factory installed extended-socket end connectors. Simply cut out old valve to specified dimensions and install Retrofit Valve end connectors.

Pressure Rating @ 73°F (23°C), Water
1/2" - 4" 235 psi

All Valves Assembled with Silicone-Free, Water Soluble Lubricant

Suitable for Vacuum Service

Retrofit End Connector Sets without valve are also available - See Ball Valve Accessories & Repair Kits



Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	5-5/16	6-1/4	6-11/16	7-1/8	8-3/16	8-15/16	12	12-1/16	13-3/16

CPVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1822RS-005C **65.63**	1832RS-005C **72.93**	1	18	602
3/4	1822RS-007C **82.65**	1832RS-007C **91.86**	1	18	602
1	1822RS-010C **98.40**	1832RS-010C **109.33**	1	12	602
1-1/4	1822RS-012C **156.43**	1832RS-012C **173.86**	1	8	602
1-1/2	1822RS-015C **165.21**	1832RS-015C **183.57**	1	8	602
2	1822RS-020C **220.95**	1832RS-020C **254.00**	1	4	602
2-1/2	1822RS-025C **495.39**	1832RS-025C **550.40**	1	0	603
3	1822RS-030C **579.22**	1832RS-030C **643.63**	1	0	603
4	1822RS-040C **1049.59**	1832RS-040C **1166.19**	1	0	603

True Union 2000 Standard Retrofit Ball Valves - Replaces Other Brand Valves



Standard Valve

Complete universal replacement valve for domestic and import CPVC valve. See separate catalog listing for retrofit replacement of older Spears® valves.

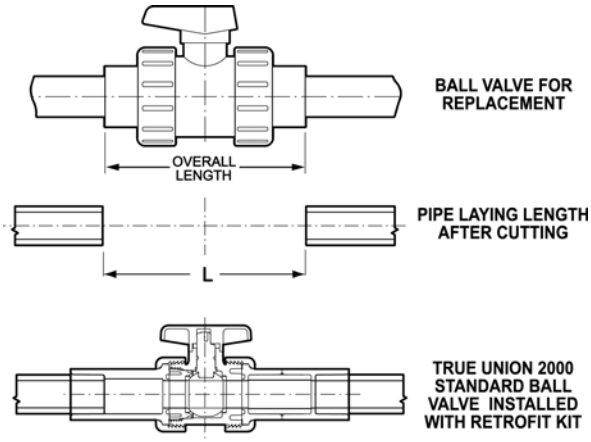
Retrofit valve consists of Spears® Standard True Union 2000 Ball Valve supplied with factory installed extended-socket end connectors. Simply cut out old valve to specified dimensions and install Retrofit Valve end connectors.

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
2-1/2" - 4" 150 psi

All Valves Assembled with Silicone-Free, Water Soluble Lubricant.

Suitable for Vacuum Service.

Retrofit End Connector Sets without valve are also available - See Ball Valve Accessories & Repair Kits



Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	4-29/32	5-7/16	6-3/32	7-1/4	7-1/2	8-17/32	10-3/4	11-7/16	14-15/16

CPVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	3622R-005C **52.48**	3632R-005C **58.36**	1	18	610
3/4	3622R-007C **66.13**	3632R-007C **73.49**	1	12	610
1	3622R-010C **78.73**	3632R-010C **87.47**	1	8	610
1-1/4	3622R-012C **125.16**	3632R-012C **139.11**	1	8	610
1-1/2	3622R-015C **132.16**	3632R-015C **146.85**	1	8	610

CPVC - Socket Ends (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	3622R-020C **176.78**	3632R-020C **203.21**	1	4	610
2-1/2	3622R-025C **396.31**	3632R-025C **440.32**	1	0	611
3	3622R-030C **463.39**	3632R-030C **514.91**	1	0	611
4	3622R-040C **839.66**	3632R-040C **932.96**	1	0	611

True Union 2000 Standard Retrofit Ball Valves - Replaces Spears® "Regular Style" Valves



Standard Valve

Complete replacement valve for older Spears® 2300 Series Regular True Union Ball Valves. See separate catalog listing for replacement of other brand valves.

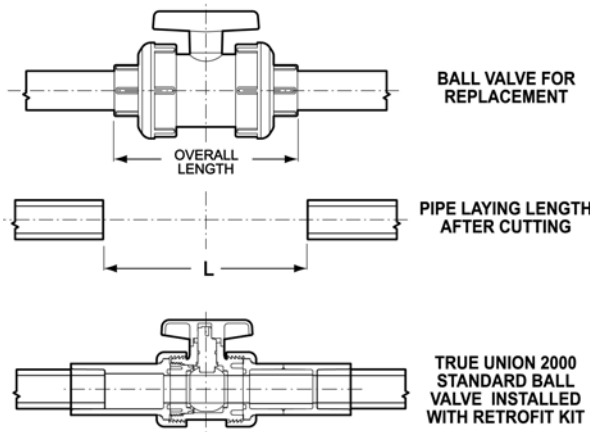
Retrofit valve consists of Spears® Standard True Union 2000 Ball Valve supplied with factory installed extended-socket end connectors. Simply cut out old valve to specified dimensions and install Retrofit Valve end connectors.

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
2-1/2" - 4" 150 psi

All Valves Assembled with Silicone-Free,
Water Soluble Lubricant

Suitable for Vacuum Service

Retrofit End Connector Sets without valve are also available - See Ball Valve Accessories & Repair Kits



Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	5-5/16	6-1/4	6-11/16	7-1/8	8-3/16	8-15/16	12	12-1/16	13-3/16

CPVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	3622RS-005C **52.48**	3632RS-005C **58.36**	1	18	610
3/4	3622RS-007C **66.13**	3632RS-007C **73.49**	1	18	610
1	3622RS-010C **78.73**	3632RS-010C **87.47**	1	12	610
1-1/4	3622RS-012C **125.16**	3632RS-012C **139.11**	1	8	610

CPVC - Socket Ends (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	3622RS-015C **132.16**	3632RS-015C **146.85**	1	8	610
2	3622RS-020C **176.78**	3632RS-020C **203.21**	1	4	610
2-1/2	3622RS-025C **396.31**	3632RS-025C **440.32**	1	0	611
3	3622RS-030C **463.39**	3632RS-030C **514.91**	1	0	611
4	3622RS-040C **839.66**	3632RS-040C **932.96**	1	0	611

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

True Union Ball Valves (Regular Style)



Socket/Threaded Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
2-1/2" - 6" 150 psi
Flanged 150 psi
Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service
All Valves assembled with Silicone-Free, Water Soluble Lubricant.

6" Venturied Valves are 4" Ball Valves equipped with 4x6 End Connectors.

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket & Threaded Ends					
Threaded End Connectors available on request					
1/2	2329-005C **75.57**	2339-005C **84.00**	1	18	232
3/4	2329-007C **95.21**	2339-007C **105.80**	1	12	232
1	2329-010C **113.32**	2339-010C **125.92**	1	8	232
1-1/4	2329-012C **180.16**	2339-012C **200.24**	1	8	232
1-1/2	2329-015C **190.27**	2339-015C **211.42**	1	8	232
2	2329-020C **254.49**	2339-020C **292.53**	1	4	232
Socket Ends					
2-1/2	2322-025C **542.01**	2332-025C **602.21**	1	0	232
3	2322-030C **633.75**	2332-030C **704.19**	1	0	232
4	2322-040C **1148.37**	2332-040C **1275.97**	1	0	232
Socket Venturied Ends					
6 VENTURIED	2322-060C **1910.38**	2332-060C **1982.16**	1	0	233
Threaded Ends					
2-1/2	2321-025C **542.01**	2331-025C **602.21**	1	0	232
3	2321-030C **633.75**	2331-030C **704.19**	1	0	232

CPVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded Ends					
4	2321-040C **1148.37**	2331-040C **1275.97**	1	0	232
Flanged Ends					
1/2	2323-005C **128.23**	2333-005C **131.00**	6	0	232
3/4	2323-007C **157.20**	2333-007C **163.75**	5	0	232
1	2323-010C **179.99**	2333-010C **191.05**	5	0	232
1-1/4	2323-012C **268.89**	2333-012C **278.33**	2	0	232
1-1/2	2323-015C **295.79**	2333-015C **305.61**	3	0	232
2	2323-020C **411.60**	2333-020C **490.19**	2	0	232
2-1/2	2323-025C **729.80**	2333-025C **875.99**	1	0	232
3	2323-030C **1067.29**	2333-030C **1091.61**	1	0	232
4	2323-040C **1871.83**	2333-040C **1946.69**	1	0	232
Flanged Venturied Ends					
6 VENTURIED	2323-060C **2901.42**	2333-060C **3001.97**	1	0	233

Compact 2000 Ball Valves



Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
All Valves Assembled with Silicone-Free, Water Soluble Lubricants.
Rated for Vacuum Service
Compact 2000 Ball Valves are a Maintenance-Free, Sealed Unit (non-repairable).
See Ball Valve Accessories & Repair Kits Section for Additional Options and Features.

CPVC 2000 Compact Ball Valve

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket Ends					
1/2	6622-005C **24.93**	6632-005C **27.74**	10	120	212

CPVC 2000 Compact Ball Valve (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket Ends					
3/4	6622-007C **32.88**	6632-007C **36.95**	10	80	212
1	6622-010C **41.09**	6632-010C **46.21**	10	0	212

Compact 2000 Ball Valves

CPVC 2000 Compact Ball Valve (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket Ends					
1-1/4	6622-012C **67.25**	6632-012C **83.12**	6	0	212
1-1/2	6622-015C **83.18**	6632-015C **92.42**	5	0	212
2	6622-020C **108.97**	6632-020C **122.43**	8	0	212
Threaded Ends					
1/2	6621-005C **24.93**	6631-005C **27.74**	10	120	212
3/4	6621-007C **32.88**	6631-007C **36.95**	10	80	212
1	6621-010C **41.09**	6631-010C **46.21**	10	0	212
1-1/4	6621-012C **67.25**	6631-012C **83.12**	6	0	212
1-1/2	6621-015C **83.18**	6631-015C **92.42**	5	0	212

CPVC 2000 Compact Ball Valve (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded Ends					
2	6621-020C **108.97**	6631-020C **122.43**	8	0	212
Flanged Ends					
1/2	6623-005C **68.21**	6633-005C **70.32**	1	0	212
3/4	6623-007C **80.63**	6633-007C **84.19**	1	0	212
1	6623-010C **106.11**	6633-010C **112.37**	1	0	212
1-1/4	6623-012C **133.47**	6633-012C **140.63**	1	0	212
1-1/2	6623-015C **168.63**	6633-015C **178.73**	1	0	212
2	6623-020C **234.95**	6633-020C **241.89**	1	0	212

Compact Ball Valves (Regular Style)



Socket/Threaded Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
3" - 6" 150 psi
Flanged 150 psi
Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service

All Valves Assembled with Silicone-Free, Water Soluble Lubricants. See Ball Valve Accessories & Repair Kits Section for Additional Options & Features

Note: Standard 6" Valve uses Lever-Style Handle for proper leverage. T-Handle option is more compact but will increase difficulty of operation.

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket Ends					
1/2	2122-005C **26.24**	2132-005C **29.18**	10	80	212
3/4	2122-007C **34.61**	2132-007C **38.91**	10	0	212
1	2122-010C **43.27**	2132-010C **48.64**	10	0	212
1-1/4	2122-012C **87.56**	2132-012C **97.25**	6	0	212
1-1/2	2122-015C **108.18**	2132-015C **113.73**	5	0	212
2	2122-020C **114.72**	2132-020C **128.89**	6	0	212
3	2122-030C **349.04**	2132-030C **389.31**	1	4	213
4	2122-040C **645.24**	2132-040C **724.94**	1	0	213
6 (Lever Handle)	2122-060C **1054.51**	2132-060C **1123.62**	1	0	213
6 (Tee Handle)	21226-060C **1054.51**	21326-060C **1123.62**	1	0	213
Threaded Ends					
1/2	2121-005C **26.24**	2131-005C **29.18**	10	80	212
3/4	2121-007C **34.61**	2131-007C **38.91**	10	0	212
1	2121-010C **43.27**	2131-010C **48.64**	10	0	212
1-1/4	2121-012C **87.56**	2131-012C **97.25**	6	0	212
1-1/2	2121-015C **108.18**	2131-015C **113.73**	5	0	212

CPVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded Ends					
2	2121-020C **114.72**	2131-020C **128.89**	6	0	212
3	2121-030C **349.04**	2131-030C **389.31**	1	4	213
4	2121-040C **645.24**	2131-040C **724.94**	1	0	213
Flanged Ends					
1/2	2123-005C **73.15**	2133-005C **76.11**	1	8	212
3/4	2123-007C **84.93**	2133-007C **89.22**	1	8	212
1	2123-010C **100.42**	2133-010C **105.81**	1	8	212
1-1/4	2123-012C **158.24**	2133-012C **167.96**	1	8	212
1-1/2	2123-015C **197.89**	2133-015C **204.01**	1	4	212
2	2123-020C **224.11**	2133-020C **238.28**	1	0	212
3	2123-030C **536.68**	2133-030C **576.95**	1	0	213
4	2123-040C **838.37**	2133-040C **918.05**	1	0	213
6 (Lever Handle)	2123-060C **1592.42**	2133-060C **1708.33**	1	0	213
6 (Tee Handle)	21236-060C **1592.42**	21336-060C **1708.33**	1	0	213

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Utility Ball Valves



Pressure Rating @ 73°F (23°C), Water
1/2" - 6" 150 psi
Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

All Valves Assembled with Silicone-Free, Water Soluble Lubricant

See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

CPVC w/EPDM O-ring Seal

Size	Threaded Ends	Socket Ends	Std Pk	Mstr Pk	Disc Code
CPVC					
1/2	2621-005C **12.35**	2622-005C **12.35**	50	0	216
3/4	2621-007C **15.69**	2622-007C **15.69**	25	0	216
1	2621-010C **17.05**	2622-010C **17.05**	25	0	216

CPVC w/EPDM O-ring Seal (continued)

Size	Threaded Ends	Socket Ends	Std Pk	Mstr Pk	Disc Code
CPVC					
1-1/4	2621-012C **24.03**	2622-012C **24.03**	20	0	216
1-1/2	2621-015C **37.26**	2622-015C **37.26**	20	0	216
2	2621-020C **46.35**	2622-020C **46.35**	8	0	216

Lab Ball Valves



Socket/Threaded Valve Only

Pressure Rating @ 73°F (23°C), Water
1/4" - 3/8" 150 psi
Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service

Valve & Adapters includes:
1 - Threaded 1/4" Valve
2 - O-ring Sealed 1/4" MPT x Mipt Adapters
2 - EPDM or FKM O-rings (AS568-013 size)
1 - End Connector Wrench
2 - O-ring Sealed 1/4" MPT x 3/8" I.D. Tubing Barb Adapters
- OR -
2 - O-ring Sealed 1/4" MPT x 1/4" I.D. Tubing Barb Adapters



Valve & Adapters

All Valves Assembled with Silicone-Free, Water Soluble Lubricant

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Valve & Adapters Threaded Ends					
1/4X3/8T	1529-002C **30.91**	1539-002C **31.51**	1	25	219
1/4X1/4T	1529-002CA **30.91**	1539-002CA **31.51**	1	25	219
Valve only Threaded Ends					
1/4	1521-002C **24.75**	1531-002C **27.21**	50	200	219
3/8	1521-003C **34.71**	1531-003C **32.53**	50	200	219
Valve only Socket Ends					
1/4	1522-002C **24.75**	1532-002C **29.45**	50	200	219
3/8	1522-003C **34.71**	1532-003C **38.53**	50	200	219

True Union 2000 Industrial Ball Check Valves



Socket Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 4" 235 psi
6" - 8" 150 psi
All Flanged 150 psi
Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service

All Valves assembled with Silicone-Free, Water Soluble Lubricant
Contact Spears® for Pricing & Availability on Custom Elastomer Seals
See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

General Installation Information: Ball check valves may be installed in either horizontal or vertical position. A minimum of ten (10) pipe diameters' distance maintained from any pump or other source of turbulence. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of flow.

CPVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket & Threaded Ends					
1/2	4529-005C **83.31**	4539-005C **92.74**	1	18	606
3/4	4529-007C **99.71**	4539-007C **110.81**	1	18	606
1	4529-010C **117.65**	4539-010C **130.71**	1	18	606
1-1/4	4529-012C **202.63**	4539-012C **224.94**	1	12	606
1-1/2	4529-015C **202.63**	4539-015C **224.94**	1	8	606
2	4529-020C **270.65**	4539-020C **301.56**	1	8	606
Socket Ends					
2-1/2	4522-025C **567.14**	4532-025C **630.13**	1	0	607
3	4522-030C **753.47**	4532-030C **820.66**	1	0	607
4	4522-040C **1244.54**	4532-040C **1383.69**	1	0	607
6	4522-060C **2569.49**	4532-060C **2854.63**	1	0	559
8	4522-080C **3022.95**	4532-080C **3805.11**	1	0	559
8" Venturied valves are 6" ball check valves fitted with 6x8 end connector adapters.					
Threaded Ends					
2-1/2	4521-025C **567.14**	4531-025C **630.13**	1	0	607
3	4521-030C **751.23**	4531-030C **841.78**	1	0	607
4	4521-040C **1244.54**	4531-040C **1383.69**	1	0	607
6	4521-060C **2569.49**	4531-060C **2854.63**	1	0	559
SR Threaded Ends					
1/2	4521-005CSR **84.42**	4531-005CSR **93.87**	1	18	606
3/4	4521-007CSR **102.44**	4531-007CSR **113.51**	1	18	606
1	4521-010CSR **120.35**	4531-010CSR **133.43**	1	18	606
1-1/4	4521-012CSR **208.03**	4531-012CSR **233.68**	1	12	606
1-1/2	4521-015CSR **208.03**	4531-015CSR **233.68**	1	8	606
2	4521-020CSR **280.11**	4531-020CSR **311.02**	1	8	606
2-1/2	4521-025CSR **591.64**	4531-025CSR **654.32**	1	0	607
3	4521-030CSR **591.64**	4531-030CSR **881.74**	1	0	607
4	4521-040CSR **1272.76**	4531-040CSR **1411.94**	1	0	607
6	4521-060CSR **2638.78**	4531-060CSR **2923.92**	1	0	559

CPVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Spigot Ends					
1/2	4527-005C **83.31**	4537-005C **92.74**	1	18	606
3/4	4527-007C **99.71**	4537-007C **110.81**	1	18	606
1	4527-010C **117.65**	4537-010C **130.71**	1	12	606
1-1/4	4527-012C **202.63**	4537-012C **224.94**	1	12	606
1-1/2	4527-015C **230.09**	4537-015C **224.94**	1	8	606
2	4527-020C **270.65**	4537-020C **301.56**	1	8	606
2-1/2	4527-025C **567.14**	4537-025C **630.13**	1	0	607
3	4527-030C **737.00**	4537-030C **815.96**	1	0	607
4	4527-040C **1244.54**	4537-040C **1383.69**	1	0	607
6	4527-060C **2569.49**	4537-060C **2854.63**	1	0	559
Flanged Ends					
1/2	4523-005C **103.44**	4533-005C **129.26**	1	8	606
3/4	4523-007C **123.41**	4533-007C **156.22**	1	8	606
1	4523-010C **147.36**	4533-010C **181.67**	1	8	606
1-1/4	4523-012C **248.55**	4533-012C **308.19**	1	8	606
1-1/2	4523-015C **265.54**	4533-015C **331.81**	1	4	606
2	4523-020C **469.52**	4533-020C **503.37**	1	0	606
2-1/2	4523-025C **850.66**	4533-025C **920.31**	1	0	607
3	4523-030C **949.84**	4533-030C **1042.04**	1	0	607
4	4523-040C **1571.47**	4533-040C **1687.47**	1	0	607
6	4523-060C **4190.15**	4533-060C **4356.08**	1	0	559
8	4523-080C **4823.25**	4533-080C **5248.27**	1	0	559
8" Venturied valves are 6" ball check valves fitted with 6x8 end connector adapters.					

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Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

True Union Ball Check Valves (Regular Style)



Socket/Threaded Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
2-1/2" - 6" 150 psi
Flanged 150 psi
Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service

All Valves assembled with Silicone-Free, Water Soluble Lubricant

6" Venturied Valves are 4" Ball Check Valves equipped with 4x6 End Connectors.

General Installation Information: Ball check valves may be installed in either horizontal or vertical position. A minimum of ten (10) pipe diameters' distance maintained from any pump or other source of turbulence. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of flow.

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket & Threaded Ends					
1/2	2229-005C **91.15**	2239-005C **101.47**	1	18	222
3/4	2229-007C **109.11**	2239-007C **121.24**	1	12	222
1	2229-010C **128.74**	2239-010C **143.02**	1	8	222
1-1/4	2229-012C **221.69**	2239-012C **246.12**	1	8	222
1-1/2	2229-015C **268.08**	2239-015C **283.37**	1	8	222
2	2229-020C **296.87**	2239-020C **329.95**	1	4	222
Socket Ends					
2-1/2	2222-025C **620.52**	2232-025C **689.44**	1	0	222
3	2222-030C **1010.72**	2232-030C **1106.06**	1	0	222
4	2222-040C **1361.67**	2232-040C **1513.93**	1	0	222
Socket Venturied Ends					
6 VENTURIED	2222-060C **1756.56**	2232-060C **1968.07**	1	0	223
Threaded Ends					
2-1/2	2221-025C **620.52**	2231-025C **689.44**	1	0	222
3	2221-030C **1010.72**	2231-030C **1106.06**	1	0	222
4	2221-040C **1361.67**	2231-040C **1513.93**	1	0	222

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Flanged Ends					
1/2	2223-005C **113.18**	2233-005C **141.42**	6	0	222
3/4	2223-007C **135.02**	2233-007C **170.94**	5	0	222
1	2223-010C **161.22**	2233-010C **198.76**	5	0	222
1-1/4	2223-012C **271.95**	2233-012C **337.19**	2	0	222
1-1/2	2223-015C **290.53**	2233-015C **363.03**	3	0	222
2	2223-020C **513.69**	2233-020C **550.75**	2	0	222
2-1/2	2223-025C **817.39**	2233-025C **930.72**	1	0	222
3	2223-030C **1039.25**	2233-030C **1140.12**	1	0	222
4	2223-040C **1719.37**	2233-040C **1846.29**	1	0	222
Flanged Venturied Ends					
6 VENTURIED	2223-060C **2072.75**	2233-060C **2243.62**	1	0	223

Foot Valve Screens

Convert Check Valve to Foot Valve using adapter - Fits all Socket Ball Check Valves or any IPS fitting socket

Standard Foot Valve Screen



PVC/CPVC Spigot

Foot Valve Screens-Spigot

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CPVC					
FVS-005C	**1/2**	10	60	299	62.85
FVS-007C	**3/4**	10	60	299	67.80
FVS-010C	**1**	10	40	299	76.97
FVS-012C	**1-1/4**	5	30	299	118.87
FVS-015C	**1-1/2**	5	0	299	123.43
FVS-020C	**2**	5	0	299	136.26

Foot Valve Screens-Spigot (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CPVC					
FVS-025C	**2-1/2**	5	0	299	198.53
FVS-030C	**3**	5	0	299	221.08
FVS-040C	**4**	5	0	299	315.98
FVS-060C	**6**	5	0	299	451.53

Y-Check Valves



True Union Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 150 psi
3" - 4" 90 psi
Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

CPVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1622-005C **127.26**	1632-005C **140.15**	1	18	629
3/4	1622-007C **136.94**	1632-007C **151.43**	1	18	629
1	1622-010C **149.82**	1632-010C **165.93**	1	12	629
1-1/4	1622-012C **235.20**	1632-012C **260.98**	1	8	629
1-1/2	1622-015C **256.15**	1632-015C **283.53**	1	8	629
2	1622-020C **317.36**	1632-020C **352.79**	1	4	629
3	1622-030C **908.25**	1632-030C **1016.27**	1	0	629
4	1622-040C **1095.44**	1632-040C **1217.88**	1	0	629

CPVC - SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1621-005CSR **130.48**	1631-005CSR **144.98**	1	18	629
3/4	1621-007CSR **141.77**	1631-007CSR **157.88**	1	12	629
1	1621-010CSR **157.88**	1631-010CSR **173.98**	1	8	629
1-1/4	1621-012CSR **248.09**	1631-012CSR **272.25**	1	8	629
1-1/2	1621-015CSR **277.08**	1631-015CSR **304.48**	1	4	629
2	1621-020CSR **339.91**	1631-020CSR **375.37**	1	0	629
3	1621-030CSR **691.11**	1631-030CSR **760.38**	1	0	629
4	1621-040CSR **1158.28**	1631-040CSR **1280.73**	1	0	629

CPVC - Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1623-005C **165.93**	1633-005C **170.80**	1	8	629
3/4	1623-007C **182.05**	1633-007C **202.98**	1	8	629
1	1623-010C **219.11**	1633-010C **243.91**	1	8	629
1-1/4	1623-012C **338.31**	1633-012C **375.37**	1	4	629
1-1/2	1623-015C **357.62**	1633-015C **397.91**	1	4	629
2	1623-020C **480.06**	1633-020C **533.22**	1	0	629
3	1623-030C **940.81**	1633-030C **1045.52**	1	0	629
4	1623-040C **1501.42**	1633-040C **1668.97**	1	0	629

CPVC - True Union Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162A-005C **138.55**	163A-005C **153.04**	1	12	629

CPVC - True Union Socket Ends (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
3/4	162A-007C **148.21**	163A-007C **165.93**	1	8	629
1	162A-010C **162.71**	163A-010C **180.43**	1	8	629
1-1/4	162A-012C **254.54**	163A-012C **283.53**	1	4	629
1-1/2	162A-015C **277.08**	163A-015C **307.71**	1	0	629
2	162A-020C **344.75**	163A-020C **383.40**	2	0	629
3	162A-030C **683.05**	163A-030C **745.86**	1	0	629
4	162A-040C **1190.51**	163A-040C **1322.61**	1	0	629

CPVC - True Union Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162B-005C **138.55**	163B-005C **153.04**	1	12	629
3/4	162B-007C **148.21**	163B-007C **165.93**	1	8	629
1	162B-010C **162.71**	163B-010C **180.43**	1	8	629
1-1/4	162B-012C **254.54**	163B-012C **283.53**	1	4	629
1-1/2	162B-015C **277.08**	163B-015C **307.71**	1	0	629
2	162B-020C **344.75**	163B-020C **383.40**	2	0	629
3	162B-030C **683.05**	163B-030C **745.86**	1	0	629
4	162B-040C **1190.51**	163B-040C **1322.61**	1	0	629

CPVC - True Union SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162B-005CSR **141.77**	163B-005CSR **156.26**	1	12	629
3/4	162B-007CSR **154.66**	163B-007CSR **170.76**	1	8	629
1	162B-010CSR **170.76**	163B-010CSR **188.48**	1	8	629
1-1/4	162B-012CSR **269.02**	163B-012CSR **296.42**	1	4	629
1-1/2	162B-015CSR **301.25**	163B-015CSR **330.23**	1	0	629
2	162B-020CSR **370.52**	163B-020CSR **407.57**	1	0	629
3	162B-030CSR **750.72**	163B-030CSR **824.83**	1	0	629
4	162B-040CSR **1259.79**	163B-040CSR **1391.89**	1	0	629

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Spears® Manufacturing Company
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Butterfly Check Valves


Wafer


Flanged


Spigot


Threaded


Grooved

Pressure Rating @ 73°F (23°C), Water

2" - 8" 150 psi
10" - 16" 100 psi
18" - 24" 50 psi

Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

General Installation Information: Butterfly Check Valve seating may be affected by normal system turbulence. Flow velocities should be limited to approximately 5 feet per second. Valves should be installed at least 5 pipe diameters away from any fitting, pump or other source of turbulence. If used as a foot valve, do not place near bottom of a tank. Butterfly type check valves should not be used in continuous cycling applications, such as with reciprocating pumps. This can result in premature failure of sealing membrane. In horizontal installations, always orient the Hinge Post Bolts visible on the external body in a vertical (top and bottom) position, perpendicular to flow. In vertical installations downstream from an elbow, flow velocities can be higher on the outer radius of the elbow. To avoid uneven butterfly plate loading, the Hinge Post Bolts should align with crotch and outer radius of elbow and NOT from side to side of the elbow.

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Wafer					
2	5420-020C **628.27**	5430-020C **697.39**	1	18	290
2-1/2	5420-025C **865.88**	5430-025C **917.65**	1	0	290
3	5420-030C **1107.55**	5430-030C **1229.38**	1	0	290
4	5420-040C **1506.29**	5430-040C **1671.97**	1	0	290
6	5420-060C **2283.56**	5430-060C **2534.76**	1	0	290
8	5420-080C **3874.39**	5430-080C **4300.57**	1	0	290
10	5420-100C **8332.34**	5430-100C **9165.58**	1	0	290
12	5420-120C **14674.37**	5430-120C **16141.81**	1	0	290
Flanged Ends					
2	5423-020C **800.28**	5433-020C **839.26**	1	8	290
2-1/2	5423-025C **1280.98**	5433-025C **1340.74**	1	0	290
3	5423-030C **1369.32**	5433-030C **1465.46**	1	0	290
4	5423-040C **1603.17**	5433-040C **1748.67**	1	0	290
6	5423-060C **2826.99**	5433-060C **3120.62**	1	0	290
8	5423-080C **4528.92**	5433-080C **5053.80**	1	0	290
10	5423-100C **8558.96**	5433-100C **9312.47**	1	0	290
12	5423-120C **15415.98**	5433-120C **16385.20**	1	0	290
14	5423-140C **22022.45**	5433-140C **23407.12**	1	0	290
16	5423-160C **30585.05**	5433-160C **32509.86**	1	0	290
18	5423-180C **38231.29**	5433-180C **40637.35**	1	0	290
20	5423-200C **54615.94**	5433-200C **58052.18**	1	0	290
24	5423-240C **68268.40**	5433-240C **72564.97**	1	0	290
Spigot (Plain End)					
2	5427-020C **420.93**	5437-020C **459.91**	1	12	290
2-1/2	5427-025C **569.05**	5437-025C **628.79**	1	12	290
3	5427-030C **579.44**	5437-030C **674.71**	1	8	290
4	5427-040C **727.53**	5437-040C **873.05**	1	4	290
6	5427-060C **1556.42**	5437-060C **1850.04**	1	0	290

CPVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Spigot (Plain End)					
8	5427-080C **2335.92**	5437-080C **2860.78**	1	0	290
10	5427-100C **5838.47**	5437-100C **6592.03**	1	0	290
12	5427-120C **9580.11**	5437-120C **10548.42**	1	0	290
14	5427-140C **10020.27**	5437-140C **20928.65**	1	0	290
16	5427-160C **13250.63**	5437-160C **13755.01**	1	0	290
18	5427-180C **20149.82**	5437-180C **23126.81**	1	0	290
20	5427-200C **25188.27**	5437-200C **28905.66**	1	0	290
24	5427-240C **26089.01**	5437-240C **72564.97**	1	0	290
Threaded Ends					
2	5421A-020C **418.36**	5431A-020C **483.31**	1	12	290
2-1/2	5421A-025C **566.79**	5431A-025C **627.07**	1	8	290
3	5421A-030C **575.97**	5431A-030C **672.09**	1	8	290
4	5421A-040C **724.07**	5431A-040C **869.58**	1	4	290
6	5421A-060C **1544.27**	5431A-060C **1837.02**	1	0	290
8	5421A-080C **2325.16**	5431A-080C **2850.04**	1	0	290
10	5421A-100C **5829.28**	5431A-100C **6582.83**	1	0	290
12	5421A-120C **9564.84**	5431A-120C **10534.04**	1	0	290
Grooved Ends					
2	542G-020C **444.34**	543G-020C **514.68**	1	12	290
2-1/2	542G-025C **589.82**	543G-025C **649.60**	1	8	290
3	542G-030C **599.33**	543G-030C **695.48**	1	8	290
4	542G-040C **769.11**	543G-040C **915.29**	1	4	290
6	542G-060C **1610.98**	543G-060C **1904.60**	1	0	290
8	542G-080C **2388.06**	543G-080C **2912.93**	1	0	290
10	542G-100C **5926.83**	543G-100C **6680.34**	1	0	290
12	542G-120C **9878.92**	543G-120C **10848.08**	1	0	290

Industrial Swing Check Valves



Threaded Bonnet on Sizes 3/4", 1" & 1-1/4"

Pressure Rating @ 73°F (23°C), Water
3/4" - 4" 150 psi
6" 100 psi
8" 70 psi
Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
All Valves Assembled with Silicone-Free Lubricants



Bolted Bonnet on Sizes 1-1/2" & Up
(Valve Shown with Arrow Indicator Option)

General Installation Information: Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec.

Industrial Swing Check Valves

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
CPVC					
3/4	4423-007C **774.01**	4433-007C **860.13**	1	12	109
1	4423-010C **892.53**	4433-010C **992.43**	1	4	109
1-1/4	4423-012C **1116.48**	4433-012C **1239.96**	1	0	109
1-1/2	4423-015C **1151.88**	4433-015C **1565.51**	1	0	109
2	4423-020C **1485.39**	4433-020C **1650.42**	1	0	109
2-1/2	4423-025C **2461.58**	4433-025C **2921.09**	1	0	111
3	4423-030C **3074.86**	4433-030C **3308.52**	1	0	111
4	4423-040C **3528.28**	4433-040C **4161.00**	1	0	111
6	4423-060C **7220.66**	4433-060C **7908.09**	1	0	111
8	4423-080C **12884.15**	4433-080C **15066.75**	1	0	111

Swing Check Valve With Arrow Indicator

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
CPVC					
3/4	4423I-007C **782.56**	4433I-007C **868.15**	1	12	109
1	4423I-010C **900.59**	4433I-010C **1002.09**	1	4	109
1-1/4	4423I-012C **1111.08**	4433I-012C **1251.24**	1	0	109
1-1/2	4423I-015C **1277.94**	4433I-015C **1251.24**	1	0	109
2	4423I-020C **1497.00**	4433I-020C **1693.56**	1	0	109
2-1/2	4423I-025C **2469.95**	4433I-025C **2962.41**	1	0	111
3	4423I-030C **2650.77**	4433I-030C **3446.74**	1	0	111
4	4423I-040C **3551.77**	4433I-040C **4185.59**	1	0	111
6	4423I-060C **7327.88**	4433I-060C **7916.65**	1	0	111
8	4423I-080C **12897.99**	4433I-080C **15114.39**	1	0	111

Swing Check Valve With Counter Balance

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
CPVC					
3/4	4423CB-007C **1201.33**	4433CB-007C **1309.60**	1	12	109
1	4423CB-010C **1303.47**	4433CB-010C **1416.69**	1	4	109

Swing Check Valve With Counter Balance (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
CPVC					
1-1/4	4423CB-012C **1111.08**	4433CB-012C **1526.17**	1	0	109
1-1/2	4423CB-015C **1526.17**	4433CB-015C **1764.87**	1	0	109
2	4423CB-020C **1983.65**	4433CB-020C **2148.72**	1	0	109
2-1/2	4423CB-025C **2994.18**	4433CB-025C **3453.78**	1	0	111
3	4423CB-030C **3241.42**	4433CB-030C **4294.28**	1	0	111
4	4423CB-040C **4010.76**	4433CB-040C **4718.82**	1	0	111
6	4423CB-060C **7858.41**	4433CB-060C **8545.80**	1	0	111
8	4423CB-080C **13533.00**	4433CB-080C **15715.46**	1	0	111

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Diaphragm Check Valves



Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 100 psi
Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Santoprene™ TPE Seat

CPVC Diaphragm Check Valves - Socket

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
6562-007C	**3/4**	15	0	004	117.00

CPVC Diaphragm Check Valves - Thread

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
6561-007C	**3/4**	15	0	004	117.00

General Installation Information: Diaphragm Check Valves have "normally closed" operation with 1 - 1-1/2 psi opening pressure and can be mounted in any position. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. Flow velocity should not exceed 5 ft./sec.

Gate Valves



1/2" - 2" Socket/Threaded Style



2-1/2" - 3" Socket Style



4" Socket Style

Pressure Rating @ 73°F (23°C), Water

1/2" - 2"	200 psi
2-1/2" - 3"	150 psi
4"	235 psi
Flanged	150 psi

Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

CPVC Gate-Wedge on CPVC Valve
All Valves Assembled with Silicone-Free, Water Soluble Lubricant

CPVC

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded Ends						
1/2	2011-005C 70.80	2021-005C 78.63	2031-005C 86.54	12	0	202
3/4	2011-007C 76.56	2021-007C 85.04	2031-007C 93.56	12	0	202
1	2011-010C 83.92	2021-010C 93.25	2031-010C 102.54	12	0	202
1-1/4	2011-012C 147.39	2021-012C 163.79	2031-012C 180.17	6	0	202
1-1/2	2011-015C 161.11	2021-015C 179.51	2031-015C 197.47	6	0	202
2	2011-020C 186.39	2021-020C 207.06	2031-020C 227.77	6	0	202
2-1/2	2011-025C 694.04	2021-025C 748.94	2031-025C 813.25	1	0	203
SR Threaded Ends						
3	2011-030CSR 931.87	2021-030CSR 1035.13	2031-030CSR 1150.16	1	0	203
4	2011-040CSR 1677.34	2021-040CSR 1863.68	2031-040CSR 2070.76	1	0	203
Socket Ends						
1/2	2012-005C 70.80	2022-005C 78.63	2032-005C 86.54	12	0	202
3/4	2012-007C 76.56	2022-007C 85.04	2032-007C 93.56	12	0	202
1	2012-010C 83.92	2022-010C 93.25	2032-010C 102.54	12	0	202
1-1/4	2012-012C 147.39	2022-012C 163.79	2032-012C 180.17	6	0	202
1-1/2	2012-015C 161.11	2022-015C 179.51	2032-015C 197.47	6	0	202
2	2012-020C 186.39	2022-020C 207.06	2032-020C 227.77	6	0	202
2-1/2	2012-025C 694.04	2022-025C 748.94	2032-025C 813.25	1	0	203
3	2012-030C 931.87	2022-030C 1035.13	2032-030C 1150.16	1	0	203
4	2012-040C 1677.34	2022-040C 1863.68	2032-040C 2070.76	1	0	203
Flanged Ends						
1/2	2013-005C 317.23	2023-005C 352.43	2033-005C 387.64	4	0	202
3/4	2013-007C 342.97	2023-007C 381.03	2033-007C 419.15	4	0	202
1	2013-010C 375.86	2023-010C 417.71	2033-010C 459.46	4	0	202
1-1/4	2013-012C 508.35	2023-012C 565.07	2033-012C 621.58	3	0	202
1-1/2	2013-015C 555.24	2023-015C 619.34	2033-015C 681.19	3	0	202

CPVC (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Flanged Ends						
2	2013-020C 642.97	2023-020C 714.39	2033-020C 785.85	2	0	202
2-1/2	2013-025C 840.07	2023-025C 1110.14	2033-025C 1245.37	1	0	203
3	2013-030C 1164.81	2023-030C 1294.24	2033-030C 1438.06	1	0	203
4	2013-040C 2096.67	2023-040C 2329.63	2033-040C 2588.49	1	0	203

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Plug Gate Valves



Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
Flanged 150 psi
Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Plug-Style PE Wedge on All Valves
Rated for Vacuum Service
All Valves Assembled with Silicone-Free, Water Soluble Lubricants

CPVC Socket Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	5212-005C 70.80	5222-005C 78.63	5232-005C 86.54	12	0	202
3/4	5212-007C 76.56	5222-007C 85.04	5232-007C 93.56	12	0	202
1	5212-010C 83.92	5222-010C 93.25	5232-010C 102.54	12	0	202
1-1/4	5212-012C 147.39	5222-012C 163.79	5232-012C 180.17	6	0	202
1-1/2	5212-015C 161.11	5222-015C 179.51	5232-015C 197.47	6	0	202
2	5212-020C 186.39	5222-020C 207.06	5232-020C 227.77	6	0	202

CPVC SR Threaded Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	5211-005CSR 73.54	5221-005CSR 81.38	5231-005CSR 89.27	12	0	202
3/4	5211-007CSR 80.49	5221-007CSR 88.98	5231-007CSR 97.53	12	0	202
1	5211-010CSR 89.37	5221-010CSR 98.67	5231-010CSR 108.01	12	0	202
1-1/4	5211-012CSR 156.11	5221-012CSR 172.51	5231-012CSR 188.92	6	0	202
1-1/2	5211-015CSR 169.85	5221-015CSR 188.21	5231-015CSR 206.18	6	0	202
2	5211-020CSR 202.63	5221-020CSR 223.29	5231-020CSR 244.00	6	0	202

CPVC Flanged Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	5213-005C 317.23	5223-005C 352.43	5233-005C 387.64	4	0	202
3/4	5213-007C 342.97	5223-007C 381.03	5233-007C 419.15	4	0	202
1	5213-010C 375.86	5223-010C 417.71	5233-010C 459.46	4	0	202
1-1/4	5213-012C 508.35	5223-012C 565.07	5233-012C 620.94	3	0	202
1-1/2	5213-015C 555.24	5223-015C 619.34	5233-015C 681.19	3	0	202
2	5213-020C 642.97	5223-020C 714.39	5233-020C 785.85	2	0	202
6	---	5223-060C 2988.46	5233-060C 3893.84	1	0	203

Butterfly Valves



Lever Handle Style

Pressure Rating @ 73°F (23°C), Water
1-1/2" - 12" 150 psi
Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
See Butterfly Valve Accessories & Repair Kits Section for
Additional Options and Features



Gear Operator Style

CPVC

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311-015C 374.91	722311-015C 374.91	723311-015C 758.78	1	0	252
2	721311-020C 399.58	722311-020C 399.58	723311-020C 783.47	1	0	252
2-1/2	721311-025C 424.31	722311-025C 424.31	723311-025C 850.82	1	0	252
3	721311-030C 462.45	722311-030C 462.45	723311-030C 911.41	1	0	252
4	721311-040C 534.31	722311-040C 534.31	723311-040C 1140.39	1	0	252
6	721311-060C 790.21	722311-060C 790.21	723311-060C 1822.87	1	0	252
8	721311-080C 1342.43	722311-080C 1342.43	723311-080C 3084.48	1	0	252
Gear Operator						
1-1/2	721321-015C 932.24	722321-015C 932.24	723321-015C 1273.06	1	0	252
2	721321-020C 963.64	722321-020C 963.64	723321-020C 1312.45	1	0	252
2-1/2	721321-025C 978.80	722321-025C 978.80	723321-025C 1379.19	1	0	252
3	721321-030C 992.23	722321-030C 992.23	723321-030C 1441.22	1	0	252
4	721321-040C 1064.07	722321-040C 1064.07	723321-040C 1670.20	1	0	252
6	721321-060C 1324.48	722321-060C 1324.48	723321-060C 2352.64	1	0	252
8	721321-080C 1872.21	722321-080C 1872.21	723321-080C 3614.27	1	0	252
10	721321-100C 2622.01	722321-100C 2622.01	723321-100C 6698.69	1	0	252
12	721321-120C 3704.03	722321-120C 3704.03	723321-120C 8707.85	1	0	252
Valve Only						
1-1/2	721301-015C 350.20	722301-015C 350.20	723301-015C 704.92	1	0	252
2	721301-020C 374.91	722301-020C 374.91	723301-020C 720.59	1	0	252
2-1/2	721301-025C 390.60	722301-025C 390.60	723301-025C 752.04	1	0	252
3	721301-030C 422.05	722301-030C 422.05	723301-030C 821.62	1	0	252
4	721301-040C 489.38	722301-040C 489.38	723301-040C 1037.17	1	0	252
6	721301-060C 736.31	722301-060C 736.31	723301-060C 1674.66	1	0	252
8	721301-080C 1275.06	722301-080C 1275.06	723301-080C 2828.60	1	0	252
10	721301-100C 2550.19	722301-100C 2550.19	723301-100C 5670.57	1	0	252
12	721301-120C 3313.43	722301-120C 3313.43	723301-120C 7369.94	1	0	252

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Lug Insert Butterfly Valves



Spears® Standard Butterfly Valve
with Lug Inserts Factory Assembled

Note: Lug (insert) Valves require attention to flow direction for dead-end service. Flange must be installed on side of valve *opposite* the hex nut recesses for Single-Side installation. See "True Lug Butterfly Valves," where dead-end service is required in either direction.

Pressure Rating @ 73°F (23°C), Water
1-1/2" - 12" 150 psi
Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply



CPVC - Zinc-Plated Lug Inserts

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311K-015C 582.12	722311K-015C 582.12	723311K-015C 811.27	1	0	252
2	721311K-020C 599.22	722311K-020C 599.22	723311K-020C 829.78	1	0	252
2-1/2	721311K-025C 607.75	722311K-025C 607.75	723311K-025C 849.72	1	0	252
3	721311K-030C 617.72	722311K-030C 617.72	723311K-030C 872.48	1	0	252
4	721311K-040C 1064.62	722311K-040C 1064.62	723311K-040C 1410.48	1	0	252
6	721311K-060C 1424.72	722311K-060C 1424.72	723311K-060C 1988.36	1	0	252
8	721311K-080C 1757.77	722311K-080C 1757.77	723311K-080C 2900.68	1	0	252
Gear Operator						
1-1/2	721321K-015C 1147.19	722321K-015C 1147.19	723321K-015C 1421.86	1	0	252
2	721321K-020C 1168.54	722321K-020C 1168.54	723321K-020C 1453.18	1	0	252
2-1/2	721321K-025C 1184.18	722321K-025C 1184.18	723321K-025C 1475.95	1	0	252
3	721321K-030C 1192.74	722321K-030C 1192.74	723321K-030C 1512.96	1	0	252
4	721321K-040C 1773.41	722321K-040C 1773.41	723321K-040C 2183.33	1	0	252
6	721321K-060C 2163.41	722321K-060C 2163.41	723321K-060C 2904.95	1	0	252
8	721321K-080C 2542.00	722321K-080C 2542.00	723321K-080C 3988.07	1	0	252
10	721321K-100C 4467.73	722321K-100C 4467.73	723321K-100C 7164.86	1	0	252
12	721321K-120C 5139.53	722321K-120C 5139.53	723321K-120C 9014.82	1	0	252
Valve Only						
1-1/2	721301K-015C 556.51	722301K-015C 556.51	723301K-015C 799.88	1	0	252
2	721301K-020C 576.44	722301K-020C 576.44	723301K-020C 818.40	1	0	252
2-1/2	721301K-025C 583.55	722301K-025C 583.55	723301K-025C 836.89	1	0	252
3	721301K-030C 592.08	722301K-030C 592.08	723301K-030C 846.85	1	0	252
4	721301K-040C 1014.81	722301K-040C 1014.81	723301K-040C 1377.75	1	0	252
6	721301K-060C 1407.64	722301K-060C 1407.64	723301K-060C 1974.11	1	0	252
8	721301K-080C 1722.18	722301K-080C 1722.18	723301K-080C 3099.96	1	0	252
10	721301K-100C 3512.68	722301K-100C 3512.68	723301K-100C 5899.57	1	0	252
12	721301K-120C 4052.12	722301K-120C 4052.12	723301K-120C 7687.22	1	0	252

CPVC - SS Lug Inserts

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311G-015C 694.56	722311G-015C 694.56	723311G-015C 979.23	1	0	252
2	721311G-020C 703.11	722311G-020C 703.11	723311G-020C 992.03	1	0	252
2-1/2	721311G-025C 713.08	722311G-025C 713.08	723311G-025C 1017.66	1	0	252
3	721311G-030C 727.31	722311G-030C 727.31	723311G-030C 1027.61	1	0	252
4	721311G-040C 1299.47	722311G-040C 1299.47	723311G-040C 1665.24	1	0	252
6	721311G-060C 1696.56	722311G-060C 1696.56	723311G-060C 2401.09	1	0	252
8	721311G-080C 2102.21	722311G-080C 2102.21	723311G-080C 3440.11	1	0	252
Gear Operator						
1-1/2	721321G-015C 1379.18	722321G-015C 1379.18	723321G-015C 1709.38	1	0	252
2	721321G-020C 1389.14	722321G-020C 1389.14	723321G-020C 1729.31	1	0	252
2-1/2	721321G-025C 1394.81	722321G-025C 1394.81	723321G-025C 1747.80	1	0	252
3	721321G-030C 1419.02	722321G-030C 1419.02	723321G-030C 1841.75	1	0	252
4	721321G-040C 2043.86	722321G-040C 2043.86	723321G-040C 2564.77	1	0	252
6	721321G-060C 1670.95	722321G-060C 2524.94	723321G-060C 3423.03	1	0	252
8	721321G-080C 2919.18	722321G-080C 2919.18	723321G-080C 4615.76	1	0	252
10	721321G-100C 5269.05	722321G-100C 5269.05	723321G-100C 8531.23	1	0	252
12	721321G-120C 6088.85	722321G-120C 6088.85	723321G-120C 10501.07	1	0	252
Valve Only						
1-1/2	721301G-015C 657.56	722301G-015C 657.56	723301G-015C 956.46	1	0	252
2	721301G-020C 676.06	722301G-020C 676.06	723301G-020C 964.98	1	0	252
2-1/2	721301G-025C 683.19	722301G-025C 683.19	723301G-025C 994.88	1	0	252
3	721301G-030C 697.41	722301G-030C 697.41	723301G-030C 1004.85	1	0	252
4	721301G-040C 1262.45	722301G-040C 1262.45	723301G-040C 1619.71	1	0	252
6	721301G-060C 1646.75	722301G-060C 1646.75	723301G-060C 2315.68	1	0	252
8	721301G-080C 2048.12	722301G-080C 2048.12	723301G-080C 3408.79	1	0	252
10	721301G-100C 4154.60	722301G-100C 4154.60	723301G-100C 6561.40	1	0	252
12	721301G-120C 4776.59	722301G-120C 4776.59	723301G-120C 8077.21	1	0	252

True Lug Butterfly Valves



Pressure Rating @ 73°F (23°C), Water
1-1/2" - 12" 150 psi
Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
See Butterfly Valve Accessories & Repair Kits
Section for Additional Options and Features

CPVC - Zinc-Plated Lugs

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311Z-015C 831.47	722311Z-015C 831.47	723311Z-015C 1160.59	1	0	252
2	721311Z-020C 855.23	722311Z-020C 855.23	723311Z-020C 1186.13	1	0	252
2-1/2	721311Z-025C 865.63	722311Z-025C 865.63	723311Z-025C 1215.89	1	0	252
3	721311Z-030C 883.83	722311Z-030C 883.83	723311Z-030C 1246.73	1	0	252
4	721311Z-040C 1521.24	722311Z-040C 1521.24	723311Z-040C 2014.87	1	0	252
6	721311Z-060C 2035.80	722311Z-060C 2035.80	723311Z-060C 2842.44	1	0	252
8	721311Z-080C 2512.91	722311Z-080C 2512.91	723311Z-080C 4145.80	1	0	252
Gear Operator						
1-1/2	721321Z-015C 1351.15	722321Z-015C 1351.15	723321Z-015C 1675.05	1	0	252
2	721321Z-020C 1375.75	722321Z-020C 1375.75	723321Z-020C 1708.88	1	0	252
2-1/2	721321Z-025C 1392.52	722321Z-025C 1392.52	723321Z-025C 1737.09	1	0	252
3	721321Z-030C 1402.01	722321Z-030C 1402.01	723321Z-030C 1780.64	1	0	252
4	721321Z-040C 2087.35	722321Z-040C 2087.35	723321Z-040C 2570.33	1	0	252
6	721321Z-060C 2547.52	722321Z-060C 2547.52	723321Z-060C 3418.87	1	0	252
8	721321Z-080C 2992.95	722321Z-080C 2992.95	723321Z-080C 4693.09	1	0	252
10	721321Z-100C 5180.15	722321Z-100C 5180.15	723321Z-100C 8431.21	1	0	252
12	721321Z-120C 6047.79	722321Z-120C 6047.79	723321Z-120C 9250.78	1	0	252
Valve Only						
1-1/2	721301Z-015C 796.82	722301Z-015C 796.82	723301Z-015C 1143.28	1	0	252
2	721301Z-020C 824.25	722301Z-020C 824.25	723301Z-020C 1170.71	1	0	252
2-1/2	721301Z-025C 833.03	722301Z-025C 833.03	723301Z-025C 1197.72	1	0	252
3	721301Z-030C 844.17	722301Z-030C 844.17	723301Z-030C 1211.07	1	0	252
4	721301Z-040C 1448.64	722301Z-040C 1448.64	723301Z-040C 1970.57	1	0	252
6	721301Z-060C 2012.74	722301Z-060C 2012.74	723301Z-060C 2821.35	1	0	252
8	721301Z-080C 2462.00	722301Z-080C 2462.00	723301Z-080C 4050.73	1	0	252
10	721301Z-100C 5020.88	722301Z-100C 5020.88	723301Z-100C 8050.56	1	0	252
12	721301Z-120C 5789.41	722301Z-120C 5789.41	723301Z-120C 8714.75	1	0	252

CPVC - Stainless Steel Lugs

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311L-015C 993.58	722311L-015C 993.58	723311L-015C 1400.85	1	0	252
2	721311L-020C 1005.03	722311L-020C 1005.03	723311L-020C 1418.92	1	0	252
2-1/2	721311L-025C 1020.14	722311L-025C 1020.14	723311L-025C 1453.58	1	0	252
3	721311L-030C 1038.93	722311L-030C 1038.93	723311L-030C 1469.16	1	0	252
4	721311L-040C 1857.78	722311L-040C 1857.78	723311L-040C 2380.64	1	0	252
6	721311L-060C 2426.68	722311L-060C 2426.68	723311L-060C 3430.73	1	0	252
8	721311L-080C 3005.44	722311L-080C 3005.44	723311L-080C 4915.85	1	0	252
Gear Operator						
1-1/2	721321L-015C 1624.49	722321L-015C 1624.49	723321L-015C 2012.85	1	0	252
2	721321L-020C 1636.25	722321L-020C 1636.25	723321L-020C 2036.41	1	0	252
2-1/2	721321L-025C 1643.51	722321L-025C 1643.51	723321L-025C 2056.75	1	0	252
3	721321L-030C 1670.87	722321L-030C 1670.87	723321L-030C 2168.79	1	0	252
4	721321L-040C 2406.42	722321L-040C 2406.42	723321L-040C 3018.28	1	0	252
6	721321L-060C 2973.22	722321L-060C 2973.22	723321L-060C 4028.49	1	0	252
8	721321L-080C 3436.65	722321L-080C 3436.65	723321L-080C 5432.64	1	0	252
10	721321L-100C 6200.03	722321L-100C 6200.03	723321L-100C 10038.27	1	0	252
12	721321L-120C 7167.71	722321L-120C 7167.71	723321L-120C 12355.75	1	0	252
Valve Only						
1-1/2	721301L-015C 939.91	722301L-015C 939.91	723301L-015C 1368.45	1	0	252
2	721301L-020C 966.72	722301L-020C 966.72	723301L-020C 1378.93	1	0	252
2-1/2	721301L-025C 976.86	722301L-025C 976.86	723301L-025C 1422.62	1	0	252
3	721301L-030C 996.75	722301L-030C 996.75	723301L-030C 1436.00	1	0	252
4	721301L-040C 1804.15	722301L-040C 1804.15	723301L-040C 2316.16	1	0	252
6	721301L-060C 2353.64	722301L-060C 2353.64	723301L-060C 3309.96	1	0	252
8	721301L-080C 2927.17	722301L-080C 2927.17	723301L-080C 4682.14	1	0	252
10	721301L-100C 5937.24	722301L-100C 5937.24	723301L-100C 9373.96	1	0	252
12	721301L-120C 6825.32	722301L-120C 6825.32	723301L-120C 11540.83	1	0	252

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

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Large Diameter Butterfly Valves



Maximum Service Temperature
CPVC = 200°F (93°C)
PP = 180°F (82°C)
Temperature/Pressure De-ratings Apply
Contact Spears® for Custom Produced Valve Sizes 30" to 60"

Pressure Rating @ 73°F (23°C), Water

Size	Psi
14	100
16	85
18	70
20	50
24	50



CPVC - Gear Operator

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
14	722321-140C **8296.33**	723321-140C **20160.83**	1	0	253

Polypropylene - Gear Operator

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
16	722321-160P **24883.37**	723321-160P **26953.13**	1	0	257

Polypropylene - Gear Operator (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
18	722321-180P **27410.01**	723321-180P **31405.12**	1	0	257
20	722321-200P **30753.47**	723321-200P **37381.61**	1	0	257
24	722321-240P **34834.44**	723321-240P **50252.52**	1	0	257

Wafer Butterfly Valves



Lever Handle

Pressure Rating @ 73°F (23°C), Water
150 psi
Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

Wafer Butterfly Valve laying lengths will directly replace common Cast Iron valves (matches Keystone Model 228 and Bray Series 30 Butterfly Valves).



Gear Operator

IMPORTANT NOTE

All PVC and CPVC valves have built-in Santoprene™ Thermoplastic Elastomer (TPE) Flange Gaskets for use with choice of Buna-N, EPDM, or FKM Seats on PVC valves and choice of EPDM or FKM Seats on CPVC valves.

CPVC

Size	EPDM Seat	FKM Seat	Std Pk	Mstr Pk	Disc Code
Lever Handle					
2	752311-020C **399.58**	753311-020C **783.47**	1	0	252
2-1/2	752311-025C **424.31**	753311-025C **850.82**	1	0	252
3	752311-030C **462.45**	753311-030C **911.41**	1	0	252
4	752311-040C **534.31**	753311-040C **1140.39**	1	0	252
6	752311-060C **790.21**	753311-060C **1822.87**	1	0	252
8	752311-080C **1342.43**	753311-080C **3084.48**	1	0	252
Gear Operator					
2	752321-020C **963.64**	753321-020C **1312.45**	1	0	252
2-1/2	752321-025C **978.11**	753321-025C **1379.19**	1	0	252
3	752321-030C **992.23**	753321-030C **1441.22**	1	0	252
4	752321-040C **1064.07**	753321-040C **1670.20**	1	0	252
6	752321-060C **1324.48**	753321-060C **2352.64**	1	0	252

CPVC (continued)

Size	EPDM Seat	FKM Seat	Std Pk	Mstr Pk	Disc Code
Gear Operator					
8	752321-080C **1872.21**	753321-080C **3614.27**	1	0	252
10	752321-100C **2622.01**	753321-100C **6698.69**	1	0	252
12	752321-120C **3704.03**	753321-120C **8707.85**	1	0	252
Valve Only					
2	752301-020C **374.91**	753301-020C **720.59**	1	0	252
2-1/2	752301-025C **390.60**	753301-025C **752.04**	1	0	252
3	752301-030C **422.05**	753301-030C **821.62**	1	0	252
4	752301-040C **489.38**	753301-040C **1037.17**	1	0	252
6	752301-060C **736.31**	753301-060C **1674.66**	1	0	252
8	752301-080C **1275.06**	753301-080C **2828.60**	1	0	252
10	752301-100C **2550.19**	753301-100C **5670.57**	1	0	252
12	752301-120C **3313.43**	753301-120C **7369.94**	1	0	252

Globe Valves



Pressure Rating @ 73°F (23°C), Water
2-1/2" - 6" 150 psi
Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
All Valves Assembled with Silicone-Free, Water Soluble Lubricant
Suitable for Vacuum Service

Internal Repair Kit includes 1-Bonnet O−ring along with a factory assembled (required) internal component replacement unit consisting of Bonnet assembled with Stem/O-rings, Seat & Seal Carrier components. Install in valve using existing valve Bolts/Nuts/Washers, and Handle/Nut.

CPVC Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2-1/2	6023-025C **976.00**	6033-025C **1025.04**	1	0	622
3	6023-030C **1024.57**	6033-030C **1138.97**	1	0	622
4	6023-040C **1330.67**	6033-040C **1462.78**	1	0	622
6	6023-060C **2071.91**	6033-060C **2089.43**	1	0	622

CPVC Internal Repair Kits

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2-1/2	GL-ERK-025C **689.17**	GL-VRK-025C **765.76**	1	0	299
3	GL-ERK-030C **788.38**	GL-VRK-030C **865.75**	1	0	299
4	GL-ERK-040C **893.94**	GL-VRK-040C **983.81**	1	0	299
6	GL-ERK-060C **1276.81**	GL-VRK-060C **1404.99**	1	0	299

Needle Valves



Pressure Rating @ 73°F (23°C), Water
CPVC 235 psi
Maximum Service Temperature
CPVC = 200°F (82°C)
Solid PTFE Stem Seals
No Elastomer or Lubricants used
Valves include Panel Mounting Nut

CPVC Needle Valve

Size	Threaded	Socket	SR Threaded	Std Pk	Mstr Pk	Disc Code
Globe Pattern						
1/4	5591-002C 83.94	5592-002C 83.94	---	1	18	219
3/8	5591-003C 83.94	5592-003C 83.94	---	1	18	219
1/2	5591-005C 88.77	5592-005C 88.77	5591-005CSR 91.04	1	18	219
Angle Pattern						
1/4	5691-002C 83.94	5692-002C 83.94	---	1	18	219
3/8	5691-003C 83.94	5692-003C 83.94	---	1	18	219
1/2	5691-005C 88.77	5692-005C 88.77	5691-005CSR 91.04	1	18	219

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Diaphragm Valves



Socket/Threaded Style



Flanged Style



Spigot Style

Pressure Rating @ 73°F (23°C), Water

1/2" - 2"	235 psi
1/2" - 4" Flanged & Valves w/PTFE Diaphragms	150 psi
6"	100 psi
8"	75 psi

Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
No Lubricants in Media Contact Area
See Diaphragm Valve Repair Kits Section for Additional Options and Features

Contact Spears® for Pricing on Additional Specialty Diaphragms

- Hypalon®
- Hypalon® backed PTFE
- PTFE Encapsulated O-rings (for True Union Style Valves)

CPVC - Socket Ends (True Union Style Uses End Connector O-ring Seals)

Size	EPDM Seals & Diaphragm	FKM Seals & Diaphragm	EPDM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2729-005C **244.62**	2739-005C **313.51**	2729T-005C **351.63**	2739T-005C **378.55**	2739VT-005C **418.69**	1	12	272
3/4	2729-007C **272.25**	2739-007C **334.25**	2729T-007C **388.35**	2739T-007C **405.93**	2739VT-007C **448.98**	1	8	272
1	2729-010C **314.22**	2739-010C **406.44**	2729T-010C **472.16**	2739T-010C **492.53**	2739VT-010C **540.93**	1	8	272
1-1/4	2729-012C **471.96**	2739-012C **561.55**	2729T-012C **651.60**	2739T-012C **674.64**	2739VT-012C **733.86**	1	4	272
1-1/2	2729-015C **485.93**	2739-015C **568.46**	2729T-015C **661.72**	2739T-015C **699.96**	2739VT-015C **756.38**	1	4	272
2	2729-020C **517.58**	2739-020C **648.78**	2729T-020C **727.66**	2739T-020C **806.34**	2739VT-020C **891.86**	1	0	272

CPVC - SR Threaded Ends (True Union Style Uses End Connector O-ring Seals)

Size	EPDM Seals & Diaphragm	FKM Seals & Diaphragm	EPDM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2721-005CSR **244.62**	2731-005CSR **313.51**	2721T-005CSR **351.63**	2731T-005CSR **378.55**	2731VT-005CSR **418.69**	1	12	272
3/4	2721-007CSR **272.25**	2731-007CSR **334.25**	2721T-007CSR **388.35**	2731T-007CSR **405.93**	2731VT-007CSR **448.98**	1	8	272
1	2721-010CSR **314.22**	2731-010CSR **406.44**	2721T-010CSR **472.16**	2731T-010CSR **492.53**	2731VT-010CSR **540.93**	1	8	272
1-1/4	2721-012CSR **471.96**	2731-012CSR **561.55**	2721T-012CSR **651.60**	2731T-012CSR **674.64**	2731VT-012CSR **733.86**	1	4	272
1-1/2	2721-015CSR **485.93**	2731-015CSR **568.46**	2721T-015CSR **661.72**	2731T-015CSR **699.96**	2731VT-015CSR **756.38**	1	4	272
2	2721-020CSR **517.58**	2731-020CSR **648.78**	2721T-020CSR **727.66**	2731T-020CSR **806.34**	2731VT-020CSR **891.86**	1	0	272

CPVC - Spigot Ends

Size	EPDM Diaphragm	FKM Diaphragm	EPDM Backed PTFE Diaphragm	FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2727-005C **238.46**	2737-005C **303.65**	2797T-005C **341.72**	2797VT-005C **381.72**	1	12	272
3/4	2727-007C **264.71**	2737-007C **323.88**	2797T-007C **376.61**	2797VT-007C **416.62**	1	8	272
1	2727-010C **307.49**	2737-010C **395.07**	2797T-010C **460.20**	2797VT-010C **507.17**	1	8	272
1-1/4	2727-012C **460.04**	2737-012C **546.16**	2797T-012C **634.12**	2797VT-012C **702.56**	1	4	272
1-1/2	2727-015C **470.28**	2737-015C **551.86**	2797T-015C **645.07**	2797VT-015C **713.87**	1	4	272
2	2727-020C **504.53**	2737-020C **632.13**	2797T-020C **709.15**	2797VT-020C **783.86**	1	0	272

CPVC - Flanged Ends

Size	EPDM Diaphragm	FKM Diaphragm	EPDM Backed PTFE Diaphragm	FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2723-005C **295.77**	2733-005C **326.63**	2793T-005C **426.35**	2793VT-005C **472.87**	4	0	272
3/4	2723-007C **330.71**	2733-007C **365.27**	2793T-007C **455.83**	2793VT-007C **504.24**	4	0	272
1	2723-010C **407.22**	2733-010C **455.39**	2793T-010C **560.14**	2793VT-010C **621.29**	4	0	272
1-1/4	2723-012C **520.28**	2733-012C **596.04**	2793T-012C **707.06**	2793VT-012C **781.59**	1	4	272
1-1/2	2723-015C **527.19**	2733-015C **610.71**	2793T-015C **844.60**	2793VT-015C **930.33**	1	4	272

CPVC - Flanged Ends (continued)

Size	EPDM Diaphragm	FKM Diaphragm	EPDM Backed PTFE Diaphragm	FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
2	2723-020C **590.43**	2733-020C **662.17**	2793T-020C **938.46**	2793VT-020C **1042.25**	1	0	272
2-1/2	2723-025C **1072.56**	2733-025C **1197.84**	2793T-025C **1852.20**	2793VT-025C **2190.55**	1	0	273
3	2723-030C **1618.78**	2733-030C **1798.63**	2793T-030C **2436.57**	2793VT-030C **2694.60**	1	0	273
4	2723-040C **2223.06**	2733-040C **2469.55**	2793T-040C **3238.77**	2793VT-040C **3455.46**	1	0	273
6	2723-060C **4069.32**	2733-060C **5834.95**	2793T-060C **7122.09**	2793VT-060C **9280.51**	1	0	273
8	2723-080C **8133.81**	2733-080C **10503.55**	2793T-080C **10621.16**	2793VT-080C **11800.37**	1	0	273

Y-Pattern Valves



Socket Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 150 psi
3" - 4" 90 psi
Maximum Service Temperature
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply



True Union Style

CPVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1722-005C **117.59**	1732-005C **124.05**	1	12	622
3/4	1722-007C **138.55**	1732-007C **148.21**	1	8	622
1	1722-010C **165.93**	1732-010C **177.22**	1	8	622
1-1/4	1722-012C **204.59**	1732-012C **217.48**	1	4	622
1-1/2	1722-015C **270.65**	1732-015C **286.74**	1	0	622
2	1722-020C **383.40**	1732-020C **409.18**	2	0	622
3	1722-030C **821.60**	1732-030C **892.48**	1	0	622
4	1722-040C **1393.48**	1732-040C **1517.53**	1	0	622

CPVC - True Union Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172A-005C **138.55**	173A-005C **146.60**	1	8	622
3/4	172A-007C **162.71**	173A-007C **173.98**	1	8	622
1	172A-010C **194.93**	173A-010C **207.80**	1	4	622
1-1/4	172A-012C **240.03**	173A-012C **256.15**	2	0	622
1-1/2	172A-015C **318.98**	173A-015C **336.69**	2	0	622
2	172A-020C **451.07**	173A-020C **481.68**	1	0	622
3	172A-030C **966.60**	173A-030C **1050.37**	1	0	622
4	172A-040C **1638.37**	173A-040C **1784.97**	1	0	622

CPVC - SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1721-005CSR **120.82**	1731-005CSR **128.89**	1	8	622
3/4	1721-007CSR **143.38**	1731-007CSR **153.04**	1	8	622
1	1721-010CSR **173.98**	1731-010CSR **177.22**	1	8	622
1-1/4	1721-012CSR **212.65**	1731-012CSR **228.77**	1	0	622
1-1/2	1721-015CSR **291.58**	1731-015CSR **307.71**	1	0	622
2	1721-020CSR **407.57**	1731-020CSR **430.15**	1	0	622
3	1721-030CSR **881.20**	1731-030CSR **953.68**	1	0	622
4	1721-040CSR **1388.65**	1731-040CSR **1580.38**	1	0	622

CPVC - True Union Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172B-005C **138.55**	173B-005C **146.60**	1	8	622
3/4	172B-007C **162.71**	173B-007C **173.98**	1	8	622
1	172B-010C **194.93**	173B-010C **207.80**	1	4	622
1-1/4	172B-012C **240.03**	173B-012C **256.15**	2	0	622
1-1/2	172B-015C **318.98**	173B-015C **336.69**	2	0	622
2	172B-020C **451.07**	173B-020C **481.68**	1	0	622
3	172B-030C **966.60**	173B-030C **1050.37**	1	0	622
4	172B-040C **1638.37**	173B-040C **1784.97**	1	0	622

CPVC - Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1723-005C **193.32**	1733-005C **199.76**	1	8	622
3/4	1723-007C **220.71**	1733-007C **230.36**	1	8	622
1	1723-010C **267.41**	1733-010C **278.69**	1	4	622
1-1/4	1723-012C **320.58**	1733-012C **331.87**	1	0	622
1-1/2	1723-015C **433.36**	1733-015C **449.46**	1	0	622
2	1723-020C **552.57**	1733-020C **578.35**	1	0	622
3	1723-030C **1063.25**	1733-030C **1135.74**	1	0	622
4	1723-040C **1725.34**	1733-040C **1834.91**	1	0	622

CPVC - True Union SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172B-005CSR **141.77**	173B-005CSR **151.43**	1	8	622
3/4	172B-007CSR **169.14**	173B-007CSR **180.43**	1	8	622
1	172B-010CSR **204.59**	173B-010CSR **207.80**	1	4	622
1-1/4	172B-012CSR **249.71**	173B-012CSR **269.02**	1	0	622
1-1/2	172B-015CSR **343.13**	173B-015CSR **362.47**	1	0	622
2	172B-020CSR **480.06**	173B-020CSR **505.83**	1	0	622
3	172B-030CSR **1035.85**	173B-030CSR **1121.25**	1	0	622
4	172B-040CSR **1633.53**	173B-040CSR **1859.06**	1	0	622



Socket/Spigot

All Filters are 2-1/2"x 2-1/2" Inlet/Outlet Connection

Note: 2-1/2" Socket is also a 3" Spigot

Pressure Rating @ 73°F (23°C), Water 200 psi

Mesh Size Codes

Mesh Size	Size Code
1/16" Holes	16
1/32" Holes	32
50 Mesh	50
76 Mesh	76
100 Mesh	100
150 Mesh	150
200 Mesh	200

Note: Standard flow filtration path is internal to external. Reverse-flow filtration flows from external to internal side of filter screen.

100 GPM CPVC Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					
16	TF2-16C **934.36**	TF3-16C **1003.79**	1	0	296
32	TF2-32C **955.31**	TF3-32C **1026.52**	1	0	296
50	TF2-50C **1082.91**	TF3-50C **1163.12**	1	0	296
76	TF2-76C **1307.78**	TF3-76C **1405.26**	1	0	296
100	TF2-100C **1188.73**	TF3-100C **1277.18**	1	0	296
150	TF2-150C **1231.25**	TF3-150C **1322.93**	1	0	296
200	TF2-200C **1337.60**	TF3-200C **1436.98**	1	0	296

Standard TF2-16C, TF2-32C, TF3-16C, TF3-32C, MTF2-16C, MTF2-32C, MTF3-16C & MTF3-32C can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

50 GPM CPVC Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					
16	MTF2-16C **785.51**	MTF3-16C **843.82**	1	0	296
32	MTF2-32C **798.24**	MTF3-32C **857.68**	1	0	296
50	MTF2-50C **823.68**	MTF3-50C **884.92**	1	0	296
76	MTF2-76C **997.68**	MTF3-76C **1071.94**	1	0	296
100	MTF2-100C **870.24**	MTF3-100C **934.85**	1	0	296
150	MTF2-150C **912.93**	MTF3-150C **979.63**	1	0	296
200	MTF2-200C **1018.96**	MTF3-200C **1094.81**	1	0	296

Standard TF2-16C, TF2-32C, TF3-16C, TF3-32C, MTF2-16C, MTF2-32C, MTF3-16C & MTF3-32C can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

100 GPM CPVC Reverse Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					
16	TF2-16C **934.36**	TF3-16C **1003.79**	1	0	296
32	TF2-32C **955.31**	TF3-32C **1026.52**	1	0	296
50	TFR2-50C **1082.91**	TFR3-50C **1163.12**	1	0	296
76	TFR2-76C **1307.78**	TFR3-76C **1405.26**	1	0	296
100	TFR2-100C **1188.73**	TFR3-100C **1277.18**	1	0	296
150	TFR2-150C **1231.25**	TFR3-150C **1322.93**	1	0	296
200	TFR2-200C **1337.60**	TFR3-200C **1436.98**	1	0	296

Standard TF2-16C, TF2-32C, TF3-16C, TF3-32C, MTF2-16C, MTF2-32C, MTF3-16C & MTF3-32C can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

50 GPM CPVC Reverse Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					
16	MTF2-16C **785.51**	MTF3-16C **843.82**	1	0	296
32	MTF2-32C **798.24**	MTF3-32C **857.68**	1	0	296
50	MTFR2-50C **823.68**	MTFR3-50C **884.92**	1	0	296
76	MTFR2-76C **997.68**	MTFR3-76C **1071.94**	1	0	296
100	MTFR2-100C **870.24**	MTFR3-100C **934.85**	1	0	296
150	MTFR2-150C **912.93**	MTFR3-150C **979.63**	1	0	296
200	MTFR2-200C **1018.96**	MTFR3-200C **1094.81**	1	0	296

Standard TF2-16C, TF2-32C, TF3-16C, TF3-32C, MTF2-16C, MTF2-32C, MTF3-16C & MTF3-32C can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

100 GPM Filter Replacement Screens for TF Filters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-16-1	**1/16" Holes**	3	0	020	222.04
FL-32-1	**1/32" Holes**	3	0	020	242.22
FL-50-1	**50 Mesh**	3	0	020	479.42
FL-76-1	**76 Mesh**	3	0	020	474.37
FL-100-1	**100 Mesh**	3	0	020	373.45
FL-150-1	**150 Mesh**	3	0	020	403.71
FL-200-1	**200 Mesh**	3	0	020	499.60

NOTE: When ordering replacement screens for TF Series Filters, please provide exact length of old screen within 1/64" to insure proper fit of new screen in your filter body.

50 GPM Filter Replacement Screens for MTF Filters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-16-1	**1/16" Holes**	3	0	020	222.04
MFL-32-1	**1/32" Holes**	3	0	020	232.14
MFL-50-1	**50 Mesh**	3	0	020	252.33
MFL-76-1	**76 Mesh**	3	0	020	358.29
MFL-100-1	**100 Mesh**	3	0	020	277.57
MFL-150-1	**150 Mesh**	3	0	020	307.85
MFL-200-1	**200 Mesh**	3	0	020	378.46

NOTE: When ordering replacement screens for MTF Series Filters, please provide exact length of old screen within 1/64" to insure proper fit of new screen in your filter body.

100 GPM Reverse Flow Filter Replacement Screens for TFR Filters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-16-1	**1/16" Holes**	3	0	020	222.04
FL-32-1	**1/32" Holes**	3	0	020	242.22
FLR-50-1	**50 Mesh**	3	0	020	243.39
FLR-76-1	**76 Mesh**	3	0	020	474.37
FLR-100-1	**100 Mesh**	3	0	020	337.02
FLR-150-1	**150 Mesh**	3	0	020	383.52

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100 GPM Reverse Flow Filter Replacement Screens for TFR Filters (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FLR-200-1	**200 Mesh**	3	0	020	474.62

50 GPM Reverse Flow Filter Replacement Screens for MTFR Filters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-16-1	**1/16" Holes**	3	0	020	222.04
MFL-32-1	**1/32" Holes**	3	0	020	232.14
MFLR-50-1	**50 Mesh**	3	0	020	256.21
MFLR-76-1	**76 Mesh**	3	0	020	358.29
MFLR-100-1	**100 Mesh**	3	0	020	263.67
MFLR-150-1	**150 Mesh**	3	0	020	292.44
MFLR-200-1	**200 Mesh**	3	0	020	359.53

Y-Strainers



Socket



Flanged



SR Thread



True Union

Part numbers shown reflect a mesh size of 8. For different mesh sizes, substitute Mesh Code in part number as specified in chart below.

U.S. Standard Mesh Sieve No.	Sieve Opening Size (in.)	Part Number Mesh Code
8	0.094	8
12	0.062	12
20	0.033	20
30	0.024	30

Example: for 8 Mesh, specify

YS22C8-005C

Additional Mesh Sizes available on request.

Pressure Rating @ 73°F (23°C), Water

1/2" - 2"	150 psi
3" - 4"	90 psi

Maximum Service Temperature

CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply

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CPVC - Socket Ends

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS22C8-005C **232.20**	YS22S8-005C **319.13**	YS32C8-005C **260.02**	YS32S8-005C **358.72**	1	18	104
3/4	YS22C8-007C **255.13**	YS22S8-007C **362.93**	YS32C8-007C **287.23**	YS32S8-007C **407.93**	1	18	104
1	YS22C8-010C **324.19**	YS22S8-010C **448.89**	YS32C8-010C **365.17**	YS32S8-010C **503.75**	1	12	104
1-1/4	YS22C8-012C **470.62**	YS22S8-012C **647.68**	YS32C8-012C **566.36**	YS32S8-012C **685.83**	1	8	104
1-1/2	YS22C8-015C **505.52**	YS22S8-015C **669.04**	YS32C8-015C **587.58**	YS32S8-015C **748.02**	1	8	104
2	YS22C8-020C **715.75**	YS22S8-020C **838.72**	YS32C8-020C **756.31**	YS32S8-020C **914.78**	1	4	104
3	YS22C8-030C **853.81**	YS22S8-030C **1021.35**	YS32C8-030C **900.54**	YS32S8-030C **1098.69**	1	0	104
4	YS22C8-040C **1478.88**	YS22S8-040C **1691.52**	YS32C8-040C **1590.03**	YS32S8-040C **1818.78**	1	0	104

CPVC - SR Threaded Ends

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS21C8-005CSR **240.65**	YS21S8-005CSR **327.58**	YS31C8-005CSR **268.48**	YS31S8-005CSR **367.18**	1	18	104
3/4	YS21C8-007CSR **264.18**	YS21S8-007CSR **371.96**	YS31C8-007CSR **296.27**	YS31S8-007CSR **416.98**	1	12	104
1	YS21C8-010CSR **344.92**	YS21S8-010CSR **469.59**	YS31C8-010CSR **385.91**	YS31S8-010CSR **524.43**	1	8	104
1-1/4	YS21C8-012CSR **491.91**	YS21S8-012CSR **632.51**	YS31C8-012CSR **587.65**	YS31S8-012CSR **707.15**	1	8	104
1-1/2	YS21C8-015CSR **530.17**	YS21S8-015CSR **693.68**	YS31C8-015CSR **667.73**	YS31S8-015CSR **772.65**	1	4	104
2	YS21C8-020CSR **750.85**	YS21S8-020CSR **873.82**	YS31C8-020CSR **841.61**	YS31S8-020CSR **949.85**	1	0	104
3	YS21C8-030CSR **897.31**	YS21S8-030CSR **1064.85**	YS31C8-030CSR **960.15**	YS31S8-030CSR **1142.18**	1	0	104
4	YS21C8-040CSR **1523.98**	YS21S8-040CSR **1736.64**	YS31C8-040CSR **1635.14**	YS31S8-040CSR **1863.91**	1	0	104

CPVC - Flanged Ends

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS23C8-005C **374.44**	YS23S8-005C **459.72**	YS33C8-005C **415.61**	YS33S8-005C **512.87**	1	8	104
3/4	YS23C8-007C **397.73**	YS23S8-007C **489.04**	YS33C8-007C **431.29**	YS33S8-007C **545.78**	1	8	104
1	YS23C8-010C **424.71**	YS23S8-010C **543.37**	YS33C8-010C **462.66**	YS33S8-010C **605.78**	1	8	104
1-1/4	YS23C8-012C **680.81**	YS23S8-012C **838.08**	YS33C8-012C **742.20**	YS33S8-012C **933.22**	1	4	104
1-1/2	YS23C8-015C **758.69**	YS23S8-015C **931.21**	YS33C8-015C **842.40**	YS33S8-015C **1038.88**	1	4	104
2	YS23C8-020C **953.87**	YS23S8-020C **1164.35**	YS33C8-020C **1046.67**	YS33S8-020C **1218.31**	1	0	104
3	YS23C8-030C **1303.27**	YS23S8-030C **1472.44**	YS33C8-030C **1300.05**	YS33S8-030C **1583.59**	1	0	104
4	YS23C8-040C **2086.21**	YS23S8-040C **2298.85**	YS33C8-040C **2244.07**	YS33S8-040C **2472.85**	1	0	104

CPVC - True Union Socket Ends

Size	EPDM CPVC Screen	EPDM SS Screen	FKM CPVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2AC8-005C **244.43**	YS2AS8-005C **335.93**	YS3AC8-005C **273.74**	YS3AS8-005C **377.59**	1	12	104
3/4	YS2AC8-007C **268.56**	YS2AS8-007C **382.03**	YS3AC8-007C **302.35**	YS3AS8-007C **429.40**	1	8	104
1	YS2AC8-010C **341.25**	YS2AS8-010C **472.54**	YS3AC8-010C **384.40**	YS3AS8-010C **530.24**	1	8	104
1-1/4	YS2AC8-012C **495.39**	YS2AS8-012C **681.77**	YS3AC8-012C **596.15**	YS3AS8-012C **722.96**	1	4	104
1-1/2	YS2AC8-015C **532.13**	YS2AS8-015C **704.24**	YS3AC8-015C **618.54**	YS3AS8-015C **787.38**	1	0	104
2	YS2AC8-020C **753.41**	YS2AS8-020C **882.85**	YS3AC8-020C **796.12**	YS3AS8-020C **962.93**	1	0	104
3	YS2AC8-030C **898.74**	YS2AS8-030C **1075.13**	YS3AC8-030C **964.91**	YS3AS8-030C **1156.51**	1	0	104

CPVC - True Union Socket Ends (continued)

Size	EPDM CPVC Screen	EPDM SS Screen	FKM CPVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
4	YS2AC8-040C **1556.71**	YS2AS8-040C **1780.54**	YS3AC8-040C **1673.73**	YS3AS8-040C **1914.53**	1	0	104

CPVC - True Union Threaded Ends

Size	EPDM CPVC Screen	EPDM SS Screen	FKM CPVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2BC8-005C **244.43**	YS2BS8-005C **335.93**	YS3BC8-005C **273.74**	YS3BS8-005C **377.59**	1	12	104
3/4	YS2BC8-007C **268.56**	YS2BS8-007C **382.03**	YS3BC8-007C **302.35**	YS3BS8-007C **429.40**	1	8	104
1	YS2BC8-010C **341.25**	YS2BS8-010C **472.54**	YS3BC8-010C **384.40**	YS3BS8-010C **530.24**	1	8	104
1-1/4	YS2BC8-012C **495.39**	YS2BS8-012C **681.77**	YS3BC8-012C **596.15**	YS3BS8-012C **721.94**	1	4	104
1-1/2	YS2BC8-015C **532.13**	YS2BS8-015C **704.24**	YS3BC8-015C **618.54**	YS3BS8-015C **787.38**	1	0	104
2	YS2BC8-020C **753.41**	YS2BS8-020C **882.85**	YS3BC8-020C **796.12**	YS3BS8-020C **962.93**	1	0	104
3	YS2BC8-030C **898.74**	YS2BS8-030C **1075.13**	YS3BC8-030C **950.39**	YS3BS8-030C **1156.51**	1	0	104
4	YS2BC8-040C **1556.71**	YS2BS8-040C **1780.54**	YS3BC8-040C **1673.73**	YS3BS8-040C **1914.53**	1	0	104

CPVC - True Union SR Threaded Ends

Size	EPDM CPVC Screen	EPDM SS Screen	FKM CPVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2BC8-005CSR **253.34**	YS2BS8-005CSR **344.79**	YS3BC8-005CSR **282.61**	YS3BS8-005CSR **386.51**	1	12	104
3/4	YS2BC8-007CSR **278.08**	YS2BS8-007CSR **391.52**	YS3BC8-007CSR **311.87**	YS3BS8-007CSR **438.93**	1	12	104
1	YS2BC8-010CSR **363.05**	YS2BS8-010CSR **494.27**	YS3BC8-010CSR **406.20**	YS3BS8-010CSR **552.33**	1	8	104
1-1/4	YS2BC8-012CSR **517.78**	YS2BS8-012CSR **665.80**	YS3BC8-012CSR **618.56**	YS3BS8-012CSR **744.35**	1	4	104
1-1/2	YS2BC8-015CSR **558.05**	YS2BS8-015CSR **730.19**	YS3BC8-015CSR **702.85**	YS3BS8-015CSR **813.32**	1	0	104
2	YS2BC8-020CSR **790.38**	YS2BS8-020CSR **919.80**	YS3BC8-020CSR **885.91**	YS3BS8-020CSR **999.85**	1	0	104
3	YS2BC8-030CSR **944.55**	YS2BS8-030CSR **1120.91**	YS3BC8-030CSR **1010.67**	YS3BS8-030CSR **1202.29**	1	0	104
4	YS2BC8-040CSR **1604.18**	YS2BS8-040CSR **1828.04**	YS3BC8-040CSR **1721.20**	YS3BS8-040CSR **1961.98**	1	0	104

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Basket Strainers



Pressure Rating
@ 73°F (23°C), Water

1/2"-8" 150 psi
10"-12" 50 psi

Maximum Service Temperature

CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply

Important Ordering Information - Column headings indicate Elastomer seal type and Strainer Basket screen material. All Part Numbers shown designate 1/8" perforated (#6 Mesh Code) Strainer Basket Screens. To order other screen perforation sizing, replace the number "6" preceding the dash-separator with the corresponding Mesh Code from chart. Pricing is the same for all listed Mesh Codes.

Perforation Size	Mesh Code
1/16"	12
3/32"	8
1/8"	6
3/16"	4
1/4"	3
3/8"	2

Example: To order a 1/16" screen perforation in listed part number BS22P6-020, change the part number to BS22P12-020

Contact Spears® for additional perforations & wire mesh sizes

CPVC - Socket Ends

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	BS22C6-005C **634.49**	BS22S6-005C **878.39**	BS32C6-005C **666.55**	BS32S6-005C **910.46**	1	2	297
3/4	BS22C6-007C **634.49**	BS22S6-007C **878.39**	BS32C6-007C **666.55**	BS32S6-007C **910.46**	1	2	297
1	BS22C6-010C **634.49**	BS22S6-010C **878.39**	BS32C6-010C **666.55**	BS32S6-010C **910.46**	1	2	297
1-1/4	BS22C6-012C **1197.36**	BS22S6-012C **1522.57**	BS32C6-012C **1345.85**	BS32S6-012C **1710.55**	1	0	297
1-1/2	BS22C6-015C **1197.36**	BS22S6-015C **1522.57**	BS32C6-015C **1345.85**	BS32S6-015C **1710.55**	1	0	297
2	BS22C6-020C **1197.36**	BS22S6-020C **1522.57**	BS32C6-020C **1345.85**	BS32S6-020C **1710.55**	1	0	297
2-1/2	BS22C6-025C **1961.57**	BS22S6-025C **2522.36**	BS32C6-025C **2203.87**	BS32S6-025C **2834.37**	1	0	297
3	BS22C6-030C **2543.26**	BS22S6-030C **3106.03**	BS32C6-030C **2857.67**	BS32S6-030C **3489.79**	1	0	297
4	BS22C6-040C **3379.36**	BS22S6-040C **4019.18**	BS32C6-040C **3797.74**	BS32S6-040C **4515.97**	1	0	297
6	BS22C6-060C **4466.31**	BS22S6-060C **5587.52**	BS32C6-060C **5018.38**	BS32S6-060C **6277.95**	1	0	297
8	BS22C6-080C **6375.84**	BS22S6-080C **7897.74**	BS32C6-080C **7163.94**	BS32S6-080C **8873.88**	1	0	297
10	BS22C6-100C **11192.03**	BS22S6-100C **13364.49**	BS32C6-100C **12575.39**	BS32S6-100C **15016.73**	1	0	297
12	BS22C6-120C **14212.40**	BS22S6-120C **17107.55**	BS32C6-120C **15968.94**	BS32S6-120C **19222.87**	1	0	297

CPVC - Flanged Ends

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	BS23C6-005C **694.41**	BS23S6-005C **938.31**	BS33C6-005C **730.83**	BS33S6-005C **974.74**	1	0	297
3/4	BS23C6-007C **694.41**	BS23S6-007C **938.31**	BS33C6-007C **730.83**	BS33S6-007C **974.74**	1	0	297
1	BS23C6-010C **694.41**	BS23S6-010C **938.31**	BS33C6-010C **730.83**	BS33S6-010C **974.74**	1	0	297
1-1/4	BS23C6-012C **1350.35**	BS23S6-012C **1673.28**	BS33C6-012C **1517.06**	BS33S6-012C **1880.14**	1	0	297
1-1/2	BS23C6-015C **1350.35**	BS23S6-015C **1673.28**	BS33C6-015C **1517.06**	BS33S6-015C **1880.14**	1	0	297
2	BS23C6-020C **1350.35**	BS23S6-020C **1673.28**	BS33C6-020C **1517.06**	BS33S6-020C **1880.14**	1	0	297
2-1/2	BS23C6-025C **2562.92**	BS23S6-025C **3124.68**	BS33C6-025C **2878.96**	BS33S6-025C **3511.07**	1	2	297

CPVC - Flanged Ends (continued)

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
3	BS23C6-030C **3047.31**	BS23S6-030C **3810.92**	BS33C6-030C **3423.96**	BS33S6-030C **4056.04**	1	0	297
4	BS23C6-040C **3990.21**	BS23S6-040C **8240.56**	BS33C6-040C **4483.56**	BS33S6-040C **9258.82**	1	0	297
6	BS23C6-060C **7662.95**	BS23S6-060C **8783.12**	BS33C6-060C **8610.48**	BS33S6-060C **9868.63**	1	0	297
8	BS23C6-080C **9913.23**	BS23S6-080C **11435.37**	BS33C6-080C **11138.97**	BS33S6-080C **12848.89**	1	0	297
10	BS23C6-100C **13460.75**	BS23S6-100C **15632.63**	BS33C6-100C **15124.09**	BS33S6-100C **17565.43**	1	0	297
12	BS23C6-120C **18415.33**	BS23S6-120C **21309.48**	BS33C6-120C **20691.55**	BS33S6-120C **23946.35**	1	0	297

CPVC - Spigot Ends

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	BS27C6-005C **634.49**	BS27S6-005C **878.39**	BS37C6-005C **666.55**	BS37S6-005C **910.46**	1	0	297
3/4	BS27C6-007C **634.49**	BS27S6-007C **878.39**	BS37C6-007C **666.55**	BS37S6-007C **910.46**	1	0	297
1	BS27C6-010C **634.49**	BS27S6-010C **878.39**	BS37C6-010C **666.55**	BS37S6-010C **910.46**	1	0	297
1-1/4	BS27C6-012C **1197.36**	BS27S6-012C **1522.57**	BS37C6-012C **1345.85**	BS37S6-012C **1710.55**	1	0	297
1-1/2	BS27C6-015C **1197.36**	BS27S6-015C **1522.57**	BS37C6-015C **1345.85**	BS37S6-015C **1710.55**	1	0	297
2	BS27C6-020C **1197.36**	BS27S6-020C **1522.57**	BS37C6-020C **1345.85**	BS37S6-020C **1710.55**	1	0	297
2-1/2	BS27C6-025C **1961.57**	BS27S6-025C **2522.36**	BS37C6-025C **2203.87**	BS37S6-025C **2834.37**	1	0	297
3	BS27C6-030C **2543.26**	BS27S6-030C **3106.03**	BS37C6-030C **2857.67**	BS37S6-030C **3489.79**	1	0	297
4	BS27C6-040C **3379.36**	BS27S6-040C **4019.18**	BS37C6-040C **3797.74**	BS37S6-040C **4515.97**	1	0	297
6	BS27C6-060C **4466.31**	BS27S6-060C **5587.52**	BS37C6-060C **5018.38**	BS37S6-060C **6277.95**	1	0	297
8	BS27C6-080C **6375.84**	BS27S6-080C **7897.74**	BS37C6-080C **7163.94**	BS37S6-080C **8873.88**	1	0	297
10	BS27C6-100C **11192.03**	BS27S6-100C **13364.49**	BS37C6-100C **12575.39**	BS37S6-100C **15016.73**	1	0	297
12	BS27C6-120C **14212.40**	BS27S6-120C **17107.55**	BS37C6-120C **15968.75**	BS37S6-120C **19222.87**	1	0	297

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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Duplex Basket Strainers

Custom configured and produced to order, Spears® Duplex Basket Strainer provides individual isolation of strainers for servicing and cleaning without shutting down the line. A center handle on the Duplex unit control valves allows selection of either strainer unit for isolation. Each Basket Strainer features a convenient quick release clamp cap equipped with safety pressure gauge and pressure release ball valve for safer system operation and strainer cleaning. Additional drain plug allows complete drain and flush of unit.



Multi-Featured Options:

- No Flow Shutdown Required
- Sizes 1/2 - 4" Constructed from Corrosion Resistant PVC or CPVC
- True Union Socket, Thread, or Flanged Connections
- Uses Spears® Standard Basket Strainers Configurations
- Simple Single-Throw Lever Operation
- Select EPDM or FKM Seal Options
- Multiple Strainer Mesh Options in Plastic or Stainless Steel
  (see Industrial Basket Strainer options in this catalog)

Pressure Rating @ 73°F (23°C), Water
1/2" - 4" 150 psi

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply

CONTACT SPEARS® FOR ADDITIONAL CUSTOM OPTIONS, SELECTION ASSISTANCE & PRICING

TRANSITION FITTINGS OVERVIEW

Spears® Transition fittings are designed primarily for adapting plastic-to-metal systems. These fittings, especially the Special Reinforced (SR) Female Plastic Thread style, can also be used for superior strength in make-up of plastic threaded joints. Spears® offers a variety of transition adapter fittings specified below. All have standard ASTM socket sizes for IPS pipe and NPT threads, except for the Gasket Sealed style that uses a straight thread with elastomer seal. All other threads should be assembled with a quality grade thread sealant that is compatible with plastics.

Warning: Some pipe joint compounds or PTFE pastes may contain substances that could cause stress cracking in thermoplastic materials. Spears® recommends the use of Spears® **BLUE 75**™ thread sealant that has been tested for compatibility with Spears® products. Choice of any other appropriate thread sealant is at the discretion of the installer.

Special Reinforced (SR) Thread Fittings: This patented fitting features all-plastic female thread construction that reduces problems associated with over-tightening of female plastic pipe threads. The external reinforcing collar is not just an added reinforcement ring, this unique precompression design compensates for expansion forces generated from tapered pipe thread joint make-up. Radial stress is reduced in normal installations and contained in severe over-tightening situations. The all-plastic internal construction provides for the maximum in chemical and corrosion benefits. Its solid construction and reliability make the SR our best transition design for all applications.

Brass Thread Fitting: This patented fitting features a molded-in-place brass thread with external reinforcing collar as an integral part of each fitting for superior strength. An internal form-compressed O-ring seal compensates for expansion and contraction variations between materials. Excellent as a metal-to-plastic transition adapter fitting.

Male Brass Thread Fitting: Developed for Copper Tube Size (CTS) hot-and-cold water distribution systems, this male brass thread alternative is the only metal thread design of its type that has the metal component lined with plastic for improved fitting construction and minimal exposure. Excellent for transition to female metal threads in a CTS system.

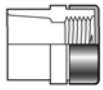
Gasket Sealed Thread Fittings: Also developed for Copper Tube Size (CTS) hot-and-cold water distribution systems, this female threaded fitting features all plastic internal construction for maximum corrosion resistance. The fitting incorporates straight-threads for mechanical connection, while sealing is accomplished through an internal elastomer gasket or O-ring against the pipe face. No sealants are used.

APPROVALS

Except where otherwise specified, Spears® Transition Fittings/Materials are approved for use in potable water systems by NSF® International under ANSI/NSF® Standard 61, Drinking Water System Components - Health Effects.

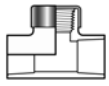
CPVC Orange Fittings in this price schedule (4200 series part numbers) are approved by Underwriters Laboratories, FM Global, and LPCB for use in CPVC Fire Sprinkler Systems. When installed in these system, installation must be made in accordance with Spears® publication FG-3, *FlameGuard® CPVC Fire Sprinkler Products Installation Manual*, and local codes. However, these fittings can also be used in many other types of installations. CPVC fittings may also be used on PVC pipe when installed using a quality CPVC solvent cement meeting the requirements of ASTM F 493, Standard Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride)(CPVC) Plastic Pipe and Fittings.

Special Reinforced Female Adapter
Soc x SR Fipt - Stainless Steel Collar



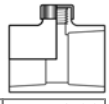
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
435-002SR	**1/4**	25	450	046	5.59
435-003SR	**3/8**	25	300	046	5.59
435-005SR	**1/2**	25	300	046	3.11
435-007SR	**3/4**	25	300	046	4.52
435-010SR	**1**	25	200	046	6.72
435-012SR	**1-1/4**	10	60	046	10.86
435-015SR	**1-1/2**	10	80	046	13.37
435-020SR	**2**	10	0	046	23.32
435-025SR	**2-1/2**	5	0	046	36.79
435-030SR	**3**	10	0	046	41.45
435-040SR	**4**	5	0	046	71.24

Special Reinforced Tee
Soc x SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
402-005SR	**1/2**	25	200	046	8.06
402-012SR	**1-1/4**	25	0	046	15.85

Special Reinforced Reducing Tee
Soc x SR Fipt - Stainless Steel Collar



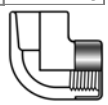
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
402-072SR	**1/2X1/4**	25	150	046	8.06
402-098SR	**3/4X1/4**	25	100	046	10.47
402-101SR	**3/4X1/2**	50	0	046	10.47
402-166SR	**1-1/4X1/2**	15	0	046	17.52
402-168SR	**1-1/4X1**	10	0	046	17.87
402-212SR	**1-1/2X1-1/4**	10	0	046	19.35
402-287SR	**2-1/2X1/2**	10	0	046	23.55
402-288SR	**2-1/2X3/4**	10	0	046	24.88
402-289SR	**2-1/2X1**	10	0	046	25.13
402-290SR	**2-1/2X1-1/4**	10	0	046	24.74
402-291SR	**2-1/2X1-1/2**	10	0	046	25.72
402-292SR	**2-1/2X2**	10	0	046	25.93
402-333SR	**3X1/2**	10	0	046	31.40
402-334SR	**3X3/4**	10	0	046	31.40
402-335SR	**3X1**	10	0	046	32.03
402-336SR	**3X1-1/4**	10	0	046	32.78
402-337SR	**3X1-1/2**	10	0	046	32.49
402-338SR	**3X2**	6	0	046	34.42
402-417SR	**4X1**	6	0	046	41.59
402-419SR	**4X1-1/2**	10	0	046	45.68
402-420SR	**4X2**	10	0	046	47.17
402-422SR	**4X3**	6	0	046	74.11

Special Reinforced Reducing Tee
Soc x SR Fipt-Stainless Steel Collar x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
403-095SR	**3/4X1/2X3/4**	50	0	046	2.73

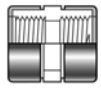
Special Reinforced 90° Ell & Reducing 90° Ell
Soc x SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
407-005SR	**1/2**	50	400	046	7.15
407-007SR	**3/4**	75	0	046	9.18
407-010SR	**1**	50	0	046	9.28
407-012SR	**1-1/4**	25	0	046	11.22
407-131SR	**1X3/4**	50	0	046	3.94
407-168SR[1]	**1-1/4X1**	25	0	046	15.55
407-249SR	**2X1**	10	0	046	17.68
407-251SR	**2X1-1/2**	10	0	046	18.65

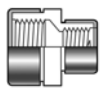
Sized with SR Adapter

Special Reinforced Coupling
SR Fipt - Stainless Steel Collar



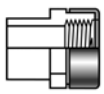
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
430-005SR	**1/2**	25	300	046	3.69
430-007SR	**3/4**	25	300	046	5.25
430-010SR	**1**	25	200	046	5.61
430-012SR	**1-1/4**	10	120	046	6.99
430-015SR	**1-1/2**	10	60	046	15.47
430-020SR	**2**	10	0	046	16.22

Special Reinforced Reducer Coupling
SR Fipt - Stainless Steel Collar



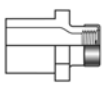
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
430-101SR	**3/4X1/2**	50	200	046	7.96

Special Reinforced Spigot Female Adapter
Spig x SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
478-005SR	**1/2**	50	600	046	4.08
478-007SR	**3/4**	25	300	046	4.81
478-010SR	**1**	50	0	046	7.41
478-012SR	**1-1/4**	25	0	046	11.80
478-015SR	**1-1/2**	25	0	046	14.15
478-020SR	**2**	15	0	046	23.55
478-030SR	**3**	5	0	046	43.28
478-040SR	**4**	5	0	046	66.85

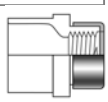
Special Reinforced Reducing Spigot Female Adapter
Spig x SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
478-072SR	**1/2X1/4**	25	450	046	11.35
478-098SR	**3/4X1/4**	50	300	046	16.53
478-128SR	**1X1/4**	50	400	046	17.04

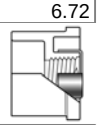
Spears® SR Series reinforced spigot adapters can be user-installed in a variety of socket type tees, elbows and reducer bushings for superior thread reinforcement demanding applications.

Special Reinforced Reducing Female Adapter
Soc x SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
435-072SR	**1/2X1/4**	50	600	046	4.06
435-074SR	**1/2X3/4**	50	400	046	4.52
435-101SR	**3/4X1/2**	50	400	046	4.52
435-102SR	**3/4X1**	50	0	046	6.72
435-130SR	**1X1/2**	50	0	046	6.72
435-131SR	**1X3/4**	25	200	046	6.72

Special Reinforced Reducer Bushing Flush Style
Spig x SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
438-128SR	**1X1/4**	25	150	046	3.31
438-166SR	**1-1/4X1/2**	25	100	046	6.04
438-207SR	**1-1/2X1/4**	25	100	046	8.43
438-209SR	**1-1/2X1/2**	25	100	046	8.43
438-210SR	**1-1/2X3/4**	25	100	046	8.43
438-247SR	**2X1/2**	10	80	046	10.32
438-248SR	**2X3/4**	10	80	046	10.32
438-249SR	**2X1**	10	80	046	10.32
438-334SR	**3X3/4**	10	0	046	40.38
438-335SR	**3X1**	10	0	046	40.38
438-336SR	**3X1-1/4**	10	0	046	40.38
438-337SR	**3X1-1/2**	10	0	046	40.38
438-420SR	**4X2**	6	0	046	62.07
438-421SR	**4X2-1/2**	6	0	046	69.86
438-528SR	**6X2**	5	0	046	71.48
438-530SR	**6X3**	5	0	046	64.35

PVC White Special Reinforced (SR) Fittings

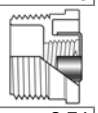
Special Reinforced Reducer Bushing Flush Style (continued)

Spig x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
438-532SR	**6X4**	5	0	046	71.48

Special Reinforced Reducer Bushing Flush Style

Mipt X SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
439-209SR	**1-1/2X1/2**	25	300	046	8.74
439-248SR	**2X3/4**	10	60	046	7.91
439-249SR	**2X1**	10	120	046	12.83

Special Reinforced Cap

SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
448-012SR	**1-1/4**	25	100	046	6.74

Special Reinforced Union

Soc x SR Fipt with Buna O-ring Seal - Stainless Steel Collar



235 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
459-002SR	**1/4**	25	150	046	15.32
459-003SR	**3/8**	25	100	046	15.32
459-005SR	**1/2**	10	60	046	8.32
459-007SR	**3/4**	10	60	046	11.45
459-010SR	**1**	10	40	046	15.24

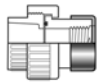
Special Reinforced Union (continued)

Soc x SR Fipt with Buna O-ring Seal - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
459-012SR	**1-1/4**	5	20	046	29.09
459-015SR	**1-1/2**	5	0	046	36.01
459-020SR	**2**	5	0	046	55.46
459-030SR	**3**	5	0	046	130.95
459-040SR	**4**	4	0	046	150.35
459-060SR	**6**	1	0	046	334.11

Special Reinforced Union

Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar



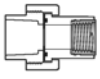
235 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
499-002SR	**1/4**	25	150	046	16.82
499-003SR	**3/8**	25	100	046	16.82
499-005SR	**1/2**	10	60	046	9.14
499-007SR	**3/4**	10	40	046	12.59
499-010SR	**1**	10	40	046	16.73
499-012SR	**1-1/4**	5	20	046	31.97
499-015SR	**1-1/2**	5	0	046	39.58
499-020SR	**2**	5	0	046	60.95
499-030SR	**3**	5	0	046	143.91
499-040SR	**4**	4	0	046	165.21
499-060SR	**6**	1	0	046	367.16

PVC White Brass Thread Fittings

Transition Union

Soc x Fipt with Brass Thread Insert & Buna-N O-ring Seal



235 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
459-010BR	**1**	10	0	046	64.74
459-012BR	**1-1/4**	5	20	046	108.76
459-015BR	**1-1/2**	5	0	046	143.89
459-020BR	**2**	5	0	046	191.94

Not intended to convey or dispense water for human consumption through drinking or cooking

Transition Union

Soc x Fipt with Brass Thread Insert & EPDM O-ring Seal



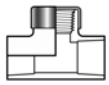
235 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
499-010BR	**1**	10	0	046	64.74
499-012BR	**1-1/4**	5	20	046	108.76
499-015BR	**1-1/2**	5	0	046	143.89
499-020BR	**2**	5	0	046	191.94

Not intended to convey or dispense water for human consumption through drinking or cooking

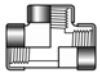
NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Special Reinforced Tee
Soc x SR Fipt - Stainless Steel Collar



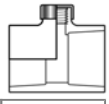
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
802-005SR	1/2	25	200	086	8.06
802-007SR	3/4	15	120	086	11.40
802-010SR	1	15	0	086	13.39
802-012SR	1-1/4	25	0	086	15.93
802-015SR	1-1/2	10	0	086	16.83
802-020SR	2	10	0	086	32.93
802-030SR	3	5	0	086	71.16
802-040SR	4	5	0	086	133.45

Special Reinforced Tee
SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
805-002SR	1/4	25	150	086	9.38
805-003SR	3/8	25	150	086	9.38
805-005SR	1/2	25	150	086	9.68
805-007SR	3/4	25	100	086	10.64
805-010SR	1	15	0	086	25.29
805-015SR	1-1/2	10	0	086	29.60
805-020SR	2	10	0	086	31.12

Special Reinforced Reducing Tee
Soc x SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
802-072SR	1/2X1/4	25	150	086	8.06
802-098SR	3/4X1/4	25	100	086	10.47
802-101SR	3/4X1/2	50	0	086	10.47
802-128SR[1]	1X1/4	10	80	086	24.79
802-130SR	1X1/2	50	0	086	12.92
802-131SR	1X3/4	15	0	086	24.79
802-164SR[1]	1-1/4X1/4	5	0	086	26.43
802-166SR	1-1/4X1/2	25	0	086	17.52
802-168SR	1-1/4X1	10	0	086	17.87
802-207SR[1]	1-1/2X1/4	10	0	086	30.84
802-211SR	1-1/2X1	10	0	086	19.35
802-212SR	1-1/2X1-1/4	10	0	086	19.35
802-245SR[1]	2X1/4	10	0	086	35.62
802-247SR	2X1/2	10	0	086	35.62
802-248SR	2X3/4	10	0	086	35.62
802-287SR	2-1/2X1/2	10	0	086	26.25
802-331SR[1]	3X1/4	5	0	086	68.00
802-333SR[1]	3X1/2	5	0	086	69.97
802-413SR[1]	4X1/4	5	0	086	93.64
802-415SR[1]	4X1/2	5	0	086	101.77

[1] Sized with Bushing

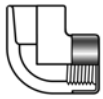
Special Reinforced Reducing Tee
Soc x SR Fipt - Stainless Steel Collar x Soc



(See also Gauge & Instrument Fittings for additional configurations)

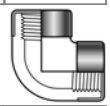
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
803-095SR	3/4X1/2X3/4	15	0	086	13.19

Special Reinforced 90° Ell
Soc x SR Fipt - Stainless Steel Collar



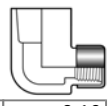
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
807-005SR	1/2	20	240	086	7.72
807-007SR	3/4	75	0	086	9.18
807-010SR	1	50	0	086	9.28
807-012SR	1-1/4	25	0	086	12.47
807-015SR	1-1/2	10	0	086	15.41
807-020SR	2	10	0	086	17.68
807-030SR	3	5	0	086	44.89
807-040SR	4	5	0	086	79.32

Special Reinforced 90° Ell
SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
808-003SR	3/8	25	150	086	4.51
808-005SR	1/2	20	120	086	4.51
808-007SR	3/4	20	120	086	5.67
808-010SR	1	50	0	086	6.60
808-012SR	1-1/4	25	0	086	7.05
808-015SR	1-1/2	10	0	086	11.00
808-020SR	2	10	0	086	12.39

Special Reinforced Reducing 90° Ell
Soc x SR Fipt - Stainless Steel Collar



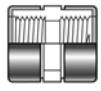
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
807-101SR	3/4X1/2	50	0	086	9.16
807-130SR	1X1/2	50	0	086	10.28

Special Reinforced 45° Ell
SR Fipt - Stainless Steel Collar



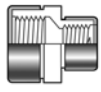
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
819-007SR	3/4	10	120	086	7.76

Special Reinforced Coupling
SR Fipt - Stainless Steel Collar



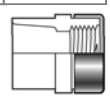
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
830-005SR	1/2	25	150	086	3.69
830-007SR	3/4	25	150	086	5.25
830-010SR	1	25	200	086	5.61
830-012SR	1-1/4	10	120	086	6.99
830-015SR	1-1/2	10	80	086	15.47
830-020SR	2	10	0	086	16.22

Special Reinforced Reducer Coupling
SR Fipt - Stainless Steel Collar



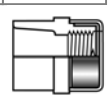
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
830-101SR	3/4X1/2	50	200	086	4.78
830-130SR	1X1/2	50	0	086	7.09
830-131SR	1X3/4	25	200	086	7.09
830-168SR	1-1/4X1	25	0	086	15.22
830-210SR	1-1/2X3/4	25	0	086	22.59
830-211SR	1-1/2X1	10	80	086	22.59
830-212SR	1-1/2X1-1/4	10	80	086	22.59
830-249SR	2X1	25	0	086	29.94
830-251SR	2X1-1/2	10	0	086	29.94

Special Reinforced Female Adapter
Soc x SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
835-002SR	1/4	25	450	086	5.59
835-003SR	3/8	25	300	086	5.59
835-005SR	1/2	25	300	086	3.11
835-007SR	3/4	25	300	086	4.52
835-010SR	1	25	200	086	6.72
835-012SR	1-1/4	10	60	086	10.86
835-015SR	1-1/2	10	80	086	13.37
835-020SR	2	10	0	086	23.32
835-025SR	2-1/2	5	0	086	36.79
835-030SR	3	15	0	086	41.45
835-040SR	4	5	0	086	71.24
835-060SR	6	6	0	086	92.56

Encapsulated Special Reinforced Female Adapter
Soc x ESR Fipt

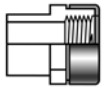


Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
835-002ESR	1/4	25	450	086	8.09

Encapsulated Special Reinforced Female Adapter (continued)
Soc x ESR Fipt

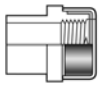
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
835-003ESR	3/8	25	300	086	8.09
835-005ESR	1/2	25	300	086	5.02
835-007ESR	3/4	25	300	086	7.41
835-010ESR	1	25	200	086	9.81
835-012ESR	1-1/4	10	80	086	15.83
835-015ESR	1-1/2	10	80	086	22.87
835-020ESR	2	10	0	086	34.00

Special Reinforced Spigot Female Adapter
Spig x SR Fipt - Stainless Steel Collar



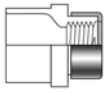
878-005SR	1/2	50	600	086	4.08
878-007SR	3/4	25	300	086	4.81
878-010SR	1	50	0	086	7.41
878-012SR	1-1/4	25	0	086	11.80
878-015SR	1-1/2	25	0	086	14.15
878-020SR	2	15	0	086	23.55
878-030SR	3	5	0	086	43.28
878-040SR	4	5	0	086	73.48

Encapsulated Special Reinforced Spigot Female Adapter
Spig x ESR Fipt



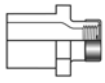
878-005ESR	1/2	50	600	086	5.57
878-007ESR	3/4	25	300	086	7.67
878-010ESR	1	50	0	086	10.53
878-012ESR	1-1/4	25	0	086	16.20
878-015ESR	1-1/2	25	0	086	23.00
878-020ESR	2	15	0	086	34.66

Special Reinforced Reducing Female Adapter
Soc x SR Fipt - Stainless Steel Collar



835-074SR	1/2X3/4	50	400	086	4.52
835-101SR	3/4X1/2	50	400	086	4.52
835-102SR	3/4X1	50	0	086	6.72
835-130SR	1X1/2	50	0	086	6.72
835-131SR	1X3/4	25	200	086	6.72

Special Reinforced Reducing Spigot Female Adapter
Spig x SR Fipt - Stainless Steel Collar



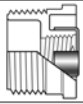
878-072SR	1/2X1/4	25	450	086	11.35
878-098SR	3/4X1/4	50	400	086	15.64
878-128SR	1X1/4	50	400	086	16.13

Reinforced Male Adapter
R Mipt x Soc - Stainless Steel Sleeve



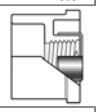
836-005R	1/2	25	150	086	3.84
836-007R	3/4	25	300	086	4.21
836-010R	1	10	60	086	7.38

Special Reinforced Reducer Bushing
Mipt x SR Fipt - Stainless Steel Collar



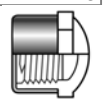
839-128SR	1X1/4	25	150	086	5.98
839-209SR	1-1/2X1/2	25	300	086	8.74
839-210SR	1-1/2X3/4	25	300	086	8.74
839-247SR	2X1/2	10	60	086	12.83
839-248SR	2X3/4	10	60	086	12.83
839-249SR	2X1	10	120	086	12.83
839-420SR	4X2	6	0	086	48.59

Special Reinforced Reducer Bushing Flush Style
Spig x SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
838-128SR	1X1/4	25	150	086	3.31
838-166SR	1-1/4X1/2	25	100	086	6.04
838-207SR	1-1/2X1/4	25	200	086	8.43
838-209SR	1-1/2X1/2	10	60	086	8.43
838-210SR	1-1/2X3/4	25	200	086	8.43
838-247SR	2X1/2	10	80	086	10.32
838-248SR	2X3/4	10	80	086	10.32
838-249SR	2X1	10	80	086	10.32
838-334SR	3X3/4	10	0	086	40.38
838-335SR	3X1	10	0	086	40.38
838-336SR	3X1-1/4	10	0	086	40.38
838-337SR	3X1-1/2	10	0	086	40.38
838-528SR	6X2	5	0	086	71.48
838-530SR	6X3	5	0	086	64.35
838-532SR	6X4	5	0	086	71.48

Special Reinforced Cap
SR Fipt - Stainless Steel Collar



848-002SR	1/4	25	500	086	4.03
848-003SR	3/8	25	450	086	4.03
848-005SR	1/2	50	300	086	4.41
848-007SR	3/4	25	300	086	5.65
848-030SR	3	5	0	086	34.84

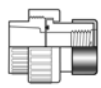
Special Reinforced Union 2000
Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8099-005SR	1/2	20	160	086	8.00
8099-007SR	3/4	20	80	086	11.40
8099-010SR	1	15	90	086	14.71
8099-012SR	1-1/4	10	0	086	25.58
8099-015SR	1-1/2	10	0	086	33.15
8099-020SR	2	5	0	086	53.35
8099-025SR	2-1/2	5	0	086	114.12
8099-030SR	3	5	0	086	127.04
8099-040SR	4	4	0	086	144.99
8099-060SR	6	1	0	086	322.21

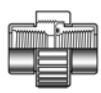
Special Reinforced Union 2000
Soc x SR Fipt with FKM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8059-005SR	1/2	20	120	086	8.32
8059-007SR	3/4	20	80	086	11.45
8059-010SR	1	15	90	086	14.88
8059-012SR	1-1/4	10	0	086	28.44
8059-015SR	1-1/2	10	0	086	35.09
8059-020SR	2	5	0	086	53.59
8059-025SR	2-1/2	5	0	086	115.19
8059-030SR	3	5	0	086	130.95
8059-040SR	4	4	0	086	150.35
8059-060SR	6	1	0	086	334.11

Special Reinforced Union 2000
SR Fipt with EPDM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Presure rating @ 73°F (23°C)

8098-005SR	1/2	20	120	086	8.43
8098-007SR	3/4	20	80	086	11.48
8098-010SR	1	15	90	086	15.20

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Special Reinforced Union 2000 (continued)
SR Fipt with EPDM O-ring Seal - Stainless Steel Collar

8098-012SR	**1-1/4**	10	0	086	28.26
8098-015SR	**1-1/2**	10	0	086	35.55
8098-020SR	**2**	5	0	086	55.86
8098-025SR	**2-1/2**	5	0	086	112.75
8098-030SR	**3**	5	0	086	132.97
8098-040SR	**4**	4	0	086	152.65
8098-060SR	**6**	1	0	086	339.26

Special Reinforced Union 2000
SR Fipt with FKM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8058-005SR	**1/2**	20	120	086	8.56
8058-007SR	**3/4**	20	80	086	11.59
8058-010SR	**1**	15	90	086	15.51
8058-012SR	**1-1/4**	10	0	086	29.54
8058-015SR	**1-1/2**	10	0	086	36.35
8058-020SR	**2**	5	0	086	56.44
8058-025SR	**2-1/2**	5	0	086	118.02
8058-030SR	**3**	5	0	086	134.25
8058-040SR	**4**	4	0	086	158.04
8058-060SR	**6**	1	0	086	351.19

Special Reinforced Union (Old Style)
Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

899-002SR	**1/4**	25	150	086	15.11
899-003SR	**3/8**	25	100	086	15.11
899-005SR	**1/2**	10	60	086	8.00
899-007SR	**3/4**	10	40	086	11.40
899-010SR	**1**	10	40	086	14.71
899-012SR	**1-1/4**	5	20	086	25.58
899-015SR	**1-1/2**	5	0	086	33.15
899-020SR	**2**	5	0	086	53.35
899-030SR	**3**	5	0	086	127.04
899-040SR	**4**	4	0	086	144.99

Special Reinforced Union (Old Style)
Soc x SR Fipt with FKM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

859-005SR	**1/2**	10	60	086	8.32
859-007SR	**3/4**	10	40	086	11.45
859-010SR	**1**	10	40	086	14.88
859-012SR	**1-1/4**	5	20	086	28.44
859-015SR	**1-1/2**	5	0	086	35.09
859-020SR	**2**	5	0	086	53.59
859-030SR	**3**	5	0	086	130.95
859-040SR	**4**	4	0	086	150.35

Special Reinforced Flange One Piece Threaded
SR Fipt - Stainless Steel Collar



150 psi Maximum Internal Pressure Rating @73°F (23°C)

852-005SR	**1/2**	25	0	086	11.91
852-007SR	**3/4**	25	0	086	13.99
852-010SR	**1**	15	0	086	15.29
852-012SR	**1-1/4**	15	0	086	21.07
852-015SR	**1-1/2**	15	0	086	23.06
852-020SR	**2**	10	0	086	23.62
852-025SR	**2-1/2**	10	0	086	54.09
852-030SR	**3**	10	0	086	55.69
852-040SR	**4**	5	0	086	104.69

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

PVC New Style Special Reinforced (SR) Threaded Tank Adapters with Neoprene Gaskets
Soc x SR Fipt - Stainless Steel Collar



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171-002SR	**1/4**	25	150	100	35.58
8171-003SR	**3/8**	25	200	100	35.58
8171-005SR	**1/2**	25	0	100	35.58
8171-007SR	**3/4**	25	0	100	41.22
8171-010SR	**1**	25	0	100	46.42
8171-012SR	**1-1/4**	20	0	100	57.06
8171-015SR	**1-1/2**	20	0	100	65.49
8171-020SR	**2**	15	0	100	93.86
8171-025SR	**2-1/2**	4	0	100	151.13
8171-030SR	**3**	4	0	100	179.89
8171-040SR	**4**	2	0	100	332.76
8171-060SR	**6**	1	0	100	622.77

PVC New Style Special Reinforced (SR) Threaded Tank Adapters with EPDM Gaskets
Soc x SR Fipt - Stainless Steel Collar



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171E-002SR	**1/4**	25	150	100	36.83
8171E-003SR	**3/8**	25	200	100	36.83
8171E-005SR	**1/2**	25	0	100	36.83
8171E-007SR	**3/4**	25	0	100	42.00
8171E-010SR	**1**	25	0	100	51.06
8171E-012SR	**1-1/4**	20	0	100	61.86
8171E-015SR	**1-1/2**	20	0	100	70.31
8171E-020SR	**2**	15	0	100	100.36
8171E-025SR	**2-1/2**	4	0	100	156.03
8171E-030SR	**3**	4	0	100	185.76
8171E-040SR	**4**	2	0	100	340.58
8171E-060SR	**6**	1	0	100	644.19

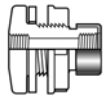
PVC New Style Special Reinforced (SR) Threaded Tank Adapters with FKM Gaskets
Soc x SR Fipt - Stainless Steel Collar



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171V-002SR	**1/4**	25	150	100	59.79
8171V-003SR	**3/8**	25	200	100	59.79
8171V-005SR	**1/2**	25	0	100	59.79
8171V-007SR	**3/4**	25	0	100	65.61
8171V-010SR	**1**	25	0	100	80.87
8171V-012SR	**1-1/4**	20	0	100	90.56
8171V-015SR	**1-1/2**	20	0	100	102.08
8171V-020SR	**2**	15	0	100	156.33
8171V-025SR	**2-1/2**	4	0	100	238.00
8171V-030SR	**3**	4	0	100	283.32
8171V-040SR	**4**	2	0	100	680.71
8171V-060SR	**6**	2	0	100	1206.42

PVC New Style Special Reinforced (SR) Threaded Tank Adapters with Neoprene Gaskets
Fipt x SR Fipt - Stainless Steel Collar



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172-002SR	**1/4**	25	150	100	47.57
8172-003SR	**3/8**	25	200	100	47.57
8172-005SR	**1/2**	25	0	100	47.57
8172-007SR	**3/4**	25	0	100	52.66
8172-010SR	**1**	25	0	100	58.24
8172-012SR	**1-1/4**	20	0	100	78.43
8172-015SR	**1-1/2**	20	0	100	88.39
8172-020SR	**2**	15	0	100	114.53
8172-025SR	**2-1/2**	4	0	100	174.37

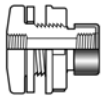
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

PVC New Style Special Reinforced (SR) Threaded Tank Adapters with Neoprene Gaskets (continued)

Fipt x SR Fipt - Stainless Steel Collar

8172-030SR	**3**	4	0	100	207.59
8172-040SR	**4**	2	0	100	369.57
8172-060SR	**6**	1	0	100	714.88

PVC New Style Special Reinforced (SR) Threaded Tank Adapters with EPDM Gaskets

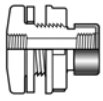


Fipt x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172E-002SR	**1/4**	25	150	100	48.94
8172E-003SR	**3/8**	25	200	100	48.94
8172E-005SR	**1/2**	25	0	100	48.94
8172E-007SR	**3/4**	25	0	100	53.65
8172E-010SR	**1**	25	0	100	64.19
8172E-012SR	**1-1/4**	20	0	100	85.21
8172E-015SR	**1-1/2**	20	0	100	95.06
8172E-020SR	**2**	15	0	100	122.60
8172E-025SR	**2-1/2**	4	0	100	180.17
8172E-030SR	**3**	4	0	100	214.46
8172E-040SR	**4**	2	0	100	378.38
8172E-060SR	**6**	1	0	100	739.66

PVC New Style Special Reinforced (SR) Threaded Tank Adapters with FKM Gaskets



Fipt x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172V-002SR	**1/4**	25	150	100	72.79
8172V-003SR	**3/8**	25	200	100	72.79
8172V-005SR	**1/2**	25	0	100	72.79
8172V-007SR	**3/4**	25	0	100	78.15
8172V-010SR	**1**	25	0	100	89.78
8172V-012SR	**1-1/4**	20	0	100	103.21
8172V-015SR	**1-1/2**	20	0	100	120.48
8172V-020SR	**2**	15	0	100	175.36
8172V-025SR	**2-1/2**	4	0	100	257.49
8172V-030SR	**3**	4	0	100	306.62
8172V-040SR	**4**	2	0	100	714.88
8172V-060SR	**6**	2	0	100	1349.89

PVC Elastomer Expansion Joint



with Neoprene Bellows SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

EJ01-007SR	**3/4**	10	0	085	200.62
EJ01-010SR	**1**	10	0	085	228.47
EJ01-012SR	**1-1/4**	15	0	085	248.49
EJ01-015SR	**1-1/2**	10	0	085	317.23
EJ01-020SR	**2**	8	0	085	381.13
EJ01-025SR	**2-1/2**	4	0	085	555.41
EJ01-030SR	**3**	2	0	085	746.94

PVC Elastomer Expansion Joint



with EPDM Bellows SR Fipt - Stainless Steel Collar

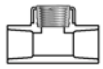
150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

EJ21-007SR	**3/4**	10	0	085	204.69
EJ21-010SR	**1**	10	0	085	233.14
EJ21-012SR	**1-1/4**	15	0	085	253.59
EJ21-015SR	**1-1/2**	10	0	085	323.68
EJ21-020SR	**2**	8	0	085	388.92
EJ21-025SR	**2-1/2**	4	0	085	563.59
EJ21-030SR	**3**	2	0	085	762.18

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

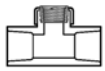
Transition Tee
Soc x Fipt With Brass Thread Insert



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
802-005BR	**1/2**	20	120	086	32.92
802-007BR	**3/4**	20	80	086	65.97

Not intended to convey or dispense water for human consumption through drinking or cooking

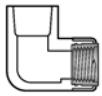
Transition Reducing Tee
Soc x Fipt With Brass Thread Insert



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
802-072BR	**1/2X1/4**	20	120	086	35.48
802-101BR	**3/4X1/2**	50	0	086	41.08

Not intended to convey or dispense water for human consumption through drinking or cooking

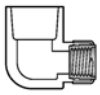
Transition 90° EII
Soc x Fipt With Brass Thread Insert



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
807-005BR	**1/2**	20	240	086	28.92
807-007BR	**3/4**	20	160	086	51.19

Not intended to convey or dispense water for human consumption through drinking or cooking

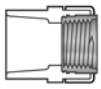
Transition Reducing 90° EII
Soc x Fipt With Brass Thread Insert



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
807-101BR	**3/4X1/2**	20	120	086	36.09

Not intended to convey or dispense water for human consumption through drinking or cooking

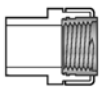
Transition Female Adapter
Soc x Fipt With Brass Thread Insert



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
835-005BR	**1/2**	25	150	086	24.97
835-007BR	**3/4**	15	90	086	35.86
835-010BR	**1**	15	90	086	61.80
835-012BR	**1-1/4**	15	60	086	101.77
835-015BR	**1-1/2**	10	40	086	133.69
835-020BR	**2**	8	32	086	165.59

Not intended to convey or dispense water for human consumption through drinking or cooking

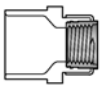
Transition Female Adapter
Spig x Fipt With Brass Thread Insert



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
878-005BR	**1/2**	25	150	086	21.00
878-010BR	**1**	15	90	086	66.81

Not intended to convey or dispense water for human consumption through drinking or cooking

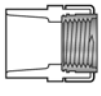
Transition Reducing Female Adapter
Soc x Fipt With Brass Thread Insert



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
835-101BR	**3/4X1/2**	50	0	086	37.07

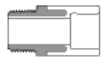
Not intended to convey or dispense water for human consumption through drinking or cooking

Transition Female Adapter
Soc x Fipt With 316 Stainless Steel Thread Insert



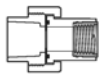
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
835-005SS	**1/2**	25	300	086	48.93
835-007SS	**3/4**	15	90	086	70.32
835-010SS	**1**	15	90	086	119.65
835-012SS	**1-1/4**	15	60	086	199.83
835-015SS	**1-1/2**	10	40	086	261.04
835-020SS	**2**	8	32	086	334.87

Transiton Male Adapter w/ Brass Thread
Brass Mipt x Socket



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
836-005BR	**1/2**	40	160	086	27.48
836-007BR	**3/4**	40	160	086	41.44
836-010BR	**1**	10	60	086	67.39
836-012BR	**1-1/4**	10	60	086	113.52
836-015BR	**1-1/2**	10	40	086	150.63
836-020BR	**2**	8	32	086	187.13

Union
Soc x Fipt with Brass Thread Insert & FKM O-ring Seal

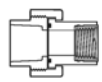


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
859-007BR	**3/4**	10	40	086	53.19
859-010BR	**1**	10	0	086	65.64
859-012BR	**1-1/4**	5	20	086	113.29
859-015BR	**1-1/2**	5	0	086	149.94
859-020BR	**2**	5	0	086	199.26

Not intended to convey or dispense water for human consumption through drinking or cooking

Union
Soc x Fipt with Brass Thread Insert & EPDM O-ring Seal

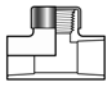


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
899-007BR	**3/4**	10	60	086	47.96
899-010BR	**1**	10	0	086	64.68
899-012BR	**1-1/4**	5	20	086	108.77
899-015BR	**1-1/2**	5	0	086	143.96
899-020BR	**2**	5	0	086	191.89

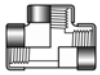
Not intended to convey or dispense water for human consumption through drinking or cooking

Special Reinforced Tee
Soc x SR Fipt - Stainless Steel Collar



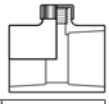
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
802-005CSR	1/2	50	0	096	19.67
802-007CSR	3/4	15	120	096	28.75
802-010CSR	1	15	0	096	36.17
802-012CSR	1-1/4	15	0	096	41.96
802-015CSR	1-1/2	10	0	096	41.96
802-020CSR	2	10	0	096	68.59
802-030CSR	3	5	0	096	98.78
802-040CSR	4	5	0	096	186.09

Special Reinforced Tee
SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
805-002CSR	1/4	20	160	096	17.60
805-003CSR	3/8	25	150	096	17.60
805-005CSR	1/2	25	150	096	23.55
805-007CSR	3/4	25	100	096	26.98
805-010CSR	1	15	0	096	40.29
805-015CSR	1-1/2	10	0	096	42.78
805-020CSR	2	10	0	096	50.94

Special Reinforced Reducing Tee
Soc x SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
802-072CSR	1/2X1/4	25	200	096	19.67
802-098CSR	3/4X1/4	25	100	096	26.29
802-101CSR	3/4X1/2	50	0	096	26.29
802-128CSR[1]	1X1/4	15	0	096	40.60
802-130CSR	1X1/2	50	0	096	16.06
802-131CSR	1X3/4	15	0	096	40.60
802-164CSR[1]	1-1/4X1/4	5	0	096	53.99
802-166CSR	1-1/4X1/2	15	0	096	42.77
802-168CSR	1-1/4X1	10	0	096	43.64
802-207CSR[1]	1-1/2X1/4	15	0	096	77.31
802-211CSR	1-1/2X1	10	0	096	51.24
802-212CSR	1-1/2X1-1/4	10	0	096	51.24
802-245CSR[1]	2X1/4	10	0	096	88.80
802-247CSR	2X1/2	10	0	096	79.93
802-248CSR	2X3/4	10	0	096	88.80
802-287CSR	2-1/2X1/2	10	0	096	61.07
802-331CSR[1]	3X1/4	5	0	096	169.62
802-413CSR[1]	4X1/4	5	0	096	184.06

[1] Sized with Bushing

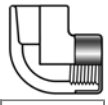
Special Reinforced Reducing Tee
Soc x SR Fipt - Stainless Steel Collar x Soc



(See also Gauge & Instrument Fittings for additional configurations)

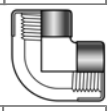
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
803-095CSR	3/4X1/2X3/4	15	0	096	16.20

Special Reinforced 90° Ell
Soc x SR Fipt - Stainless Steel Collar



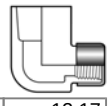
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
807-005CSR	1/2	20	240	096	9.55
807-007CSR	3/4	75	0	096	11.22
807-010CSR	1	50	0	096	13.51
807-012CSR	1-1/4	25	0	096	27.89
807-015CSR	1-1/2	10	0	096	33.53
807-020CSR	2	10	0	096	41.95

Special Reinforced 90° Ell
SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
808-003CSR	3/8	25	150	096	5.77
808-005CSR	1/2	20	120	096	5.77
808-007CSR	3/4	20	160	096	8.45
808-010CSR	1	50	0	096	10.83
808-012CSR	1-1/4	25	0	096	20.84
808-015CSR	1-1/2	10	0	096	24.54
808-020CSR	2	10	0	096	32.87

Special Reinforced Reducing 90° Ell
Soc x SR Fipt - Stainless Steel Collar



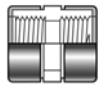
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
807-101CSR	3/4X1/2	50	0	096	12.17
807-130CSR	1X1/2	50	0	096	13.12

Special Reinforced 45° Ell
SR Fipt - Stainless Steel Collar



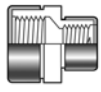
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
819-007CSR	3/4	10	120	096	13.19

Special Reinforced Coupling
SR Fipt - Stainless Steel Collar



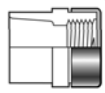
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
830-005CSR	1/2	25	300	096	9.31
830-007CSR	3/4	25	300	096	15.04
830-010CSR	1	25	200	096	17.08
830-012CSR	1-1/4	10	120	096	18.15
830-015CSR	1-1/2	10	80	096	19.46
830-020CSR	2	10	0	096	23.00

Special Reinforced Reducer Coupling
SR Fipt - Stainless Steel Collar



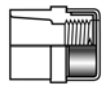
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
830-101CSR	3/4X1/2	50	200	096	16.68
830-130CSR	1X1/2	50	0	096	20.14
830-131CSR	1X3/4	25	200	096	20.14
830-168CSR	1-1/4X1	25	0	096	27.39
830-210CSR	1-1/2X3/4	25	0	096	39.17
830-211CSR	1-1/2X1	10	80	096	39.17
830-212CSR	1-1/2X1-1/4	10	80	096	39.17
830-249CSR	2X1	25	0	096	96.42
830-251CSR	2X1-1/2	15	0	096	96.42

Special Reinforced Female Adapter
Soc x SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
835-002CSR	1/4	25	450	096	13.06
835-003CSR	3/8	25	300	096	13.06
835-005CSR	1/2	25	300	096	5.61
835-007CSR	3/4	25	150	096	6.06
835-010CSR	1	25	200	096	13.82
835-012CSR	1-1/4	10	60	096	14.18
835-015CSR	1-1/2	10	80	096	16.46
835-020CSR	2	10	0	096	23.39
835-025CSR	2-1/2	5	0	096	54.39
835-030CSR	3	15	0	096	111.75
835-040CSR	4	5	0	096	185.99
835-060CSR	6	6	0	096	290.55

Encapsulated Special Reinforced (SR) Female Adapter
Soc x ESR Fipt



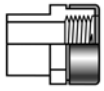
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
835-002CESR	1/4	25	450	096	16.57

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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Encapsulated Special Reinforced (SR) Female Adapter (continued)
Soc x ESR Fipt

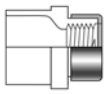
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
835-003CESR	3/8	25	300	096	16.57
835-005CESR	1/2	25	300	096	8.60
835-007CESR	3/4	25	300	096	9.08
835-010CESR	1	25	200	096	20.01
835-012CESR	1-1/4	10	80	096	20.48
835-015CESR	1-1/2	10	0	096	26.52
835-020CESR	2	10	0	096	41.22

Special Reinforced Spigot Female Adapter
Spig x SR Fipt - Stainless Steel Collar



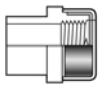
878-005CSR	1/2	50	600	096	5.98
878-007CSR	3/4	25	300	096	6.31
878-010CSR	1	50	0	096	14.19
878-012CSR	1-1/4	25	0	096	14.68
878-015CSR	1-1/2	25	0	096	17.04
878-020CSR	2	15	0	096	31.04
878-030CSR	3	5	0	096	113.15
878-040CSR	4	5	0	096	189.95

Special Reinforced Reducing Female Adapter
Soc x SR Fipt - Stainless Steel Collar



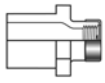
835-074CSR	1/2X3/4	50	400	096	6.06
835-101CSR	3/4X1/2	50	400	096	6.06
835-102CSR	3/4X1	50	0	096	13.82
835-130CSR	1X1/2	50	0	096	13.82
835-131CSR	1X3/4	25	200	096	13.82

Encapsulated Special Reinforced (SR) Female Adapter
Spig x ESR Fipt



878-005CESR	1/2	50	600	096	8.85
878-007CESR	3/4	25	300	096	9.42
878-010CESR	1	50	0	096	20.20
878-012CESR	1-1/4	25	0	096	20.75
878-015CESR	1-1/2	25	0	096	27.05
878-020CESR	2	15	0	096	41.81

Special Reinforced Reducing Spigot Female Adapter
Spig x SR Fipt - Stainless Steel Collar



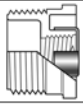
878-072CSR	1/2X1/4	25	450	096	17.14
878-098CSR	3/4X1/4	50	400	096	19.95
878-128CSR	1X1/4	50	400	096	22.33

Reinforced Male Adapter
R Mipt x Soc - Stainless Steel Sleeve



836-005CR	1/2	25	150	096	8.62
836-007CR	3/4	25	300	096	9.87
836-010CR	1	10	120	096	11.71

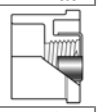
Special Reinforced Reducing Bushing
Mipt x SR Fipt - Stainless Steel Collar



839-209CSR	1-1/2X1/2	25	300	096	22.11
839-210CSR	1-1/2X3/4	25	300	096	22.11
839-247CSR	2X1/2	10	60	096	24.43
839-248CSR	2X3/4	10	60	096	24.43
839-249CSR	2X1	10	120	096	24.43
839-420CSR	4X2	6	0	096	135.66

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Special Reinforced Reducer Bushing
Spig x SR Fipt - Stainless Steel Collar



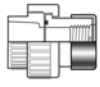
838-128CSR	1X1/4	25	150	096	12.74
838-207CSR	1-1/2X1/4	25	200	096	21.55
838-209CSR	1-1/2X1/2	10	120	096	22.46
838-210CSR	1-1/2X3/4	10	120	096	22.46
838-247CSR	2X1/2	10	80	096	30.86
838-248CSR	2X3/4	10	80	096	30.86
838-249CSR	2X1	10	80	096	30.86
838-334CSR	3X3/4	10	0	096	130.68
838-335CSR	3X1	10	0	096	130.68
838-336CSR	3X1-1/4	10	0	096	130.68
838-337CSR	3X1-1/2	10	0	096	130.68
838-528CSR	6X2	5	0	096	449.27
838-530CSR	6X3	5	0	096	449.27

Special Reinforced Cap
SR Fipt - Stainless Steel Collar



848-002CSR	1/4	25	500	096	7.06
848-003CSR	3/8	25	450	096	7.06
848-007CSR	3/4	25	300	096	11.00
848-030CSR	3	5	0	096	122.80

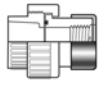
Special Reinforced Union 2000
Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8099-005CSR	1/2	20	160	096	15.81
8099-007CSR	3/4	20	160	096	28.07
8099-010CSR	1	15	90	096	38.87
8099-012CSR	1-1/4	10	0	096	73.64
8099-015CSR	1-1/2	10	0	096	80.09
8099-020CSR	2	5	0	096	84.34
8099-025CSR	2-1/2	5	0	096	144.66
8099-030CSR	3	5	0	096	234.95
8099-040CSR	4	4	0	096	275.93
8099-060CSR	6	1	0	096	613.20

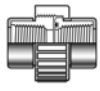
Special Reinforced Union 2000
Soc x SR Fipt with FKM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8059-005CSR	1/2	25	200	096	16.13
8059-007CSR	3/4	20	160	096	28.45
8059-010CSR	1	15	90	096	39.20
8059-012CSR	1-1/4	10	0	096	74.74
8059-015CSR	1-1/2	10	0	096	81.24
8059-020CSR	2	5	0	096	84.58
8059-030CSR	3	5	0	096	237.94
8059-040CSR	4	4	0	096	277.60

Special Reinforced Union 2000
SR Fipt with FKM O-ring Seal - Stainless Steel Collar



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8058-005CSR	1/2	20	160	096	16.55
8058-007CSR	3/4	20	80	096	28.85
8058-010CSR	1	15	90	096	39.65
8058-012CSR	1-1/4	10	0	096	74.74
8058-015CSR	1-1/2	10	0	096	81.56
8058-020CSR	2	5	0	096	85.94
8058-030CSR	3	5	0	096	242.85
8058-040CSR	4	4	0	096	284.51

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Special Reinforced Union 2000 (continued)

SR Fipt with FKM O-ring Seal - Stainless Steel Collar

8058-060CSR	**6**	1	0	096	640.73

Special Reinforced Union 2000



SR Fipt with EPDM O-ring Seal - Stainless Steel Collar

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8098-005CSR	**1/2**	20	160	096	16.00
8098-007CSR	**3/4**	20	80	096	28.59
8098-010CSR	**1**	15	90	096	39.20
8098-012CSR	**1-1/4**	10	0	096	74.01
8098-015CSR	**1-1/2**	10	0	096	80.93
8098-020CSR	**2**	5	0	096	85.09
8098-025CSR	**2-1/2**	5	0	096	147.05
8098-030CSR	**3**	5	0	096	239.09
8098-040CSR	**4**	4	0	096	276.79
8098-060CSR	**6**	1	0	096	615.09

Special Reinforced Union (Old Style)



Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

899-002CSR	**1/4**	25	150	096	25.21
899-003CSR	**3/8**	25	100	096	25.21
899-005CSR	**1/2**	10	60	096	15.81
899-007CSR	**3/4**	10	40	096	28.07
899-010CSR	**1**	10	40	096	38.87
899-012CSR	**1-1/4**	5	20	096	73.64
899-015CSR	**1-1/2**	5	0	096	80.09
899-020CSR	**2**	5	0	096	84.34
899-030CSR	**3**	5	0	096	234.95
899-040CSR	**4**	4	0	096	275.93

Special Reinforced Union (Old Style)



Soc x SR Fipt with FKM O-ring Seal - Stainless Steel Collar

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

859-002CSR	**1/4**	25	150	096	25.38
859-003CSR	**3/8**	25	100	096	25.38
859-005CSR	**1/2**	10	60	096	16.13
859-007CSR	**3/4**	10	40	096	28.45
859-010CSR	**1**	10	40	096	39.20
859-012CSR	**1-1/4**	5	20	096	74.74
859-015CSR	**1-1/2**	5	0	096	81.24
859-020CSR	**2**	5	0	096	84.58
859-030CSR	**3**	5	0	096	237.94
859-040CSR	**4**	4	0	096	277.60

Special Reinforced Flange One Piece Threaded



SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

852-005CSR	**1/2**	25	0	096	20.65
852-007CSR	**3/4**	25	0	096	25.05
852-010CSR	**1**	15	0	096	27.41
852-012CSR	**1-1/4**	15	0	096	37.93
852-015CSR	**1-1/2**	15	0	096	40.21
852-020CSR	**2**	10	0	096	41.19
852-025CSR	**2-1/2**	10	0	096	66.27
852-030CSR	**3**	10	0	096	65.76
852-040CSR	**4**	5	0	096	123.22

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

CPVC New Style Special Reinforced (SR) Threaded Tank Adapters with Neoprene Gaskets



Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171-002CSR	**1/4**	25	150	101	49.80
8171-003CSR	**3/8**	25	200	101	49.80
8171-005CSR	**1/2**	25	0	101	49.80
8171-007CSR	**3/4**	25	0	101	59.60
8171-010CSR	**1**	25	0	101	67.42
8171-012CSR	**1-1/4**	20	0	101	86.97
8171-015CSR	**1-1/2**	20	0	101	97.64
8171-020CSR	**2**	15	0	101	135.02
8171-025CSR	**2-1/2**	4	0	101	205.39
8171-030CSR	**3**	4	0	101	244.46
8171-040CSR	**4**	2	0	101	392.88
8171-060CSR	**6**	1	0	101	1037.65

CPVC New Style Special Reinforced (SR) Threaded Tank Adapters with EPDM Gaskets



Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171E-002CSR	**1/4**	25	150	101	56.44
8171E-003CSR	**3/8**	25	200	101	56.44
8171E-005CSR	**1/2**	25	0	101	56.44
8171E-007CSR	**3/4**	25	0	101	63.79
8171E-010CSR	**1**	25	0	101	76.27
8171E-012CSR	**1-1/4**	20	0	101	95.32
8171E-015CSR	**1-1/2**	20	0	101	103.13
8171E-020CSR	**2**	15	0	101	145.79
8171E-025CSR	**2-1/2**	4	0	101	214.24
8171E-030CSR	**3**	4	0	101	255.05
8171E-040CSR	**4**	2	0	101	408.93
8171E-060CSR	**6**	2	0	101	1079.93

CPVC New Style Special Reinforced (SR) Threaded Tank Adapters with FKM Gaskets

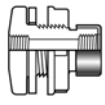


Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171V-002CSR	**1/4**	25	150	101	73.54
8171V-003CSR	**3/8**	25	200	101	73.54
8171V-005CSR	**1/2**	25	0	101	73.54
8171V-007CSR	**3/4**	25	0	101	85.01
8171V-010CSR	**1**	25	0	101	98.89
8171V-012CSR	**1-1/4**	20	0	101	122.59
8171V-015CSR	**1-1/2**	20	0	101	130.91
8171V-020CSR	**2**	15	0	101	194.93
8171V-025CSR	**2-1/2**	4	0	101	287.26
8171V-030CSR	**3**	4	0	101	342.05
8171V-040CSR	**4**	2	0	101	730.36
8171V-060CSR	**6**	2	0	101	1803.22

CPVC New Style Special Reinforced (SR) Threaded Tank Adapters with Neoprene Gaskets



Fipt x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172-002CSR	**1/4**	25	150	101	65.97
8172-003CSR	**3/8**	25	200	101	65.97
8172-005CSR	**1/2**	25	0	101	65.97
8172-007CSR	**3/4**	25	0	101	76.61
8172-010CSR	**1**	25	0	101	84.41
8172-012CSR	**1-1/4**	20	0	101	119.75
8172-015CSR	**1-1/2**	20	0	101	133.78
8172-020CSR	**2**	15	0	101	165.40
8172-025CSR	**2-1/2**	4	0	101	240.05

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
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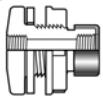
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

CPVC New Style Special Reinforced (SR) Threaded Tank Adapters with Neoprene Gaskets (continued)

Fipt x SR Fipt - Stainless Steel Collar

8172-030CSR	**3**	4	0	101	285.78
8172-040CSR	**4**	2	0	101	438.93
8172-060CSR	**6**	2	0	101	1175.97

CPVC New Style Special Reinforced (SR) Threaded Tank Adapters with EPDM Gaskets

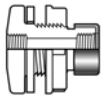


Fipt x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172E-002CSR	**1/4**	25	150	101	68.55
8172E-003CSR	**3/8**	25	200	101	68.55
8172E-005CSR	**1/2**	25	0	101	68.55
8172E-007CSR	**3/4**	25	0	101	81.17
8172E-010CSR	**1**	25	0	101	88.12
8172E-012CSR	**1-1/4**	20	0	101	124.38
8172E-015CSR	**1-1/2**	20	0	101	144.60
8172E-020CSR	**2**	15	0	101	177.48
8172E-025CSR	**2-1/2**	4	0	101	267.74
8172E-030CSR	**3**	4	0	101	318.73
8172E-040CSR	**4**	2	0	101	515.99
8172E-060CSR	**6**	2	0	101	1193.37

CPVC New Style Special Reinforced (SR) Threaded Tank Adapters with FKM Gaskets



Fipt x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172V-002CSR	**1/4**	25	150	101	105.26
8172V-003CSR	**3/8**	25	200	101	105.26
8172V-005CSR	**1/2**	25	0	101	105.26
8172V-007CSR	**3/4**	25	0	101	119.08
8172V-010CSR	**1**	25	0	101	137.53
8172V-012CSR	**1-1/4**	20	0	101	169.80
8172V-015CSR	**1-1/2**	20	0	101	178.83
8172V-020CSR	**2**	15	0	101	274.84
8172V-025CSR	**2-1/2**	4	0	101	397.14
8172V-030CSR	**3**	4	0	101	472.79
8172V-040CSR	**4**	2	0	101	1206.41
8172V-060CSR	**6**	2	0	101	2190.53

CPVC Elastomer Expansion Joint

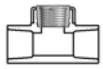


with EPDM Bellows SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

EJ21-007CSR	**3/4**	10	0	085	208.22
EJ21-010CSR	**1**	10	0	085	239.45
EJ21-012CSR	**1-1/4**	15	0	085	264.60
EJ21-015CSR	**1-1/2**	10	0	085	337.27
EJ21-020CSR	**2**	8	0	085	445.81
EJ21-025CSR	**2-1/2**	4	0	085	619.13
EJ21-030CSR	**3**	2	0	085	824.60

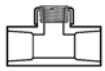
Transition Tee
Soc x Fipt With Brass Thread Insert



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
802-005CBR	**1/2**	20	140	096	58.38
802-007CBR	**3/4**	25	0	096	116.75

Not intended to convey or dispense water for human consumption through drinking or cooking

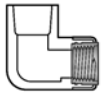
Transition Reducing Tee
Soc x Fipt With Brass Thread Insert



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
802-101CBR	**3/4X1/2**	50	0	096	72.36

Not intended to convey or dispense water for human consumption through drinking or cooking

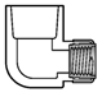
Transition 90° Ell
Soc x Fipt With Brass Thread Insert



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
807-005CBR	**1/2**	20	240	096	51.33
807-007CBR	**3/4**	20	160	096	89.61

Not intended to convey or dispense water for human consumption through drinking or cooking

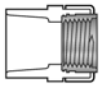
Transition Reducing 90° Ell
Soc x Fipt With Brass Thread Insert



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
807-101CBR	**3/4X1/2**	20	120	096	64.19

Not intended to convey or dispense water for human consumption through drinking or cooking

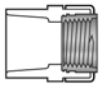
Transition Female Adapter
Soc x Fipt With Brass Thread Insert



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
835-005CBR	**1/2**	25	150	096	31.64
835-007CBR	**3/4**	15	90	096	65.48
835-010CBR	**1**	15	90	096	114.92
835-012CBR	**1-1/4**	15	60	096	187.47
835-015CBR	**1-1/2**	10	80	096	247.18
835-020CBR	**2**	8	32	096	308.72

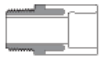
Not intended to convey or dispense water for human consumption through drinking or cooking

Transition Female Adapter
Soc x Fipt With Type 316 Stainless Steel Thread Insert



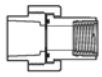
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
835-005CSS	**1/2**	25	150	096	62.13
835-007CSS	**3/4**	15	90	096	86.74
835-010CSS	**1**	15	90	096	151.81
835-012CSS	**1-1/4**	15	0	096	246.72
835-015CSS	**1-1/2**	10	60	096	321.87
835-020CSS	**2**	8	32	096	376.68

Transition Male Adapter w/Brass Thread
Brass Mipt x Socket



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
836-005CBR	**1/2**	40	160	096	70.14
836-007CBR	**3/4**	40	160	096	98.75
836-010CBR	**1**	10	60	096	171.99
836-012CBR	**1-1/4**	10	60	096	279.76
836-015CBR	**1-1/2**	10	40	096	363.71
836-020CBR	**2**	8	32	096	426.20

Union
Soc x Fipt with Brass Thread Insert & FKM O-ring Seal

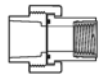


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
859-007CBR	**3/4**	10	20	096	146.17
859-010CBR	**1**	10	0	096	162.80
859-012CBR	**1-1/4**	5	0	096	272.91
859-015CBR	**1-1/2**	5	0	096	310.13
859-020CBR	**2**	5	0	096	350.51

Not intended to convey or dispense water for human consumption through drinking or cooking

Union
Soc x Fipt with Brass Thread Insert & EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
899-007CBR	**3/4**	10	40	096	143.69
899-010CBR	**1**	10	0	096	160.80
899-012CBR	**1-1/4**	5	20	096	269.46
899-015CBR	**1-1/2**	5	0	096	306.17
899-020CBR	**2**	5	0	096	346.21

Not intended to convey or dispense water for human consumption through drinking or cooking

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC Orange Special Reinforced (SR) Fittings

The CPVC Orange fittings in this section (4200 series part numbers) are approved by Underwriters Laboratories, FM Global, and LPCB for use in CPVC Fire Sprinkler Systems. When installed in these systems, installation must be made in accordance with Spears® publication FG-3, *FlameGuard® CPVC Fire Sprinkler Products Installation Instructions*, and local codes. However, these fittings can also be used in many other types of installations, such as hot water distribution. CPVC fittings may also be used on PVC pipe when installed with a quality CPVC solvent cement meeting the requirements of ASTM F 493, Standard Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings.

Sprinkler Head Tee - Special Reinforced Plastic Thread Style with Wrench Flats

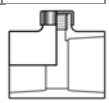
Socket x Socket x SR FIPT - Zinc Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4202-010SR	**1**	15	0	076	20.40
4202-130SR	**1X1/2**	50	0	076	7.95

Sprinkler Head Tee - Special Reinforced Plastic Thread Style

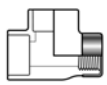
Socket x Socket x SR FIPT - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4202-101SR	**3/4X1/2**	50	0	076	7.36
4202-124SR	**1X3/4X1/2**	50	0	076	7.95
4202-156SR	**1-1/4X1X1/2**	15	0	076	13.25
4202-166SR	**1-1/4X1/2**	15	0	076	13.25
4202-168SR	**1-1/4X1**	15	0	076	28.48
4202-199SR	**1-1/2X1-1/4X1/2**	10	0	076	17.44
4202-209SR	**1-1/2X1/2**	25	0	076	17.44
4202-211SR	**1-1/2X1-1/2X1**	10	0	076	17.44
4202-237SR	**2X1-1/2X1/2**	10	0	076	24.61
4202-247SR	**2X1/2**	10	0	076	24.61
4202-287SR	**2-1/2X1/2**	10	0	076	33.73

Sprinkler Head Tee - Special Reinforced Plastic Thread Style

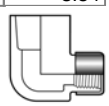
Socket x SR FIPT x Socket - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4203-122SR	**1X1/2X1**	50	0	076	8.54

Sprinkler Head 90° Ell - Special Reinforced Plastic Thread Style

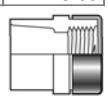
Socket x SR FIPT - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4207-101SR	**3/4X1/2**	20	180	076	4.85
4207-130SR	**1X1/2**	10	150	076	6.84
4207-131SR	**1X3/4**	50	0	076	8.27
4207-166SR	**1-1/4X1/2**	25	0	076	8.69

Female Adapter - Special Reinforced Plastic Thread Style

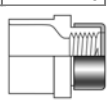
Socket x SR FIPT - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4235-007SR	**3/4**	25	300	076	8.65
4235-010SR	**1**	25	200	076	15.21
4235-012SR	**1-1/4**	10	60	076	24.76

Female Sprinkler Head Adapter - Special Reinforced Plastic Thread Style

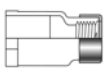
Socket x SR FIPT - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4235-101SR	**3/4X1/2**	50	200	076	5.28
4235-130SR	**1X1/2**	50	0	076	5.65
4235-131SR	**1X3/4**	50	0	076	8.95

Female Sprinkler Head Adapter - Special Reinforced Plastic Thread Style with Socket Body Wrench Flats

Socket x SR FIPT - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
W4235-101SR	**3/4X1/2**	50	0	076	6.03
W4235-130SR	**1X1/2**	50	0	076	6.45

Female Sprinkler Head Adapter - Special Reinforced Plastic Thread with Metal Thread Start

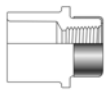
Socket x SR FIPT - Zinc Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Z4235-101SR	**3/4X1/2**	50	200	076	5.28

Female Sprinkler Head Adapter - Special Reinforced Plastic Thread Style with Positioning Ring

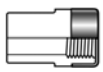
Socket x SR FIPT - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
R4235-101SR	**3/4X1/2**	25	300	076	5.97

Spigot Female Sprinkler Head Adapters - Special Reinforced Plastic Threaded Style

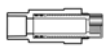
Spigot x SR FIPT - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4238-101SR	**3/4X1/2**	50	400	076	5.28
4238-130SR	**1X1/2**	50	0	076	5.72

Adjustable Sprinkler Head Adapters - Special Reinforced Plastic Thread Style

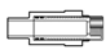
Socket x SR FIPT - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
42001SR	**3/4X1/2**	12	0	076	13.49
42011SR	**1X1/2**	12	0	076	13.49

Adjustable Sprinkler Head Adapters - Special Reinforced Plastic Thread Style

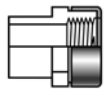
Spigot x SR FIPT - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
42004SR	**3/4X1/2**	12	0	076	13.49
42014SR	**1X1/2**	12	0	076	13.49

Spigot Female Adapter - Special Reinforced Plastic Thread Style

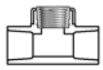
Spigot x SR FIPT - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4278-007SR	**3/4**	25	300	076	9.08
4278-010SR	**1**	50	0	076	16.17

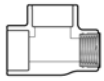
The CPVC Orange fittings in this section (4200 series part numbers) are approved by Underwriters Laboratories, FM Global, and LPCB for use in CPVC Fire Sprinkler Systems. When installed in these systems, installation must be made in accordance with Spears® publication FG-3, *FlameGuard® CPVC Fire Sprinkler Products Installation Instructions*, and local codes. However, these fittings can also be used in many other types of installations, such as hot water distribution. CPVC fittings may also be used on PVC pipe when installed with a quality CPVC solvent cement meeting the requirements of ASTM F 493, Standard Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings.

Sprinkler Head Tee - Brass Thread Insert Style
Socket x Socket x FIPT



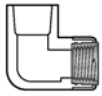
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4202-101	**3/4X1/2**	50	0	076	13.83
4202-124	**1X3/4X1/2**	50	0	076	14.93
4202-130	**1X1/2**	50	0	076	14.93
4202-010	**1**	10	40	076	38.39
4202-156	**1-1/4X1X1/2**	15	0	076	24.89
4202-166	**1-1/4X1/2**	15	0	076	24.89
4202-199	**1-1/2X1-1/4X1/2**	10	0	076	32.79
4202-209	**1-1/2X1/2**	10	0	076	32.79
4202-237	**2X1-1/2X1/2**	10	0	076	46.24
4202-247	**2X1/2**	10	0	076	46.24
Not intended to convey or dispense water for human consumption through drinking or cooking					

Sprinkler Head Tee - Brass Thread Insert Style
Socket x FIPT x Socket



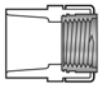
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4203-122	**1X1/2X1**	50	0	076	24.52
Not intended to convey or dispense water for human consumption through drinking or cooking					

Sprinkler Head 90° Ell - Brass Thread Insert Style
Socket x FIPT



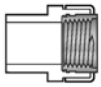
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4207-101	**3/4X1/2**	20	120	076	9.14
4207-130	**1X1/2**	15	90	076	12.84
4207-131	**1X3/4**	25	0	076	15.54
4207-166	**1-1/4X1/2**	10	60	076	17.88
Not intended to convey or dispense water for human consumption through drinking or cooking					

Female Adapter - Brass Thread Insert Style
Socket x FIPT



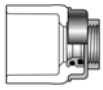
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4235-007	**3/4**	15	90	076	18.23
4235-010	**1**	15	90	076	31.99
4235-012	**1-1/4**	15	60	076	52.15
4235-015	**1-1/2**	10	40	076	69.57
4235-020	**2**	8	32	076	87.19
Not intended to convey or dispense water for human consumption through drinking or cooking					

Spigot Female Adapter - Brass Thread Insert Style
Spigot x FIPT



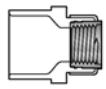
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4278-007	**3/4**	25	150	076	17.05
4278-010	**1**	15	90	076	30.37
Not intended to convey or dispense water for human consumption through drinking or cooking					

TorqueSafe™ Female Sprinkler Head Adapter - Gasket Sealed Brass Thread Insert Style
Socket x Gasket FIPT



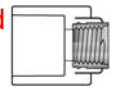
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4235-130GS	**1X1/2**	50	0	076	10.63
FIPT With Elastomer Seal - Use NO Thread Sealant. Not intended to convey or dispense water for human consumption through drinking or cooking					

Female Sprinkler Head Adapter - Brass Thread Insert Style
Socket x FIPT



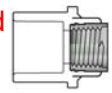
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4235-101	**3/4X1/2**	50	0	076	9.96
4235-130	**1X1/2**	50	0	076	10.63
4235-131	**1X3/4**	50	0	076	16.80
Not intended to convey or dispense water for human consumption through drinking or cooking					

Female Sprinkler Head Adapter - Brass Thread Insert Style with Long Body
Socket x FIPT



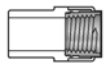
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
L4235-130	**1X1/2**	50	0	076	15.07
Not intended to convey or dispense water for human consumption through drinking or cooking					

Female Sprinkler Head Adapter - Brass Thread Insert Style with Positioning Ring
Socket x FIPT



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
R4235-101	**3/4X1/2**	50	0	076	9.96
Not intended to convey or dispense water for human consumption through drinking or cooking					

Spigot Female Sprinkler Head Adapters - Brass Thread Insert Style
Spigot x FIPT



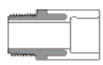
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4238-101	**3/4X1/2**	50	0	076	9.96
4238-130	**1X1/2**	50	0	076	10.63
Not intended to convey or dispense water for human consumption through drinking or cooking					

Bushing - with Brass Thread Insert
Spigot x FIPT



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4238-130BR	**1X1/2**	50	300	076	13.76
Not intended to convey or dispense water for human consumption through drinking or cooking					

Male Adapter
MIPT x Socket



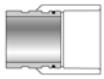
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4236-007	**3/4**	40	160	076	41.02
4236-010	**1**	10	60	076	62.72
4236-012	**1-1/4**	10	60	076	75.00
4236-015	**1-1/2**	10	40	076	136.12
4236-020	**2**	8	32	076	181.14

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

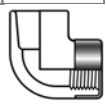
CPVC Orange Brass Grooved Coupling Adapter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Grooved Coupling Adapter					
Brass Groove End x Socket					
4233-012	**1-1/4**	10	40	076	103.14
4233-015	**1-1/2**	10	40	076	109.31
4233-020	**2**	8	32	076	126.60
4233-025	**2-1/2**	5	0	076	162.39
4233-030	**3**	5	0	076	180.53
Not intended to convey or dispense water for human consumption through drinking or cooking					



CTS CPVC Tan Special Reinforced (SR) Fittings

SPECIAL REINFORCED 90° ELL
Socket x SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4107-005SR	**1/2**	50	300	035	9.01

ZINC DROP EAR REINFORCED CTS 90° ELL (One Piece Unit)
Socket x SR Fipt - Zinc Collar



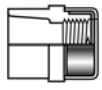
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DEZ4107-005SR	**1/2**	10	150	035	20.26

DROP EAR SPECIAL REINFORCED 90° ELL (Fitting Plus Bracket)
Socket x SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DE4107-005SR	**1/2**	10	200	035	13.93

SPECIAL REINFORCED FEMALE ADAPTER
Socket x SR Fipt - Stainless Steel Collar

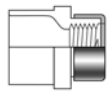


Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4135-005SR	**1/2**	25	200	035	6.96

SPECIAL REINFORCED FEMALE ADAPTER (continued)
Socket x SR Fipt - Stainless Steel Collar

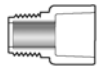
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4135-007SR	**3/4**	25	300	035	7.65
4135-010SR	**1**	5	100	035	9.71

SPECIAL REINFORCED REDUCING FEMALE ADAPTER
Socket x SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4135-131SR	**1X3/4**	25	150	035	15.28

REINFORCED MALE ADADPTER (Internal Stainless Steel Reinforced)
R Mipt x Socket - Stainless Steel Sleeve



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4136-005R	**1/2**	25	300	035	8.93
4136-007R	**3/4**	25	300	035	9.93
4136-010R	**1**	10	120	035	14.79

CTS CPVC Tan Brass Thread Fittings

GASKET SEALED BRASS THREAD TRANSITION FEMALE ADAPTER
Socket x Gasket FPT - Use NO Thread Sealant



NSF Certified Lead Free

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4135-005BRG	**1/2**	25	150	035	40.21
4135-007BRG	**3/4**	25	150	035	44.28
4135-010BRG	**1**	15	90	035	132.09
4135-012BRG	**1-1/4**	15	60	035	250.97
4135-015BRG	**1-1/2**	10	40	035	327.12
4135-020BRG	**2**	8	32	035	480.95

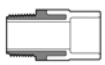
GASKET SEALED BRASS THREAD TRANSITION REDUCING FEMALE ADADPTER
Socket x Gasket FPT - Use NO Thread Sealant



NSF Certified Lead Free

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4135-101BRG	**3/4X1/2**	25	150	035	43.77
4135-130BRG	**1X1/2**	50	0	035	69.15

TRANSITION MALE ADAPTER w/BRASS THREAD
Brass Mipt x Socket



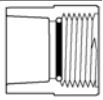
NSF Certified Lead Free

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4136-005BR	**1/2**	60	360	035	40.21
4136-007BR	**3/4**	40	160	035	44.28
4136-010BR	**1**	10	60	035	132.09
4136-012BR	**1-1/4**	10	60	035	162.92
4136-015BR	**1-1/2**	10	40	035	215.06
4136-020BR	**2**	8	32	035	357.49

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CTS CPVC Tan Gasket Sealed Thread Fittings

FEMALE ADAPTER with Gasket
Socket x NPSC



For Cold Water Service Only

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4135-005OR	**1/2**	25	200	035	4.71

FEMALE ADAPTER with Gasket (continued)
Socket x NPSC

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4135-007OR	**3/4**	25	300	035	6.68
4135-010OR	**1**	5	100	035	7.62

Blue 75™ Thread Sealant

Blue 75™ Thread Sealant



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
SB75-005	**1/4 Pint**	24	0	895	10.46
SB75-010	**1/2 Pint**	24	0	895	16.66
SB75-020	**Pint**	12	0	895	26.94
SB75-030	**Quart**	12	0	895	48.41

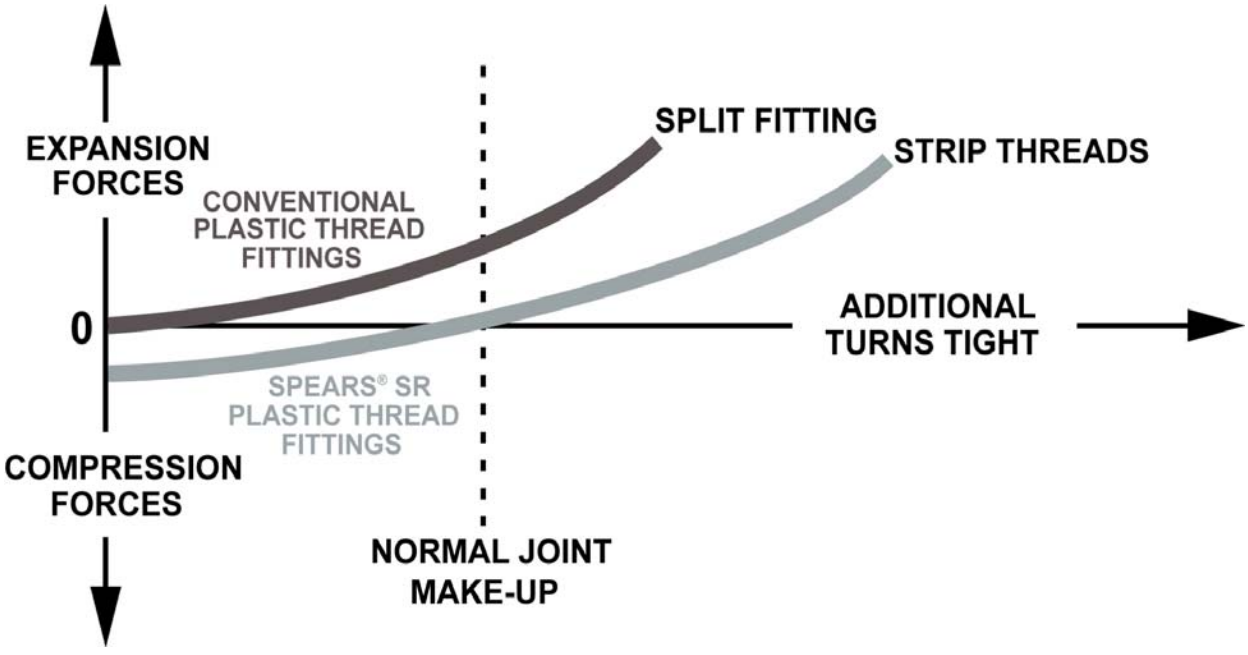
Polypropylene Schedule 80 Natural & Black SR Threaded Fittings



- Featuring Patented Special Reinforced (SR) Thread
- Full 150 psi Pressure Rating at 73°F (23°C)
- High Grade Homopolymer Compound
- Excellent Chemical Resistance
- IPS Sizes 1/2" through 2"

Spears® Patented SR Fitting Design is One of the Most Significant Improvements in Threaded Thermoplastic Fittings . . .

Radial stress generated by tightening of tapered pipe threads exerts tremendous expansion forces on female plastic thread fittings. When subjected to over-tightening — even accidentally — these forces can literally split the fitting. Spears® patented SR Fitting design not only alleviates this problem by containing expansion forces with its stainless steel collar, but additionally compensates for expansion stress through thermoplastic material compression. Stresses are equalized at normal joint make-up. The following graph illustrates this effect in a comparison of conventional plastic female thread fittings with Spears® SR plastic thread fittings when taken to failure.



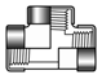
Another Quality Spears® Product Designed for Performance, Customer Satisfaction and Service

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

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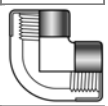
Polypropylene Schedule 80 Natural SR Threaded Fittings

Tee - Natural
SR Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4805-005SR	1/2	25	200	060	13.98
4805-007SR	3/4	15	120	060	15.52
4805-010SR	1	15	0	060	18.47
4805-015SR	1-1/2	10	0	060	27.38
4805-020SR	2	10	0	060	36.19

90° Ell - Natural
SR Fipt



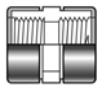
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4808-005SR	1/2	20	240	060	11.36
4808-007SR	3/4	20	240	060	13.81
4808-010SR	1	50	0	060	17.06
4808-015SR	1-1/2	10	0	060	23.13
4808-020SR	2	25	0	060	31.46

45° Ell - Natural
SR Fipt



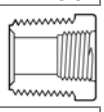
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4819-005SR	1/2	50	400	060	14.31
4819-007SR	3/4	50	300	060	16.09
4819-010SR	1	50	0	060	17.00
4819-015SR	1-1/2	25	0	060	23.13
4819-020SR	2	25	0	060	31.46

Coupling - Natural
SR Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4830-005SR	1/2	25	300	060	10.77
4830-007SR	3/4	25	300	060	13.48
4830-010SR	1	25	200	060	14.87
4830-015SR	1-1/2	10	80	060	19.44
4830-020SR	2	10	0	060	23.37

T.T. Bushing - Natural
Mipt x Fipt



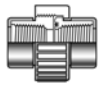
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4839-101	3/4X1/2	10	300	060	16.66
4839-130	1X1/2	10	50	060	20.35
4839-131	1X3/4	10	50	060	20.35
4839-211	1-1/2X1	10	120	060	35.96
4839-249	2X1	10	50	060	52.13
4839-251	2X1-1/2	10	120	060	52.13

Cap - Natural
SR Fipt



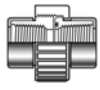
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4848-005SR	1/2	50	300	060	10.21
4848-007SR	3/4	50	300	060	13.39
4848-010SR	1	15	180	060	14.87
4848-015SR	1-1/2	10	120	060	20.75
4848-020SR	2	10	80	060	23.37

Union - Natural
SR Fipt with FKM O-ring



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4858-005SR	1/2	20	120	060	50.18
4858-007SR	3/4	20	80	060	54.68
4858-010SR	1	15	90	060	67.69
4858-015SR	1-1/2	10	0	060	102.54
4858-020SR	2	5	0	060	149.75

Union - Natural
SR Fipt with EPDM O-ring



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4898-005SR	1/2	20	120	060	49.19
4898-007SR	3/4	20	80	060	53.59
4898-010SR	1	15	90	060	66.34
4898-015SR	1-1/2	10	0	060	100.49
4898-020SR	2	5	0	060	146.75

Flange - Natural
SR Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4852-005SR	1/2	25	0	060	31.35
4852-007SR	3/4	25	0	060	33.97
4852-010SR	1	15	0	060	38.08
4852-015SR	1-1/2	15	0	060	53.39
4852-020SR	2	10	0	060	63.00

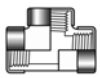
Blind Flange - Natural



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4853-005	1/2	25	0	060	52.45
4853-007	3/4	25	0	060	54.18
4853-010	1	15	0	060	57.49
4853-015	1-1/2	15	0	060	94.95
4853-020	2	10	0	060	103.51

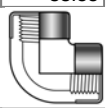
Polypropylene Schedule 80 Black SR Threaded Fittings

Tee - Black
SR Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4805-005BSR	1/2	25	200	061	12.94
4805-007BSR	3/4	15	120	061	14.42
4805-010BSR	1	15	0	061	17.05
4805-015BSR	1-1/2	10	0	061	25.29
4805-020BSR	2	10	0	061	33.55

90° Ell - Black
SR Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4808-005BSR	1/2	20	240	061	10.56

90° Ell - Black (continued)
SR Fipt

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4808-007BSR	3/4	20	240	061	12.83
4808-010BSR	1	50	0	061	15.81
4808-015BSR	1-1/2	25	0	061	21.34
4808-020BSR	2	10	0	061	29.05

45° Ell - Black
SR Fipt



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4819-005BSR	1/2	50	400	061	13.21
4819-007BSR	3/4	50	300	061	14.93
4819-010BSR	1	50	0	061	15.74
4819-015BSR	1-1/2	25	0	061	21.34
4819-020BSR	2	25	0	061	29.05

Polypropylene Schedule 80 Black SR Threaded Fittings

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Coupling - Black					
SR Fipt					
4830-005BSR	**1/2**	25	300	061	10.02
4830-007BSR	**3/4**	25	300	061	12.49
4830-010BSR	**1**	25	200	061	13.74
4830-015BSR	**1-1/2**	10	80	061	17.99
4830-020BSR	**2**	10	0	061	21.61
T.T. Bushing - Black					
Mipt x Fipt					
4839-101B	**3/4X1/2**	10	300	061	15.48
4839-130B	**1X1/2**	10	50	061	18.87
4839-131B	**1X3/4**	10	50	061	18.87
4839-211B	**1-1/2X1**	25	0	061	33.22
4839-249B	**2X1**	10	120	061	48.14
4839-251B	**2X1-1/2**	10	120	061	48.14
Cap - Black					
SR Fipt					
4848-005BSR	**1/2**	50	300	061	9.49
4848-007BSR	**3/4**	50	300	061	12.49
4848-010BSR	**1**	15	180	061	13.75
4848-015BSR	**1-1/2**	10	120	061	19.19
4848-020BSR	**2**	10	80	061	21.61
Union - Black					
SR Fipt with FKM O-ring					
4858-005BSR	**1/2**	20	120	061	47.52
4858-007BSR	**3/4**	20	80	061	51.51
4858-010BSR	**1**	15	90	061	63.53
4858-015BSR	**1-1/2**	10	0	061	92.23
4858-020BSR	**2**	5	0	061	143.93
Union - Black					
SR Fipt with EPDM O-ring					
4898-005BSR	**1/2**	20	120	061	45.59
4898-007BSR	**3/4**	20	80	061	49.96
4898-010BSR	**1**	15	90	061	61.44
4898-015BSR	**1-1/2**	10	0	061	93.06
4898-020BSR	**2**	5	0	061	137.40
Flange - Black					
SR Fipt					
4852-005BSR	**1/2**	25	0	061	29.01
4852-007BSR	**3/4**	25	0	061	31.36
4852-010BSR	**1**	15	0	061	35.17
4852-015BSR	**1-1/2**	15	0	061	49.40
4852-020BSR	**2**	10	0	061	58.24
Blind Flange - Black					
4853-005B	**1/2**	25	0	061	48.47
4853-007B	**3/4**	25	0	061	49.57
4853-010B	**1**	15	0	061	53.13
4853-015B	**1-1/2**	15	0	061	87.88
4853-020B	**2**	10	0	061	96.98

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

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Gauge Guards



Connections use Spears® Patented Special Reinforced (SR)
Female Threads on Pressure Inlet (1/4" or 1/2")

Pressure Rating
235 psi @ 73°F
16 BAR @ 22°C
Maximum Service Temperature
PP = 180°F (82°C)
Temperature/Pressure De-ratings Apply
Rated for Full Vacuum Service

Gauge Guards are pre-filled with glycerin-water on units with Factory Installed Gauges.
"No Gauge" units are to be filled by end user.

PP GAUGE GUARDS

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Disc Code
PTFE Diaphragm					
No Gauge	G0004-002P **121.51**	G0004-005P **121.51**	1	18	626
0-30 in-Hg	G30V4-002P **186.67**	G30V4-005P **186.67**	1	18	626
0-15 psi	G0154-002P **177.54**	G0154-005P **177.54**	1	18	626
0-30 psi	G0304-002P **177.54**	G0304-005P **177.54**	1	18	626
0-60 psi	G0604-002P **177.54**	G0604-005P **177.54**	1	18	626
0-100 psi	G1004-002P **177.54**	G1004-005P **177.54**	1	18	626
0-160 psi	G1604-002P **177.54**	G1604-005P **177.54**	1	18	626
0-200 psi	G2004-002P **177.54**	G2004-005P **177.54**	1	18	626
0-300 psi	G3004-002P **177.54**	G3004-005P **177.54**	1	18	626
FKM Diaphragm					
No Gauge	G0003-002P **121.51**	G0003-005P **121.51**	1	18	626
0-30 in-Hg	G30V3-002P **186.67**	G30V3-005P **186.67**	1	18	626
0-15 psi	G0153-002P **177.54**	G0153-005P **177.54**	1	18	626
0-30 psi	G0303-002P **177.54**	G0303-005P **177.54**	1	18	626
0-60 psi	G0603-002P **177.54**	G0603-005P **177.54**	1	18	626
0-100 psi	G1003-002P **177.54**	G1003-005P **177.54**	1	18	626
0-160 psi	G1603-002P **177.54**	G1603-005P **177.54**	1	18	626
0-200 psi	G2003-002P **177.54**	G2003-005P **177.54**	1	18	626
0-300 psi	G3003-002P **177.54**	G3003-005P **177.54**	1	18	626
EPDM Diaphragm					
No Gauge	G0002-002P **116.71**	G0002-005P **116.71**	1	18	626
0-30 in-Hg	G30V2-002P **179.18**	G30V2-005P **179.18**	1	18	626
0-15 psi	G0152-002P **170.51**	G0152-005P **170.51**	1	18	626
0-30 psi	G0302-002P **170.51**	G0302-005P **170.51**	1	18	626
0-60 psi	G0602-002P **170.51**	G0602-005P **170.51**	1	18	626
0-100 psi	G1002-002P **170.51**	G1002-005P **170.51**	1	18	626
0-160 psi	G1602-002P **170.51**	G1602-005P **170.51**	1	18	626
0-200 psi	G2002-002P **170.51**	G2002-005P **170.51**	1	18	626
0-300 psi	G3002-002P **170.51**	G3002-005P **170.51**	1	18	626

Needle Valves



Pressure Rating @ 73°F (23°C), Water
150 psi
Maximum Service Temperature
PP = 180°F (82°C)
Solid PTFE Stem Seals
No Elastomer or Lubricants used
Valves include Panel Mounting Nut

PP Needle Valve

Size	Threaded	Socket	SR Threaded	Std Pk	Mstr Pk	Disc Code
Globe Pattern						
1/4	5591-002P 78.54	---	---	1	18	219
3/8	5591-003P 78.54	---	---	1	18	219
1/2	---	---	5591-005PSR 86.85	1	18	219
Angle Pattern						
1/4	5691-002P 78.54	---	---	1	18	219
3/8	5691-003P 78.54	---	---	1	18	219
1/2	---	---	5691-005PSR 86.85	1	18	219

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Industrial Swing Check Valves



Threaded Bonnet on Sizes 3/4", 1" & 1-1/4"

Pressure Rating @ 73°F (23°C), Water
3/4" - 4" 150 psi
6" 100 psi
8" 70 psi
Maximum Service Temperature
PP = 180°F (82°C)
Temperature/Pressure De-ratings Apply
All Valves Assembled with Silicone-Free Lubricants



Bolted Bonnet on Sizes 1-1/2" & Up

General Installation Information: Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec.

Industrial Swing Check Valves

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
PP					
3/4	4423-007P **563.29**	4433-007P **625.86**	1	12	113
1	4423-010P **673.87**	4433-010P **734.44**	1	4	113
1-1/4	4423-012P **807.65**	4433-012P **897.31**	1	0	113
1-1/2	4423-015P **1002.77**	4433-015P **1091.16**	1	0	113
2	4423-020P **1072.15**	4433-020P **1204.66**	1	0	113
2-1/2	4423-025P **1785.13**	4433-025P **1985.68**	1	0	112
3	4423-030P **1876.73**	4433-030P **2244.16**	1	0	112
4	4423-040P **2552.76**	4433-040P **2833.55**	1	0	112
6	4423-060P **4835.67**	4433-060P **5377.21**	1	0	112
8	4423-080P **9256.18**	4433-080P **10171.67**	1	0	112

Swing Check Valve With Arrow Indicator

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
PP					
3/4	4423I-007P **571.34**	4433I-007P **633.92**	1	12	113
1	4423I-010P **685.14**	4433I-010P **790.82**	1	4	113
1-1/4	4423I-012P **880.14**	4433I-012P **976.99**	1	0	113
1-1/2	4423I-015P **1131.42**	4433I-015P **976.99**	1	0	113
2	4423I-020P **1101.74**	4433I-020P **1249.35**	1	0	113
2-1/2	4423I-025P **1795.51**	4433I-025P **2012.18**	1	0	112
3	4423I-030P **2237.73**	4433I-030P **2335.62**	1	0	112
4	4423I-040P **2563.15**	4433I-040P **2843.98**	1	0	112
6	4423I-060P **4940.04**	4433I-060P **5422.53**	1	0	112
8	4423I-080P **9325.12**	4433I-080P **10274.48**	1	0	112

Swing Check Valve With Counter Balance

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
PP					
3/4	4423CB-007P **721.01**	4433CB-007P **801.11**	1	12	113
1	4423CB-010P **862.53**	4433CB-010P **940.06**	1	4	113

Swing Check Valve With Counter Balance (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
PP					
1-1/4	4423CB-012P **880.14**	4433CB-012P **1354.36**	1	0	113
1-1/2	4423CB-015P **1244.07**	4433CB-015P **1670.49**	1	0	113
2	4423CB-020P **1340.19**	4433CB-020P **1505.82**	1	0	113
2-1/2	4423CB-025P **2069.04**	4433CB-025P **2541.67**	1	0	112
3	4423CB-030P **2517.42**	4433CB-030P **3149.68**	1	0	112
4	4423CB-040P **2882.82**	4433CB-040P **3167.00**	1	0	112
6	4423CB-060P **5363.56**	4433CB-060P **6882.82**	1	0	112
8	4423CB-080P **9791.67**	4433CB-080P **10707.18**	1	0	112

Polypropylene Butterfly Valves



Lever Handle Style

Pressure Rating @ 73°F (23°C), Water
1-1/2" - 12" 150 psi
Maximum Service Temperature
PP = 180°F (82°C)
Temperature/Pressure De-ratings Apply
See Butterfly Valve Accessories & Repair Kits Section for Additional Options and Features

Lever Handle

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	721311-015P 504.43	722311-015P 504.43	723311-015P 1047.92	1	0	256
2	721311-020P 509.53	722311-020P 509.53	723311-020P 1069.31	1	0	256
2-1/2	721311-025P 532.53	722311-025P 532.53	723311-025P 1087.55	1	0	256
3	721311-030P 543.79	722311-030P 543.79	723311-030P 1108.84	1	0	256
4	721311-040P 606.41	722311-040P 606.41	723311-040P 1384.55	1	0	256
6	721311-060P 947.55	722311-060P 947.55	723311-060P 2189.28	1	0	256
8	721311-080P 1611.42	722311-080P 1611.42	723311-080P 3717.36	1	0	256

Gear Operator

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	721321-020P 1450.40	722321-020P 1450.40	723321-020P 1843.71	1	0	256
2-1/2	721321-025P 1469.71	722321-025P 1469.71	723321-025P 1940.52	1	0	256
3	721321-030P 1498.03	722321-030P 1498.03	723321-030P 2038.75	1	0	256
4	721321-040P 1596.08	722321-040P 1596.08	723321-040P 2319.01	1	0	256
6	721321-060P 1864.45	722321-060P 1864.45	723321-060P 3138.24	1	0	256
8	721321-080P 2547.86	722321-080P 2547.86	723321-080P 4685.58	1	0	256
10	721321-100P 3425.92	722321-100P 3425.92	723321-100P 7623.22	1	0	256
12	721321-120P 4744.19	722321-120P 4744.19	723321-120P 11141.25	1	0	256

Valve Only

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	721301-015P 466.19	722301-015P 466.19	723301-015P 924.76	1	0	256
2	721301-020P 475.69	722301-020P 475.69	723301-020P 941.56	1	0	256
2-1/2	721301-025P 493.96	722301-025P 493.96	723301-025P 976.32	1	0	256
3	721301-030P 509.32	722301-030P 509.32	723301-030P 1001.89	1	0	256
4	721301-040P 582.67	722301-040P 582.67	723301-040P 1242.76	1	0	256
6	721301-060P 891.04	722301-060P 891.04	723301-060P 2010.09	1	0	256
8	721301-080P 1531.21	722301-080P 1531.21	723301-080P 3404.53	1	0	256
10	721301-100P 3058.38	722301-100P 3058.38	723301-100P 6822.46	1	0	256
12	721301-120P 3957.38	722301-120P 3957.38	723301-120P 9744.93	1	0	256

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Large Diameter Butterfly Valves



Maximum Service Temperature
PP = 180°F (82°C)
Temperature/Pressure De-ratings Apply
Contact Spears® for Custom Produced Valve Sizes 30" to 60"

Pressure Rating @ 73°F (23°C), Water

Size	Psi
14	100
16	85
18	70
20	50
24	50



Polypropylene - Gear Operator

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
14	722321-140P **6381.79**	723321-140P **15508.33**	1	0	257
16	722321-160P **24883.37**	723321-160P **26953.13**	1	0	257
18	722321-180P **27410.01**	723321-180P **31405.12**	1	0	257

Polypropylene - Gear Operator (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
20	722321-200P **30753.47**	723321-200P **37381.61**	1	0	257
24	722321-240P **34834.44**	723321-240P **50252.52**	1	0	257

Diaphragm Valves



PP Thread Style

Pressure Rating @ 73°F (23°C), Water

1/2" - 2"	235 psi
1/2" - 4" Flanged & Valves w/PTFE Diaphragms	150 psi
6"	100 psi
8"	75 psi

Maximum Service Temperature
PP = 180°F (82°C)
Temperature/Pressure De-ratings Apply
No Lubricants in Media Contact Area
See Diaphragm Valve Repair Kits Section
for Additional Options and Features

Contact Spears® for Pricing on Additional Specialty Diaphragms

- Hypalon®
- Hypalon® backed PTFE
- PTFE Encapsulated O-rings (for True Union Style Valves)

PP - SR Threaded Ends (True Union Style Uses End Connector O-ring Seals)

Size	EPDM Seals & Diaphragm	FKM Seals & Diaphragm	EPDM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2721-005PSR **141.92**	2731-005PSR **157.88**	2721T-005PSR **226.87**	2731T-005PSR **238.82**	2731VT-005PSR **270.09**	1	12	280
3/4	2721-007PSR **161.63**	2731-007PSR **179.32**	2721T-007PSR **237.53**	2731T-007PSR **252.03**	2731VT-007PSR **295.88**	1	8	280
1	2721-010PSR **199.94**	2731-010PSR **220.29**	2721T-010PSR **346.26**	2731T-010PSR **364.27**	2731VT-010PSR **384.35**	1	8	280
1-1/4	2721-012PSR **303.65**	2731-012PSR **338.13**	2721T-012PSR **474.08**	2731T-012PSR **497.04**	2731VT-012PSR **551.59**	1	4	280
1-1/2	2721-015PSR **317.62**	2731-015PSR **352.59**	2721T-015PSR **505.57**	2731T-015PSR **530.11**	2731VT-015PSR **570.94**	1	4	280
2	2721-020PSR **369.41**	2731-020PSR **410.53**	2721T-020PSR **576.81**	2731T-020PSR **605.21**	2731VT-020PSR **657.75**	1	0	280

PP - Flanged Ends

Size	EPDM Diaphragm	FKM Diaphragm	EPDM Backed PTFE Diaphragm	FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
2-1/2	2723-025P **680.55**	2733-025P **752.06**	2793T-025P **1070.76**	2793VT-025P **1195.80**	1	0	281
3	2723-030P **973.09**	2733-030P **1075.14**	2793T-030P **1480.80**	2793VT-030P **1651.21**	1	0	281
4	2723-040P **1400.18**	2733-040P **1541.54**	2793T-040P **1973.94**	2793VT-040P **2189.40**	1	0	281
6	2723-060P **3465.21**	2733-060P **3850.23**	2793T-060P **4947.32**	2793VT-060P **5592.09**	1	0	281
8	2723-080P **8626.77**	2733-080P **7766.52**	2793T-080P **8980.86**	2793VT-080P **15133.51**	1	0	281

True Union 2000 Industrial Ball Valves



Socket Style



SR Threaded Style



6" Lever Handle Style

All Valves Assembled with Silicone-Free, Water Soluble Lubricant
Contact Spears® for Pricing on Custom Elastomer Seals
See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

Pressure Rating @ 73°F (23°C), Water

1/2" - 4"	235 psi
6" - 8"	150 psi
All Flanged	150 psi

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service

Note: Standard 6" Valve uses lockout type Lever-Style Handle for proper leverage. Non-locking T-Handle is more compact, but will increase difficulty of operation.
True Union 2000 Industrial Ball Valves have Built-in Handle Lockouts (except 6" T-Handle Option)

PVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded & Socket Ends					
1/2	1829-005 **49.69**	1839-005 **55.27**	1	18	600
3/4	1829-007 **58.80**	1839-007 **65.41**	1	18	600
1	1829-010 **70.02**	1839-010 **77.99**	1	12	600
1-1/4	1829-012 **96.86**	1839-012 **123.64**	1	8	600
1-1/2	1829-015 **116.67**	1839-015 **129.52**	1	8	600
2	1829-020 **153.96**	1839-020 **169.54**	1	4	600
Socket Ends					
2-1/2	1822-025 **295.95**	1832-025 **401.01**	1	0	601
3	1822-030 **390.18**	1832-030 **433.54**	1	0	601
4	1822-040 **659.24**	1832-040 **732.49**	1	0	601
6	1822-060 **1424.09**	1832-060 **1580.38**	1	0	612
8	1822-080 **1894.05**	1832-080 **2101.91**	1	0	612
8" Venturied valves are 6" ball valves fitted with 6x8 end connector adapters.					
Threaded Ends					
2-1/2	1821-025 **295.95**	1831-025 **401.01**	1	0	601
3	1821-030 **390.18**	1831-030 **433.54**	1	0	601
4	1821-040 **659.24**	1831-040 **732.49**	1	0	601
6	1821-060 **1424.09**	1831-060 **1580.38**	1	0	612
SR Threaded Ends					
1/2	1821-005SR **50.75**	1831-005SR **56.36**	1	18	600
3/4	1821-007SR **61.36**	1831-007SR **68.00**	1	18	600
1	1821-010SR **72.59**	1831-010SR **80.56**	1	12	600
1-1/4	1821-012SR **104.58**	1831-012SR **131.37**	1	8	600
1-1/2	1821-015SR **124.98**	1831-015SR **137.82**	1	8	600
2	1821-020SR **162.95**	1831-020SR **178.36**	1	4	600

PVC Industrial (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
SR Threaded Ends					
2-1/2	1821-025SR **320.13**	1831-025SR **425.16**	1	0	601
3	1821-030SR **414.37**	1831-030SR **457.72**	1	0	601
4	1821-040SR **687.47**	1831-040SR **760.73**	1	0	601
6	1821-060SR **1464.37**	1831-060SR **1620.63**	1	0	612
Spigot Ends					
1/2	1827-005 **49.69**	1837-005 **55.27**	1	18	600
3/4	1827-007 **58.80**	1837-007 **65.41**	1	18	600
1	1827-010 **70.02**	1837-010 **77.99**	1	12	600
1-1/4	1827-012 **96.86**	1837-012 **123.64**	1	8	600
1-1/2	1827-015 **116.67**	1837-015 **129.52**	1	8	600
2	1827-020 **153.96**	1837-020 **169.54**	1	4	600
2-1/2	1827-025 **295.95**	1837-025 **401.01**	1	0	601
3	1827-030 **390.18**	1837-030 **433.54**	1	0	601
4	1827-040 **659.24**	1837-040 **732.49**	1	0	601
6	1827-060 **1424.09**	1837-060 **1580.38**	1	0	612
Flanged Ends					
1/2	1823-005 **71.08**	1833-005 **75.81**	1	8	600
3/4	1823-007 **90.04**	1833-007 **97.95**	1	8	600
1	1823-010 **108.98**	1833-010 **117.21**	1	8	600
1-1/4	1823-012 **127.97**	1833-012 **142.17**	1	8	600
1-1/2	1823-015 **161.16**	1833-015 **175.36**	1	4	600
2	1823-020 **256.61**	1833-020 **272.17**	1	0	600
2-1/2	1823-025 **473.91**	1833-025 **481.75**	1	0	601
3	1823-030 **523.81**	1833-030 **650.35**	1	0	601

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PVC Industrial (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Flanged Ends					
4	1823-040 **1053.20**	1833-040 **1220.83**	1	0	601
6	1823-060 **2242.47**	1833-060 **2600.11**	1	0	612
8	1823-080 **2982.48**	1833-080 **3458.14**	1	0	612
8" Venturied valves are 6" ball valves fitted with 6x8 end connector adapters.					

PVC 6" Industrial T-Handle Valve Option (Non–Locking)

NOTICE: T-Handle is more compact, but will greatly increase difficulty of operation.

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket Ends					
6	18226-060 **1424.09**	18326-060 **1580.38**	1	0	612
Threaded Ends					
6	18216-060 **1424.09**	18316-060 **1580.38**	1	0	612
SR Threaded Ends					
6	18216-060SR **1464.37**	18316-060SR **1620.63**	1	0	612
Flanged Ends					
6	18236-060 **2242.47**	18336-060 **2600.11**	1	0	612

CPVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded & Socket Ends					
1/2	1829-005C **65.63**	1839-005C **72.93**	1	18	602
3/4	1829-007C **82.65**	1839-007C **91.86**	1	18	602
1	1829-010C **98.40**	1839-010C **109.33**	1	12	602
1-1/4	1829-012C **156.43**	1839-012C **173.86**	1	8	602
1-1/2	1829-015C **165.21**	1839-015C **183.57**	1	8	602
2	1829-020C **220.95**	1839-020C **254.00**	1	4	602
Socket Ends					
2-1/2	1822-025C **495.39**	1832-025C **550.40**	1	0	603
3	1822-030C **579.22**	1832-030C **643.63**	1	0	603
4	1822-040C **1049.59**	1832-040C **1166.19**	1	0	603
6	1822-060C **2234.41**	1832-060C **2482.51**	1	0	613
8	1822-080C **2971.79**	1832-080C **3301.76**	1	0	613
8" Venturied valves are 6" ball valves fitted with 6x8 end connector adapters.					
Threaded Ends					
2-1/2	1821-025C **495.39**	1831-025C **550.40**	1	0	603
3	1821-030C **579.22**	1831-030C **643.63**	1	0	603
4	1821-040C **1049.59**	1831-040C **1166.19**	1	0	603
6	1821-060C **2234.41**	1831-060C **2482.51**	1	0	613
SR Threaded Ends					
1/2	1821-005CSR **66.68**	1831-005CSR **73.99**	1	18	602
3/4	1821-007CSR **85.23**	1831-007CSR **94.43**	1	18	602
1	1821-010CSR **100.98**	1831-010CSR **111.88**	1	12	602

CPVC Industrial (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
SR Threaded Ends					
1-1/4	1821-012CSR **164.17**	1831-012CSR **181.60**	1	8	602
1-1/2	1821-015CSR **173.53**	1831-015CSR **191.85**	1	8	602
2	1821-020CSR **229.95**	1831-020CSR **263.00**	1	4	602
2-1/2	1821-025CSR **519.58**	1831-025CSR **574.58**	1	0	603
3	1821-030CSR **603.40**	1831-030CSR **667.80**	1	0	603
4	1821-040CSR **1077.80**	1831-040CSR **1194.44**	1	0	603
6	1821-060CSR **2295.64**	1831-060CSR **2543.73**	1	0	613
Spigot Ends					
1/2	1827-005C **65.63**	1837-005C **72.93**	1	18	602
3/4	1827-007C **82.65**	1837-007C **91.86**	1	18	602
1	1827-010C **98.40**	1837-010C **109.33**	1	12	602
1-1/4	1827-012C **156.43**	1837-012C **173.86**	1	8	602
1-1/2	1827-015C **165.21**	1837-015C **183.57**	1	8	602
2	1827-020C **220.95**	1837-020C **254.00**	1	4	602
2-1/2	1827-025C **495.39**	1837-025C **550.40**	1	0	603
3	1827-030C **579.22**	1837-030C **643.63**	1	0	603
4	1827-040C **1049.59**	1837-040C **1166.19**	1	0	603
6	1827-060C **2234.41**	1837-060C **2482.51**	1	0	613
Flanged Ends					
1/2	1823-005C **111.36**	1833-005C **113.76**	1	8	602
3/4	1823-007C **136.51**	1833-007C **142.17**	1	8	602
1	1823-010C **156.26**	1833-010C **165.88**	1	8	602
1-1/4	1823-012C **233.48**	1833-012C **241.68**	1	8	602
1-1/2	1823-015C **256.82**	1833-015C **265.38**	1	4	602
2	1823-020C **357.38**	1833-020C **425.63**	1	0	602
2-1/2	1823-025C **667.02**	1833-025C **800.64**	1	0	603
3	1823-030C **975.47**	1833-030C **997.72**	1	0	603
4	1823-040C **1710.82**	1833-040C **1779.24**	1	0	603
6	1823-060C **3644.03**	1833-060C **3789.02**	1	0	613
8	1823-080C **4846.55**	1833-080C **5039.38**	1	0	613
8" Venturied valves are 6" ball valves fitted with 6x8 end connector adapters.					

CPVC 6" Industrial T-Handle Valve Option (Non-Locking) NOTICE: T-Handle is more compact, but will greatly increase difficulty of operation.

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket Ends					
6	18226-060C **2234.41**	18326-060C **2482.51**	1	0	613
Threaded Ends					
6	18216-060C **2234.41**	18316-060C **2482.51**	1	0	613

True Union 2000 Industrial Ball Valves

CPVC 6" Industrial T-Handle Valve Option (Non-Locking) NOTICE: T-Handle is more compact, but will greatly increase difficulty of operation.

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
SR Threaded Ends					
6	18216-060CSR **2295.64**	18316-060CSR **2543.73**	1	0	613
Flanged Ends					
6	18236-060C **3644.03**	18336-060C **3789.02**	1	0	613

True Union 2000 Industrial Vented/Bleach Ball Valves



Pressure Rating @ 73°F (23°C), Water

1/2" - 4"	235 psi
6"	150 psi
Flanged	150 psi

Same True Union 2000 Industrial Ball Valve with Special Ball Vent Design for Sodium Hypochlorite (Bleach) and other Chemical Applications where entrapped fluids may form caustic crystalline residues and pressure build up from gases developed. Valve has a 1/8" vent hole in ball to equalize internal fluid pressures. Install valve with ball vent on the pressure (upstream) side when in closed position.

All Valves assembled with Silicone-Free, Water Soluble Lubricant

Contact Spears® for Pricing & Availability on Custom Elastomer Seals. See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

PVC True Union 2000 Industrial Vented/Bleach Ball Valves

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded & Socket Ends					
1/2	1829V-005 **58.45**	1839V-005 **65.06**	1	18	600
3/4	1829V-007 **69.17**	1839V-007 **76.94**	1	18	600
1	1829V-010 **82.39**	1839V-010 **91.75**	1	12	600
1-1/4	1829V-012 **113.97**	1839V-012 **145.45**	1	8	600
1-1/2	1829V-015 **137.25**	1839V-015 **152.38**	1	8	600
2	1829V-020 **181.12**	1839V-020 **199.46**	1	4	600
Socket Ends					
2-1/2	1822V-025 **348.17**	1832V-025 **471.76**	1	0	601
3	1822V-030 **390.18**	1832V-030 **510.03**	1	0	601
4	1822V-040 **659.24**	1832V-040 **861.75**	1	0	601
6	1822V-060 **1675.42**	1832V-060 **1975.46**	1	0	612
SR Threaded Ends					
1/2	1821V-005SR **59.72**	1831V-005SR **66.32**	1	18	600
3/4	1821V-007SR **72.18**	1831V-007SR **79.99**	1	18	600
1	1821V-010SR **85.41**	1831V-010SR **94.79**	1	12	600
1-1/4	1821V-012SR **123.04**	1831V-012SR **154.54**	1	8	600
1-1/2	1821V-015SR **147.04**	1831V-015SR **162.16**	1	8	600
2	1821V-020SR **191.71**	1831V-020SR **209.82**	1	4	600
2-1/2	1821V-025SR **376.62**	1831V-025SR **500.19**	1	0	601

PVC True Union 2000 Industrial Vented/Bleach Ball Valves (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
SR Threaded Ends					
3	1821V-030SR **487.51**	1831V-030SR **538.48**	1	0	601
4	1821V-040SR **808.78**	1831V-040SR **894.98**	1	0	601
Flanged Ends					
1/2	1823V-005 **83.76**	1833V-005 **89.47**	1	8	600
3/4	1823V-007 **105.95**	1833V-007 **115.22**	1	8	600
1	1823V-010 **128.21**	1833V-010 **137.87**	1	8	600
1-1/4	1823V-012 **150.56**	1833V-012 **206.28**	1	8	600
1-1/2	1823V-015 **189.60**	1833V-015 **206.28**	1	4	600
2	1823V-020 **301.89**	1833V-020 **320.20**	1	0	600
2-1/2	1823V-025 **557.54**	1833V-025 **566.75**	1	0	601
3	1823V-030 **616.24**	1833V-030 **765.09**	1	0	601
4	1823V-040 **1239.06**	1833V-040 **1436.28**	1	0	601
6	1823V-060 **2638.22**	1833V-060 **3058.95**	1	0	612

CPVC True Union 2000 Industrial Vented/Bleach Ball Valves

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded & Socket Ends					
1/2	1829V-005C **77.20**	1839V-005C **85.79**	1	18	602
3/4	1829V-007C **97.23**	1839V-007C **108.07**	1	18	602
1	1829V-010C **115.77**	1839V-010C **128.62**	1	12	602

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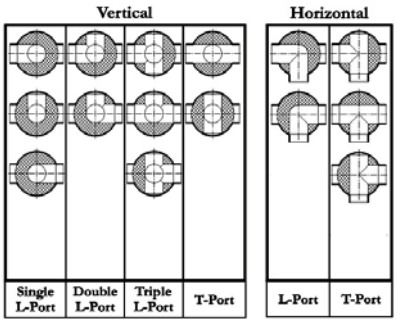
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC True Union 2000 Industrial Vented/Bleach Ball Valves (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded & Socket Ends					
1-1/4	1829V-012C **184.04**	1839V-012C **204.57**	1	8	602
1-1/2	1829V-015C **194.37**	1839V-015C **215.96**	1	8	602
2	1829V-020C **259.96**	1839V-020C **298.81**	1	4	602
Socket Ends					
2-1/2	1822V-025C **582.81**	1832V-025C **647.51**	1	0	603
3	1822V-030C **681.44**	1832V-030C **757.19**	1	0	603
4	1822V-040C **1234.79**	1832V-040C **1372.00**	1	0	603
6	1822V-060C **2628.74**	1832V-060C **2920.60**	1	0	613
SR Threaded Ends					
1/2	1821V-005CSR **78.43**	1831V-005CSR **87.05**	1	18	602
3/4	1821V-007CSR **100.28**	1831V-007CSR **111.07**	1	18	602
1	1821V-010CSR **118.77**	1831V-010CSR **131.62**	1	12	602
1-1/4	1821V-012CSR **193.12**	1831V-012CSR **213.65**	1	8	602
1-1/2	1821V-015CSR **204.15**	1831V-015CSR **225.73**	1	8	602
2	1821V-020CSR **270.54**	1831V-020CSR **309.41**	1	4	602
2-1/2	1821V-025CSR **611.26**	1831V-025CSR **675.97**	1	0	603
3	1821V-030CSR **709.89**	1831V-030CSR **785.65**	1	0	603
4	1821V-040CSR **1268.01**	1831V-040CSR **1405.23**	1	0	603
Flanged Ends					
1/2	1823V-005C **131.00**	1833V-005C **133.82**	1	8	602
3/4	1823V-007C **160.59**	1833V-007C **167.29**	1	8	602
1	1823V-010C **183.84**	1833V-010C **195.16**	1	8	602
1-1/4	1823V-012C **274.69**	1833V-012C **284.33**	1	8	602
1-1/2	1823V-015C **302.14**	1833V-015C **312.22**	1	4	602
2	1823V-020C **420.45**	1833V-020C **500.73**	1	0	602
2-1/2	1823V-025C **784.74**	1833V-025C **941.93**	1	0	603
3	1823V-030C **1147.61**	1833V-030C **1173.76**	1	0	603
4	1823V-040C **2093.21**	1833V-040C **2093.23**	1	0	603
6	1823V-060C **4457.67**	1833V-060C **4457.67**	1	0	613

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
2-1/2" - 4" 150 psi
Flanged 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Vertical 3-Way or Horizontal Diverter Design
(No Branch Shut-off)
All Standard Carton Quantities are one
All Valves assembled with Silicone-Free,
Water Soluble Lubricant
See Ball Valve Accessories & Repair Kits Section
for Additional Options and Features

Ball Port Options



Ball port options viewed from top of valve



Horizontal Diverter Valve



Vertical 3-Way Valve

PVC Horizontal Diverter Ball Valves

Material		EPDM				FKM				Disc Code
Joint		Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Ball Port	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	L-Port	5022L1-005 102.54	5021L1-005SR 105.85	5027L1-005 102.54	5023L1-005 209.43	5032L1-005 111.22	5031L1-005SR 116.24	5037L1-005 111.22	5033L1-005 218.79	615
	T-Port	5022T1-005 102.54	5021T1-005SR 105.85	5027T1-005 102.54	5023T1-005 209.43	5032T1-005 111.22	5031T1-005SR 116.24	5037T1-005 111.22	5033T1-005 218.79	615
3/4	L-Port	5022L1-007 122.29	5021L1-007SR 126.36	5027L1-007 122.29	5023L1-007 219.13	5032L1-007 131.63	5031L1-007SR 135.73	5037L1-007 131.63	5033L1-007 231.24	615
	T-Port	5022T1-007 122.29	5021T1-007SR 126.36	5027T1-007 122.29	5023T1-007 219.13	5032T1-007 131.63	5031T1-007SR 135.73	5037T1-007 131.63	5033T1-007 231.24	615
1	L-Port	5022L1-010 148.27	5021L1-010SR 152.26	5027L1-010 148.27	5023L1-010 312.32	5032L1-010 163.35	5031L1-010SR 167.40	5037L1-010 163.35	5033L1-010 341.42	615
	T-Port	5022T1-010 148.27	5021T1-010SR 152.26	5027T1-010 148.27	5023T1-010 312.32	5032T1-010 163.35	5031T1-010SR 167.40	5037T1-010 163.35	5033T1-010 341.42	615
1-1/4	L-Port	5022L1-012 171.86	5021L1-012SR 179.63	5027L1-012 171.86	5023L1-012 590.69	5032L1-012 193.32	5031L1-012SR 201.44	5037L1-012 193.32	5033L1-012 625.67	615
	T-Port	5022T1-012 171.86	5021T1-012SR 179.63	5027T1-012 171.86	5023T1-012 590.69	5032T1-012 193.32	5031T1-012SR 201.44	5037T1-012 193.32	5033T1-012 625.67	615
1-1/2	L-Port	5022L1-015 200.95	5021L1-015SR 213.94	5027L1-015 200.95	5023L1-015 608.53	5032L1-015 220.00	5031L1-015SR 232.98	5037L1-015 220.00	5033L1-015 636.42	615
	T-Port	5022T1-015 200.95	5021T1-015SR 213.94	5027T1-015 200.95	5023T1-015 608.53	5032T1-015 220.00	5031T1-015SR 232.98	5037T1-015 220.00	5033T1-015 636.42	615
2	L-Port	5022L1-020 246.51	5021L1-020SR 259.48	5027L1-020 246.51	5023L1-020 790.23	5032L1-020 287.39	5031L1-020SR 301.48	5037L1-020 287.39	5033L1-020 829.91	615
	T-Port	5022T1-020 246.51	5021T1-020SR 259.48	5027T1-020 246.51	5023T1-020 790.23	5032T1-020 287.39	5031T1-020SR 301.48	5037T1-020 287.39	5033T1-020 829.91	615
2-1/2	L-Port	5022L1-025 831.12	5021L1-025SR 867.49	5027L1-025 831.12	5023L1-025 1387.52	5032L1-025 883.79	5031L1-025SR 920.15	5037L1-025 883.79	5033L1-025 1626.02	615
	T-Port	5022T1-025 831.12	5021T1-025SR 867.49	5027T1-025 831.12	5023T1-025 1387.52	5032T1-025 883.79	5031T1-025SR 920.15	5037T1-025 883.79	5033T1-025 1626.02	615
3	L-Port	5022L1-030 848.09	5021L1-030SR 886.21	5027L1-030 848.09	5023L1-030 1405.72	5032L1-030 897.64	5031L1-030SR 934.00	5037L1-030 897.64	5033L1-030 1633.48	615
	T-Port	5022T1-030 848.09	5021T1-030SR 886.21	5027T1-030 848.09	5023T1-030 1405.72	5032T1-030 897.64	5031T1-030SR 934.00	5037T1-030 897.64	5033T1-030 1633.48	615
4	L-Port	5022L1-040 1535.97	5021L1-040SR 1577.56	5027L1-040 1535.97	5023L1-040 2042.29	5032L1-040 1553.29	5031L1-040SR 1594.87	5037L1-040 1553.29	5033L1-040 2232.33	615
	T-Port	5022T1-040 1535.97	5021T1-040SR 1577.56	5027T1-040 1535.97	5023T1-040 2042.29	5032T1-040 1553.29	5031T1-040SR 1594.87	5037T1-040 1553.29	5033T1-040 2232.33	615

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

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CPVC Horizontal Diverter Ball Valves

Material		EPDM				FKM				Disc Code
Joint		Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Ball Port	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	L-Port	5022L1-005C 157.82	5021L1-005CSR 162.83	5027L1-005C 157.82	5023L1-005C 322.20	5032L1-005C 170.98	5031L1-005CSR 178.77	5037L1-005C 170.98	5033L1-005C 336.56	617
	T-Port	5022T1-005C 157.82	5021T1-005CSR 162.83	5027T1-005C 157.82	5023T1-005C 322.20	5032T1-005C 170.98	5031T1-005CSR 178.77	5037T1-005C 170.98	5033T1-005C 336.56	617
3/4	L-Port	5022L1-007C 188.12	5021L1-007CSR 194.37	5027L1-007C 188.12	5023L1-007C 337.09	5032L1-007C 202.49	5031L1-007CSR 208.73	5037L1-007C 202.49	5033L1-007C 355.80	617
	T-Port	5022T1-007C 188.12	5021T1-007CSR 194.37	5027T1-007C 188.12	5023T1-007C 337.09	5032T1-007C 202.49	5031T1-007CSR 208.73	5037T1-007C 202.49	5033T1-007C 355.80	617
1	L-Port	5022L1-010C 228.12	5021L1-010CSR 234.21	5027L1-010C 228.12	5023L1-010C 480.34	5032L1-010C 251.35	5031L1-010CSR 257.40	5037L1-010C 251.35	5033L1-010C 525.21	617
	T-Port	5022T1-010C 228.12	5021T1-010CSR 234.21	5027T1-010C 228.12	5023T1-010C 480.34	5032T1-010C 251.35	5031T1-010CSR 257.40	5037T1-010C 251.35	5033T1-010C 525.21	617
1-1/4	L-Port	5022L1-012C 264.35	5021L1-012CSR 276.29	5027L1-012C 264.35	5023L1-012C 908.74	5032L1-012C 296.38	5031L1-012CSR 309.89	5037L1-012C 296.38	5033L1-012C 962.62	617
	T-Port	5022T1-012C 264.35	5021T1-012CSR 276.29	5027T1-012C 264.35	5023T1-012C 908.74	5032T1-012C 296.38	5031T1-012CSR 309.89	5037T1-012C 296.38	5033T1-012C 962.62	617
1-1/2	L-Port	5022L1-015C 309.22	5021L1-015CSR 329.13	5027L1-015C 309.22	5023L1-015C 936.25	5032L1-015C 338.44	5031L1-015CSR 358.39	5037L1-015C 338.44	5033L1-015C 979.05	617
	T-Port	5022T1-015C 309.22	5021T1-015CSR 329.13	5027T1-015C 309.22	5023T1-015C 936.25	5032T1-015C 338.44	5031T1-015CSR 358.39	5037T1-015C 338.44	5033T1-015C 979.05	617
2	L-Port	5022L1-020C 379.35	5021L1-020CSR 399.20	5027L1-020C 379.35	5023L1-020C 1215.68	5032L1-020C 442.12	5031L1-020CSR 463.73	5037L1-020C 442.12	5033L1-020C 1276.82	617
	T-Port	5022T1-020C 379.35	5021T1-020CSR 399.20	5027T1-020C 379.35	5023T1-020C 1215.68	5032T1-020C 442.12	5031T1-020CSR 463.73	5037T1-020C 442.12	5033T1-020C 1276.82	617
2-1/2	L-Port	5022L1-025C 1278.73	5021L1-025CSR 1334.51	5027L1-025C 1278.73	5023L1-025C 2134.61	5032L1-025C 1359.63	5031L1-025CSR 1415.62	5037L1-025C 1359.63	5033L1-025C 2501.60	617
	T-Port	5022T1-025C 1278.73	5021T1-025CSR 1334.51	5027T1-025C 1278.73	5023T1-025C 2134.61	5032T1-025C 1359.63	5031T1-025CSR 1415.62	5037T1-025C 1359.63	5033T1-025C 2501.60	617
3	L-Port	5022L1-030C 1304.72	5021L1-030CSR 1363.43	5027L1-030C 1304.72	5023L1-030C 2163.38	5032L1-030C 1380.93	5031L1-030CSR 1436.91	5037L1-030C 1380.93	5033L1-030C 2513.13	617
	T-Port	5022T1-030C 1304.72	5021T1-030CSR 1363.43	5027T1-030C 1304.72	5023T1-030C 2163.38	5032T1-030C 1380.93	5031T1-030CSR 1436.91	5037T1-030C 1380.93	5033T1-030C 2513.13	617
4	L-Port	5022L1-040C 2362.94	5021L1-040CSR 2426.84	5027L1-040C 2362.94	5023L1-040C 3142.08	5032L1-040C 2389.62	5031L1-040CSR 2453.65	5037L1-040C 2389.62	5033L1-040C 3434.33	617
	T-Port	5022T1-040C 2362.94	5021T1-040CSR 2426.84	5027T1-040C 2362.94	5023T1-040C 3142.08	5032T1-040C 2389.62	5031T1-040CSR 2453.65	5037T1-040C 2389.62	5033T1-040C 3434.33	617

PVC Vertical 3-Way Ball Valves

Material		EPDM				FKM				Disc Code
Joint		Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Ball Port	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	L-Port	4722L1-005 102.03	4721L1-005SR 103.65	4727L1-005 102.03	4723L1-005 210.83	4732L1-005 110.51	4731L1-005SR 112.15	4737L1-005 110.51	4733L1-005 218.43	615
	Double L-Port	4722L2-005 203.20	4721L2-005SR 204.83	4727L2-005 203.20	4723L2-005 311.99	4732L2-005 211.68	4731L2-005SR 213.33	4737L2-005 211.68	4733L2-005 319.60	615
	Triple L-Port	4722L3-005 203.20	4721L3-005SR 204.83	4727L3-005 203.20	4723L3-005 311.99	4732L3-005 211.68	4731L3-005SR 213.33	4737L3-005 211.68	4733L3-005 319.60	615
	T-Port	4722T1-005 102.03	4721T1-005SR 103.65	4727T1-005 102.03	4723T1-005 210.83	4732T1-005 110.51	4731T1-005SR 112.15	4737T1-005 110.51	4733T1-005 218.43	615
3/4	L-Port	4722L1-007 119.68	4721L1-007SR 123.78	4727L1-007 119.68	4723L1-007 221.38	4732L1-007 130.43	4731L1-007SR 134.49	4737L1-007 130.43	4733L1-007 230.74	615
	Double L-Port	4722L2-007 220.86	4721L2-007SR 224.92	4727L2-007 220.86	4723L2-007 322.56	4732L2-007 231.60	4731L2-007SR 235.66	4737L2-007 231.60	4733L2-007 331.89	615
	Triple L-Port	4722L3-007 220.86	4721L3-007SR 224.92	4727L3-007 220.86	4723L3-007 322.56	4732L3-007 231.60	4731L3-007SR 235.66	4737L3-007 231.60	4733L3-007 331.89	615
	T-Port	4722T1-007 119.68	4721T1-007SR 123.78	4727T1-007 119.68	4723T1-007 221.38	4732T1-007 130.43	4731T1-007SR 134.49	4737T1-007 130.43	4733T1-007 230.74	615
1	L-Port	4722L1-010 145.49	4721L1-010SR 149.58	4727L1-010 145.49	4723L1-010 315.78	4732L1-010 161.98	4731L1-010SR 166.03	4737L1-010 161.98	4733L1-010 341.77	615
	Double L-Port	4722L2-010 246.69	4721L2-010SR 250.76	4727L2-010 246.69	4723L2-010 416.96	4732L2-010 263.12	4731L2-010SR 267.20	4737L2-010 263.12	4733L2-010 442.94	615
	Triple L-Port	4722L3-010 246.69	4721L3-010SR 250.76	4727L3-010 246.69	4723L3-010 416.96	4732L3-010 263.12	4731L3-010SR 267.20	4737L3-010 263.12	4733L3-010 442.94	615
	T-Port	4722T1-010 145.49	4721T1-010SR 149.58	4727T1-010 145.49	4723T1-010 315.78	4732T1-010 161.98	4731T1-010SR 166.03	4737T1-010 161.98	4733T1-010 341.77	615
1-1/4	L-Port	4722L1-012 175.99	4721L1-012SR 184.15	4727L1-012 175.99	4723L1-012 595.20	4732L1-012 207.36	4731L1-012SR 215.49	4737L1-012 207.36	4733L1-012 629.48	615
	Double L-Port	4722L2-012 277.17	4721L2-012SR 285.31	4727L2-012 277.17	4723L2-012 696.36	4732L2-012 308.53	4731L2-012SR 316.65	4737L2-012 308.53	4733L2-012 730.66	615
	Triple L-Port	4722L3-012 277.17	4721L3-012SR 285.31	4727L3-012 277.17	4723L3-012 696.36	4732L3-012 308.53	4731L3-012SR 316.65	4737L3-012 308.53	4733L3-012 730.66	615
	T-Port	4722T1-012 175.99	4721T1-012SR 184.15	4727T1-012 175.99	4723T1-012 595.20	4732T1-012 207.36	4731T1-012SR 215.49	4737T1-012 207.36	4733T1-012 629.48	615

PVC Vertical 3-Way Ball Valves (continued)

Material		EPDM				FKM				Disc Code
Joint		Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Ball Port	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1-1/2	L-Port	4722L1-015 203.52	4721L1-015SR 216.54	4727L1-015 203.52	4723L1-015 617.38	4732L1-015 223.11	4731L1-015SR 236.11	4737L1-015 223.11	4733L1-015 636.42	615
	Double L-Port	4722L2-015 304.71	4721L2-015SR 317.68	4727L2-015 304.71	4723L2-015 718.53	4732L2-015 324.26	4731L2-015SR 337.26	4737L2-015 324.26	4733L2-015 737.58	615
	Triple L-Port	4722L3-015 304.71	4721L3-015SR 317.68	4727L3-015 304.71	4723L3-015 718.53	4732L3-015 324.26	4731L3-015SR 337.26	4737L3-015 324.26	4733L3-015 737.58	615
	T-Port	4722T1-015 203.52	4721T1-015SR 216.54	4727T1-015 203.52	4723T1-015 617.38	4732T1-015 223.11	4731T1-015SR 236.11	4737T1-015 223.11	4733T1-015 636.42	615
2	L-Port	4722L1-020 249.61	4721L1-020SR 263.73	4727L1-020 249.61	4723L1-020 795.60	4732L1-020 289.81	4731L1-020SR 303.92	4737L1-020 289.81	4733L1-020 830.80	615
	Double L-Port	4722L2-020 350.76	4721L2-020SR 364.91	4727L2-020 350.76	4723L2-020 896.78	4732L2-020 390.98	4731L2-020SR 405.07	4737L2-020 390.98	4733L2-020 931.93	615
	Triple L-Port	4722L3-020 350.76	4721L3-020SR 364.91	4727L3-020 350.76	4723L3-020 896.78	4732L3-020 390.98	4731L3-020SR 405.07	4737L3-020 390.98	4733L3-020 931.93	615
	T-Port	4722T1-020 249.61	4721T1-020SR 263.73	4727T1-020 249.61	4723T1-020 795.60	4732T1-020 289.81	4731T1-020SR 303.92	4737T1-020 289.81	4733T1-020 830.80	615
2-1/2	L-Port	4722L1-025 877.91	4721L1-025SR 914.28	4727L1-025 877.91	4723L1-025 1393.58	4732L1-025 887.78	4731L1-025SR 924.17	4737L1-025 887.78	4733L1-025 1624.14	615
	Double L-Port	4722L2-025 979.05	4721L2-025SR 1015.43	4727L2-025 979.05	4723L2-025 1494.75	4732L2-025 988.94	4731L2-025SR 1025.31	4737L2-025 988.94	4733L2-025 1725.31	615
	Triple L-Port	4722L3-025 979.05	4721L3-025SR 1015.43	4727L3-025 979.05	4723L3-025 1494.75	4732L3-025 988.94	4731L3-025SR 1025.31	4737L3-025 988.94	4733L3-025 1725.31	615
	T-Port	4722T1-025 877.91	4721T1-025SR 914.28	4727T1-025 877.91	4723T1-025 1393.58	4732T1-025 887.78	4731T1-025SR 924.17	4737T1-025 887.78	4733T1-025 1624.14	615
3	L-Port	4722L1-030 895.91	4721L1-030SR 932.28	4727L1-030 895.91	4723L1-030 1412.80	4732L1-030 903.87	4731L1-030SR 940.25	4737L1-030 903.87	4733L1-030 1634.89	615
	Double L-Port	4722L2-030 997.07	4721L2-030SR 1033.46	4727L2-030 997.07	4723L2-030 1513.98	4732L2-030 1005.05	4731L2-030SR 1041.41	4737L2-030 1005.05	4733L2-030 1736.04	615
	Triple L-Port	4722L3-030 997.07	4721L3-030SR 1033.46	4727L3-030 997.07	4723L3-030 1513.98	4732L3-030 1005.05	4731L3-030SR 1041.41	4737L3-030 1005.05	4733L3-030 1736.04	615
	T-Port	4722T1-030 895.91	4721T1-030SR 932.28	4727T1-030 895.91	4723T1-030 1412.80	4732T1-030 903.87	4731T1-030SR 940.25	4737T1-030 903.87	4733T1-030 1634.89	615
4	L-Port	4722L1-040 1548.61	4721L1-040SR 1590.18	4727L1-040 1548.61	4723L1-040 2053.91	4732L1-040 1563.68	4731L1-040SR 1605.25	4737L1-040 1563.68	4733L1-040 2151.25	615
	Double L-Port	4722L2-040 1649.80	4721L2-040SR 1691.34	4727L2-040 1649.80	4723L2-040 2155.07	4732L2-040 1664.85	4731L2-040SR 1706.43	4737L2-040 1664.85	4733L2-040 2252.42	615
	Triple L-Port	4722L3-040 1649.80	4721L3-040SR 1691.34	4727L3-040 1649.80	4723L3-040 2155.07	4732L3-040 1664.85	4731L3-040SR 1706.43	4737L3-040 1664.85	4733L3-040 2252.42	615
	T-Port	4722T1-040 1548.61	4721T1-040SR 1590.18	4727T1-040 1548.61	4723T1-040 2053.91	4732T1-040 1563.68	4731T1-040SR 1605.25	4737T1-040 1563.68	4733T1-040 2151.25	615

CPVC Vertical 3-Way Ball Valves

Material		EPDM				FKM				Disc Code
Joint		Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Ball Port	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	L-Port	4722L1-005C 156.94	4721L1-005CSR 159.53	4727L1-005C 156.94	4723L1-005C 324.26	4732L1-005C 169.93	4731L1-005CSR 172.52	4737L1-005C 169.93	4733L1-005C 336.06	617
	Double L-Port	4722L2-005C 312.67	4721L2-005CSR 315.08	4727L2-005C 312.67	4723L2-005C 480.00	4732L2-005C 325.66	4731L2-005CSR 328.09	4737L2-005C 325.66	4733L2-005C 491.61	617
	Triple L-Port	4722L3-005C 312.67	4721L3-005CSR 315.08	4727L3-005C 312.67	4723L3-005C 480.00	4732L3-005C 325.66	4731L3-005CSR 328.09	4737L3-005C 325.66	4733L3-005C 491.61	617
	T-Port	4722T1-005C 156.94	4721T1-005CSR 159.53	4727T1-005C 156.94	4723T1-005C 324.26	4732T1-005C 169.93	4731T1-005CSR 172.52	4737T1-005C 169.93	4733T1-005C 336.06	617
3/4	L-Port	4722L1-007C 184.15	4721L1-007CSR 190.54	4727L1-007C 184.15	4723L1-007C 340.56	4732L1-007C 200.60	4731L1-007CSR 207.00	4737L1-007C 200.60	4733L1-007C 354.93	617
	Double L-Port	4722L2-007C 339.86	4721L2-007CSR 345.92	4727L2-007C 339.86	4723L2-007C 496.13	4732L2-007C 356.32	4731L2-007CSR 362.56	4737L2-007C 356.32	4733L2-007C 510.48	617
	Triple L-Port	4722L3-007C 339.86	4721L3-007CSR 345.92	4727L3-007C 339.86	4723L3-007C 496.13	4732L3-007C 356.32	4731L3-007CSR 362.56	4737L3-007C 356.32	4733L3-007C 510.48	617
	T-Port	4722T1-007C 184.15	4721T1-007CSR 190.54	4727T1-007C 183.68	4723T1-007C 340.56	4732T1-007C 200.60	4731T1-007CSR 207.00	4737T1-007C 200.60	4733T1-007C 354.93	617
1	L-Port	4722L1-010C 223.81	4721L1-010CSR 230.05	4727L1-010C 223.81	4723L1-010C 485.72	4732L1-010C 249.27	4731L1-010CSR 255.51	4737L1-010C 249.27	4733L1-010C 525.73	617
	Double L-Port	4722L2-010C 379.52	4721L2-010CSR 385.76	4727L2-010C 379.52	4723L2-010C 641.43	4732L2-010C 404.81	4731L2-010CSR 411.07	4737L2-010C 404.81	4733L2-010C 681.45	617
	Triple L-Port	4722L3-010C 379.52	4721L3-010CSR 385.76	4727L3-010C 379.52	4723L3-010C 641.43	4732L3-010C 404.81	4731L3-010CSR 411.07	4737L3-010C 404.81	4733L3-010C 681.45	617
	T-Port	4722T1-010C 223.81	4721T1-010CSR 230.05	4727T1-010C 223.81	4723T1-010C 485.72	4732T1-010C 249.27	4731T1-010CSR 255.51	4737T1-010C 249.27	4733T1-010C 525.73	617

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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC Vertical 3-Way Ball Valves (continued)

Material		EPDM				FKM				Disc Code
Joint		Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Ball Port	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1-1/4	L-Port	4722L1-012C 270.75	4721L1-012CSR 283.21	4727L1-012C 270.75	4723L1-012C 915.65	4732L1-012C 319.07	4731L1-012CSR 331.55	4737L1-012C 319.07	4733L1-012C 968.48	617
	Double L-Port	4722L2-012C 426.29	4721L2-012CSR 438.77	4727L2-012C 426.29	4723L2-012C 1071.22	4732L2-012C 474.62	4731L2-012CSR 487.97	4737L2-012C 474.62	4733L2-012C 730.66	617
	Triple L-Port	4722L3-012C 426.29	4721L3-012CSR 438.77	4727L3-012C 426.29	4723L3-012C 1071.22	4732L3-012C 474.62	4731L3-012CSR 487.97	4737L3-012C 474.62	4733L3-012C 1124.04	617
	T-Port	4722T1-012C 270.75	4721T1-012CSR 283.21	4727T1-012C 270.75	4723T1-012C 915.65	4732T1-012C 319.07	4731T1-012CSR 331.55	4737T1-012C 319.07	4733T1-012C 968.48	617
1-1/2	L-Port	4722L1-015C 313.00	4721L1-015CSR 333.11	4727L1-015C 313.00	4723L1-015C 949.80	4732L1-015C 343.15	4731L1-015CSR 363.23	4737L1-015C 343.15	4733L1-015C 979.05	617
	Double L-Port	4722L2-015C 468.76	4721L2-015CSR 488.65	4727L2-015C 468.76	4723L2-015C 1105.32	4732L2-015C 498.89	4731L2-015CSR 558.62	4737L2-015C 498.89	4733L2-015C 1134.78	617
	Triple L-Port	4722L3-015C 468.76	4721L3-015CSR 488.65	4727L3-015C 468.76	4723L3-015C 1105.32	4732L3-015C 498.89	4731L3-015CSR 558.62	4737L3-015C 498.89	4733L3-015C 1134.78	617
	T-Port	4722T1-015C 313.00	4721T1-015CSR 333.11	4727T1-015C 313.00	4723T1-015C 949.80	4732T1-015C 343.15	4731T1-015CSR 363.23	4737T1-015C 343.15	4733T1-015C 979.05	617
2	L-Port	4722L1-020C 384.04	4721L1-020CSR 405.67	4727L1-020C 384.04	4723L1-020C 1223.99	4732L1-020C 445.86	4731L1-020CSR 467.52	4737L1-020C 445.86	4733L1-020C 1278.04	617
	Double L-Port	4722L2-020C 539.61	4721L2-020CSR 561.41	4727L2-020C 539.61	4723L2-020C 1332.96	4732L2-020C 601.44	4731L2-020CSR 623.06	4737L2-020C 601.44	4733L2-020C 1433.76	617
	Triple L-Port	4722L3-020C 539.61	4721L3-020CSR 561.41	4727L3-020C 539.61	4723L3-020C 1332.96	4732L3-020C 601.44	4731L3-020CSR 623.06	4737L3-020C 601.44	4733L3-020C 1433.76	617
	T-Port	4722T1-020C 384.04	4721T1-020CSR 405.67	4727T1-020C 384.04	4723T1-020C 1223.99	4732T1-020C 445.86	4731T1-020CSR 467.52	4737T1-020C 445.86	4733T1-020C 1278.04	617
2-1/2	L-Port	4722L1-025C 1350.63	4721L1-025CSR 1406.56	4727L1-025C 1350.63	4723L1-025C 2143.79	4732L1-025C 1365.85	4731L1-025CSR 1421.81	4737L1-025C 1365.85	4733L1-025C 2498.75	617
	Double L-Port	4722L2-025C 1506.17	4721L2-025CSR 1544.08	4727L2-025C 1506.17	4723L2-025C 2299.54	4732L2-025C 1521.42	4731L2-025CSR 1577.38	4737L2-025C 1521.42	4733L2-025C 2654.31	617
	Triple L-Port	4722L3-025C 1506.17	4721L3-025CSR 1544.08	4727L3-025C 1506.17	4723L3-025C 2299.54	4732L3-025C 1521.42	4731L3-025CSR 1577.38	4737L3-025C 1521.42	4733L3-025C 2654.31	617
	T-Port	4722T1-025C 1350.63	4721T1-025CSR 1406.56	4727T1-025C 1350.63	4723T1-025C 2143.79	4732T1-025C 1365.85	4731T1-025CSR 1421.81	4737T1-025C 1365.85	4733T1-025C 2498.75	617
3	L-Port	4722L1-030C 1378.33	4721L1-030CSR 1434.28	4727L1-030C 1378.33	4723L1-030C 2173.62	4732L1-030C 1390.47	4731L1-030CSR 1446.60	4737L1-030C 1390.47	4733L1-030C 2515.20	617
	Double L-Port	4722L2-030C 1533.91	4721L2-030CSR 1571.82	4727L2-030C 1533.91	4723L2-030C 2329.15	4732L2-030C 1546.18	4731L2-030CSR 1602.15	4737L2-030C 1546.18	4733L2-030C 2670.75	617
	Triple L-Port	4722L3-030C 1533.91	4721L3-030CSR 1571.82	4727L3-030C 1533.91	4723L3-030C 2329.15	4732L3-030C 1546.18	4731L3-030CSR 1602.15	4737L3-030C 1546.18	4733L3-030C 2670.75	617
	T-Port	4722T1-030C 1378.33	4721T1-030CSR 1434.28	4727T1-030C 1378.33	4723T1-030C 2173.62	4732T1-030C 1390.47	4731T1-030CSR 1446.60	4737T1-030C 1390.47	4733T1-030C 2515.20	617
4	L-Port	4722L1-040C 2382.52	4721L1-040CSR 2446.43	4727L1-040C 2382.52	4723L1-040C 3191.12	4732L1-040C 2405.72	4731L1-040CSR 2469.64	4737L1-040C 2405.72	4733L1-040C 3309.60	617
	Double L-Port	4722L2-040C 2538.05	4721L2-040CSR 2601.98	4727L2-040C 2538.05	4723L2-040C 3315.47	4732L2-040C 2561.27	4731L2-040CSR 2625.20	4737L2-040C 2561.27	4733L2-040C 3465.15	617
	Triple L-Port	4722L3-040C 2538.05	4721L3-040CSR 2601.98	4727L3-040C 2538.05	4723L3-040C 3315.47	4732L3-040C 2561.27	4731L3-040CSR 2625.20	4737L3-040C 2561.27	4733L3-040C 3465.15	617
	T-Port	4722T1-040C 2382.52	4721T1-040CSR 2446.43	4727T1-040C 2382.52	4723T1-040C 3191.12	4732T1-040C 2405.72	4731T1-040CSR 2469.64	4737T1-040C 2405.72	4733T1-040C 3309.60	617

Tee-Style "Zero Dead-Leg" Ball Valves

Valves are produced to order in Ball Valve sizes 1/2" – 2".
Tee Valves can be custom produced in any standard Tee and Valve size combination.

The Tee Valve is assembled with socket end connector.
Tee Valves are a non-stock configuration.
All orders are non-cancelable, non-returnable.



Pressure Rating @ 73°F (23°C), Water
Valve Sizes 1/2" - 2" (20mm - 63mm) = 235 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Mainline Socket Tee x Valve Socket					
1/2	182901-005 **163.19**	183901-005 **175.80**	1	12	263
3/4	182901-007 **178.35**	183901-007 **192.79**	1	8	263
1	182901-010 **181.71**	183901-010 **203.39**	1	8	263
2	182901-020 **301.16**	183901-020 **351.61**	1	0	263
3/4X1/2	182901-101 **165.91**	183901-101 **178.48**	1	12	263
1X1/2	182901-130 **171.36**	183901-130 **183.99**	1	8	263
1X3/4	182901-131 **181.71**	183901-131 **203.39**	1	8	263
1-1/4X1/2	182901-166 **180.55**	183901-166 **193.15**	1	8	263
1-1/4X3/4	182901-167 **185.06**	183901-167 **199.53**	1	8	263
1-1/4X1	182901-168 **197.72**	183901-168 **219.42**	1	8	263
1-1/2X1/2	182901-209 **180.55**	183901-209 **193.17**	1	8	263
1-1/2X3/4	182901-210 **185.06**	183901-210 **199.53**	1	8	263
1-1/2X1	182901-211 **197.72**	183901-211 **219.42**	1	8	263
2X1/2	182901-247 **233.48**	183901-247 **246.17**	1	8	263
2X3/4	182901-248 **240.39**	183901-248 **254.80**	1	8	263
2X1	182901-249 **250.64**	183901-249 **272.35**	1	8	263
2X1-1/2	182901-251 **309.25**	183901-251 **336.34**	1	8	263
3X1/2	182901-333 **238.23**	183901-333 **250.85**	1	0	263
3X1	182901-335 **255.26**	183901-335 **276.96**	1	4	263
3X1-1/2	182901-337 **292.86**	183901-337 **319.97**	1	0	263
3X2	182901-338 **318.44**	183901-338 **368.92**	1	0	263
4X1	182901-417 **295.06**	183901-417 **316.75**	1	0	263
4X1-1/2	182901-419 **332.68**	183901-419 **359.77**	1	0	263
4X2	182901-420 **392.35**	183901-420 **442.83**	1	0	263
6X2	182901-528 **461.26**	183901-528 **511.75**	1	0	263
8X2	182901-578 **703.81**	183901-578 **754.31**	1	0	263

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Mainline Socket Tee x Valve Socket					
1/2	182901-005C **251.47**	183901-005C **263.35**	1	12	264
3/4	182901-007C **274.80**	183901-007C **288.40**	1	8	264

CPVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Mainline Socket Tee x Valve Socket					
1	182901-010C **279.99**	183901-010C **300.41**	1	8	264
2	182901-020C **305.92**	183901-020C **353.36**	1	0	264
3/4X1/2	182901-101C **255.63**	183901-101C **267.48**	1	12	264
1X1/2	182901-130C **231.83**	183901-130C **277.07**	1	8	264
1X3/4	182901-131C **279.99**	183901-131C **293.61**	1	8	264
1-1/4X1/2	182901-166C **283.69**	183901-166C **295.58**	1	8	264
1-1/4X3/4	182901-167C **285.19**	183901-167C **298.78**	1	8	264
1-1/4X1	182901-168C **326.88**	183901-168C **347.29**	1	8	264
1-1/2X1/2	182901-209C **318.65**	183901-209C **329.88**	1	8	264
1-1/2X3/4	182901-210C **327.88**	183901-210C **335.95**	1	8	264
1-1/2X1	182901-211C **339.20**	183901-211C **347.29**	1	8	264
2X1/2	182901-247C **363.89**	183901-247C **375.75**	1	8	264
2X3/4	182901-248C **392.64**	183901-248C **406.24**	1	8	264
2X1	182901-249C **413.22**	183901-249C **433.63**	1	8	264
2X1-1/2	182901-251C **485.20**	183901-251C **510.64**	1	0	264
3X1/2	182901-333C **479.02**	183901-333C **490.88**	1	8	264
3X1	182901-335C **501.63**	183901-335C **522.04**	1	0	264
3X1-1/2	182901-337C **571.54**	183901-337C **596.99**	1	0	264
3X2	182901-338C **627.05**	183901-338C **674.49**	1	0	264
4X1	182901-417C **616.77**	183901-417C **637.18**	1	0	264
4X1-1/2	182901-419C **686.65**	183901-419C **712.13**	1	0	264
4X2	182901-420C **818.23**	183901-420C **865.67**	1	0	264
6X2	182901-528C **1068.74**	183901-528C **1116.17**	1	0	264
8X2	182901-578C **1576.85**	183901-578C **1624.31**	1	0	264

PVC Metric

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Mainline Socket Tee x Valve Socket					
20	182901M-020 **163.19**	183901M-020 **175.80**	1	8	263
25	182901M-025 **178.35**	183901M-025 **192.79**	1	8	263
32	182901M-032 **181.71**	183901M-032 **203.39**	1	8	263
40	182901M-040 **252.48**	183901M-040 **270.74**	1	8	263

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Tee-Style "Zero Dead-Leg" Ball Valves

PVC Metric (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Mainline Socket Tee x Valve Socket					
50	182901M-050 **264.35**	183901M-050 **342.67**	1	8	263
63	182901M-063 **301.16**	183901M-063 **351.61**	1	8	263

CPVC Metric

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Mainline Socket Tee x Valve Socket					
20	182901M-020C **251.47**	183901M-020C **263.35**	1	8	264

CPVC Metric (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Mainline Socket Tee x Valve Socket					
25	182901M-025C **292.34**	183901M-025C **288.40**	1	8	263
32	182901M-032C **279.99**	183901M-032C **300.41**	1	8	264
40	182901M-040C **283.87**	183901M-040C **302.98**	1	8	264
50	182901M-050C **288.93**	183901M-050C **340.43**	1	8	264
63	182901M-063C **305.92**	183901M-063C **353.36**	1	8	264

True Union 2000 Standard Ball Valves



Socket Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" = 235 psi
2-1/2" - 4" = 150 psi
Flanged = 150 psi

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply
All Valves Assembled with Silicone-Free, Water Soluble Lubricant
See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

PVC Standard

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket & Threaded Ends					
1/2	3629-005 **39.77**	3639-005 **44.23**	1	18	608
3/4	3629-007 **47.03**	3639-007 **52.32**	1	18	608
1	3629-010 **56.02**	3639-010 **62.40**	1	12	608
1-1/4	3629-012 **77.48**	3639-012 **98.91**	1	8	608
1-1/2	3629-015 **93.35**	3639-015 **103.62**	1	8	608
2	3629-020 **123.18**	3639-020 **135.62**	1	4	608
Socket Ends					
2-1/2	3622-025 **235.95**	3632-025 **320.80**	1	0	609
3	3622-030 **312.14**	3632-030 **346.81**	1	0	609
4	3622-040 **527.23**	3632-040 **586.01**	1	0	609
Threaded Ends					
2-1/2	3621-025 **235.95**	3631-025 **320.80**	1	0	609
3	3621-030 **312.14**	3631-030 **346.81**	1	0	609
4	3621-040 **527.23**	3631-040 **586.01**	1	0	609
SR Threaded Ends					
1/2	3621-005SR **40.63**	3631-005SR **45.08**	1	18	608
3/4	3621-007SR **49.06**	3631-007SR **54.39**	1	18	608
1	3621-010SR **58.06**	3631-010SR **64.44**	1	18	608
1-1/4	3621-012SR **83.67**	3631-012SR **105.08**	1	12	608
1-1/2	3621-015SR **99.98**	3631-015SR **110.24**	1	8	608

PVC Standard (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
SR Threaded Ends					
2	3621-020SR **130.35**	3631-020SR **142.81**	1	8	608
2-1/2	3621-025SR **256.11**	3631-025SR **340.14**	1	0	609
3	3621-030SR **331.52**	3631-030SR **366.17**	1	0	609
4	3621-040SR **550.00**	3631-040SR **608.60**	1	0	609
Spigot Ends					
1/2	3627-005 **39.77**	3637-005 **44.23**	1	18	608
3/4	3627-007 **47.03**	3637-007 **52.32**	1	18	608
1	3627-010 **56.02**	3637-010 **62.40**	1	12	608
1-1/4	3627-012 **77.48**	3637-012 **98.91**	1	12	608
1-1/2	3627-015 **93.35**	3637-015 **103.62**	1	8	608
2	3627-020 **123.18**	3637-020 **135.62**	1	8	608
2-1/2	3627-025 **236.74**	3637-025 **320.80**	1	0	609
3	3627-030 **312.14**	3637-030 **346.81**	1	0	609
4	3627-040 **527.23**	3637-040 **586.01**	1	0	609
Flanged Ends					
1/2	3623-005 **56.87**	3633-005 **60.65**	1	8	608
3/4	3623-007 **72.05**	3633-007 **78.36**	1	8	608
1	3623-010 **87.18**	3633-010 **93.75**	1	8	608
1-1/4	3623-012 **102.35**	3633-012 **113.76**	1	4	608
1-1/2	3623-015 **128.93**	3633-015 **140.29**	1	4	608

PVC Standard (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Flanged Ends					
2	3623-020 **205.28**	3633-020 **217.74**	1	0	608
2-1/2	3623-025 **379.14**	3633-025 **385.41**	1	0	609
3	3623-030 **392.87**	3633-030 **520.28**	1	0	609
4	3623-040 **842.57**	3633-040 **976.66**	1	0	609

PVC White Standard

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Socket EPDM					
3622-015W	**1-1/2**	1	8	608	93.35
3622-020W	**2**	1	8	608	123.18

PVC White Standard

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
SR Threaded Ends EPDM					
3621-015WSR	**1-1/2**	1	8	608	99.98
3621-020WSR	**2**	1	8	608	130.35

CPVC Standard

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket & Threaded Ends					
1/2	3629-005C **52.48**	3639-005C **58.36**	1	18	610
3/4	3629-007C **66.13**	3639-007C **73.49**	1	18	610
1	3629-010C **78.73**	3639-010C **87.47**	1	12	610
1-1/4	3629-012C **125.16**	3639-012C **139.11**	1	8	610
1-1/2	3629-015C **132.16**	3639-015C **146.85**	1	8	610
2	3629-020C **176.78**	3639-020C **203.21**	1	4	610
Socket Ends					
2-1/2	3622-025C **396.31**	3632-025C **440.32**	1	0	611
3	3622-030C **463.39**	3632-030C **514.91**	1	0	611
4	3622-040C **839.66**	3632-040C **932.96**	1	0	611
Threaded Ends					
2-1/2	3621-025C **396.31**	3631-025C **440.32**	1	0	611
3	3621-030C **463.39**	3631-030C **514.91**	1	0	611
4	3621-040C **839.66**	3631-040C **932.96**	1	0	611
SR Threaded Ends					
1/2	3621-005CSR **53.34**	3631-005CSR **59.19**	1	18	610
3/4	3621-007CSR **68.21**	3631-007CSR **75.56**	1	18	610
1	3621-010CSR **80.77**	3631-010CSR **89.48**	1	18	610
1-1/4	3621-012CSR **131.34**	3631-012CSR **145.26**	1	12	610
1-1/2	3621-015CSR **138.17**	3631-015CSR **153.47**	1	8	610
2	3621-020CSR **183.94**	3631-020CSR **210.39**	1	8	610
2-1/2	3621-025CSR **415.65**	3631-025CSR **459.67**	1	0	611
3	3621-030CSR **482.73**	3631-030CSR **534.25**	1	0	611
4	3621-040CSR **862.26**	3631-040CSR **956.28**	1	0	611

CPVC Standard

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Spigot Ends					
1/2	3627-005C **52.48**	3637-005C **58.36**	1	18	610
3/4	3627-007C **66.13**	3637-007C **73.49**	1	18	610
1	3627-010C **78.73**	3637-010C **87.47**	1	12	610
1-1/4	3627-012C **125.16**	3637-012C **139.11**	1	12	610
1-1/2	3627-015C **132.16**	3637-015C **146.85**	1	8	610
2	3627-020C **176.78**	3637-020C **203.21**	1	8	610
2-1/2	3627-025C **396.31**	3637-025C **440.32**	1	0	611
3	3627-030C **463.39**	3637-030C **514.91**	1	0	611
4	3627-040C **839.66**	3637-040C **932.96**	1	0	611
Flanged Ends					
1/2	3623-005C **89.08**	3633-005C **91.01**	1	8	610
3/4	3623-007C **109.19**	3633-007C **113.80**	1	8	610
1	3623-010C **125.01**	3633-010C **132.71**	1	8	610
1-1/4	3623-012C **186.79**	3633-012C **193.34**	1	4	610
1-1/2	3623-015C **205.47**	3633-015C **212.31**	1	4	610
2	3623-020C **285.91**	3633-020C **340.49**	1	0	610
2-1/2	3623-025C **533.62**	3633-025C **640.52**	1	0	611
3	3623-030C **731.60**	3633-030C **798.18**	1	0	611
4	3623-040C **1368.66**	3633-040C **1423.40**	1	0	611

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com



Industrial Valve

Complete universal replacement valve for domestic and import PVC or CPVC valve. See separate catalog listing for retrofit replacement of older Spears® valves.

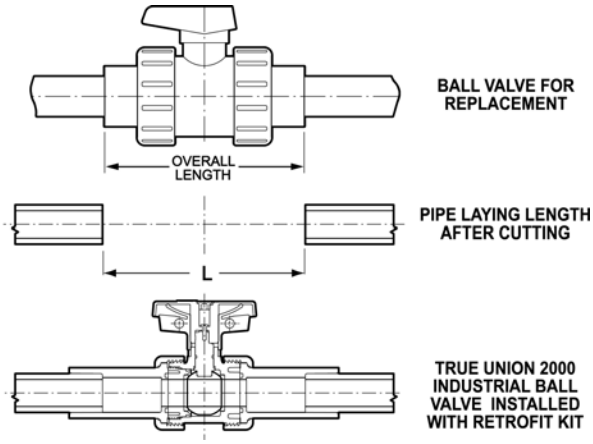
Retrofit valve consists of Spears® Industrial True Union 2000 Ball Valve supplied with factory installed extended-socket end connectors. Simply cut out old valve to specified dimensions and install Retrofit Valve end connectors.

Pressure Rating @ 73°F (23°C), Water 1/2" - 4" = 235 psi

All Valves Assembled with Silicone-Free, Water Soluble Lubricant

Suitable for Vacuum Service

Retrofit End Connector Sets without valve are also available - See Ball Valve Accessories & Repair Kits



Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	4-29/32	5-7/16	6-3/32	7-1/4	7-1/2	8-17/32	10-3/4	11-7/16	14-15/16

PVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1822R-005 **49.69**	1832R-005 **55.27**	1	18	600
3/4	1822R-007 **58.80**	1832R-007 **65.41**	1	18	600
1	1822R-010 **70.02**	1832R-010 **77.99**	1	12	600
1-1/4	1822R-012 **96.86**	1832R-012 **123.64**	1	8	600
1-1/2	1822R-015 **116.67**	1832R-015 **129.52**	1	8	600
2	1822R-020 **153.96**	1832R-020 **169.54**	1	4	600
2-1/2	1822R-025 **295.95**	1832R-025 **401.01**	1	0	601
3	1822R-030 **390.18**	1832R-030 **433.54**	1	0	601
4	1822R-040 **659.24**	1832R-040 **732.49**	1	0	601

CPVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1822R-005C **65.63**	1832R-005C **72.93**	1	18	602
3/4	1822R-007C **82.65**	1832R-007C **91.86**	1	18	602
1	1822R-010C **98.40**	1832R-010C **109.33**	1	12	602
1-1/4	1822R-012C **156.43**	1832R-012C **173.86**	1	8	602
1-1/2	1822R-015C **165.21**	1832R-015C **183.57**	1	8	602
2	1822R-020C **220.95**	1832R-020C **254.00**	1	4	602
2-1/2	1822R-025C **495.39**	1832R-025C **550.40**	1	0	603
3	1822R-030C **579.22**	1832R-030C **643.63**	1	0	603
4	1822R-040C **1049.59**	1832R-040C **1166.19**	1	0	603



Industrial Valve

Complete replacement valve for older Spears® 2300 Series Regular True Union Ball Valves. See separate catalog listing for replacement of other brand valves.

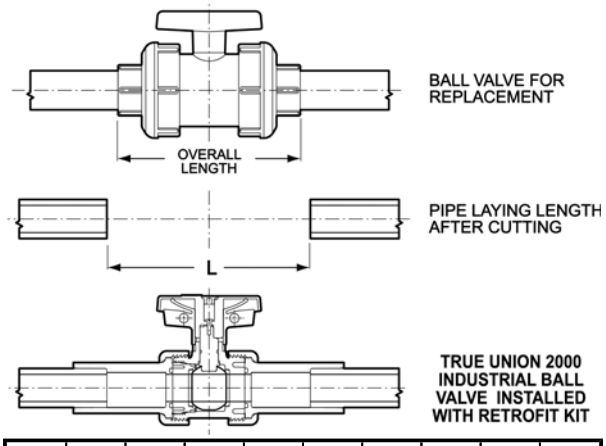
Retrofit valve consists of Spears® Industrial True Union 2000 Ball Valve supplied with factory installed extended-socket end connectors. Simply cut out old valve to specified dimensions and install Retrofit Valve end connectors.

Pressure Rating @ 73°F (23°C), Water
1/2" - 4" 235 psi

All Valves Assembled with Silicone-Free, Water Soluble Lubricant

Suitable for Vacuum Service

Retrofit End Connector Sets without valve are also available - See Ball Valve Accessories & Repair Kits



Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	5-5/16	6-1/4	6-11/16	7-1/8	8-3/16	8-15/16	12	12-1/16	13-3/16

PVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1822RS-005 **49.69**	1832RS-005 **55.27**	1	18	600
3/4	1822RS-007 **58.80**	1832RS-007 **65.41**	1	18	600
1	1822RS-010 **70.02**	1832RS-010 **77.99**	1	12	600
1-1/4	1822RS-012 **96.86**	1832RS-012 **123.64**	1	8	600
1-1/2	1822RS-015 **116.67**	1832RS-015 **129.52**	1	8	600
2	1822RS-020 **153.96**	1832RS-020 **169.54**	1	4	600
2-1/2	1822RS-025 **295.95**	1832RS-025 **401.01**	1	0	601
3	1822RS-030 **390.18**	1832RS-030 **433.54**	1	0	601
4	1822RS-040 **659.24**	1832RS-040 **732.49**	1	0	601

CPVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1822RS-005C **65.63**	1832RS-005C **72.93**	1	18	602
3/4	1822RS-007C **82.65**	1832RS-007C **91.86**	1	18	602
1	1822RS-010C **98.40**	1832RS-010C **109.33**	1	12	602
1-1/4	1822RS-012C **156.43**	1832RS-012C **173.86**	1	8	602
1-1/2	1822RS-015C **165.21**	1832RS-015C **183.57**	1	8	602
2	1822RS-020C **220.95**	1832RS-020C **254.00**	1	4	602
2-1/2	1822RS-025C **495.39**	1832RS-025C **550.40**	1	0	603
3	1822RS-030C **579.22**	1832RS-030C **643.63**	1	0	603
4	1822RS-040C **1049.59**	1832RS-040C **1166.19**	1	0	603



Standard Valve

Complete universal replacement valve for domestic and import PVC or CPVC valve. See separate catalog listing for retrofit replacement of older Spears® valves.

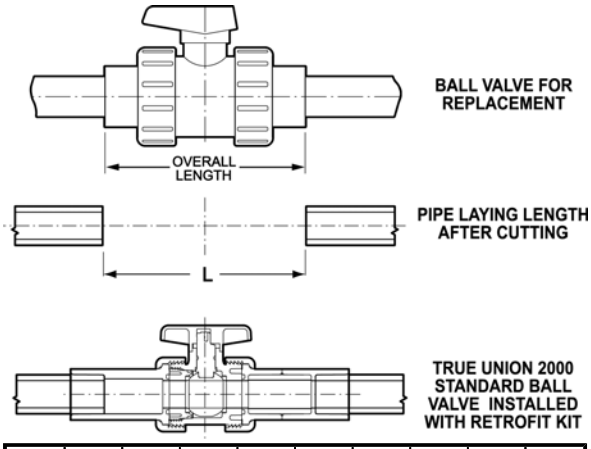
Retrofit valve consists of Spears® Standard True Union 2000 Ball Valve supplied with factory installed extended-socket end connectors. Simply cut out old valve to specified dimensions and install Retrofit Valve end connectors.

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
2-1/2" - 4" 150 psi

All Valves Assembled with Silicone-Free, Water Soluble Lubricant.

Suitable for Vacuum Service.

Retrofit End Connector Sets without valve are also available - See Ball Valve Accessories & Repair Kits



Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	4-29/32	5-7/16	6-3/32	7-1/4	7-1/2	8-17/32	10-3/4	11-7/16	14-15/16

PVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	3622R-005 **39.77**	3632R-005 **44.23**	1	18	608
3/4	3622R-007 **47.03**	3632R-007 **52.32**	1	12	608
1	3622R-010 **56.02**	3632R-010 **62.40**	1	8	608
1-1/4	3622R-012 **77.48**	3632R-012 **98.91**	1	8	608
1-1/2	3622R-015 **93.35**	3632R-015 **103.62**	1	8	608
2	3622R-020 **123.18**	3632R-020 **135.62**	1	4	608
2-1/2	3622R-025 **235.95**	3632R-025 **320.80**	1	0	609
3	3622R-030 **312.14**	3632R-030 **346.81**	1	0	609
4	3622R-040 **527.23**	3632R-040 **586.01**	1	0	609

CPVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	3622R-005C **52.48**	3632R-005C **58.36**	1	18	610
3/4	3622R-007C **66.13**	3632R-007C **73.49**	1	12	610
1	3622R-010C **78.73**	3632R-010C **87.47**	1	8	610
1-1/4	3622R-012C **125.16**	3632R-012C **139.11**	1	8	610
1-1/2	3622R-015C **132.16**	3632R-015C **146.85**	1	8	610
2	3622R-020C **176.78**	3632R-020C **203.21**	1	4	610
2-1/2	3622R-025C **396.31**	3632R-025C **440.32**	1	0	611
3	3622R-030C **463.39**	3632R-030C **514.91**	1	0	611
4	3622R-040C **839.66**	3632R-040C **932.96**	1	0	611

True Union 2000 Standard Retrofit Ball Valves - Replaces Spears® "Regular Style" Valves



Standard Valve

Complete replacement valve for older Spears® 2300 Series Regular True Union Ball Valves. See separate catalog listing for replacement of other brand valves.

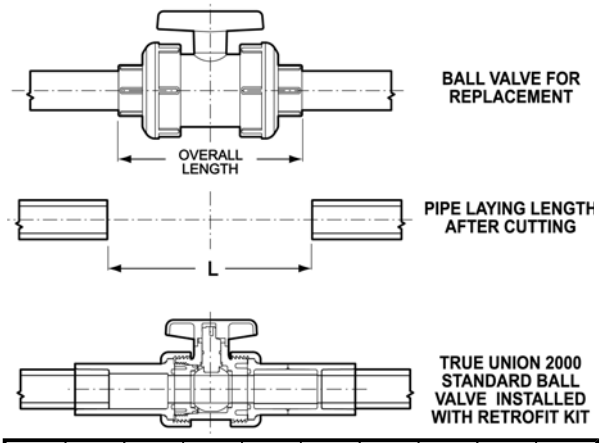
Retrofit valve consists of Spears® Standard True Union 2000 Ball Valve supplied with factory installed extended-socket end connectors. Simply cut out old valve to specified dimensions and install Retrofit Valve end connectors.

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
2-1/2" - 4" 150 psi

All Valves Assembled with Silicone-Free, Water Soluble Lubricant

Suitable for Vacuum Service

Retrofit End Connector Sets without valve are also available - See Ball Valve Accessories & Repair Kits



Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	5-5/16	6-1/4	6-11/16	7-1/8	8-3/16	8-15/16	12	12-1/16	13-3/16

PVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	3622RS-005 **39.77**	3632RS-005 **44.23**	1	18	608
3/4	3622RS-007 **47.03**	3632RS-007 **52.32**	1	18	608
1	3622RS-010 **56.02**	3632RS-010 **62.40**	1	12	608
1-1/4	3622RS-012 **77.48**	3632RS-012 **98.91**	1	8	608
1-1/2	3622RS-015 **93.35**	3632RS-015 **103.62**	1	8	608
2	3622RS-020 **123.18**	3632RS-020 **135.62**	1	4	608
2-1/2	3622RS-025 **235.95**	3632RS-025 **320.80**	1	0	609
3	3622RS-030 **312.14**	3632RS-030 **346.81**	1	0	609
4	3622RS-040 **527.23**	3632RS-040 **586.01**	1	0	609

CPVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	3622RS-005C **52.48**	3632RS-005C **58.36**	1	18	610
3/4	3622RS-007C **66.13**	3632RS-007C **73.49**	1	18	610
1	3622RS-010C **78.73**	3632RS-010C **87.47**	1	12	610
1-1/4	3622RS-012C **125.16**	3632RS-012C **139.11**	1	8	610
1-1/2	3622RS-015C **132.16**	3632RS-015C **146.85**	1	8	610
2	3622RS-020C **176.78**	3632RS-020C **203.21**	1	4	610
2-1/2	3622RS-025C **396.31**	3632RS-025C **440.32**	1	0	611
3	3622RS-030C **463.39**	3632RS-030C **514.91**	1	0	611
4	3622RS-040C **839.66**	3632RS-040C **932.96**	1	0	611

True Union Ball Valves (Regular Style)



Socket/Threaded Style



Flanged Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
2-1/2" - 6" 150 psi
Flanged 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service
All Valves assembled with Silicone-Free, Water Soluble Lubricant.

6" Venturied Valves are 4" Ball Valves equipped with 4x6 End Connectors.

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket & Threaded Ends					
1/2	2329-005 **57.23**	2339-005 **63.68**	1	18	230
3/4	2329-007 **67.69**	2339-007 **75.34**	1	12	230
1	2329-010 **80.64**	2339-010 **89.82**	1	8	230

PVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket & Threaded Ends					
1-1/4	2329-012 **111.55**	2339-012 **142.38**	1	8	230
1-1/2	2329-015 **134.40**	2339-015 **149.16**	1	8	230
2	2329-020 **177.31**	2339-020 **195.25**	1	4	230

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True Union Ball Valves (Regular Style)

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket Ends					
2-1/2	2322-025 **323.80**	2332-025 **438.75**	1	0	230
3	2322-030 **426.91**	2332-030 **474.35**	1	0	230
4	2322-040 **721.29**	2332-040 **801.42**	1	0	230
Socket Venturied Ends					
6 VENTURIED	2322-060 **962.36**	2332-060 **1048.55**	1	0	231
Threaded Ends					
2-1/2	2321-025 **323.80**	2331-025 **438.75**	1	0	230
3	2321-030 **426.91**	2331-030 **474.35**	1	0	230
4	2321-040 **721.29**	2331-040 **801.42**	1	0	230
Flanged Ends					
1/2	2323-005 **81.87**	2333-005 **87.34**	6	0	230
3/4	2323-007 **103.72**	2333-007 **112.80**	5	0	230
1	2323-010 **125.55**	2333-010 **134.96**	5	0	230
1-1/4	2323-012 **147.37**	2333-012 **163.75**	2	0	230
1-1/2	2323-015 **185.60**	2333-015 **201.94**	3	0	230
2	2323-020 **295.56**	2333-020 **313.45**	2	0	230
2-1/2	2323-025 **518.53**	2333-025 **527.07**	1	0	230
3	2323-030 **573.11**	2333-030 **711.55**	1	0	230
4	2323-040 **1152.32**	2333-040 **1335.74**	1	0	230
Flanged Venturied Ends					
6 VENTURIED	2323-060 **1680.55**	2333-060 **1723.61**	1	0	231

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket & Threaded Ends					
Threaded End Connectors available on request					
1/2	2329-005C **75.57**	2339-005C **84.00**	1	18	232
3/4	2329-007C **95.21**	2339-007C **105.80**	1	12	232
1	2329-010C **113.32**	2339-010C **125.92**	1	8	232
1-1/4	2329-012C **180.16**	2339-012C **200.24**	1	8	232
1-1/2	2329-015C **190.27**	2339-015C **211.42**	1	8	232
2	2329-020C **254.49**	2339-020C **292.53**	1	4	232
Socket Ends					
2-1/2	2322-025C **542.01**	2332-025C **602.21**	1	0	232
3	2322-030C **633.75**	2332-030C **704.19**	1	0	232
4	2322-040C **1148.37**	2332-040C **1275.97**	1	0	232
Socket Venturied Ends					
6 VENTURIED	2322-060C **1910.38**	2332-060C **1982.16**	1	0	233
Threaded Ends					
2-1/2	2321-025C **542.01**	2331-025C **602.21**	1	0	232
3	2321-030C **633.75**	2331-030C **704.19**	1	0	232
4	2321-040C **1148.37**	2331-040C **1275.97**	1	0	232

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Flanged Ends					
1/2	2323-005C **128.23**	2333-005C **131.00**	6	0	232
3/4	2323-007C **157.20**	2333-007C **163.75**	5	0	232
1	2323-010C **179.99**	2333-010C **191.05**	5	0	232
1-1/4	2323-012C **268.89**	2333-012C **278.33**	2	0	232
1-1/2	2323-015C **295.79**	2333-015C **305.61**	3	0	232
2	2323-020C **411.60**	2333-020C **490.19**	2	0	232
2-1/2	2323-025C **729.80**	2333-025C **875.99**	1	0	232
3	2323-030C **1067.29**	2333-030C **1091.61**	1	0	232
4	2323-040C **1871.83**	2333-040C **1946.69**	1	0	232
Flanged Venturied Ends					
6 VENTURIED	2323-060C **2901.42**	2333-060C **3001.97**	1	0	233



PVC White – Socket/Threaded Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
3" - 4" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service

All Valves Assembled with Silicone-Free, Water Soluble Lubricant. See Ball Valve Accessories & Repair Kits Section for Additional Options and Features



PVC Gray – Socket/Threaded Style

PVC White

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded Ends						
1/2	2411-005W 19.02	2421-005W 21.09	2431-005W 23.46	10	120	240
3/4	2411-007W 25.75	2421-007W 26.55	2431-007W 29.51	10	80	240
1	2411-010W 28.11	2421-010W 31.22	2431-010W 34.72	10	0	240
1-1/4	2411-012W 39.08	2421-012W 43.46	2431-012W 48.28	6	0	240
1-1/2	2411-015W 50.66	2421-015W 58.82	2431-015W 63.78	5	0	240
2	2411-020W 57.03	2421-020W 63.31	2431-020W 70.37	5	0	240
3	2411-030W 207.42	2421-030W 257.32	2431-030W 296.68	1	0	240
4	2411-040W 438.47	2421-040W 483.08	2431-040W 525.14	1	0	240
Socket Ends						
1/2	2412-005W 19.02	2422-005W 21.09	2432-005W 23.46	10	120	240
3/4	2412-007W 25.75	2422-007W 26.55	2432-007W 29.51	10	80	240
1	2412-010W 28.11	2422-010W 31.22	2432-010W 34.72	10	0	240
1-1/4	2412-012W 39.08	2422-012W 43.46	2432-012W 48.28	6	0	240
1-1/2	2412-015W 50.66	2422-015W 58.82	2432-015W 63.79	5	0	240
2	2412-020W 57.03	2422-020W 63.31	2432-020W 70.37	5	0	240
3	2412-030W 207.42	2422-030W 257.32	2432-030W 296.68	1	0	240
4	2412-040W 438.47	2422-040W 483.08	2432-040W 525.14	1	0	240

PVC Gray

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded Ends						
1/2	2411-005G 20.88	2421-005G 23.15	2431-005G 25.75	10	120	240
3/4	2411-007G 26.31	2421-007G 29.26	2431-007G 32.49	10	80	240
1	2411-010G 30.95	2421-010G 34.35	2431-010G 38.18	10	0	240
1-1/4	2411-012G 42.98	2421-012G 47.78	2431-012G 53.02	6	0	240
1-1/2	2411-015G 54.11	2421-015G 63.38	2431-015G 70.48	5	0	240
2	2411-020G 62.65	2421-020G 69.62	2431-020G 77.32	5	0	240
3	2411-030G 218.37	2421-030G 270.83	2431-030G 312.31	1	0	240
4	2411-040G 461.53	2421-040G 508.53	2431-040G 552.76	1	0	240
Socket Ends						
1/2	2412-005G 20.88	2422-005G 23.15	2432-005G 25.75	10	120	240

PVC Gray (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket Ends						
3/4	2412-007G 26.31	2422-007G 29.26	2432-007G 32.49	10	80	240
1	2412-010G 30.95	2422-010G 34.35	2432-010G 38.18	10	0	240
1-1/4	2412-012G 42.98	2422-012G 47.78	2432-012G 53.02	5	0	240
1-1/2	2412-015G 54.17	2422-015G 63.38	2432-015G 70.48	5	0	240
2	2412-020G 62.65	2422-020G 69.62	2432-020G 77.32	5	0	240
3	2412-030G 218.37	2422-030G 270.83	2432-030G 312.31	1	0	240
4	2412-040G 461.53	2422-040G 508.53	2432-040G 552.76	1	0	240

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Compact 2000 Ball Valves



Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
All Valves Assembled with Silicone-Free, Water Soluble Lubricants.
Rated for Vacuum Service
Compact 2000 Ball Valves are a Maintenance-Free, Sealed Unit (non-repairable).
See Ball Valve Accessories & Repair Kits Section for Additional Options and Features.

PVC 2000 Compact Ball Valve

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket Ends					
1/2	6622-005 **21.17**	6632-005 **23.83**	10	120	210
3/4	6622-007 **28.88**	6632-007 **29.57**	10	80	210
1	6622-010 **31.53**	6632-010 **35.36**	10	0	210
1-1/4	6622-012 **47.43**	6632-012 **54.81**	6	0	210
1-1/2	6622-015 **56.49**	6632-015 **62.83**	5	0	210
2	6622-020 **75.42**	6632-020 **84.74**	8	0	210
Threaded Ends					
1/2	6621-005 **21.17**	6631-005 **23.83**	10	120	210
3/4	6621-007 **28.88**	6631-007 **29.57**	10	80	210
1	6621-010 **31.53**	6631-010 **35.36**	10	0	210
1-1/4	6621-012 **51.92**	6631-012 **54.81**	6	0	210
1-1/2	6621-015 **56.49**	6631-015 **62.83**	5	0	210
2	6621-020 **75.42**	6631-020 **84.74**	8	0	210
Flanged Ends					
1/2	6623-005 **44.58**	6633-005 **46.84**	10	120	210
3/4	6623-007 **50.35**	6633-007 **52.11**	10	120	210
1	6623-010 **65.61**	6633-010 **69.13**	10	120	210
1-1/4	6623-012 **81.93**	6633-012 **87.89**	10	120	210
1-1/2	6623-015 **99.12**	6633-015 **107.74**	10	120	210
2	6623-020 **132.27**	6633-020 **138.07**	10	120	210

CPVC 2000 Compact Ball Valve

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket Ends					
1/2	6622-005C **24.93**	6632-005C **27.74**	10	120	212
3/4	6622-007C **32.88**	6632-007C **36.95**	10	80	212
1	6622-010C **41.09**	6632-010C **46.21**	10	0	212
1-1/4	6622-012C **67.25**	6632-012C **83.12**	6	0	212
1-1/2	6622-015C **83.18**	6632-015C **92.42**	5	0	212
2	6622-020C **108.97**	6632-020C **122.43**	8	0	212
Threaded Ends					
1/2	6621-005C **24.93**	6631-005C **27.74**	10	120	212

CPVC 2000 Compact Ball Valve (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded Ends					
3/4	6621-007C **32.88**	6631-007C **36.95**	10	80	212
1	6621-010C **41.09**	6631-010C **46.21**	10	0	212
1-1/4	6621-012C **67.25**	6631-012C **83.12**	6	0	212
1-1/2	6621-015C **83.18**	6631-015C **92.42**	5	0	212
2	6621-020C **108.97**	6631-020C **122.43**	8	0	212
Flanged Ends					
1/2	6623-005C **68.21**	6633-005C **70.32**	1	0	212
3/4	6623-007C **80.63**	6633-007C **84.19**	1	0	212
1	6623-010C **106.11**	6633-010C **112.37**	1	0	212
1-1/4	6623-012C **133.47**	6633-012C **140.63**	1	0	212
1-1/2	6623-015C **168.63**	6633-015C **178.73**	1	0	212
2	6623-020C **234.95**	6633-020C **241.89**	1	0	212

Compact Ball Valves (Regular Style)



Socket/Threaded Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
3" - 6" 150 psi
Flanged 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service

All Valves Assembled with Silicone-Free, Water Soluble Lubricants.

See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

Note: Standard 6" Valve uses Lever-Style Handle for proper leverage.

T-Handle option is more compact but will increase difficulty of operation.

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket Ends					
1/2	2122-005 **22.27**	2132-005 **25.08**	10	80	210
3/4	2122-007 **30.40**	2132-007 **31.13**	10	0	210
1	2122-010 **33.17**	2132-010 **37.24**	10	0	210
1-1/4	2122-012 **59.48**	2132-012 **66.13**	6	0	210
1-1/2	2122-015 **73.65**	2132-015 **76.96**	5	0	210
2	2122-020 **79.38**	2132-020 **89.20**	6	0	210
3	2122-030 **258.01**	2132-030 **289.86**	1	4	211
4	2122-040 **396.95**	2132-040 **571.38**	1	0	211
6 (Lever Handle)	2122-060 **515.51**	2132-060 **742.05**	1	0	211
6 (Tee Handle)	21226-060 **515.51**	21326-060 **742.05**	1	0	211
Threaded Ends					
1/2	2121-005 **22.27**	2131-005 **25.08**	10	80	210
3/4	2121-007 **30.40**	2131-007 **31.13**	10	0	210
1	2121-010 **33.17**	2131-010 **37.24**	10	0	210
1-1/4	2121-012 **59.48**	2131-012 **66.13**	6	0	210
1-1/2	2121-015 **73.65**	2131-015 **76.96**	5	0	210
2	2121-020 **79.38**	2131-020 **89.20**	6	0	210
3	2121-030 **258.01**	2131-030 **289.86**	1	4	211
4	2121-040 **396.95**	2131-040 **571.38**	1	0	211
Flanged Ends					
1/2	2123-005 **49.24**	2133-005 **52.45**	1	8	210
3/4	2123-007 **59.58**	2133-007 **61.95**	1	8	210
1	2123-010 **65.73**	2133-010 **69.78**	1	8	210
1-1/4	2123-012 **93.05**	2133-012 **99.69**	1	8	210
1-1/2	2123-015 **107.66**	2133-015 **112.73**	1	4	210
2	2123-020 **124.97**	2133-020 **134.69**	1	0	210
3	2123-030 **335.73**	2133-030 **367.59**	1	0	211
4	2123-040 **495.22**	2133-040 **669.64**	1	0	211
6 (Lever Handle)	2123-060 **953.51**	2133-060 **1049.57**	1	0	211

PVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Flanged Ends					
6 (Tee Handle)	21236-060 **953.51**	21336-060 **1049.57**	1	0	211

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket Ends					
1/2	2122-005C **26.24**	2132-005C **29.18**	10	80	212
3/4	2122-007C **34.61**	2132-007C **38.91**	10	0	212
1	2122-010C **43.27**	2132-010C **48.64**	10	0	212
1-1/4	2122-012C **87.56**	2132-012C **97.25**	6	0	212
1-1/2	2122-015C **108.18**	2132-015C **113.73**	5	0	212
2	2122-020C **114.72**	2132-020C **128.89**	6	0	212
3	2122-030C **349.04**	2132-030C **389.31**	1	4	213
4	2122-040C **645.24**	2132-040C **724.94**	1	0	213
6 (Lever Handle)	2122-060C **1054.51**	2132-060C **1123.62**	1	0	213
6 (Tee Handle)	21226-060C **1054.51**	21326-060C **1123.62**	1	0	213
Threaded Ends					
1/2	2121-005C **26.24**	2131-005C **29.18**	10	80	212
3/4	2121-007C **34.61**	2131-007C **38.91**	10	0	212
1	2121-010C **43.27**	2131-010C **48.64**	10	0	212
1-1/4	2121-012C **87.56**	2131-012C **97.25**	6	0	212
1-1/2	2121-015C **108.18**	2131-015C **113.73**	5	0	212
2	2121-020C **114.72**	2131-020C **128.89**	6	0	212
3	2121-030C **349.04**	2131-030C **389.31**	1	4	213
4	2121-040C **645.24**	2131-040C **724.94**	1	0	213
Flanged Ends					
1/2	2123-005C **73.15**	2133-005C **76.11**	1	8	212
3/4	2123-007C **84.93**	2133-007C **89.22**	1	8	212
1	2123-010C **100.42**	2133-010C **105.81**	1	8	212
1-1/4	2123-012C **158.24**	2133-012C **167.96**	1	8	212
1-1/2	2123-015C **197.89**	2133-015C **204.01**	1	4	212

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Compact Ball Valves (Regular Style)

CPVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Flanged Ends					
2	2123-020C **224.11**	2133-020C **238.28**	1	0	212
3	2123-030C **536.68**	---	1	0	213
4	2123-040C **838.37**	2133-040C **918.05**	1	0	213
6 (Lever Handle)	2123-060C **1592.42**	2133-060C **1708.33**	1	0	213
6 (Tee Handle)	21236-060C **1592.42**	21336-060C **1708.33**	1	0	213

Lab Ball Valves



Socket/Threaded Valve Only

Pressure Rating @ 73°F (23°C), Water
1/4" - 3/8" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service

Valve & Adapters includes:
1 - Threaded 1/4" Valve
2 - O-ring Sealed 1/4" MPT x Mipt Adapters
2 - EPDM or FKM O-rings (AS568-013 size)
1 - End Connector Wrench
2 - O-ring Sealed 1/4" MPT x 3/8" I.D. Tubing Barb Adapters
- OR -
2 - O-ring Sealed 1/4" MPT x 1/4" I.D. Tubing Barb Adapters



Valve & Adapters

All Valves Assembled with Silicone-Free, Water Soluble Lubricant

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Valve & Adapters Threaded Ends					
1/4X1/4T	1529-002A **25.75**	1539-002A **26.92**	1	25	218
1/4X3/8T	1529-002 **25.75**	1539-002 **26.92**	1	25	218
Valve only Threaded Ends					
1/4	1521-002 **20.58**	1531-002 **22.91**	50	200	218
3/8	1521-003 **28.93**	1531-003 **32.07**	50	200	218
Valve only Socket Ends					
1/4	1522-002 **20.58**	1532-002 **23.28**	50	200	218
3/8	1522-003 **28.93**	1532-003 **32.07**	50	200	218

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Valve & Adapters Threaded Ends					
1/4X1/4T	1529-002CA **30.91**	1539-002CA **31.51**	1	25	219
1/4X3/8T	1529-002C **30.91**	1539-002C **31.51**	1	25	219
Valve only Threaded Ends					
1/4	1521-002C **24.75**	1531-002C **27.21**	50	200	219
3/8	1521-003C **34.71**	1531-003C **32.53**	50	200	219
Valve only Socket Ends					
1/4	1522-002C **24.75**	1532-002C **29.45**	50	200	219
3/8	1522-003C **34.71**	1532-003C **38.53**	50	200	219



Pressure Rating @ 73°F (23°C), Water
1/2" - 6" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

All Valves Assembled with Silicone-Free, Water Soluble Lubricant

Note: Standard 6" Valve uses Lever-Style Handle for proper leverage.

PVC w/EPDM O-ring Seal

Size	Threaded Ends	Socket Ends	Std Pk	Mstr Pk	Disc Code
PVC White					
1/2	2621-005 **9.37**	2622-005 **9.37**	50	0	215
3/4	2621-007 **11.12**	2622-007 **11.12**	25	0	215
1	2621-010 **15.12**	2622-010 **15.12**	25	0	215
1-1/4	2621-012 **20.03**	2622-012 **20.03**	20	0	215
1-1/2	2621-015 **30.57**	2622-015 **30.57**	20	0	215
2	2621-020 **38.64**	2622-020 **38.64**	8	0	215
2-1/2	2621-025 **66.14**	2622-025 **66.14**	6	0	214
3	2621-030 **118.62**	2622-030 **118.62**	1	4	214
4	2621-040 **217.41**	2622-040 **217.41**	1	0	214
6 (Lever Handle)	---	2622-060 **350.76**	1	0	214
PVC Gray					
1/2	2621-005G **9.37**	2622-005G **9.37**	50	0	215
3/4	2621-007G **11.12**	2622-007G **11.12**	25	0	215
1	2621-010G **15.12**	2622-010G **15.12**	25	0	215
1-1/4	2621-012G **20.03**	2622-012G **20.03**	20	0	215
1-1/2	2621-015G **30.57**	2622-015G **30.57**	20	0	215
2	2621-020G **38.64**	2622-020G **38.64**	8	0	215
2-1/2	2621-025G **66.14**	2622-025G **66.14**	6	0	214
3	2621-030G **118.62**	2622-030G **118.62**	1	4	214
4	2621-040G **217.41**	2622-040G **217.41**	1	0	214

CPVC w/EPDM O-ring Seal

Size	Threaded Ends	Socket Ends	Std Pk	Mstr Pk	Disc Code
CPVC					
1/2	2621-005C **12.35**	2622-005C **12.35**	50	0	216
3/4	2621-007C **15.69**	2622-007C **15.69**	25	0	216
1	2621-010C **17.05**	2622-010C **17.05**	25	0	216
1-1/4	2621-012C **24.03**	2622-012C **24.03**	20	0	216
1-1/2	2621-015C **37.26**	2622-015C **37.26**	20	0	216
2	2621-020C **46.35**	2622-020C **46.35**	8	0	216

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CWV Ball Valves



A Combination of Economy & Quality - Made in the U.S.A.
For Greater Value in a General Purpose Cold Water Valve

Pressure Rating @ 73°F (23°C), Water = 125 psi

You don't have to go overseas to find an economical general purpose ball valve! Spears® CWV BALL VALVES are produced in the U.S.A. with Spears® high quality construction and NSF® Certified for potable water service. Designed for use with cold water, these PVC valves may be suitable for some applications previously handled by Spears® Utility Valves. Available in IPS sizes 1/2" through 2" with a Full 1-Year Warranty.

CWV PVC Ball Valve

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Socket Ends					
8722-005	**1/2**	50	0	204	8.43
8722-007	**3/4**	25	0	204	10.00
8722-010	**1**	25	0	204	13.60
8722-012	**1-1/4**	20	0	204	18.03
8722-015	**1-1/2**	20	0	204	27.52
8722-020	**2**	10	0	204	34.78

CWV PVC Ball Valve

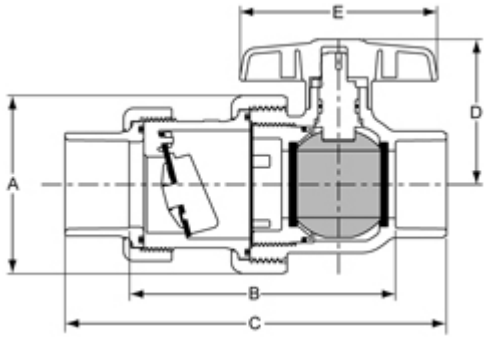
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Threaded Ends					
8721-005	**1/2**	50	0	204	10.41
8721-007	**3/4**	25	0	204	12.35
8721-010	**1**	25	0	204	16.80
8721-012	**1-1/4**	20	0	204	22.25
8721-015	**1-1/2**	20	0	204	33.97
8721-020	**2**	10	0	204	42.94

Swing Check Ball Valve



- One-piece Combination for Applications Requiring In-line Ball Valve and Check Valves
- Compact, Space-Saving Design
- True Union Design Allows Easy Service and Cleaning
- High Grade EPDM Seals
- Replaceable PTFE HDPE Ball Valve Seats
- Safety-Blocked™ Seal Carrier on Ball Valve
- Replaceable Sealed Check Valve Cartridge
- Suitable for Horizontal or Vertical Up-flow Installations
- Socket End Connections

Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature
140°F (60°C)
Temperature/Pressure De-ratings Apply



Dimensions

Size	A	B	C	D	E
1-1/2	3-7/8	5-3/4	8-1/4	3-3/16	4-1/4
2	4-7/16	6-11/16	9-3/8	3-7/8	5-1/16

General Installation Information: Swing Check Ball Valves are designed for horizontal installations, but may be installed in up-flow only vertical position. The Check Valve portion MUST be installed with the valve's FLOW arrow pointing in the direction of flow and with the designated side up in horizontal installations. Do Not install Check Valve upside down. The Ball Valve portion may be rotated and installed in any position. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure is less than 0.5 psi.

PVC Swing Check Ball Valve

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Soc x Soc					
7622-015	**1-1/2**	10	0	026	42.57
7622-020	**2**	6	0	026	61.09





Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

CPVC CTS Ball Valves



Socket with EPDM O-ring Seal

100 psi Maximum Internal Pressure @ 180°F (82°C)

1922-005	**1/2**	50	200	217	33.39
1922-007	**3/4**	25	0	217	39.47
1922-010	**1**	25	0	217	45.53
1922-012	**1-1/4**	20	0	217	70.68
1922-015	**1-1/2**	20	0	217	101.94
1922-020	**2**	8	0	217	130.59

For additional valve information, please refer to Spears® Technical Information part 2 This book.

1/4-Turn Angle Supply Stop



Socket x NPT

100 psi @ 180°F (82°C)
1/2" & 3/8" Male Thread for Connection to Female Flexible Supply Line

7722-005	**1/2**	50	400	217	16.43
7722-073	**1/2X3/8**	50	400	217	16.43

1/4-Turn Angle Supply Stop



SR FPT x NPT

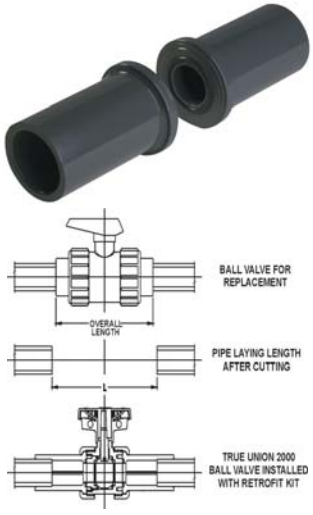
100 psi @ 180°F (82°C)
1/2" & 3/8" Male Thread for Connection to Female Flexible Supply Line

7721-005SR	**1/2**	50	400	217	40.69
7721-073SR	**1/2X3/8**	50	400	217	40.69

Retrofit End Connector Sets (Socket Style Only)

Special extended Socket end connectors allow in-line replacement of other brand valves with Spears® True Union 2000 Ball Valves, 3-Way Ball Valves, and True Union 2000 Ball Check Valves.
Kit includes 2 Extended End Connectors with O-rings

Retrofit Kit For Other Brand Valves



Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	4-29/32	5-7/16	6-3/32	7-1/4	7-1/2	8-17/32	10-3/4	11-7/16	14-15/16

True Union Retrofit Kits - Other Brand Valves (Socket Style Only) PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	RFK2-005 **10.16**	RFK3-005 **13.23**	1	25	299
3/4	RFK2-007 **13.22**	RFK3-007 **15.11**	1	25	299
1	RFK2-010 **14.97**	RFK3-010 **17.48**	1	25	299
1-1/4	RFK2-012 **17.59**	RFK3-012 **24.98**	1	10	299
1-1/2	RFK2-015 **22.06**	RFK3-015 **28.80**	1	10	299
2	RFK2-020 **31.78**	RFK3-020 **39.72**	1	10	299
2-1/2	RFK2-025 **58.47**	RFK3-025 **79.58**	1	5	299
3	RFK2-030 **77.78**	RFK3-030 **97.20**	1	5	299
4	RFK2-040 **114.79**	RFK3-040 **164.27**	1	4	299

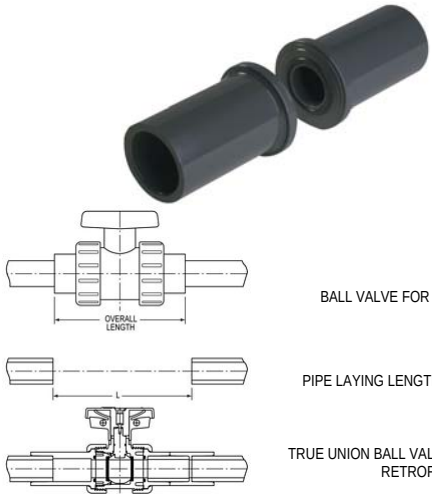
True Union Retrofit Kits - Other Brand Valves (Socket Style Only) CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	RFK2-005C **14.75**	RFK3-005C **15.98**	1	25	299
3/4	RFK2-007C **16.60**	RFK3-007C **20.15**	1	25	299
1	RFK2-010C **18.97**	RFK3-010C **23.13**	1	25	299
1-1/4	RFK2-012C **24.71**	RFK3-012C **32.09**	1	10	299
1-1/2	RFK2-015C **30.16**	RFK3-015C **38.57**	1	10	299
2	RFK2-020C **40.95**	RFK3-020C **48.89**	1	10	299
2-1/2	RFK2-025C **86.49**	RFK3-025C **103.29**	1	5	299
3	RFK2-030C **115.92**	RFK3-030C **140.49**	1	5	299

True Union Retrofit Kits - Other Brand Valves (Socket Style Only) CPVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
4	RFK2-040C **165.75**	RFK3-040C **218.97**	1	4	299

Retrofit Kit For Older "Regular Style" Spears® Valves



Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	5-5/16	6-1/4	6-11/16	7-1/8	8-3/16	8-15/16	12	12-1/16	13-3/16

True Union Retrofit Kits - Older "Regular Style" Spears® Valves (Socket Style Only) PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	RFKS2-005 **10.16**	RFKS3-005 **13.23**	1	10	299
3/4	RFKS2-007 **13.22**	RFKS3-007 **15.11**	1	10	299
1	RFKS2-010 **14.97**	RFKS3-010 **17.48**	1	10	299
1-1/4	RFKS2-012 **17.59**	RFKS3-012 **24.98**	1	10	299
1-1/2	RFKS2-015 **22.06**	RFKS3-015 **28.80**	1	10	299
2	RFKS2-020 **31.78**	RFKS3-020 **39.72**	1	5	299
2-1/2	RFKS2-025 **58.47**	RFKS3-025 **79.58**	1	5	299
3	RFKS2-030 **77.78**	RFKS3-030 **97.20**	1	5	299
4	RFKS2-040 **114.79**	RFKS3-040 **164.27**	1	2	299

True Union Retrofit Kits - Older "Regular Style" Spears® Valves (Socket Style Only) CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	RFKS2-005C **14.75**	RFKS3-005C **15.98**	1	10	299
3/4	RFKS2-007C **16.60**	RFKS3-007C **20.15**	1	10	299
1	RFKS2-010C **18.97**	RFKS3-010C **23.13**	1	10	299
1-1/4	RFKS2-012C **24.71**	RFKS3-012C **32.09**	1	10	299
1-1/2	RFKS2-015C **30.16**	RFKS3-015C **38.57**	1	10	299
2	RFKS2-020C **40.95**	RFKS3-020C **48.89**	1	5	299

True Union Retrofit Kits - Older "Regular Style" Spears® Valves (Socket Style Only) CPVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2-1/2	RFKS2-025C **86.49**	RFKS3-025C **103.29**	1	5	299
3	RFKS2-030C **115.92**	RFKS3-030C **140.49**	1	5	299
4	RFKS2-040C **165.75**	RFKS3-040C **218.97**	1	2	299

Supplemental End Connector Sets



Set of 2 End Connectors with O-rings for all True Union 2000 Ball Valves, Sch 80 Union 2000 fittings and True Union Style Diaphragm Valves.

PVC - Supplemental End Connector Sets

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
SR Threaded Ends					
1/2	ECSRT2-005 **8.21**	ECSRT3-005 **10.35**	1	25	299
3/4	ECSRT2-007 **11.87**	ECSRT3-007 **13.20**	1	25	299
1	ECSRT2-010 **13.22**	ECSRT3-010 **14.81**	1	25	299
1-1/4	ECSRT2-012 **17.52**	ECSRT3-012 **22.65**	1	10	299
1-1/2	ECSRT2-015 **23.84**	ECSRT3-015 **28.56**	1	10	299
2	ECSRT2-020 **31.34**	ECSRT3-020 **36.89**	1	10	299
2-1/2	ECSRT2-025 **64.18**	ECSRT3-025 **78.95**	1	5	299
3	ECSRT2-030 **77.66**	ECSRT3-030 **91.27**	1	5	299
4	ECSRT2-040 **107.48**	ECSRT3-040 **142.14**	1	4	299
6	ECSRT2-060 **232.18**	ECSRT3-060 **307.00**	1	4	299
Socket Ends					
1/2	ECS2-005 **7.13**	ECS3-005 **9.28**	1	25	299
3/4	ECS2-007 **9.26**	ECS3-007 **10.59**	1	25	299
1	ECS2-010 **10.47**	ECS3-010 **12.24**	1	25	299
1-1/4	ECS2-012 **12.32**	ECS3-012 **17.51**	1	10	299
1-1/2	ECS2-015 **15.45**	ECS3-015 **20.16**	1	10	299
2	ECS2-020 **22.25**	ECS3-020 **27.80**	1	10	299
2-1/2	ECS2-025 **40.94**	ECS3-025 **55.69**	1	5	299
3	ECS2-030 **54.44**	ECS3-030 **68.04**	1	5	299
4	ECS2-040 **80.37**	ECS3-040 **114.98**	1	4	299

PVC - Supplemental End Connector Sets (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket Ends					
6	ECS2-060 **173.58**	ECS3-060 **248.40**	1	0	299
Spigot Ends					
1/2	ECSP2-005 **7.13**	ECSP3-005 **9.28**	1	25	299
3/4	ECSP2-007 **9.26**	ECSP3-007 **10.59**	1	25	299
1	ECSP2-010 **10.47**	ECSP3-010 **12.24**	1	25	299
1-1/4	ECSP2-012 **12.32**	ECSP3-012 **17.51**	1	10	299
1-1/2	ECSP2-015 **15.45**	ECSP3-015 **20.16**	1	10	299
2	ECSP2-020 **22.25**	ECSP3-020 **27.80**	1	10	299
2-1/2	ECSP2-025 **40.94**	ECSP3-025 **55.69**	1	5	299
3	ECSP2-030 **54.44**	ECSP3-030 **68.04**	1	5	299
4	ECSP2-040 **80.37**	ECSP3-040 **114.98**	1	4	299

CPVC - Supplemental End Connector Sets

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
SR Threaded Ends					
1/2	ECSRT2-005C **11.41**	ECSRT3-005C **12.26**	1	25	299
3/4	ECSRT2-007C **14.21**	ECSRT3-007C **16.68**	1	25	299
1	ECSRT2-010C **15.86**	ECSRT3-010C **18.79**	1	25	299
1-1/4	ECSRT2-012C **23.25**	ECSRT3-012C **30.87**	1	10	299
1-1/2	ECSRT2-015C **29.49**	ECSRT3-015C **35.39**	1	10	299
2	ECSRT2-020C **37.76**	ECSRT3-020C **43.33**	1	10	299
2-1/2	ECSRT2-025C **83.74**	ECSRT3-025C **95.56**	1	5	299
3	ECSRT2-030C **104.37**	ECSRT3-030C **121.60**	1	5	299
4	ECSRT2-040C **143.16**	ECSRT3-040C **180.43**	1	4	299
6	ECSRT2-060C **309.23**	ECSRT3-060C **389.69**	1	4	299
Socket Ends					
1/2	ECS2-005C **10.33**	ECS3-005C **11.19**	1	25	299
3/4	ECS2-007C **11.62**	ECS3-007C **14.09**	1	25	299
1	ECS2-010C **13.26**	ECS3-010C **16.18**	1	25	299
1-1/4	ECS2-012C **18.06**	ECS3-012C **22.47**	1	10	299
1-1/2	ECS2-015C **21.09**	ECS3-015C **27.00**	1	10	299
2	ECS2-020C **28.67**	ECS3-020C **34.22**	1	10	299
2-1/2	ECS2-025C **60.55**	ECS3-025C **72.31**	1	5	299
3	ECS2-030C **81.13**	ECS3-030C **98.37**	1	5	299
4	ECS2-040C **116.03**	ECS3-040C **153.28**	1	4	299
6	ECS2-060C **250.64**	ECS3-060C **331.09**	1	0	299
Spigot Ends					
1/2	ECSP2-005C **10.33**	ECSP3-005C **11.19**	1	25	299
3/4	ECSP2-007C **11.62**	ECSP3-007C **14.09**	1	25	299

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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC - Supplemental End Connector Sets (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Spigot Ends					
1	ECSP2-010C **13.26**	ECSP3-010C **16.18**	1	25	299
1-1/4	ECSP2-012C **18.06**	ECSP3-012C **22.47**	1	10	299
1-1/2	ECSP2-015C **21.09**	ECSP3-015C **27.00**	1	10	299
2	ECSP2-020C **28.67**	ECSP3-020C **34.22**	1	10	299
2-1/2	ECSP2-025C **60.55**	ECSP3-025C **72.31**	1	5	299
3	ECSP2-030C **81.13**	ECSP3-030C **98.37**	1	5	299
4	ECSP2-040C **116.03**	ECSP3-040C **153.28**	1	4	299

Split Nut Repair Kits



Split Nut Repair Kit

Designed to replace broken union nuts on all True Union 2000 Ball Valves and Sch 80 Union 2000 fittings

Kit includes:
2-Split Nut Halves
1-SS316 Gear Clamp
Full valve pressure rating maintained

Split Nut Repair Kits

Size	PVC	CPVC	Std Pk	Mstr Pk	Disc Code
1/2	SNK-005 **8.42**	SNK-005C **12.96**	25	200	299
3/4	SNK-007 **10.41**	SNK-007C **16.35**	1	25	299
1	SNK-010 **13.03**	SNK-010C **20.01**	1	25	299
1-1/4	SNK-012 **16.31**	SNK-012C **26.69**	1	25	299
1-1/2	SNK-015 **21.79**	SNK-015C **38.28**	1	25	299
2	SNK-020 **33.19**	SNK-020C **57.43**	1	25	299
3	SNK-030 **90.06**	SNK-030C **207.36**	1	6	299
4	SNK-040 **150.12**	SNK-040C **290.39**	1	6	299

True Union 2000 Valve Seal Carrier Tools



True Union 2000 Valve Seal Carrier Tools

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
True Union 2000 Check Valve Seal Carrier Tool					
TSK-00503	**1/2**	1000	0	299	.83
TSK-00703	**3/4**	1800	0	299	.83
TSK-01003	**1**	1800	0	299	.83
TSK-01203	**1-1/4**	1500	0	299	1.67
TSK-01503	**1-1/2**	800	0	299	1.67
TSK-02003	**2**	550	0	299	1.67
TSK-03003	**3**	200	0	299	5.01

True Union 2000 Valve Seal Carrier Tools (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
True Union 2000 Check Valve Seal Carrier Tool					
TSK-04003	**4**	150	0	299	5.01
TSK-06003	**6**	40	0	299	10.37
True Union 2000 Ball Valve Seal Carrier Tool					
TSK1-00503	**1/2**	2200	0	299	.83
TSK1-00703	**3/4**	1700	0	299	.83
TSK1-01003	**1**	1600	0	299	.83
TSK1-01203	**1-1/4**	1200	0	299	1.67
TSK1-01503	**1-1/2**	700	0	299	1.67
TSK1-02003	**2**	550	0	299	1.67
TSK-03003	**3**	200	0	299	5.01
TSK-04003	**4**	150	0	299	5.01
TSK-06003	**6**	40	0	299	10.37

Seal Carrier Adjustment Tool for Regular True Union Valves (not shown)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
VT-025-040	**2-1/2 - 4**	20	0	299	44.08

Designed for use on Spears® 2-1/2", 3", & 4" Regular True Union Ball Valves for quick, easy adjustment of valve seal carriers using a standard 1", 6-point socket.

Stem Extension Kits



Desired Handle Height for Factory Assembled One-Piece Units

Desired Handle Height	Code	Desired Handle Height	Code	Desired Handle Height	Code	Desired Handle Height	Code
5"	050	16"	160	27"	270	38"	380
6"	060	17"	170	28"	280	39"	390
7"	070	18"	180	29"	290	40"	400
8"	080	19"	190	30"	300	41"	410
9"	090	20"	200	31"	310	42"	420
10"	100	21"	210	32"	320	43"	430
11"	110	22"	220	33"	330	44"	440
12"	120	23"	230	34"	340	45"	450
13"	130	24"	240	35"	350	46"	460
14"	140	25"	250	36"	360	47"	470
15"	150	26"	260	37"	370	48"	480

If desired handle height is in increments of less than a full inch, substitute the last "0" of the three-digit code with a "2" for 1/4", a "5" for 1/2", or a "7" for 3/4". EXAMPLE: If ordering a Stem Extension Kit for a 1/2" valve with a desired handle height of 14-3/4", the part number would read: BVSE-005-147.

* Desired length of PVC Schedule 80 Pipe purchased separately and assembled by others.

** Factory assembled with solvent cemented PVC Schedule 80 pipe. To order, fill in the last three digits of the part number with the three-digit code representing the desired handle height from the chart above. FACTORY SOLVENT CEMENTED STEM EXTENSION KITS, ONCE PRODUCED ARE NON-CANCELLABLE AND NON-RETURNABLE.

IMPORTANT NOTE The following minimum handle heights apply to use of all Stem Extension Kits.										
Valve Size (in.)	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6
True Union 2000 Industrial Ball Valves										
Minimum Height (in.)	4-9/16	5-3/16	5-1/2	6-3/4	7-3/8	8	9-13/16	9-13/16	11-5/8	12-3/4
True Union 2000 Standard, Compact 2000 & Single Entry Ball Valves										
Minimum Height (in.)	3-5/8	4-1/4	4-3/4	6	6-3/8	7-7/16	9-1/2	9-1/2	11	N/A
Regular True Union & Compact Ball Valves										
Minimum Height (in.)	4-1/2	5-1/4	5-1/2	7	7-1/2	8	9	9	10-1/2	N/A

Stem Extension Kits (Two Piece)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Fits Spears Regular True Union and Compact Ball Valves, 1/2"-2" = 3-Slot Stem, 2-1/2"-4" = Double Flats Stem					
BVSE-005-000*	**1/2**	1	25	299	10.80
BVSE-007-000*	**3/4**	1	25	299	11.98
BVSE-010-000*	**1**	1	25	299	11.98
BVSE-012-000*	**1-1/4**	1	25	299	19.41
BVSE-015-000*	**1-1/2**	1	25	299	22.05
BVSE-020-000*	**2**	1	25	299	23.97
BVSE-030-000*	**2-1/2, 3**	1	25	299	24.45
BVSE-040-000*	**4**	1	25	299	33.58

Optional Factory Assembled (One-Piece)

Part Number	Disc Code	5"-12" Handle Height	13"-18" Handle Height	19"-24" Handle Height	25"-36" Handle Height	37"-48" Handle Height
BVSE-005-__**	299	17.75	19.22	20.80	27.57	32.06
BVSE-007-__**	299	19.05	20.48	22.06	28.84	33.35
BVSE-010-__**	299	19.05	20.48	22.06	28.84	33.35
BVSE-012-__**	299	29.71	30.68	33.97	42.97	48.37
BVSE-015-__**	299	32.48	35.06	36.73	45.76	51.15
BVSE-020-__**	299	34.53	37.07	38.75	47.80	53.17
BVSE-030-__**	299	35.28	37.61	39.24	48.28	53.65
BVSE-040-__**	299	48.61	52.67	56.33	63.68	73.94

Stem Extension Kits (Two Piece)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Fits All True Union 2000, Compact 2000 & Single Entry Ball Valves (Except 3-Way) 1/2" - 3" = 3-Slot Stem, sizes 4"-6" = Double Flats Stem					
BVSE2-005-000*	**1/2**	1	25	299	10.80
BVSE2-007-000*	**3/4**	1	25	299	11.98
BVSE2-010-000*	**1**	1	25	299	11.98
BVSE2-012-000*	**1-1/4**	1	25	299	19.41
BVSE2-015-000*	**1-1/2**	1	25	299	22.05
BVSE2-020-000*	**2**	1	25	299	23.97
BVSE2-030-000*	**2-1/2, 3**	1	25	299	24.45
BVSE2-040-000*	**4**	1	25	299	33.58
BVSE2-060-000*	**6**	1	25	299	62.12

Optional Factory Assembled (One-Piece)

Part Number	Disc Code	5"-12" Handle Height	13"-18" Handle Height	19"-24" Handle Height	25"-36" Handle Height	37"-48" Handle Height
BVSE2-005-__**	299	17.75	19.22	20.80	27.57	32.06
BVSE2-007-__**	299	19.05	20.48	22.06	28.84	33.35
BVSE2-010-__**	299	19.05	20.48	22.06	28.84	33.35
BVSE2-012-__**	299	29.71	30.68	33.97	42.97	48.37
BVSE2-015-__**	299	32.48	35.06	36.73	45.76	51.15
BVSE2-020-__**	299	34.53	37.07	38.75	47.80	53.17
BVSE2-030-__**	299	35.28	37.61	39.24	48.28	53.65
BVSE2-040-__**	299	48.61	52.67	56.33	63.68	73.94
BVSE2-060-__**	299	90.01	97.57	104.32	117.91	136.91

Round Safety Handle Kits



Regular fits Spears® Regular True Union and Compact Ball Valves in sizes 1/2" - 2" with 3-Slot Stem and in sizes 2-1/2" - 4" with 1-Slot Stem.

Industrial fits All True Union 2000, Compact 2000, and Single Entry Ball Valves in sizes 1/2" - 2" with 3-Slot Stem and in sizes 2-1/2" - 4" with 1-Slot Stem. The 6" size has a Double-Flat Stem pattern.

Round Safety Handle Kits

Size	Regular	Industrial	Std Pk	Mstr Pk	Disc Code
1/2	RSH-005 13.92	RSH2-005 13.92	500	0	299
3/4	RSH-007 16.78	RSH2-007 16.78	300	0	299
1	RSH-010 17.73	RSH2-010 17.73	210	0	299
1-1/4	RSH-012 21.07	RSH2-012 21.07	200	0	299

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Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Round Safety Handle Kits (continued)

2" Operator Nuts

Size	Regular	Industrial	Std Pk	Mstr Pk	Disc Code
1-1/2	RSH-015 21.07	RSH2-015 21.07	100	0	299
2	RSH-020 27.33	RSH2-020 27.33	60	0	299
2-1/2 & 3	RSH-030 58.48	RSH2-030 58.48	25	0	299
4	RSH-040 78.61	RSH2-040 78.61	16	0	299
6	---	RSH2-060 95.17	16	0	299



Industrial & Regular (VTN2 Series) Operator Nuts fit Regular True Union, True Union 2000, Compact, Compact 2000 and Single Entry Ball Valves in sizes 1/2" - 2" with current 3-Slot Stems and in sizes 2-1/2", 3", and 4" with current 1-Slot Stems. The VTN-040 fits the 6" size with a Double-Flat Stem pattern.

2" Operator Nuts

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Regular					
VTN-030	2-1/2 & 3	10	40	299	107.86
VTN-040	4	5	0	299	107.86
Industrial					
VTN2-005	1/2	10	60	299	12.96
VTN2-007	3/4	10	60	299	17.24
VTN2-010	1	10	60	299	21.59
VTN2-012	1-1/4	10	60	299	25.89
VTN2-015	1-1/2	10	60	299	38.85
VTN2-020	2	10	60	299	64.71
VTN2-030	2-1/2 & 3	10	40	299	70.79
VTN2-040	4	5	0	299	75.05

Handle Lockout Ring



Spears® Handle Lockout Ring is for use with Spears® True Union 2000 Industrial Ball Valves with built-in handle lockout mechanism. Normal handle lockout operation allows lockout in both open and closed positions. The Lockout Ring limits lockout operation to either a lock-open only or a lock-closed only position, according to the position in which the Lockout Ring is installed.

Handle Lockout Ring

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
TU2LR-005	1/2	250	3000	299	19.97
TU2LR-007	3/4	250	3000	299	19.97
TU2LR-010	1	1	250	299	19.97
TU2LR-012	1-1/4	1	25	299	19.97
TU2LR-015	1-1/2	1	25	299	22.47
TU2LR-020	2	1	25	299	22.47
TU2LR-030	2-1/2 & 3	1	25	299	24.97
TU2LR-040	4	1	25	299	24.97

Multi-Mount Mounting Bracket



TUMB2 fits all True Union 2000 Ball Valves (except 3-Way). TUMB fits Regular True Union Ball Valves.

Multi-Mount Mounting Bracket

Size	TU 2000	Regular True Union	Std Pk	Mstr Pk	Disc Code
1/2	TUMB2-005 47.20	TUMB-005 47.20	1	10	299
3/4	TUMB2-007 50.01	TUMB-007 50.01	1	10	299
1	TUMB2-010 53.81	TUMB-010 53.81	1	10	299
1-1/4	TUMB2-012 56.32	TUMB-012 56.32	1	10	299
1-1/2	TUMB2-015 60.66	TUMB-015 60.66	1	10	299
2	TUMB2-020 67.68	TUMB-020 67.68	1	10	299
2-1/2, 3	TUMB2-030 128.57	TUMB-030 128.57	1	4	299
4	TUMB2-040 157.25	TUMB-040 157.25	1	4	299

Multi-Mount Actuator Mounting Platform



Add-on actuator adapter. Use MMP1 with True Union 2000 Multi-Mount Bracket. Use MMP with Regular True Union.

Multi-Mount Actuator Mounting Platform

Size	TU 2000	Regular True Union	Std Pk	Mstr Pk	Disc Code
1/2	MMP1-005 19.97	MMP-005 19.97	1	10	299
3/4	MMP1-007 20.65	MMP-007 20.65	1	10	299
1	MMP1-010 24.11	MMP-010 24.11	1	10	299
1-1/4	MMP1-012 26.33	MMP-012 26.33	1	10	299
1-1/2	MMP1-015 35.99	MMP-015 35.99	1	10	299
2	MMP1-020 40.71	MMP-020 40.71	1	10	299
2-1/2, 3	MMP1-030 91.86	MMP-030 91.86	1	5	299

Multi-Mount Actuator Mounting Platform (continued)

Size	TU 2000	Regular True Union	Std Pk	Mstr Pk	Disc Code
4	MMP1-040 105.85	MMP-040 105.85	1	5	299

True Union Multi-Mount Mounting Kit



Complete Multi-Mount Actuation Mounting Kit fits all True Union 2000 (except 3-Way) and Regular True Union Ball Valves.

True Union Multi-Mount Mounting Kit

Size	TU 2000	Regular True Union	Std Pk	Mstr Pk	Disc Code
1/2	TUAK1-005 63.84	TUAK-005 63.84	1	5	299
3/4	TUAK1-007 67.17	TUAK-007 67.17	1	5	299
1	TUAK1-010 74.07	TUAK-010 74.07	1	5	299
1-1/4	TUAK1-012 78.54	TUAK-012 78.54	1	5	299
1-1/2	TUAK1-015 91.85	TUAK-015 91.85	1	5	299
2	TUAK1-020 102.97	TUAK-020 102.97	1	5	299
2-1/2 & 3	TUAK1-030 209.42	TUAK-030 209.42	1	5	299
4	TUAK1-040 249.94	TUAK-040 249.94	1	2	299

True Union 2000 Low Profile Actuator Mounting Kit



Industrial Unit - Top-mount actuator mounting system for True Union 2000 Industrial (1800 series) & 3-Way Ball Valves
Standard Unit - Top-mount actuator mounting system for True Union 2000 Standard Ball Valves (3600 series) and Compact 2000 Ball Valves (6600 series)
Note: Low Profile Mounting Kit will not work with Multi-Mount Valve Mounting Bracket - See Mini-Mount actuation Mounting Kit or Mini-Mount Combo Actuation Mounting Kit

True Union 2000 Low Profile Actuator Mounting Kit Mini-Mount Actuator Mounting Kit

Size	TU 2000 Industrial	TU 2000 Standard & Compact	Std Pk	Mstr Pk	Disc Code
1/2	AMB5-005 14.63	AMB6-005 14.63	1	10	299
3/4	AMB5-007 17.78	AMB6-007 17.78	1	10	299
1	AMB5-010 21.54	AMB6-010 21.54	1	10	299
1-1/4	AMB5-012 24.07	AMB6-012 24.07	1	10	299
1-1/2	AMB5-015 26.31	AMB6-015 26.31	1	10	299
2	AMB5-020 34.51	AMB6-020 34.51	1	10	299
3	AMB5-030 72.06	AMB6-030 72.06	1	10	299
4	AMB5-040 75.85	AMB6-040 75.85	1	5	299
6	AMB5-060 110.64	---	1	5	299



Industrial Unit – Top-mount actuator mounting system for True Union 2000 Industrial (1800 series) & 3-Way Ball Valves
Standard Unit – Top-mount actuator mounting system for True Union 2000 Standard Ball Valves (3600 series) and Compact 2000 Ball Valves (6600 series)
Compact Unit – Top-mount actuator mounting system for Regular Style Compact Ball Valves (2100 series)

Mini-Mount Actuator Mounting Kit

Size	TU 2000 Industrial	TU 2000 Standard/Compact	Compact (Regular)	Std Pk	Mstr Pk	Disc Code
1/2	AMB2-005 14.63	AMB3-005 14.63	AMB4-005 14.63	1	10	299
3/4	AMB2-007 17.78	AMB3-007 17.78	AMB4-007 17.78	1	10	299
1	AMB2-010 21.54	AMB3-010 21.54	AMB4-010 21.54	1	10	299

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Mini-Mount Actuator Mounting Kit (continued)

True Union 2000 Mini-Mount Combo

Size	TU 2000 Industrial	TU 2000 Standard/Compact	Compact (Regular)	Std Pk	Mstr Pk	Disc Code
1-1/4	AMB2-012 24.07	AMB3-012 24.07	AMB4-012 24.07	1	10	299
1-1/2	AMB2-015 26.31	AMB3-015 26.31	AMB4-015 26.31	1	10	299
2	AMB2-020 34.51	AMB3-020 34.51	AMB4-020 34.51	1	10	299
3	AMB2-030 72.06	AMB3-030 72.06	AMB4-030 72.06	1	10	299
4	AMB2-040 75.85	AMB3-040 75.85	AMB4-040 75.85	1	5	299
6	AMB2-060 110.64	---	---	1	5	299



Industrial Unit – Top-mount actuator mounting system with valve support mounting bracket for True Union 2000 Industrial (1800 series) Ball Valve (will not fit 3-Way)
Standard Unit – Top-mount actuator mounting system with valve support mounting bracket for True Union 2000 (3600 series) Standard Ball Valve

True Union 2000 Mini-Mount Combo

Size	Industrial	Standard	Std Pk	Mstr Pk	Disc Code
1/2	TUAK2-005 63.84	TUAK3-005 63.84	1	5	299
3/4	TUAK2-007 67.17	TUAK3-007 67.17	1	10	299
1	TUAK2-010 74.07	TUAK3-010 74.07	1	5	299
1-1/4	TUAK2-012 78.54	TUAK3-012 78.54	1	5	299
1-1/2	TUAK2-015 91.85	TUAK3-015 91.85	1	5	299
2	TUAK2-020 102.97	TUAK3-020 102.97	1	5	299
3	TUAK2-030 209.42	TUAK3-030 209.42	1	5	299
4	TUAK2-040 249.94	TUAK3-040 249.94	1	2	299

True Union 2000 Valve Repair Kits — Industrial Ball Valve

Industrial Kit includes:
- 2-PTFE Seats
- 2-End Connector O-rings
- 2-Stem O-rings
- 1-Seal Carrier O-ring
- 1-PTFE Stem Bearing
- 2-Seat O-rings (where applicable)

True Union 2000 Valve Repair Kits

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Industrial Ball Valve					
1/2	TU2-ERK-005 19.67	TU2-VRK-005 22.28	1	10	299
3/4	TU2-ERK-007 22.28	TU2-VRK-007 23.03	1	10	299
1	TU2-ERK-010 23.03	TU2-VRK-010 29.37	1	10	299
1-1/4	TU2-ERK-012 28.00	TU2-VRK-012 47.06	1	10	299

True Union 2000 Valve Repair Kits (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Industrial Ball Valve					
1-1/2	TU2-ERK-015 40.18	TU2-VRK-015 61.62	1	10	299
2	TU2-ERK-020 46.25	TU2-VRK-020 86.26	1	10	299
2-1/2 & 3	TU2-ERK-030 106.74	TU2-VRK-030 139.96	1	10	299
4	TU2-ERK-040 151.80	TU2-VRK-040 181.40	1	10	299
6	TU2-ERK-060 276.55	TU2-VRK-060 352.47	1	10	299

True Union 2000 Valve Repair Kits — Standard Ball Valve

Standard Kit includes:
- 2-HDPE/PTFE Seats
- 2-End Connector O-rings
- 2-Stem O-rings
- 1-Seal Carrier O-ring
- 2-Seat O-rings (where applicable)

Standard Ball Valve					
1/2	TU1-ERK-005 18.72	TU1-VRK-005 21.18	1	10	299
3/4	TU1-ERK-007 21.18	TU1-VRK-007 21.91	1	10	299
1	TU1-ERK-010 21.91	TU1-VRK-010 27.88	1	10	299
1-1/4	TU1-ERK-012 26.57	TU1-VRK-012 44.72	1	10	299
1-1/2	TU1-ERK-015 38.18	TU1-VRK-015 58.55	1	10	299
2	TU1-ERK-020 43.93	TU1-VRK-020 90.81	1	10	299
2-1/2 & 3	TU1-ERK-030 101.39	TU1-VRK-030 132.95	1	10	299
4	TU1-ERK-040 144.23	TU1-VRK-040 172.33	1	10	299

True Union 2000 Valve Repair Kits — 3-Way Ball Valve

3-Way Kit includes:
- 2-PTFE Seats (no branch seal)
- 3-End Connector O-rings
- 2-Stem O-rings
- 1-Seal Carrier O-ring
- 1-Stem Bushing
- 2-Seat O-rings (where applicable)

3-Way Ball Valve					
1/2	TU3-ERK-005 28.13	TU3-VRK-005 31.85	1	10	299
3/4	TU3-ERK-007 31.85	TU3-VRK-007 32.93	1	10	299
1	TU3-ERK-010 32.93	TU3-VRK-010 41.95	1	10	299
1-1/4	TU3-ERK-012 39.98	TU3-VRK-012 67.23	1	10	299
1-1/2	TU3-ERK-015 57.42	TU3-VRK-015 88.05	1	10	299
2	TU3-ERK-020 66.08	TU3-VRK-020 123.21	1	10	299
2-1/2 & 3	TU3-ERK-030 152.47	TU3-VRK-030 199.93	1	10	299
4	TU3-ERK-040 204.95	TU3-VRK-040 259.14	1	10	299

True Union 2000 Valve Repair Kits — Ball Check Valve

Ball Check Kit includes:
2-End Connector O-rings
1-Seal Carrier O-ring
1-Seal Plate O-ring

True Union 2000 Valve Repair Kits
Single Entry Ball Valve Repair Kit

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Ball Check Valve					
1/2	CK2-ERK-005 3.36	CK2-VRK-005 6.24	1	10	299
3/4	CK2-ERK-007 4.05	CK2-VRK-007 10.32	1	10	299
1	CK2-ERK-010 5.27	CK2-VRK-010 16.78	1	10	299
1-1/4	CK2-ERK-012 7.91	CK2-VRK-012 26.83	1	10	299
1-1/2	CK2-ERK-015 7.91	CK2-VRK-015 26.83	1	10	299
2	CK2-ERK-020 11.73	CK2-VRK-020 28.97	1	10	299
3	CK2-ERK-030 17.12	CK2-VRK-030 80.77	1	10	299
4	CK2-ERK-040 22.14	CK2-VRK-040 87.23	1	10	299
6	CK2-ERK-060 40.39	CK2-VRK-060 209.31	1	10	299

Single Entry Kit includes:
2-End Connector O-rings
1-Seal Carrier O-ring
1-Seal Plate O-ring
1-Stem Bearing (1-1/4" & up)

Single Entry Ball Valve Repair Kits
True Union Valve Repair Kits (Regular Style)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	SE-BRK-005 16.06	SE-ERK-005 17.02	SE-VRK-005 19.91	1	10	299
3/4	SE-BRK-007 16.54	SE-ERK-007 17.52	SE-VRK-007 20.13	1	10	299
1	SE-BRK-010 17.73	SE-ERK-010 18.44	SE-VRK-010 21.07	1	10	299
1-1/4, 1-1/2	SE-BRK-015 22.54	SE-ERK-015 24.94	SE-VRK-015 29.95	1	10	299
2	SE-BRK-020 25.64	SE-ERK-020 26.35	SE-VRK-020 31.41	1	10	299
3	SE-BRK-030 58.96	SE-ERK-030 59.24	SE-VRK-030 64.66	1	10	299
4	SE-BRK-040 108.80	SE-ERK-040 108.85	SE-VRK-040 112.13	1	10	299

Ball Valve Kit includes:
2-PTFE Seats
2-Seat O-rings (2-1/2")
2-End Connector O-rings
1-Stem Bearing (1-1/4" & up)

True Union Valve Repair Kits (Regular Style)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Ball Valve					
1/2	TU-ERK-005 19.67	TU-VRK-005 22.28	1	10	299
3/4	TU-ERK-007 22.28	TU-VRK-007 23.03	1	10	299
1	TU-ERK-010 23.03	TU-VRK-010 29.37	1	10	299
1-1/4	TU-ERK-012 28.00	TU-VRK-012 47.06	1	10	299

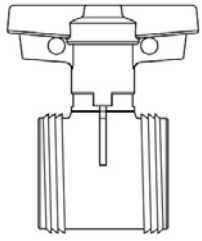
True Union Valve Repair Kits (Regular Style) (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Ball Valve					
1-1/2	TU-ERK-015 40.18	TU-VRK-015 61.62	1	10	299
2	TU-ERK-020 46.25	TU-VRK-020 86.26	1	10	299
2-1/2, 3	TU-ERK-030 106.74	TU-VRK-030 139.96	1	10	299
4, 6 VENTURIED	TU-ERK-040 151.80	TU-VRK-040 181.40	1	10	299

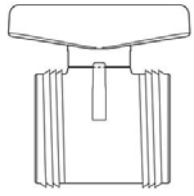
True Union Ball Check Valve Repair Kits (Regular Style)

Ball Check (Regular Style) Kit includes:
1-Body O-ring
2-Seat-plate O-rings
2-End Connector O-rings

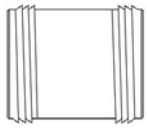
Size					
Ball Check Valve					
1/2	CK-ERK-005 3.36	CK-VRK-005 6.24	1	10	299
3/4	CK-ERK-007 4.05	CK-VRK-007 10.32	1	10	299
1	CK-ERK-010 5.27	CK-VRK-010 16.78	1	10	299
1-1/4	CK-ERK-012 7.91	CK-VRK-012 26.83	1	10	299
1-1/2	CK-ERK-015 7.91	CK-VRK-015 26.83	1	10	299
2	CK-ERK-020 11.73	CK-VRK-020 28.97	1	10	299
2-1/2 OR 3	CK-ERK-030 17.12	CK-VRK-030 80.77	1	10	299
4	CK-ERK-040 22.14	CK-VRK-040 87.23	1	10	299



True Union 2000 Industrial Ball Valve Cartridge



True Union 2000 Standard Ball Valve Cartridge



True Union 2000 Industrial Ball Check Valve Cartridge

True Union Ball Valve Cartridge Kits include valve assembly, less union nuts and end connectors.

Note: 6" Valve uses Lever-Style Handle for proper leverage. T−Style Handle is more compact, but will increase difficulty of operation.

PVC True Union 2000 Industrial Ball Valve Cartridges

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1820-005 **34.53**	1830-005 **39.24**	1	18	299

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC True Union 2000 Industrial Ball Valve Cartridges (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
3/4	1820-007 **40.94**	1830-007 **43.84**	1	18	299
1	1820-010 **48.92**	1830-010 **55.55**	1	18	299
1-1/4	1820-012 **63.16**	1830-012 **74.26**	1	8	299
1-1/2	1820-015 **82.29**	1830-015 **92.97**	1	8	299
2	1820-020 **105.45**	1830-020 **112.25**	1	8	299
2-1/2	1820-025 **231.35**	1830-025 **290.07**	1	0	299
3	1820-030 **282.33**	1830-030 **313.63**	1	0	299
4	1820-040 **477.03**	1830-040 **529.85**	1	0	299
6 (T-Style Handle)	18206-060 **882.27**	18306-060 **978.82**	1	0	299
6 (Lever Handle)	1820-060 **882.27**	1830-060 **978.82**	1	0	299

CPVC True Union 2000 Industrial Ball Valve Cartridges

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1820-005C **48.69**	1830-005C **53.13**	1	18	299
3/4	1820-007C **59.54**	1830-007C **64.94**	1	18	299
1	1820-010C **74.12**	1830-010C **75.69**	1	18	299
1-1/4	1820-012C **99.91**	1830-012C **103.89**	1	8	299
1-1/2	1820-015C **125.72**	1830-015C **131.99**	1	8	299
2	1820-020C **170.22**	1830-020C **173.43**	1	8	299
2-1/2	1820-025C **358.33**	1830-025C **398.11**	1	0	299
3	1820-030C **419.00**	1830-030C **464.43**	1	0	299
4	1820-040C **759.08**	1830-040C **843.55**	1	0	299
6 (T-Style Handle)	18206-060C **1385.01**	18306-060C **1538.15**	1	0	299
6 (Lever Handle)	1820-060C **1385.01**	1830-060C **1538.15**	1	0	299

PVC True Union 2000 Industrial Ball Check Valve Cartridges

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	4520-005 **40.77**	4530-005 **45.97**	1	10	299
3/4	4520-007 **48.63**	4530-007 **51.33**	1	10	299
1	4520-010 **57.80**	4530-010 **64.44**	1	6	299
1-1/4	4520-012 **89.13**	4530-012 **94.75**	1	4	299
1-1/2	4520-015 **96.99**	4530-015 **107.62**	1	4	299
2	4520-020 **132.39**	4530-020 **147.23**	1	4	299
2-1/2	4520-025 **320.96**	4530-025 **341.83**	1	4	299
3	4520-030 **384.33**	4530-030 **487.96**	1	4	299
4	4520-040 **602.05**	4530-040 **634.31**	1	0	299
6	4520-060 **1013.79**	4530-060 **1125.31**	1	0	299

CPVC True Union 2000 Industrial Ball Check Valve Cartridges

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	4520-005C **60.25**	4530-005C **67.06**	1	18	299
3/4	4520-007C **72.12**	4530-007C **80.15**	1	18	299
1	4520-010C **85.13**	4530-010C **94.57**	1	18	299
1-1/4	4520-012C **146.56**	4530-012C **162.74**	1	12	299
1-1/2	4520-015C **146.56**	4530-015C **162.74**	1	8	299
2	4520-020C **195.76**	4530-020C **218.14**	1	8	299
2-1/2	4520-025C **410.23**	4530-025C **455.80**	1	4	299
3	4520-030C **484.04**	4530-030C **577.18**	1	4	299
4	4520-040C **900.21**	4530-040C **1000.89**	1	0	299
6	4520-060C **1596.43**	4530-060C **1769.54**	1	0	299

PVC True Union 2000 Standard Ball Valve Cartridges

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	3620-005 **26.71**	3630-005 **29.69**	1	18	299
3/4	3620-007 **31.58**	3630-007 **35.14**	1	18	299
1	3620-010 **37.64**	3630-010 **41.89**	1	18	299
1-1/4	3620-012 **52.06**	3630-012 **66.44**	1	12	299
1-1/2	3620-015 **62.68**	3630-015 **69.61**	1	12	299
2	3620-020 **82.75**	3630-020 **91.09**	1	8	299
2-1/2 & 3	3620-030 **209.65**	3630-030 **232.93**	1	0	299
4	3620-040 **354.14**	3630-040 **393.61**	1	0	299

CPVC True Union 2000 Standard Ball Valve Cartridges

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	3620-005C **35.25**	3630-005C **39.18**	1	18	299
3/4	3620-007C **44.42**	3630-007C **49.34**	1	18	299
1	3620-010C **52.66**	3630-010C **58.76**	1	18	299
1-1/4	3620-012C **84.03**	3630-012C **93.40**	1	12	299
1-1/2	3620-015C **88.77**	3630-015C **98.64**	1	12	299
2	3620-020C **118.73**	3630-020C **136.49**	1	8	299
2-1/2 & 3	3620-030C **311.25**	3630-030C **345.83**	1	0	299
4	3620-040C **647.21**	3630-040C **626.62**	1	0	299

PVC True Union Ball Valve Cartridges (Regular Style)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	2320-005 34.53	2330-005 39.24	1	10	299
3/4	2320-007 40.94	2330-007 43.84	1	10	299
1	2320-010 48.92	2330-010 55.55	1	10	299

PVC True Union Ball Valve Cartridges (Regular Style) (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/4	2320-012 63.16	2330-012 74.26	1	4	299
1-1/2	2320-015 82.29	2330-015 92.97	1	4	299
2	2320-020 105.45	2330-020 112.25	1	4	299
2-1/2, 3	2320-030 231.35	2330-030 270.02	1	0	299
4	2320-040 424.18	2330-040 446.51	1	0	299

CPVC True Union Ball Valve Cartridges (Regular Style)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	2320-005C 48.69	2330-005C 53.13	1	10	299
3/4	2320-007C 59.54	2330-007C 64.94	1	10	299
1	2320-010C 74.12	2330-010C 75.69	1	10	299
1-1/4	2320-012C 99.91	2330-012C 103.89	1	4	299
1-1/2	2320-015C 125.72	2330-015C 131.99	1	4	299
2	2320-020C 170.22	2330-020C 173.43	1	4	299
2-1/2, 3	2320-030C 323.52	2330-030C 329.37	1	0	299
4	2320-040C 534.94	2330-040C 638.18	1	0	299

PVC True Union Ball Check Valve Cartridges (Regular Style)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	2220-005 37.91	2230-005 42.74	1	10	299
3/4	2220-007 45.19	2230-007 47.74	1	10	299
1	2220-010 53.78	2230-010 59.93	1	6	299
1-1/4	2220-012 78.55	2230-012 72.96	1	4	299
1-1/2	2220-015 90.19	2230-015 100.09	1	4	299
2	2220-020 123.14	2230-020 136.92	1	4	299
2-1/2	2220-025 298.49	2230-025 317.91	1	0	299
3	2220-030 298.49	2230-030 317.91	1	0	299
4	2220-040 559.89	2230-040 589.93	1	0	299

CPVC True Union Ball Check Valve Cartridges (Regular Style)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	2220-005C 56.03	2230-005C 62.39	1	10	299
3/4	2220-007C 67.05	2230-007C 74.54	1	10	299
1	2220-010C 79.15	2230-010C 87.94	1	6	299
1-1/4	2220-012C 136.29	2230-012C 151.35	1	4	299
1-1/2	2220-015C 146.56	2230-015C 162.83	1	4	299
2	2220-020C 182.52	2230-020C 202.86	1	4	299
2-1/2	2220-025C 381.51	2230-025C 423.88	1	0	299

CPVC True Union Ball Check Valve Cartridges (Regular Style) (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
3	2220-030C 381.51	2230-030C 423.88	1	0	299
4	2220-040C 837.20	2230-040C 930.83	1	0	299

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

True Union 2000 Industrial Ball Check Valves



Socket Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 4" 235 psi
6" - 8" 150 psi
All Flanged 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service

All Valves assembled with Silicone-Free, Water Soluble Lubricant
Contact Spears® for Pricing & Availability on Custom Elastomer Seals
See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

General Installation Information: Ball check valves may be installed in either horizontal or vertical position. A minimum of ten (10) pipe diameters' distance maintained from any pump or other source of turbulence. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of flow.

PVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket & Threaded Ends					
1/2	4529-005 **56.36**	4539-005 **63.52**	1	18	604
3/4	4529-007 **67.20**	4539-007 **70.93**	1	18	604
1	4529-010 **79.93**	4539-010 **89.09**	1	18	604
1-1/4	4529-012 **116.72**	4539-012 **131.00**	1	12	604
1-1/2	4529-015 **134.05**	4539-015 **148.78**	1	8	604
2	4529-020 **183.02**	4539-020 **203.51**	1	8	604
Socket Ends					
2-1/2	4522-025 **443.72**	4532-025 **472.58**	1	0	605
3	4522-030 **564.68**	4532-030 **632.98**	1	0	605
4	4522-040 **832.33**	4532-040 **876.92**	1	0	605
6	4522-060 **1636.75**	4532-060 **1813.96**	1	0	558
8	4522-080 **2181.25**	4532-080 **2417.89**	1	0	559
8" Venturied valves are 6" ball check valves fitted with 6x8 end connector adapters.					
Threaded Ends					
2-1/2	4521-025 **443.72**	4531-025 **472.58**	1	0	605
3	4521-030 **568.31**	4531-030 **637.46**	1	0	605
4	4521-040 **832.33**	4531-040 **876.92**	1	0	605
6	4521-060 **1636.75**	4531-060 **1813.96**	1	0	558
SR Threaded Ends					
1/2	4521-005SR **57.51**	4531-005SR **64.64**	1	18	604
3/4	4521-007SR **69.94**	4531-007SR **73.66**	1	18	604
1	4521-010SR **82.63**	4531-010SR **91.82**	1	18	604
1-1/4	4521-012SR **122.14**	4531-012SR **136.39**	1	12	604
1-1/2	4521-015SR **142.79**	4531-015SR **157.51**	1	8	604
2	4521-020SR **192.47**	4531-020SR **212.97**	1	8	604
2-1/2	4521-025SR **467.89**	4531-025SR **496.78**	1	0	605
3	4521-030SR **580.14**	4531-030SR **496.78**	1	0	605
4	4521-040SR **860.55**	4531-040SR **905.16**	1	0	605
6	4521-060SR **1683.47**	4531-060SR **1862.27**	1	0	558

PVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Spigot Ends					
1/2	4527-005 **56.36**	4537-005 **63.52**	1	18	604
3/4	4527-007 **67.20**	4537-007 **70.93**	1	18	604
1	4527-010 **79.93**	4537-010 **89.09**	1	12	604
1-1/4	4527-012 **116.72**	4537-012 **131.00**	1	12	604
1-1/2	4527-015 **134.05**	4537-015 **148.78**	1	8	604
2	4527-020 **183.02**	4537-020 **203.51**	1	8	604
2-1/2	4527-025 **443.72**	4537-025 **472.58**	1	0	605
3	4527-030 **502.43**	4537-030 **634.38**	1	0	605
4	4527-040 **832.33**	4537-040 **876.92**	1	0	605
6	4527-060 **1636.75**	4537-060 **1813.96**	1	0	558
Flanged Ends					
1/2	4523-005 **79.46**	4533-005 **99.73**	1	8	604
3/4	4523-007 **96.11**	4533-007 **119.60**	5	0	604
1	4523-010 **113.91**	4533-010 **139.17**	5	0	604
1-1/4	4523-012 **140.88**	4533-012 **182.12**	2	0	604
1-1/2	4523-015 **194.40**	4533-015 **211.28**	3	0	604
2	4523-020 **274.37**	4533-020 **280.87**	2	0	604
2-1/2	4523-025 **568.38**	4533-025 **661.89**	1	0	605
3	4523-030 **795.06**	4533-030 **924.53**	1	0	605
4	4523-040 **1076.19**	4533-040 **1249.16**	1	0	605
6	4523-060 **2577.57**	4533-060 **2989.97**	1	0	558
8	4523-080 **3347.48**	4533-080 **3891.12**	1	0	559
8" Venturied valves are 6" ball check valves fitted with 6x8 end connector adapters.					

CPVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket & Threaded Ends					
1/2	4529-005C **83.31**	4539-005C **92.74**	1	18	606
3/4	4529-007C **99.71**	4539-007C **110.81**	1	18	606
1	4529-010C **117.65**	4539-010C **130.71**	1	18	606

CPVC Industrial (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket & Threaded Ends					
1-1/4	4529-012C **202.63**	4539-012C **224.94**	1	12	606
1-1/2	4529-015C **202.63**	4539-015C **224.94**	1	8	606
2	4529-020C **270.65**	4539-020C **301.56**	1	8	606
Socket Ends					
2-1/2	4522-025C **567.14**	4532-025C **630.13**	1	0	607
3	4522-030C **753.47**	4532-030C **820.66**	1	0	607
4	4522-040C **1244.54**	4532-040C **1383.69**	1	0	607
6	4522-060C **2569.49**	4532-060C **2854.63**	1	0	559
8	4522-080C **3022.95**	4532-080C **3805.11**	1	0	559
8" Venturied valves are 6" ball check valves fitted with 6x8 end connector adapters.					
Threaded Ends					
2-1/2	4521-025C **567.14**	4531-025C **630.13**	1	0	607
3	4521-030C **751.23**	4531-030C **841.78**	1	0	607
4	4521-040C **1244.54**	4531-040C **1383.69**	1	0	607
6	4521-060C **2569.49**	4531-060C **2854.63**	1	0	559
SR Threaded Ends					
1/2	4521-005CSR **84.42**	4531-005CSR **93.87**	1	18	606
3/4	4521-007CSR **102.44**	4531-007CSR **113.51**	1	18	606
1	4521-010CSR **120.35**	4531-010CSR **133.43**	1	18	606
1-1/4	4521-012CSR **208.03**	4531-012CSR **233.68**	1	12	606
1-1/2	4521-015CSR **208.03**	4531-015CSR **233.68**	1	8	606
2	4521-020CSR **280.11**	4531-020CSR **311.02**	1	8	606
2-1/2	4521-025CSR **591.64**	4531-025CSR **654.32**	1	0	607
3	4521-030CSR **591.64**	4531-030CSR **881.74**	1	0	607
4	4521-040CSR **1272.76**	4531-040CSR **1411.94**	1	0	607
6	4521-060CSR **2638.78**	4531-060CSR **2923.92**	1	0	559
Spigot Ends					
1/2	4527-005C **83.31**	4537-005C **92.74**	1	18	606
3/4	4527-007C **99.71**	4537-007C **110.81**	1	18	606
1	4527-010C **117.65**	4537-010C **130.71**	1	12	606
1-1/4	4527-012C **202.63**	4537-012C **224.94**	1	12	606
1-1/2	4527-015C **230.09**	4537-015C **224.94**	1	8	606
2	4527-020C **270.65**	4537-020C **301.56**	1	8	606
2-1/2	4527-025C **567.14**	4537-025C **630.13**	1	0	607
3	4527-030C **737.00**	4537-030C **815.96**	1	0	607
4	4527-040C **1244.54**	4537-040C **1383.69**	1	0	607
6	4527-060C **2569.49**	4537-060C **2854.63**	1	0	559
Flanged Ends					
1/2	4523-005C **103.44**	4533-005C **129.26**	1	8	606

CPVC Industrial (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Flanged Ends					
3/4	4523-007C **123.41**	4533-007C **156.22**	1	8	606
1	4523-010C **147.36**	4533-010C **181.67**	1	8	606
1-1/4	4523-012C **248.55**	4533-012C **308.19**	1	8	606
1-1/2	4523-015C **265.54**	4533-015C **331.81**	1	4	606
2	4523-020C **469.52**	4533-020C **503.37**	1	0	606
2-1/2	4523-025C **850.66**	4533-025C **920.31**	1	0	607
3	4523-030C **949.84**	4533-030C **1042.04**	1	0	607
4	4523-040C **1571.47**	4533-040C **1687.47**	1	0	607
6	4523-060C **4190.15**	4533-060C **4356.08**	1	0	559
8	4523-080C **4823.25**	4533-080C **5248.27**	1	0	559
8" Venturied valves are 6" ball check valves fitted with 6x8 end connector adapters.					

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True Union Ball Check Valves (Regular Style)



Socket/Threaded Style

Pressure Rating @ 73°F (23°C),Water
1/2" - 2" 235 psi
2-1/2" - 6" 150 psi
Flanged 150 psi

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service
All Valves assembled with Silicone-Free, Water Soluble Lubricant

6" Venturied Valves are 4" Ball Check Valves equipped with 4x6 End Connectors.

General Installation Information: Ball check valves may be installed in either horizontal or vertical position. A minimum of ten (10) pipe diameters' distance maintained from any pump or other source of turbulence. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of flow.

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket & Threaded Ends					
1/2	2229-005 **61.67**	2239-005 **69.49**	1	18	220
3/4	2229-007 **73.53**	2239-007 **77.62**	1	12	220
1	2229-010 **87.44**	2239-010 **97.48**	1	8	220
1-1/4	2229-012 **127.71**	2239-012 **143.32**	1	8	220
1-1/2	2229-015 **146.67**	2239-015 **162.78**	1	8	220
2	2229-020 **200.24**	2239-020 **222.66**	1	4	220
Socket Ends					
2-1/2	2222-025 **485.46**	2232-025 **517.04**	1	0	220
3	2222-030 **586.46**	2232-030 **681.48**	1	0	220
4	2222-040 **910.65**	2232-040 **959.46**	1	0	220
Socket Venturied Ends					
6 VENTURIED	2222-060 **1230.28**	2232-060 **1393.56**	1	0	221
Threaded Ends					
2-1/2	2221-025 **485.46**	2231-025 **517.04**	1	0	220
3	2221-030 **586.46**	2231-030 **681.48**	1	0	220
4	2221-040 **910.65**	2231-040 **959.46**	1	0	220
Flanged Ends					
1/2	2223-005 **86.95**	2233-005 **109.14**	6	0	220
3/4	2223-007 **105.15**	2233-007 **130.85**	5	0	220
1	2223-010 **124.63**	2233-010 **152.27**	5	0	220
1-1/4	2223-012 **154.15**	2233-012 **199.26**	2	0	220
1-1/2	2223-015 **212.68**	2233-015 **231.19**	3	0	220
2	2223-020 **300.19**	2233-020 **307.32**	2	0	220
2-1/2	2223-025 **621.87**	2233-025 **724.20**	1	0	220
3	2223-030 **869.88**	2233-030 **1011.54**	1	0	220
4	2223-040 **1177.48**	2233-040 **1366.73**	1	0	220
Flanged Venturied Ends					
6 VENTURIED	2223-060 **1473.61**	2233-060 **1644.16**	1	0	221

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket & Threaded Ends					
1/2	2229-005C **91.15**	2239-005C **101.47**	1	18	222
3/4	2229-007C **109.11**	2239-007C **121.24**	1	12	222
1	2229-010C **128.74**	2239-010C **143.02**	1	8	222

CPVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Socket & Threaded Ends					
1-1/4	2229-012C **221.69**	2239-012C **246.12**	1	8	222
1-1/2	2229-015C **268.08**	2239-015C **283.37**	1	8	222
2	2229-020C **296.87**	2239-020C **329.95**	1	4	222
Socket Ends					
2-1/2	2222-025C **620.52**	2232-025C **689.44**	1	0	222
3	2222-030C **1010.72**	2232-030C **1106.06**	1	0	222
4	2222-040C **1361.67**	2232-040C **1513.93**	1	0	222
Socket Venturied Ends					
6 VENTURIED	2222-060C **1756.56**	2232-060C **1968.07**	1	0	223
Threaded Ends					
2-1/2	2221-025C **620.52**	2231-025C **689.44**	1	0	222
3	2221-030C **1010.72**	2231-030C **1106.06**	1	0	222
4	2221-040C **1361.67**	2231-040C **1513.93**	1	0	222
Flanged Ends					
1/2	2223-005C **113.18**	2233-005C **141.42**	6	0	222
3/4	2223-007C **135.02**	2233-007C **170.94**	5	0	222
1	2223-010C **161.22**	2233-010C **198.76**	5	0	222
1-1/4	2223-012C **271.95**	2233-012C **337.19**	2	0	222
1-1/2	2223-015C **290.53**	2233-015C **363.03**	3	0	222
2	2223-020C **513.69**	2233-020C **550.75**	2	0	222
2-1/2	2223-025C **817.39**	2233-025C **930.72**	1	0	222
3	2223-030C **1039.25**	2233-030C **1140.12**	1	0	222
4	2223-040C **1719.37**	2233-040C **1846.29**	1	0	222
Flanged Venturied Ends					
6 VENTURIED	2223-060C **2072.75**	2233-060C **2243.62**	1	0	223

Foot Valve Screens

Convert Check Valve to Foot Valve using adapter - Fits all Socket Ball Check Valves or any IPS fitting socket or thread

Standard Foot Valve Screen



PVC/CPVC Spigot

Compact Foot Valve Screens



PVC Gray Spigot or Threaded

PE Black Threaded Only

Foot Valve Screens - PVC

Size	PVC	CPVC	Std Pk	Mstr Pk	Disc Code
Spigot					
1/2	FVS-005 **45.51**	FVS-005C **62.85**	10	60	299
3/4	FVS-007 **54.04**	FVS-007C **67.80**	10	60	299
1	FVS-010 **65.73**	FVS-010C **76.97**	10	40	299
1-1/4	FVS-012 **95.67**	FVS-012C **118.87**	5	30	299
1-1/2	FVS-015 **100.78**	FVS-015C **123.43**	5	0	299
2	FVS-020 **113.74**	FVS-020C **136.26**	5	0	299
2-1/2	FVS-025 **156.45**	FVS-025C **198.53**	5	0	299
3	FVS-030 **160.93**	FVS-030C **221.08**	5	0	299
4	FVS-040 **190.41**	FVS-040C **315.98**	5	0	299
6	FVS-060 **257.85**	FVS-060C **451.53**	5	0	299

PVC Compact Foot Valve Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Spigot					
CFVS7-005	**1/2**	50	300	299	2.80
CFVS7-007	**3/4**	25	150	299	3.19
CFVS7-010	**1**	25	150	299	3.78
CFVS7-012	**1-1/4**	50	0	299	4.81
CFVS7-015	**1-1/2**	25	0	299	8.06

PVC Compact Foot Valve Screen (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Spigot					
CFVS7-020	**2**	25	0	299	9.17

PVC Compact Foot Valve Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Threaded					
CFVS1-005	**1/2**	50	300	299	2.80
CFVS1-007	**3/4**	25	150	299	3.19
CFVS1-010	**1**	20	120	299	3.78
CFVS1-012	**1-1/4**	50	0	299	4.81
CFVS1-015	**1-1/2**	25	0	299	8.06
CFVS1-020	**2**	25	0	299	9.17

HDPE Black Compact Foot Valve Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Threaded					
CFVS1-005P	**1/2**	50	300	299	3.35
CFVS1-007P	**3/4**	25	150	299	4.03
CFVS1-010P	**1**	20	120	299	4.62
CFVS1-012P	**1-1/4**	50	0	299	5.31
CFVS1-015P	**1-1/2**	25	0	299	9.04
CFVS1-020P	**2**	25	0	299	10.14

Y-Check Valves



PVC Clear — Socket Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 150 psi
3" - 4" 90 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply



True Union Style

PVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1622-005 **88.61**	1632-005 **98.27**	1	18	627
3/4	1622-007 **95.05**	1632-007 **106.34**	1	18	627

PVC - Socket Ends (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1	1622-010 **104.72**	1632-010 **115.98**	1	12	627
1-1/4	1622-012 **164.32**	1632-012 **182.05**	1	8	627
1-1/2	1622-015 **178.81**	1632-015 **198.15**	1	8	627

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PVC - Socket Ends (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	1622-020 **222.32**	1632-020 **246.49**	1	4	627
3	1622-030 **439.80**	1632-030 **488.12**	1	0	627
4	1622-040 **766.83**	1632-040 **852.22**	1	0	627

PVC - SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1621-005SR **91.83**	1631-005SR **101.51**	1	18	627
3/4	1621-007SR **99.87**	1631-007SR **111.16**	1	12	627
1	1621-010SR **111.16**	1631-010SR **122.43**	1	8	627
1-1/4	1621-012SR **173.98**	1631-012SR **191.71**	1	8	627
1-1/2	1621-015SR **193.32**	1631-015SR **212.65**	1	4	627
2	1621-020SR **238.42**	1631-020SR **262.59**	1	0	627
3	1621-030SR **483.31**	1631-030SR **531.62**	1	0	627
4	1621-040SR **811.94**	1631-040SR **897.31**	1	0	627

PVC - Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1623-005 **115.98**	1633-005 **128.89**	1	8	627
3/4	1623-007 **127.26**	1633-007 **141.77**	1	4	627
1	1623-010 **148.98**	1633-010 **170.76**	1	8	627
1-1/4	1623-012 **236.81**	1633-012 **262.59**	1	4	627
1-1/2	1623-015 **251.33**	1633-015 **278.69**	1	4	627
2	1623-020 **336.69**	1633-020 **373.73**	1	0	627
3	1623-030 **658.88**	1633-030 **731.38**	1	0	627
4	1623-040 **1051.96**	1633-040 **1167.96**	1	0	627

PVC Clear - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1622-005CL **88.61**	1632-005CL **98.27**	1	18	628
3/4	1622-007CL **95.05**	1632-007CL **106.34**	1	18	628
1	1622-010CL **104.72**	1632-010CL **115.98**	1	12	628
1-1/4	1622-012CL **164.32**	1632-012CL **182.05**	1	8	628
1-1/2	1622-015CL **178.81**	1632-015CL **198.15**	1	8	628
2	1622-020CL **222.32**	1632-020CL **246.49**	1	4	628
3	1622-030CL **439.80**	1632-030CL **488.12**	1	0	628
4	1622-040CL **766.83**	1632-040CL **852.22**	1	0	628

PVC Clear - SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1621-005CLSR **91.83**	1631-005CLSR **101.51**	1	18	628
3/4	1621-007CLSR **99.87**	1631-007CLSR **111.16**	1	12	628
1	1621-010CLSR **111.16**	1631-010CLSR **122.43**	1	8	628

PVC Clear - SR Threaded Ends (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/4	1621-012CLSR **173.98**	1631-012CLSR **191.71**	1	8	628
1-1/2	1621-015CLSR **193.32**	1631-015CLSR **212.65**	1	4	628
2	1621-020CLSR **238.42**	1631-020CLSR **262.59**	1	0	628
3	1621-030CLSR **483.31**	1631-030CLSR **531.62**	1	0	628
4	1621-040CLSR **811.94**	1631-040CLSR **897.31**	1	0	628

PVC Clear - Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1623-005CL **115.98**	1633-005CL **128.89**	1	8	628
3/4	1623-007CL **127.26**	1633-007CL **141.77**	1	8	628
1	1623-010CL **153.04**	1633-010CL **170.76**	1	8	628
1-1/4	1623-012CL **236.81**	1633-012CL **262.59**	1	4	628
1-1/2	1623-015CL **251.33**	1633-015CL **278.69**	1	4	628
2	1623-020CL **336.69**	1633-020CL **373.73**	1	0	628
3	1623-030CL **658.88**	1633-030CL **731.38**	1	0	628
4	1623-040CL **1051.96**	1633-040CL **1167.96**	1	0	628

CPVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1622-005C **127.26**	1632-005C **140.15**	1	18	629
3/4	1622-007C **136.94**	1632-007C **151.43**	1	18	629
1	1622-010C **149.82**	1632-010C **165.93**	1	12	629
1-1/4	1622-012C **235.20**	1632-012C **260.98**	1	8	629
1-1/2	1622-015C **256.15**	1632-015C **283.53**	1	8	629
2	1622-020C **317.36**	1632-020C **352.79**	1	4	629
3	1622-030C **908.25**	1632-030C **1016.27**	1	0	629
4	1622-040C **1095.44**	1632-040C **1217.88**	1	0	629

CPVC - SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1621-005CSR **130.48**	1631-005CSR **144.98**	1	18	629
3/4	1621-007CSR **141.77**	1631-007CSR **157.88**	1	12	629
1	1621-010CSR **157.88**	1631-010CSR **173.98**	1	8	629
1-1/4	1621-012CSR **248.09**	1631-012CSR **272.25**	1	8	629
1-1/2	1621-015CSR **277.08**	1631-015CSR **304.48**	1	4	629
2	1621-020CSR **339.91**	1631-020CSR **375.37**	1	0	629
3	1621-030CSR **691.11**	1631-030CSR **760.38**	1	0	629
4	1621-040CSR **1158.28**	1631-040CSR **1280.73**	1	0	629

CPVC - Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1623-005C **165.93**	1633-005C **170.80**	1	8	629

CPVC - Flanged Ends (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
3/4	1623-007C **182.05**	1633-007C **202.98**	1	8	629
1	1623-010C **219.11**	1633-010C **243.91**	1	8	629
1-1/4	1623-012C **338.31**	1633-012C **375.37**	1	4	629
1-1/2	1623-015C **357.62**	1633-015C **397.91**	1	4	629
2	1623-020C **480.06**	1633-020C **533.22**	1	0	629
3	1623-030C **940.81**	1633-030C **1045.52**	1	0	629
4	1623-040C **1501.42**	1633-040C **1668.97**	1	0	629

PVC - True Union Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162A-005 **96.66**	163A-005 **106.34**	1	12	627
3/4	162A-007 **103.09**	163A-007 **115.98**	1	8	627
1	162A-010 **114.38**	163A-010 **125.64**	1	8	627
1-1/4	162A-012 **178.81**	163A-012 **198.15**	1	4	627
1-1/2	162A-015 **194.93**	163A-015 **215.88**	1	0	627
2	162A-020 **241.64**	163A-020 **267.41**	2	0	627
3	162A-030 **478.45**	163A-030 **521.96**	1	0	627
4	162A-040 **834.49**	163A-040 **926.32**	1	0	627

PVC - True Union Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162B-005 **96.66**	163B-005 **106.34**	1	12	627
3/4	162B-007 **103.09**	163B-007 **115.98**	1	8	627
1	162B-010 **114.38**	163B-010 **125.64**	1	8	627
1-1/4	162B-012 **177.22**	163B-012 **198.15**	1	4	627
1-1/2	162B-015 **194.93**	163B-015 **215.88**	1	0	627
2	162B-020 **241.64**	163B-020 **267.41**	2	0	627
3	162B-030 **478.45**	163B-030 **521.96**	1	0	627
4	162B-040 **834.49**	163B-040 **926.32**	1	0	627

PVC - True Union SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162B-005SR **99.87**	163B-005SR **109.55**	1	12	627
3/4	162B-007SR **107.93**	163B-007SR **119.22**	1	8	627
1	162B-010SR **119.22**	163B-010SR **132.11**	1	8	627
1-1/4	162B-012SR **188.48**	163B-012SR **207.80**	1	4	627
1-1/2	162B-015SR **211.03**	163B-015SR **231.98**	1	0	627
2	162B-020SR **259.37**	163B-020SR **286.74**	1	0	627
3	162B-030SR **525.17**	163B-030SR **578.35**	1	0	627
4	162B-040SR **881.20**	163B-040SR **974.63**	1	0	627

PVC Clear - True Union Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162A-005CL **96.66**	163A-005CL **106.34**	1	12	628
3/4	162A-007CL **103.09**	163A-007CL **115.98**	1	8	628
1	162A-010CL **114.38**	163A-010CL **125.64**	1	8	628
1-1/4	162A-012CL **178.81**	163A-012CL **198.15**	1	4	628
1-1/2	162A-015CL **194.93**	163A-015CL **215.88**	1	0	628
2	162A-020CL **241.64**	163A-020CL **267.41**	2	0	628
3	162A-030CL **478.45**	163A-030CL **521.96**	1	0	628
4	162A-040CL **834.49**	163A-040CL **926.32**	1	0	628

PVC Clear - True Union Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162B-005CL **96.66**	163B-005CL **106.34**	1	12	628
3/4	162B-007CL **103.09**	163B-007CL **115.98**	1	8	628
1	162B-010CL **114.38**	163B-010CL **125.64**	1	8	628
1-1/4	162B-012CL **178.81**	163B-012CL **198.15**	1	4	628
1-1/2	162B-015CL **194.93**	163B-015CL **215.88**	1	0	628
2	162B-020CL **241.64**	163B-020CL **267.41**	2	0	628
3	162B-030CL **478.45**	163B-030CL **521.96**	1	0	628
4	162B-040CL **834.49**	163B-040CL **926.32**	1	0	628

PVC Clear - True Union SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162B-005CLSR **99.87**	163B-005CLSR **109.55**	1	12	628
3/4	162B-007CLSR **107.93**	163B-007CLSR **119.22**	1	8	628
1	162B-010CLSR **119.22**	163B-010CLSR **132.11**	1	8	628
1-1/4	162B-012CLSR **188.48**	163B-012CLSR **207.80**	1	4	628
1-1/2	162B-015CLSR **211.03**	163B-015CLSR **231.98**	1	0	628
2	162B-020CLSR **259.37**	163B-020CLSR **286.74**	1	0	628
3	162B-030CLSR **525.17**	163B-030CLSR **578.35**	1	0	628
4	162B-040CLSR **881.20**	163B-040CLSR **974.63**	1	0	628

CPVC - True Union Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162A-005C **138.55**	163A-005C **153.04**	1	12	629
3/4	162A-007C **148.21**	163A-007C **165.93**	1	8	629
1	162A-010C **162.71**	163A-010C **180.43**	1	8	629
1-1/4	162A-012C **254.54**	163A-012C **283.53**	1	4	629
1-1/2	162A-015C **277.08**	163A-015C **307.71**	1	0	629
2	162A-020C **344.75**	163A-020C **383.40**	2	0	629
3	162A-030C **683.05**	163A-030C **745.86**	1	0	629
4	162A-040C **1190.51**	163A-040C **1322.61**	1	0	629

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Y-Check Valves

CPVC - True Union Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162B-005C **138.55**	163B-005C **153.04**	1	12	629
3/4	162B-007C **148.21**	163B-007C **165.93**	1	8	629
1	162B-010C **162.71**	163B-010C **180.43**	1	8	629
1-1/4	162B-012C **254.54**	163B-012C **283.53**	1	4	629
1-1/2	162B-015C **277.08**	163B-015C **307.71**	1	0	629
2	162B-020C **344.75**	163B-020C **383.40**	2	0	629
3	162B-030C **683.05**	163B-030C **745.86**	1	0	629
4	162B-040C **1190.51**	163B-040C **1322.61**	1	0	629

CPVC - True Union SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	162B-005CSR **141.77**	163B-005CSR **156.26**	1	12	629
3/4	162B-007CSR **154.66**	163B-007CSR **170.76**	1	8	629
1	162B-010CSR **170.76**	163B-010CSR **188.48**	1	8	629
1-1/4	162B-012CSR **269.02**	163B-012CSR **296.42**	1	4	629
1-1/2	162B-015CSR **301.25**	163B-015CSR **330.23**	1	0	629
2	162B-020CSR **370.52**	163B-020CSR **407.57**	1	0	629
3	162B-030CSR **750.72**	163B-030CSR **824.83**	1	0	629
4	162B-040CSR **1259.79**	163B-040CSR **1391.89**	1	0	629

Y-Check Valve Repair Kits

All Kits include:
- 1-Seat
- 1-Bonnet O-ring
- 1-Plug O-ring

All Union Kits include:
- 1-Seat
- 1-Bonnet O-ring
- 1-Plug O-ring
- 2-End Connector O-rings

Y-Check Valve - Seat & O-ring Repair Kits

Size	Standard EPDM O-ring	Standard FKM O-ring	True Union EPDM O-ring	True Union FKM O-ring	Std Pk	Mstr Pk	Disc Code
1/2	YC-ERK-005 **3.49**	YC-VRK-005 **10.32**	YC-UERK-005 **4.08**	YC-UVRK-005 **12.38**	1	10	299
3/4	YC-ERK-007 **4.00**	YC-VRK-007 **11.13**	YC-UERK-007 **4.73**	YC-UVRK-007 **13.84**	1	10	299
1	YC-ERK-010 **4.08**	YC-VRK-010 **15.11**	YC-UERK-010 **4.97**	YC-UVRK-010 **20.03**	1	10	299
1-1/4	YC-ERK-012 **4.27**	YC-VRK-012 **28.11**	YC-UERK-012 **6.20**	YC-UVRK-012 **35.15**	1	10	299
1-1/2	YC-ERK-015 **7.42**	YC-VRK-015 **30.69**	YC-UERK-015 **10.41**	YC-UVRK-015 **43.69**	1	10	299
2	YC-ERK-020 **9.98**	YC-VRK-020 **36.74**	YC-UERK-020 **13.78**	YC-UVRK-020 **52.99**	1	10	299
3	YC-ERK-030 **17.22**	YC-VRK-030 **96.37**	YC-UERK-030 **29.93**	YC-UVRK-030 **122.27**	1	10	299
4	YC-ERK-040 **22.29**	YC-VRK-040 **138.74**	YC-UERK-040 **33.16**	YC-UVRK-040 **171.17**	1	10	299


Wafer


Flanged


Spigot


Threaded


Grooved

Pressure Rating @ 73°F (23°C), Water

2" - 8" 150 psi
10" - 16" 100 psi
18" - 24" 50 psi

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

General Installation Information: Butterfly Check Valve seating may be affected by normal system turbulence. Flow velocities should be limited to approximately 5 feet per second. Valves should be installed at least 5 pipe diameters away from any fitting, pump or other source of turbulence. If used as a foot valve, do not place near bottom of a tank. Butterfly type check valves should not be used in continuous cycling applications, such as with reciprocating pumps. This can result in premature failure of sealing membrane. In horizontal installations, always orient the Hinge Post Bolts visible on the external body in a vertical (top and bottom) position, perpendicular to flow. In vertical installations downstream from an elbow, flow velocities can be higher on the outer radius of the elbow. To avoid uneven butterfly plate loading, the Hinge Post Bolts should align with crotch and outer radius of elbow and NOT from side to side of the elbow.

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Wafer					
2	5420-020 **405.36**	5430-020 **446.66**	1	18	289
2-1/2	5420-025 **558.62**	5430-025 **615.63**	1	0	289
3	5420-030 **714.56**	5430-030 **787.42**	1	8	289
4	5420-040 **971.78**	5430-040 **1070.91**	1	4	289
6	5420-060 **1473.27**	5430-060 **1623.54**	1	0	289
8	5420-080 **2499.61**	5430-080 **2754.56**	1	0	289
10	5420-100 **4596.12**	5430-100 **5101.67**	1	0	289
12	5420-120 **6480.46**	5430-120 **7193.33**	1	0	289
14	5420-140 **9256.78**	---	1	0	289
16	5420-160 **12855.58**	---	1	0	289
18	5420-180 **16068.26**	---	1	0	289
20	5420-200 **20085.32**	---	1	0	289
24	5420-240 **28691.31**	---	1	0	289
Flanged Ends					
2	5423-020 **517.05**	5433-020 **556.04**	1	8	289
2-1/2	5423-025 **672.97**	5433-025 **732.75**	1	0	289
3	5423-030 **966.60**	5433-030 **1062.73**	1	0	289
4	5423-040 **1255.01**	5433-040 **1400.49**	1	0	289
6	5423-060 **2034.51**	5433-060 **2328.13**	1	0	289
8	5423-080 **2915.34**	5433-080 **3440.21**	1	0	289
10	5423-100 **5368.20**	5433-100 **6121.71**	1	0	289
12	5423-120 **7605.37**	5433-120 **8090.37**	1	0	289
14	5423-140 **10723.57**	5433-140 **11407.36**	4	0	289

PVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Flanged Ends					
16	5423-160 **15093.44**	5433-160 **16296.21**	1	0	289
18	5423-180 **19283.61**	5433-180 **20626.99**	1	0	289
20	5423-200 **25345.15**	5433-200 **27140.77**	1	0	289
24	5423-240 **33197.34**	5433-240 **35709.75**	1	0	289
Spigot (Plain End)					
2	5427-020 **220.86**	5437-020 **259.83**	1	12	289
2-1/2	5427-025 **304.01**	5437-025 **363.79**	1	12	289
3	5427-030 **407.94**	5437-030 **504.07**	1	8	289
4	5427-040 **535.26**	5437-040 **680.78**	1	4	289
6	5427-060 **1138.06**	5437-060 **1431.68**	1	0	289
8	5427-080 **1696.74**	5437-080 **2221.57**	1	0	289
10	5427-100 **4149.55**	5437-100 **4903.06**	1	0	289
12	5427-120 **5620.22**	5437-120 **6588.52**	1	0	289
14	5427-140 **7500.69**	5437-140 **8618.72**	1	0	289
16	5427-160 **11284.86**	5437-160 **13230.73**	1	0	289
18	5427-180 **14106.08**	5437-180 **16536.92**	1	0	289
20	5427-200 **17632.13**	5437-200 **20669.82**	1	0	289
24	5427-240 **25188.72**	5437-240 **29527.29**	1	0	289
Threaded Ends					
2	5421A-020 **215.67**	5431A-020 **254.64**	1	4	289
2-1/2	5421A-025 **293.62**	5431A-025 **353.36**	1	8	289
3	5421A-030 **400.16**	5431A-030 **496.27**	1	8	289
4	5421A-040 **524.87**	5431A-040 **670.37**	1	4	289

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PVC (continued)

Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
6	5421A-060 **1117.29**	5431A-060 **1410.89**	1	0	289
8	5421A-080 **1678.56**	5431A-080 **2203.39**	1	0	289
10	5421A-100 **4141.06**	5431A-100 **4895.80**	1	0	289
12	5421A-120 **5613.29**	5431A-120 **6581.60**	1	0	289

Grooved Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	542G-020 **244.24**	543G-020 **283.21**	1	12	289
2-1/2	542G-025 **319.60**	543G-025 **379.35**	1	8	289
3	542G-030 **420.93**	543G-030 **517.05**	1	8	289
4	542G-040 **566.45**	543G-040 **711.95**	1	4	289
6	542G-060 **1184.84**	543G-060 **1478.47**	1	0	289
8	542G-080 **1748.67**	543G-080 **2273.56**	1	0	289
10	542G-100 **4232.69**	543G-100 **4986.21**	1	0	289
12	542G-120 **5731.94**	543G-120 **6701.15**	1	0	289

CPVC

Wafer

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	5420-020C **628.27**	5430-020C **697.39**	1	18	290
2-1/2	5420-025C **865.88**	5430-025C **917.65**	1	0	290
3	5420-030C **1107.55**	5430-030C **1229.38**	1	0	290
4	5420-040C **1506.29**	5430-040C **1671.97**	1	0	290
6	5420-060C **2283.56**	5430-060C **2534.76**	1	0	290
8	5420-080C **3874.39**	5430-080C **4300.57**	1	0	290
10	5420-100C **8332.34**	5430-100C **9165.58**	1	0	290
12	5420-120C **14674.37**	5430-120C **16141.81**	1	0	290

Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	5423-020C **800.28**	5433-020C **839.26**	1	8	290
2-1/2	5423-025C **1280.98**	5433-025C **1340.74**	1	0	290
3	5423-030C **1369.32**	5433-030C **1465.46**	1	0	290
4	5423-040C **1603.17**	5433-040C **1748.67**	1	0	290
6	5423-060C **2826.99**	5433-060C **3120.62**	1	0	290
8	5423-080C **4528.92**	5433-080C **5053.80**	1	0	290
10	5423-100C **8558.96**	5433-100C **9312.47**	1	0	290
12	5423-120C **15415.98**	5433-120C **16385.20**	1	0	290
14	5423-140C **22022.45**	5433-140C **23407.12**	1	0	290
16	5423-160C **30585.05**	5433-160C **32509.86**	1	0	290
18	5423-180C **38231.29**	5433-180C **40637.35**	1	0	290
20	5423-200C **54615.94**	5433-200C **58052.18**	1	0	290
24	5423-240C **68268.40**	5433-240C **72564.97**	1	0	290

CPVC

Spigot (Plain End)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	5427-020C **420.93**	5437-020C **459.91**	1	12	290
2-1/2	5427-025C **569.05**	5437-025C **628.79**	1	12	290
3	5427-030C **579.44**	5437-030C **674.71**	1	8	290
4	5427-040C **727.53**	5437-040C **873.05**	1	4	290
6	5427-060C **1556.42**	5437-060C **1850.04**	1	0	290
8	5427-080C **2335.92**	5437-080C **2860.78**	1	0	290
10	5427-100C **5838.47**	5437-100C **6592.03**	1	0	290
12	5427-120C **9580.11**	5437-120C **10548.42**	1	0	290
14	5427-140C **10020.27**	5437-140C **20928.65**	1	0	290
16	5427-160C **13250.63**	5437-160C **13755.01**	1	0	290
18	5427-180C **20149.82**	5437-180C **23126.81**	1	0	290
20	5427-200C **25188.27**	5437-200C **28905.66**	1	0	290
24	5427-240C **26089.01**	5437-240C **72564.97**	1	0	290

Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	5421A-020C **418.36**	5431A-020C **483.31**	1	12	290
2-1/2	5421A-025C **566.79**	5431A-025C **627.07**	1	8	290
3	5421A-030C **575.97**	5431A-030C **672.09**	1	8	290
4	5421A-040C **724.07**	5431A-040C **869.58**	1	4	290
6	5421A-060C **1544.27**	5431A-060C **1837.02**	1	0	290
8	5421A-080C **2325.16**	5431A-080C **2850.04**	1	0	290
10	5421A-100C **5829.28**	5431A-100C **6582.83**	1	0	290
12	5421A-120C **9564.84**	5431A-120C **10534.04**	1	0	290

Grooved Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	542G-020C **444.34**	543G-020C **514.68**	1	12	290
2-1/2	542G-025C **589.82**	543G-025C **649.60**	1	8	290
3	542G-030C **599.33**	543G-030C **695.48**	1	8	290
4	542G-040C **769.11**	543G-040C **915.29**	1	4	290
6	542G-060C **1610.98**	543G-060C **1904.60**	1	0	290
8	542G-080C **2388.06**	543G-080C **2912.93**	1	0	290
10	542G-100C **5926.83**	543G-100C **6680.34**	1	0	290
12	542G-120C **9878.92**	543G-120C **10848.08**	1	0	290

Butterfly Check Valve Repair Kits

PVC & CPVC Butterfly Check Valve Repair Kit is an internal assembly including:

- 1-Flex Seal Gasket Seat
- 1-Hinge Post
- 2-Flapper Plates
- 2-Flapper Covers
- 1-Post Strip
- 2-Seat Post O-rings
- Plastic Assembly Screws
- Use Existing Hinge Post Bolts

PVC Butterfly Check Valve Repair Kits

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	BFC-ERK-020 **155.97**	BFC-VRK-020 **184.27**	1	10	299
2-1/2	BFC-ERK-025 **212.40**	BFC-VRK-025 **255.68**	1	0	299
3	BFC-ERK-030 **289.32**	BFC-VRK-030 **358.56**	1	10	299
4	BFC-ERK-040 **379.69**	BFC-VRK-040 **484.75**	1	10	299
6	BFC-ERK-060 **808.19**	BFC-VRK-060 **1020.60**	1	10	299
8	BFC-ERK-080 **1214.39**	BFC-VRK-080 **1593.74**	1	10	299
10	BFC-ERK-100 **2995.41**	BFC-VRK-100 **3541.26**	1	0	299
12	BFC-ERK-120 **4060.31**	BFC-VRK-120 **4760.63**	1	0	299

CPVC Butterfly Check Valve Repair Kits

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	BFC-ERK-020C **302.62**	BFC-VRK-020C **330.77**	1	10	299
2-1/2	BFC-ERK-025C **410.02**	BFC-VRK-025C **453.64**	1	10	299
3	BFC-ERK-030C **416.84**	BFC-VRK-030C **486.08**	1	10	299
4	BFC-ERK-040C **523.71**	BFC-VRK-040C **629.08**	1	10	299
6	BFC-ERK-060C **1117.00**	BFC-VRK-060C **1328.74**	1	10	299
8	BFC-ERK-080C **1681.80**	BFC-VRK-080C **2061.54**	1	10	299
10	BFC-ERK-100C **4216.46**	BFC-VRK-100C **4761.63**	1	0	299
12	BFC-ERK-120C **6918.72**	BFC-VRK-120C **7619.71**	1	0	299

Industrial Swing Check Valves



Threaded Bonnet on Sizes 3/4", 1" & 1-1/4"

Pressure Rating @ 73°F (23°C), Water
3/4" - 4" 150 psi
6" 100 psi
8" 70 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
PP = 180°F (82°C)
Temperature/Pressure De-ratings Apply
All Valves Assembled with Silicone-Free Lubricants



Bolted Bonnet on Sizes 1-1/2" & Up
(Valve Shown with Arrow Indicator Option)

General Installation Information: Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec.

Industrial Swing Check Valves

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
PVC					
3/4	4423-007 **489.87**	4433-007 **518.17**	1	12	108
1	4423-010 **564.53**	4433-010 **615.23**	1	4	108
1-1/4	4423-012 **706.16**	4433-012 **747.16**	1	0	108
1-1/2	4423-015 **774.14**	4433-015 **864.87**	1	0	108
2	4423-020 **891.23**	4433-020 **990.28**	1	0	108
2-1/2	4423-025 **1491.55**	4433-025 **1759.58**	1	0	110
3	4423-030 **1668.08**	4433-030 **2185.93**	1	0	110
4	4423-040 **2126.11**	4433-040 **2496.24**	1	0	110
6	4423-060 **4040.65**	4433-060 **4742.66**	1	0	110
8	4423-080 **7742.14**	4433-080 **9049.54**	1	0	110
CPVC					
3/4	4423-007C **774.01**	4433-007C **860.13**	1	12	109

Industrial Swing Check Valves (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
CPVC					
1	4423-010C **892.53**	4433-010C **992.43**	1	4	109
1-1/4	4423-012C **1116.48**	4433-012C **1239.96**	1	0	109
1-1/2	4423-015C **1151.88**	4433-015C **1565.51**	1	0	109
2	4423-020C **1485.39**	4433-020C **1650.42**	1	0	109
2-1/2	4423-025C **2461.58**	4433-025C **2921.09**	1	0	111
3	4423-030C **3074.86**	4433-030C **3308.52**	1	0	111
4	4423-040C **3528.28**	4433-040C **4161.00**	1	0	111
6	4423-060C **7220.66**	4433-060C **7908.09**	1	0	111
8	4423-080C **12884.15**	4433-080C **15066.75**	1	0	111
PP					
3/4	4423-007P **563.29**	4433-007P **625.86**	1	12	113
1	4423-010P **673.87**	4433-010P **734.44**	1	4	113
1-1/4	4423-012P **807.65**	4433-012P **897.31**	1	0	113

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Industrial Swing Check Valves (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
PP					
1-1/2	4423-015P **1002.77**	4433-015P **1091.16**	1	0	113
2	4423-020P **1072.15**	4433-020P **1204.66**	1	0	113
2-1/2	4423-025P **1785.13**	4433-025P **1985.68**	1	0	112
3	4423-030P **1876.73**	4433-030P **2244.16**	1	0	112
4	4423-040P **2552.76**	4433-040P **2833.55**	1	0	112
6	4423-060P **4835.67**	4433-060P **5377.21**	1	0	112
8	4423-080P **9256.18**	4433-080P **10171.67**	1	0	112

Swing Check Valve With Arrow Indicator

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
PVC					
3/4	4423I-007 **497.92**	4433I-007 **526.24**	1	12	108
1	4423I-010 **572.57**	4433I-010 **641.02**	1	4	108
1-1/4	4423I-012 **731.22**	4433I-012 **803.54**	1	0	108
1-1/2	4423I-015 **848.02**	4433I-015 **803.54**	1	0	108
2	4423I-020 **918.19**	4433I-020 **1002.26**	1	0	108
2-1/2	4423I-025 **1500.05**	4433I-025 **1668.77**	1	0	110
3	4423I-030 **1746.95**	4433I-030 **1668.77**	1	0	110
4	4423I-040 **2134.74**	4433I-040 **2536.97**	1	0	110
6	4423I-060 **4049.09**	4433I-060 **4781.72**	1	0	110
8	4423I-080 **7865.20**	4433I-080 **9095.78**	1	0	110
CPVC					
3/4	4423I-007C **782.56**	4433I-007C **868.15**	1	12	109
1	4423I-010C **900.59**	4433I-010C **1002.09**	1	4	109
1-1/4	4423I-012C **1111.08**	4433I-012C **1251.24**	1	0	109
1-1/2	4423I-015C **1277.94**	4433I-015C **1251.24**	1	0	109
2	4423I-020C **1497.00**	4433I-020C **1693.56**	1	0	109
2-1/2	4423I-025C **2469.95**	4433I-025C **2962.41**	1	0	111
3	4423I-030C **2650.77**	4433I-030C **3446.74**	1	0	111
4	4423I-040C **3551.77**	4433I-040C **4185.59**	1	0	111
6	4423I-060C **7327.88**	4433I-060C **7916.65**	1	0	111
8	4423I-080C **12897.99**	4433I-080C **15114.39**	1	0	111
PP					
3/4	4423I-007P **571.34**	4433I-007P **633.92**	1	12	113
1	4423I-010P **685.14**	4433I-010P **790.82**	1	4	113
1-1/4	4423I-012P **880.14**	4433I-012P **976.99**	1	0	113
1-1/2	4423I-015P **1131.42**	4433I-015P **976.99**	1	0	113
2	4423I-020P **1101.74**	4433I-020P **1249.35**	1	0	113
2-1/2	4423I-025P **1795.51**	4433I-025P **2012.18**	1	0	112

Swing Check Valve With Arrow Indicator (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
PP					
3	4423I-030P **2237.73**	4433I-030P **2335.62**	1	0	112
4	4423I-040P **2563.15**	4433I-040P **2843.98**	1	0	112
6	4423I-060P **4940.04**	4433I-060P **5422.53**	1	0	112
8	4423I-080P **9325.12**	4433I-080P **10274.48**	1	0	112

Contact Spears® for Pricing on Additional Specialty Valve Accessories Available:

- Arrow Indicator Kits for Field Installation
- Counter Balance Kits for Field Installation

Swing Check Valve With Counter Balance

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
PVC					
3/4	4423CB-007 **774.86**	4433CB-007 **829.28**	1	8	108
1	4423CB-010 **866.79**	4433CB-010 **928.46**	1	4	108
1-1/4	4423CB-012 **1046.99**	4433CB-012 **1088.37**	1	0	108
1-1/2	4423CB-015 **1123.33**	4433CB-015 **1311.98**	1	0	108
2	4423CB-020 **1239.38**	4433CB-020 **1500.17**	1	0	108
2-1/2	4423CB-025 **1864.98**	4433CB-025 **2132.38**	1	0	110
3	4423CB-030 **2100.28**	4433CB-030 **2423.29**	1	0	110
4	4423CB-040 **2516.60**	4433CB-040 **2886.71**	1	0	110
6	4423CB-060 **4487.07**	4433CB-060 **4487.07**	1	0	110
8	4423CB-080 **8996.31**	4433CB-080 **9487.41**	1	0	110
CPVC					
3/4	4423CB-007C **1201.33**	4433CB-007C **1309.60**	1	12	109
1	4423CB-010C **1303.47**	4433CB-010C **1416.69**	1	4	109
1-1/4	4423CB-012C **1111.08**	4433CB-012C **1526.17**	1	0	109
1-1/2	4423CB-015C **1526.17**	4433CB-015C **1764.87**	1	0	109
2	4423CB-020C **1983.65**	4433CB-020C **2148.72**	1	0	109
2-1/2	4423CB-025C **2994.18**	4433CB-025C **3453.78**	1	0	111
3	4423CB-030C **3241.42**	4433CB-030C **4294.28**	1	0	111
4	4423CB-040C **4010.76**	4433CB-040C **4718.82**	1	0	111
6	4423CB-060C **7858.41**	4433CB-060C **8545.80**	1	0	111
8	4423CB-080C **13533.00**	4433CB-080C **15715.46**	1	0	111
PP					
3/4	4423CB-007P **721.01**	4433CB-007P **801.11**	1	12	113
1	4423CB-010P **862.53**	4433CB-010P **940.06**	1	4	113
1-1/4	4423CB-012P **880.14**	4433CB-012P **1354.36**	1	0	113
1-1/2	4423CB-015P **1244.07**	4433CB-015P **1670.49**	1	0	113
2	4423CB-020P **1340.19**	4433CB-020P **1505.82**	1	0	113
2-1/2	4423CB-025P **2069.04**	4433CB-025P **2541.67**	1	0	112
3	4423CB-030P **2517.42**	4433CB-030P **3149.68**	1	0	112

Industrial Swing Check Valves

Swing Check Valve With Counter Balance (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
PP					
4	4423CB-040P **2882.82**	4433CB-040P **3167.00**	1	0	112
6	4423CB-060P **5363.56**	4433CB-060P **6882.82**	1	0	112
8	4423CB-080P **9791.67**	4433CB-080P **10707.18**	1	0	112

Industrial Swing Check Valve Accessory and Repair Kits

Repair Kits include:
- 1-Bonnet O-ring
- 1-Disc O-ring
- 1-Seat O-ring
- 1-Plug O-ring
- 1-Arm Plug O-ring

Industrial Swing Check Valve Repair Kits

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
3/4	SK-ERK-007 **26.29**	SK-VRK-007 **32.05**	1	10	299
1	SK-ERK-010 **34.34**	SK-VRK-010 **41.88**	1	10	299
1-1/2 & 1-1/4	SK-ERK-015 **82.11**	SK-VRK-015 **103.84**	1	10	299
2	SK-ERK-020 **88.15**	SK-VRK-020 **107.48**	1	10	299
2-1/2	SK-ERK-025 **93.22**	SK-VRK-025 **119.31**	1	10	299
3	SK-ERK-030 **105.69**	SK-VRK-030 **128.97**	1	10	299
4	SK-ERK-040 **115.32**	SK-VRK-040 **140.62**	1	10	299
6	SK-ERK-060 **229.20**	SK-VRK-060 **270.57**	1	10	299
8	SK-ERK-080 **288.39**	SK-VRK-080 **349.87**	1	10	299

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Utility Swing Check Valves



Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature
140°F (60°C)
Temperature/Pressure De-ratings Apply
EPDM Seat

General Installation Information: Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure less than 0.5 psi.

PVC White Swing Check

Size	Socket	Thread	SR Threaded	Std Pk	Mstr Pk	Disc Code
1/2	S1520-05 16.68	S1520-05F 16.68	S1520-05FSR 19.46	35	0	026
3/4	S1520-07 17.22	S1520-07F 17.22	S1520-07FSR 21.18	35	0	026
1	S1520-10 17.94	S1520-10F 17.94	S1520-10FSR 23.45	20	0	026
1-1/4	S1520-12 18.63	S1520-12F 18.63	S1520-12FSR 27.48	12	0	026
1-1/2	S1520-15 19.75	S1520-15F 19.75	S1520-15FSR 34.86	12	0	026
2	S1520-20 30.65	S1520-20F 30.65	S1520-20FSR 47.05	15	0	026
2-1/2	S1520-25 50.99	S1520-25F 50.99	S1520-25FSR 67.39	5	0	026
3	S1520-30 56.66	S1520-30F 56.66	S1520-30FSR 100.49	4	0	026
4	S1520-40 80.22	S1520-40F 80.22	S1520-40FSR 125.64	2	0	026
6	S1520-60 168.56	S1520-60F 168.56	S1520-60FSR 222.33	1	0	026
8	S1520-80 313.13	---	---	1	0	026

PVC Clear Swing Check

Size	Socket	Thread	SR Threaded	Std Pk	Mstr Pk	Disc Code
1/2	S1520C05 22.68	S1520C05F 22.68	S1520C05FSR 25.45	35	0	026
3/4	S1520C07 23.13	S1520C07F 23.13	S1520C07FSR 27.12	35	0	026
1	S1520C10 23.57	S1520C10F 23.57	S1520C10FSR 29.09	20	0	026
1-1/4	S1520C12 24.75	S1520C12F 24.75	S1520C12FSR 33.57	12	0	026
1-1/2	S1520C15 26.89	S1520C15F 26.89	S1520C15FSR 42.03	12	0	026
2	S1520C20 38.72	S1520C20F 38.72	S1520C20FSR 55.12	15	0	026
2-1/2	S1520C25 64.54	S1520C25F 64.54	S1520C25FSR 89.97	5	0	026
3	S1520C30 71.72	S1520C30F 71.72	S1520C30FSR 115.54	4	0	026
4	S1520C40 96.54	S1520C40F 96.54	S1520C40FSR 141.93	2	0	026
6	S1520C60 199.53	S1520C60F 199.53	S1520C60FSR 253.31	1	0	026
8	S1520C80 333.29	---	---	1	0	026

True Union Utility Swing Check Valves



Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature
140°F (60°C)
Temperature/Pressure De-ratings Apply
EPDM Seat

General Installation Information: Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure less than 0.5 psi.

PVC White True Union Swing Check

Size	Socket	Threaded	SR Thread	Std Pk	Mstr Pk	Disc Code
1/2	S1720-05 18.97	S1720-05F 18.97	S1720-05FSR 21.73	35	0	026

PVC White True Union Swing Check (continued)

Size	Socket	Threaded	SR Thread	Std Pk	Mstr Pk	Disc Code
3/4	S1720-07 19.55	S1720-07F 19.55	S1720-07FSR 23.54	30	0	026
1	S1720-10 20.37	S1720-10F 20.37	S1720-10FSR 25.89	18	0	026

True Union Utility Swing Check Valves

PVC White True Union Swing Check (continued)

Size	Socket	Threaded	SR Thread	Std Pk	Mstr Pk	Disc Code
1-1/4	S1720-12 21.44	S1720-12F 21.44	S1720-12FSR 30.27	12	0	026
1-1/2	S1720-15 23.57	S1720-15F 23.57	S1720-15FSR 38.71	10	0	026
2	S1720-20 35.41	S1720-20F 35.41	S1720-20FSR 51.74	10	0	026
2-1/2	S1720-25 59.04	S1720-25F 59.04	S1720-25FSR 84.44	2	0	026
3	S1720-30 75.38	S1720-30F 75.38	S1720-30FSR 119.23	2	0	026
4	S1720-40 101.75	S1720-40F 101.75	S1720-40FSR 146.72	1	0	026

PVC Clear True Union Swing Check

Size	Socket	Threaded	SR Thread	Std Pk	Mstr Pk	Disc Code
1/2	S1720C05 24.57	S1720C05F 24.57	S1720C05FSR 27.33	35	0	026

PVC Clear True Union Swing Check (continued)

Size	Socket	Threaded	SR Thread	Std Pk	Mstr Pk	Disc Code
3/4	S1720C07 24.98	S1720C07F 24.98	S1720C07FSR 28.96	30	0	026
1	S1720C10 27.29	S1720C10F 27.29	S1720C10FSR 32.80	18	0	026
1-1/4	S1720C12 28.75	S1720C12F 28.75	S1720C12FSR 37.57	12	0	026
1-1/2	S1720C15 30.83	S1720C15F 30.83	S1720C15FSR 45.96	10	0	026
2	S1720C20 43.37	S1720C20F 43.37	S1720C20FSR 59.78	10	0	026
2-1/2	S1720C25 71.22	S1720C25F 71.22	S1720C25FSR 96.64	2	0	026
3	S1720C30 81.97	S1720C30F 81.97	S1720C30FSR 125.80	2	0	026
4	S1720C40 109.29	S1720C40F 109.29	S1720C40FSR 154.64	1	0	026

Compression Utility Swing Check Valves



Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature
140°F (60°C)
Temperature/Pressure De-ratings Apply

- Standard Swing Check Assembly Maintains a Positive Seal
- Convenient Compression Ends for Quick Connections
- Engineered for Maximum Flow, Quick Response & Positive Shutoff
- Excellent for Pool & Spa, OEM and General Purpose Applications
- Compact, Space-Saving Design
- Replaceable PVC White or Clear Sealed Unit
- High Grade EPDM Seat
- Suitable for Horizontal or Vertical Up-flow Installations
- Pressure Rated to 150 psi @ 73°F Full Flow (open), 75 psi Back Pressure (closed)
- Maximum Service Temperature 140°F (temperature/pressure de-ratings apply)

General Installation Information: Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure less than 0.5 psi.

PVC White Compression End Swing Check

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Compression End					
S1500-05	**1/2**	20	0	026	22.17
S1500-07	**3/4**	35	0	026	23.33
S1500-10	**1**	20	0	026	24.31
S1500-12	**1-1/4**	12	0	026	28.55
S1500-15	**1-1/2**	12	0	026	31.85
S1500-20	**2**	10	0	026	50.24
S1500-25	**2-1/2**	5	0	026	83.91
S1500-30	**3**	4	0	026	108.93
S1500-40	**4**	2	0	026	167.34

PVC Clear Compression End Swing Check

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Compression End					
S1500C05	**1/2**	35	0	026	24.38
S1500C07	**3/4**	20	0	026	26.24
S1500C10	**1**	20	0	026	26.78
S1500C12	**1-1/4**	12	0	026	30.06
S1500C15	**1-1/2**	12	0	026	33.88
S1500C20	**2**	10	0	026	50.58
S1500C25	**2-1/2**	5	0	026	84.84
S1500C30	**3**	4	0	026	123.92
S1500C40	**4**	2	0	026	170.74

Compression Coupling Nut Wrenches

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CCW-005	**1/2**	1	50	299	11.93
CCW-007	**3/4**	1	50	299	12.14
CCW-010	**1**	1	50	299	12.65
CCW-012	**1-1/4**	1	50	299	14.32
CCW-015	**1-1/2**	1	50	299	15.44
CCW-020*	**2**	1	50	299	17.25
CCW-030**	**3**	1	25	299	21.22

* CCW-20 - Wrench also fits 2-1/2" Coupling Body
**CCW-30 - Wrench also fits 4" Coupling Body

Compression Coupling Nut Wrench Sets

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CCW-000	**Set**	1	25	299	99.68
Complete Set of Wrenches, Sizes 1/2" - 3"					

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

(Spring Assisted Swing Check)



Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature
140°F (60°C)
Temperature/Pressure De-ratings Apply
EPDM Seat
Stainless Steel Spring Assisted (non-adjustable)

General Installation Information: Spring check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure less than 0.5 psi.

PVC White Spring Check (Spring Assisted Swing Check)

Size	Socket	Thread	SR Thread	Std Pk	Mstr Pk	Disc Code
1/2	S1580-05 32.84	S1580-05F 32.84	S1580-05FSR 35.62	20	0	026
3/4	S1580-07 37.17	S1580-07F 37.17	S1580-07FSR 41.13	20	0	026
1	S1580-10 38.72	S1580-10F 38.72	S1580-10FSR 44.22	20	0	026
1-1/4	S1580-12 40.32	S1580-12F 40.32	S1580-12FSR 49.17	12	0	026
1-1/2	S1580-15 42.92	S1580-15F 42.92	S1580-15FSR 58.02	12	0	026
2	S1580-20 44.99	S1580-20F 44.99	S1580-20FSR 61.39	15	0	026
2-1/2	S1580-25 79.85	S1580-25F 79.85	S1580-25FSR 105.28	4	0	026
3	S1580-30 83.28	S1580-30F 83.28	S1580-30FSR 127.12	4	0	026
4	S1580-40 118.19	S1580-40F 118.19	S1580-40FSR 163.61	2	0	026

PVC Clear Spring Check (Spring Assisted Swing Check)

Size	Socket	Thread	SR Thread	Std Pk	Mstr Pk	Disc Code
1/2	S1580C05 33.84	S1580C05F 33.84	S1580C05FSR 36.65	20	0	026
3/4	S1580C07 38.31	S1580C07F 38.31	S1580C07FSR 42.31	20	0	026
1	S1580C10 39.94	S1580C10F 39.94	S1580C10FSR 45.43	20	0	026
1-1/4	S1580C12 41.58	S1580C12F 41.58	S1580C12FSR 50.41	12	0	026
1-1/2	S1580C15 44.05	S1580C15F 44.05	S1580C15FSR 59.19	12	0	026
2	S1580C20 45.72	S1580C20F 45.72	S1580C20FSR 62.11	15	0	026
2-1/2	S1580C25 82.33	S1580C25F 82.33	S1580C25FSR 107.72	5	0	026
3	S1580C30 85.73	S1580C30F 85.73	S1580C30FSR 170.57	4	0	026
4	S1580C40 121.80	S1580C40F 121.80	S1580C40FSR 167.21	2	0	026

True Union Utility Spring Check Valves

(Spring Assisted Swing Check)



Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature
140°F (60°C)
Temperature/Pressure De-ratings Apply
EPDM Seat
Stainless Steel Spring Assisted (non-adjustable)

General Installation Information: Spring check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure less than 0.5 psi.

PVC White True Union Spring Check (Spring Assisted Swing Check)

Size	Socket	Thread	SR Thread	Std Pk	Mstr Pk	Disc Code
1/2	S1780-05 43.67	S1780-05F 43.67	S1780-05FSR 46.44	20	0	026
3/4	S1780-07 49.54	S1780-07F 49.54	S1780-07FSR 53.52	30	0	026
1	S1780-10 51.63	S1780-10F 51.63	S1780-10FSR 57.12	18	0	026
1-1/4	S1780-12 53.78	S1780-12F 53.78	S1780-12FSR 62.57	12	0	026
1-1/2	S1780-15 57.29	S1780-15F 57.29	S1780-15FSR 72.44	10	0	026
2	S1780-20 59.65	S1780-20F 59.65	S1780-20FSR 76.03	10	0	026
2-1/2	S1780-25 106.46	S1780-25F 106.46	S1780-25FSR 131.83	2	0	026
3	S1780-30 111.06	S1780-30F 111.06	S1780-30FSR 154.89	2	0	026
4	S1780-40 157.59	S1780-40F 157.59	S1780-40FSR 203.04	1	0	026

PVC Clear True Union Spring Check (Spring Assisted Swing Check)

Size	Socket	Thread	SR Thread	Std Pk	Mstr Pk	Disc Code
1/2	S1780C05 45.05	S1780C05F 45.05	S1780C05FSR 47.82	20	0	026
3/4	S1780C07 51.09	S1780C07F 51.09	S1780C07FSR 55.07	30	0	026
1	S1780C10 53.22	S1780C10F 53.22	S1780C10FSR 58.76	18	0	026
1-1/4	S1780C12 55.41	S1780C12F 55.41	S1780C12FSR 64.21	12	0	026
1-1/2	S1780C15 58.76	S1780C15F 58.76	S1780C15FSR 74.21	10	0	026
2	S1780C20 60.47	S1780C20F 60.47	S1780C20FSR 77.83	10	0	026
2-1/2	S1780C25 109.76	S1780C25F 109.76	S1780C25FSR 135.19	2	0	026
3	S1780C30 114.48	S1780C30F 114.48	S1780C30FSR 158.31	2	0	026
4	S1780C40 162.48	S1780C40F 162.48	S1780C40FSR 207.93	1	0	026

Diaphragm Check Valves



Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 100 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Santoprene™ TPE Seat

PVC Diaphragm Check Valves - Socket

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
6562-007	**3/4**	15	0	004	89.09

PVC Diaphragm Check Valves - Thread

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
6561-007	**3/4**	15	0	004	89.09

CPVC Diaphragm Check Valves - Socket

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
6562-007C	**3/4**	15	0	004	117.00

CPVC Diaphragm Check Valves - Thread

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
6561-007C	**3/4**	15	0	004	117.00

General Installation Information: Diaphragm Check Valves have "normally closed" operation with 1 - 1-1/2 psi opening pressure and can be mounted in any position. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. Flow velocity should not exceed 5 ft./sec.

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Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC In-line Adjustable Spring Check Valves



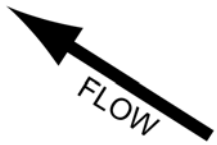
Fipt x Mipt



Mipt x Fipt



Fipt x Fipt



Pressure Rating @ 73°F (23°C), Water
200 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply

2 - 14 lbs. Adjustable Spring Tension
(5 to 32 feet of head)
Factory Preset to Approx. 5 psi
(12 feet of head)
Each full turn of adjustment nut = 1 psi
(2.3 feet of head)
Stainless Steel Adjustment Hardware
EPDM Seat

Standard Unit - Female Inlet x Male Outlet

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Fipt x Mipt (Inlet x Outlet)					
S1102-05	**1/2**	30	180	026	10.95
S1102-07	**3/4**	25	150	026	11.20
S1102-10	**1**	25	150	026	18.59
S1102-05-07	**1/2X3/4**	25	150	026	15.98

Male Inlet x Female Outlet Option

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Mipt x Fipt (Inlet x Outlet)					
S1101-05	**1/2**	30	180	026	10.95

Female Inlet x Female Outlet Option

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Fipt x Fipt (Inlet x Outlet)					
S1100-07	**3/4**	25	150	026	11.57

Industrial PVC Backwater Valves

Backwater Valves are designed to prevent backflow in numerous applications where easy service access for maintenance and cleaning is needed. Excellent for use in sanitary or storm sewer drainage systems to prevent waste back up due to inadequate drainage, for balancing multi-level ponds, aquaculture features or storage tank systems, and many other applications. Spears® Backwater Valve has been engineered for improved function and easier service, especially in buried service with use of optional Service-Access Extension available either preassembled with valve or as an add-on kit.

- Replaceable internal flapper assembly with EPDM Seat.
- Service-Access Extension available either preassembled with valve, as an add-on kit, or as valve & extension kit components with user supplied pipe.
- Direct Connection to ASTM D 2665 PVC DWV or other IPS size pipe. Spears® fabricated IPS x Sewer Adapters or DWV x Sewer & Drain Adapter Bushings are available for connection to ASTM D 3034 & ASTM D 2729 Sewer pipe.
- Pressure Rated to 43 psi (100 feet of head) @ 73°F (23°C).
- All extension kits can be cut shorter for custom application.
- Conforms to ASME/ANSI A112.14.1 for Backwater Valves.

PVC Backwater Valves



PVC Backwater Valves
Soc x Soc - Valve Only

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S275P	**2**	1	12	055	59.05
S375P	**3**	2	0	055	59.17
S475P	**4**	1	0	055	65.55
S675P	**6**	1	0	055	279.26

PVC Backwater Valves with Extension Kit to Premade Length



PVC Backwater Valves with Extension Kit to Premade Length
Soc x Soc - Assembled with Extension

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S275P-120[1]	**2X12HT**	1	0	055	178.12
S275P-160[1]	**2X16HT**	1	0	055	191.59
S275P-200[1]	**2X20HT**	1	0	055	205.05
S275P-240[1]	**2X24HT**	1	0	055	218.53
S275P-360[1]	**2X36HT**	1	0	055	229.52
S275P-480[1]	**2X48HT**	1	0	055	252.25
S375P-120[1]	**3X12HT**	1	0	055	178.12
S375P-160[1]	**3X16HT**	1	0	055	191.59
S375P-200[1]	**3X20HT**	1	0	055	205.05
S375P-240[1]	**3X24HT**	1	0	055	218.53
S375P-360[1]	**3X36HT**	1	0	055	229.52
S375P-480[1]	**3X48HT**	1	0	055	252.25
S475P-120[1]	**4X12HT**	1	0	055	231.36

PVC Backwater Valves with Extension Kit to Premade Length
Soc x Soc - Assembled with Extension (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S475P-160[1]	**4X16HT**	1	0	055	249.59
S475P-200[1]	**4X20HT**	1	0	055	266.20
S475P-240[1]	**4X24HT**	1	0	055	283.85
S475P-360[1]	**4X36HT**	1	0	055	298.11
S475P-480[1]	**4X48HT**	1	0	055	327.60
S675P-120[1]	**6X12HT**	1	0	055	485.82
S675P-160[1]	**6X16HT**	1	0	055	524.14
S675P-200[1]	**6X20HT**	1	0	055	559.02
S675P-240[1]	**6X24HT**	1	0	055	596.16
S675P-360[1]	**6X36HT**	1	0	055	626.04
S675P-480[1]	**6X48HT**	1	0	055	687.95

[1] - Size designates nominal valve size x extension height (HT-top of valve to top of extension, inches)

PVC Service-Access Extension Kit Only to Premade Length



PVC Service-Access Extension Kit: includes factory assembled internal flap assembly, assembly extension pipe, and external extension housing with top access adapter. Requires solvent cement assembly to existing valve and uses existing threaded Access Plug. Standard Extensions are available in convenient increments of 12", 16", 20", 24", 36", and 48" (measured from top of valve to top of extension). Contact Spears® for pricing on custom cut lengths. All extension kits can be cut shorter in the field for custom fits prior to cementing access adapter in place.

PVC Service-Access Extension Kit Only to Premade Length

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
SAEK-020-120[1]	**2X12HT**	1	0	055	55.55
SAEK-020-160[1]	**2X16HT**	1	0	055	57.14
SAEK-020-200[1]	**2X20HT**	1	0	055	58.65
SAEK-020-240[1]	**2X24HT**	1	0	055	61.46
SAEK-020-360[1]	**2X36HT**	1	0	055	64.37
SAEK-020-480[1]	**2X48HT**	1	0	055	67.52
SAEK-030-120[1]	**3X12HT**	1	0	055	60.24
SAEK-030-160[1]	**3X16HT**	1	0	055	68.00
SAEK-030-200[1]	**3X20HT**	1	0	055	72.04
SAEK-030-240[1]	**3X24HT**	1	0	055	81.19
SAEK-030-360[1]	**3X36HT**	1	0	055	96.04
SAEK-030-480[1]	**3X48HT**	1	0	055	113.59
SAEK-040-120[1]	**4X12HT**	1	0	055	89.83
SAEK-040-160[1]	**4X16HT**	1	0	055	101.27
SAEK-040-200[1]	**4X20HT**	1	0	055	124.92
SAEK-040-240[1]	**4X24HT**	1	0	055	136.79

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PVC Service-Access Extension Kit Only to Premade Length (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
SAEK-040-360[1]	**4X36HT**	1	0	055	172.06
SAEK-040-480[1]	**4X48HT**	1	0	055	198.64
SAEK-060-120[1]	**6X12HT**	1	0	055	160.94
SAEK-060-160[1]	**6X16HT**	1	0	055	182.92
SAEK-060-200[1]	**6X20HT**	1	0	055	207.41
SAEK-060-240[1]	**6X24HT**	1	0	055	237.97
SAEK-060-360[1]	**6X36HT**	1	0	055	295.39
SAEK-060-480[1]	**6X48HT**	1	0	055	366.67

[1] - Size designates nominal valve size x extension height (HT-top of valve to top of extension, inches)

PVC Backwater Valve with Extension Components



PVC Backwater Valve with Extension Components Soc x Soc - Components Must be assembled with user supplied pipe (see Table 1)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S275P-AK	**2**	1	8	055	87.00
S375P-AK	**3**	1	0	055	87.00
S475P-AK	**4**	1	0	055	101.77
S675P-AK	**6**	1	0	055	360.38

PVC Backwater Valve Extension Components Only



PVC Backwater Valve Extension Components Only Must be assembled with user supplied pipe (see Table 1)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S275P-ECK	**2**	1	8	055	46.33
S375P-ECK	**3**	1	0	055	46.33
S475P-ECK	**4**	1	0	055	60.37
S675P-ECK	**6**	1	0	055	126.83

PVC Backwater Valve Extension Components Only Must be assembled with user supplied pipe (see Table 1) (continued)

Table 1: User Supplied Pipe Requirements For Use With Extension Components

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Valve Size	Acceptable RISER Pipe Types for User-Supplied Pipe	Acceptable HANDLE Pipe
2"	4" Class 125 PVC PIPE 4" Sch 40 PVC PIPE	Use any 3/4" IPS plastic pipe[1]
3"	5" Class 125 PVC PIPE 5" Sch 40 PVC PIPE[3] 6" D3034 (SDR 35) PVC SEWER PIPE[2]	
4"	8" Class 125 PVC PIPE 8" Sch 40 PVC PIPE	
6"	10" Class 125 PVC PIPE 10" Sch 40 PVC PIPE	

Note 1: Riser and Handle pipe are *not* the same length. Sch 40 and/or Sch 80 pipe as well as ABS may be used. Special cement must be used to join PVC to ABS.
Note 2: When 6" SDR35 pipe is used, adapter fits pipe inside diameter.
Note 3: DO NOT use Sch 80 for 3" Riser pipe.

Industrial Backwater Valve Flapper Repair Kit



Industrial Backwater Valve Flapper Repair Kit

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Complete Flapper Assembly replacement					
S275P-FRK	**2**	1	10	055	34.48
S375P-FRK	**3**	1	10	055	43.48
S475P-FRK	**4**	1	10	055	50.64
S675P-FRK	**6**	1	5	055	90.18

PVC Backwater Valve Metric Adapters

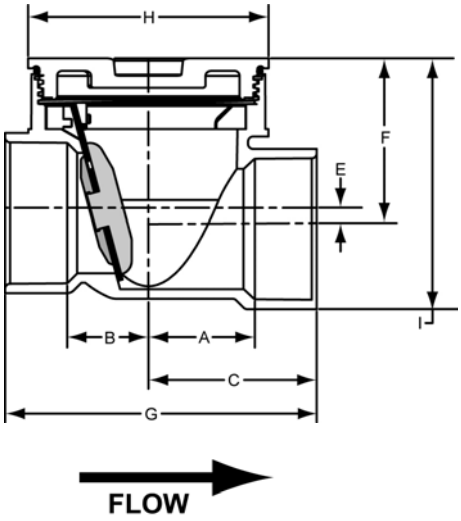


PVC Backwater Valve Metric Adapters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Metric Socket x ASTM Spigot					
S275MA-063	**63mm X 2**	50	0	055	15.28
S375MA-090	**90mm X 3**	25	0	055	16.42
S475MA-110	**110mm X 4**	10	0	055	19.45
S675MA-160	**160mm X 6**	4	0	055	44.89

Technical Information

STANDARD VALVE



Standard Valve Dimensions (Inches)

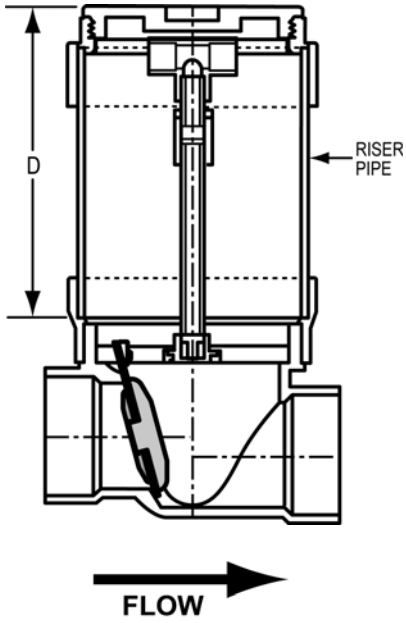
Size	A	B	C	E	F	G	H	I
2	1-13/16	1-3/4	2-5/8	5/16	3-1/4	5-9/32	4-3/16	4-9/16
3	2-5/8	2	4-3/16	13/32	4-1/8	7-3/4	6	6-1/8
4	3-5/8	3-3/4	5-7/16	23/32	5-7/16	10-15/16	8-1/4	7-15/16
6	4-3/4	4-5/8	7-3/4	13/16	7-3/16	15-3/8	11-1/4	10-13/16

Valve with Extension Kit Dimensions (Inches)

HEIGHT-D
12
16
20
24
36
48

D = Top of plug Standard Valve to top of plug with Extension

VALVE WITH EXTENSION KIT



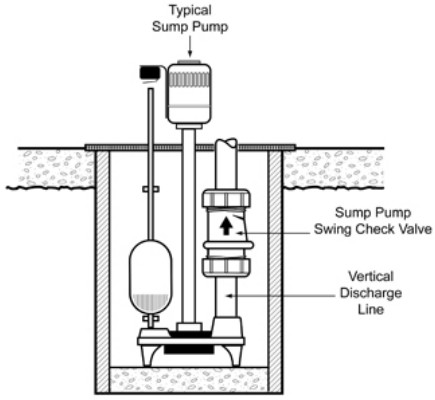
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Sump Pump Swing Check Valve



- Specifically Designed for Use on Sump Pump Discharge Lines (See Illustration)
- Includes Compression End Connectors with Buna-N Gaskets for Use on Either 1-1/4" or 1-1/2" Pipe
- All Plastic Construction with Elastomer Seals - No Metal Parts
- Angled Seat and Weighted Flapper for Low-Pressure Seal
- Suitable for Vertical Up-flow or Horizontal Installations

Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature
140°F (60°C)
Temperature/Pressure De-ratings Apply



General Installation Information: Sump Pump Swing Check Valves may be installed in either vertical up-flow (see illustration) or horizontal positions on pump discharge line. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. In horizontal installations, the designated side must be positioned "up." Do Not install Check Valve upside down.

PVC Sump Pump Swing Check Valve

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Compression Ends					
Buna-N Gaskets included for both 1-1/4" & 1-1/2" pipe					
S1400-15	**1-1/2 & 1-1/4**	16	0	026	18.80

Swing Check Ball Valve



- One-piece Combination for Applications Requiring In-line Ball Valve and Check Valves
- Compact, Space-Saving Design
- True Union Design Allows Easy Service and Cleaning
- High Grade EPDM Seals
- Replaceable PTFE HDPE Ball Valve Seats
- Safety-Blocked™ Seal Carrier on Ball Valve
- Replaceable Sealed Check Valve Cartridge
- Suitable for Horizontal or Vertical Up-flow Installations
- Socket End Connections

Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature
140°F (60°C)
Temperature/Pressure De-ratings Apply

General Installation Information: Swing Check Ball Valves are designed for horizontal installations, but may be installed in up-flow only vertical position. The Check Valve portion MUST be installed with the valve's FLOW arrow pointing in the direction of flow and with the designated side up in horizontal installations. Do Not install Check Valve upside down. The Ball Valve portion may be rotated and installed in any position. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure is less than 0.5 psi.

PVC Swing Check Ball Valve

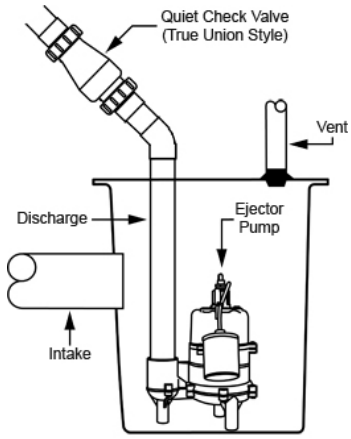
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Soc x Soc					
7622-015	**1-1/2**	10	0	026	42.57
7622-020	**2**	6	0	026	61.09

Quiet Check Valve



- Designed to Provide Quiet Operation in Sump Pump or Sewage Ejector Pump Systems.
- Spring Controlled Rate of Closing Prevents Slamming and Eliminates Noise.
- Includes Both True Union Sockets for Easy Servicing and Direct Socket Connection for Installation in Confined Space.
- 2" Size for Sewage Ejector Systems, 1-1/2" Size for Sump Pump Effluent Systems.

Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature 140°F (60°C)
Temperature/Pressure De-ratings Apply



Typical Application

General Installation Information: Install check valve 12"-18" above pump discharge, or as recommended by pump system manufacturer. Be sure check valve installation complies with local codes. Valve may be installed in either vertical up-flow or horizontal positions on pump discharge line. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. In horizontal installations, the designated side must be positioned "up."

PVC Quiet Check Valve

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Soc x Soc					
True Union or Direct Socket End Connection					
8622-015	**1-1/2**	12	0	026	42.11
8622-020	**2**	10	0	026	60.19

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1/2" - 2" Socket/Threaded Style



2-1/2" - 3" Socket Style



4" Socket Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 200 psi
2-1/2" - 3" 150 psi
4" 235 psi
Flanged 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

PP Gate-Wedge on PVC Valves
CPVC Gate-Wedge on CPVC Valve
All Valves Assembled with Silicone-Free, Water Soluble Lubricant

See Gate Valve Accessories & Repair Kits Section for Additional Options and Features

PVC

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded Ends						
1/2	2011-005 24.19	2021-005 26.55	2031-005 29.24	12	0	200
3/4	2011-007 29.58	2021-007 32.56	2031-007 34.27	12	0	200
1	2011-010 35.06	2021-010 38.61	2031-010 42.51	12	0	200
1-1/4	2011-012 48.48	2021-012 53.35	2031-012 58.65	6	0	200
1-1/2	2011-015 61.86	2021-015 68.73	2031-015 74.84	6	0	200
2	2011-020 79.45	2021-020 87.47	2031-020 96.16	6	0	200
2-1/2	2011-025 439.27	2021-025 483.19	2031-025 531.53	1	0	201
SR Threaded Ends						
3	2011-030SR 439.27	2021-030SR 483.19	2031-030SR 531.53	1	0	201
4	2011-040SR 862.04	2021-040SR 957.83	2031-040SR 1053.58	1	0	201
Socket Ends						
1/2	2012-005 24.19	2022-005 26.55	2032-005 29.24	12	0	200
3/4	2012-007 29.58	2022-007 32.56	2032-007 34.27	12	0	200
1	2012-010 35.06	2022-010 38.61	2032-010 42.51	12	0	200
1-1/4	2012-012 48.48	2022-012 53.35	2032-012 58.65	6	0	200
1-1/2	2012-015 61.86	2022-015 68.73	2032-015 74.84	6	0	200
2	2012-020 79.45	2022-020 87.47	2032-020 96.16	6	0	200
2-1/2	2012-025 439.27	2022-025 483.19	2032-025 531.53	1	0	201
3	2012-030 439.27	2022-030 483.19	2032-030 531.53	1	0	201
4	2012-040 862.04	2022-040 957.83	2032-040 1053.58	1	0	201
Flanged Ends						
1/2	2013-005 117.13	2023-005 132.82	2033-005 152.23	4	0	200
3/4	2013-007 131.79	2023-007 149.14	2033-007 170.16	4	0	200
1	2013-010 144.72	2023-010 163.48	2033-010 187.76	4	0	200
1-1/4	2013-012 163.01	2023-012 187.15	2033-012 222.11	3	0	200
1-1/2	2013-015 190.27	2023-015 217.19	2033-015 255.16	3	0	200

PVC (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Flanged Ends						
2	2013-020 244.91	2023-020 257.32	2033-020 275.47	2	0	200
2-1/2	2013-025 549.07	2023-025 735.17	2033-025 808.67	1	0	201
3	2013-030 549.07	2023-030 735.17	2033-030 808.67	1	0	201
4	2013-040 1080.78	2023-040 1200.93	2033-040 1321.02	1	0	201

CPVC

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Threaded Ends						
1/2	2011-005C 70.80	2021-005C 78.63	2031-005C 86.54	12	0	202
3/4	2011-007C 76.56	2021-007C 85.04	2031-007C 93.56	12	0	202
1	2011-010C 83.92	2021-010C 93.25	2031-010C 102.54	12	0	202
1-1/4	2011-012C 147.39	2021-012C 163.79	2031-012C 180.17	6	0	202
1-1/2	2011-015C 161.11	2021-015C 179.51	2031-015C 197.47	6	0	202
2	2011-020C 186.39	2021-020C 207.06	2031-020C 227.77	6	0	202
2-1/2	2011-025C 694.04	2021-025C 748.94	2031-025C 813.25	1	0	203
SR Threaded Ends						
3	2011-030CSR 931.87	2021-030CSR 1035.13	2031-030CSR 1150.16	1	0	203
4	2011-040CSR 1677.34	2021-040CSR 1863.68	2031-040CSR 2070.76	1	0	203
Socket Ends						
1/2	2012-005C 70.80	2022-005C 78.63	2032-005C 86.54	12	0	202
3/4	2012-007C 76.56	2022-007C 85.04	2032-007C 93.56	12	0	202
1	2012-010C 83.92	2022-010C 93.25	2032-010C 102.54	12	0	202
1-1/4	2012-012C 147.39	2022-012C 163.79	2032-012C 180.17	6	0	202
1-1/2	2012-015C 161.11	2022-015C 179.51	2032-015C 197.47	6	0	202
2	2012-020C 186.39	2022-020C 207.06	2032-020C 227.77	6	0	202
2-1/2	2012-025C 694.04	2022-025C 748.94	2032-025C 813.25	1	0	203
3	2012-030C 931.87	2022-030C 1035.13	2032-030C 1150.16	1	0	203
4	2012-040C 1677.34	2022-040C 1863.68	2032-040C 2070.76	1	0	203

Gate Valves

CPVC

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Flanged Ends						
1/2	2013-005C 317.23	2023-005C 352.43	2033-005C 387.64	4	0	202
3/4	2013-007C 342.97	2023-007C 381.03	2033-007C 419.15	4	0	202
1	2013-010C 375.86	2023-010C 417.71	2033-010C 459.46	4	0	202
1-1/4	2013-012C 508.35	2023-012C 565.07	2033-012C 621.58	3	0	202
1-1/2	2013-015C 555.24	2023-015C 619.34	2033-015C 681.19	3	0	202

CPVC (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Flanged Ends						
2	2013-020C 642.97	2023-020C 714.39	2033-020C 785.85	2	0	202
2-1/2	2013-025C 840.07	2023-025C 1110.14	2033-025C 1245.37	1	0	203
3	2013-030C 1164.81	2023-030C 1294.24	2033-030C 1438.06	1	0	203
4	2013-040C 2096.67	2023-040C 2329.63	2033-040C 2588.49	1	0	203

Plug Gate Valves



Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
Flanged 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Plug-Style PE Wedge on All Valves
Rated for Vacuum Service
All Valves Assembled with Silicone-Free, Water Soluble Lubricants

PVC Socket Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	5212-005 24.19	5222-005 26.55	5232-005 29.24	12	0	200
3/4	5212-007 29.58	5222-007 32.56	5232-007 34.27	12	0	200
1	5212-010 35.06	5222-010 38.61	5232-010 42.51	12	0	200
1-1/4	5212-012 48.48	5222-012 53.35	5232-012 58.65	6	0	200
1-1/2	5212-015 61.86	5222-015 68.73	5232-015 74.84	6	0	200
2	5212-020 79.45	5222-020 87.47	5232-020 96.16	6	0	200

PVC SR Threaded Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	5211-005SR 26.92	5221-005SR 29.31	5231-005SR 31.95	12	0	200
3/4	5211-007SR 33.53	5221-007SR 36.51	5231-007SR 38.22	12	0	200
1	5211-010SR 40.51	5221-010SR 44.06	5231-010SR 47.94	12	0	200
1-1/4	5211-012SR 57.22	5221-012SR 62.08	5231-012SR 67.40	6	0	200
1-1/2	5211-015SR 76.83	5221-015SR 83.69	5231-015SR 89.78	6	0	200
2	5211-020SR 95.66	5221-020SR 103.65	5231-020SR 112.39	6	0	200

PVC Flanged Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	5213-005 117.13	5223-005 132.82	5233-005 152.23	4	0	200
3/4	5213-007 131.79	5223-007 149.14	5233-007 170.16	4	0	200

PVC Flanged Ends (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1	5213-010 144.72	5223-010 163.48	5233-010 187.76	4	0	200
1-1/4	5213-012 163.01	5223-012 187.15	5233-012 222.11	3	0	200
1-1/2	5213-015 190.27	5223-015 217.19	5233-015 255.16	3	0	200
2	5213-020 244.91	5223-020 257.32	5233-020 275.47	2	0	200
6	---	5223-060 2298.84	5233-060 2995.21	1	0	201
8	---	5223-080 2729.45	5233-080 3199.78	1	0	201

CPVC Socket Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	5212-005C 70.80	5222-005C 78.63	5232-005C 86.54	12	0	202
3/4	5212-007C 76.56	5222-007C 85.04	5232-007C 93.56	12	0	202
1	5212-010C 83.92	5222-010C 93.25	5232-010C 102.54	12	0	202
1-1/4	5212-012C 147.39	5222-012C 163.79	5232-012C 180.17	6	0	202
1-1/2	5212-015C 161.11	5222-015C 179.51	5232-015C 197.47	6	0	202
2	5212-020C 186.39	5222-020C 207.06	5232-020C 227.77	6	0	202

CPVC SR Threaded Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	5211-005CSR 73.54	5221-005CSR 81.38	5231-005CSR 89.27	12	0	202
3/4	5211-007CSR 80.49	5221-007CSR 88.98	5231-007CSR 97.53	12	0	202
1	5211-010CSR 89.37	5221-010CSR 98.67	5231-010CSR 108.01	12	0	202

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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Plug Gate Valves

CPVC SR Threaded Ends (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/4	5211-012CSR 156.11	5221-012CSR 172.51	5231-012CSR 188.92	6	0	202
1-1/2	5211-015CSR 169.85	5221-015CSR 188.21	5231-015CSR 206.18	6	0	202
2	5211-020CSR 202.63	5221-020CSR 223.29	5231-020CSR 244.00	6	0	202

CPVC Flanged Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	5213-005C 317.23	5223-005C 352.43	5233-005C 387.64	4	0	202
3/4	5213-007C 342.97	5223-007C 381.03	5233-007C 419.15	4	0	202

CPVC Flanged Ends (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1	5213-010C 375.86	5223-010C 417.71	5233-010C 459.46	4	0	202
1-1/4	5213-012C 508.35	5223-012C 565.07	5233-012C 620.94	3	0	202
1-1/2	5213-015C 555.24	5223-015C 619.34	5233-015C 681.19	3	0	202
2	5213-020C 642.97	5223-020C 714.39	5233-020C 785.85	2	0	202
6	---	5223-060C 2988.46	5233-060C 3893.84	1	0	203
8	---	5223-080C 3173.98	5233-080C 4102.27	1	0	203

Gate Valve Accessories & Repair Kits

Operator Nut



2" Operator Nuts

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GTN-005[1]	**1/2, 3/4 & 1**	10	60	299	43.15
GTN-012[2]	**1-1/4, 1-1/2 & 2**	10	60	299	64.71
PGTN-012[3]	**1-1/4, 1-1/2 & 2**	10	60	299	64.71
GTN-030	**3**	10	80	299	107.86
GTN-040	**4**	10	60	299	107.86

1 - GTN-005 fits Standard & Plug Style Gate Valves
2 - GTN-012 fits Standard Gate Valves Only
3 - PGTN-012 fits Plug Style Gate Valves Only

Regular Gate Valve O-ring Repair Kits

1/2" - 2" Kit includes:
1-Stem O-ring
1-Bonnet O-Ring
1-Stem Bushing
1-Stem Washer
2-1/2" - 3" Kit includes:
1-Stem O-ring
1-Seal Carrier O-ring
1-Stem Bushing
1-Stem Washer
4" Kit includes:
1-Stem O-ring
1-Bonnet O-ring
1-Stem Bushing

Regular Gate Valve O-ring Repair Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	GT-BRK-005 6.68	GT-ERK-005 7.76	GT-VRK-005 13.27	1	10	299

Regular Gate Valve O-ring Repair Kits (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
3/4	GT-BRK-007 6.68	GT-ERK-007 7.76	GT-VRK-007 13.27	1	10	299
1	GT-BRK-010 6.95	GT-ERK-010 9.01	GT-VRK-010 14.63	1	10	299
1-1/4 & 1-1/2	GT-BRK-015 8.25	GT-ERK-015 12.96	GT-VRK-015 24.45	1	10	299
2	GT-BRK-020 8.91	GT-ERK-020 13.55	GT-VRK-020 25.19	1	10	299
2-1/2 & 3	GT-BRK-030 10.23	GT-ERK-030 14.67	GT-VRK-030 27.51	1	10	299
4	GT-BRK-040 10.80	GT-ERK-040 15.63	GT-VRK-040 32.35	1	10	299

Plug Gate Valve O-ring Repair Kits

1/2" - 2" Kit includes:
1-Stem O-ring
1-Bonnet O-Ring

Plug Gate Valve O-ring Repair Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2, 3/4 & 1	PGT-BRK-010 3.35	PGT-ERK-010 3.61	PGT-VRK-010 6.84	1	10	299
1-1/4, 1-1/2 & 2	PGT-BRK-020 4.08	PGT-ERK-020 4.77	PGT-VRK-020 8.05	1	10	299

PVC Plug Gate Valve Internal Replacement Cartridge

Internal Replacement Cartridge includes complete, fully assembled Handle/Nut, Stem/O–ring, Bonnet/O-ring, and Gate for direct insertion into existing valve Body.

PVC Plug Gate Valve Internal Replacement Cartridge

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2, 3/4 & 1	5210-010 21.23	5220-010 23.35	5230-010 25.65	1	10	299
1-1/4, 1-1/2 & 2	5210-020 42.61	5220-020 46.85	5230-020 51.55	1	4	299
6	---	5220-060 1463.19	5230-060 1905.89	1	0	299

CPVC Plug Gate Valve Internal Replacement Cartridge

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2, 3/4 & 1	5210-010C 62.18	5220-010C 69.08	5230-010C 76.01	1	10	299

CPVC Plug Gate Valve Internal Replacement Cartridge
(continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/4, 1-1/2 & 2	5210-020C 129.46	5220-020C 143.84	5230-020C 158.25	1	4	299
6	---	5220-060C 1901.60	5230-060C 2477.71	1	0	299

PVC Pool Butterfly Valves



Pressure Rating @ 73°F (23°C), Water
1-1/2" - 12" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply

See Butterfly Valve Accessories & Repair Kits Section for Additional Options and Features

PVC White Butterfly Valve Lever Handle EPDM Seats



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
682311-015	**1-1/2**	1	0	260	163.68
682311-020	**2**	1	0	260	169.38
682311-025	**2-1/2**	1	0	260	175.07
682311-030	**3**	1	0	260	185.02
682311-040	**4**	1	0	260	206.37
682311-060	**6**	1	0	260	306.01
682311-080	**8**	1	0	260	540.85

PVC White Butterfly Valve Gear Operated EPDM Seats



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
682321-015	**1-1/2**	1	0	261	546.54
682321-020	**2**	1	0	261	596.36
682321-025	**2-1/2**	1	0	261	639.06
682321-030	**3**	1	0	261	644.76
682321-040	**4**	1	0	261	676.06
682321-060	**6**	1	0	261	724.45
682321-080	**8**	1	0	261	1000.82
682321-100	**10**	1	0	261	1201.26
682321-120	**12**	1	0	261	1458.88

Butterfly Valves



Lever Handle Style

Pressure Rating @ 73°F (23°C), Water
1-1/2" - 12" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
See Butterfly Valve Accessories & Repair Kits Section for Additional Options and Features



Gear Operator Style

PVC

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311-015 280.63	722311-015 280.63	723311-015 585.92	1	0	250
2	721311-020 291.79	722311-020 291.79	723311-020 603.85	1	0	250
2-1/2	721311-025 309.78	722311-025 309.78	723311-025 612.84	1	0	250
3	721311-030 314.28	722311-030 314.28	723311-030 624.07	1	0	250
4	721311-040 363.69	722311-040 363.69	723311-040 781.22	1	0	250
6	721311-060 538.78	722311-060 538.78	723311-060 1248.15	1	0	250

PVC (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
8	721311-080 915.91	722311-080 915.91	723311-080 2114.67	1	0	250
Gear Operator						
1-1/2	721321-015 814.87	722321-015 814.87	723321-015 1034.89	1	0	250
2	721321-020 826.14	722321-020 826.14	723321-020 1055.11	1	0	250
2-1/2	721321-025 837.32	722321-025 837.32	723321-025 1095.48	1	0	250
3	721321-030 850.82	722321-030 850.82	723321-030 1158.38	1	0	250
4	721321-040 893.46	722321-040 893.46	723321-040 1311.01	1	0	250
6	721321-060 1073.08	722321-060 1073.08	723321-060 1782.43	1	0	250

Butterfly Valves

PVC (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Gear Operator						
8	721321-080 1450.18	722321-080 1450.18	723321-080 2648.97	1	0	250
10	721321-100 1961.99	722321-100 1961.99	723321-100 4328.08	1	0	250
12	721321-120 2702.82	722321-120 2702.82	723321-120 6218.33	1	0	250
Valve Only						
1-1/2	721301-015 244.71	722301-015 244.71	723301-015 511.81	1	0	250
2	721301-020 271.61	722301-020 271.61	723301-020 536.53	1	0	250
2-1/2	721301-025 280.63	722301-025 280.63	723301-025 554.46	1	0	250
3	721301-030 287.36	722301-030 287.36	723301-030 565.69	1	0	250
4	721301-040 332.24	722301-040 332.24	723301-040 709.37	1	0	250
6	721301-060 502.83	722301-060 502.83	723301-060 1149.38	1	0	250
8	721301-080 871.03	722301-080 871.03	723301-080 1939.57	1	0	250
10	721301-100 1746.49	722301-100 1746.49	723301-100 3883.62	1	0	250
12	721301-120 2253.85	722301-120 2253.85	723301-120 5544.83	1	0	250

CPVC

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311-015C 374.91	722311-015C 374.91	723311-015C 758.78	1	0	252
2	721311-020C 399.58	722311-020C 399.58	723311-020C 783.47	1	0	252
2-1/2	721311-025C 424.31	722311-025C 424.31	723311-025C 850.82	1	0	252
3	721311-030C 462.45	722311-030C 462.45	723311-030C 911.41	1	0	252
4	721311-040C 534.31	722311-040C 534.31	723311-040C 1140.39	1	0	252
6	721311-060C 790.21	722311-060C 790.21	723311-060C 1822.87	1	0	252
8	721311-080C 1342.43	722311-080C 1342.43	723311-080C 3084.48	1	0	252

CPVC

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Gear Operator						
1-1/2	721321-015C 932.24	722321-015C 932.24	723321-015C 1273.06	1	0	252
2	721321-020C 963.64	722321-020C 963.64	723321-020C 1312.45	1	0	252
2-1/2	721321-025C 978.80	722321-025C 978.80	723321-025C 1379.19	1	0	252
3	721321-030C 992.23	722321-030C 992.23	723321-030C 1441.22	1	0	252
4	721321-040C 1064.07	722321-040C 1064.07	723321-040C 1670.20	1	0	252
6	721321-060C 1324.48	722321-060C 1324.48	723321-060C 2352.64	1	0	252
8	721321-080C 1872.21	722321-080C 1872.21	723321-080C 3614.27	1	0	252
10	721321-100C 2622.01	722321-100C 2622.01	723321-100C 6698.69	1	0	252
12	721321-120C 3704.03	722321-120C 3704.03	723321-120C 8707.85	1	0	252
Valve Only						
1-1/2	721301-015C 350.20	722301-015C 350.20	723301-015C 704.92	1	0	252
2	721301-020C 374.91	722301-020C 374.91	723301-020C 720.59	1	0	252
2-1/2	721301-025C 390.60	722301-025C 390.60	723301-025C 752.04	1	0	252
3	721301-030C 422.05	722301-030C 422.05	723301-030C 821.62	1	0	252
4	721301-040C 489.38	722301-040C 489.38	723301-040C 1037.17	1	0	252
6	721301-060C 736.31	722301-060C 736.31	723301-060C 1674.66	1	0	252
8	721301-080C 1275.06	722301-080C 1275.06	723301-080C 2828.60	1	0	252
10	721301-100C 2550.19	722301-100C 2550.19	723301-100C 5670.57	1	0	252
12	721301-120C 3313.43	722301-120C 3313.43	723301-120C 7369.94	1	0	252

Lug Insert Butterfly Valves



Spears® Standard Butterfly Valve with Lug Inserts Factory Assembled

Note: Lug (insert) Valves require attention to flow direction for dead-end service. Flange must be installed on side of valve *opposite* the hex nut recesses for Single-Side installation. See "True Lug Butterfly Valves," where dead-end service is required in either direction.

Pressure Rating @ 73°F (23°C), Water
1-1/2" - 12" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

See Butterfly Valve Accessories & Repair Kits Section for Additional Options and Features. Lug Valves Use Same Accessories, Repair Kits, and Overhaul Kits as Standard Butterfly Valves



PVC - Zinc-Plated Lug Inserts

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311K-015 446.91	722311K-015 446.91	723311K-015 639.06	1	0	250

PVC - Zinc-Plated Lug Inserts (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
2	721311K-020 456.87	722311K-020 456.87	723311K-020 663.27	1	0	250

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Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC - Zinc-Plated Lug Inserts (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
2-1/2	721311K-025 483.92	722311K-025 483.92	723311K-025 684.60	1	0	250
3	721311K-030 491.04	722311K-030 491.04	723311K-030 723.88	1	0	250
4	721311K-040 862.51	722311K-040 862.51	723311K-040 1118.72	1	0	250
6	721311K-060 1128.66	722311K-060 1128.66	723311K-060 1599.79	1	0	250
8	721311K-080 1401.95	722311K-080 1401.95	723311K-080 2284.40	1	0	250
Gear Operator						
1-1/2	721321K-015 930.84	722321K-015 930.84	723321K-015 1117.29	1	0	250
2	721321K-020 950.76	722321K-020 950.76	723321K-020 1137.21	1	0	250
2-1/2	721321K-025 996.31	722321K-025 996.31	723321K-025 1178.47	1	0	250
3	721321K-030 1010.54	722321K-030 1010.54	723321K-030 1211.22	1	0	250
4	721321K-040 1391.98	722321K-040 1391.98	723321K-040 1733.58	1	0	250
6	721321K-060 1717.93	722321K-060 1717.93	723321K-060 2295.78	1	0	250
8	721321K-080 2018.23	722321K-080 2018.23	723321K-080 3011.71	1	0	250
10	721321K-100 3568.20	722321K-100 3568.20	723321K-100 5713.12	1	0	250
12	721321K-120 4111.91	722321K-120 4111.91	723321K-120 6867.40	1	0	250
Valve Only						
1-1/2	721301K-015 401.38	722301K-015 401.38	723301K-015 614.86	1	0	250
2	721301K-020 441.22	722301K-020 441.22	723301K-020 631.95	1	0	250
2-1/2	721301K-025 462.57	722301K-025 462.57	723301K-025 667.53	1	0	250
3	721301K-030 471.11	722301K-030 471.11	723301K-030 674.64	1	0	250
4	721301K-040 844.01	722301K-040 844.01	723301K-040 1094.52	1	0	250
6	721301K-060 1120.15	722301K-060 1120.15	723301K-060 1571.33	1	0	250
8	721301K-080 1376.32	722301K-080 1376.32	723301K-080 2253.08	1	0	250
10	721301K-100 2811.01	722301K-100 2811.01	723301K-100 4533.20	1	0	250
12	721301K-120 3240.84	722301K-120 3240.84	723301K-120 6488.80	1	0	250

CPVC - Zinc-Plated Lug Inserts

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311K-015C 582.12	722311K-015C 582.12	723311K-015C 811.27	1	0	252
2	721311K-020C 599.22	722311K-020C 599.22	723311K-020C 829.78	1	0	252
2-1/2	721311K-025C 607.75	722311K-025C 607.75	723311K-025C 849.72	1	0	252
3	721311K-030C 617.72	722311K-030C 617.72	723311K-030C 872.48	1	0	252
4	721311K-040C 1064.62	722311K-040C 1064.62	723311K-040C 1410.48	1	0	252
6	721311K-060C 1424.72	722311K-060C 1424.72	723311K-060C 1988.36	1	0	252
8	721311K-080C 1757.77	722311K-080C 1757.77	723311K-080C 2900.68	1	0	252
Gear Operator						
1-1/2	721321K-015C 1147.19	722321K-015C 1147.19	723321K-015C 1421.86	1	0	252
2	721321K-020C 1168.54	722321K-020C 1168.54	723321K-020C 1453.18	1	0	252
2-1/2	721321K-025C 1184.18	722321K-025C 1184.18	723321K-025C 1475.95	1	0	252

CPVC - Zinc-Plated Lug Inserts (continued)

Size	Buna-N			Std Pk	Mstr Pk	Disc Code
Gear Operator						
3	721321K-030C 1192.74	722321K-030C 1192.74	723321K-030C 1512.96	1	0	252
4	721321K-040C 1773.41	722321K-040C 1773.41	723321K-040C 2183.33	1	0	252
6	721321K-060C 2163.41	722321K-060C 2163.41	723321K-060C 2904.95	1	0	252
8	721321K-080C 2542.00	722321K-080C 2542.00	723321K-080C 3988.07	1	0	252
10	721321K-100C 4467.73	722321K-100C 4467.73	723321K-100C 7164.86	1	0	252
12	721321K-120C 5139.53	722321K-120C 5139.53	723321K-120C 9014.82	1	0	252
Valve Only						
1-1/2	721301K-015C 556.51	722301K-015C 556.51	723301K-015C 799.88	1	0	252
2	721301K-020C 576.44	722301K-020C 576.44	723301K-020C 818.40	1	0	252
2-1/2	721301K-025C 583.55	722301K-025C 583.55	723301K-025C 836.89	1	0	252
3	721301K-030C 592.08	722301K-030C 592.08	723301K-030C 846.85	1	0	252
4	721301K-040C 1014.81	722301K-040C 1014.81	723301K-040C 1377.75	1	0	252
6	721301K-060C 1407.64	722301K-060C 1407.64	723301K-060C 1974.11	1	0	252
8	721301K-080C 1722.18	722301K-080C 1722.18	723301K-080C 3099.96	1	0	252
10	721301K-100C 3512.68	722301K-100C 3512.68	723301K-100C 5899.57	1	0	252
12	721301K-120C 4052.12	722301K-120C 4052.12	723301K-120C 7687.22	1	0	252

PVC - SS Lug Inserts

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311G-015 509.54	722311G-015 509.54	723311G-015 768.59	1	0	250
2	721311G-020 515.24	722311G-020 515.24	723311G-020 775.68	1	0	250
2-1/2	721311G-025 566.47	722311G-025 566.47	723311G-025 807.01	1	0	250
3	721311G-030 572.17	722311G-030 572.17	723311G-030 815.56	1	0	250
4	721311G-040 1014.81	722311G-040 1014.81	723311G-040 1315.12	1	0	250
6	721311G-060 1329.36	722311G-060 1329.36	723311G-060 1881.61	1	0	250
8	721311G-080 1642.47	722311G-080 1642.47	723311G-080 2687.19	1	0	250
Gear Operator						
1-1/2	721321G-015 1039.01	722321G-015 1039.01	723321G-015 1305.16	1	0	250
2	721321G-020 1051.81	722321G-020 1051.81	723321G-020 1326.51	1	0	250
2-1/2	721321G-025 1107.33	722321G-025 1107.33	723321G-025 1386.29	1	0	250
3	721321G-030 1121.56	722321G-030 1121.56	723321G-030 1419.02	1	0	250
4	721321G-040 1635.37	722321G-040 1635.37	723321G-040 2036.74	1	0	250
6	721321G-060 2021.07	722321G-060 2021.07	723321G-060 2701.41	1	0	250
8	721321G-080 2374.05	722321G-080 2374.05	723321G-080 3450.06	1	0	250
10	721321G-100 4194.45	722321G-100 4194.45	723321G-100 6725.08	1	0	250
12	721321G-120 4834.94	722321G-120 4834.94	723321G-120 8360.43	1	0	250
Valve Only						
1-1/2	721301G-015 491.04	722301G-015 491.04	723301G-015 728.74	1	0	250
2	721301G-020 500.99	722301G-020 500.99	723301G-020 750.07	1	0	250

Lug Insert Butterfly Valves

PVC - SS Lug Inserts (continued)

Size	Buna-N			Std Pk	Mstr Pk	Disc Code
Valve Only						
2-1/2	721301G-025 546.54	722301G-025 546.54	723301G-025 765.74	1	0	250
3	721301G-030 555.07	722301G-030 555.07	723301G-030 792.78	1	0	250
4	721301G-040 994.88	722301G-040 994.88	723301G-040 1286.65	1	0	250
6	721301G-060 1317.97	722301G-060 1317.97	723301G-060 1846.01	1	0	250
8	721301G-080 1622.57	722301G-080 1622.57	723301G-080 2651.60	1	0	250
10	721301G-100 3304.89	722301G-100 3304.89	723301G-100 5330.23	1	0	250
12	721301G-120 3811.58	722301G-120 3811.58	723301G-120 6649.64	1	0	250

CPVC - SS Lug Inserts

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311G-015C 694.56	722311G-015C 694.56	723311G-015C 979.23	1	0	252
2	721311G-020C 703.11	722311G-020C 703.11	723311G-020C 992.03	1	0	252
2-1/2	721311G-025C 713.08	722311G-025C 713.08	723311G-025C 1017.66	1	0	252
3	721311G-030C 727.31	722311G-030C 727.31	723311G-030C 1027.61	1	0	252
4	721311G-040C 1299.47	722311G-040C 1299.47	723311G-040C 1665.24	1	0	252
6	721311G-060C 1696.56	722311G-060C 1696.56	723311G-060C 2401.09	1	0	252
8	721311G-080C 2102.21	722311G-080C 2102.21	723311G-080C 3440.11	1	0	252
Gear Operator						
1-1/2	721321G-015C 1379.18	722321G-015C 1379.18	723321G-015C 1709.38	1	0	252
2	721321G-020C 1389.14	722321G-020C 1389.14	723321G-020C 1729.31	1	0	252
2-1/2	721321G-025C 1394.81	722321G-025C 1394.81	723321G-025C 1747.80	1	0	252
3	721321G-030C 1419.02	722321G-030C 1419.02	723321G-030C 1841.75	1	0	252
4	721321G-040C 2043.86	722321G-040C 2043.86	723321G-040C 2564.77	1	0	252
6	721321G-060C 1670.95	722321G-060C 2524.94	723321G-060C 3423.03	1	0	252

CPVC - SS Lug Inserts (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Gear Operator						
8	721321G-080C 2919.18	722321G-080C 2919.18	723321G-080C 4615.76	1	0	252
10	721321G-100C 5269.05	722321G-100C 5269.05	723321G-100C 8531.23	1	0	252
12	721321G-120C 6088.85	722321G-120C 6088.85	723321G-120C 10501.07	1	0	252
Valve Only						
1-1/2	721301G-015C 657.56	722301G-015C 657.56	723301G-015C 956.46	1	0	252
2	721301G-020C 676.06	722301G-020C 676.06	723301G-020C 964.98	1	0	252
2-1/2	721301G-025C 683.19	722301G-025C 683.19	723301G-025C 994.88	1	0	252
3	721301G-030C 697.41	722301G-030C 697.41	723301G-030C 1004.85	1	0	252
4	721301G-040C 1262.45	722301G-040C 1262.45	723301G-040C 1619.71	1	0	252
6	721301G-060C 1646.75	722301G-060C 1646.75	723301G-060C 2315.68	1	0	252
8	721301G-080C 2048.12	722301G-080C 2048.12	723301G-080C 3408.79	1	0	252
10	721301G-100C 4154.60	722301G-100C 4154.60	723301G-100C 6561.40	1	0	252
12	721301G-120C 4776.59	722301G-120C 4776.59	723301G-120C 8077.21	1	0	252

True Lug Butterfly Valves - Zinc Plated Lugs



Pressure Rating @ 73°F (23°C), Water

1-1/2" - 12" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
See Butterfly Valve Accessories & Repair Kits
Section for Additional Options and Features

PVC - Zinc-Plated Lugs

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311Z-015 637.80	722311Z-015 637.80	723311Z-015 914.57	1	0	250

PVC - Zinc-Plated Lugs (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
2	721311Z-020 652.32	722311Z-020 652.32	723311Z-020 950.06	1	0	250
2-1/2	721311Z-025 690.91	722311Z-025 690.91	723311Z-025 980.57	1	0	250

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

True Lug Butterfly Valves - Zinc Plated Lugs

PVC - Zinc-Plated Lugs (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
3	721311Z-030 701.45	722311Z-030 701.45	723311Z-030 993.40	1	0	250
4	721311Z-040 1233.73	722311Z-040 1233.73	723311Z-040 1599.16	1	0	250
6	721311Z-060 1614.42	722311Z-060 1614.42	723311Z-060 2286.72	1	0	250
8	721311Z-080 2003.91	722311Z-080 2003.91	723311Z-080 3264.42	1	0	250
Gear Operator						
1-1/2	721321Z-015 1035.86	722321Z-015 1035.86	723321Z-015 1316.49	1	0	250
2	721321Z-020 1057.96	722321Z-020 1057.96	723321Z-020 1339.41	1	0	250
2-1/2	721321Z-025 1108.71	722321Z-025 1108.71	723321Z-025 1388.58	1	0	250
3	721321Z-030 1121.72	722321Z-030 1121.72	723321Z-030 1423.33	1	0	250
4	721321Z-040 1638.38	722321Z-040 1638.38	723321Z-040 2039.96	1	0	250
6	721321Z-060 2021.85	722321Z-060 2021.85	723321Z-060 2702.67	1	0	250
8	721321Z-080 2375.36	722321Z-080 2375.36	723321Z-080 3544.83	1	0	250
10	721321Z-100 4197.85	722321Z-100 4197.85	723321Z-100 6723.55	1	0	250
12	721321Z-120 4838.20	722321Z-120 4838.20	723321Z-120 8080.51	1	0	250
Valve Only						
1-1/2	721301Z-015 573.36	722301Z-015 573.36	723301Z-015 879.98	1	0	250
2	721301Z-020 631.09	722301Z-020 631.09	723301Z-020 902.61	1	0	250
2-1/2	721301Z-025 664.28	722301Z-025 664.28	723301Z-025 954.40	1	0	250
3	721301Z-030 673.01	722301Z-030 673.01	723301Z-030 963.38	1	0	250
4	721301Z-040 1208.07	722301Z-040 1208.07	723301Z-040 1565.17	1	0	250
6	721301Z-060 1602.52	722301Z-060 1602.51	723301Z-060 2246.29	1	0	250
8	721301Z-080 1968.05	722301Z-080 1968.05	723301Z-080 3219.98	1	0	250
10	721301Z-100 4016.72	722301Z-100 4016.72	723301Z-100 6476.74	1	0	250
12	721301Z-120 4631.53	722301Z-120 4631.53	723301Z-120 7380.32	1	0	250

CPVC - Zinc-Plated Lugs (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
3	721311Z-030C 883.83	722311Z-030C 883.83	723311Z-030C 1246.73	1	0	252
4	721311Z-040C 1521.24	722311Z-040C 1521.24	723311Z-040C 2014.87	1	0	252
6	721311Z-060C 2035.80	722311Z-060C 2035.80	723311Z-060C 2842.44	1	0	252
8	721311Z-080C 2512.91	722311Z-080C 2512.91	723311Z-080C 4145.80	1	0	252
Gear Operator						
1-1/2	721321Z-015C 1351.15	722321Z-015C 1351.15	723321Z-015C 1675.05	1	0	252
2	721321Z-020C 1375.75	722321Z-020C 1375.75	723321Z-020C 1708.88	1	0	252
2-1/2	721321Z-025C 1392.52	722321Z-025C 1392.52	723321Z-025C 1737.09	1	0	252
3	721321Z-030C 1402.01	722321Z-030C 1402.01	723321Z-030C 1780.64	1	0	252
4	721321Z-040C 2087.35	722321Z-040C 2087.35	723321Z-040C 2570.33	1	0	252
6	721321Z-060C 2547.52	722321Z-060C 2547.52	723321Z-060C 3418.87	1	0	252
8	721321Z-080C 2992.95	722321Z-080C 2992.95	723321Z-080C 4693.09	1	0	252
10	721321Z-100C 5180.15	722321Z-100C 5180.15	723321Z-100C 8431.21	1	0	252
12	721321Z-120C 6047.79	722321Z-120C 6047.79	723321Z-120C 9250.78	1	0	252
Valve Only						
1-1/2	721301Z-015C 796.82	722301Z-015C 796.82	723301Z-015C 1143.28	1	0	252
2	721301Z-020C 824.25	722301Z-020C 824.25	723301Z-020C 1170.71	1	0	252
2-1/2	721301Z-025C 833.03	722301Z-025C 833.03	723301Z-025C 1197.72	1	0	252
3	721301Z-030C 844.17	722301Z-030C 844.17	723301Z-030C 1211.07	1	0	252
4	721301Z-040C 1448.64	722301Z-040C 1448.64	723301Z-040C 1970.57	1	0	252
6	721301Z-060C 2012.74	722301Z-060C 2012.74	723301Z-060C 2821.35	1	0	252
8	721301Z-080C 2462.00	722301Z-080C 2462.00	723301Z-080C 4050.73	1	0	252
10	721301Z-100C 5020.88	722301Z-100C 5020.88	723301Z-100C 8050.56	1	0	252
12	721301Z-120C 5789.41	722301Z-120C 5789.41	723301Z-120C 8714.75	1	0	252

CPVC - Zinc-Plated Lugs

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311Z-015C 831.47	722311Z-015C 831.47	723311Z-015C 1160.59	1	0	252
2	721311Z-020C 855.23	722311Z-020C 855.23	723311Z-020C 1186.13	1	0	252
2-1/2	721311Z-025C 865.63	722311Z-025C 865.63	723311Z-025C 1215.89	1	0	252

True Lug Butterfly Valves - SS Lugs

PVC - Stainless Steel Lugs

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311L-015 727.88	722311L-015 727.88	723311L-015 1099.09	1	0	250
2	721311L-020 736.22	722311L-020 736.22	723311L-020 1109.53	1	0	250
2-1/2	721311L-025 809.62	722311L-025 809.62	723311L-025 1153.64	1	0	250
3	721311L-030 818.03	722311L-030 818.03	723311L-030 1166.02	1	0	250

PVC - Stainless Steel Lugs (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
4	721311L-040 1451.39	722311L-040 1451.39	723311L-040 1878.96	1	0	250
6	721311L-060 1899.12	722311L-060 1899.12	723311L-060 2688.66	1	0	250
8	721311L-080 2348.03	722311L-080 2348.03	723311L-080 3840.49	1	0	250
Gear Operator						
1-1/2	721321L-015 1222.96	722321L-015 1222.96	723321L-015 1536.49	1	0	250

PVC - Stainless Steel Lugs (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Gear Operator						
2	721321L-020 1239.15	722321L-020 1239.15	723321L-020 1562.08	1	0	250
2-1/2	721321L-025 1304.36	722321L-025 1304.36	723321L-025 1633.62	1	0	250
3	721321L-030 1319.63	722321L-030 1319.63	723321L-030 1672.00	1	0	250
4	721321L-040 1925.15	722321L-040 1925.15	723321L-040 2397.57	1	0	250
6	721321L-060 2378.57	722321L-060 2378.57	723321L-060 3179.59	1	0	250
8	721321L-080 2793.99	722321L-080 2793.99	723321L-080 4060.64	1	0	250
10	721321L-100 4936.32	722321L-100 4936.32	723321L-100 7912.26	1	0	250
12	721321L-120 5689.55	722321L-120 5689.55	723321L-120 9837.38	1	0	250
Valve Only						
1-1/2	721301L-015 701.03	722301L-015 701.03	723301L-015 1041.07	1	0	250
2	721301L-020 715.78	722301L-020 715.78	723301L-020 1072.65	1	0	250
2-1/2	721301L-025 781.48	722301L-025 781.48	723301L-025 1093.31	1	0	250
3	721301L-030 791.71	722301L-030 791.71	723301L-030 1133.39	1	0	250
4	721301L-040 1421.01	722301L-040 1421.01	723301L-040 1838.22	1	0	250
6	721301L-060 1882.91	722301L-060 1882.91	723301L-060 2637.41	1	0	250
8	721301L-080 2317.64	722301L-080 2317.64	723301L-080 3788.13	1	0	250
10	721301L-100 4720.77	722301L-100 4720.77	723301L-100 7614.92	1	0	250
12	721301L-120 5445.81	722301L-120 5445.81	723301L-120 9501.73	1	0	250

CPVC - Stainless Steel Lugs

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Lever Handle						
1-1/2	721311L-015C 993.58	722311L-015C 993.58	723311L-015C 1400.85	1	0	252
2	721311L-020C 1005.03	722311L-020C 1005.03	723311L-020C 1418.92	1	0	252
2-1/2	721311L-025C 1020.14	722311L-025C 1020.14	723311L-025C 1453.58	1	0	252
3	721311L-030C 1038.93	722311L-030C 1038.93	723311L-030C 1469.16	1	0	252
4	721311L-040C 1857.78	722311L-040C 1857.78	723311L-040C 2380.64	1	0	252
6	721311L-060C 2426.68	722311L-060C 2426.68	723311L-060C 3430.73	1	0	252
8	721311L-080C 3005.44	722311L-080C 3005.44	723311L-080C 4915.85	1	0	252
Gear Operator						
1-1/2	721321L-015C 1624.49	722321L-015C 1624.49	723321L-015C 2012.85	1	0	252
2	721321L-020C 1636.25	722321L-020C 1636.25	723321L-020C 2036.41	1	0	252
2-1/2	721321L-025C 1643.51	722321L-025C 1643.51	723321L-025C 2056.75	1	0	252
3	721321L-030C 1670.87	722321L-030C 1670.87	723321L-030C 2168.79	1	0	252
4	721321L-040C 2406.42	722321L-040C 2406.42	723321L-040C 3018.28	1	0	252
6	721321L-060C 2973.22	722321L-060C 2973.22	723321L-060C 4028.49	1	0	252
8	721321L-080C 3436.65	722321L-080C 3436.65	723321L-080C 5432.64	1	0	252
10	721321L-100C 6200.03	722321L-100C 6200.03	723321L-100C 10038.27	1	0	252
12	721321L-120C 7167.71	722321L-120C 7167.71	723321L-120C 12355.75	1	0	252

CPVC - Stainless Steel Lugs

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Valve Only						
1-1/2	721301L-015C 939.91	722301L-015C 939.91	723301L-015C 1368.45	1	0	252
2	721301L-020C 966.72	722301L-020C 966.72	723301L-020C 1378.93	1	0	252
2-1/2	721301L-025C 976.86	722301L-025C 976.86	723301L-025C 1422.62	1	0	252
3	721301L-030C 996.75	722301L-030C 996.75	723301L-030C 1436.00	1	0	252
4	721301L-040C 1804.15	722301L-040C 1804.15	723301L-040C 2316.16	1	0	252
6	721301L-060C 2353.64	722301L-060C 2353.64	723301L-060C 3309.96	1	0	252
8	721301L-080C 2927.17	722301L-080C 2927.17	723301L-080C 4682.14	1	0	252
10	721301L-100C 5937.24	722301L-100C 5937.24	723301L-100C 9373.96	1	0	252
12	721301L-120C 6825.32	722301L-120C 6825.32	723301L-120C 11540.83	1	0	252

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Polypropylene Butterfly Valves



Lever Handle Style

Pressure Rating @ 73°F (23°C), Water
1-1/2" - 12" 150 psi
Maximum Service Temperature
PP = 180°F (82°C)
Temperature/Pressure De-ratings Apply
See Butterfly Valve Accessories & Repair Kits Section for Additional Options and Features

Lever Handle

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	721311-015P 504.43	722311-015P 504.43	723311-015P 1047.92	1	0	256
2	721311-020P 509.53	722311-020P 509.53	723311-020P 1069.31	1	0	256
2-1/2	721311-025P 532.53	722311-025P 532.53	723311-025P 1087.55	1	0	256
3	721311-030P 543.79	722311-030P 543.79	723311-030P 1108.84	1	0	256
4	721311-040P 606.41	722311-040P 606.41	723311-040P 1384.55	1	0	256
6	721311-060P 947.55	722311-060P 947.55	723311-060P 2189.28	1	0	256
8	721311-080P 1611.42	722311-080P 1611.42	723311-080P 3717.36	1	0	256

Gear Operator

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	721321-020P 1450.40	722321-020P 1450.40	723321-020P 1843.71	1	0	256
2-1/2	721321-025P 1469.71	722321-025P 1469.71	723321-025P 1940.52	1	0	256
3	721321-030P 1498.03	722321-030P 1498.03	723321-030P 2038.75	1	0	256
4	721321-040P 1596.08	722321-040P 1596.08	723321-040P 2319.01	1	0	256
6	721321-060P 1864.45	722321-060P 1864.45	723321-060P 3138.24	1	0	256
8	721321-080P 2547.86	722321-080P 2547.86	723321-080P 4685.58	1	0	256

Gear Operator (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
10	721321-100P 3425.92	722321-100P 3425.92	723321-100P 7623.22	1	0	256
12	721321-120P 4744.19	722321-120P 4744.19	723321-120P 11141.25	1	0	256

Valve Only

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	721301-015P 466.19	722301-015P 466.19	723301-015P 924.76	1	0	256
2	721301-020P 475.69	722301-020P 475.69	723301-020P 941.56	1	0	256
2-1/2	721301-025P 493.96	722301-025P 493.96	723301-025P 976.32	1	0	256
3	721301-030P 509.32	722301-030P 509.32	723301-030P 1001.89	1	0	256
4	721301-040P 582.67	722301-040P 582.67	723301-040P 1242.76	1	0	256
6	721301-060P 891.04	722301-060P 891.04	723301-060P 2010.09	1	0	256
8	721301-080P 1531.21	722301-080P 1531.21	723301-080P 3404.53	1	0	256
10	721301-100P 3058.38	722301-100P 3058.38	723301-100P 6822.46	1	0	256
12	721301-120P 3957.38	722301-120P 3957.38	723301-120P 9744.93	1	0	256

Large Diameter Butterfly Valves



Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
PP = 180°F (82°C)
Temperature/Pressure De-ratings Apply
Contact Spears® for Custom Produced Valve Sizes 30" to 60"

Pressure Rating @ 73°F (23°C), Water

Size	Psi
14	100
16	85
18	70
20	50
24	50



PVC - Gear Operator

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
14	722321-140 **6062.52**	723321-140 **14732.79**	1	0	251

CPVC - Gear Operator

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
14	722321-140C **8296.33**	723321-140C **20160.83**	1	0	253

Large Diameter Butterfly Valves

Polypropylene - Gear Operator

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
14	722321-140P **6381.79**	723321-140P **15508.33**	1	0	257
16	722321-160P **24883.37**	723321-160P **26953.13**	1	0	257
18	722321-180P **27410.01**	723321-180P **31405.12**	1	0	257

Polypropylene - Gear Operator (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
20	722321-200P **30753.47**	723321-200P **37381.61**	1	0	257
24	722321-240P **34834.44**	723321-240P **50252.52**	1	0	257

Wafer Butterfly Valves



Lever Handle



Gear Operator

Wafer Butterfly Valve laying lengths will directly replace common Cast Iron valves (matches Keystone Model 228 and Bray Series 30 Butterfly Valves).

IMPORTANT NOTE

All PVC and CPVC valves have built-in Santoprene™ Thermoplastic Elastomer (TPE) Flange Gaskets for use with choice of Buna-N, EPDM, or FKM Seats on PVC valves and choice of EPDM or FKM Seats on CPVC valves.

Pressure Rating @ 73°F (23°C), Water
150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

PVC

Size	Buna-N Seat	EPDM Seat	FKM Seat	Std Pk	Mstr Pk	Disc Code
Lever Handle						
2	751311-020 291.79	752311-020 291.79	753311-020 603.85	1	0	250
2-1/2	751311-025 309.78	752311-025 309.78	753311-025 612.84	1	0	250
3	751311-030 314.28	752311-030 314.28	753311-030 624.07	1	0	250
4	751311-040 363.69	752311-040 363.69	753311-040 781.22	1	0	250
6	751311-060 538.78	752311-060 538.78	753311-060 1248.15	1	0	250
8	751311-080 915.91	752311-080 915.91	753311-080 2114.67	1	0	250
Gear Operator						
2	751321-020 826.14	752321-020 826.14	753321-020 1055.11	1	0	250
2-1/2	751321-025 837.32	752321-025 837.32	753321-025 1095.48	1	0	250
3	751321-030 850.82	752321-030 850.82	753321-030 1158.38	1	0	250
4	751321-040 893.46	752321-040 893.46	753321-040 1311.01	1	0	250
6	751321-060 1073.08	752321-060 1073.08	753321-060 1782.43	1	0	250
8	751321-080 1450.18	752321-080 1450.18	753321-080 2648.97	1	0	250
10	751321-100 1954.23	752321-100 1954.23	753321-100 6120.40	1	0	250
12	751321-120 2370.75	752321-120 2370.75	753321-120 6807.60	1	0	250
Valve Only						
2	751301-020 271.61	752301-020 271.61	753301-020 536.53	1	0	250
2-1/2	751301-025 280.63	752301-025 280.63	753301-025 554.46	1	0	250

PVC (continued)

Size	Buna-N Seat	EPDM Seat	FKM Seat	Std Pk	Mstr Pk	Disc Code
Valve Only						
3	751301-030 287.36	752301-030 287.36	753301-030 565.69	1	0	250
4	751301-040 332.24	752301-040 332.24	753301-040 709.37	1	0	250
6	751301-060 502.83	752301-060 502.83	753301-060 1149.38	1	0	250
8	751301-080 871.03	752301-080 871.03	753301-080 1939.57	1	0	250
10	751301-100 1746.49	752301-100 1746.49	753301-100 3883.58	1	0	250
12	751301-120 2253.85	752301-120 2253.85	753301-120 5544.83	1	0	250

CPVC

Size	EPDM Seat	FKM Seat	Std Pk	Mstr Pk	Disc Code
Lever Handle					
2	752311-020C **399.58**	753311-020C **783.47**	1	0	252
2-1/2	752311-025C **424.31**	753311-025C **850.82**	1	0	252
3	752311-030C **462.45**	753311-030C **911.41**	1	0	252
4	752311-040C **534.31**	753311-040C **1140.39**	1	0	252
6	752311-060C **790.21**	753311-060C **1822.87**	1	0	252
8	752311-080C **1342.43**	753311-080C **3084.48**	1	0	252
Gear Operator					
2	752321-020C **963.64**	753321-020C **1312.45**	1	0	252
2-1/2	752321-025C **978.11**	753321-025C **1379.19**	1	0	252
3	752321-030C **992.23**	753321-030C **1441.22**	1	0	252

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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Wafer Butterfly Valves

CPVC (continued)

Size	EPDM Seat	FKM Seat	Std Pk	Mstr Pk	Disc Code
Gear Operator					
4	752321-040C **1064.07**	753321-040C **1670.20**	1	0	252
6	752321-060C **1324.48**	753321-060C **2352.64**	1	0	252
8	752321-080C **1872.21**	753321-080C **3614.27**	1	0	252
10	752321-100C **2622.01**	753321-100C **6698.69**	1	0	252
12	752321-120C **3704.03**	753321-120C **8707.85**	1	0	252
Valve Only					
2	752301-020C **374.91**	753301-020C **720.59**	1	0	252
2-1/2	752301-025C **390.60**	753301-025C **752.04**	1	0	252

CPVC (continued)

Size	EPDM Seat	FKM Seat	Std Pk	Mstr Pk	Disc Code
Valve Only					
3	752301-030C **422.05**	753301-030C **821.62**	1	0	252
4	752301-040C **489.38**	753301-040C **1037.17**	1	0	252
6	752301-060C **736.31**	753301-060C **1674.66**	1	0	252
8	752301-080C **1275.06**	753301-080C **2828.60**	1	0	252
10	752301-100C **2550.19**	753301-100C **5670.57**	1	0	252
12	752301-120C **3313.43**	753301-120C **7369.94**	1	0	252

High Purity TFM-Lined Butterfly Valves



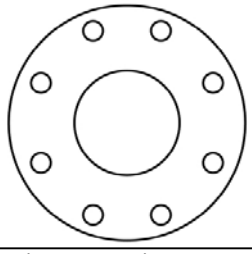
Pressure Rating @ 73°F (23°C), Water
2" - 6" 150 psi
Maximum Service Temperature
200°F (93°C)

TFM-Lined

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FKM O-ring Seal					
TFM PTFE Lined with backing O-rings, no fluid contact with elastomers or body					
253322-020	**2**	1	0	254	2880.75
253322-030	**3**	1	0	254	3148.89
253322-040	**4**	1	0	254	4033.28
253322-060	**6**	1	0	254	5398.89

Flange Gaskets Selection Guide

Order Gaskets & Bolts Kits Separately



- 1/8" Full-Faced design with ANSI Class 150 Bolt Patterns
- Pressure Rated to 150 psi @ 73°F
- Available in Buna-N (Nitrile), EPDM, or FKM

Note: Do not order for Wafer Butterfly Valves. Gasket is Built-in.

Flange Size (in.)	Number of Bolt Holes	Gasket Part Number		
		Buna-N (Nitrile)	EPDM	FKM
1/2	4	GK1-005	GK2-005	GK3-005
3/4	4	GK1-007	GK2-007	GK3-007
1	4	GK1-010	GK2-010	GK3-010
1-1/4	4	GK1-012	GK2-012	GK3-012
1-1/2	4	GK1-015	GK2-015	GK3-015
2	4	GK1-020	GK2-020	GK3-020
2-1/2	4	GK1-025	GK2-025	GK3-025
3	4	GK1-030	GK2-030	GK3-030
4	8	GK1-040	GK2-040	GK3-040
5	8	GK1-050	GK2-050	GK3-050
6	8	GK1-060	GK2-060	GK3-060
8	8	GK1-080	GK2-080	GK3-080
10	12	GK1-100	GK2-100	GK3-100
12	12	GK1-120	GK2-120	GK3-120

EPDM Full-Faced Flange Gaskets

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK2-005	**1/2**	1	25	017	4.27
GK2-007	**3/4**	1	25	017	4.55
GK2-010	**1**	1	25	017	4.75
GK2-012	**1-1/4**	1	25	017	4.99
GK2-015	**1-1/2**	1	25	017	5.36
GK2-020	**2**	1	25	017	6.54
GK2-025	**2-1/2**	1	25	017	7.85
GK2-030	**3**	1	25	017	11.54
GK2-040	**4**	1	25	017	13.14
GK2-050	**5**	1	25	017	16.43
GK2-060	**6**	1	25	017	17.24
GK2-080	**8**	1	25	017	22.97
GK2-100	**10**	1	25	017	29.93
GK2-120	**12**	1	25	017	41.18

FKM Full-Faced Flange Gaskets

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK3-005	**1/2**	1	25	017	15.25
GK3-007	**3/4**	1	25	017	18.11
GK3-010	**1**	1	25	017	20.01
GK3-012	**1-1/4**	1	5	017	22.59
GK3-015	**1-1/2**	1	25	017	28.49
GK3-020	**2**	1	25	017	39.83
GK3-025	**2-1/2**	1	25	017	53.27
GK3-030	**3**	1	25	017	119.04
GK3-040	**4**	1	25	017	137.42
GK3-050	**5**	1	25	017	160.20
GK3-060	**6**	1	25	017	181.75
GK3-080	**8**	1	25	017	258.94
GK3-100	**10**	1	25	017	344.42
GK3-120	**12**	1	25	017	485.28

Buna-N Full-Faced Flange Gaskets

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK1-005	**1/2**	1	25	017	3.22
GK1-007	**3/4**	1	25	017	3.69
GK1-010	**1**	1	25	017	3.80

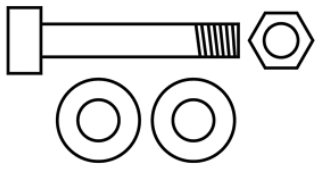
Buna-N Full-Faced Flange Gaskets (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GK1-012	**1-1/4**	1	25	017	3.89
GK1-015	**1-1/2**	1	25	017	4.18
GK1-020	**2**	1	25	017	4.67
GK1-025	**2-1/2**	1	25	017	5.14
GK1-030	**3**	1	25	017	7.91
GK1-040	**4**	1	25	017	8.84
GK1-050	**5**	1	25	017	10.48
GK1-060	**6**	1	25	017	10.77
GK1-080	**8**	1	25	017	14.20
GK1-100	**10**	1	25	017	18.02
GK1-120	**12**	1	25	017	24.31

Bolt Kit Selection Guide

Kit Contains All Bolts, Nuts, & Flat Washers for Specified Valve Size

- For Connecting Valve Between Two (2) Mating Spears® Flanges
- Pre-coated, Anti-seize Lubricated Bolts
- Available in Zinc Coated Steel, Type 304 Stainless Steel or Type 316



Order Gaskets separately for Standard valves; gaskets are already included with Wafer Butterfly Valves.

Standard Butterfly Valve Hardware Kit						
Valve Size (in.)	Bolts Per Kit	Bolt Diameter (in.-TPI)	Bolt Length (in.)	Hardware Kit Part Number		
				Zinc Plate Steel	Type 316 Stainless	Type 304 Stainless
1-1/2	4	1/2-13	4-1/2	BFHK-015	BFHK1-015	BFHK2-015
2	4	5/8-11	5	BFHK-020	BFHK1-020	BFHK2-020
2-1/2 & 3	4	5/8-11	5-1/2	BFHK-030	BFHK1-030	BFHK2-030
4	8	5/8-11	6	BFHK-040	BFHK1-040	BFHK2-040
6	8	3/4-10	7	BFHK-060	BFHK1-060	BFHK2-060
8	8	3/4-10	7-1/2	BFHK-080	BFHK1-080	BFHK2-080
10 & 12	12	7/8-9	8-1/2	BFHK-120	BFHK1-120	BFHK2-120

Wafer Butterfly Valve Hardware Kit						
Valve Size (in.)	Bolts Per Kit	Bolt Diameter (in.-TPI)	Bolt Length (in.)	Hardware Kit Part Number		
				Zinc Plate Steel	Type 316 Stainless	Type 304 Stainless
2	4	5/8-11	4-1/2	WBHK-020	WBHK1-020	WBHK2-020
2-1/2 & 3	4	5/8-11	5	WBHK-030	WBHK1-030	WBHK2-030
4	8	5/8-11	5-1/2	WBHK-040	WBHK1-040	WBHK2-040
6	8	3/4-10	6	WBHK-060	WBHK1-060	WBHK2-060
8	8	3/4-10	7	WBHK-080	WBHK1-080	WBHK2-080
10	12	7/8-9	7-1/2	WBHK-100	WBHK1-100	WBHK2-100
12	12	7/8-9	8	WBHK-120	WBHK1-120	WBHK2-120

Standard Butterfly Valve Bolt Kit - Zinc Plated

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
For Connection of Valve Between 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers					
BFHK-015	**1-1/2**	1	10	017	11.34
BFHK-020	**2**	1	10	017	27.16
BFHK-030	**2-1/2 & 3**	1	5	017	48.74
BFHK-040	**4**	1	5	017	75.96

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Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Standard Butterfly Valve Bolt Kit - Zinc Plated (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
For Connection of Valve Between 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers					
BFHK-060	**6**	1	3	017	97.47
BFHK-080	**8**	1	3	017	107.55
BFHK-120	**10 & 12**	1	0	017	153.13

Standard Butterfly Valve Bolt Kit - Type 316 Stainless Steel

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
For Connection of Valve Between 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers					
BFHK1-015	**1-1/2**	1	10	017	39.79
BFHK1-020	**2**	1	10	017	55.65
BFHK1-030	**2-1/2 & 3**	1	10	017	66.24
BFHK1-040	**4**	1	5	017	303.62
BFHK1-060	**6**	1	3	017	355.28
BFHK1-080	**8**	1	3	017	415.89
BFHK1-120	**10 & 12**	1	0	017	681.98

Standard Butterfly Valve Bolt Kit - Type 304 Stainless Steel

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
For Connection of Valve Between 2-Spears® Flanges Inlcudes Bolts, Nuts & Flat Washers					
BFHK2-015	**1-1/2**	1	10	017	36.14
BFHK2-020	**2**	1	10	017	50.27
BFHK2-030	**2-1/2 & 3**	1	10	017	60.37
BFHK2-040	**4**	1	5	017	118.22
BFHK2-060	**6**	1	3	017	150.41
BFHK2-080	**8**	1	3	017	165.05
BFHK2-120	**10 & 12**	1	0	017	401.00

True-Lug Butterfly Valve Bolt Kit - Zinc Plated

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Connects 1-Side of of True-Lug Valve to 1-Spears® Flange Includes Bolt & Washers					
Use 2-Kits For Dual Spears® Flanges					
BFHKL-015	**1-1/2**	1	10	017	30.32
BFHKL-020	**2**	1	10	017	39.64
BFHKL-025	**2-1/2**	1	5	017	45.43
BFHKL-030	**3**	1	5	017	55.58
BFHKL-040	**4**	1	5	017	101.58
BFHKL-080	**6&8**	1	3	017	201.61
BFHKL-120	**10&12**	1	0	017	272.11

True-Lug Buterfly Valve Bolt Kit - Type 316 Stainless Steel

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Connects 1-Side of True-Lug Valve to 1-Spears® Flange Inlcudes Bolts & Flat Washers					
Use 2-Kits For Dual Spears® Flanges					
BFHKL1-015	**1-1/2**	1	10	017	62.06
BFHKL1-020	**2**	1	10	017	62.91
BFHKL1-025	**2-1/2**	1	10	017	68.63
BFHKL1-030	**3**	1	10	017	78.53
BFHKL1-040	**4**	1	5	017	164.72
BFHKL1-080	**6&8**	1	3	017	238.11
BFHKL1-120	**10&12**	1	0	017	578.32

True-Lug Butterfly Valve Bolt Kit - Type 304 Stainless Steel

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Connects 1-Side of True-Lug Valve to 1-Spears® Flange Inlcudes Bolts & Flat Washers					
Use 2-Kits For Dual Spears® Flanges					
BFHKL2-015	**1-1/2**	1	10	017	37.05
BFHKL2-020	**2**	1	10	017	45.05
BFHKL2-025	**2-1/2**	1	10	017	56.95
BFHKL2-030	**3**	1	10	017	70.21
BFHKL2-040	**4**	1	5	017	128.95
BFHKL2-080	**6&8**	1	3	017	218.21
BFHKL2-120	**10&12**	1	0	017	402.42

Wafer Butterfly Valve Bolt Kit - Zinc Plated

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
For Connection of Valve Between 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers					
Note: Do not order Gaskets, these are included with Wafer Butterfly Valves					
WBHK-020	**2**	1	10	017	10.62
WBHK-030	**2-1/2 & 3**	1	10	017	12.28
WBHK-040	**4**	1	5	017	25.93
WBHK-060	**6**	1	3	017	39.94
WBHK-080	**8**	1	0	017	53.86
WBHK-100	**10**	1	0	017	93.37
WBHK-120	**12**	1	0	017	109.20

Wafer Butterfly Valve Bolt Kit - Type 316 Stainless Steel

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
For Connection of Valve Between 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers					
Note: Do not order Gaskets, these are included with Wafer Butterfly Valves					
WBHK1-020	**2**	1	10	017	51.31
WBHK1-030	**2-1/2 & 3**	1	10	017	66.26
WBHK1-040	**4**	1	5	017	132.51
WBHK1-060	**6**	1	3	017	214.74
WBHK1-080	**8**	1	0	017	272.81
WBHK1-100	**10**	1	0	017	726.86
WBHK1-120	**12**	1	0	017	915.76

Wafer Butterfly Valve Bolt Kit - Type 304 Stainless Steel

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
For Connection of Valve Between 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers					
Note: Do not order Gaskets, these are included with Wafer Butterfly Valves					
WBHK2-020	**2**	1	10	017	33.14
WBHK2-030	**2-1/2 & 3**	1	10	017	44.68
WBHK2-040	**4**	1	5	017	84.64
WBHK2-060	**6**	1	3	017	113.59
WBHK2-080	**8**	1	0	017	150.96
WBHK2-100	**10**	1	0	017	357.54
WBHK2-120	**12**	1	0	017	475.41

Gear Operator Kits



For Wafer Style Butterfly Valves, replace the "GO" prefix with "GOW" in the part number (e.g., GOW-020). Pricing is as indicated.

Contact Spears® for Kit Pricing and Availability on 14" & Larger Valves

Gear Operator Kits

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GO-015	**1-1/2**	1	2	299	683.19
GO-020	**2**	1	2	299	683.19
GO-030	**3**	1	2	299	683.19
GO-040	**4**	1	2	299	683.19
GO-060	**6**	1	2	299	712.27
GO-080	**8**	1	2	299	712.27
GO-100	**10**	1	2	299	1277.39
GO-120	**12**	1	0	299	1277.39
GO-140	**14-24**	1	0	299	1537.27

Powder Coated

GOP-015	**1-1/2**	1	2	299	1099.35
GOP-020	**2**	1	2	299	1099.35
GOP-030	**3**	1	2	299	1099.35
GOP-040	**4**	1	2	299	1099.35
GOP-060	**6**	1	2	299	1128.43
GOP-080	**8**	1	2	299	1128.43
GOP-100	**10**	1	0	299	1693.55
GOP-120	**12**	1	0	299	1693.55

Lever Handle



Lever Handle Kits

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BFH-015	**1-1/2**	1	10	299	54.80
BFH-020	**2 OR 2-1/2**	1	10	299	54.80
BFH-030	**3**	1	10	299	58.24
BFH-040	**4**	1	10	299	69.01
BFH-060	**6**	1	10	299	129.45
BFH-080	**8**	1	10	299	168.28

T-Handle



T-Handle Kits

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BFTH-020	**2**	1	10	299	50.42
BFTH-030	**3**	1	10	299	58.24
BFTH-040	**4**	1	10	299	82.17

Speed Handle



Speed Handle For Gear Operator

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
SH-120	**1-1/2 - 12**	10	0	299	100.62

Operator Nut



2" Operator Nuts

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GTN-040	**4**	10	60	299	107.86

Note: Operator Nut is used with Valve Gear Operator. Size 4 fits all Butterfly valve sizes 1-1/2" through 24".

Stem Stop



Gear Operator Positive Stem Stop

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PSS-120	**1-1/2 - 12**	50	0	299	29.87

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Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Lug Insert Sets



Lug Insert Sets (For PVC/CPVC Standard Valves Only)

Size	Stainless Steel	Zinc Plated	Std Pk	Mstr Pk	Disc Code
1-1/2	LUG1-015 **453.01**	LUG2-015 **103.55**	1	10	299
2 OR 2-1/2	LUG1-020 **453.01**	LUG2-020 **103.55**	1	10	299
3	LUG1-030 **453.01**	LUG2-030 **103.55**	1	10	299
4	LUG1-040 **901.77**	LUG2-040 **207.08**	1	5	299
6 OR 8	LUG1-080 **1139.05**	LUG2-080 **422.84**	1	5	299
10 OR 12	LUG1-120 **2882.21**	LUG2-120 **862.95**	1	5	299

Chainwheel Operators

For Wafer Style Butterfly Valves, replace the "CO" prefix with "COW" in the part number (e.g., COW-020). Pricing is as indicated.

Contact Spears® for larger sizes



Valve not included

Order "valve only" (without operator) for use with Chainwheel Operator.

How to Order Chain Required chain length is based on chain drop at 3 ft. from floor									
Floor-to-Chainwheel Height	7'	8'	9'	10'	11'	12'	13	14'	15'
Required Chain Length	10'	12'	14'	16'	18'	20'	22'	24'	26'

Chainwheel Operators

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CO-020	**2**	1	2	299	1168.20
CO-025	**2-1/2**	1	0	299	1168.20
CO-030	**3**	1	2	299	1246.07
CO-040	**4**	1	2	299	1246.07
CO-060	**6**	1	2	299	1246.07
CO-080	**8**	1	2	299	1246.07
CO-100	**10**	1	0	299	1791.22
CO-120	**12**	1	0	299	1791.22

Lock-Link Chain for Chainwheel Operators (price per foot)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BC-1	**BRASS**	1	0	901	20.65
GC-1	HOT-DIP GALVANIZED	1	100	901	6.27

Lock-Link Chain for Chainwheel Operators (price per foot) (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
SC-1	**STAINLESS STEEL**	1	0	901	44.09

Stem Extensions

Valve not included



Basic Stem Extension height is 24" and is manufactured in standard 6" increments (heights less than 24" are at the same price). Intermediate Stem Extension heights are available and are priced to the next full 6" increment. Stem Extensions over 120" in height are manufactured and shipped in 2–piece sections. Please contact your servicing Spears® Regional Distribution Center.

For Wafer Style Butterfly Valves, replace the "BFSE" prefix with "BFSEW" in the part number (e.g., BFSEW-020-240). Pricing is as indicated.

Contact Spears® for pricing and availability on Stem Extensions for 14" & Larger Butterfly Valves.

Stem Extensions

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BFSE-015-240	**1-1/2X24**	1	0	299	1022.58
BFSE-015-300	**1-1/2X30**	1	0	299	1085.84
BFSE-015-360	**1-1/2X36**	1	0	299	1149.12
BFSE-015-420	**1-1/2X42**	1	0	299	1212.40
BFSE-015-480	**1-1/2X48**	1	0	299	1275.67
BFSE-015-540	**1-1/2X54**	1	0	299	1338.95
BFSE-015-600	**1-1/2X60**	1	0	299	1402.23
BFSE-015-660	**1-1/2X66**	1	0	299	1465.49
BFSE-015-720	**1-1/2X72**	1	0	299	1528.77
BFSE-015-780	**1-1/2X78**	1	0	299	1592.06
BFSE-015-840	**1-1/2X84**	1	0	299	1655.33
BFSE-015-900	**1-1/2X90**	1	0	299	1718.61
BFSE-015-960	**1-1/2X96**	1	0	299	1781.89
BFSE-015-1020	**1-1/2X102**	1	0	299	1845.16
BFSE-015-1080	**1-1/2X108**	1	0	299	1908.43
BFSE-015-1140	**1-1/2X114**	1	0	299	1971.71
BFSE-015-1200	**1-1/2X120**	1	0	299	2034.97
BFSE-020-240	**2X24**	1	0	299	1022.58
BFSE-020-300	**2X30**	1	0	299	1085.84
BFSE-020-360	**2X36**	1	0	299	1149.12
BFSE-020-420	**2X42**	1	0	299	1212.40
BFSE-020-480	**2X48**	1	0	299	1275.67
BFSE-020-540	**2X54**	1	0	299	1338.95
BFSE-020-600	**2X60**	1	0	299	1402.23
BFSE-020-660	**2X66**	1	0	299	1465.49
BFSE-020-720	**2X72**	1	0	299	1528.77
BFSE-020-780	**2X78**	1	0	299	1592.03
BFSE-020-840	**2X84**	1	0	299	1655.33
BFSE-020-900	**2X90**	1	0	299	1718.61
BFSE-020-960	**2X96**	1	0	299	1781.89
BFSE-020-1020	**2X102**	1	0	299	1845.16
BFSE-020-1080	**2X108**	1	0	299	1908.43
BFSE-020-1140	**2X114**	1	0	299	1971.71
BFSE-020-1200	**2X120**	1	0	299	2034.97
BFSE-030-240	**3X24**	1	0	299	1022.58
BFSE-030-300	**3X30**	1	0	299	1085.84
BFSE-030-360	**3X36**	1	0	299	1149.12

Stem Extensions (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BFSE-030-420	**3X42**	1	0	299	1212.40
BFSE-030-480	**3X48**	1	0	299	1275.67
BFSE-030-540	**3X54**	1	0	299	1338.95
BFSE-030-600	**3X60**	1	0	299	1402.23
BFSE-030-660	**3X66**	1	0	299	1465.49
BFSE-030-720	**3X72**	1	0	299	1573.63
BFSE-030-780	**3X78**	1	0	299	1592.06
BFSE-030-840	**3X84**	1	0	299	1655.33
BFSE-030-900	**3X90**	1	0	299	1718.61
BFSE-030-960	**3X96**	1	0	299	1781.89
BFSE-030-1020	**3X102**	1	0	299	1845.16
BFSE-030-1080	**3X108**	1	0	299	1908.43
BFSE-030-1140	**3X114**	1	0	299	1971.71
BFSE-030-1200	**3X120**	1	0	299	2034.97
BFSE-040-240	**4X24**	1	0	299	1022.58
BFSE-040-300	**4X30**	1	0	299	1108.24
BFSE-040-360	**4X36**	1	0	299	1149.12
BFSE-040-420	**4X42**	1	0	299	1071.27
BFSE-040-480	**4X48**	1	0	299	1275.67
BFSE-040-540	**4X54**	1	0	299	1338.95
BFSE-040-600	**4X60**	1	0	299	1402.23
BFSE-040-660	**4X66**	1	0	299	1465.49
BFSE-040-720	**4X72**	1	0	299	1528.77
BFSE-040-780	**4X78**	1	0	299	1592.06
BFSE-040-840	**4X84**	1	0	299	1655.33
BFSE-040-900	**4X90**	1	0	299	1718.61
BFSE-040-960	**4X96**	1	0	299	1781.89
BFSE-040-1020	**4X102**	1	0	299	2310.90
BFSE-040-1080	**4X108**	1	0	299	2321.86
BFSE-040-1140	**4X114**	1	0	299	2422.92
BFSE-040-1200	**4X120**	1	0	299	2523.80
BFSE-060-240	**6X24**	1	0	299	1140.17
BFSE-060-300	**6X30**	1	0	299	1140.17
BFSE-060-360	**6X36**	1	0	299	1149.12
BFSE-060-420	**6X42**	1	0	299	1212.40
BFSE-060-480	**6X48**	1	0	299	1275.67
BFSE-060-540	**6X54**	1	0	299	1338.95
BFSE-060-600	**6X60**	1	0	299	1402.23
BFSE-060-660	**6X66**	1	0	299	1465.49
BFSE-060-720	**6X72**	1	0	299	1528.77
BFSE-060-780	**6X78**	1	0	299	1592.06
BFSE-060-840	**6X84**	1	0	299	1655.33
BFSE-060-900	**6X90**	1	0	299	1718.61
BFSE-060-960	**6X96**	1	0	299	1781.89
BFSE-060-1020	**6X102**	1	0	299	2359.90
BFSE-060-1080	**6X108**	1	0	299	2451.85
BFSE-060-1140	**6X114**	1	0	299	2584.21
BFSE-060-1200	**6X120**	1	0	299	2656.47
BFSE-080-240	**8X24**	1	0	299	1022.58
BFSE-080-300	**8X30**	1	0	299	1085.84
BFSE-080-360	**8X36**	1	0	299	1149.12
BFSE-080-420	**8X42**	1	0	299	1212.40
BFSE-080-480	**8X48**	1	0	299	1275.67
BFSE-080-540	**8X54**	1	0	299	1338.95
BFSE-080-600	**8X60**	1	0	299	1402.23
BFSE-080-660	**8X66**	1	0	299	1465.49
BFSE-080-720	**8X72**	1	0	299	1528.77
BFSE-080-780	**8X78**	1	0	299	1592.06
BFSE-080-840	**8X84**	1	0	299	1655.33
BFSE-080-900	**8X90**	1	0	299	1718.61
BFSE-080-960	**8X96**	1	0	299	1781.89
BFSE-080-1020	**8X102**	1	0	299	2115.69
BFSE-080-1080	**8X108**	1	0	299	2205.46
BFSE-080-1140	**8X114**	1	0	299	2245.25
BFSE-080-1200	**8X120**	1	0	299	2401.89
BFSE-100-240	**10X24**	1	0	299	1430.88

Stem Extensions (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BFSE-100-300	**10X30**	1	0	299	1524.92
BFSE-100-360	**10X36**	1	0	299	1642.63
BFSE-100-420	**10X42**	1	0	299	1698.35
BFSE-100-480	**10X48**	1	0	299	1873.01
BFSE-100-540	**10X54**	1	0	299	2047.65
BFSE-100-600	**10X60**	1	0	299	2222.27
BFSE-100-660	**10X66**	1	0	299	2396.94
BFSE-100-720	**10X72**	1	0	299	2571.59
BFSE-100-780	**10X78**	1	0	299	2746.22
BFSE-100-840	**10X84**	1	0	299	2920.86
BFSE-100-900	**10X90**	1	0	299	3095.55
BFSE-100-960	**10X96**	1	0	299	3270.15
BFSE-100-1020	**10X102**	1	0	299	3444.80
BFSE-100-1080	**10X108**	1	0	299	3619.44
BFSE-100-1140	**10X114**	1	0	299	3794.08
BFSE-100-1200	**10X120**	1	0	299	3968.73
BFSE-120-240	**12X24**	1	0	299	2474.80
BFSE-120-300	**12X30**	1	0	299	2538.37
BFSE-120-360	**12X36**	1	0	299	2613.85
BFSE-120-420	**12X42**	1	0	299	2702.82
BFSE-120-480	**12X48**	1	0	299	2852.17
BFSE-120-540	**12X54**	1	0	299	2852.07
BFSE-120-600	**12X60**	1	0	299	2941.40
BFSE-120-720	**12X72**	1	0	299	3120.94
BFSE-120-780	**12X78**	1	0	299	3201.04
BFSE-120-840	**12X84**	1	0	299	3269.94
BFSE-120-900	**12X90**	1	0	299	3270.15
BFSE-120-960	**12X96**	1	0	299	3466.15
BFSE-120-1020	**12X102**	1	0	299	3444.80
BFSE-120-1080	**12X108**	1	0	299	3619.44
BFSE-120-1140	**12X114**	1	0	299	3794.08
BFSE-120-1200	**12X120**	1	0	299	3968.73

Butterfly Valve Seat Repair Kits

Important Repair & Overhaul Kit Ordering Note

Ongoing Butterfly Valve design improvements have resulted in variations to repair kits. Standard cataloged kits are for current 72 part number series, dry-stem type valve revision. Kits for previous revisions are available and can be determined by valve serial number. When ordering kits, please specify valve size, material (PVC, CPVC, PP), Standard, Lug or True Lug type valve, Buna−N, EPDM or FKM elastomer material, and valve serial number stamped on the bottom of the valve body to insure proper kit selection. Stainless Steel Stems are normally not replaced, but can be ordered separately on request.

Seat Repair Kits for Standard Valve include:
- 1-Seat
- 1-Seal Carrier

Repair Kits for Wafer Valve include:
- 1-Seat
- 2-Flange Gaskets

Seat Repair Kits for 14" & Larger Valves include:
- 1-Seat

PVC Standard Valve Seat Repair Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	BF-BRK-015 19.40	BF-ERK-015 19.44	BF-VRK-015 114.97	1	10	299
2	BF-BRK-020 20.27	BF-ERK-020 20.83	BF-VRK-020 121.42	1	10	299
2-1/2	BF-BRK-025 21.41	BF-ERK-025 21.44	BF-VRK-025 131.23	1	10	299
3	BF-BRK-030 22.28	BF-ERK-030 24.78	BF-VRK-030 141.34	1	10	299
4	BF-BRK-040 34.57	BF-ERK-040 38.43	BF-VRK-040 171.38	1	10	299
6	BF-BRK-060 73.69	BF-ERK-060 81.87	BF-VRK-060 439.42	1	10	299
8	BF-BRK-080 92.14	BF-ERK-080 102.35	BF-VRK-080 503.54	1	5	299

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PVC Standard Valve Seat Repair Kits (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
10	BF-BRK-100 120.96	BF-ERK-100 134.41	BF-VRK-100 603.26	1	10	299
12	BF-BRK-120 164.88	BF-ERK-120 183.22	BF-VRK-120 708.55	1	10	299

CPVC Standard Valve Seat Repair Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	BF-BRK-015C 19.95	BF-ERK-015C 22.42	BF-VRK-015C 125.34	1	10	299
2	BF-BRK-020C 20.58	BF-ERK-020C 23.46	BF-VRK-020C 133.15	1	10	299
2-1/2	BF-BRK-025C 22.39	BF-ERK-025C 25.26	BF-VRK-025C 143.64	1	10	299
3	BF-BRK-030C 24.56	BF-ERK-030C 27.27	BF-VRK-030C 155.45	1	10	299
4	BF-BRK-040C 38.04	BF-ERK-040C 42.26	BF-VRK-040C 188.52	1	10	299
6	BF-BRK-060C 81.04	BF-ERK-060C 90.03	BF-VRK-060C 483.33	1	10	299
8	BF-BRK-080C 100.58	BF-ERK-080C 111.77	BF-VRK-080C 553.87	1	5	299
10	BF-BRK-100C 133.08	BF-ERK-100C 147.86	BF-VRK-100C 663.54	1	10	299
12	BF-BRK-120C 181.40	BF-ERK-120C 201.54	BF-VRK-120C 779.37	1	10	299

PP Standard Valve Seat Repair Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	BF-BRK-015P 20.49	BF-ERK-015P 23.59	BF-VRK-015P 132.26	1	10	299
2	BF-BRK-020P 21.69	BF-ERK-020P 25.19	BF-VRK-020P 138.64	1	10	299
2-1/2	BF-BRK-025P 24.94	BF-ERK-025P 27.19	BF-VRK-025P 147.15	1	10	299
3	BF-BRK-030P 26.73	BF-ERK-030P 28.97	BF-VRK-030P 165.04	1	10	299
4	BF-BRK-040P 39.63	BF-ERK-040P 45.34	BF-VRK-040P 196.59	1	10	299
6	BF-BRK-060P 84.02	BF-ERK-060P 97.61	BF-VRK-060P 494.66	1	10	299
8	BF-BRK-080P 123.87	BF-ERK-080P 137.96	BF-VRK-080P 582.18	1	10	299
10	BF-BRK-100P 144.06	BF-ERK-100P 164.73	BF-VRK-100P 674.07	1	10	299
12	BF-BRK-120P 223.23	BF-ERK-120P 248.42	BF-VRK-120P 804.23	1	10	299
14	---	BF-ERK-140P 1461.38	BF-VRK-140P 5944.25	1	15	299
16	---	BF-ERK-160P 2435.63	BF-VRK-160P 6753.28	1	15	299
18	---	BF-ERK-180P 3291.39	BF-VRK-180P 7943.39	1	15	299
20	---	BF-ERK-200P 3698.06	BF-VRK-200P 9454.96	1	15	299
24	---	BF-ERK-240P 5281.67	BF-VRK-240P 12604.92	1	15	299

PVC & CPVC Wafer Butterfly Valve Repair Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	BFW-BRK-020 14.19	BFW-ERK-020 14.58	BFW-VRK-020 85.00	1	10	299
2-1/2	BFW-BRK-025 14.99	BFW-ERK-025 15.01	BFW-VRK-025 91.86	1	10	299
3	BFW-BRK-030 15.60	BFW-ERK-030 17.35	BFW-VRK-030 98.94	1	10	299
4	BFW-BRK-040 24.20	BFW-ERK-040 26.91	BFW-VRK-040 119.97	1	10	299
6	BFW-BRK-060 51.59	BFW-ERK-060 57.32	BFW-VRK-060 307.60	1	10	299
8	BFW-BRK-080 64.49	BFW-ERK-080 71.64	BFW-VRK-080 352.47	1	10	299

Standard Valve Overhaul Kits

Standard Valve Overhaul Kits include:

- 1-Seat
- 1-Disc Timing Stop
- 1-Stem Bushing
- 1-Lower Stem Bearing
- 2-Stem O-rings
- 1-Upper Disc O-ring
- 1-Seal Carrier
- 1-Stem Nut
- 1-Hex Washer
- 1-Round Washer
- 2-Bushing O-rings
- 1-Lower Disc O-ring

Kits with Disc option include additional replacement Disc

PVC Standard Valve Overhaul Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	BF-BOK-015 33.55	BF-EOK-015 38.02	BF-VOK-015 125.84	1	10	299
2	BF-BOK-020 43.48	BF-EOK-020 52.85	BF-VOK-020 142.80	1	10	299
2-1/2	BF-BOK-025 48.37	BF-EOK-025 64.14	BF-VOK-025 152.65	1	10	299
3	BF-BOK-030 56.91	BF-EOK-030 69.38	BF-VOK-030 167.36	1	10	299
4	BF-BOK-040 64.15	BF-EOK-040 80.51	BF-VOK-040 194.51	1	10	299
6	BF-BOK-060 89.13	BF-EOK-060 98.05	BF-VOK-060 476.02	1	10	299
8	BF-BOK-080 112.31	BF-EOK-080 140.72	BF-VOK-080 542.29	1	10	299
10	BF-BOK-100 161.31	BF-EOK-100 189.52	BF-VOK-100 624.83	1	10	299
12	BF-BOK-120 189.05	BF-EOK-120 218.29	BF-VOK-120 817.58	1	10	299

CPVC Standard Valve Overhaul Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	BF-BOK-015C 40.63	BF-EOK-015C 44.27	BF-VOK-015C 145.69	1	10	299
2	BF-BOK-020C 51.08	BF-EOK-020C 64.38	BF-VOK-020C 161.41	1	10	299
2-1/2	BF-BOK-025C 63.52	BF-EOK-025C 69.69	BF-VOK-025C 172.59	1	10	299
3	BF-BOK-030C 72.26	BF-EOK-030C 80.81	BF-VOK-030C 186.88	1	10	299
4	BF-BOK-040C 79.69	BF-EOK-040C 99.52	BF-VOK-040C 220.18	1	10	299
6	BF-BOK-060C 113.84	BF-EOK-060C 126.27	BF-VOK-060C 569.18	1	10	299
8	BF-BOK-080C 127.16	BF-EOK-080C 154.67	BF-VOK-080C 632.57	1	10	299
10	BF-BOK-100C 181.94	BF-EOK-100C 213.28	BF-VOK-100C 710.11	1	10	299
12	BF-BOK-120C 236.18	BF-EOK-120C 274.33	BF-VOK-120C 905.06	1	10	299

PP Standard Valve Overhaul Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	BF-BOK-015P 42.31	BF-EOK-015P 46.26	BF-VOK-015P 150.57	1	10	299
2	BF-BOK-020P 54.19	BF-EOK-020P 57.51	BF-VOK-020P 166.11	1	10	299
2-1/2	BF-BOK-025P 68.00	BF-EOK-025P 81.34	BF-VOK-025P 183.62	1	10	299
3	BF-BOK-030P 89.47	BF-EOK-030P 101.12	BF-VOK-030P 206.64	1	10	299
4	BF-BOK-040P 96.26	BF-EOK-040P 107.91	BF-VOK-040P 243.87	1	10	299
6	BF-BOK-060P 119.15	BF-EOK-060P 143.64	BF-VOK-060P 599.29	1	10	299
8	BF-BOK-080P 143.74	BF-EOK-080P 177.01	BF-VOK-080P 647.38	1	10	299
10	BF-BOK-100P 194.46	BF-EOK-100P 230.64	BF-VOK-100P 768.81	1	10	299

PP Standard Valve Overhaul Kits (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
12	BF-BOK-120P 267.33	BF-EOK-120P 292.29	BF-VOK-120P 942.63	1	10	299
14	---	BF-EOK-140P 1719.32	BF-VOK-140P 6459.93	1	15	299
16	---	BF-EOK-160P 2818.55	BF-VOK-160P 7267.72	1	15	299
18	---	BF-EOK-180P 3757.99	BF-VOK-180P 9688.39	1	15	299
20	---	BF-EOK-200P 4221.43	BF-VOK-200P 11533.69	1	15	299
24	---	BF-EOK-240P 6028.61	BF-VOK-240P 15377.07	1	15	299

PVC Standard Valve Overhaul Kits with Disc

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	BF-BOKD-015 43.08	BF-EOKD-015 47.55	BF-VOKD-015 134.31	1	10	299
2	BF-BOKD-020 59.88	BF-EOKD-020 70.63	BF-VOKD-020 165.80	1	10	299
2-1/2	BF-BOKD-025 63.00	BF-EOKD-025 77.24	BF-VOKD-025 178.96	1	10	299
3	BF-BOKD-030 68.29	BF-EOKD-030 97.91	BF-VOKD-030 202.54	1	10	299
4	BF-BOKD-040 74.98	BF-EOKD-040 108.01	BF-VOKD-040 242.80	1	10	299
6	BF-BOKD-060 113.93	BF-EOKD-060 128.07	BF-VOKD-060 535.32	1	10	299
8	BF-BOKD-080 150.69	BF-EOKD-080 205.88	BF-VOKD-080 600.48	1	10	299
10	BF-BOKD-100 257.58	BF-EOKD-100 291.91	BF-VOKD-100 664.01	1	10	299
12	BF-BOKD-120 315.91	BF-EOKD-120 336.32	BF-VOKD-120 873.46	1	10	299

CPVC Standard Valve Overhaul Kits with Disc

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	BF-BOKD-015C 46.54	BF-EOKD-015C 49.71	BF-VOKD-015C 151.62	1	10	299
2	BF-BOKD-020C 71.16	BF-EOKD-020C 81.13	BF-VOKD-020C 171.46	1	10	299
2-1/2	BF-BOKD-025C 78.02	BF-EOKD-025C 109.17	BF-VOKD-025C 197.04	1	10	299
3	BF-BOKD-030C 86.26	BF-EOKD-030C 113.05	BF-VOKD-030C 233.71	1	10	299
4	BF-BOKD-040C 91.86	BF-EOKD-040C 118.02	BF-VOKD-040C 300.31	1	10	299
6	BF-BOKD-060C 119.64	BF-EOKD-060C 148.91	BF-VOKD-060C 634.94	1	10	299
8	BF-BOKD-080C 181.67	BF-EOKD-080C 215.92	BF-VOKD-080C 682.36	1	10	299
10	BF-BOKD-100C 289.86	BF-EOKD-100C 321.26	BF-VOKD-100C 768.27	1	10	299
12	BF-BOKD-120C 335.04	BF-EOKD-120C 355.74	BF-VOKD-120C 987.32	1	10	299

PP Standard Valve Overhaul Kits with Disc

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	BF-BOKD-015P 46.86	BF-EOKD-015P 54.49	BF-VOKD-015P 172.06	1	10	299
2	BF-BOKD-020P 75.57	BF-EOKD-020P 84.60	BF-VOKD-020P 194.42	1	10	299
2-1/2	BF-BOKD-025P 81.52	BF-EOKD-025P 123.58	BF-VOKD-025P 221.65	1	10	299
3	BF-BOKD-030P 88.24	BF-EOKD-030P 128.59	BF-VOKD-030P 259.35	1	10	299
4	BF-BOKD-040P 95.15	BF-EOKD-040P 134.41	BF-VOKD-040P 318.98	1	10	299
6	BF-BOKD-060P 124.61	BF-EOKD-060P 162.78	BF-VOKD-060P 678.69	1	10	299
8	BF-BOKD-080P 202.12	BF-EOKD-080P 236.33	BF-VOKD-080P 729.79	1	10	299
10	BF-BOKD-100P 309.13	BF-EOKD-100P 344.66	BF-VOKD-100P 829.29	1	10	299

PP Standard Valve Overhaul Kits with Disc (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
12	BF-BOKD-120P 347.02	BF-EOKD-120P 364.94	BF-VOKD-120P 1063.20	1	10	299
14	---	BF-EOKD-140P 2146.75	BF-VOKD-140P 6746.77	1	0	299
16	---	BF-EOKD-160P 3517.61	BF-VOKD-160P 7616.88	1	0	299
18	---	BF-EOKD-180P 4690.04	BF-VOKD-180P 10154.52	1	0	299
20	---	BF-EOKD-200P 5269.01	BF-VOKD-200P 12088.69	1	0	299
24	---	BF-EOKD-240P 7526.69	BF-VOKD-240P 16118.20	1	0	299

Wafer Butterfly Valve Overhaul Kits

Wafer Valve Overhaul Kits include:

1-Seat
2-Flange Gaskets
2-Stem Bushing O-rings
2-Stem Bushing Washers
2-Stem Bushings
Kits with Disc option include additional replacement Disc

PVC & CPVC Wafer Butterfly Valve Overhaul Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	BFW-BOK-020 30.44	BFW-EOK-020 37.00	BFW-VOK-020 99.96	1	10	299
2-1/2	BFW-BOK-025 33.86	BFW-EOK-025 44.89	BFW-VOK-025 106.85	1	10	299
3	BFW-BOK-030 39.83	BFW-EOK-030 48.57	BFW-VOK-030 117.15	1	10	299
4	BFW-BOK-040 44.91	BFW-EOK-040 56.36	BFW-VOK-040 136.16	1	10	299
6	BFW-BOK-060 62.39	BFW-EOK-060 68.64	BFW-VOK-060 333.21	1	10	299
8	BFW-BOK-080 78.61	BFW-EOK-080 98.51	BFW-VOK-080 379.61	1	10	299

PVC Wafer Butterfly Valve Overhaul Kits with Disc

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	BFW-BOKD-020 41.92	BFW-EOKD-020 49.44	BFW-VOKD-020 116.06	1	10	299
2-1/2	BFW-BOKD-025 44.11	BFW-EOKD-025 54.07	BFW-VOKD-025 125.27	1	10	299
3	BFW-BOKD-030 47.81	BFW-EOKD-030 68.54	BFW-VOKD-030 141.78	1	10	299
4	BFW-BOKD-040 52.48	BFW-EOKD-040 75.61	BFW-VOKD-040 169.96	1	10	299
6	BFW-BOKD-060 79.75	BFW-EOKD-060 89.65	BFW-VOKD-060 374.73	1	10	299
8	BFW-BOKD-080 105.48	BFW-EOKD-080 144.12	BFW-VOKD-080 420.34	1	10	299

CPVC Wafer Butterfly Valve Overhaul Kits with Disc

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2	BFW-EOKD-020C **56.79**	BFW-VOKD-020C **120.02**	1	10	299
2-1/2	BFW-EOKD-025C **76.42**	BFW-VOKD-025C **137.93**	1	10	299
3	BFW-EOKD-030C **79.14**	BFW-VOKD-030C **163.59**	1	10	299
4	BFW-EOKD-040C **82.61**	BFW-VOKD-040C **210.21**	1	10	299
6	BFW-EOKD-060C **104.23**	BFW-VOKD-060C **444.45**	1	10	299

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CPVC Wafer Butterfly Valve Overhaul Kits with Disc (continued)

PVC True Lug Valve Overhaul Kits

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
8	BFW-EOKD-080C **151.14**	BFW-VOKD-080C **477.65**	1	10	299

True Lug Valve Overhaul Kits include:

- 1-Seat
- 1-Disc Timing Stop
- 1-Stem Bushing
- 1-Lower Stem Bearing
- 2-Stem O-rings
- 1-Upper Disc O-ring
- 1-Seal Carrier Flange O-ring
- 1-Seal Carrier
- 1-Stem Nut
- 1-Hex Washer
- 1-Round Washer
- 2-Bushing O-rings
- 1-Lower Disc O-ring

Kits with Disc option include additional replacement Disc

PVC True Lug Valve Overhaul Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	BFT-BOK-015 34.56	BFT-EOK-015 39.19	BFT-VOK-015 129.76	1	10	299
2	BFT-BOK-020 44.77	BFT-EOK-020 54.44	BFT-VOK-020 147.22	1	10	299
2-1/2	BFT-BOK-025 49.95	BFT-EOK-025 66.13	BFT-VOK-025 157.39	1	10	299
3	BFT-BOK-030 58.67	BFT-EOK-030 71.52	BFT-VOK-030 172.52	1	10	299
4	BFT-BOK-040 66.14	BFT-EOK-040 83.01	BFT-VOK-040 200.51	1	10	299
6	BFT-BOK-060 91.87	BFT-EOK-060 100.76	BFT-VOK-060 490.74	1	10	299
8	BFT-BOK-080 115.77	BFT-EOK-080 145.07	BFT-VOK-080 559.09	1	10	299
10	BFT-BOK-100 166.32	BFT-EOK-100 195.38	BFT-VOK-100 659.61	1	10	299
12	BFT-BOK-120 194.78	BFT-EOK-120 225.05	BFT-VOK-120 842.85	1	15	299

CPVC True Lug Valve Overhaul Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	BFT-BOK-015C 41.85	BFT-EOK-015C 45.64	BFT-VOK-015C 150.20	1	10	299
2	BFT-BOK-020C 52.65	BFT-EOK-020C 66.38	BFT-VOK-020C 166.41	1	10	299
2-1/2	BFT-BOK-025C 65.48	BFT-EOK-025C 71.88	BFT-VOK-025C 177.91	1	10	299
3	BFT-BOK-030C 74.49	BFT-EOK-030C 83.32	BFT-VOK-030C 192.66	1	10	299
4	BFT-BOK-040C 82.17	BFT-EOK-040C 102.61	BFT-VOK-040C 226.97	1	10	299
6	BFT-BOK-060C 117.32	BFT-EOK-060C 130.19	BFT-VOK-060C 586.75	1	10	299
8	BFT-BOK-080C 131.08	BFT-EOK-080C 159.44	BFT-VOK-080C 652.13	1	10	299
10	BFT-BOK-100C 187.59	BFT-EOK-100C 218.15	BFT-VOK-100C 732.05	1	10	299
12	BFT-BOK-120C 243.52	BFT-EOK-120C 297.91	BFT-VOK-120C 933.05	1	15	299

PVC True Lug Valve Overhaul Kits with Disc

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	BFT-BOKD-015 44.41	BFT-EOKD-015 49.01	BFT-VOKD-015 138.40	1	10	299
2	BFT-BOKD-020 61.73	BFT-EOKD-020 72.81	BFT-VOKD-020 170.94	1	10	299
2-1/2	BFT-BOKD-025 64.93	BFT-EOKD-025 79.66	BFT-VOKD-025 184.52	1	10	299
3	BFT-BOKD-030 70.40	BFT-EOKD-030 100.88	BFT-VOKD-030 208.81	1	10	299
4	BFT-BOKD-040 77.29	BFT-EOKD-040 111.36	BFT-VOKD-040 250.29	1	10	299
6	BFT-BOKD-060 117.47	BFT-EOKD-060 131.89	BFT-VOKD-060 551.89	1	10	299

PVC True Lug Valve Overhaul Kits with Disc (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
8	BFT-BOKD-080 155.36	BFT-EOKD-080 179.32	BFT-VOKD-080 619.05	1	10	299
10	BFT-BOKD-100 265.56	BFT-EOKD-100 300.93	BFT-VOKD-100 684.55	1	10	299
12	BFT-BOKD-120 325.67	BFT-EOKD-120 346.72	BFT-VOKD-120 900.51	1	10	299

CPVC True Lug Valve Overhaul Kits with Disc

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2	BFT-BOKD-015C 47.94	BFT-EOKD-015C 51.27	BFT-VOKD-015C 156.27	1	10	299
2	BFT-BOKD-020C 73.34	BFT-EOKD-020C 83.64	BFT-VOKD-020C 176.79	1	10	299
2-1/2	BFT-BOKD-025C 80.42	BFT-EOKD-025C 112.56	BFT-VOKD-025C 203.93	1	10	299
3	BFT-BOKD-030C 88.92	BFT-EOKD-030C 116.61	BFT-VOKD-030C 240.92	1	10	299
4	BFT-BOKD-040C 94.73	BFT-EOKD-040C 121.65	BFT-VOKD-040C 309.60	1	10	299
6	BFT-BOKD-060C 123.34	BFT-EOKD-060C 153.56	BFT-VOKD-060C 654.59	1	10	299
8	BFT-BOKD-080C 187.32	BFT-EOKD-080C 222.58	BFT-VOKD-080C 703.47	1	10	299
10	BFT-BOKD-100C 298.84	BFT-EOKD-100C 331.18	BFT-VOKD-100C 792.69	1	10	299
12	BFT-BOKD-120C 345.40	BFT-EOKD-120C 366.73	BFT-VOKD-120C 1017.85	1	10	299

Contact Spears® for pricing on the following additional accessories:

- PTFE Seat Sleeves
- PTFE Coated Valve Stems



Pressure Rating @ 73°F (23°C), Water
2-1/2" - 6" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
All Valves Assembled with Silicone-Free, Water Soluble Lubricant
Suitable for Vacuum Service

Internal Repair Kit includes 1-Bonnet O−ring along with a factory assembled (required) internal component replacement unit consisting of Bonnet assembled with Stem/O-rings, Seat & Seal Carrier components. Install in valve using existing valve Bolts/Nuts/Washers, and Handle/Nut.

PVC Flanged Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2-1/2	6013-025 608.27	6023-025 643.73	6033-025 693.48	1	0	620
3	6013-030 697.26	6023-030 728.15	6033-030 810.33	1	0	620
4	6013-040 791.04	6023-040 945.64	6033-040 1039.07	1	0	620
6	6013-060 1216.55	6023-060 1454.71	6033-060 1483.69	1	0	620

CPVC Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2-1/2	6023-025C **976.00**	6033-025C **1025.04**	1	0	622
3	6023-030C **1024.57**	6033-030C **1138.97**	1	0	622
4	6023-040C **1330.67**	6033-040C **1462.78**	1	0	622
6	6023-060C **2071.91**	6033-060C **2089.43**	1	0	622

PVC Internal Repair Kit

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2-1/2	GL-BRK-025 202.35	GL-ERK-025 489.42	GL-VRK-025 544.35	1	0	299
3	GL-BRK-030 225.51	GL-ERK-030 542.27	GL-VRK-030 604.42	1	0	299
4	GL-BRK-040 264.58	GL-ERK-040 635.91	GL-VRK-040 699.16	1	0	299
6	GL-BRK-060 576.49	GL-ERK-060 977.16	GL-VRK-060 997.16	1	0	299

CPVC Internal Repair Kits

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2-1/2	GL-ERK-025C **689.17**	GL-VRK-025C **765.76**	1	0	299
3	GL-ERK-030C **788.38**	GL-VRK-030C **865.75**	1	0	299
4	GL-ERK-040C **893.94**	GL-VRK-040C **983.81**	1	0	299
6	GL-ERK-060C **1276.81**	GL-VRK-060C **1404.99**	1	0	299

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Pressure Rating @ 73°F (23°C), Water
PVC or CPVC 235 psi
PP 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
PP = 180°F (82°C)
Solid PTFE Stem Seals
No Elastomer or Lubricants used
Valves include Panel Mounting Nut

PVC Needle Valve

Size	Threaded	Socket	SR Threaded	Std Pk	Mstr Pk	Disc Code
Globe Pattern						
1/4	5591-002 71.27	5592-002 71.27	---	1	18	218
3/8	5591-003 71.27	5592-003 71.27	5591-003SR 65.01	1	18	218
1/2	5591-005 79.11	5592-005 79.11	5591-005SR 81.23	1	18	218
Angle Pattern						
1/4	5691-002 71.27	5692-002 71.27	---	1	18	218
3/8	5691-003 71.27	5692-003 71.27	---	1	18	218
1/2	5691-005 79.11	5692-005 79.11	5691-005SR 81.23	1	18	218

CPVC Needle Valve

Size	Threaded	Socket	SR Threaded	Std Pk	Mstr Pk	Disc Code
Globe Pattern						
1/4	5591-002C 83.94	5592-002C 83.94	---	1	18	219
3/8	5591-003C 83.94	5592-003C 83.94	5591-003CSR 83.75	1	18	219
1/2	5591-005C 88.77	5592-005C 88.77	5591-005CSR 91.04	1	18	219
Angle Pattern						
1/4	5691-002C 83.94	5692-002C 83.94	---	1	18	219
3/8	5691-003C 83.94	5692-003C 83.94	---	1	18	219
1/2	5691-005C 88.77	5692-005C 88.77	5691-005CSR 91.04	1	18	219

PP Needle Valve

Size	Threaded	Socket	SR Threaded	Std Pk	Mstr Pk	Disc Code
Globe Pattern						
1/4	5591-002P 78.54	---	---	1	18	219
3/8	5591-003P 78.54	---	---	1	18	219
1/2	---	---	5591-005PSR 86.85	1	18	219
Angle Pattern						
1/4	5691-002P 78.54	---	---	1	18	219
3/8	5691-003P 78.54	---	---	1	18	219
1/2	---	---	5691-005PSR 86.85	1	18	219



Socket/Threaded Style

Pressure Rating @ 73°F (23°C), Water

1/2" - 2"	235 psi
1/2" - 4" Flanged & Valves w/PTFE Diaphragms	150 psi
6"	100 psi
8"	75 psi

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
PP = 180°F (82°C)

Temperature/Pressure De-ratings Apply
No Lubricants in Media Contact Area
See Diaphragm Valve Repair Kits Section for Additional Options and Features

Contact Spears® for Pricing on Additional Specialty Diaphragms

- Hypalon®
- Hypalon® backed PTFE
- PTFE Encapsulated O-rings (for True Union Style Valves)



Spigot Style



Flanged Style



PP Thread Style

PVC - Socket Ends (True Union Style Uses End Connector O-ring Seals)

Size	EPDM Seals & Diaphragm	FKM Seals & Diaphragm	EPDM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2729-005 **138.17**	2739-005 **153.52**	2729T-005 **220.23**	2739T-005 **244.36**	2739VT-005 **301.41**	1	12	270
3/4	2729-007 **156.82**	2739-007 **174.26**	2729T-007 **235.19**	2739T-007 **263.92**	2739VT-007 **325.84**	1	8	270
1	2729-010 **193.27**	2739-010 **212.38**	2729T-010 **339.29**	2739T-010 **351.71**	2739VT-010 **415.07**	1	8	270
1-1/4	2729-012 **289.32**	2739-012 **344.00**	2729T-012 **466.44**	2739T-012 **494.42**	2739VT-012 **559.41**	1	4	270
1-1/2	2729-015 **304.11**	2739-015 **351.93**	2729T-015 **497.96**	2739T-015 **522.87**	2739VT-015 **579.77**	1	4	270
2	2729-020 **359.78**	2739-020 **426.36**	2729T-020 **567.82**	2739T-020 **596.35**	2739VT-020 **727.21**	1	0	270

PVC - SR Threaded Ends (True Union Style Uses End Connector O-ring Seals)

Size	EPDM Seals & Diaphragm	FKM Seals & Diaphragm	EPDM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2721-005SR **138.17**	2731-005SR **153.52**	2721T-005SR **220.23**	2731T-005SR **244.36**	2731VT-005SR **301.41**	1	12	270
3/4	2721-007SR **156.82**	2731-007SR **174.26**	2721T-007SR **235.19**	2731T-007SR **263.92**	2731VT-007SR **325.84**	1	8	270
1	2721-010SR **193.27**	2731-010SR **212.38**	2721T-010SR **339.29**	2731T-010SR **351.71**	2731VT-010SR **415.07**	1	8	270
1-1/4	2721-012SR **289.32**	2731-012SR **344.00**	2721T-012SR **466.44**	2731T-012SR **494.42**	2731VT-012SR **559.41**	1	4	270
1-1/2	2721-015SR **304.11**	2731-015SR **351.93**	2721T-015SR **497.96**	2731T-015SR **522.87**	2731VT-015SR **579.77**	1	4	270
2	2721-020SR **359.78**	2731-020SR **426.36**	2721T-020SR **567.82**	2731T-020SR **596.35**	2731VT-020SR **727.21**	1	0	270

PVC - Spigot Ends

Size	EPDM Diaphragm	FKM Diaphragm	EPDM Backed PTFE Diaphragm	FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2727-005 **134.69**	2737-005 **149.64**	2797T-005 **212.65**	2797VT-005 **246.13**	1	12	270
3/4	2727-007 **151.76**	2737-007 **167.95**	2797T-007 **226.91**	2797VT-007 **270.23**	1	8	270
1	2727-010 **188.36**	2737-010 **205.13**	2797T-010 **331.25**	2797VT-010 **385.63**	1	8	270
1-1/4	2727-012 **280.05**	2737-012 **337.34**	2797T-012 **455.60**	2797VT-012 **506.20**	1	4	270
1-1/2	2727-015 **296.52**	2737-015 **343.13**	2797T-015 **485.58**	2797VT-015 **554.63**	1	4	270
2	2727-020 **348.61**	2737-020 **411.64**	2797T-020 **550.78**	2797VT-020 **677.99**	1	0	270

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PVC - Flanged Ends

Size	EPDM Diaphragm	FKM Diaphragm	EPDM Backed PTFE Diaphragm	FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2723-005 **220.62**	2733-005 **238.83**	2793T-005 **301.41**	2793VT-005 **330.85**	4	0	270
3/4	2723-007 **247.91**	2733-007 **254.18**	2793T-007 **325.84**	2793VT-007 **367.59**	4	0	270
1	2723-010 **278.91**	2733-010 **311.92**	2793T-010 **415.07**	2793VT-010 **465.51**	4	0	270
1-1/4	2723-012 **378.85**	2733-012 **419.41**	2793T-012 **559.41**	2793VT-012 **617.51**	1	4	270
1-1/2	2723-015 **383.39**	2733-015 **428.03**	2793T-015 **579.77**	2793VT-015 **644.24**	1	4	270
2	2723-020 **455.72**	2733-020 **487.52**	2793T-020 **650.22**	2793VT-020 **743.36**	1	0	270
2-1/2	2723-025 **636.56**	2733-025 **727.61**	2793T-025 **1005.45**	2793VT-025 **1151.62**	1	0	271
3	2723-030 **851.09**	2733-030 **945.73**	2793T-030 **1318.47**	2793VT-030 **1458.88**	1	0	271
4	2723-040 **1178.95**	2733-040 **1285.62**	2793T-040 **1827.12**	2793VT-040 **2030.06**	1	0	271
6	2723-060 **2848.21**	2733-060 **3334.72**	2793T-060 **4731.41**	2793VT-060 **5199.41**	1	0	271
8	2723-080 **5694.80**	2733-080 **6000.89**	2793T-080 **7022.07**	2793VT-080 **7888.94**	1	0	271

CPVC - Socket Ends (True Union Style Uses End Connector O-ring Seals)

Size	EPDM Seals & Diaphragm	FKM Seals & Diaphragm	EPDM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2729-005C **244.62**	2739-005C **313.51**	2729T-005C **351.63**	2739T-005C **378.55**	2739VT-005C **418.69**	1	12	272
3/4	2729-007C **272.25**	2739-007C **334.25**	2729T-007C **388.35**	2739T-007C **405.93**	2739VT-007C **448.98**	1	8	272
1	2729-010C **314.22**	2739-010C **406.44**	2729T-010C **472.16**	2739T-010C **492.53**	2739VT-010C **540.93**	1	8	272
1-1/4	2729-012C **471.96**	2739-012C **561.55**	2729T-012C **651.60**	2739T-012C **674.64**	2739VT-012C **733.86**	1	4	272
1-1/2	2729-015C **485.93**	2739-015C **568.46**	2729T-015C **661.72**	2739T-015C **699.96**	2739VT-015C **756.38**	1	4	272
2	2729-020C **517.58**	2739-020C **648.78**	2729T-020C **727.66**	2739T-020C **806.34**	2739VT-020C **891.86**	1	0	272

CPVC - SR Threaded Ends (True Union Style Uses End Connector O-ring Seals)

Size	EPDM Seals & Diaphragm	FKM Seals & Diaphragm	EPDM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2721-005CSR **244.62**	2731-005CSR **313.51**	2721T-005CSR **351.63**	2731T-005CSR **378.55**	2731VT-005CSR **418.69**	1	12	272
3/4	2721-007CSR **272.25**	2731-007CSR **334.25**	2721T-007CSR **388.35**	2731T-007CSR **405.93**	2731VT-007CSR **448.98**	1	8	272
1	2721-010CSR **314.22**	2731-010CSR **406.44**	2721T-010CSR **472.16**	2731T-010CSR **492.53**	2731VT-010CSR **540.93**	1	8	272
1-1/4	2721-012CSR **471.96**	2731-012CSR **561.55**	2721T-012CSR **651.60**	2731T-012CSR **674.64**	2731VT-012CSR **733.86**	1	4	272
1-1/2	2721-015CSR **485.93**	2731-015CSR **568.46**	2721T-015CSR **661.72**	2731T-015CSR **699.96**	2731VT-015CSR **756.38**	1	4	272
2	2721-020CSR **517.58**	2731-020CSR **648.78**	2721T-020CSR **727.66**	2731T-020CSR **806.34**	2731VT-020CSR **891.86**	1	0	272

CPVC - Spigot Ends

Size	EPDM Diaphragm	FKM Diaphragm	EPDM Backed PTFE Diaphragm	FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2727-005C **238.46**	2737-005C **303.65**	2797T-005C **341.72**	2797VT-005C **381.72**	1	12	272
3/4	2727-007C **264.71**	2737-007C **323.88**	2797T-007C **376.61**	2797VT-007C **416.62**	1	8	272
1	2727-010C **307.49**	2737-010C **395.07**	2797T-010C **460.20**	2797VT-010C **507.17**	1	8	272
1-1/4	2727-012C **460.04**	2737-012C **546.16**	2797T-012C **634.12**	2797VT-012C **702.56**	1	4	272
1-1/2	2727-015C **470.28**	2737-015C **551.86**	2797T-015C **645.07**	2797VT-015C **713.87**	1	4	272
2	2727-020C **504.53**	2737-020C **632.13**	2797T-020C **709.15**	2797VT-020C **783.86**	1	0	272

CPVC - Flanged Ends

Size	EPDM Diaphragm	FKM Diaphragm	EPDM Backed PTFE Diaphragm	FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2723-005C **295.77**	2733-005C **326.63**	2793T-005C **426.35**	2793VT-005C **472.87**	4	0	272
3/4	2723-007C **330.71**	2733-007C **365.27**	2793T-007C **455.83**	2793VT-007C **504.24**	4	0	272
1	2723-010C **407.22**	2733-010C **455.39**	2793T-010C **560.14**	2793VT-010C **621.29**	4	0	272
1-1/4	2723-012C **520.28**	2733-012C **596.04**	2793T-012C **707.06**	2793VT-012C **781.59**	1	4	272
1-1/2	2723-015C **527.19**	2733-015C **610.71**	2793T-015C **844.60**	2793VT-015C **930.33**	1	4	272
2	2723-020C **590.43**	2733-020C **662.17**	2793T-020C **938.46**	2793VT-020C **1042.25**	1	0	272
2-1/2	2723-025C **1072.56**	2733-025C **1197.84**	2793T-025C **1852.20**	2793VT-025C **2190.55**	1	0	273
3	2723-030C **1618.78**	2733-030C **1798.63**	2793T-030C **2436.57**	2793VT-030C **2694.60**	1	0	273
4	2723-040C **2223.06**	2733-040C **2469.55**	2793T-040C **3238.77**	2793VT-040C **3455.46**	1	0	273
6	2723-060C **4069.32**	2733-060C **5834.95**	2793T-060C **7122.09**	2793VT-060C **9280.51**	1	0	273
8	2723-080C **8133.81**	2733-080C **10503.55**	2793T-080C **10621.16**	2793VT-080C **11800.37**	1	0	273

PP - SR Threaded Ends (True Union Style Uses End Connector O-ring Seals)

Size	EPDM Seals & Diaphragm	FKM Seals & Diaphragm	EPDM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
1/2	2721-005PSR **141.92**	2731-005PSR **157.88**	2721T-005PSR **226.87**	2731T-005PSR **238.82**	2731VT-005PSR **270.09**	1	12	280
3/4	2721-007PSR **161.63**	2731-007PSR **179.32**	2721T-007PSR **237.53**	2731T-007PSR **252.03**	2731VT-007PSR **295.88**	1	8	280
1	2721-010PSR **199.94**	2731-010PSR **220.29**	2721T-010PSR **346.26**	2731T-010PSR **364.27**	2731VT-010PSR **384.35**	1	8	280
1-1/4	2721-012PSR **303.65**	2731-012PSR **338.13**	2721T-012PSR **474.08**	2731T-012PSR **497.04**	2731VT-012PSR **551.59**	1	4	280
1-1/2	2721-015PSR **317.62**	2731-015PSR **352.59**	2721T-015PSR **505.57**	2731T-015PSR **530.11**	2731VT-015PSR **570.94**	1	4	280
2	2721-020PSR **369.41**	2731-020PSR **410.53**	2721T-020PSR **576.81**	2731T-020PSR **605.21**	2731VT-020PSR **657.75**	1	0	280

PP - Flanged Ends

Size	EPDM Diaphragm	FKM Diaphragm	EPDM Backed PTFE Diaphragm	FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Disc Code
2-1/2	2723-025P **680.55**	2733-025P **752.06**	2793T-025P **1070.76**	2793VT-025P **1195.80**	1	0	281
3	2723-030P **973.09**	2733-030P **1075.14**	2793T-030P **1480.80**	2793VT-030P **1651.21**	1	0	281
4	2723-040P **1400.18**	2733-040P **1541.54**	2793T-040P **1973.94**	2793VT-040P **2189.40**	1	0	281
6	2723-060P **3465.21**	2733-060P **3850.23**	2793T-060P **4947.32**	2793VT-060P **5592.09**	1	0	281
8	2723-080P **8626.77**	2733-080P **7766.52**	2793T-080P **8980.86**	2793VT-080P **15133.51**	1	0	281

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Tee-Style "Zero Dead-Leg" Diaphragm Valves



Valves are produced to order in Diaphragm Valve sizes 1/2" - 2" and virtually any user specified Mainline Socket Tee size available.
Tee-Style Valve material options include PVC, CPVC, or Low Extractable PVC.
Valve End Connection options include Spigot, Socket & Thread, or patented Special Reinforced (SR) Female Plastic Thread.
Diaphragm Options include EPDM, FKM, PTFE with bonded EPDM backing, or PTFE with bonded FKM backing.

Pressure Rating @ 73°F (23°C), Water
Valve Sizes 1/2" - 2" (20mm - 63mm)
235 psi with Elastomer Diaphragms
150 psi with PTFE Diaphragms

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

CONTACT SPEARS® FOR SELECTION ASSISTANCE & PRICING

Quick View Selection Chart

The following Base Part Numbers must be completed according to desired configuration size. Contact Spears® for the appropriate Tee size x Valve size code designations to replace the "xxx" in each.

Diaphragm Material	PVC Base Part Number			Pressure Rating @ 73°F (23°C)
	Spigot	Socket & Threaded	SR Threaded	
EPDM	2727ZD-xxx	2729ZD-xxx	2721ZD-xxxSR	1/2" – 2" 235 psi
FKM	2737ZD-xxx	2739ZD-xxx	2731ZD-xxxSR	
PTFE, EPDM Backing	2797TZD-xxx	2729TZD-xxx	2721TZD-xxxSR	1/2" – 2" 150 psi
PTFE FKM Backing	2797VTZD-xxx	2739VTZD-xxx	2731VTZD-xxxSR	

Diaphragm Material	CPVC Base Part Number			Pressure Rating @ 73°F (23°C)
	Spigot	Socket & Threaded	SR Threaded	
EPDM	2727ZD-xxxC	2729ZD-xxxC	2721ZD-xxxCSR	1/2" – 2" 235 psi
FKM	2737ZD-xxxC	2739ZD-xxxC	2731ZD-xxxCSR	
PTFE, EPDM Backing	2797TZD-xxxC	2729TZD-xxxC	2721TZD-xxxCSR	1/2" – 2" 150 psi
PTFE FKM Backing	2797VTZD-xxxC	2739VTZD-xxxC	2731VTZD-xxxCSR	

Diaphragm Material	Low Extractable PVC Base Part Number			Pressure Rating @ 73°F (23°C)
	Spigot	Socket & Threaded	SR Threaded	
EPDM	2727ZD-xxxBL	2729ZD-xxxBL	2721ZD-xxxSRBL	1/2" – 2" 235 psi
FKM	2737ZD-xxxBL	2739ZD-xxxBL	2731ZD-xxxSRBL	
PTFE, EPDM Backing	2797TZD-xxxBL	2729TZD-xxxBL	2721TZD-xxxSRBL	1/2" – 2" 150 psi
PTFE FKM Backing	2797VTZD-xxxBL	2739VTZD-xxxBL	2731VTZD-xxxSRBL	

Note: Low Extractable PVC Valves are typically used with elastomer backed PTFE Diaphragms to maintain purity in most applications. Tee-Style Zero Dead-Leg Diaphragm Valves are a non-stock configuration. All orders are non-cancelable, non-returnable.

True Union Style Diaphragm Valve Repair Kits

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
O-rings & Elastomer Diaphragm					
1/2	DV-ERK-005 48.20	DV-VRK-005 105.40	1	10	299
3/4	DV-ERK-007 54.73	DV-VRK-007 114.24	1	10	299
1	DV-ERK-010 68.46	DV-VRK-010 126.84	1	10	299
1-1/4 OR 1-1/2	DV-ERK-015 94.45	DV-VRK-015 214.43	1	10	299
2	DV-ERK-020 112.41	DV-VRK-020 255.15	1	10	299
O-rings & EPDM Backed PTFE Diaphragm					
1/2	DV-TERK-005 128.29	DV-TVRK-005 133.76	1	10	299
3/4	DV-TERK-007 143.19	DV-TVRK-007 148.60	1	10	299
1	DV-TERK-010 172.77	DV-TVRK-010 174.85	1	10	299
1-1/4 OR 1-1/2	DV-TERK-015 236.68	DV-TVRK-015 239.53	1	10	299
2	DV-TERK-020 276.03	DV-TVRK-020 283.85	1	10	299
O-rings & FKM Backed PTFE Diaphragm					
1/2	DV-VTERK-005 147.72	DV-VTVRK-005 164.99	1	10	299
3/4	DV-VTERK-007 154.84	DV-VTVRK-007 174.87	1	10	299
1	DV-VTERK-010 190.40	DV-VTVRK-010 211.69	1	10	299
1-1/4 OR 1-1/2	DV-VTERK-015 332.40	DV-VTVRK-015 344.31	1	5	299
2	DV-VTERK-020 337.97	DV-VTVRK-020 488.32	1	5	299

True Union Diaphragm Repair Kits include:
1-Diaphragm
2-End Connector O-rings
Contact Spears® for Pricing on Additional Specialty Diaphragms

- Hypalon®
- Hypalon® backed PTFE
- PTFE Encapsulated O-rings (for True Union Style Valves)

Diaphragm Only - Elastomer

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	27-39-00541A 38.47	27-39-00542A 82.61	1	0	901
3/4	27-39-00741A 62.71	27-39-00742A 102.11	1	0	901
1	27-39-01041A 55.51	27-39-01042A 129.20	1	0	901
1-1/4 OR 1-1/2	27-39-01541 62.41	27-39-01542 168.26	1	0	901
2	27-39-02041 90.07	27-39-02042 207.06	1	0	901
3	27-39-03041 185.43	27-39-03042 528.11	1	0	901
4	27-39-04041 211.92	27-39-04042 900.20	1	0	901
6	27-39-06041 457.25	27-39-06042 2842.76	1	0	901
8	27-39-08041 744.68	27-39-08042 5141.15	1	0	901

Diaphragm Only - PTFE with Elastomer Backing

Size	PTFE/EPDM	PTFE/FKM	Std Pk	Mstr Pk	Disc Code
1/2	27-39-00565A 111.42	27-39-00566A 128.42	100	0	299
3/4	27-39-00765A 124.64	27-39-00766A 133.83	25	0	299
1	27-39-01065A 139.02	27-39-01066A 165.27	25	0	299

Diaphragm Only - PTFE with Elastomer Backing (continued)

Size	PTFE/EPDM	PTFE/FKM	Std Pk	Mstr Pk	Disc Code
1-1/4 OR 1-1/2	27-39-01565 206.74	27-39-01566 336.64	100	0	299
2	27-39-02065 240.78	27-39-02066 379.28	100	0	299
3	27-39-03065 660.63	27-39-03066 819.35	15	0	299
4	27-39-04065 1283.15	27-39-04066 1409.06	10	0	299
6	27-39-06065 2835.58	27-39-06066 3152.88	1	5	299
8	27-39-08065 5140.74	27-39-08066 5662.62	1	0	299

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Socket Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 150 psi
3" - 4" 90 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply



True Union Style

PVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1722-005 **83.76**	1732-005 **88.61**	1	12	620
3/4	1722-007 **98.27**	1732-007 **104.72**	1	8	620
1	1722-010 **117.59**	1732-010 **125.64**	1	8	620
1-1/4	1722-012 **143.38**	1732-012 **157.88**	1	4	620
1-1/2	1722-015 **191.71**	1732-015 **202.98**	1	0	620
2	1722-020 **272.25**	1732-020 **289.99**	2	0	620
3	1722-030 **586.39**	1732-030 **637.95**	1	0	620
4	1722-040 **995.58**	1732-040 **1084.20**	1	0	620

PVC Clear - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1722-005CL **83.76**	1732-005CL **88.61**	1	12	621
3/4	1722-007CL **98.27**	1732-007CL **104.72**	1	8	621
1	1722-010CL **117.59**	1732-010CL **125.64**	1	8	621
1-1/4	1722-012CL **143.38**	1732-012CL **157.88**	1	4	621
1-1/2	1722-015CL **191.71**	1732-015CL **202.98**	1	0	621
2	1722-020CL **272.25**	1732-020CL **289.99**	2	0	621
3	1722-030CL **586.39**	1732-030CL **637.95**	1	0	621
4	1722-040CL **995.58**	1732-040CL **1084.20**	1	0	621

PVC - SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1721-005SR **86.99**	1731-005SR **91.83**	1	8	620
3/4	1721-007SR **103.09**	1731-007SR **109.55**	1	8	620
1	1721-010SR **124.05**	1731-010SR **132.11**	1	8	620
1-1/4	1721-012SR **169.14**	1731-012SR **178.81**	1	0	620
1-1/2	1721-015SR **207.80**	1731-015SR **217.48**	1	0	620
2	1721-020SR **293.20**	1731-020SR **307.71**	1	0	620
3	1721-030SR **629.88**	1731-030SR **681.44**	1	0	620
4	1721-040SR **1040.69**	1731-040SR **1129.28**	1	0	620

PVC Clear - SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1721-005CLSR **86.99**	1731-005CLSR **91.83**	1	8	621
3/4	1721-007CLSR **103.09**	1731-007CLSR **109.55**	1	8	621
1	1721-010CLSR **124.05**	1731-010CLSR **132.11**	1	8	621
1-1/4	1721-012CLSR **169.14**	1731-012CLSR **178.81**	1	0	621
1-1/2	1721-015CLSR **207.80**	1731-015CLSR **217.48**	1	0	621
2	1721-020CLSR **293.20**	1731-020CLSR **307.71**	1	0	621
3	1721-030CLSR **629.88**	1731-030CLSR **681.44**	1	0	621
4	1721-040CLSR **1040.69**	1731-040CLSR **1129.28**	1	0	621

PVC - Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1723-005 **117.59**	1733-005 **122.43**	1	8	620
3/4	1723-007 **135.32**	1733-007 **141.77**	1	4	620
1	1723-010 **159.47**	1733-010 **165.93**	1	4	620
1-1/4	1723-012 **186.86**	1733-012 **199.76**	1	0	620
1-1/2	1723-015 **235.20**	1733-015 **246.49**	1	0	620
2	1723-020 **330.23**	1733-020 **346.36**	1	0	620
3	1723-030 **644.40**	1733-030 **695.95**	1	0	620
4	1723-040 **1279.09**	1733-040 **1356.44**	1	0	620

PVC Clear - Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1723-005CL **117.59**	1733-005CL **122.43**	1	8	621
3/4	1723-007CL **135.32**	1733-007CL **141.77**	1	8	621
1	1723-010CL **159.47**	1733-010CL **165.93**	1	4	621
1-1/4	1723-012CL **186.86**	1733-012CL **199.76**	1	0	621
1-1/2	1723-015CL **235.20**	1733-015CL **246.49**	1	0	621
2	1723-020CL **330.23**	1733-020CL **346.36**	1	0	621
3	1723-030CL **644.40**	1733-030CL **695.95**	1	0	621
4	1723-040CL **1279.09**	1733-040CL **1356.44**	1	0	621

CPVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1722-005C **117.59**	1732-005C **124.05**	1	12	622
3/4	1722-007C **138.55**	1732-007C **148.21**	1	8	622
1	1722-010C **165.93**	1732-010C **177.22**	1	8	622
1-1/4	1722-012C **204.59**	1732-012C **217.48**	1	4	622
1-1/2	1722-015C **270.65**	1732-015C **286.74**	1	0	622
2	1722-020C **383.40**	1732-020C **409.18**	2	0	622
3	1722-030C **821.60**	1732-030C **892.48**	1	0	622
4	1722-040C **1393.48**	1732-040C **1517.53**	1	0	622

CPVC - SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1721-005CSR **120.82**	1731-005CSR **128.89**	1	8	622
3/4	1721-007CSR **143.38**	1731-007CSR **153.04**	1	8	622
1	1721-010CSR **173.98**	1731-010CSR **177.22**	1	8	622
1-1/4	1721-012CSR **212.65**	1731-012CSR **228.77**	1	0	622
1-1/2	1721-015CSR **291.58**	1731-015CSR **307.71**	1	0	622
2	1721-020CSR **407.57**	1731-020CSR **430.15**	1	0	622
3	1721-030CSR **881.20**	1731-030CSR **953.68**	1	0	622
4	1721-040CSR **1388.65**	1731-040CSR **1580.38**	1	0	622

CPVC - Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	1723-005C **193.32**	1733-005C **199.76**	1	8	622
3/4	1723-007C **220.71**	1733-007C **230.36**	1	8	622
1	1723-010C **267.41**	1733-010C **278.69**	1	4	622
1-1/4	1723-012C **320.58**	1733-012C **331.87**	1	0	622
1-1/2	1723-015C **433.36**	1733-015C **449.46**	1	0	622
2	1723-020C **552.57**	1733-020C **578.35**	1	0	622
3	1723-030C **1063.25**	1733-030C **1135.74**	1	0	622
4	1723-040C **1725.34**	1733-040C **1834.91**	1	0	622

PVC - True Union Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172A-005 **99.87**	173A-005 **104.72**	1	8	620
3/4	172A-007 **115.98**	173A-007 **122.43**	1	8	620
1	172A-010 **138.55**	173A-010 **148.21**	1	4	620
1-1/4	172A-012 **169.14**	173A-012 **185.27**	2	0	620
1-1/2	172A-015 **225.54**	173A-015 **238.42**	2	0	620
2	172A-020 **318.98**	173A-020 **341.54**	1	0	620
3	172A-030 **689.49**	173A-030 **749.12**	1	0	620
4	172A-040 **1171.18**	173A-040 **1274.31**	1	0	620

PVC - True Union Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172B-005 **99.87**	173B-005 **104.72**	1	8	620
3/4	172B-007 **115.98**	173B-007 **122.43**	1	8	620
1	172B-010 **138.55**	173B-010 **148.21**	1	4	620
1-1/4	172B-012 **169.14**	173B-012 **185.27**	2	0	620
1-1/2	172B-015 **225.54**	173B-015 **238.42**	1	0	620
2	172B-020 **318.98**	173B-020 **341.54**	1	0	620
3	172B-030 **689.49**	173B-030 **749.12**	1	0	620
4	172B-040 **1171.18**	173B-040 **1274.31**	1	0	620

PVC - True Union SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172B-005SR **103.09**	173B-005SR **107.93**	1	8	620
3/4	172B-007SR **120.82**	173B-007SR **128.89**	1	8	620
1	172B-010SR **146.60**	173B-010SR **154.66**	1	4	620
1-1/4	172B-012SR **199.76**	173B-012SR **211.03**	1	0	620
1-1/2	172B-015SR **244.86**	173B-015SR **256.15**	1	0	620
2	172B-020SR **344.75**	173B-020SR **362.47**	1	0	620
3	172B-030SR **741.03**	173B-030SR **802.25**	1	0	620
4	172B-040SR **1224.34**	173B-040SR **1329.06**	1	0	620

PVC Clear - True Union Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172A-005CL **99.87**	173A-005CL **104.72**	1	8	621
3/4	172A-007CL **115.98**	173A-007CL **122.43**	1	8	621
1	172A-010CL **138.55**	173A-010CL **148.21**	1	4	621
1-1/4	172A-012CL **169.14**	173A-012CL **185.27**	2	0	621
1-1/2	172A-015CL **225.54**	173A-015CL **238.42**	2	0	621
2	172A-020CL **318.98**	173A-020CL **341.54**	1	0	621
3	172A-030CL **689.49**	173A-030CL **749.12**	1	0	621
4	172A-040CL **1171.18**	173A-040CL **1274.31**	1	0	621

PVC Clear - True Union Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172B-005CL **99.87**	173B-005CL **104.72**	1	8	621
3/4	172B-007CL **115.98**	173B-007CL **122.43**	1	8	621
1	172B-010CL **138.55**	173B-010CL **148.21**	1	4	621
1-1/4	172B-012CL **169.14**	173B-012CL **185.27**	2	0	621
1-1/2	172B-015CL **225.54**	173B-015CL **238.42**	1	0	621
2	172B-020CL **318.98**	173B-020CL **341.54**	1	0	621
3	172B-030CL **689.49**	173B-030CL **749.12**	1	0	621
4	172B-040CL **1171.18**	173B-040CL **1274.31**	1	0	621

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Y-Pattern Valves

PVC Clear - True Union SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172B-005CLSR **103.09**	173B-005CLSR **107.93**	1	8	621
3/4	172B-007CLSR **120.82**	173B-007CLSR **128.89**	1	8	621
1	172B-010CLSR **146.60**	173B-010CLSR **154.66**	1	4	621
1-1/4	172B-012CLSR **199.76**	173B-012CLSR **211.03**	2	0	621
1-1/2	172B-015CLSR **244.86**	173B-015CLSR **256.15**	1	0	621
2	172B-020CLSR **344.75**	173B-020CLSR **362.47**	1	0	621
3	172B-030CLSR **741.03**	173B-030CLSR **802.25**	1	0	621
4	172B-040CLSR **1224.34**	173B-040CLSR **1329.06**	1	0	621

CPVC - True Union Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172A-005C **138.55**	173A-005C **146.60**	1	8	622
3/4	172A-007C **162.71**	173A-007C **173.98**	1	8	622
1	172A-010C **194.93**	173A-010C **207.80**	1	4	622
1-1/4	172A-012C **240.03**	173A-012C **256.15**	2	0	622
1-1/2	172A-015C **318.98**	173A-015C **336.69**	2	0	622
2	172A-020C **451.07**	173A-020C **481.68**	1	0	622
3	172A-030C **966.60**	173A-030C **1050.37**	1	0	622
4	172A-040C **1638.37**	173A-040C **1784.97**	1	0	622

CPVC - True Union Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172B-005C **138.55**	173B-005C **146.60**	1	8	622
3/4	172B-007C **162.71**	173B-007C **173.98**	1	8	622
1	172B-010C **194.93**	173B-010C **207.80**	1	4	622
1-1/4	172B-012C **240.03**	173B-012C **256.15**	2	0	622
1-1/2	172B-015C **318.98**	173B-015C **336.69**	2	0	622
2	172B-020C **451.07**	173B-020C **481.68**	1	0	622
3	172B-030C **966.60**	173B-030C **1050.37**	1	0	622
4	172B-040C **1638.37**	173B-040C **1784.97**	1	0	622

CPVC - True Union SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2	172B-005CSR **141.77**	173B-005CSR **151.43**	1	8	622
3/4	172B-007CSR **169.14**	173B-007CSR **180.43**	1	8	622
1	172B-010CSR **204.59**	173B-010CSR **207.80**	1	4	622
1-1/4	172B-012CSR **249.71**	173B-012CSR **269.02**	1	0	622
1-1/2	172B-015CSR **343.13**	173B-015CSR **362.47**	1	0	622
2	172B-020CSR **480.06**	173B-020CSR **505.83**	1	0	622
3	172B-030CSR **1035.85**	173B-030CSR **1121.25**	1	0	622
4	172B-040CSR **1633.53**	173B-040CSR **1859.06**	1	0	622

Y-Pattern Valve Repair Kits

Internal Repair Kit includes 1-Stem O-ring, 1-Seal Carrier O-ring, along with a factory assembled (required) internal component replacement unit consisting of Stem assembled with Seat & Seal Carrier components. Install in valve using existing valve Bonnet, Bonnet Nut, and Handle/Nut. True Union style valve kits include an additional 2-End Connector O-rings.

PVC Y-Pattern Valve Internal Repair Kits

Size	Standard EPDM	Standard FKM	True Union EPDM	True Union FKM	Std Pk	Mstr Pk	Disc Code
1/2	YV-ERK-005 **26.00**	YV-VRK-005 **27.60**	YV-UERK-005 **27.37**	YV-UVRK-005 **29.05**	1	10	299
3/4	YV-ERK-007 **35.06**	YV-VRK-007 **37.52**	YV-UERK-007 **36.91**	YV-UVRK-007 **39.48**	1	10	299
1	YV-ERK-010 **45.99**	YV-VRK-010 **48.35**	YV-UERK-010 **48.40**	YV-UVRK-010 **50.87**	1	10	299
1-1/4	YV-ERK-012 **69.95**	YV-VRK-012 **75.02**	YV-UERK-012 **73.62**	YV-UVRK-012 **78.97**	1	10	299
1-1/2	YV-ERK-015 **132.56**	YV-VRK-015 **139.71**	YV-UERK-015 **147.86**	YV-UVRK-015 **147.87**	1	10	299
2	YV-ERK-020 **162.05**	YV-VRK-020 **170.22**	YV-UERK-020 **170.57**	YV-UVRK-020 **179.17**	1	4	299
3	YV-ERK-030 **226.75**	YV-VRK-030 **238.82**	YV-UERK-030 **238.71**	YV-UVRK-030 **251.39**	1	10	299
4	YV-ERK-040 **388.17**	YV-VRK-040 **409.80**	YV-UERK-040 **408.58**	YV-UVRK-040 **431.36**	1	10	299

CPVC Y-Pattern Valve Internal Repair Kits

Size	Standard EPDM	Standard FKM	True Union EPDM	True Union FKM	Std Pk	Mstr Pk	Disc Code
1/2	YV-ERK-005C **33.27**	YV-VRK-005C **35.33**	YV-UERK-005C **35.03**	YV-UVRK-005C **37.18**	1	10	299
3/4	YV-ERK-007C **44.89**	YV-VRK-007C **48.01**	YV-UERK-007C **47.24**	YV-UVRK-007C **50.55**	1	10	299

CPVC Y-Pattern Valve Internal Repair Kits (continued)

Size	Standard EPDM	Standard FKM	True Union EPDM	True Union FKM	Std Pk	Mstr Pk	Disc Code
1	YV-ERK-010C **58.87**	YV-VRK-010C **61.86**	YV-UERK-010C **61.97**	YV-UVRK-010C **65.09**	1	10	299
1-1/4	YV-ERK-012C **89.55**	YV-VRK-012C **96.03**	YV-UERK-012C **92.60**	YV-UVRK-012C **101.11**	1	10	299
1-1/2	YV-ERK-015C **169.67**	YV-VRK-015C **178.78**	YV-UERK-015C **178.61**	YV-UVRK-015C **188.21**	1	10	299
2	YV-ERK-020C **207.43**	YV-VRK-020C **217.87**	YV-UERK-020C **218.36**	YV-UVRK-020C **229.34**	1	4	299
3	YV-ERK-030C **290.23**	YV-VRK-030C **305.68**	YV-UERK-030C **305.54**	YV-UVRK-030C **321.76**	1	10	299
4	YV-ERK-040C **496.86**	YV-VRK-040C **524.54**	YV-UERK-040C **523.01**	YV-UVRK-040C **552.15**	1	10	299

Sewer Disconnect

Spears® Sewer Disconnect functions as both cleanout and disconnect device, plus helps prevent sewage backup during hurricanes and floods. Complete unit consists of body and plunger (sold separately - both parts are required for proper use). The plunger can be screwed into the body to block solids waste flow. The plunger should be removed from the body and stored when not in use to prevent accidental closing (i.e., from ground vibration, etc.).

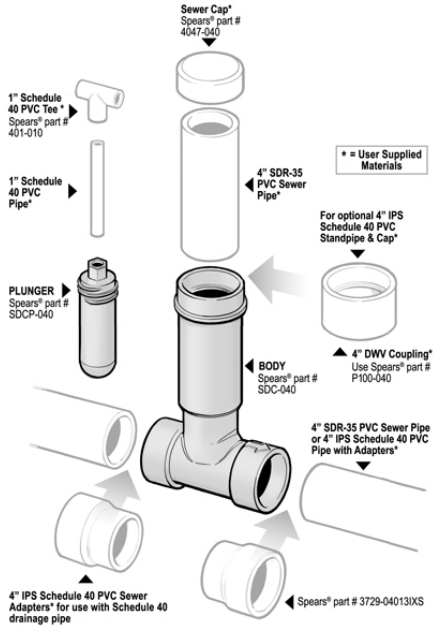


- Connects directly to 4" SDR-35 (or any ASTM D3034/D2729) PVC Sewer Pipe.
- Easily adapted to 4" Schedule 40 PVC Drainage Pipe with addition of IPS x Sewer Adapters, Socket x Spigot, Spears® part no. 3729-04013IXS.
- User-supplied standpipe can be installed to grade using PVC Sewer Pipe connected to the body branch socket and a Sewer Cap to close off (Spears® part no. 4047-040). Optionally, user-supplied Schedule 40 Pipe can be used for standpipe with addition of a Schedule 40 DWV Socket Coupling (Spears® part no. P100-040) and Cap (Spears® part no. P116-040).
- T-handle for Plunger operation can be easily fabricated from user-supplied 1" Schedule 40 Pipe and Tee fitting (Spears® part no. 401-010).

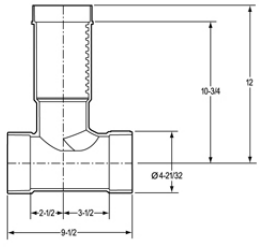


Note - the unit restricts flow by approximately 85%. As a result, the unit must be located in the sewer line where solids are present. Full disconnect is not achieved without solids in the flow.

Auxiliary Components
(Purchased Separately)



Basic Dimensions



Sewer Disconnect Body

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Sewer Socket X Sewer Socket.					
Requires Separate Purchase of SDCP-040 Plunger Requires Purchase of SDCP-040 Plunger					
SDC-040	**4**	6	0	055	72.66

Sewer Disconnect Plunger

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
For Use With Sewer Disconnect Body. Requires Separate Purchase of SDC-040 Body Requires Purchase of SDC-040 Body					
SDCP-040	**4**	12	0	055	25.02

Optional IPS x SEWER Adapter

IPS Socket x Sewer Spigot for adapting Sewer Disconnect Body to Schedule 40 drainage pipe



3729-04013IXS	**4**	1	90	399	17.51

Industrial PVC Backwater Valves

Backwater Valves are designed to prevent backflow in numerous applications where easy service access for maintenance and cleaning is needed. Excellent for use in sanitary or storm sewer drainage systems to prevent waste back up due to inadequate drainage, for balancing multi-level ponds, aquaculture features or storage tank systems, and many other applications. Spears® Backwater Valve has been engineered for improved function and easier service, especially in buried service with use of optional Service-Access Extension available either preassembled with valve or as an add-on kit.

- Replaceable internal flapper assembly with EPDM Seat.
- Service-Access Extension available either preassembled with valve, as an add-on kit, or as valve & extension kit components with user supplied pipe.
- Direct Connection to ASTM D 2665 PVC DWV or other IPS size pipe. Spears® fabricated IPS x Sewer Adapters or DWV x Sewer & Drain Adapter Bushings are available for connection to ASTM D 3034 & ASTM D 2729 Sewer pipe.
- Pressure Rated to 43 psi (100 feet of head) @ 73°F (23°C).
- All extension kits can be cut shorter for custom application.
- Conforms to ASME/ANSI A112.14.1 for Backwater Valves.

PVC Backwater Valves



PVC Backwater Valves
Soc x Soc - Valve Only

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S275P	**2**	1	12	055	59.05
S375P	**3**	2	0	055	59.17
S475P	**4**	1	0	055	65.55
S675P	**6**	1	0	055	279.26

PVC Backwater Valves with Extension Kit to Premade Length



PVC Backwater Valves with Extension Kit to Premade Length
Soc x Soc - Assembled with Extension

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S275P-120[1]	**2X12HT**	1	0	055	178.12
S275P-160[1]	**2X16HT**	1	0	055	191.59
S275P-200[1]	**2X20HT**	1	0	055	205.05
S275P-240[1]	**2X24HT**	1	0	055	218.53
S275P-360[1]	**2X36HT**	1	0	055	229.52
S275P-480[1]	**2X48HT**	1	0	055	252.25
S375P-120[1]	**3X12HT**	1	0	055	178.12
S375P-160[1]	**3X16HT**	1	0	055	191.59
S375P-200[1]	**3X20HT**	1	0	055	205.05
S375P-240[1]	**3X24HT**	1	0	055	218.53
S375P-360[1]	**3X36HT**	1	0	055	229.52
S375P-480[1]	**3X48HT**	1	0	055	252.25
S475P-120[1]	**4X12HT**	1	0	055	231.36

PVC Backwater Valves with Extension Kit to Premade Length
Soc x Soc - Assembled with Extension (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S475P-160[1]	**4X16HT**	1	0	055	249.59
S475P-200[1]	**4X20HT**	1	0	055	266.20
S475P-240[1]	**4X24HT**	1	0	055	283.85
S475P-360[1]	**4X36HT**	1	0	055	298.11
S475P-480[1]	**4X48HT**	1	0	055	327.60
S675P-120[1]	**6X12HT**	1	0	055	485.82
S675P-160[1]	**6X16HT**	1	0	055	524.14
S675P-200[1]	**6X20HT**	1	0	055	559.02
S675P-240[1]	**6X24HT**	1	0	055	596.16
S675P-360[1]	**6X36HT**	1	0	055	626.04
S675P-480[1]	**6X48HT**	1	0	055	687.95

[1] - Size designates nominal valve size x extension height (HT-top of valve to top of extension, inches)

PVC Service-Access Extension Kit Only to Premade Length



PVC Service-Access Extension Kit: includes factory assembled internal flap assembly, assembly extension pipe, and external extension housing with top access adapter. Requires solvent cement assembly to existing valve and uses existing threaded Access Plug. Standard Extensions are available in convenient increments of 12", 16", 20", 24", 36", and 48" (measured from top of valve to top of extension). Contact Spears® for pricing on custom cut lengths. All extension kits can be cut shorter in the field for custom fits prior to cementing access adapter in place.

PVC Service-Access Extension Kit Only to Premade Length

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
SAEK-020-120[1]	**2X12HT**	1	0	055	55.55
SAEK-020-160[1]	**2X16HT**	1	0	055	57.14
SAEK-020-200[1]	**2X20HT**	1	0	055	58.65
SAEK-020-240[1]	**2X24HT**	1	0	055	61.46
SAEK-020-360[1]	**2X36HT**	1	0	055	64.37
SAEK-020-480[1]	**2X48HT**	1	0	055	67.52
SAEK-030-120[1]	**3X12HT**	1	0	055	60.24
SAEK-030-160[1]	**3X16HT**	1	0	055	68.00
SAEK-030-200[1]	**3X20HT**	1	0	055	72.04
SAEK-030-240[1]	**3X24HT**	1	0	055	81.19
SAEK-030-360[1]	**3X36HT**	1	0	055	96.04
SAEK-030-480[1]	**3X48HT**	1	0	055	113.59
SAEK-040-120[1]	**4X12HT**	1	0	055	89.83
SAEK-040-160[1]	**4X16HT**	1	0	055	101.27
SAEK-040-200[1]	**4X20HT**	1	0	055	124.92
SAEK-040-240[1]	**4X24HT**	1	0	055	136.79

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PVC Service-Access Extension Kit Only to Premade Length (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
SAEK-040-360[1]	**4X36HT**	1	0	055	172.06
SAEK-040-480[1]	**4X48HT**	1	0	055	198.64
SAEK-060-120[1]	**6X12HT**	1	0	055	160.94
SAEK-060-160[1]	**6X16HT**	1	0	055	182.92
SAEK-060-200[1]	**6X20HT**	1	0	055	207.41
SAEK-060-240[1]	**6X24HT**	1	0	055	237.97
SAEK-060-360[1]	**6X36HT**	1	0	055	295.39
SAEK-060-480[1]	**6X48HT**	1	0	055	366.67

[1] - Size designates nominal valve size x extension height (HT-top of valve to top of extension, inches)

PVC Backwater Valve with Extension Components



PVC Backwater Valve with Extension Components Soc x Soc - Components Must be assembled with user supplied pipe (see Table 1)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S275P-AK	**2**	1	8	055	87.00
S375P-AK	**3**	1	0	055	87.00
S475P-AK	**4**	1	0	055	101.77
S675P-AK	**6**	1	0	055	360.38

PVC Backwater Valve Extension Components Only



PVC Backwater Valve Extension Components Only Must be assembled with user supplied pipe (see Table 1)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S275P-ECK	**2**	1	8	055	46.33
S375P-ECK	**3**	1	0	055	46.33
S475P-ECK	**4**	1	0	055	60.37
S675P-ECK	**6**	1	0	055	126.83

PVC Backwater Valve Extension Components Only Must be assembled with user supplied pipe (see Table 1) (continued)

Table 1: User Supplied Pipe Requirements For Use With Extension Components

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Valve Size	Acceptable RISER Pipe Types for User-Supplied Pipe	Acceptable HANDLE Pipe
2"	4" Class 125 PVC PIPE 4" Sch 40 PVC PIPE	Use any 3/4" IPS plastic pipe[1]
3"	5" Class 125 PVC PIPE 5" Sch 40 PVC PIPE[3] 6" D3034 (SDR 35) PVC SEWER PIPE[2]	
4"	8" Class 125 PVC PIPE 8" Sch 40 PVC PIPE	
6"	10" Class 125 PVC PIPE 10" Sch 40 PVC PIPE	

Note 1: Riser and Handle pipe are *not* the same length. Sch 40 and/or Sch 80 pipe as well as ABS may be used. Special cement must be used to join PVC to ABS.
Note 2: When 6" SDR35 pipe is used, adapter fits pipe inside diameter.
Note 3: DO NOT use Sch 80 for 3" Riser pipe.

Industrial Backwater Valve Flapper Repair Kit



Industrial Backwater Valve Flapper Repair Kit

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Complete Flapper Assembly replacement					
S275P-FRK	**2**	1	10	055	34.48
S375P-FRK	**3**	1	10	055	43.48
S475P-FRK	**4**	1	10	055	50.64
S675P-FRK	**6**	1	5	055	90.18

PVC Backwater Valve Metric Adapters

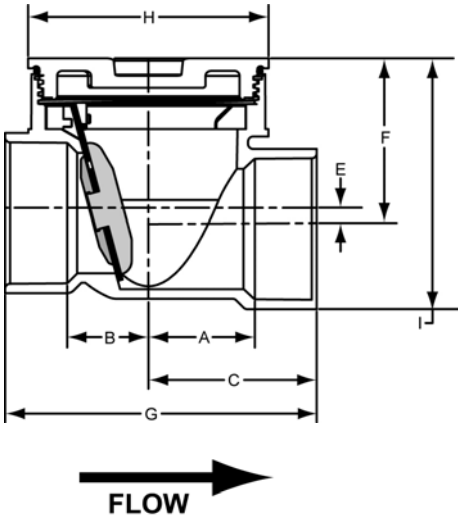


PVC Backwater Valve Metric Adapters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Metric Socket x ASTM Spigot					
S275MA-063	**63mm X 2**	50	0	055	15.28
S375MA-090	**90mm X 3**	25	0	055	16.42
S475MA-110	**110mm X 4**	10	0	055	19.45
S675MA-160	**160mm X 6**	4	0	055	44.89

Technical Information

STANDARD VALVE



Standard Valve Dimensions (Inches)

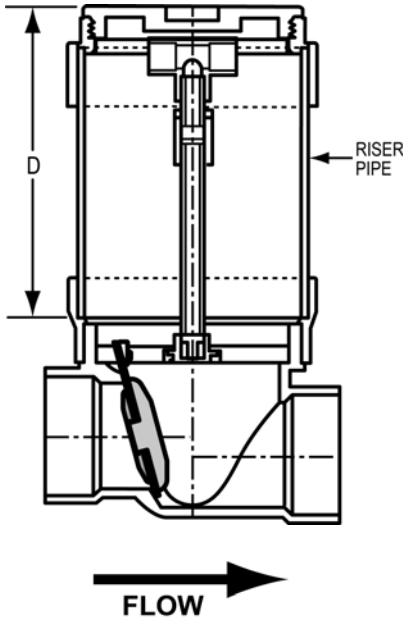
Size	A	B	C	E	F	G	H	I
2	1-13/16	1-3/4	2-5/8	5/16	3-1/4	5-9/32	4-3/16	4-9/16
3	2-5/8	2	4-3/16	13/32	4-1/8	7-3/4	6	6-1/8
4	3-5/8	3-3/4	5-7/16	23/32	5-7/16	10-15/16	8-1/4	7-15/16
6	4-3/4	4-5/8	7-3/4	13/16	7-3/16	15-3/8	11-1/4	10-13/16

Valve with Extension Kit Dimensions (Inches)

HEIGHT-D
12
16
20
24
36
48

D = Top of plug Standard Valve to top of plug with Extension

VALVE WITH EXTENSION KIT



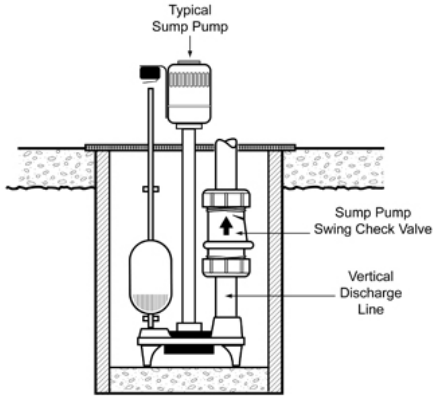
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Sump Pump Swing Check Valve



- Specifically Designed for Use on Sump Pump Discharge Lines (See Illustration)
- Includes Compression End Connectors with Buna-N Gaskets for Use on Either 1-1/4" or 1-1/2" Pipe
- All Plastic Construction with Elastomer Seals - No Metal Parts
- Angled Seat and Weighted Flapper for Low-Pressure Seal
- Suitable for Vertical Up-flow or Horizontal Installations

Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature
140°F (60°C)
Temperature/Pressure De-ratings Apply



General Installation Information: Sump Pump Swing Check Valves may be installed in either vertical up-flow (see illustration) or horizontal positions on pump discharge line. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. In horizontal installations, the designated side must be positioned "up." Do Not install Check Valve upside down.

PVC Sump Pump Swing Check Valve

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Compression Ends					
Buna-N Gaskets included for both 1-1/4" & 1-1/2" pipe					
S1400-15	**1-1/2 & 1-1/4**	16	0	026	18.80

Swing Check Ball Valve



- One-piece Combination for Applications Requiring In-line Ball Valve and Check Valves
- Compact, Space-Saving Design
- True Union Design Allows Easy Service and Cleaning
- High Grade EPDM Seals
- Replaceable PTFE HDPE Ball Valve Seats
- Safety-Blocked™ Seal Carrier on Ball Valve
- Replaceable Sealed Check Valve Cartridge
- Suitable for Horizontal or Vertical Up-flow Installations
- Socket End Connections

Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature
140°F (60°C)
Temperature/Pressure De-ratings Apply

General Installation Information: Swing Check Ball Valves are designed for horizontal installations, but may be installed in up-flow only vertical position. The Check Valve portion MUST be installed with the valve's FLOW arrow pointing in the direction of flow and with the designated side up in horizontal installations. Do Not install Check Valve upside down. The Ball Valve portion may be rotated and installed in any position. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure is less than 0.5 psi.

PVC Swing Check Ball Valve

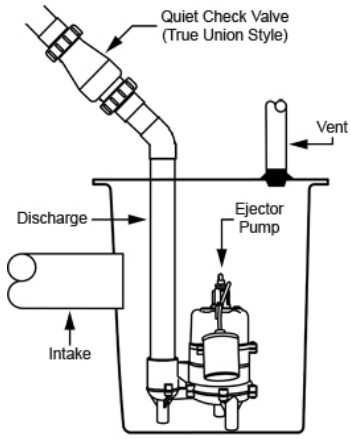
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Soc x Soc					
7622-015	**1-1/2**	10	0	026	42.57
7622-020	**2**	6	0	026	61.09

Quiet Check Valve



- Designed to Provide Quiet Operation in Sump Pump or Sewage Ejector Pump Systems.
- Spring Controlled Rate of Closing Prevents Slamming and Eliminates Noise.
- Includes Both True Union Sockets for Easy Servicing and Direct Socket Connection for Installation in Confined Space.
- 2" Size for Sewage Ejector Systems, 1-1/2" Size for Sump Pump Effluent Systems.

Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature 140°F (60°C)
Temperature/Pressure De-ratings Apply



Typical Application

General Installation Information: Install check valve 12"-18" above pump discharge, or as recommended by pump system manufacturer. Be sure check valve installation complies with local codes. Valve may be installed in either vertical up-flow or horizontal positions on pump discharge line. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. In horizontal installations, the designated side must be positioned "up."

PVC Quiet Check Valve

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Soc x Soc					
True Union or Direct Socket End Connection					
8622-015	**1-1/2**	12	0	026	42.11
8622-020	**2**	10	0	026	60.19

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Spears® Makes Valve Actuation Simple. . .

Sold in Pre-Matched Valve & Actuator Packages

Spears® makes actuation easy by matching each valve type and size with the appropriate actuator for proper operating torque and cycle time to assure optimum performance.

Accessory Add-ons Provide Custom Actuation Configurations

Spears® Premium Actuation Packages can be fully customized to user specifications by addition of selected control accessories purchased separately. Select from our wide variety of accessories and options or contact Spears® for virtually any special actuation need, even if not specified.

Complete Packages Factory Assembled - Ready for Installation

All actuation packages include valve, actuator mounting, coupling, and precision actuator factory assembled with any purchased accessories, ready for installation.

Easy Steps to Locate Desired Product

This catalog provides pricing for both Spears® economical Electro Series Actuated Ball Valves and Spears® full featured Premium Electric and Premium Pneumatic actuated valve packages with optional accessories. Actuated valve packages are listed in separate sections by valve type (ball, butterfly, diaphragm) and actuation type (electric, pneumatic). Optional accessories are listed and priced separately for assembly with the desired package. A complete listing of content is located at the end of this catalog. See Spears® Actuated Thermoplastic Valves Product Guide & Engineering Specification, for additional technical information on valve packages and accessories.

Step 1: Select and Locate Desired Actuated Valve Type
- Section I: Ball Valves
- Section II: Butterfly Valves
- Section III: Diaphragm Valves

Step 2: Select and Locate Desired Actuation Type within Valve Section
- Electric Actuated
- Pneumatic Actuated

Step 3: Select and Locate Desired Material Type Pricing Table
- PVC
- CPVC
- Polypropylene

Step 4: Select and Locate Specific Part Number & Pricing According to Listed Options
Individual pricing tables for actuated valve packages are organized by valve Size, Elastomer type (O-ring, seat, etc.), and valve configuration options such as End Connector (Joint) or other specified criteria. Unit List Price Each is located immediately below the Part Number. Product Discount Code is located in the far right column.

Step 5: Select and Locate Desired Accessories (see important ordering information below)
- Electric Actuator Accessories
- Pneumatic Actuator Accessories for Ball Valves & Butterfly Valves
- Pneumatic Actuator Accessories for Diaphragm Valves

Ordering Premium Valve Packages with Accessory Add-ons
- IMPORTANT -

Accessories are individually ordered separately and factory assembled with the selected Premium Actuated Valve Package. When Accessories are ordered for assembly with an actuated valve package, the suffix "-A" must be added to the actuated valve package part number being ordered. Do not add this suffix if no accessories are being ordered or if ordering Electro Series Ball Valves. Example: Package part number 21101A112-005 would be ordered as 21101A112-005-A REQUIRED ORDER SEQUENCE: Order line items should begin with the actuated valve package part number (with -A suffix) and be immediately followed by the selected accessory part number(s) as the next line item(s). This sequential listing of valve package and applicable accessories on the order assures that selected accessories are properly assembled with the selected package. Failure to follow this simple practice may result in unnecessary delays.

Actuated Valve Packages Overview

Typical Package Illustration	Valve Type	Basic Valve Options				Actuation Package Available		
		Basic Valve Material	Size Range (inch)	Seal Material Options	End Connector Options	Premium Electric Actuation	Premium Pneumatic Actuation	Electro Series Actuation
	True Union 2000 Ball Valves	PVC	1/2 - 6	EPDM FKM	Socket SR Thread Flanged	X	X	X 1/2" - 2"
		CPVC	1/2 - 6	EPDM FKM	Socket SR Thread Flanged	X	X	X 1/2" - 2"
	Compact 2000 Ball Valves	PVC	1/2 - 6	EPDM FKM	Socket Thread Flanged	X	X	X 1/2" - 2"
		CPVC	1/2 - 6	EPDM FKM	Socket Thread Flanged	X	X	X 1/2" - 2"
	Butterfly Valves	PVC	1-1/2 - 12	Buna-N EPDM FKM	Flanged	X	X	
		CPVC	1-1/2 - 12	Buna-N EPDM FKM	Flanged	X	X	
		PP	1-1/2 - 24 [1]	EPDM FKM	Flanged	X	X	
	Diaphragm Valves	PVC	1/2 - 4 [2]	Buna-N EPDM FKM PTFE	Socket [3] Thread [3] Spigot [4] Flanged	X	X	
		CPVC	1/2 - 4 [2]	Buna-N EPDM FKM PTFE	Socket Thread Spigot Flanged	X	X	
		PP	1/2 - 4 [2]	EPDM FKM	Thread Flanged	X	X	

Notes: 1 - Butterfly Valves also available in sizes 30" - 60", quoted and produced to order. Contact Spears®.
2 - 2-1/2" to 4" Diaphragm Valves available in Flanged ends only.
3 - 1/2" - 2" Socket and Thread Diaphragm Valves are True Union style.
4 - Spigot Diaphragm Valves available in sizes 1/2" - 2" only.

The following table illustrates actuator features for Premium Electric actuators used in Actuated Valve Packages. Features specified as "Standard" are available on packages in this price sheet. Features specified as "Accessory" are included as package add-ons in this price sheet. Features specified as "Options" must be special ordered (contact Spears® for pricing).

Electric Actuator Features Overview

Standard 2-Position Electric Actuator Features	Electro Series Ball Valves	Premium Electric TU Ball Valves	Premium Electric Butterfly Valves	Premium Electric Diaphragm Valves
Motor Rotation	Unidirectional	Reversing	Reversing	Reversing
NEMA Rating	4X	4	4	4
Enclosure Material	PP	Powder Coated Aluminum	Powder Coated Aluminum	Powder Coated Aluminum
Enclosure Conduit Entry	1/2NPT	1/2NPT	1/2NPT	1/2NPT
Voltage	115 VAC	115 VAC	115 VAC	115 VAC
Pre wired to terminal strip	Wired direct	Standard	Standard	Standard
Thermal Overload Protection	Standard	Standard	Standard	Standard
Basic Manual Override	—	Standard (1/2" – 2")	—	(Option)
Declutchable Manual Override	—	Standard (2-1/2" – 4")	Standard	Standard (2" – 4")
Limit Switches (SPDT)	1	2	2	2
Mounting Position	Any	Any	Any	Any
Permanent Lubrication	Standard	Standard	Standard	Standard
Friction Brake	—	—	Standard	—
Feedback Potentiometer	—	Standard	Standard	Standard
Options & Accessories				
24 VAC	Option	Option	Option	Option
230 VAC	Option	Option	Option	Option
230 VAC 3-phase, 60 Hz	—	Option	Option	Option
230 VAC 3-phase, 50 Hz	—	Option	Option	Option
460 VAC 3-phase, 60 Hz	—	—	Option	—
460 VAC 3-phase, 50 Hz	—	—	Option	—
12 VDC	Option	Option	Option	Option
24 VDC	Option	Option	Option	Option
NEMA 4X, 7, 9 Rating	(4X Standard)	Option	Option	Option
Basic Manual Override	—	Standard (1/2" – 2")	—	Option
Declutchable Manual Override	—	Option (Standard on 4" – 6")	(Standard)	Option
Duty Cycle Upgrade	Option	Option	Option	Option
Spring Return (Fail Safe)	—	Option	Option	—
Positioner Board (Modulating)	—	Accessory	Accessory	Accessory
Additional Limit Switch Sets	—	Accessory	Accessory	Accessory
LED Indicator Lights	—	Accessory	Accessory	Accessory
Position Indicator (visual)	Standard	Standard	Standard	Accessory
Heater & Thermostat	—	Accessory	Accessory	Accessory
Torque Sensor	—	Accessory	Accessory	Standard
Speed Controller	—	Accessory	Accessory	Accessory
Timer Board	—	Accessory	Accessory	Accessory
Transmitter	—	Accessory	Accessory	Accessory
Controller Interface	—	Accessory	Accessory	Accessory
"2-Wire" Control Relay	Accessory	Accessory	Accessory	—
Friction Brake	—	Accessory	Standard	Accessory
ID Tag-SS	Accessory	Accessory	Accessory	Accessory

The following table illustrates actuator features for Premium Pneumatic actuators used in Actuated Valve Packages. Features specified as "Standard" are available on packages in this price sheet. Features specified as "Accessory" are included as package add-ons in this price sheet. Features specified as "Options" must be special ordered (contact Spears® for pricing).

Please contact Spears® for any desired features or accessories not specified.

Pneumatic Actuator Features Overview

Standard Pneumatic Actuator Features	Premium Pneumatic TU Ball Valves	Premium Pneumatic Butterfly Valves	Premium Pneumatic Diaphragm Valves
Type	Dual Piston, Rack & Pinion	Dual Piston, Rack & Pinion	Linear Piston
Enclosure Material (ends/body)	Epoxy Coated/Hard Anodized Aluminum	Epoxy Coated/Hard Anodized Aluminum	PES-Polyestersulphone PP-Polypropylene
Standard Operation	Air-to-Air or Air-Spring Closed	Air-to-Air or Air-Spring Closed	Air-to-Air or Air-Spring Closed/Open
Standard Operating Pressure	80 psi	80 psi	80 psi
Air Connection Size	1/8"	1/8"	1/8"
Basic Manual Override	Standard	Standard	(Option)
Options & Accessories			
Air-Spring Open	Option	Option	Option
40 psi Operating Pressure	Option	Option	—
60 psi Operating Pressure	Option	Option	Option
Basic Manual Override	(Standard)	(Standard)	Option
Declutchable Manual Override	Option	Option	—
Pneumatic Positioner	Accessory	Accessory	Accessory
Electro-Pneumatic Positioner	Accessory	Accessory	Accessory
Dome Position Indicator	Accessory	Accessory	Accessory
Pointer Indicator	Accessory	Accessory	—
3 & 4-Way Solenoid Valve	Accessory	Accessory	Accessory
Dual Power Solenoid Valve	Accessory	Accessory	—
Limit Switches	Accessory	Accessory	Accessory
Output Signal Limit Switches	Accessory	Accessory	—
3-Way "Dribble" Control Limit Switches	Accessory	Accessory	—
Stainless Steel Pressure Gauge Set	Accessory	Accessory	Accessory
Stem Extension	Accessory	Accessory	Accessory
ID Tag-SS	Accessory	Accessory	Accessory

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Additional Actuated Valve Configurations, Options & Accessories Not Specified

Spears® can provide virtually any actuation need for Spears® valves. The following actuated valve configurations, options and accessories not currently specified in this price sheet are a few of those available on a special order basis. See the *Accessories* sections for standard configuration and accessory options. Please contact Spears® for additional technical information or other custom actuation needs. Certain special order options and custom Actuation Packages may require extended lead times. Please contact Spears® for details.

Special Actuated Ball Valves

- Compact Ball Valves
- Single Entry Ball Valves
- True Union 2000 3-Way Vertical & Horizontal Ball Valves
- Vented Ball Valves

Special Actuated Butterfly Valves

- Tandem 3-Way - two valves operated from one actuator, both closing or both opening at the same time
- Tandem Diverting - two valves operated from one actuator, one opening while the other closes
- "No Seat" actuated Butterfly Valves for duct (damper) applications
- Polypropylene 30" to 60" Actuated Valves (custom produced)

Actuated Gate Valves

- PVC & CPVC Construction
- Sizes 1/2" – 4"
- Socket, Thread, Flange End Connections

Special Actuator Options

- Actuators Only
- Actuator Brackets Only
- Actuator Stem Extensions
- Double Powder Coated Electric Enclosures
- Stainless Steel Pneumatic Enclosures
- Electric Spring Return Open or Close with No Override
- Battery Back-up Electric Actuators

Special Switch Sets & Solenoids

- Single Limit Switch & Bracket Only (no actuator) for manual valves
- Double Limit Switch & Bracket Only (no actuator) for manual valves
- Dual Coil 5-Way Solenoid Valves

Replacement Parts Many replacement parts are available for Spears® electric and pneumatic actuators and valves. Contact Spears® for specific parts needed.

Electro Actuated Compact 2000 Ball Valve

General purpose industrial grade sealed unit design, 1/4-turn shutoff. Basic On-Off operation.



- Maintenance-free
- PTFE Seats
- 235 psi @ 73°F (23°C) (flanged 150 psi)
- 115 VAC standard, optional voltages available
- High Impact PP NEMA 4x Enclosure, SS316 Fasteners
- 2-Position with Stem-mounted Visual Open/Close Indicator

See **Electric Actuator Accessories** for "2-wire" Control Add-on Actuator Accessory

PVC Electro Actuated Compact 2000 Ball Valve

O-ring	EPDM			FKM			Disc Code
Joint	Socket	Thread	Flanged	Socket	Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	E1404-005 **452.61**	E1406-005 **452.61**	E1408-005 **557.42**	E1405-005 **498.81**	E1407-005 **498.81**	E1409-005 **587.83**	496
3/4	E1404-007 **463.71**	E1406-007 **463.71**	E1408-007 **586.16**	E1405-007 **515.36**	E1407-007 **515.36**	E1409-007 **616.72**	496
1	E1404-010 **472.03**	E1406-010 **472.03**	E1408-010 **604.24**	E1405-010 **523.54**	E1407-010 **523.54**	E1409-010 **635.27**	496
1-1/4	E1504-012 **488.69**	E1506-012 **488.69**	E1508-012 **636.49**	E1505-012 **552.26**	E1507-012 **552.26**	E1509-012 **670.07**	496
1-1/2	E1504-015 **502.61**	E1506-015 **502.61**	E1508-015 **648.42**	E1505-015 **563.01**	E1507-015 **563.01**	E1509-015 **686.42**	496
2	E1504-020 **524.78**	E1506-020 **524.78**	E1508-020 **705.54**	E1505-020 **585.32**	E1507-020 **585.32**	E1509-020 **744.75**	496

CPVC

O-ring	EPDM			FKM			Disc Code
Joint	Socket	Thread	Flanged	Socket	Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	E1404-005C **460.93**	E1406-005C **460.93**	E1408-005C **575.63**	E1405-005C **514.89**	E1407-005C **514.89**	E1409-005C **607.20**	498
3/4	E1404-007C **477.59**	E1406-007C **477.59**	E1408-007C **608.88**	E1405-007C **535.89**	E1407-007C **535.89**	E1409-007C **637.03**	498
1	E1404-010C **499.80**	E1406-010C **499.80**	E1408-010C **624.16**	E1405-010C **544.46**	E1407-010C **544.46**	E1409-010C **656.29**	498
1-1/4	E1504-012C **530.35**	E1506-012C **530.35**	E1508-012C **671.94**	E1505-012C **574.18**	E1507-012C **574.18**	E1509-012C **696.34**	498
1-1/2	E1504-015C **541.43**	E1506-015C **541.43**	E1508-015C **680.32**	E1505-015C **581.44**	E1507-015C **581.44**	E1509-015C **709.23**	498
2	E1504-020C **588.66**	E1506-020C **588.66**	E1508-020C **733.05**	E1505-020C **604.03**	E1507-020C **604.03**	E1509-020C **769.78**	498

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Electro Actuated True Union 2000 Standard Ball Valve



General Purpose True Union design, 1/4-turn shutoff. Basic On-Off operation.

- Blocked Seal Carrier
- PTFE/HDPE Seats
- 235 psi @ 73°F (23°C) (flanged 150 psi)
- 115 VAC standard, optional voltages available
- High Impact PP NEMA 4x Enclosure, SS316 Fasteners
- 2-Position with Stem-mounted Visual Open/Close Indicator

See **Electric Actuator Accessories** for "2-wire" Control Add-on Actuator Accessory

PVC Electro Actuated True Union 2000 Standard Ball Valve

O-ring	EPDM			FKM			Disc Code
Joint	Socket & Thread	SR Thread	Flanged	Socket & Thread	SR Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	E1453-005 **469.73**	E1451-005SR **470.59**	E1457-005 **577.91**	E1454-005 **517.58**	E1452-005SR **518.55**	E1458-005 **636.74**	500
3/4	E1453-007 **479.98**	E1451-007SR **481.93**	E1457-007 **606.21**	E1454-007 **536.13**	E1452-007SR **538.09**	E1458-007 **675.55**	500
1	E1453-010 **494.41**	E1451-010SR **494.41**	E1457-010 **632.88**	E1454-010 **548.11**	E1452-010SR **550.23**	E1458-010 **701.72**	500
1-1/4	E1553-012 **506.39**	E1551-012SR **512.47**	E1557-012 **658.42**	E1554-012 **584.32**	E1552-012SR **590.29**	E1558-012 **759.53**	500
1-1/2	E1553-015 **535.73**	E1551-015SR **542.20**	E1557-015 **691.06**	E1554-015 **599.61**	E1552-015SR **606.21**	E1558-015 **773.62**	500
2	E1553-020 **567.65**	E1551-020SR **574.68**	E1557-020 **760.69**	E1554-020 **631.15**	E1552-020SR **637.77**	E1558-020 **845.79**	500

CPVC

O-ring	EPDM			FKM			Disc Code
Joint	Socket & Thread	SR Thread	Flanged	Socket & Thread	SR Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	E1453-005C **486.67**	E1451-005CSR **489.37**	E1457-005C **601.96**	E1454-005C **543.46**	E1452-005CSR **546.14**	E1458-005C **671.75**	502
3/4	E1453-007C **508.45**	E1451-007CSR **512.24**	E1457-007C **645.41**	E1454-007C **569.79**	E1452-007CSR **573.66**	E1458-007C **722.78**	502
1	E1455-010C **534.46**	E1451-010CSR **534.46**	E1457-010C **691.06**	E1454-010C **582.42**	E1452-010CSR **587.76**	E1458-010C **752.34**	502
1-1/4	E1555-012C **567.12**	E1551-012CSR **575.62**	E1557-012C **748.33**	E1554-012C **615.14**	E1552-012CSR **623.73**	E1558-012C **810.85**	502
1-1/2	E1555-015C **585.08**	E1551-015CSR **599.73**	E1557-015C **773.72**	E1554-015C **629.98**	E1552-015CSR **644.54**	E1558-015C **831.43**	502
2	E1555-020C **649.45**	E1551-020CSR **665.21**	E1557-020C **829.85**	E1554-020C **670.01**	E1552-020CSR **685.85**	E1558-020C **897.02**	502

Electro Actuated True Union 2000 Industrial Ball Valve



Industrial grade True Union design, 1/4-turn shutoff. Basic On-Off operation.

- Blocked Seal Carrier
- Double O-ring Stem Seal
- PTFE Seats
- 235 psi @ 73°F (23°C) (flanged 150 psi)
- 115 VAC standard, optional voltages available
- High Impact PP NEMA 4x Enclosure, SS316 Fasteners
- 2-Position with Stem-mounted Visual Open/Close Indicator

See **Electric Actuator Accessories** for "2-wire" Control Add-on Actuator Accessory

PVC Electro Actuated Industrial Ball Valve

O-ring	EPDM			FKM			Disc Code
Joint	Socket & Thread	SR Thread	Flanged	Socket & Thread	SR Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	E1459-005 **481.93**	E1463-005SR **484.63**	E1465-005 **586.83**	E1460-005 **531.21**	E1464-005SR **533.91**	E1466-005 **620.09**	500
3/4	E1459-007 **494.45**	E1463-007SR **498.29**	E1465-007 **616.88**	E1460-007 **552.27**	E1464-007SR **556.13**	E1466-007 **653.66**	500
1	E1459-010 **511.58**	E1463-010SR **516.92**	E1465-010 **642.60**	E1460-010 **567.29**	E1464-010SR **572.62**	E1466-010 **679.02**	500
1-1/4	E1559-012 **530.28**	E1563-012SR **538.83**	E1565-012 **678.07**	E1560-012 **630.67**	E1564-012SR **639.24**	E1566-012 **731.83**	500
1-1/2	E1559-015 **564.60**	E1563-015SR **579.25**	E1565-015 **710.45**	E1560-015 **631.74**	E1564-015SR **646.38**	E1566-015 **755.06**	500
2	E1559-020 **605.75**	E1563-020SR **621.61**	E1565-020 **786.48**	E1560-020 **672.71**	E1564-020SR **688.57**	E1566-020 **831.81**	500

CPVC

O-ring	EPDM			FKM			Disc Code
Joint	Socket & Thread	SR Thread	Flanged	Socket & Thread	SR Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	E1459-005C **502.83**	E1463-005CSR **505.55**	E1465-005C **617.59**	E1460-005C **561.39**	E1464-005CSR **566.80**	E1466-005C **653.31**	502
3/4	E1459-007C **528.92**	E1463-007CSR **532.74**	E1465-007C **660.09**	E1460-007C **592.45**	E1464-007CSR **613.32**	E1466-007C **698.83**	502
1	E1459-010C **558.72**	E1463-010CSR **564.04**	E1465-010C **683.11**	E1460-010C **609.47**	E1464-010CSR **614.74**	E1466-010C **721.15**	502
1-1/4	E1559-012C **605.81**	E1563-012CSR **614.42**	E1565-012C **732.93**	E1560-012C **658.12**	E1564-012CSR **666.68**	E1566-012C **780.33**	502
1-1/2	E1559-015C **625.94**	E1563-015CSR **640.59**	E1565-015C **780.16**	E1560-015C **660.13**	E1564-015CSR **674.84**	E1566-015C **806.54**	502
2	E1559-020C **738.12**	E1563-020CSR **754.00**	E1565-020C **879.42**	E1560-020C **771.15**	E1564-020CSR **787.20**	E1566-020C **905.27**	502

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Premium Actuated True Union 2000 Industrial Ball Valve - Electric



Industrial grade True Union design, 1/4-turn shutoff for a wide range of applications. Full-featured actuator can be custom configured with add-on accessories.

- Blocked Seal Carrier
- Double O-ring Stem Seal
- PTFE Seats
- 1/2" - 4" 235 psi @ 73°F (23°C)
- 6" and all flanged 150 psi @ 73°F (23°C)
- 115 VAC standard, optional voltages available
- 2-Position Operation with 2-SPDT Limit Switches
- NEMA 4 Enclosure, Powder Coated
- Manual Override (shown)
- Position Indicator

See **Electric Actuator Accessories** for Add-on Actuator Accessories

PVC

O-ring	EPDM			FKM			Disc Code
Joint	Socket	SR Thread	Flanged	Socket	SR Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	21101A112-005 **1065.72**	23101A112-005 **1075.91**	24101A112-005 **1096.10**	21201A112-005 **1073.33**	23201A112-005 **1083.01**	24201A112-005 **1102.88**	500
3/4	21101A112-007 **1071.26**	23101A112-007 **1086.56**	24101A112-007 **1106.39**	21201A112-007 **1079.34**	23201A112-007 **1094.23**	24201A112-007 **1114.80**	500
1	21101A112-010 **1087.91**	23101A112-010 **1097.39**	24101A112-010 **1127.19**	21201A112-010 **1097.32**	23201A112-010 **1107.46**	24201A112-010 **1138.47**	500
1-1/4	21101A112-012 **1100.36**	23101A112-012 **1111.07**	24101A112-012 **1147.22**	21201A112-012 **1110.39**	23201A112-012 **1121.12**	24201A112-012 **1155.01**	500
1-1/2	21101A112-015 **1113.58**	23101A112-015 **1123.68**	24101A112-015 **1164.10**	21201A112-015 **1126.70**	23201A112-015 **1137.29**	24201A112-015 **1175.07**	500
2	21101A112-020 **1162.81**	23101A112-020 **1176.79**	24101A112-020 **1217.67**	21201A112-020 **1178.51**	23201A112-020 **1192.62**	24201A112-020 **1228.05**	500
2-1/2	21101A111-025 **1350.14**	23101A111-025 **1402.33**	24101A111-025 **1470.41**	21201A111-025 **1386.53**	23201A111-025 **1441.26**	24201A111-025 **1490.74**	500
3	21101A111-030 **1417.06**	23101A111-030 **1431.39**	24101A111-030 **1497.24**	21201A111-030 **1444.97**	23201A111-030 **1455.14**	24201A111-030 **1516.56**	500
4	21101A121-040 **2585.00**	23101A121-040 **2602.76**	24101A121-040 **2946.19**	21201A121-040 **2638.52**	23201A121-040 **2666.64**	24201A121-040 **3016.21**	500
6	21101A121-060 **3603.81**	23101A121-060 **3644.09**	24101A121-060 **4367.06**	21201A121-060 **3696.56**	23201A121-060 **3731.04**	24201A121-060 **4601.46**	500

CPVC

O-ring	EPDM			FKM			Disc Code
Joint	Socket	SR Thread	Flanged	Socket	SR Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	21102A112-005 **1126.31**	23102A112-005 **1131.98**	24102A112-005 **1172.19**	21202A112-005 **1135.01**	23202A112-005 **1144.09**	24202A112-005 **1191.24**	502
3/4	21102A112-007 **1135.85**	23102A112-007 **1143.79**	24102A112-007 **1183.54**	21202A112-007 **1145.91**	23202A112-007 **1155.19**	24202A112-007 **1210.02**	502
1	21102A112-010 **1147.31**	23102A112-010 **1158.17**	24102A112-010 **1191.59**	21202A112-010 **1161.87**	23202A112-010 **1172.53**	24202A112-010 **1237.66**	502
1-1/4	21102A112-012 **1159.85**	23102A112-012 **1170.40**	24102A112-012 **1223.82**	21202A112-012 **1186.50**	23202A112-012 **1200.49**	24202A112-012 **1256.13**	502
1-1/2	21102A112-015 **1179.13**	23102A112-015 **1189.37**	24102A112-015 **1254.80**	21202A112-015 **1201.21**	23202A112-015 **1226.07**	24202A112-015 **1291.91**	502
2	21102A112-020 **1255.49**	23102A112-020 **1267.89**	24102A112-020 **1353.33**	21202A112-020 **1287.21**	23202A112-020 **1316.91**	24202A112-020 **1379.99**	502
2-1/2	21102A111-025 **1523.49**	23102A111-025 **1538.67**	24102A111-025 **1641.50**	21202A111-025 **1545.14**	23202A111-025 **1613.24**	24202A111-025 **1666.80**	502
3	21102A111-030 **1596.15**	23102A111-030 **1621.50**	24102A111-030 **1864.60**	21202A111-030 **1605.44**	23202A111-030 **1653.89**	24202A111-030 **1885.31**	502
4	21102A121-040 **2948.17**	23102A121-040 **2960.63**	24102A121-040 **3297.05**	21202A121-040 **2970.63**	23202A121-040 **3007.93**	24202A121-040 **3313.32**	502
6	21102A121-060 **4272.70**	23102A121-060 **4416.42**	24102A121-060 **5212.73**	21202A121-060 **4354.28**	23202A121-060 **4502.07**	24202A121-060 **5377.76**	502

NOTE:"Socket" valves up to 2" size include standard plastic thread end connectors.

Premium Actuated True Union 2000 Industrial Ball Valve - Pneumatic



Industrial grade True Union design, 1/4-turn shutoff for a wide range of applications. Full-featured actuator can be custom configured with add-on accessories.

- Blocked Seal Carrier
- Double O-ring Stem Seal
- PTFE Seats
- 1/2" - 4" 235 psi @ 73°F (23°C)
- 6" and all flanged 150 psi @ 73°F (23°C)
- 80 psi Operating Pressure, other options available
- 2-Position Air-Air or Air-Spring Closed (optional spring open)
- Dual Rack & Pinion with Adjustable Stops
- Manual Override
- Position Indicator

See **Pneumatic Actuator Accessories for Ball Valves & Butterfly Valves** for Add-on Actuator Accessories

PVC

O-ring	EPDM			FKM			Disc Code
Joint	Socket	SR Thread	Flanged	Socket	SR Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2 Air to Air	21101H101-005 **591.62**	23101H101-005 **599.01**	24101H101-005 **641.57**	21201H101-005 **598.40**	23201H101-005 **610.36**	24201H101-005 **652.48**	530
1/2 Air to Spring	21101J101-005 **686.34**	23101J101-005 **693.72**	24101J101-005 **734.90**	21201J101-005 **693.12**	23201J101-005 **704.97**	24201J101-005 **747.18**	530
3/4 Air to Air	21101H101-007 **606.97**	23101H101-007 **611.40**	24101H101-007 **655.29**	21201H101-007 **610.39**	23201H101-007 **617.89**	24201H101-007 **669.67**	530
3/4 Air to Spring	21101J101-007 **701.69**	23101J101-007 **706.13**	24101J101-007 **749.90**	21201J101-007 **708.08**	23201J101-007 **712.61**	24201J101-007 **764.40**	530
1 Air to Air	21101H101-010 **629.03**	23101H101-010 **637.05**	24101H101-010 **678.39**	21201H101-010 **635.79**	23201H101-010 **647.74**	24201H101-010 **687.42**	530
1 Air to Spring	21101J101-010 **723.75**	23101J101-010 **731.84**	24101J101-010 **773.09**	21201J101-010 **734.22**	23201J101-010 **742.48**	24201J101-010 **782.19**	530
1-1/4 Air to Air	21101H101-012 **642.25**	23101H101-012 **658.64**	24101H101-012 **699.85**	21201H101-012 **657.68**	23201H101-012 **669.73**	24201H101-012 **710.64**	530
1-1/4 Air to Spring	21101J101-012 **736.97**	23101J101-012 **753.26**	24101J101-012 **794.57**	21201J101-012 **752.39**	23201J101-012 **764.45**	24201J101-012 **810.46**	530
1-1/2 Air to Air	21101H101-015 **663.02**	23101H101-015 **676.14**	24101H101-015 **727.14**	21201H101-015 **670.32**	23201H101-015 **691.02**	24201H101-015 **739.16**	530
1-1/2 Air to Spring	21101J101-015 **757.84**	23101J101-015 **770.77**	24101J101-015 **821.91**	21201J101-015 **765.04**	23201J101-015 **785.74**	24201J101-015 **835.89**	530
2 Air to Air	21101H101-020 **697.65**	23101H101-020 **717.01**	24101H101-020 **764.56**	21201H101-020 **709.37**	23201H101-020 **737.42**	24201H101-020 **774.42**	530
2 Air to Spring	21101J101-020 **894.23**	23101J101-020 **908.53**	24101J101-020 **961.20**	21201J101-020 **905.87**	23201J101-020 **934.03**	24201J101-020 **971.04**	530
2-1/2 Air to Air	21101H101-025 **962.49**	23101H101-025 **1056.31**	24101H101-025 **1084.07**	21201H101-025 **984.65**	23201H101-025 **1076.94**	24201H101-025 **1105.69**	530
2-1/2 Air to Spring	21101J101-025 **1107.45**	23101J101-025 **1193.05**	24101J101-025 **1228.82**	21201J101-025 **1129.15**	23201J101-025 **1221.38**	24201J101-025 **1250.45**	530
3 Air to Air	21101H101-030 **985.88**	23101H101-030 **1072.23**	24101H101-030 **1119.75**	21201H101-030 **1008.24**	23201H101-030 **1098.41**	24201H101-030 **1144.35**	530
3 Air to Spring	21101J101-030 **1131.02**	23101J101-030 **1215.55**	24101J101-030 **1263.04**	21201J101-030 **1153.48**	23201J101-030 **1241.80**	24201J101-030 **1287.71**	530
4 Air to Air	21101H101-040 **1599.55**	23101H101-040 **1651.74**	24101H101-040 **1852.71**	21201H101-040 **1643.09**	23201H101-040 **1695.39**	24201H101-040 **1907.00**	530
4 Air to Spring	21101J101-040 **1748.68**	23101J101-040 **1915.85**	24101J101-040 **2117.03**	21201J101-040 **1907.24**	23201J101-040 **1959.39**	24201J101-040 **2171.03**	530
6 Air to Air	21101H101-060 **2143.46**	23101H101-060 **2301.04**	24101H101-060 **2519.09**	21201H101-060 **2250.54**	23201H101-060 **2566.07**	24201H101-060 **2608.04**	530
6 Air to Spring	21101J101-060 **2427.72**	23101J101-060 **2898.17**	24101J101-060 **3117.61**	21201J101-060 **2862.79**	23201J101-060 **3382.80**	24201J101-060 **3420.94**	530

NOTE:"Socket" valves up to 2" size include standard plastic thread end connectors.

For Air to Spring OPEN, change letter "**J**" to letter "**K**" in listed part number.

CPVC

O-ring	EPDM			FKM			Disc Code
Joint	Socket	SR Thread	Flanged	Socket	SR Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2 Air to Air	21102H101-005 **607.01**	23102H101-005 **613.10**	24102H101-005 **653.70**	21202H101-005 **615.02**	23202H101-005 **619.98**	24202H101-005 **662.24**	532
1/2 Air to Spring	21102J101-005 **700.39**	23102J101-005 **707.81**	24102J101-005 **748.31**	21202J101-005 **709.73**	23202J101-005 **715.30**	24202J101-005 **756.95**	532
3/4 Air to Air	21102H101-007 **618.59**	23102H101-007 **626.57**	24102H101-007 **669.18**	21202H101-007 **628.68**	23202H101-007 **634.60**	24202H101-007 **683.97**	532
3/4 Air to Spring	21102J101-007 **713.31**	23102J101-007 **721.29**	24102J101-007 **763.90**	21202J101-007 **723.39**	23202J101-007 **729.31**	24202J101-007 **778.68**	532

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Spears® Manufacturing Company

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC (continued)

O-ring	EPDM			FKM			Disc Code
Joint	Socket	SR Thread	Flanged	Socket	SR Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1 Air to Air	21102H101-010 **636.70**	23102H101-010 **649.23**	24102H101-010 **689.19**	21202H101-010 **647.36**	23202H101-010 **656.11**	24202H101-010 **707.47**	532
1 Air to Spring	21102J101-010 **731.42**	23102J101-010 **743.95**	24102J101-010 **783.79**	21202J101-010 **742.08**	23202J101-010 **747.07**	24202J101-010 **802.31**	532
1-1/4 Air to Air	21102H101-012 **659.09**	23102H101-012 **670.43**	24102H101-012 **713.73**	21202H101-012 **667.43**	23202H101-012 **681.71**	24202H101-012 **732.08**	532
1-1/4 Air to Spring	21102J101-012 **753.70**	23102J101-012 **765.15**	24102J101-012 **808.34**	21202J101-012 **762.15**	23202J101-012 **776.43**	24202J101-012 **826.80**	532
1-1/2 Air to Air	21102H101-015 **677.64**	23102H101-015 **689.77**	24102H101-015 **743.73**	21202H101-015 **689.52**	23202H101-015 **707.39**	24202H101-015 **768.70**	532
1-1/2 Air to Spring	21102J101-015 **772.26**	23102J101-015 **784.49**	24102J101-015 **840.87**	21202J101-015 **784.24**	23202J101-015 **802.11**	24202J101-015 **863.42**	532
2 Air to Air	21102H101-020 **718.66**	23102H101-020 **739.82**	24102H101-020 **785.42**	21202H101-020 **751.28**	23202H101-020 **763.01**	24202H101-020 **829.04**	532
2 Air to Spring	21102J101-020 **915.26**	23102J101-020 **936.43**	24102J101-020 **981.93**	21202J101-020 **947.88**	23202J101-020 **959.61**	24202J101-020 **1025.64**	532
2-1/2 Air to Air	21102H101-025 **1032.35**	23102H101-025 **1085.39**	24102H101-025 **1101.24**	21202H101-025 **1055.75**	23202H101-025 **1148.05**	24202H101-025 **1232.58**	532
2-1/2 Air to Spring	21102J101-025 **1176.95**	23102J101-025 **1229.88**	24102J101-025 **1245.71**	21202J101-025 **1200.25**	23202J101-025 **1290.50**	24202J101-025 **1377.37**	532
3 Air to Air	21102H101-030 **1060.86**	23102H101-030 **1105.70**	24102H101-030 **1156.92**	21202H101-030 **1093.88**	23202H101-030 **1179.97**	24202H101-030 **1261.09**	532
3 Air to Spring	21102J101-030 **1206.10**	23102J101-030 **1248.99**	24102J101-030 **1300.31**	21202J101-030 **1240.40**	23202J101-030 **1323.37**	24202J101-030 **1404.59**	532
4 Air to Air	21102H101-040 **2136.50**	23102H101-040 **2147.18**	24102H101-040 **2268.94**	21202H101-040 **2279.55**	23202H101-040 **2286.58**	24202H101-040 **2397.18**	532
4 Air to Spring	21102J101-040 **2400.46**	23102J101-040 **2411.33**	24102J101-040 **2533.09**	21202J101-040 **2543.50**	23202J101-040 **2550.53**	24202J101-040 **2661.40**	532
6 Air to Air	21102H101-060 **3423.52**	23102H101-060 **3444.05**	24102H101-060 **3947.32**	21202H101-060 **3501.33**	23202H101-060 **3525.32**	24202H101-060 **4129.88**	532
6 Air to Spring	21102J101-060 **4016.14**	23102J101-060 **4282.37**	24102J101-060 **4527.94**	21202J101-060 **4137.11**	23202J101-060 **4358.94**	24202J101-060 **4677.32**	532

NOTE:"Socket" valves up to 2" size include standard plastic thread end connectors.

For Air to Spring OPEN, change letter "**J**" to letter "**K**" in listed part number.

Premium Actuated Standard Butterfly Valve - Electric



Industrial grade valve with patented seat design uses no liner. Eliminates seat-creep and reduces operating torque. Full-featured actuator can be custom configured with add-on accessories.

- Solid SS316L Stem
- ANSI Class 150 Bolt Pattern
- 150 psi @ 73°F (23°C) (Thru 12"), 14"-100 psi, 16"-85 psi, 18"-70 psi, 20"-24"-50 psi
- 115 VAC standard, optional voltages available
- 2-Position Operation with 2-SPDT Limit Switches
- NEMA 4 Enclosure, Powder Coated
- Declutchable Manual Override
- Position Indicator

See **Electric Actuator Accessories** for Add-on Actuator Accessories

PVC

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2	41101A121-015 **1564.27**	41201A121-015 **1564.27**	41301A121-015 **1825.80**	510
2	41101A121-020 **1606.43**	41201A121-020 **1606.43**	41301A121-020 **1865.74**	510
2-1/2	41101A121-025 **1631.00**	41201A121-025 **1631.00**	41301A121-025 **1899.07**	510
3	41101A121-030 **1911.98**	41201A121-030 **1911.98**	41301A121-030 **2184.48**	510
4	41101A121-040 **2104.18**	41201A121-040 **2104.18**	41301A121-040 **2473.37**	510
6	41101A121-060 **2857.84**	41201A121-060 **2857.84**	41301A121-060 **3490.80**	510
8	41101A121-080 **3234.03**	41201A121-080 **3234.03**	41301A121-080 **4280.12**	510
10	41101A121-100 **4687.24**	41201A121-100 **4687.24**	41301A121-100 **6779.36**	510
12	41101A123-120 **4929.28**	41201A123-120 **4929.28**	41301A123-120 **6235.70**	510

CPVC

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2	41102A121-015 **1667.58**	41202A121-015 **1667.58**	41302A121-015 **2014.81**	512
2	41102A121-020 **1707.52**	41202A121-020 **1707.52**	41302A121-020 **2045.93**	512
2-1/2	41102A121-025 **1738.65**	41202A121-025 **1738.65**	41302A121-025 **2092.48**	512
3	41102A121-030 **2043.83**	41202A121-030 **2043.83**	41302A121-030 **2435.02**	512
4	41102A121-040 **2258.00**	41202A121-040 **2490.45**	41302A121-040 **2794.26**	512
6	41102A121-060 **3086.42**	41202A121-060 **3086.42**	41302A121-060 **4005.01**	512
8	41102A121-080 **3629.60**	41202A121-080 **3629.60**	41302A121-080 **5150.38**	512
10	41102A121-100 **5474.01**	41202A121-100 **5474.01**	41302A121-100 **8528.66**	512
12	41102A123-120 **6332.49**	41202A123-120 **6332.49**	41302A123-120 **8092.70**	512

Polypropylene

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2	41103A121-015 **1781.13**	41203A121-015 **1781.13**	41303A121-015 **2230.01**	514
2	41103A121-020 **1806.16**	41203A121-020 **1806.16**	41303A121-020 **2262.23**	514
2-1/2	41103A121-025 **1839.83**	41203A121-025 **1839.83**	41303A121-025 **2312.04**	514
3	41103A121-030 **2129.28**	41203A121-030 **2129.28**	41303A121-030 **2611.47**	514
4	41103A121-040 **2349.35**	41203A121-040 **2349.35**	41303A121-040 **2995.54**	514
6	41103A121-060 **3237.91**	41203A121-060 **3237.91**	41303A121-060 **4333.37**	514
8	41103A121-080 **3880.37**	41203A121-080 **3880.37**	41303A121-080 **5714.22**	514
10	41103A121-100 **5971.47**	41203A121-100 **5971.47**	41303A121-100 **9656.34**	514
12	41103A123-120 **7548.63**	41203A123-120 **6686.28**	41303A123-120 **8350.91**	514

Polypropylene (continued)

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
14, 16, 18, 20 & 24 - Price On Application				

NOTE: Due to variations in potential system operating conditions, 14" -24" Actuated Butterfly Valve packages are sized and priced according to application parameters. Please contact Spears® for additional information.

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Premium Actuated Standard Butterfly Valve - Pneumatic



Industrial grade valve with patented seat design uses no liner. Eliminates seat-creep and reduces operating torque. Full-featured actuator can be custom configured with add-on accessories.

- Solid SS316L Stem
- ANSI Class 150 Bolt Pattern
- 150 psi @ 73°F (23°C) (Thru 12")
- 14"-100 psi, 16"- 85 psi, 18"-70 psi, 20"-24"-50 psi
- 80 psi Operating Pressure, other options available
- 2-Position Air-Air or Air-Spring Closed (optional spring open)
- Dual Rack & Pinion with Adjustable Stops
- Manual Override
- Position Indicator

See **Pneumatic Actuator Accessories for Ball Valves & Butterfly Valves** for Add-on Actuator Accessories

NOTE: Due to variations in potential system operating conditions, 14" -24" Actuated Butterfly Valve packages are sized and priced according to application parameters. Please contact Spears® for additional information.

PVC

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2 Air to Air	41101H101-015 **621.21**	41201H101-015 **621.21**	41301H101-015 **882.73**	540
1-1/2 Air to Spring	41101J101-015 **690.59**	41201J101-015 **690.59**	41301J101-015 **952.09**	540
2 Air to Air	41101H101-020 **663.34**	41201H101-020 **663.34**	41301H101-020 **922.65**	540
2 Air to Spring	41101J101-020 **827.36**	41201J101-020 **827.36**	41301J101-020 **1086.65**	540
2-1/2 Air to Air	41101H101-025 **687.93**	41201H101-025 **687.93**	41301H101-025 **955.99**	540
2-1/2 Air to Spring	41101J101-025 **915.02**	41201J101-025 **915.02**	41301J101-025 **1183.09**	540
3 Air to Air	41101H101-030 **801.76**	41201H101-030 **801.76**	41301H101-030 **1074.23**	540
3 Air to Spring	41101J101-030 **987.84**	41201J101-030 **987.84**	41301J101-030 **1260.33**	540
4 Air to Air	41101H101-040 **940.31**	41201H101-040 **940.31**	41301H101-040 **1309.48**	540
4 Air to Spring	41101J101-040 **1198.94**	41201J101-040 **1198.94**	41301J101-040 **1568.12**	540
6 Air to Air	41101H101-060 **1318.64**	41201H101-060 **1318.64**	41301H101-060 **1951.58**	540
6 Air to Spring	41101J101-060 **1826.45**	41201J101-060 **1826.45**	41301J101-060 **2459.40**	540
8 Air to Air	41101H101-080 **1871.45**	41201H101-080 **1871.45**	41301H101-080 **2917.54**	540
8 Air to Spring	41101J101-080 **2584.31**	41201J101-080 **2584.31**	41301J101-080 **3630.36**	540
10 Air to Air	41101H101-100 **2788.46**	41201H101-100 **2788.46**	41301H101-100 **4880.59**	540
10 Air to Spring	41101J101-100 **4043.80**	41201J101-100 **4043.80**	41301J101-100 **6135.93**	540
12 Air to Air	41101H101-120 **3300.87**	41201H101-120 **3300.87**	41301H101-120 **6522.59**	540
12 Air to Spring	41101J101-120 **4556.22**	41201J101-120 **4556.22**	41301J101-120 **7777.92**	540

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

CPVC

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2 Air to Air	41102H101-015 **724.52**	41202H101-015 **724.52**	41302H101-015 **1071.73**	542
1-1/2 Air to Spring	41102J101-015 **793.89**	41202J101-015 **793.89**	41302J101-015 **1141.12**	542
2 Air to Air	41102H101-020 **764.43**	41202H101-020 **764.43**	41302H101-020 **1102.85**	542
2 Air to Spring	41102J101-020 **928.45**	41202J101-020 **928.45**	41302J101-020 **1266.84**	542
2-1/2 Air to Air	41102H101-025 **795.57**	41202H101-025 **795.57**	41302H101-025 **1149.40**	542
2-1/2 Air to Spring	41102J101-025 **1023.08**	41202J101-025 **1023.08**	41302J101-025 **1376.51**	542
3 Air to Air	41102H101-030 **933.59**	41202H101-030 **933.59**	41302H101-030 **1324.76**	542

CPVC (continued)

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
3 Air to Spring	41102J101-030 **1119.67**	41202J101-030 **1119.67**	41302J101-030 **1510.85**	542
4 Air to Air	41102H101-040 **1094.12**	41202H101-040 **1094.12**	41302H101-040 **1630.40**	542
4 Air to Spring	41102J101-040 **1352.76**	41202J101-040 **1352.76**	41302J101-040 **1889.04**	542
6 Air to Air	41102H101-060 **1547.18**	41202H101-060 **1547.18**	41302H101-060 **2465.80**	542
6 Air to Spring	41102J101-060 **2055.01**	41202J101-060 **2055.01**	41302J101-060 **2973.61**	542
8 Air to Air	41102H101-080 **2267.02**	41202H101-080 **2267.02**	41302H101-080 **3787.82**	542
8 Air to Spring	41102J101-080 **2979.84**	41202J101-080 **2979.84**	41302J101-080 **4500.64**	542
10 Air to Air	41102H101-100 **3575.23**	41202H101-100 **3575.23**	41302H101-100 **6629.91**	542
10 Air to Spring	41102J101-100 **4830.57**	41202J101-100 **4830.57**	41302J101-100 **7885.23**	542
12 Air to Air	41102H101-120 **4338.15**	41202H101-120 **4338.15**	41302H101-120 **8309.27**	542
12 Air to Spring	41102J101-120 **5593.48**	41202J101-120 **5593.48**	41302J101-120 **9564.60**	542

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

Polypropylene

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2 Air to Air	41103H101-015 **838.05**	41203H101-015 **838.05**	41303H101-015 **1286.94**	544
1-1/2 Air to Spring	41103J101-015 **907.43**	41203J101-015 **907.43**	41303J101-015 **1356.32**	544
2 Air to Air	41103H101-020 **863.08**	41203H101-020 **863.08**	41303H101-020 **1319.15**	544
2 Air to Spring	41103J101-020 **1027.12**	41203J101-020 **1027.12**	41303J101-020 **1483.16**	544
2-1/2 Air to Air	41103H101-025 **896.74**	41203H101-025 **896.74**	41303H101-025 **1368.96**	544
2-1/2 Air to Spring	41103J101-025 **1123.85**	41203J101-025 **1123.85**	41303J101-025 **1596.06**	544
3 Air to Air	41103H101-030 **1019.04**	41203H101-030 **1019.04**	41303H101-030 **1501.24**	544
3 Air to Spring	41103J101-030 **1205.13**	41203J101-030 **1205.13**	41303J101-030 **1687.34**	544
4 Air to Air	41103H101-040 **1185.47**	41203H101-040 **1185.47**	41303H101-040 **1831.65**	544
4 Air to Spring	41103J101-040 **1444.11**	41203J101-040 **1444.11**	41303J101-040 **2090.29**	544
6 Air to Air	41103H101-060 **1698.69**	41203H101-060 **1698.69**	41303H101-060 **2794.18**	544
6 Air to Spring	41103J101-060 **2206.49**	41203J101-060 **2206.49**	41303J101-060 **3301.97**	544
8 Air to Air	41103H101-080 **2517.78**	41203H101-080 **2517.78**	41303H101-080 **4351.64**	544
8 Air to Spring	41103J101-080 **3230.60**	41203J101-080 **3230.60**	41303J101-080 **3645.13**	544
10 Air to Air	41103H101-100 **4072.68**	41203H101-100 **4072.68**	41303H101-100 **7757.55**	544

Polypropylene (continued)

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
10 Air to Spring	41103J101-100 **5328.04**	41203J101-100 **5328.04**	41303J101-100 **9012.88**	544
12 Air to Air	41103H101-120 **4968.57**	41203H101-120 **4968.57**	41303H101-120 **10634.23**	544
12 Air to Spring	41103J101-120 **6223.91**	41203J101-120 **6223.91**	41303J101-120 **11889.59**	544

14, 16, 18, 20 & 24 - Price On Application
NOTE: For Air to Spring OPEN, change letter "**J**" to letter "**K**" in listed part number.

Premium Actuated Lug Insert Butterfly Valve - Electric



Industrial grade valve with factory assembled lug inserts. Patented seat design uses no liner. Eliminates seat-creep and reduces operating torque. Full-featured actuator can be custom configured with add-on accessories.

- Solid SS316L Stem
- ANSI Class 150 Bolt Pattern
- 150 psi @ 73°F (23°C)
- 115 VAC standard, optional voltages available
- Zinc or SS Lug Inserts
- 2-Position Operation with 2-SPDT Limit Switches
- NEMA 4 Enclosure, Powder Coated
- Declutchable Manual Override
- Position Indicator

See **Electric Actuator Accessories** for Add-on Actuator Accessories

PVC - Stainless Steel Lug Inserts

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2	41121A121-015 **1647.08**	41221A121-015 **1647.08**	41321A121-015 **1884.78**	510
2	41121A121-020 **1692.66**	41221A121-020 **1692.66**	41321A121-020 **1941.75**	510
2-1/2	41121A121-025 **1738.21**	41221A121-025 **1738.21**	41321A121-025 **1957.40**	510
3	41121A121-030 **2229.55**	41221A121-030 **2229.55**	41321A121-030 **2467.25**	510
4	41121A121-040 **2981.71**	41221A121-040 **2981.71**	41321A121-040 **3273.47**	510
6	41121A121-060 **3966.44**	41221A121-060 **3966.44**	41321A121-060 **4494.48**	510
8	41121A121-080 **4354.26**	41221A121-080 **4354.26**	41321A121-080 **5383.32**	510
10	41121A121-100 **6745.96**	41221A121-100 **6745.96**	41321A121-100 **8771.31**	510
12	41121A123-120 **7781.83**	41221A123-120 **7781.83**	41321A123-120 **8959.16**	510

PVC - Zinc Lug Inserts

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2	41111A121-015 **1583.91**	41211A121-015 **1583.91**	41311A121-015 **1837.09**	510
2	41111A121-020 **1632.88**	41211A121-020 **1632.88**	41311A121-020 **1982.45**	510
2-1/2	41111A121-025 **1654.37**	41211A121-025 **1654.37**	41311A121-025 **1925.38**	510
3	41111A121-030 **2145.58**	41211A121-030 **2145.58**	41311A121-030 **2349.13**	510
4	41111A121-040 **2830.84**	41211A121-040 **2830.84**	41311A121-040 **3081.34**	510
6	41111A121-060 **3768.60**	41211A121-060 **3768.60**	41311A121-060 **4219.80**	510
8	41111A121-080 **4108.03**	41211A121-080 **4108.03**	41311A121-080 **5117.15**	510
10	41111A121-100 **6252.08**	41211A121-100 **6252.08**	41311A121-100 **7974.26**	510
12	41111A123-120 **5828.11**	41211A123-120 **5828.11**	41311A123-120 **6985.37**	510

CPVC - Stainless Steel Lug Inserts

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2	41122A121-015 **1813.61**	41222A121-015 **1813.61**	41322A121-015 **2112.51**	512
2	41122A121-020 **1867.73**	41222A121-020 **1867.73**	41322A121-020 **2156.65**	512
2-1/2	41122A121-025 **1874.85**	41222A121-025 **1874.85**	41322A121-025 **2186.55**	512
3	41122A121-030 **2371.89**	41222A121-030 **2371.89**	41322A121-030 **2679.33**	512
4	41122A121-040 **3249.28**	41222A121-040 **3249.28**	41322A121-040 **3606.54**	512
6	41122A121-060 **4295.23**	41222A121-060 **4295.23**	41322A121-060 **4964.17**	512
8	41122A121-080 **4779.82**	41222A121-080 **4779.82**	41322A121-080 **6140.51**	512
10	41122A121-100 **7595.67**	41222A121-100 **7595.67**	41322A121-100 **10002.46**	512

CPVC - Stainless Steel Lug Inserts (continued)

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
12	41122A123-120 **8472.60**	41222A123-120 **8472.60**	41322A123-120 **9605.33**	512

CPVC - Zinc Lug Inserts

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2	41112A121-015 **1712.57**	41212A121-015 **1712.57**	41312A121-015 **2061.82**	512
2	41112A121-020 **1768.09**	41212A121-020 **1768.09**	41312A121-020 **2076.25**	512
2-1/2	41112A121-025 **1775.23**	41212A121-025 **1775.23**	41312A121-025 **2108.00**	512
3	41112A121-030 **2266.56**	41212A121-030 **2266.56**	41312A121-030 **2521.34**	512
4	41112A121-040 **3001.68**	41212A121-040 **3001.63**	41312A121-040 **3364.57**	512
6	41112A121-060 **4056.12**	41212A121-060 **4056.12**	41312A121-060 **4622.59**	512
8	41112A121-080 **4453.89**	41212A121-080 **4453.89**	41312A121-080 **5831.64**	512
10	41112A121-100 **6953.75**	41212A121-100 **6953.75**	41312A121-100 **9340.63**	512
12	41112A123-120 **7027.30**	41212A123-120 **7027.30**	41312A123-120 **8416.30**	512

Premium Actuated Lug Insert Butterfly Valve - Pneumatic



Industrial grade valve with factory assembled lug inserts. Patented seat design uses no liner. Eliminates seat-creep and reduces operating torque. Full-featured actuator can be custom configured with add-on accessories.

- Solid SS316L Stem
- ANSI Class 150 Bolt Pattern
- 150 psi @ 73°F (23°C)
- Zinc or SS Lug Inserts
- 80 psi Operating Pressure, other options available
- 2-Position Air-Air or Air-Spring Closed (optional spring open)
- Dual Rack & Pinion with Adjustable Stops
- Manual Override
- Position Indicator

See **Pneumatic Actuator Accessories for Ball Valves & Butterfly Valves** for Add-on Actuator Accessories

PVC - Stainless Steel Lug Inserts

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2 Air to Air	41121H101-015 **910.18**	41221H101-015 **898.26**	41321H101-015 **1135.95**	540
1-1/2 Air to Spring	41121J101-015 **962.57**	41221J101-015 **962.57**	41321J101-015 **1200.25**	540
2 Air to Air	41121H101-020 **943.84**	41221H101-020 **943.84**	41321H101-020 **1192.94**	540
2 Air to Spring	41121J101-020 **1098.89**	41221J101-020 **1098.89**	41321J101-020 **1347.97**	540
2-1/2 Air to Air	41121H101-025 **1038.93**	41221H101-025 **1038.93**	41321H101-025 **1258.11**	540
2-1/2 Air to Spring	41121J101-025 **1254.49**	41221J101-025 **1254.49**	41321J101-025 **1473.67**	540
3 Air to Air	41121H101-030 **1299.20**	41221H101-030 **1299.20**	41321H101-030 **1536.89**	540
3 Air to Spring	41121J101-030 **1339.69**	41221J101-030 **1339.69**	41321J101-030 **1577.39**	540
4 Air to Air	41121H101-040 **1729.88**	41221H101-040 **1729.88**	41321H101-040 **2021.65**	540
4 Air to Spring	41121J101-040 **1971.94**	41221J101-040 **1971.94**	41321J101-040 **2263.71**	540
6 Air to Air	41121H101-060 **2446.11**	41221H101-060 **2446.11**	41321H101-060 **2974.15**	540
6 Air to Spring	41121J101-060 **2789.51**	41221J101-060 **2789.51**	41321J101-060 **3317.54**	540
8 Air to Air	41121H101-080 **2924.01**	41221H101-080 **2924.01**	41321H101-080 **3953.04**	540
8 Air to Spring	41121J101-080 **3747.68**	41221J101-080 **3747.68**	41321J101-080 **4776.73**	540
10 Air to Air	41121H101-100 **4817.54**	41221H101-100 **4817.54**	41321H101-100 **6842.91**	540
10 Air to Spring	41121J101-100 **6037.95**	41221J101-100 **6037.95**	41321J101-100 **8063.31**	540
12 Air to Air	41121H101-120 **5388.03**	41221H101-120 **5388.03**	41321H101-120 **8226.08**	540
12 Air to Spring	41121J101-120 **6594.46**	41221J101-120 **6594.46**	41321J101-120 **9432.54**	540

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

PVC - Zinc Lug Inserts

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2 Air to Air	41111H101-015 **808.61**	41211H101-015 **808.61**	41311H101-015 **1022.09**	540
1-1/2 Air to Spring	41111J101-015 **872.91**	41211J101-015 **872.91**	41311J101-015 **1086.39**	540
2 Air to Air	41111H101-020 **884.06**	41211H101-020 **884.06**	41311H101-020 **1074.79**	540
2 Air to Spring	41111J101-020 **1039.13**	41211J101-020 **1039.13**	41311J101-020 **1229.85**	540
2-1/2 Air to Air	41111H101-025 **954.95**	41211H101-025 **954.95**	41311H101-025 **1159.89**	540
2-1/2 Air to Spring	41111J101-025 **1170.53**	41211J101-025 **1170.53**	41311J101-025 **1375.47**	540
3 Air to Air	41111H101-030 **1215.23**	41211H101-030 **1215.23**	41311H101-030 **1418.77**	540

PVC - Zinc Lug Inserts (continued)

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
3 Air to Spring	41111J101-030 **1255.73**	41211J101-030 **1255.73**	41311J101-030 **1459.26**	540
4 Air to Air	41111H101-040 **1579.01**	41211H101-040 **1579.01**	41311H101-040 **1829.52**	540
4 Air to Spring	41111J101-040 **1821.05**	41211J101-040 **1821.05**	41311J101-040 **2071.56**	540
6 Air to Air	41111H101-060 **2380.64**	41211H101-060 **2380.64**	41311H101-060 **2699.46**	540
6 Air to Spring	41111J101-060 **2591.67**	41211J101-060 **2591.67**	41311J101-060 **3042.85**	540
8 Air to Air	41111H101-080 **2677.76**	41211H101-080 **2677.76**	41311H101-080 **3554.52**	540
8 Air to Spring	41111J101-080 **3501.44**	41211J101-080 **3501.44**	41311J101-080 **4378.19**	540
10 Air to Air	41111H101-100 **4323.67**	41211H101-100 **4323.67**	41311H101-100 **6045.85**	540
10 Air to Spring	41111J101-100 **5544.07**	41211J101-100 **5544.07**	41311J101-100 **7266.26**	540
12 Air to Air	41111H101-120 **4817.29**	41211H101-120 **4817.29**	41311H101-120 **8065.25**	540
12 Air to Spring	41111J101-120 **6023.73**	41211J101-120 **6023.73**	41311J101-120 **9271.69**	540

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

CPVC - Stainless Steel Lug Inserts

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2 Air to Air	41122H101-015 **1064.78**	41222H101-015 **1064.78**	41322H101-015 **1363.68**	542
1-1/2 Air to Spring	41122J101-015 **1129.09**	41222J101-015 **1129.09**	41322J101-015 **1427.99**	542
2 Air to Air	41122H101-020 **1118.91**	41222H101-020 **1118.91**	41322H101-020 **1407.84**	542
2 Air to Spring	41122J101-020 **1273.97**	41222J101-020 **1273.97**	41322J101-020 **1562.88**	542
2-1/2 Air to Air	41122H101-025 **1175.57**	41222H101-025 **1175.57**	41322H101-025 **1487.25**	542
2-1/2 Air to Spring	41122J101-025 **1391.13**	41222J101-025 **1391.13**	41322J101-025 **1702.83**	542
3 Air to Air	41122H101-030 **1441.55**	41222H101-030 **1441.55**	41322H101-030 **1748.97**	542
3 Air to Spring	41122J101-030 **1482.38**	41222J101-030 **1482.03**	41322J101-030 **1789.46**	542
4 Air to Air	41122H101-040 **1997.46**	41222H101-040 **1997.46**	41322H101-040 **2354.73**	542
4 Air to Spring	41122J101-040 **2239.51**	41222J101-040 **2239.51**	41322J101-040 **2596.77**	542
6 Air to Air	41122H101-060 **2774.89**	41222H101-060 **2774.89**	41322H101-060 **3443.83**	542
6 Air to Spring	41122J101-060 **3118.29**	41222J101-060 **3118.29**	41322J101-060 **3787.23**	542
8 Air to Air	41122H101-080 **3349.57**	41222H101-080 **3349.57**	41322H101-080 **4710.23**	542
8 Air to Spring	41122J101-080 **4173.23**	41222J101-080 **4173.23**	41322J101-080 **5533.92**	542

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Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC - Stainless Steel Lug Inserts (continued)

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
10 Air to Air	41122H101-100 **5667.25**	41222H101-100 **5667.25**	41322H101-100 **8074.05**	542
10 Air to Spring	41122J101-100 **6279.72**	41222J101-100 **6279.72**	41322J101-100 **8686.51**	542
12 Air to Air	41122H101-120 **6353.03**	41222H101-120 **6353.03**	41322H101-120 **9653.65**	542
12 Air to Spring	41122J101-120 **7559.47**	41222J101-120 **7559.47**	41322J101-120 **10860.09**	542

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

CPVC - Zinc Lug Inserts

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2 Air to Air	41112H101-015 **963.74**	41212H101-015 **963.74**	41312H101-015 **1207.13**	542
1-1/2 Air to Spring	41112J101-015 **1027.77**	41212J101-015 **1027.77**	41312J101-015 **1271.42**	542
2 Air to Air	41112H101-020 **1019.27**	41212H101-020 **1019.27**	41312H101-020 **1261.24**	542
2 Air to Spring	41112J101-020 **1174.34**	41212J101-020 **1174.31**	41312J101-020 **1416.31**	542
2-1/2 Air to Air	41112H101-025 **1075.94**	41212H101-025 **1075.94**	41312H101-025 **1329.27**	542
2-1/2 Air to Spring	41112J101-025 **1291.51**	41212J101-025 **1291.51**	41312J101-025 **1544.85**	542
3 Air to Air	41112H101-030 **1336.20**	41212H101-030 **1336.20**	41312H101-030 **1590.98**	542
3 Air to Spring	41112J101-030 **1376.69**	41212J101-030 **1376.69**	41312J101-030 **1631.46**	542
4 Air to Air	41112H101-040 **1749.82**	41212H101-040 **1749.82**	41312H101-040 **2112.76**	542
4 Air to Spring	41112J101-040 **1991.86**	41212J101-040 **1991.86**	41312J101-040 **2354.80**	542
6 Air to Air	41112H101-060 **2535.78**	41212H101-060 **2535.78**	41312H101-060 **3102.25**	542
6 Air to Spring	41112J101-060 **2879.17**	41212J101-060 **2879.17**	41312J101-060 **3445.64**	542
8 Air to Air	41112H101-080 **3023.64**	41212H101-080 **3023.64**	41312H101-080 **4401.39**	542
8 Air to Spring	41112J101-080 **3847.32**	41212J101-080 **3847.32**	41312J101-080 **5225.06**	542
10 Air to Air	41112H101-100 **5025.36**	41212H101-100 **5025.36**	41312H101-100 **7412.23**	542
10 Air to Spring	41112J101-100 **5637.80**	41212J101-100 **5637.80**	41312J101-100 **8024.68**	542
12 Air to Air	41112H101-120 **5628.57**	41212H101-120 **5628.57**	41312H101-120 **9263.67**	542
12 Air to Spring	41112J101-120 **6835.01**	41212J101-120 **6835.01**	41312J101-120 **10470.12**	542

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

Premium Actuated True Lug Butterfly Valve - Electric



Industrial grade lug style valve with patented seat design uses no liner. Eliminates seat-creep and reduces operating torque. Full-featured actuator can be custom configured with add-on accessories.

- Solid SS316L Stem
- ANSI Class 150 Bolt Pattern
- 150 psi @ 73°F (23°C)
- 115 VAC standard, optional voltages available
- 2-Position Operation with 2-SPDT Limit Switches
- NEMA 4 Enclosure, Powder Coated
- Declutchable Manual Override
- Position Indicator

See **Electric Actuator Accessories** for Add-on Actuator Accessories

PVC - Stainless Steel Lugs

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2	51121A121-015 **2011.01**	51221A121-015 **2011.01**	51321A121-015 **2343.89**	510
2	51121A121-020 **2041.21**	51221A121-020 **2041.21**	51321A121-020 **2390.58**	510
2-1/2	51121A121-025 **2121.34**	51221A121-025 **2121.34**	51321A121-025 **2426.55**	510
3	51121A121-030 **2405.72**	51221A121-030 **2405.72**	51321A121-030 **2740.20**	510
4	51121A121-040 **3170.02**	51221A121-040 **3170.02**	51321A121-040 **3578.43**	510
6	51121A121-060 **4208.87**	51221A121-060 **4208.87**	51321A121-060 **4947.49**	510
8	51121A121-080 **4650.21**	51221A121-080 **4650.21**	51321A121-080 **6089.76**	510
10	51121A121-100 **7598.87**	51221A121-100 **7598.87**	51321A121-100 **10432.09**	510
12	51121A123-120 **8311.76**	51221A123-120 **8311.76**	51321A123-120 **9428.33**	510

PVC - Zinc Lugs

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2	51111A121-015 **1886.03**	51211A121-015 **1886.03**	51311A121-015 **2186.18**	510
2	51111A121-020 **1958.35**	51211A121-020 **1958.35**	51311A121-020 **2224.12**	510
2-1/2	51111A121-025 **2006.60**	51211A121-025 **2006.60**	51311A121-025 **2290.58**	510
3	51111A121-030 **2289.53**	51211A121-030 **2289.53**	51311A121-030 **2573.79**	510
4	51111A121-040 **2961.57**	51211A121-040 **2961.57**	51311A121-040 **3226.01**	510
6	51111A121-060 **3934.39**	51211A121-060 **3934.39**	51311A121-060 **4564.60**	510
8	51111A121-080 **4307.99**	51211A121-080 **4307.99**	51311A121-080 **5533.55**	510
10	51111A121-100 **6909.63**	51211A121-100 **6909.63**	51311A121-100 **9317.88**	510
12	51111A123-120 **7464.31**	51211A123-120 **7464.31**	51311A123-120 **8354.61**	510

CPVC - Stainless Steel Lugs

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2	51122A121-015 **2244.86**	51222A121-015 **2244.86**	51322A121-015 **2664.37**	512
2	51122A121-020 **2286.85**	51222A121-020 **2286.85**	51322A121-020 **2690.41**	512
2-1/2	51122A121-025 **2312.57**	51222A121-025 **2312.57**	51322A121-025 **2748.95**	512
3	51122A121-030 **2606.44**	51222A121-030 **2606.44**	51322A121-030 **3036.46**	512
4	51122A121-040 **3545.11**	51222A121-040 **3545.11**	51322A121-040 **4046.33**	512
6	51122A121-060 **4243.87**	51222A121-060 **4243.87**	51322A121-060 **5605.88**	512
8	51122A121-080 **5246.92**	51222A121-080 **5246.92**	51322A121-080 **6964.93**	512
10	51122A121-100 **8791.35**	51222A121-100 **8791.35**	51322A121-100 **12154.11**	512

CPVC - Stainless Steel Lugs (continued)

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
12	51122A123-120 **10380.13**	51222A123-120 **10380.13**	51322A123-120 **14972.41**	512

CPVC - Zinc Lugs

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2	51112A121-015 **2104.78**	51212A121-015 **2104.78**	51312A121-015 **2443.94**	512
2	51112A121-020 **2147.42**	51212A121-020 **2147.42**	51312A121-020 **2486.56**	512
2-1/2	51112A121-025 **2171.81**	51212A121-025 **2171.81**	51312A121-025 **2528.78**	512
3	51112A121-030 **2343.52**	51212A121-030 **2343.52**	51312A121-030 **2816.27**	512
4	51112A121-040 **3197.08**	51212A121-040 **3197.08**	51312A121-040 **3708.02**	512
6	51112A121-060 **4335.97**	51212A121-060 **4335.97**	51312A121-060 **5127.55**	512
8	51112A121-080 **4791.56**	51212A121-080 **4791.56**	51312A121-080 **6346.80**	512
10	51112A121-100 **7892.68**	51212A121-100 **7892.68**	51312A121-100 **10858.58**	512
12	51112A123-120 **8831.46**	51212A123-120 **8831.46**	51312A123-120 **9751.58**	512

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Premium Actuated True Lug Butterfly Valve - Pneumatic



Industrial grade lug style valve with patented seat design uses no liner. Eliminates seat-creep and reduces operating torque. Full-featured actuator can be custom configured with add-on accessories.

- Solid SS316L Stem
- ANSI Class 150 Bolt Pattern
- 150 psi @ 73°F (23°C)
- Zinc or SS Lugs
- 80 psi Operating Pressure, other options available
- 2-Position Air-Air or Air-Spring Closed (optional spring open)
- Dual Rack & Pinion with Adjustable Stops
- Manual Override
- Position Indicator

See **Pneumatic Actuator Accessories for Ball Valves & Butterfly Valves** for Add-on Actuator Accessories

PVC - Stainless Steel Lugs

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2 Air to Air	51121H101-015 **1067.92**	51221H101-015 **1067.92**	51321H101-015 **1400.82**	540
1-1/2 Air to Spring	51121J101-015 **1137.32**	51221J101-015 **1137.32**	51321J101-015 **1470.20**	540
2 Air to Air	51121H101-020 **1101.28**	51221H101-020 **1101.28**	51321H101-020 **1447.48**	540
2 Air to Spring	51121J101-020 **1262.16**	51221J101-020 **1262.16**	51321J101-020 **1611.48**	540
2-1/2 Air to Air	51121H101-025 **1178.24**	51221H101-025 **1178.24**	51321H101-025 **1483.47**	540
2-1/2 Air to Spring	51121J101-025 **1405.36**	51221J101-025 **1405.36**	51321J101-025 **1710.56**	540
3 Air to Air	51121H101-030 **1295.45**	51221H101-030 **1295.45**	51321H101-030 **1629.95**	540
3 Air to Spring	51121J101-030 **1481.55**	51221J101-030 **1481.55**	51321J101-030 **1816.04**	540
4 Air to Air	51121H101-040 **2006.15**	51221H101-040 **2006.15**	51321H101-040 **2414.57**	540
4 Air to Spring	51121J101-040 **2264.78**	51221J101-040 **2264.78**	51321J101-040 **2673.22**	540
6 Air to Air	51121H101-060 **2669.65**	51221H101-060 **2669.65**	51321H101-060 **3408.28**	540
6 Air to Spring	51121J101-060 **3177.44**	51221J101-060 **3177.44**	51321J101-060 **3916.08**	540
8 Air to Air	51121H101-080 **3287.64**	51221H101-080 **3287.64**	51321H101-080 **4727.18**	540
8 Air to Spring	51121J101-080 **4000.46**	51221J101-080 **4000.46**	51321J101-080 **5440.02**	540
10 Air to Air	51121H101-100 **5700.09**	51221H101-100 **5700.09**	51321H101-100 **8533.31**	540
10 Air to Spring	51121J101-100 **6892.34**	51221J101-100 **6892.34**	51321J101-100 **9788.66**	540
12 Air to Air	51121H101-120 **6425.66**	51221H101-120 **6425.66**	51321H101-120 **10394.62**	540
12 Air to Spring	51121J101-120 **7681.00**	51221J101-120 **7681.00**	51321J101-120 **11649.95**	540

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

PVC - Zinc Lugs

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2 Air to Air	51111H101-015 **942.95**	51211H101-015 **942.95**	51311H101-015 **1243.12**	540
1-1/2 Air to Spring	51111J101-015 **1012.35**	51211J101-015 **1012.35**	51311J101-015 **1312.48**	540
2 Air to Air	51111H101-020 **1015.25**	51211H101-020 **1015.25**	51311H101-020 **1281.04**	540
2 Air to Spring	51111J101-020 **1179.27**	51211J101-020 **1179.27**	51311J101-020 **1445.07**	540
2-1/2 Air to Air	51111H101-025 **1063.49**	51211H101-025 **1063.49**	51311H101-025 **1347.51**	540
2-1/2 Air to Spring	51111J101-025 **1290.60**	51211J101-025 **1290.60**	51311J101-025 **1574.59**	540
3 Air to Air	51111H101-030 **1179.29**	51211H101-030 **1179.29**	51311H101-030 **1463.54**	540

PVC - Zinc Lugs (continued)

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
3 Air to Spring	51111J101-030 **1365.40**	51211J101-030 **1365.40**	51311J101-030 **1649.63**	540
4 Air to Air	51111H101-040 **1797.69**	51211H101-040 **1797.69**	51311H101-040 **2062.13**	540
4 Air to Spring	51111J101-040 **2056.33**	51211J101-040 **2596.38**	51311J101-040 **2320.76**	540
6 Air to Air	51111H101-060 **2395.19**	51211H101-060 **2395.19**	51311H101-060 **3025.40**	540
6 Air to Spring	51111J101-060 **2902.98**	51211J101-060 **2902.98**	51311J101-060 **3533.20**	540
8 Air to Air	51111H101-080 **2945.42**	51211H101-080 **2945.42**	51311H101-080 **4170.98**	540
8 Air to Spring	51111J101-080 **4232.31**	51211J101-080 **4232.31**	51311J101-080 **4883.81**	540
10 Air to Air	51111H101-100 **5010.85**	51211H101-100 **5010.85**	51311H101-100 **7419.13**	540
10 Air to Spring	51111J101-100 **6266.19**	51211J101-100 **6266.19**	51311J101-100 **8674.45**	540
12 Air to Air	51111H101-120 **5628.48**	51211H101-120 **5628.48**	51311H101-120 **8319.40**	540
12 Air to Spring	51111J101-120 **6883.84**	51211J101-120 **6883.84**	51311J101-120 **9574.74**	540

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

CPVC - Stainless Steel Lugs

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2 Air to Air	51122H101-015 **1301.76**	51222H101-015 **1301.76**	51322H101-015 **1721.29**	542
1-1/2 Air to Spring	51122J101-015 **1371.16**	51222J101-015 **1371.16**	51322J101-015 **1790.67**	542
2 Air to Air	51122H101-020 **1343.79**	51222H101-020 **1343.79**	51322H101-020 **1747.31**	542
2 Air to Spring	51122J101-020 **1507.80**	51222J101-020 **1507.80**	51322J101-020 **1911.34**	542
2-1/2 Air to Air	51122H101-025 **1369.48**	51222H101-025 **1369.48**	51322H101-025 **1805.85**	542
2-1/2 Air to Spring	51122J101-025 **1596.57**	51222J101-025 **1596.57**	51322J101-025 **2032.96**	542
3 Air to Air	51122H101-030 **1496.19**	51222H101-030 **1496.19**	51322H101-030 **1926.21**	542
3 Air to Spring	51122J101-030 **1682.28**	51222J101-030 **1682.28**	51322J101-030 **2112.32**	542
4 Air to Air	51122H101-040 **2381.24**	51222H101-040 **2381.24**	51322H101-040 **2882.45**	542
4 Air to Spring	51122J101-040 **2639.86**	51222J101-040 **2639.86**	51322J101-040 **3141.09**	542
6 Air to Air	51122H101-060 **3130.47**	51222H101-060 **3130.47**	51322H101-060 **4066.65**	542
6 Air to Spring	51122J101-060 **3638.27**	51222J101-060 **3638.27**	51322J101-060 **4574.49**	542
8 Air to Air	51122H101-080 **3884.34**	51222H101-080 **3884.34**	51322H101-080 **5602.33**	542
8 Air to Spring	51122J101-080 **4597.16**	51222J101-080 **4597.16**	51322J101-080 **6315.19**	542

CPVC - Stainless Steel Lugs (continued)

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
10 Air to Air	51122H101-100 **6892.57**	51222H101-100 **6892.57**	51322H101-100 **10255.32**	542
10 Air to Spring	51122J101-100 **8147.92**	51222J101-100 **8147.92**	51322J101-100 **11510.66**	542
12 Air to Air	51122H101-120 **7776.09**	51222H101-120 **7776.09**	51322H101-120 **12392.34**	542
12 Air to Spring	51122J101-120 **9031.45**	51222J101-120 **9031.45**	51322J101-120 **13647.68**	542

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

CPVC - Zinc Lugs

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Disc Code
1-1/2 Air to Air	51112H101-015 **1161.68**	51212H101-015 **1161.68**	51312H101-015 **1500.85**	542
1-1/2 Air to Spring	51112J101-015 **1231.08**	51212J101-015 **1231.08**	51312J101-015 **1570.23**	542
2 Air to Air	51112H101-020 **1204.34**	51212H101-020 **1204.34**	51312H101-020 **1543.47**	542
2 Air to Spring	51112J101-020 **1368.36**	51212J101-020 **1368.36**	51312J101-020 **1707.48**	542
2-1/2 Air to Air	51112H101-025 **1228.71**	51212H101-025 **1228.71**	51312H101-025 **1585.69**	542
2-1/2 Air to Spring	51112J101-025 **1455.80**	51212J101-025 **1455.80**	51312J101-025 **1812.80**	542
3 Air to Air	51112H101-030 **1233.27**	51212H101-030 **1233.27**	51312H101-030 **1706.02**	542
3 Air to Spring	51112J101-030 **1419.34**	51212J101-030 **1419.34**	51312J101-030 **1892.13**	542
4 Air to Air	51112H101-040 **2033.20**	51212H101-040 **2033.20**	51312H101-040 **2544.16**	542
4 Air to Spring	51112J101-040 **2291.83**	51212J101-040 **2291.83**	51312J101-040 **2802.78**	542
6 Air to Air	51112H101-060 **2796.74**	51212H101-060 **2796.74**	51312H101-060 **3588.35**	542
6 Air to Spring	51112J101-060 **3304.58**	51212J101-060 **3304.58**	51312J101-060 **4096.16**	542
8 Air to Air	51112H101-080 **3428.99**	51212H101-080 **3428.99**	51312H101-080 **4984.22**	542
8 Air to Spring	51112J101-080 **4141.80**	51212J101-080 **4141.80**	51312J101-080 **5697.06**	542
10 Air to Air	51112H101-100 **5993.88**	51212H101-100 **5993.88**	51312H101-100 **8959.81**	542
10 Air to Spring	51112J101-100 **7249.24**	51212J101-100 **7249.24**	51312J101-100 **10215.15**	542
12 Air to Air	51112H101-120 **6762.03**	51212H101-120 **6762.03**	51312H101-120 **9625.77**	542
12 Air to Spring	51112J101-120 **8017.36**	51212J101-120 **8017.36**	51312J101-120 **10881.11**	542

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

Tandem Actuated Butterfly Valves

Custom configured and produced to order, Spears® Tandem Actuated Butterfly Valves are available in multiple configurations to meet variety of operational needs. Tandem Actuated Butterfly Valves utilize a Tee-Style configuration for 3-way or diverting operation where two (2) valves are operated from one (1) actuator.

Electric



Pneumatic



Multi-Featured Options:

- Tandem 3-Way: two valves operated from one actuator, both closing or both opening at the same time.
- Tandem Diverting: two valves operated from one actuator, one opening while the other closes.
- Variable Valve Orientation Available
- Multi Seat Material Options including EPDM, FKM, Buna-N, and PTFE Sleeved Seats.
- Multi Flanged Connection Options including Standard, Lug-Insert or True-Lug Style Valves
- Multi Actuation Option, including Electric or Pneumatic with a host of Actuation Accessories for each (see Electric or Pneumatic Actuator Accessories for Butterfly Valves)

Pressure Rating @ 73°F (23°C), Water
150 psi for Sizes through 12"
(Larger Sizes Available)

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply

CONTACT SPEARS® FOR SELECTION ASSISTANCE & PRICING

Premium Actuated Diaphragm Valve - Electric



Industrial grade Weir-type design, excellent for throttling and use with viscous fluids. Full-featured actuator can be custom configured with add-on accessories.

- Stainless Steel Hardware
- 235 psi @ 73°F (23°C) - sizes 1/2"- 2" (flanged & PTFE diaphragm-150 psi), 2-1/2"- 4"-150 psi
- 115 VAC standard, optional voltages available
- Multi-turn Operation with 2-SPDT Limit Switches
- NEMA 4 Enclosure, Powder Coated

See **Electric Actuator Accessories** for Add-on Actuator Accessories

PVC - EPDM and FKM Diaphragms

Material	EPDM O-ring & EPDM Diaphragm				FKM O-ring & FKM Diaphragm				Disc Code
Joint	Socket	SR Threaded	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	91121A101-005 **1904.72**	93121A101-005 **1910.05**	94021A101-005 **1901.34**	95021A101-005 **1985.43**	91231A101-005 **1919.76**	93231A101-005 **1925.12**	94031A101-005 **1915.96**	95031A101-005 **2003.28**	520
3/4	91121A101-007 **1923.00**	93121A101-007 **1930.71**	94021A101-007 **1918.02**	95021A101-007 **2012.18**	91231A101-007 **1940.03**	93231A101-007 **1947.73**	94031A101-007 **1933.88**	95031A101-007 **2018.29**	520
1	91121A101-010 **1964.96**	93121A101-010 **1975.65**	94021A101-010 **1960.15**	95021A101-010 **2048.81**	91231A101-010 **1983.71**	93231A101-010 **1994.35**	94031A101-010 **1976.60**	95031A101-010 **2081.12**	520
1-1/4	91121A101-012 **2059.01**	93121A101-012 **2076.16**	94021A101-012 **2049.91**	95021A101-012 **2146.65**	91231A101-012 **2112.54**	93231A101-012 **2129.35**	94031A101-012 **2106.21**	95031A101-012 **2186.35**	520
1-1/2	91121A101-015 **2073.48**	93121A101-015 **2102.77**	94021A101-015 **2066.04**	95021A101-015 **2151.12**	91231A101-015 **2120.31**	93231A101-015 **2120.31**	94031A101-015 **2111.68**	95031A101-015 **2194.80**	520
2	91121A101-020 **2885.93**	93121A101-020 **2944.49**	94021A101-020 **2874.76**	95021A101-020 **2981.86**	91231A101-020 **2952.52**	93231A101-020 **3012.77**	94031A101-020 **2937.79**	95031A101-020 **3013.66**	520
2-1/2	**---**	**---**	**---**	95021A101-025 **3459.73**	---	---	---	95031A101-025 **3550.77**	520
3	**---**	**---**	**---**	95021A101-030 **3674.27**	---	---	---	95031A101-030 **3768.92**	520
4	**---**	**---**	**---**	95021A101-040 **4332.48**	---	---	---	95031A101-040 **4439.16**	520

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors.
O-rings used on Socket and SR Thread End Connectors only.

PVC - Elastomer Backed Diaphragms

Material	EPDM O-ring & EPDM Backed PTFE Diaphragm				FKM O-ring & EPDM Backed PTFE Diaphragm				Disc Code
Joint	Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	91151A101-005 **1985.04**	93151A101-005 **1990.42**	94051A101-005 **1977.64**	95051A101-005 **2064.54**	91251A101-005 **2008.71**	93251A101-005 **2014.07**	---	---	520
3/4	91151A101-007 **1999.71**	93151A101-007 **2007.42**	94051A101-007 **1991.60**	95051A101-007 **2088.47**	91251A101-007 **2027.84**	93251A101-007 **2035.55**	---	---	520
1	91151A101-010 **2107.92**	93151A101-010 **2118.59**	94051A101-010 **2100.04**	95051A101-010 **2182.13**	91251A101-010 **2120.06**	93251A101-010 **2130.73**	---	---	520
1-1/4	91151A101-012 **2232.40**	93151A101-012 **2249.48**	94051A101-012 **2221.79**	95051A101-012 **2323.41**	91251A101-012 **2259.79**	93251A101-012 **2276.91**	---	---	520
1-1/2	91151A101-015 **2263.27**	93151A101-015 **2292.54**	94051A101-015 **2251.11**	95051A101-015 **2343.33**	91251A101-015 **2287.64**	93251A101-015 **2316.92**	---	---	520
2	91151A101-020 **3093.97**	93151A101-020 **3124.66**	94051A101-020 **3076.94**	95051A101-020 **3176.37**	91251A101-020 **3122.49**	93251A101-020 **3186.22**	---	---	520
2-1/2	**---**	**---**	**---**	95051A101-025 **3841.39**	---	---	---	---	520
3	**---**	**---**	**---**	95051A101-030 **4219.27**	---	---	---	---	520
4	**---**	**---**	**---**	95051A101-040 **4981.31**	---	---	---	---	520

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors.
O-rings used on Socket and SR Thread End Connectors only.

CPVC - EPDM and FKM Diaphragms

Material	EPDM O-ring & EPDM Diaphragm				FKM O-ring & FKM Diaphragm				Disc Code
Joint	Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	91122A101-005 **2008.96**	93122A101-005 **2014.33**	94022A101-005 **2002.91**	95022A101-005 **2059.01**	91232A101-005 **2076.35**	93232A101-005 **2081.71**	94032A101-005 **2066.69**	95032A101-005 **1947.31**	522
3/4	91122A101-007 **2035.98**	93122A101-007 **2043.68**	94022A101-007 **2028.61**	95022A101-007 **2093.19**	91232A101-007 **2096.67**	93232A101-007 **2104.38**	94032A101-007 **2086.56**	95032A101-007 **2127.05**	522
1	91122A101-010 **2083.36**	93122A101-010 **2094.02**	94022A101-010 **2076.81**	95022A101-010 **2174.43**	91232A101-010 **2173.65**	93232A101-010 **2184.33**	94032A101-010 **2162.53**	95032A101-010 **2221.57**	522
1-1/4	91122A101-012 **2237.77**	93122A101-012 **2254.89**	94022A101-012 **2226.16**	95022A101-012 **2285.12**	91232A101-012 **2372.79**	93232A101-012 **2389.86**	94032A101-012 **2357.74**	95032A101-012 **2359.27**	522

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC - EPDM and FKM Diaphragms (continued)

Material	EPDM O-ring & EPDM Diaphragm				FKM O-ring & FKM Diaphragm				Disc Code
Joint	Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1-1/2	91122A101-015 **2267.07**	93122A101-015 **2267.07**	94022A101-015 **2236.15**	95022A101-015 **2291.87**	91232A101-015 **2395.36**	93232A101-015 **2418.32**	94032A101-015 **2379.13**	95032A101-015 **2436.71**	522
2	91122A101-020 **3043.73**	93122A101-020 **3105.84**	94022A101-020 **2917.48**	95022A101-020 **2679.78**	91232A101-020 **4627.10**	93232A101-020 **3239.72**	94032A101-020 **3158.27**	95032A101-020 **3188.32**	522
2-1/2	**---**	**---**	**---**	95022A101-025 **3895.72**	---	---	---	95032A101-025 **4021.01**	522
3	**---**	**---**	**---**	95022A101-030 **4441.96**	---	---	---	95032A101-030 **4621.80**	522
4	**---**	**---**	**---**	95022A101-040 **5376.61**	---	---	---	95032A101-040 **5623.08**	522

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors.
O-rings used on Socket and SR Thread End Connectors only.

CPVC Premium Actuated Diaphragm Valves -Electric

O-ring	EPDM O-ring & EPDM Backed PTFE Diaphragm						Disc Code
Joint	Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	91152A101-005 **2113.69**	93152A101-005 **2119.07**	94052A101-005 **2103.99**	95052A101-005 **2186.85**	91252A101-005 **2140.04**	93252A101-005 **2145.40**	522
3/4	91152A101-007 **2149.63**	93152A101-007 **2157.33**	94052A101-007 **2138.15**	95052A101-007 **2215.72**	91252A101-007 **2166.85**	93252A101-007 **2185.78**	522
1	91152A101-010 **2238.00**	93152A101-010 **2248.65**	94052A101-010 **2226.26**	95052A101-010 **2324.11**	91252A101-010 **2257.95**	93252A101-010 **2268.59**	522
1-1/4	91152A101-012 **2413.65**	93152A101-012 **2430.75**	94052A101-012 **2396.54**	95052A101-012 **2467.96**	91252A101-012 **2436.19**	93252A101-012 **2453.32**	522
1-1/2	91152A101-015 **2423.56**	93152A101-015 **2452.83**	94052A101-015 **2407.27**	95052A101-015 **2602.59**	91252A101-015 **2461.00**	93252A101-015 **2490.27**	522
2	91152A101-020 **3253.81**	93152A101-020 **3320.21**	94052A101-020 **3235.29**	95052A101-020 **3464.61**	91252A101-020 **3332.48**	93252A101-020 **3400.51**	522
2-1/2	**---**	**---**	**---**	95052A101-025 **4675.37**	---	---	522
3	**---**	**---**	**---**	95052A101-030 **5259.75**	---	---	522
4	**---**	**---**	**---**	95052A101-040 **6392.31**	---	---	522

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors.
O-rings used on Socket and SR Thread End Connectors only.

Polypropylene - EPDM O-ring and EPDM Diaphragm

Size	SR Thread	Flanged	Disc Code
1/2	93123A101-005 **1908.37**	---	524
3/4	93123A101-007 **1927.66**	---	524
1	93123A101-010 **1971.52**	---	524
1-1/4	93123A101-012 **2073.01**	---	524
1-1/2	93123A101-015 **2086.68**	---	524
2	93123A101-020 **2895.56**	---	524
2-1/2	---	95023A101-025 **3503.72**	524
3	---	95023A101-030 **3796.26**	524
4	---	95023A101-040 **4553.73**	524

NOTE: O-rings used on SR Thread End Connectors only.

Polypropylene - FKM O-ring and FKM Diaphragm

Size	SR Thread	Flanged	Disc Code
1/2	93233A101-005 **1924.02**	---	524
3/4	93233A101-007 **1945.02**	---	524
1	93233A101-010 **1991.44**	---	524
1-1/4	93233A101-012 **2106.79**	---	524
1-1/2	93233A101-015 **2120.94**	---	524
2	93233A101-020 **2936.67**	---	524
2-1/2	---	95033A101-025 **3575.22**	524
3	---	95033A101-030 **3898.29**	524
4	---	95033A101-040 **4695.06**	524

NOTE: O-rings used on SR Thread End Connectors only.

Polypropylene - EPDM O-ring and EPDM Backed PTFE Diaphragm

Size	SR Thread	Flanged	Disc Code
1/2	93153A101-005 **1991.58**	---	524
3/4	93153A101-007 **2001.98**	---	524
1	93153A101-010 **2114.75**	---	524
1-1/4	93153A101-012 **2239.88**	---	524
1-1/2	93153A101-015 **2270.66**	---	524
2	93153A101-020 **3147.36**	---	524
2-1/2	---	95053A101-025 **3906.71**	524
3	---	95053A101-030 **4316.74**	524
4	---	95053A101-040 **5127.48**	524

NOTE: O-rings used on SR Thread End Connectors only.

Polypropylene Premium Actuated Diaphragm Valves - Electric

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FKM O-ring and EPDM Backed PTFE Diaphragm SR Thread					
93253A101-005	1/2	0	0	524	2003.25
93253A101-007	3/4	0	0	524	2016.18
93253A101-010	1	0	0	524	2132.38
93253A101-012	1-1/4	0	0	524	2262.38
93253A101-015	1-1/2	0	0	524	2294.72
93253A101-020	2	0	0	524	3131.36

NOTE: O-rings used on SR Thread End Connectors only.

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Unitized Actuated Diaphragm Valve - Pneumatic with Plastic Housing



Industrial grade Weir-type design, excellent for throttling and use with viscous fluids or slurries.

- Compact, Light Weight Design
- True Union Socket/Thread, SR Thread, or Spigot End Connections - sizes 1/2"-2" Pressure Rated to 235 psi @ 73°F (23°C)
- Flanged Ends (& PTFE diaphragms) - sizes 1/2" - 2" Pressure Rated to 150 psi @ 73°F (23°C)
- Corrosion Resistant Plastic Housing
- Stainless Steel Hardware
- 90 psi Operating Pressure
- Linear Action Operation with Preset Stops
- Air-Air, Air-Spring Closed, or Optional Air-Spring Open

NOTE: "Socket" valves include standard plastic thread end connectors.

PVC - EPDM O-ring and EPDM Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Air	91121H850-005 **182.11**	93121H850-005 **182.11**	94021H850-005 **176.64**	95021H850-005 **209.47**	550
3/4 Air to Air	91121H850-007 **194.74**	93121H850-007 **194.74**	94021H850-007 **188.89**	95021H850-007 **225.26**	550
1 Air to Air	91121H850-010 **205.26**	93121H850-010 **205.26**	94021H850-010 **199.11**	95021H850-010 **238.95**	550
1-1/4 Air to Air	91121H850-012 **322.37**	93121H850-012 **322.37**	94021H850-012 **312.69**	95021H850-012 **296.84**	550
1-1/2 Air to Air	91121H850-015 **324.21**	93121H850-015 **324.21**	94021H850-015 **314.48**	95021H850-015 **374.74**	550
2 Air to Air	91121H850-020 **394.74**	93121H850-020 **394.74**	94021H850-020 **382.89**	95021H850-020 **453.68**	550
1/2 Air to Spring Close	91121J850-005 **260.00**	93121J850-005 **260.00**	94021J850-005 **252.20**	95021J850-005 **301.05**	550
3/4 Air to Spring Close	91121J850-007 **289.47**	93121J850-007 **289.47**	94021J850-007 **280.79**	95021J850-007 **322.11**	550
1 Air to Spring Close	91121J850-010 **335.79**	93121J850-010 **335.79**	94021J850-010 **325.72**	95021J850-010 **342.11**	550
1-1/4 Air to Spring Close	91121J850-012 **413.68**	93121J850-012 **413.68**	94021J850-012 **464.58**	95021J850-012 **428.42**	550
1-1/2 Air to Spring Close	91121J850-015 **478.95**	93121J850-015 **478.95**	94021J850-015 **464.21**	95021J850-015 **513.68**	550
2 Air to Spring Close	91121J850-020 **586.32**	93121J850-020 **586.32**	94021J850-020 **568.73**	95021J850-020 **654.74**	550
1/2 Air to Spring Open	91121K850-005 **182.11**	93121K850-005 **182.11**	94021K850-005 **176.64**	95021K850-005 **209.47**	550
3/4 Air to Spring Open	91121K850-007 **194.74**	93121K850-007 **194.74**	94021K850-007 **188.89**	95021K850-007 **225.26**	550
1 Air to Spring Open	91121K850-010 **205.26**	93121K850-010 **205.26**	94021K850-010 **199.11**	95021K850-010 **238.95**	550
1-1/4 Air to Spring Open	91121K850-012 **257.89**	93121K850-012 **257.89**	94021K850-012 **250.16**	95021K850-012 **296.84**	550
1-1/2 Air to Spring Open	91121K850-015 **324.21**	93121K850-015 **324.21**	94021K850-015 **314.48**	95021K850-015 **374.74**	550
2 Air to Spring Open	91121K850-020 **394.74**	93121K850-020 **394.74**	94021K850-020 **382.89**	95021K850-020 **453.68**	550

PVC - FKM O-ring and FKM Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Air	91231H850-005 **202.34**	93231H850-005 **202.34**	94031H850-005 **196.27**	95031H850-005 **232.75**	550
3/4 Air to Air	91231H850-007 **216.38**	93231H850-007 **216.38**	94031H850-007 **209.88**	95031H850-007 **250.29**	550
1 Air to Air	91231H850-010 **228.07**	93231H850-010 **228.07**	94031H850-010 **221.23**	95031H850-010 **265.49**	550
1-1/4 Air to Air	91231H850-012 **379.25**	93231H850-012 **379.25**	94031H850-012 **367.88**	95031H850-012 **349.22**	550
1-1/2 Air to Air	91231H850-015 **381.42**	93231H850-015 **381.42**	94031H850-015 **369.98**	95031H850-015 **440.86**	550
2 Air to Air	91231H850-020 **464.40**	93231H850-020 **464.40**	94031H850-020 **450.46**	95031H850-020 **533.75**	550
1/2 Air to Spring Close	91231J850-005 **288.88**	93231J850-005 **288.88**	94031J850-005 **280.22**	95031J850-005 **334.51**	550
3/4 Air to Spring Close	91231J850-007 **321.64**	93231J850-007 **321.64**	94031J850-007 **311.99**	95031J850-007 **357.89**	550

PVC - FKM O-ring and FKM Diaphragm (continued)

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1 Air to Spring Close	91231J850-010 **373.09**	93231J850-010 **373.09**	94031J850-010 **361.91**	95031J850-010 **380.12**	550
1-1/4 Air to Spring Close	91231J850-012 **486.68**	93231J850-012 **486.68**	94031J850-012 **472.08**	95031J850-012 **504.02**	550
1-1/2 Air to Spring Close	91231J850-015 **563.46**	93231J850-015 **563.46**	94031J850-015 **546.57**	95031J850-015 **604.34**	550
2 Air to Spring Close	91231J850-020 **689.78**	93231J850-020 **689.78**	94031J850-020 **669.09**	95031J850-020 **770.27**	550
1/2 Air to Spring Open	91231K850-005 **202.34**	93231K850-005 **202.34**	94031K850-005 **196.27**	95031K850-005 **232.75**	550
3/4 Air to Spring Open	91231K850-007 **216.38**	93231K850-007 **216.38**	94031K850-007 **209.88**	95031K850-007 **250.29**	550
1 Air to Spring Open	91231K850-010 **228.07**	93231K850-010 **228.07**	94031K850-010 **221.23**	95031K850-010 **265.49**	550
1-1/4 Air to Spring Open	91231K850-012 **303.41**	93231K850-012 **303.41**	94031K850-012 **294.31**	95031K850-012 **349.22**	550
1-1/2 Air to Spring Open	91231K850-015 **381.42**	93231K850-015 **381.42**	94031K850-015 **369.98**	95031K850-015 **440.86**	550
2 Air to Spring Open	91231K850-020 **464.40**	93231K850-020 **464.40**	94031K850-020 **450.46**	95031K850-020 **533.75**	550

PVC - EPDM O-ring and EPDM Backed PTFE Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Air	91151H850-005 **244.21**	93151H850-005 **244.21**	94051H850-005 **236.88**	95051H850-005 **303.16**	550
3/4 Air to Air	91151H850-007 **262.11**	93151H850-007 **262.11**	94051H850-007 **254.24**	95051H850-007 **302.11**	550
1 Air to Air	91151H850-010 **280.00**	93151H850-010 **280.00**	94051H850-010 **271.60**	95051H850-010 **320.00**	550
1-1/4 Air to Air	91151H850-012 **349.47**	93151H850-012 **349.47**	94051H850-012 **338.99**	95051H850-012 **397.89**	550
1-1/2 Air to Air	91151H850-015 **440.00**	93151H850-015 **440.00**	94051H850-015 **426.80**	95051H850-015 **503.16**	550
2 Air to Air	91151H850-020 **529.47**	93151H850-020 **529.47**	94051H850-020 **513.59**	95051H850-020 **608.42**	550
1/2 Air to Spring Close	91151J850-005 **324.21**	93151J850-005 **324.21**	94051J850-005 **314.48**	95051J850-005 **393.68**	550
3/4 Air to Spring Close	91151J850-007 **347.37**	93151J850-007 **347.37**	94051J850-007 **336.95**	95051J850-007 **416.84**	550
1 Air to Spring Close	91151J850-010 **369.47**	93151J850-010 **369.47**	94051J850-010 **358.39**	95051J850-010 **443.16**	550
1-1/4 Air to Spring Close	91151J850-012 **464.21**	93151J850-012 **464.21**	94051J850-012 **450.28**	95051J850-012 **555.79**	550
1-1/2 Air to Spring Close	91151J850-015 **555.79**	93151J850-015 **555.79**	94051J850-015 **539.12**	95051J850-015 **690.53**	550
2 Air to Spring Close	91151J850-020 **707.37**	93151J850-020 **707.37**	94051J850-020 **686.15**	95051J850-020 **847.37**	550
1/2 Air to Spring Open	91151K850-005 **244.21**	93151K850-005 **244.21**	94051K850-005 **236.88**	95051K850-005 **283.16**	550
3/4 Air to Spring Open	91151K850-007 **262.11**	93151K850-007 **262.11**	94051K850-007 **254.24**	95051K850-007 **303.16**	550
1 Air to Spring Open	91151K850-010 **280.00**	93151K850-010 **280.00**	94051K850-010 **271.60**	95051K850-010 **318.95**	550
1-1/4 Air to Spring Open	91151K850-012 **349.47**	93151K850-012 **349.47**	94051K850-012 **338.99**	95051K850-012 **402.11**	550
1-1/2 Air to Spring Open	91151K850-015 **440.00**	93151K850-015 **440.00**	94051K850-015 **426.80**	95051K850-015 **503.16**	550
2 Air to Spring Open	91151K850-020 **529.47**	93151K850-020 **529.47**	94051K850-020 **513.59**	95051K850-020 **609.47**	550

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PVC - FKM O-ring and EPDM Backed PTFE Diaphragm

Size	Socket	SR Thread	Disc Code
1/2 Air to Air	91251H850-005 **271.35**	93251H850-005 **271.35**	550
3/4 Air to Air	91251H850-007 **291.23**	93251H850-007 **291.23**	550
1 Air to Air	91251H850-010 **311.12**	93251H850-010 **311.12**	550
1-1/4 Air to Air	91251H850-012 **388.31**	93251H850-012 **388.31**	550
1-1/2 Air to Air	91251H850-015 **488.88**	93251H850-015 **488.88**	550
2 Air to Air	91251H850-020 **588.31**	93251H850-020 **588.31**	550
1/2 Air to Spring Close	91251J850-005 **360.23**	93251J850-005 **360.23**	550
3/4 Air to Spring Close	91251J850-007 **385.97**	93251J850-007 **385.97**	550
1 Air to Spring Close	91251J850-010 **410.53**	93251J850-010 **410.53**	550
1-1/4 Air to Spring Close	91251J850-012 **515.79**	93251J850-012 **515.79**	550
1-1/2 Air to Spring Close	91251J850-015 **617.55**	93251J850-015 **617.55**	550
2 Air to Spring Close	91251J850-020 **785.97**	93251J850-020 **785.97**	550
1/2 Air to Spring Open	91251K850-005 **271.35**	93251K850-005 **271.35**	550
3/4 Air to Spring Open	91251K850-007 **291.23**	93251K850-007 **291.23**	550
1 Air to Spring Open	91251K850-010 **311.12**	93251K850-010 **311.12**	550
1-1/4 Air to Spring Open	91251K850-012 **388.31**	93251K850-012 **388.31**	550
1-1/2 Air to Spring Open	91251K850-015 **488.88**	93251K850-015 **488.88**	550
2 Air to Spring Open	91251K850-020 **588.31**	93251K850-020 **588.31**	550

CPVC - EPDM O-ring and EPDM Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Air	91122H850-005 **262.11**	93122H850-005 **262.11**	94022H850-005 **253.68**	95022H850-005 **301.05**	552
3/4 Air to Air	91122H850-007 **282.11**	93122H850-007 **282.11**	94022H850-007 **272.63**	95022H850-007 **322.11**	552
1 Air to Air	91122H850-010 **298.95**	93122H850-010 **298.95**	94022H850-010 **289.47**	95022H850-010 **341.05**	552
1-1/4 Air to Air	91122H850-012 **371.58**	93122H850-012 **371.58**	94022H850-012 **360.00**	95022H850-012 **426.32**	552
1-1/2 Air to Air	91122H850-015 **468.42**	93122H850-015 **468.42**	94022H850-015 **454.74**	95022H850-015 **536.84**	552
2 Air to Air	91122H850-020 **567.37**	93122H850-020 **567.37**	94022H850-020 **550.53**	95022H850-020 **653.68**	552
1/2 Air to Spring Close	91122J850-005 **374.74**	93122J850-005 **374.74**	94022J850-005 **364.21**	95022J850-005 **430.53**	552
3/4 Air to Spring Close	91122J850-007 **420.00**	93122J850-007 **420.00**	94022J850-007 **407.37**	95022J850-007 **461.05**	552
1 Air to Spring Close	91122J850-010 **489.47**	93122J850-010 **489.47**	94022J850-010 **474.74**	95022J850-010 **487.37**	552
1-1/4 Air to Spring Close	91122J850-012 **598.95**	93122J850-012 **598.95**	94022J850-012 **581.05**	95022J850-012 **609.47**	552
1-1/2 Air to Spring Close	91122J850-015 **688.42**	93122J850-015 **688.42**	94022J850-015 **667.37**	95022J850-015 **767.37**	552
2 Air to Spring Close	91122J850-020 **866.32**	93122J850-020 **866.32**	94022J850-020 **840.00**	95022J850-020 **934.74**	552
1/2 Air to Spring Open	91122K850-005 **262.11**	93122K850-005 **262.11**	94022K850-005 **253.68**	95022K850-005 **301.05**	552
3/4 Air to Spring Open	91122K850-007 **282.11**	93122K850-007 **282.11**	94022K850-007 **272.63**	95022K850-007 **322.11**	552
1 Air to Spring Open	91122K850-010 **298.95**	93122K850-010 **298.95**	94022K850-010 **289.47**	95022K850-010 **341.05**	552
1-1/4 Air to Spring Open	91122K850-012 **371.58**	93122K850-012 **371.58**	94022K850-012 **360.00**	95022K850-012 **426.32**	552
1-1/2 Air to Spring Open	91122K850-015 **468.42**	93122K850-015 **468.42**	94022K850-015 **454.74**	95022K850-015 **536.84**	552

CPVC - EPDM O-ring and EPDM Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Air	91122H850-005 262.11	93122H850-005 262.11	94022H850-005 253.68	95022H850-005 301.05	552
3/4 Air to Air	91122H850-007 282.11	93122H850-007 282.11	94022H850-007 272.63	95022H850-007 322.11	552
1 Air to Air	91122H850-010 298.95	93122H850-010 298.95	94022H850-010 289.47	95022H850-010 341.05	552
1-1/4 Air to Air	91122H850-012 371.58	93122H850-012 371.58	94022H850-012 360.00	95022H850-012 426.32	552
1-1/2 Air to Air	91122H850-015 468.42	93122H850-015 468.42	94022H850-015 454.74	95022H850-015 536.84	552
2 Air to Air	91122H850-020 567.37	93122H850-020 567.37	94022H850-020 550.53	95022H850-020 653.68	552
1/2 Air to Spring Close	91122J850-005 374.74	93122J850-005 374.74	94022J850-005 364.21	95022J850-005 430.53	552
3/4 Air to Spring Close	91122J850-007 420.00	93122J850-007 420.00	94022J850-007 407.37	95022J850-007 461.05	552
1 Air to Spring Close	91122J850-010 489.47	93122J850-010 489.47	94022J850-010 474.74	95022J850-010 487.37	552
1-1/4 Air to Spring Close	91122J850-012 598.95	93122J850-012 598.95	94022J850-012 581.05	95022J850-012 609.47	552
1-1/2 Air to Spring Close	91122J850-015 688.42	93122J850-015 688.42	94022J850-015 667.37	95022J850-015 767.37	552
2 Air to Spring Close	91122J850-020 866.32	93122J850-020 866.32	94022J850-020 840.00	95022J850-020 934.74	552
1/2 Air to Spring Open	91122K850-005 262.11	93122K850-005 262.11	94022K850-005 253.68	95022K850-005 301.05	552
3/4 Air to Spring Open	91122K850-007 282.11	93122K850-007 282.11	94022K850-007 272.63	95022K850-007 322.11	552
1 Air to Spring Open	91122K850-010 298.95	93122K850-010 298.95	94022K850-010 289.47	95022K850-010 341.05	552
1-1/4 Air to Spring Open	91122K850-012 371.58	93122K850-012 371.58	94022K850-012 360.00	95022K850-012 426.32	552
1-1/2 Air to Spring Open	91122K850-015 468.42	93122K850-015 468.42	94022K850-015 454.74	95022K850-015 536.84	552
2 Air to Spring Open	91122K850-020 567.37	93122K850-020 567.37	94022K850-020 550.53	95022K850-020 653.68	552

CPVC - FKM O-ring and FKM Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Air	91232H850-005 327.37	93232H850-005 327.37	94032H850-005 317.89	95032H850-005 334.74	552
3/4 Air to Air	91232H850-007 351.58	93232H850-007 351.58	94032H850-007 341.05	95032H850-007 357.89	552
1 Air to Air	91232H850-010 373.68	93232H850-010 373.68	94032H850-010 362.11	95032H850-010 378.95	552
1-1/4 Air to Air	91232H850-012 464.21	93232H850-012 464.21	94032H850-012 449.47	95032H850-012 501.05	552
1-1/2 Air to Air	91232H850-015 585.26	93232H850-015 585.26	94032H850-015 568.42	95032H850-015 631.58	552
2 Air to Air	91232H850-020 708.42	93232H850-020 708.42	94032H850-020 687.37	95032H850-020 769.47	552
1/2 Air to Spring Close	91232J850-005 468.42	93232J850-005 468.42	94032J850-005 454.74	95032J850-005 506.32	552
3/4 Air to Spring Close	91232J850-007 524.21	93232J850-007 524.21	94032J850-007 508.42	95032J850-007 542.11	552
1 Air to Spring Close	91232J850-010 611.58	93232J850-010 611.58	94032J850-010 593.68	95032J850-010 572.63	552
1-1/4 Air to Spring Close	91232J850-012 748.42	93232J850-012 748.42	94032J850-012 726.32	95032J850-012 716.84	552
1-1/2 Air to Spring Close	91232J850-015 860.00	93232J850-015 860.00	94032J850-015 834.74	95032J850-015 902.11	552
2 Air to Spring Close	91232J850-020 1082.11	93232J850-020 1082.11	94032J850-020 1049.47	95032J850-020 1098.95	552
1/2 Air to Spring Open	91232K850-005 327.37	93232K850-005 327.37	94032K850-005 317.89	95032K850-005 354.74	552
3/4 Air to Spring Open	91232K850-007 351.58	93232K850-007 351.58	94032K850-007 341.05	95032K850-007 378.95	552
1 Air to Spring Open	91232K850-010 373.68	93232K850-010 373.68	94032K850-010 362.11	95032K850-010 401.05	552
1-1/4 Air to Spring Open	91232K850-012 464.21	93232K850-012 464.21	94032K850-012 449.47	95032K850-012 501.05	552
1-1/2 Air to Spring Open	91232K850-015 585.26	93232K850-015 585.26	94032K850-015 568.42	95032K850-015 631.58	552
2 Air to Spring Open	91232K850-020 708.42	93232K850-020 708.42	94032K850-020 687.37	95032K850-020 769.47	552

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CPVC - EPDM O-ring and EPDM Backed PTFE Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Air	91152H850-005 **353.68**	93152H850-005 **353.68**	94052H850-005 **343.16**	95052H850-005 **353.68**	552
3/4 Air to Air	91152H850-007 **378.95**	93152H850-007 **378.95**	94052H850-007 **367.37**	95052H850-007 **434.74**	552
1 Air to Air	91152H850-010 **398.95**	93152H850-010 **398.95**	94052H850-010 **386.32**	95052H850-010 **458.95**	552
1-1/4 Air to Air	91152H850-012 **503.16**	93152H850-012 **503.16**	94052H850-012 **487.37**	95052H850-012 **580.00**	552
1-1/2 Air to Air	91152H850-015 **629.47**	93152H850-015 **629.47**	94052H850-015 **610.53**	95052H850-015 **726.32**	552
2 Air to Air	91152H850-020 **762.11**	93152H850-020 **762.11**	94052H850-020 **738.95**	95052H850-020 **876.84**	552
1/2 Air to Spring Close	91152J850-005 **471.58**	93152J850-005 **471.58**	94052J850-005 **456.84**	95052J850-005 **505.26**	552
3/4 Air to Spring Close	91152J850-007 **505.26**	93152J850-007 **505.26**	94052J850-007 **490.53**	95052J850-007 **620.00**	552
1 Air to Spring Close	91152J850-010 **525.26**	93152J850-010 **525.26**	94052J850-010 **509.47**	95052J850-010 **655.79**	552
1-1/4 Air to Spring Close	91152J850-012 **669.47**	93152J850-012 **669.47**	94052J850-012 **649.47**	95052J850-012 **829.47**	552
1-1/2 Air to Spring Close	91152J850-015 **795.79**	93152J850-015 **795.79**	94052J850-015 **772.63**	95052J850-015 **1037.89**	552
2 Air to Spring Close	91152J850-020 **1015.79**	93152J850-020 **1015.79**	94052J850-020 **985.26**	95052J850-020 **1251.58**	552
1/2 Air to Spring Open	91152K850-005 **353.68**	93152K850-005 **353.68**	94052K850-005 **343.16**	95052K850-005 **353.68**	552
3/4 Air to Spring Open	91152K850-007 **378.95**	93152K850-007 **378.95**	94052K850-007 **367.37**	95052K850-007 **434.74**	552
1 Air to Spring Open	91152K850-010 **398.95**	93152K850-010 **398.95**	94052K850-010 **386.32**	95052K850-010 **458.95**	552
1-1/4 Air to Spring Open	91152K850-012 **503.16**	93152K850-012 **503.16**	94052K850-012 **487.37**	95052K850-012 **580.00**	552
1-1/2 Air to Spring Open	91152K850-015 **629.47**	93152K850-015 **629.47**	94052K850-015 **610.53**	95052K850-015 **726.32**	552
2 Air to Spring Open	91152K850-020 **762.11**	93152K850-020 **762.11**	94052K850-020 **738.95**	95052K850-020 **876.84**	552

CPVC - FKM O-ring and EPDM Backed PTFE Diaphragm

Size	Socket	SR Thread	Disc Code
1/2 Air to Air	91252H850-005 **409.47**	93252H850-005 **409.47**	552
3/4 Air to Air	91252H850-007 **440.00**	93252H850-007 **440.00**	552
1 Air to Air	91252H850-010 **466.32**	93252H850-010 **466.32**	552
1-1/4 Air to Air	91252H850-012 **580.00**	93252H850-012 **580.00**	552
1-1/2 Air to Air	91252H850-015 **731.58**	93252H850-015 **731.58**	552
2 Air to Air	91252H850-020 **886.32**	93252H850-020 **886.32**	552
1/2 Air to Spring Close	91252J850-005 **586.32**	93252J850-005 **586.32**	552
3/4 Air to Spring Close	91252J850-007 **655.79**	93252J850-007 **655.79**	552
1 Air to Spring Close	91252J850-010 **765.26**	93252J850-010 **765.26**	552
1-1/4 Air to Spring Close	91252J850-012 **935.79**	93252J850-012 **935.79**	552
1-1/2 Air to Spring Close	91252J850-015 **1074.74**	93252J850-015 **1074.74**	552
2 Air to Spring Close	91252J850-020 **1352.63**	93252J850-020 **1352.63**	552
1/2 Air to Spring Open	91252K850-005 **409.47**	93252K850-005 **409.47**	552
3/4 Air to Spring Open	91252K850-007 **440.00**	93252K850-007 **440.00**	552
1 Air to Spring Open	91252K850-010 **466.32**	93252K850-010 **466.32**	552
1-1/4 Air to Spring Open	91252K850-012 **580.00**	93252K850-012 **580.00**	552
1-1/2 Air to Spring Open	91252K850-015 **731.58**	93252K850-015 **731.58**	552
2 Air to Spring Open	91252K850-020 **886.32**	93252K850-020 **886.32**	552

Polypropylene Premium Actuated Diaphragm Valves - Pneumatic w/Plastic Housing

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
EPDM O-ring and EPDM Diaphragm SR Thread					
93123H850-005	1/2 Air to Air	1	0	554	218.95
93123H850-007	3/4 Air to Air	1	4	554	236.84
93123H850-010	1 Air to Air	1	0	554	247.37
93123H850-012	1-1/4 Air to Air	1	0	554	313.68
93123H850-015	1-1/2 Air to Air	1	0	554	393.68
93123H850-020	2 Air to Air	1	0	554	474.74
93123J850-005	1/2 Air to Spring Close	1	0	554	296.84
93123J850-007	3/4 Air to Spring Close	1	0	554	341.05
93123J850-010	1 Air to Spring Close	1	0	554	387.37
93123J850-012	1-1/4 Air to Spring Close	1	0	554	442.11
93123J850-015	1-1/2 Air to Spring	1	0	554	540.00
93123J850-020	2 Air to Spring Close	1	0	554	664.21
93123K850-005	1/2 Air to Spring Open	1	0	554	218.95
93123K850-007	3/4 Air to Spring Open	1	4	554	236.84
93123K850-010	1 Air to Spring Open	1	0	554	247.37
93123K850-012	1-1/4 Air to Spring Open	1	0	554	313.68
93123K850-015	1-1/2 Air to Spring Open	1	0	554	393.68
93123K850-020	2 Air to Spring Open	1	0	554	474.74

Polypropylene Premium Actuated Diaphragm Valves - Pneumatic w/Plastic Housing

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FKM O-ring and FKM Diaphragm SR Thread					
93233H850-005	1/2 Air to Air	1	0	554	347.37
93233H850-007	3/4 Air to Air	1	0	554	375.79
93233H850-010	1 Air to Air	1	0	554	392.63
93233H850-012	1-1/4 Air to Air	1	0	554	497.89

Polypropylene Premium Actuated Diaphragm Valves - Pneumatic w/Plastic Housing (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FKM O-ring and FKM Diaphragm SR Thread					
93233H850-015	1-1/2 Air to Air	1	0	554	625.26
93233H850-020	2 Air to Air	1	0	554	753.68
93233J850-005	1/2 Air to Spring Close	1	0	554	471.58
93233J850-007	3/4 Air to Spring Close	1	0	554	541.05
93233J850-010	1 Air to Spring Close	1	0	554	614.74
93233J850-012	1-1/4 Air to Spring Close	1	0	554	702.11
93233J850-015	1-1/2 Air to Spring Close	1	0	554	856.84
93233J850-020	2 Air to Spring Close	1	0	554	1054.74
93233K850-005	1/2 Air to Spring Open	1	0	554	347.37
93233K850-007	3/4 Air to Spring Open	1	0	554	375.79
93233K850-010	1 Air to Spring Open	1	0	554	392.63
93233K850-012	1-1/4 Air to Spring Open	1	0	554	497.89
93233K850-015	1-1/2 Air to Spring Open	1	0	554	625.26
93233K850-020	2 Air to Spring Open	1	0	554	753.68

Polypropylene Premium Actuated Diaphragm Valves - Pneumatic w/Plastic Housing

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
EPDM O-ring and EPDM Backed PTFE Diaphragm SR Thread					
93153H850-005	1/2 Air to Air	1	0	554	364.21
93153H850-007	3/4 Air to Air	1	0	554	377.89
93153H850-010	1 Air to Air	1	0	554	393.68
93153H850-012	1-1/4 Air to Air	1	0	554	544.21
93153H850-015	1-1/2 Air to Air	1	0	554	654.74
93153H850-020	2 Air to Air	1	0	554	797.89
93153J850-005	1/2 Air to Spring Close	1	0	554	377.89
93153J850-007	3/4 Air to Spring Close	1	0	554	403.16
93153J850-010	1 Air to Spring Close	1	0	554	429.47
93153J850-012	1-1/4 Air to Spring Close	1	0	554	534.74
93153J850-015	1-1/2 Air to Spring Close	1	0	554	641.05
93153J850-020	2 Air to Spring Close	1	0	554	820.00
93153K850-005	1/2 Air to Spring Open	1	0	554	364.21
93153K850-007	3/4 Air to Spring Open	1	0	554	377.89
93153K850-010	1 Air to Spring Open	1	0	554	393.68
93153K850-012	1-1/4 Air to Spring Open	1	0	554	544.21
93153K850-015	1-1/2 Air to Spring Open	1	0	554	654.74
93153K850-020	2 Air to Spring Open	1	0	554	797.89
FKM O-ring and EPDM Backed PTFE Diaphragm SR Thread					
93253H850-005	1/2 Air to Air	1	4	554	423.16
93253H850-007	3/4 Air to Air	1	0	554	438.95
93253H850-010	1 Air to Air	1	0	554	457.89
93253H850-012	1-1/4 Air to Air	1	0	554	632.63
93253H850-015	1-1/2 Air to Air	1	0	554	761.05
93253H850-020	2 Air to Air	1	0	554	927.37
93253J850-005	1/2 Air to Spring Close	1	4	554	438.95
93253J850-007	3/4 Air to Spring Close	1	0	554	468.42
93253J850-010	1 Air to Spring Close	1	0	554	498.95
93253J850-012	1-1/4 Air to Spring Close	1	0	554	622.11
93253J850-015	1-1/2 Air to Spring Close	1	0	554	745.26
93253J850-020	2 Air to Spring Close	1	0	554	953.68
93253K850-005	1/2 Air to Spring Open	1	0	554	423.16
93253K850-007	3/4 Air to Spring Open	1	0	554	438.95
93253K850-010	1 Air to Spring Open	1	0	554	457.89
93253K850-012	1-1/4 Air to Spring Open	1	0	554	632.63
93253K850-015	1-1/2 Air to Spring Open	1	0	554	761.05
93253K850-020	2 Air to Spring Open	1	0	554	927.37

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Premium Actuated Diaphragm Valve - Pneumatic



Industrial grade Weir-type design, excellent for throttling and use with viscous fluids. Full-featured actuator can be custom configured with add-on accessories.

- Stainless Steel Hardware
- 235 psi @ 73°F (23°C) - sizes 1/2"- 2" (flanged & PTFE diaphragm-150 psi), 2-1/2"- 4"-150 psi
- 80 psi Operating Pressure
- Linear Action Operation with Preset Stops
- Air-Air or Air-Spring Closed (optional spring open)

See **Pneumatic Actuator Accessories for Diaphragm Valves** for Add-on Actuator Accessories

PVC - EPDM O-ring and EPDM Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Air	91121H100-005 **857.54**	93121H100-005 **862.91**	94021H100-005 **854.18**	95021H100-005 **938.25**	550
1/2 Air to Spring	91121J100-005 **889.07**	93121J100-005 **894.44**	94021J100-005 **885.72**	95021J100-005 **969.80**	550
3/4 Air to Air	91121H100-007 **1890.95**	93121H100-007 **1151.62**	94021H100-007 **1138.96**	95021H100-007 **1233.11**	550
3/4 Air to Spring	91121J100-007 **1191.26**	93121J100-007 **1198.94**	94021J100-007 **1186.27**	95021J100-007 **1280.41**	550
1 Air to Air	91121H100-010 **1937.63**	93121H100-010 **1250.18**	94021H100-010 **1234.72**	95021H100-010 **1323.38**	550
1 Air to Spring	91121J100-010 **1290.01**	93121J100-010 **1300.66**	94021J100-010 **1285.19**	95021J100-010 **1373.84**	550
1-1/4 Air to Air	91121H100-012 **2062.16**	93121H100-012 **2079.57**	94021H100-012 **2053.08**	95021H100-012 **2149.82**	550
1-1/4 Air to Spring	91121J100-012 **2144.17**	93121J100-012 **2161.59**	94021J100-012 **2135.08**	95021J100-012 **2231.81**	550
1-1/2 Air to Air	91121H100-015 **2076.64**	93121H100-015 **2105.91**	94021H100-015 **2069.19**	95021H100-015 **2154.27**	550
1-1/2 Air to Spring	91121J100-015 **2158.64**	93121J100-015 **2187.92**	94021J100-015 **2151.21**	95021J100-015 **2236.27**	550
2 Air to Air	91121H100-020 **2355.05**	93121H100-020 **2386.75**	94021H100-020 **2344.15**	95021H100-020 **2448.98**	550
2 Air to Spring	91121J100-020 **2446.52**	93121J100-020 **2478.22**	94021J100-020 **2435.61**	95021J100-020 **2540.45**	550
2-1/2 Air to Air	---	---	---	95021H100-025 **2856.29**	550
2-1/2 Air to Spring	---	---	---	95021J100-025 **3461.91**	550
3 Air to Air	---	---	---	95021H100-030 **3665.59**	550
3 Air to Spring	---	---	---	95021J100-030 **4618.12**	550
4 Air to Air	---	---	---	95021H100-040 **4888.60**	550
4 Air to Spring	---	---	---	95021J100-040 **5380.64**	550
6 Air to Spring	---	---	---	95021J100-060 **12535.32**	550

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors. For Air to Spring OPEN, change letter "J" to letter " K" in listed part number. O-rings used on Socket and SR Thread End Connectors only.

PVC - FKM O-ring and FKM Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Air	91231H100-005 **872.59**	93231H100-005 **877.95**	94031H100-005 **868.81**	95031H100-005 **956.12**	550
1/2 Air to Spring	91231J100-005 **904.11**	93231J100-005 **909.51**	94031J100-005 **900.35**	95031J100-005 **987.66**	550
3/4 Air to Air	91231H100-007 **1161.01**	93231H100-007 **1168.67**	94031H100-007 **1154.83**	95031H100-007 **1239.22**	550
3/4 Air to Spring	91231J100-007 **1208.31**	93231J100-007 **1215.98**	94031J100-007 **1202.13**	95031J100-007 **1286.53**	550
1 Air to Air	91231H100-010 **1258.22**	93231H100-010 **1268.89**	94031H100-010 **1251.15**	95031H100-010 **1355.67**	550
1 Air to Spring	91231J100-010 **1308.66**	93231J100-010 **1319.37**	94031J100-010 **1301.61**	95031J100-010 **1406.14**	550
1-1/4 Air to Air	91231H100-012 **2115.69**	93231H100-012 **2132.78**	94031H100-012 **2109.16**	95031H100-012 **2189.49**	550

PVC - FKM O-ring and FKM Diaphragm (continued)

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1-1/4 Air to Spring	91231J100-012 **2197.69**	93231J100-012 **2214.79**	94031J100-012 **2191.17**	95031J100-012 **2271.48**	550
1-1/2 Air to Air	91231H100-015 **2123.45**	93231H100-015 **2152.71**	94031H100-015 **2114.84**	95031H100-015 **2197.94**	550
1-1/2 Air to Spring	91231J100-015 **2205.45**	93231J100-015 **2234.73**	94031J100-015 **2196.84**	95031J100-015 **2279.96**	550
2 Air to Air	91231H100-020 **2420.24**	93231H100-020 **2451.98**	94031H100-020 **2405.88**	95031H100-020 **2480.12**	550
2 Air to Spring	91231J100-020 **2511.73**	93231J100-020 **2543.45**	94031J100-020 **2497.34**	95031J100-020 **2571.57**	550
2-1/2 Air to Air	---	---	---	95031H100-025 **2945.42**	550
2-1/2 Air to Spring	---	---	---	95031J100-025 **3551.01**	550
3 Air to Air	---	---	---	95031H100-030 **3758.22**	550
3 Air to Spring	---	---	---	95031J100-030 **4710.76**	550
4 Air to Air	---	---	---	95031H100-040 **4993.08**	550
4 Air to Spring	---	---	---	95031J100-040 **5485.07**	550

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors. For Air to Spring OPEN, change letter "J" to letter " K" in listed part number. O-rings used on Socket and SR Thread End Connectors only.

PVC - EPDM O-ring and EPDM Backed PTFE Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Air	91151H100-005 **937.88**	93151H100-005 **943.25**	94051H100-005 **930.47**	95051H100-005 **1017.37**	550
1/2 Air to Spring	91151J100-005 **969.43**	93151J100-005 **974.77**	94051J100-005 **961.99**	95051J100-005 **1048.91**	550
3/4 Air to Air	91151H100-007 **1884.44**	93151H100-007 **1228.35**	94051H100-007 **1212.53**	95051H100-007 **1309.40**	550
3/4 Air to Spring	91151J100-007 **1315.26**	93151J100-007 **1275.65**	94051J100-007 **1259.84**	95051J100-007 **1356.72**	550
1 Air to Air	91151H100-010 **1963.58**	93151H100-010 **1393.13**	94051H100-010 **1374.60**	95051H100-010 **1456.65**	550
1 Air to Spring	91151J100-010 **1432.95**	93151J100-010 **1443.61**	94051J100-010 **1425.05**	95051J100-010 **1507.13**	550
1-1/4 Air to Air	91151H100-012 **2235.56**	93151H100-012 **2252.64**	94051H100-012 **2224.94**	95051H100-012 **1636.99**	550
1-1/4 Air to Spring	91151J100-012 **2317.55**	93151J100-012 **2334.66**	94051J100-012 **2306.96**	95051J100-012 **1636.99**	550
1-1/2 Air to Air	91151H100-015 **2266.42**	93151H100-015 **2295.69**	94051H100-015 **2254.27**	95051H100-015 **2346.47**	550
1-1/2 Air to Spring	91151J100-015 **2348.42**	93151J100-015 **2377.69**	94051J100-015 **2336.28**	95051J100-015 **2428.47**	550
2 Air to Air	91151H100-020 **2558.75**	93151H100-020 **2590.48**	94051H100-020 **2542.06**	95051H100-020 **2639.36**	550
2 Air to Spring	91151J100-020 **2650.21**	93151J100-020 **2681.95**	94051J100-020 **2633.52**	95051J100-020 **2730.84**	550
2-1/2 Air to Air	---	---	---	95051H100-025 **3217.42**	550
2-1/2 Air to Spring	---	---	---	95051J100-025 **3823.01**	550
3 Air to Air	---	---	---	95051H100-030 **4123.14**	550
3 Air to Spring	---	---	---	95051J100-030 **5075.66**	550
4 Air to Air	---	---	---	95051H100-040 **5523.12**	550
4 Air to Spring	---	---	---	95051J100-040 **6015.17**	550

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors. For Air to Spring OPEN, change letter "J" to letter " K" in listed part number. O-rings used on Socket and SR Thread End Connectors only.

PVC - FKM O-ring and EPDM Backed PTFE Diaphragm

Size	Socket	SR Thread	Disc Code
1/2 Air to Air	91251H100-005 **961.53**	93251H100-005 **966.89**	550
1/2 Air to Spring	91251J100-005 **993.08**	93251J100-005 **998.43**	550
3/4 Air to Air	91251H100-007 **1248.77**	93251H100-007 **1256.47**	550
3/4 Air to Spring	91251J100-007 **1296.09**	93251J100-007 **1303.80**	550
1 Air to Air	91251H100-010 **1394.62**	93251H100-010 **1405.27**	550
1 Air to Spring	91251J100-010 **1445.09**	93251J100-010 **1455.76**	550
1-1/4 Air to Air	91251H100-012 **2262.96**	93251H100-012 **2280.05**	550
1-1/4 Air to Spring	91251J100-012 **2344.96**	93251J100-012 **2362.04**	550
1-1/2 Air to Air	91251H100-015 **2290.80**	93251H100-015 **2320.07**	550
1-1/2 Air to Spring	91251J100-015 **2372.82**	93251J100-015 **2402.08**	550
2 Air to Air	91251H100-020 **2586.65**	93251H100-020 **2618.39**	550
2 Air to Spring	91251J100-020 **2678.13**	93251J100-020 **2709.84**	550

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors. For Air to Spring OPEN, change letter "J" to letter " K" in listed part number. O-rings used on Socket and SR Thread End Connectors only.

CPVC - EPDM O-ring and EPDM Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Air	91122H100-005 **961.77**	93122H100-005 **967.15**	94022H100-005 **955.74**	95022H100-005 **1011.83**	552
1/2 Air to Spring	91122J100-005 **993.33**	93122J100-005 **998.67**	94022J100-005 **987.26**	95022J100-005 **1043.37**	552
3/4 Air to Air	91122H100-007 **1256.92**	93122H100-007 **1264.61**	94022H100-007 **1249.54**	95022H100-007 **1314.14**	552
3/4 Air to Spring	91122J100-007 **1304.23**	93122J100-007 **1311.93**	94022J100-007 **1296.86**	95022J100-007 **1361.45**	552
1 Air to Air	91122H100-010 **1357.92**	93122H100-010 **1368.58**	94022H100-010 **1351.37**	95022H100-010 **1448.98**	552
1 Air to Spring	91122J100-010 **1408.38**	93122J100-010 **1419.04**	94022J100-010 **1401.80**	95022J100-010 **1499.44**	552
1-1/4 Air to Air	91122H100-012 **2240.94**	93122H100-012 **2258.02**	94022H100-012 **2229.31**	95022H100-012 **2288.25**	552
1-1/4 Air to Spring	91122J100-012 **2322.95**	93122J100-012 **2340.03**	94022J100-012 **2311.31**	95022J100-012 **2370.28**	552
1-1/2 Air to Air	91122H100-015 **2254.63**	93122H100-015 **2283.88**	94022H100-015 **2239.31**	95022H100-015 **2295.04**	552
1-1/2 Air to Spring	91122J100-015 **2336.63**	93122J100-015 **2365.92**	94022J100-015 **2321.28**	95022J100-015 **2377.03**	552
2 Air to Air	91122H100-020 **2509.59**	93122H100-020 **2541.31**	94022H100-020 **2496.81**	95022H100-020 **2580.89**	552
2 Air to Spring	91122J100-020 **2601.04**	93122J100-020 **2632.78**	94022J100-020 **2588.26**	95022J100-020 **2672.35**	552
2-1/2 Air to Air	---	---	---	95022H100-025 **3283.08**	552
2-1/2 Air to Spring	---	---	---	95022J100-025 **3888.69**	552
3 Air to Air	---	---	---	95022H100-030 **4417.13**	552
3 Air to Spring	---	---	---	95022J100-030 **5369.66**	552
4 Air to Air	---	---	---	95022H100-040 **5910.75**	552
4 Air to Spring	---	---	---	95022J100-040 **6402.80**	552

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors. For Air to Spring OPEN, change letter "J" to letter " K" in listed part number. O-rings used on Socket and SR Thread End Connectors only.

CPVC - EPDM O-ring and EPDM Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Air	91122H100-005 **961.77**	93122H100-005 **967.15**	94022H100-005 **955.74**	95022H100-005 **1011.83**	552
1/2 Air to Spring	91122J100-005 **993.33**	93122J100-005 **998.67**	94022J100-005 **987.26**	95022J100-005 **1043.37**	552
3/4 Air to Air	91122H100-007 **1256.92**	93122H100-007 **1264.61**	94022H100-007 **1249.54**	95022H100-007 **1314.14**	552
3/4 Air to Spring	91122J100-007 **1304.23**	93122J100-007 **1311.93**	94022J100-007 **1296.86**	95022J100-007 **1361.45**	552
1 Air to Air	91122H100-010 **1357.92**	93122H100-010 **1368.58**	94022H100-010 **1351.37**	95022H100-010 **1448.98**	552
1 Air to Spring	91122J100-010 **1408.38**	93122J100-010 **1419.04**	94022J100-010 **1401.80**	95022J100-010 **1499.44**	552
1-1/4 Air to Air	91122H100-012 **2240.94**	93122H100-012 **2258.02**	94022H100-012 **2229.31**	95022H100-012 **2288.25**	552
1-1/4 Air to Spring	91122J100-012 **2322.95**	93122J100-012 **2340.03**	94022J100-012 **2311.31**	95022J100-012 **2370.28**	552
1-1/2 Air to Air	91122H100-015 **2254.63**	93122H100-015 **2283.88**	94022H100-015 **2239.31**	95022H100-015 **2295.04**	552
1-1/2 Air to Spring	91122J100-015 **2336.63**	93122J100-015 **2365.92**	94022J100-015 **2321.28**	95022J100-015 **2377.03**	552
2 Air to Air	91122H100-020 **2509.59**	93122H100-020 **2541.31**	94022H100-020 **2496.81**	95022H100-020 **2580.89**	552
2 Air to Spring	91122J100-020 **2601.04**	93122J100-020 **2632.78**	94022J100-020 **2588.26**	95022J100-020 **2672.35**	552
2-1/2 Air to Air	---	---	---	95022H100-025 **3283.08**	552
2-1/2 Air to Spring	---	---	---	95022J100-025 **3888.69**	552
3 Air to Air	---	---	---	95022H100-030 **4417.13**	552
3 Air to Spring	---	---	---	95022J100-030 **5369.66**	552
4 Air to Air	---	---	---	95022H100-040 **5910.75**	552
4 Air to Spring	---	---	---	95022J100-040 **6402.80**	552

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors. For Air to Spring OPEN, change letter "J" to letter " K" in listed part number. O-rings used on Socket and SR Thread End Connectors only.

CPVC - FKM O-ring and FKM Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Air	91232H100-005 **1029.18**	93232H100-005 **1034.56**	94032H100-005 **1019.54**	95032H100-005 **1042.04**	552
1/2 Air to Spring	91232J100-005 **1060.73**	93232J100-005 **1066.09**	94032J100-005 **1051.08**	95032J100-005 **1073.59**	552
3/4 Air to Air	91232H100-007 **1317.60**	93232H100-007 **1325.29**	94032H100-007 **1307.47**	95032H100-007 **1347.97**	552
3/4 Air to Spring	91232J100-007 **1364.91**	93232J100-007 **1372.61**	94032J100-007 **1354.79**	95032J100-007 **1395.28**	552
1 Air to Air	91232H100-010 **1448.22**	93232H100-010 **1458.88**	94032H100-010 **1437.07**	95032H100-010 **1496.13**	552
1 Air to Spring	91232J100-010 **1498.67**	93232J100-010 **1509.34**	94032J100-010 **1487.55**	95032J100-010 **1546.59**	552
1-1/4 Air to Air	91232H100-012 **2375.94**	93232H100-012 **2393.01**	94032H100-012 **2360.89**	95032H100-012 **2362.44**	552
1-1/4 Air to Spring	91232J100-012 **2457.94**	93232J100-012 **2475.04**	94032J100-012 **2442.88**	95032J100-012 **2444.44**	552
1-1/2 Air to Air	91232H100-015 **2398.52**	93232H100-015 **2427.78**	94032H100-015 **2382.27**	95032H100-015 **2376.79**	552
1-1/2 Air to Spring	91232J100-015 **2480.53**	93232J100-015 **2509.79**	94032J100-015 **2464.28**	95032J100-015 **2458.79**	552
2 Air to Air	91232H100-020 **2638.03**	93232H100-020 **2669.73**	94032H100-020 **2621.71**	95032H100-020 **2651.11**	552
2 Air to Spring	91232J100-020 **2729.48**	93232J100-020 **2761.22**	94032J100-020 **2713.17**	95032J100-020 **2742.59**	552
2-1/2 Air to Air	---	---	---	95032H100-025 **3405.74**	552
2-1/2 Air to Spring	---	---	---	95032J100-025 **4011.33**	552
3 Air to Air	---	---	---	95032H100-030 **4593.16**	552
3 Air to Spring	---	---	---	95032J100-030 **5545.69**	552
4 Air to Air	---	---	---	95032H100-040 **6152.06**	552

CPVC - FKM O-ring and FKM Diaphragm (continued)

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
4 Air to Spring	**---**	**---**	**---**	95032J100-040 **6644.07**	552

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors. For Air to Spring OPEN, change letter "J" to letter " K" in listed part number. O-rings used on Socket and SR Thread End Connectors only.

CPVC - EPDM O-ring and EPDM Backed PTFE Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Disc Code
1/2 Air to Air	91152H100-005 **1066.53**	93152H100-005 **1071.91**	94052H100-005 **1056.81**	95052H100-005 **1139.67**	552
1/2 Air to Spring	91152J100-005 **1528.60**	93152J100-005 **1103.43**	94052J100-005 **1088.36**	95052J100-005 **1171.21**	552
3/4 Air to Air	91152H100-007 **1370.55**	93152H100-007 **1378.25**	94052H100-007 **1359.08**	95052H100-007 **1436.63**	552
3/4 Air to Spring	91152J100-007 **1550.23**	93152J100-007 **1425.58**	94052J100-007 **1406.37**	95052J100-007 **1483.93**	552
1 Air to Air	91152H100-010 **1512.57**	93152H100-010 **1523.21**	94052H100-010 **1500.82**	95052H100-010 **1598.67**	552
1 Air to Spring	91152J100-010 **1563.02**	93152J100-010 **1573.68**	94052J100-010 **1551.29**	95052J100-010 **1649.13**	552
1-1/4 Air to Air	91152H100-012 **2416.81**	93152H100-012 **2447.60**	94052H100-012 **2399.67**	95052H100-012 **2471.12**	552
1-1/4 Air to Spring	91152J100-012 **2498.82**	93152J100-012 **2529.61**	94052J100-012 **2481.69**	95052J100-012 **2553.13**	552
1-1/2 Air to Air	91152H100-015 **2426.71**	93152H100-015 **2455.98**	94052H100-015 **2410.43**	95052H100-015 **2605.76**	552
1-1/2 Air to Spring	91152J100-015 **2508.73**	93152J100-015 **2538.00**	94052J100-015 **2492.45**	95052J100-015 **2687.76**	552
2 Air to Air	91152H100-020 **2715.22**	93152H100-020 **2746.94**	94052H100-020 **2697.08**	95052H100-020 **2921.57**	552
2 Air to Spring	91152J100-020 **2806.69**	93152J100-020 **2838.42**	94052J100-020 **2788.56**	95052J100-020 **3013.02**	552
2-1/2 Air to Air	**---**	**---**	**---**	95052H100-025 **4046.33**	552
2-1/2 Air to Spring	**---**	**---**	**---**	95052J100-025 **4651.91**	552
3 Air to Air	**---**	**---**	**---**	95052H100-030 **5217.69**	552
3 Air to Spring	**---**	**---**	**---**	95052J100-030 **6170.23**	552
4 Air to Air	**---**	**---**	**---**	95052H100-040 **6905.05**	552
4 Air to Spring	**---**	**---**	**---**	95052J100-040 **7397.12**	552

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors. For Air to Spring OPEN, change letter "J" to letter " K" in listed part number. O-rings used on Socket and SR Thread End Connectors only.

CPVC - FKM O-ring and EPDM Backed PTFE Diaphragm

Size	Socket	SR Thread	Disc Code
1/2 Air to Air	91252H100-005 **1092.87**	93252H100-005 **1098.23**	552
1/2 Air to Spring	91252J100-005 **1124.42**	93252J100-005 **1129.78**	552
3/4 Air to Air	91252H100-007 **1387.78**	93252H100-007 **1395.47**	552
3/4 Air to Spring	91252J100-007 **1435.08**	93252J100-007 **1442.78**	552
1 Air to Air	91252H100-010 **1532.48**	93252H100-010 **1549.60**	552
1 Air to Spring	91252J100-010 **1582.95**	93252J100-010 **1600.05**	552
1-1/4 Air to Air	91252H100-012 **2439.35**	93252H100-012 **2456.46**	552
1-1/4 Air to Spring	91252J100-012 **2521.38**	93252J100-012 **2538.45**	552
1-1/2 Air to Air	91252H100-015 **2464.17**	93252H100-015 **2493.43**	552
1-1/2 Air to Spring	91252J100-015 **2546.16**	93252J100-015 **2575.43**	552
2 Air to Air	91252H100-020 **2792.25**	93252H100-020 **2825.56**	552
2 Air to Spring	91252J100-020 **2883.71**	93252J100-020 **2917.02**	552

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors. For Air to Spring OPEN, change letter "J" to letter " K" in listed part number. O-rings used on Socket and SR Thread End Connectors only.

Polypropylene - EPDM O-ring and EPDM Diaphragm

Size	SR Thread	Flanged	Disc Code
1/2 Air to Air	93123H100-005 **861.19**	---	554
1/2 Air to Spring	93123J100-005 **892.75**	---	554
3/4 Air to Air	93123H100-007 **1148.61**	---	554
3/4 Air to Spring	93123J100-007 **880.51**	---	554
1 Air to Air	93123H100-010 **1246.07**	---	554
1 Air to Spring	93123J100-010 **1296.54**	---	554
1-1/4 Air to Air	93123H100-012 **2076.16**	---	554
1-1/4 Air to Spring	93123J100-012 **2158.17**	---	554
1-1/2 Air to Air	93123H100-015 **2089.84**	---	554
1-1/2 Air to Spring	93123J100-015 **2171.87**	---	554
2 Air to Air	93123H100-020 **2364.49**	---	554
2 Air to Spring	93123J100-020 **2455.96**	---	554
2-1/2 Air to Air	---	95023H100-025 **2899.34**	554
2-1/2 Air to Spring	---	95023J100-025 **3504.91**	554
3 Air to Air	---	95023H100-030 **3785.01**	554
3 Air to Spring	---	95023J100-030 **4737.56**	554
4 Air to Air	---	95023H100-040 **5105.20**	554
4 Air to Spring	---	95023J100-040 **5597.23**	554

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

Polypropylene - FKM O-ring and EPDM Diaphragm

Size	SR Thread	Flanged	Disc Code
1/2 Air to Air	93233H100-005 **876.84**	---	554

Polypropylene - FKM O-ring and EPDM Diaphragm (continued)

Size	SR Thread	Flanged	Disc Code
1/2 Air to Spring	93233J100-005 **908.38**	---	554
3/4 Air to Air	93233H100-007 **1165.95**	---	554
3/4 Air to Spring	93233J100-007 **1213.27**	---	554
1 Air to Air	93233H100-010 **1265.99**	---	554
1 Air to Spring	93233J100-010 **1316.47**	---	554
1-1/4 Air to Air	93233H100-012 **2109.95**	---	554
1-1/4 Air to Spring	93233J100-012 **2191.89**	---	554
1-1/2 Air to Air	93233H100-015 **2124.07**	---	554
1-1/2 Air to Spring	93233J100-015 **2206.08**	---	554
2 Air to Air	93233H100-020 **2404.77**	---	554
2 Air to Spring	93233J100-020 **2496.24**	---	554
2-1/2 Air to Air	---	95033H100-025 **2969.35**	554
2-1/2 Air to Spring	---	95033J100-025 **3574.95**	554
3 Air to Air	---	95033H100-030 **3884.91**	554
3 Air to Spring	---	95033J100-030 **4837.43**	554
4 Air to Air	---	95033H100-040 **5243.57**	554
4 Air to Spring	---	95033J100-040 **5735.61**	554

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

Polypropylene - EPDM O-ring and EPDM Backed PTFE Diaphragm

Size	SR Thread	Flanged	Disc Code
1/2 Air to Air	93153H100-005 **944.39**	---	554
1/2 Air to Spring	93153J100-005 **975.95**	---	554
3/4 Air to Air	93153H100-007 **1222.91**	---	554
3/4 Air to Spring	93153J100-007 **1270.21**	---	554
1 Air to Air	93153H100-010 **1389.31**	---	554
1 Air to Spring	93153J100-010 **1439.78**	---	554
1-1/4 Air to Air	93153H100-012 **2243.04**	---	554
1-1/4 Air to Spring	93153J100-012 **2325.07**	---	554
1-1/2 Air to Air	93153H100-015 **2273.83**	---	554
1-1/2 Air to Spring	93153J100-015 **2355.84**	---	554
2 Air to Air	93153H100-020 **2567.56**	---	554
2 Air to Spring	93153J100-020 **2659.01**	---	554
2-1/2 Air to Air	---	95053H100-025 **3281.33**	554
2-1/2 Air to Spring	---	95053J100-025 **3886.89**	554
3 Air to Air	---	95053H100-030 **4282.03**	554
3 Air to Spring	---	95053J100-030 **5234.57**	554
4 Air to Air	---	95053H100-040 **5666.87**	554

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Polypropylene - EPDM O-ring and EPDM Backed PTFE Diaphragm (continued)

Size	SR Thread	Flanged	Disc Code
4 Air to Spring	---	95053J100-040 **6158.92**	554

Polypropylene - FKM O-ring and EPDM Backed PTFE Diaphragm SR Thread

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
93253H100-005	1/2 Air to Air	0	0	554	956.07
93253J100-005	1/2 Air to Spring	0	0	554	987.62
93253H100-007	3/4 Air to Air	0	0	554	1237.08
93253J100-007	3/4 Air to Spring	0	0	554	1284.42
93253H100-010	1 Air to Air	0	0	554	1406.94
93253J100-010	1 Air to Spring	0	0	554	1457.40
93253H100-012	1-1/4 Air to Air	0	0	554	2265.52
93253J100-012	1-1/4 Air to Spring	0	0	554	2347.51
93253H100-015	1-1/2 Air to Air	0	0	554	2297.87
93253J100-015	1-1/2 Air to Spring	0	0	554	2379.87
93253H100-020	2 Air to Air	0	0	554	2595.34
93253J100-020	2 Air to Spring	0	0	554	2686.81

Electric Actuator Accessories

Contact Spears® for any desired accessories or functions not specified in the Accessory Selection Tables

The following accessories are for use on Spears® electric actuated Ball Valves, Butterfly Valves and Diaphragm Valves. Accessories are individually ordered separately and factory assembled with the selected Premium Actuated Valve Package. See important ordering instructions, *Ordering Premium Valve Packages with Accessory Add-ons*.

Accessory	Description	Accessory Part Number	Price Each Disc Code: 298
Heater	Heater/Thermostat - On 41°F, Off 60.8°F	A-H1	205.61
	Heater/Thermostat - On 62.6°F, Off 80.6°F	A-H2	185.03
Auxilliary Limit Switches	2-SPDT Limit Switch Set (1/2" shaft cam)[1]	A-LS1	184.44
	2-SPDT Limit Switch Set (3/8" shaft cam)[1]	A-LS2	184.44
	2-SPDT Limit Switch Set for Electric Spring Return	A-LS3	165.47
Position Indicators	LED Indicator Lights	A-P2	235.62
Modulating Positioner Boards	115 VAC 4-20 mA	A-PB1	1884.91
	115 VAC 0-5 VDC	A-PB2	1884.91
	115 VAC 0-10 VDC	A-PB3	1884.91
	230 VAC 4-20 mA	A-PB4	1884.91
	230 VAC 0-5 VDC	A-PB5	1884.91
	230 VAC 0-10 VDC	A-PB6	1884.91
	24 VAC 4-20 mA	A-PB7	1884.91
	24 VAC 0-5 VDC	A-PB8	1884.91
	24 VAC 0-10 VDC	A-PB9	1884.91
	24 VDC 4-20 mA	A-PB10	1884.91
	24 VDC 0-5 VDC	A-PB11	1884.91
	24 VDC 0-10 VDC	A-PB12	1884.91
	115 VAC 4-20 mA For Electric Spring Return Actuator	A-PB13	1970.15
Transmitter	4-20mA	A-T1	1383.00
Torque Sensors	Adjustable Electronic Torque Sensor	A-TS1	998.80
Speed Controller	Variable Speed Controller	A-SC1	655.89
"2-Wire" Control (operates as solenoid valve)	Control Relay Switch Setup 115 VAC- Normally Closed[2]	A-CR1	233.05
	Control Relay Switch Setup 115 VAC- Normally Open[2]	A-CR2	233.05
	Control Relay Switch Setup 24 VAC- Normally Closed[2]	A-CR3	233.05
	Control Relay Switch Setup 24 VAC- Normally Open[2]	A-CR4	233.05
	Control Relay Switch Setup 230 VAC- Normally Closed[2]	A-CR5	233.05
	Control Relay Switch Setup 230 VAC- Normally Open[2]	A-CR6	233.05
	Control Relay Switch Setup 12 VDC- Normally Closed[2]	A-CR7	233.05
	Control Relay Switch Setup 12 VDC- Normally Open[2]	A-CR8	233.05
	Control Relay Switch Setup 24 VDC- Normally Closed[2]	A-CR9	233.05
	Control Relay Switch Setup 24 VDC- Normally Open[2]	A-CR10	233.05
Friction Brake	Mechanical Brake[3]	A-FB1	387.21
Lockout Switch	Power disconnect switch activated when manual override is in use	A-LK1	268.76
Battery Backup	115VAC 7 AMP BATTERY BACK UP	A-BB4	4972.24
ID Tag	Type 316 Stainless Steel ID Tag 1/2" x 3" (3-lines, 12-characters & spaces)	TAG3-015	31.61

Stem Extensions	Ball Valve Stem Extension[4]	A-BVSE-xxx-000	Call for pricing
	True Union 2000 Ball Valve Stem Extension[4]	A-BVSE2-xxx-000	
	Butterfly Valve Stem Extension[4]	A-BFSE-xxx-000	
	Diaphragm Valve Stem Extension[4]	A-DESE-xxx-000	

NOTES: 1 - The A-LS2 is used on 1/2" - 2" basic Ball Valve packages; A-LS1 used on all other sizes.
2 - "2-Wire" Control is not applicable to Diaphragm Valves.
3 - Friction Brake is standard on Butterfly Valves and not applicable to Diaphragm Valves.
4 - Stem Extension Part Numbers: Enter size code for "xxx" in part number. Replace "000" with desired length code in part number; length is from top of valve to bottom of actuator.

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Pneumatic Actuator Accessories for Ball Valves & Butterfly Valves

The following accessories are for use on Spears® pneumatic actuated Ball Valves and Butterfly Valves. See separate listing for pneumatic Diaphragm Valve accessories. Accessories are individually ordered separately and factory assembled with the selected Premium Actuated Valve Package. See important ordering instructions, *Ordering Premium Valve Packages with Accessory Add-ons*.

Accessory	Description	Accessory Part Number	Price Each Disc Code: 298
Pneumatic Positioners	3-15 psi NEMA 4 Flat-Top Indicator [1]	A-PP1	1485.40
	3-15 psi NEMA 4 Dome Indicator [1]	A-PP2	1598.11
	3-15 psi NEMA 4 Dome Indicator Integrated 2-SPDT Mech. Switches [1]	A-PP3	2197.71
Electro Pneumatic Positioners with Indicator	4-20mA NEMA 4 Flat-Top Indicator [1]	A-EP1	3155.21
	4-20mA NEMA 4 Dome Indicator [1]	A-EP2	3267.76
	4-20 mA NEMA 4 Dome Indicator Integrated 2-SPDT Mech. Switches [1]	A-EP3	3450.99
	4-20mA NEMA 7 Flat-Top Indicator [1]	A-EP4	3549.60
	4-20mA Intrinsically Safe (CSA/UL) Flat-Top Indicator [1]	A-EP5	3599.48
	4-20mA NEMA 7 Dome Indicator [1]	A-EP6	3662.27
	4-20mA Intrinsically Safe w/2-SPST Proximity Switches [1]	A-EP22	3717.58
Solenoid Valves	3 & 4-way 115 VAC NEMA 4/4x	A-SV1	204.93
	3 & 4-way 230 VAC NEMA 4/4x	A-SV2	215.15
	3 & 4-way 24 VAC NEMA 4/4x	A-SV3	215.15
	3 & 4-way 12 VDC NEMA 4/4x	A-SV4	215.15
	3 & 4-way 24 VDC NEMA 4/4x	A-SV5	215.15
	3 & 4-way 115 VAC NEMA 4/4x/7/9	A-SV6	435.46
	3 & 4-way 230 VAC NEMA 4/4x/7/9	A-SV7	435.46
	3 & 4-way 24 VAC NEMA 4/4x/7/9	A-SV8	435.46
	3 & 4-way 12 VDC NEMA 4/4x/7/9	A-SV9	435.46
	3 & 4-way 24 VDC NEMA 4/4x/7/9	A-SV10	435.46
	Dual Coil 3 & 4-way 115 VAC NEMA 4/4x	A-SV11	358.56
	Dual Coil 3 & 4-way 230 VAC NEMA 4/4x	A-SV12	358.56
	Dual Coil 3 & 4-way 24 VAC NEMA 4/4x	A-SV13	358.56
	Dual Coil 3 & 4-way 12 VDC NEMA 4/4x	A-SV14	358.56
	Dual Coil 3 & 4-way 24 VDC NEMA 4/4x	A-SV15	358.56
	Dual Coil 3 & 4-way 115 VAC NEMA 7/9	A-SV16	747.93
	Dual Coil 3 & 4-way 230 VAC NEMA 7/9	A-SV17	747.93
	Dual Coil 3 & 4-way 24 VAC NEMA 7/9	A-SV18	747.93
	Dual Coil 3 & 4-way 12 VDC NEMA 7/9	A-SV19	747.93
	Dual Coil 3 & 4-way 24 VDC NEMA 7/9	A-SV20	747.93
	Stainless Steel 3 & 4-way 115 VAC NEMA 4/4x	A-SV21	891.27
	3-Way 24 VDC Hi Temperature (Class H) NEMA 4x	A-SV22	2554.60
	3 & 4-way 230 VAC NEMA 4/4x 1/2" NPT Din Connector	A-SV23	1144.97
Limit Switch & Transmitter Combination	4-20mA 2-SPDT NEMA 4/4x/7/9	A-LS20	1215.38
	4-20mA 2-SPDT NEMA 4/4x/7/9 w/ Visual Indicator	A-LS21	1280.98
	4-20mA 2-DPDT NEMA 4/4x/7/9	A-LS22	1445.27
	4-20mA 2-DPDT NEMA 4/4x/7/9 w/ Visual Indicator	A-LS23	1511.03
	4-20mA 2-Proximity NEMA 4/4x/7/9	A-LS24	1560.29
	4-20mA 2-Proximity NEMA 4/4x/7/9 w/ Visual Indicator	A-LS25	1612.23
Limit Switches	2-SPDT NEMA 4/4x	A-LS40	337.93
	2-SPDT NEMA 4/4x w/ Visual Indicator	A-LS41	394.19
	2-SPDT NEMA 4/4x w/ Green/Red Dome Indicator	A-LS41D	487.09
	NEMA 4/4x w/ Low Profile Indicator	A-LS41L	496.84
	2-DPDT NEMA 4/4x	A-LS42	558.48
	2-DPDT NEMA 4/4x w/ Visual Indicator	A-LS43	624.25
	2-Proximity NEMA 4/4x	A-LS44	673.37
	2-Proximity NEMA 4/4x w/ Low Profile Indicator (source power requires intrinsic safety barrier or amplifier).	A-LS44L	819.52
	2-Proximity NEMA 4/4x w/ Visual Indicator	A-LS45	739.12
	2-Proximity NEMA 7/9	A-LS46	771.92
	2-Proximity NEMA 7/9 w/ Visual Indicator	A-LS47	837.83
	2-Proximity NEMA 7/9 w/ Low Profile Indicator	A-LS47L	777.00
	2-SPDT NEMA 4/4x/7/9	A-LS48	555.76
	2-SPDT NEMA 4/4x/7/9 w/ Visual Indicator	A-LS49	492.74
	2-DPDT NEMA 4/4x/7/9	A-LS50	994.86
	2-DPDT NEMA 4/4x/7/9 w/ Visual Indicator	A-LS51	1059.87
	4-SPDT NEMA 4/4x w/ 180° Indicator	A-LS52	557.13
Transmitter	4-20mA Output Transmitter	A-PT1	4839.32
Indicator	Dome Indicator	A-V2	92.22
Pressure Gauge Set	Stainless steel case, 3-gauge set for use with positioners: 1 - input pressure gauge 0-30 psi, 2 - output gauges 0-160 psi	A-G1	701.33
	Plastic case, 3-gauge set for use with positioners: 1 - input pressure gauge 0-30 psi, 2 - output gauges 0-160 psi	A-G2	264.95

Pneumatic Actuator Accessories for Ball Valves & Butterfly Valves

Accessory	Description	Accessory Part Number	Price Each Disc Code: 298
Air Mufflers	Standard Sintered Bronze, 40 Micron, 18" NPT	A-M18	15.67
	Standard Sintered Bronze, 40 Micron, 1/4" NPT	A-M14	12.87
	Speed Control Muffler (Adjustable Air Flow) 1/8" NPT	A-M2V18	28.73
	Speed Control Muffler (Adjustable Air Flow) 1/4" NPT	A-M2V14	24.34
ID Tag	Type 316 Stainless Steel ID Tag 1/2" x 3" (3-lines, 12-characters & spaces)	TAG3-015	31.61

Stem Extensions	Ball Valve Stem Extension [2]	A-BVSE-xxx-000	Call for pricing
	True Union 2000 Ball Valve Stem Extension [2]	A-BVSE2-xxx-000	
	Butterfly Valve Stem Extension [2]	A-BFSE-xxx-000	

NOTES: 1 - Pneumatic and Electro-Pneumatic positioners include brass gauges: 1 input gauge @ 0-30 psi and 2 output gauges @ 0-160 psi. Stainless steel gauges may be ordered separately.
2 - Stem Extension Part Numbers: Enter size code for "xxx" in part number. Replace "000" with desired length code in part number; length is from top of valve to bottom of actuator.

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Pneumatic Actuator Accessories for Diaphragm Valves

The following accessories are for use on Spears® pneumatic actuated Diaphragm Valves only. See separate listing for Ball Valve and Butterfly Valve pneumatic accessories. Accessories are individually ordered separately and factory assembled with the selected Premium Actuated Valve Package. See important ordering instructions, *Ordering Premium Valve Packages with Accessory Add-ons*.

Accessory	Description	Accessory Part Number	Price Each Disc Code: 298
Pneumatic Positioners	3-15 psi NEMA 4x w/ Visual Indicator Top Loading (no gauge)	A-DPP1	4579.13
	3-15 psi NEMA 4x w/ Visual Indicator Top Loading w/ gauges (3)	A-DPP2	5183.53
	3-15 psi NEMA 4x w/ Visual Indicator Bottom Loading (no gauge)	A-DPP3	4579.14
	3-15 psi NEMA 4x w/ Visual Indicator Bottom Loading w/ gauges (3)	A-DPP4	5183.53
Electro Pneumatic Positioners	4-20mA (3-15 psi) NEMA 4x w/Visual Indicator (up to 2")	A-DEP1	8763.88
	4-20mA (3-15 psi) NEMA 4x w/Visual Indicator w/SS Gauges (up to 2")	A-DEP2	9368.28
	4-20mA (3-15 psi) NEMA 4x w/Visual Indicator (2-1/2" & up)	A-DEP3	8763.88
	4-20mA (3-15 psi) NEMA 4x w/Visual Indicator w/SS Gauges (2-1/2" & up)	A-DEP4	9368.28
3-Way Solenoid Valves	115 VAC NEMA 4/4x	A-DSV1	377.04
	230 VAC NEMA 4/4x	A-DSV2	377.04
	24 VAC NEMA 4/4x	A-DSV3	377.04
	12 VDC NEMA 4/4x	A-DSV4	377.04
	24 VDC NEMA 4/4x	A-DSV5	377.04
	115 VAC NEMA 4/4x/7/9	A-DSV6	581.96
	230 VAC NEMA 4/4x/7/9	A-DSV7	581.96
	24 VAC NEMA 4/4x/7/9	A-DSV8	581.96
	12 VDC NEMA 4/4x/7/9	A-DSV9	581.96
	24 VDC NEMA 4/4x/7/9	A-DSV10	581.96
4-Way Solenoid Valves	115 VAC NEMA 4/4x	A-DSV11	704.81
	230 VAC NEMA 4/4x	A-DSV12	704.81
	24 VAC NEMA 4/4x	A-DSV13	704.81
	12 VDC NEMA 4/4x	A-DSV14	704.81
	24 VDC NEMA 4/4x	A-DSV15	704.81
	115 VAC NEMA 4/4x/7/9	A-DSV16	987.82
	230 VAC NEMA 4/4x/7/9	A-DSV17	987.82
	24 VAC NEMA 4/4x/7/9	A-DSV18	987.82
	12 VDC NEMA 4/4x/7/9	A-DSV19	987.82
	24 VDC NEMA 4/4x/7/9	A-DSV20	987.82
Micro Limit Switches	2-SPDT NEMA 4 w/ 180° Visual Indicator [1]	A-DLS20	1328.40
	2-SPDT NEMA 7/9 w/ 180° Visual Indicator [1]	A-DLS25	2033.33
Proximity Limit Switches	2-SPDT NEMA 4/4X	A-DLS23	1840.67
Limit Switches	2-SPDT NEMA 4 [2]	A-DLS24	1327.14
Speed Controller	Variable Speed Controller	A-DPSC1	1142.29
ID Tag	Type 316 Stainless Steel ID Tag 1/2" x 3" (3-lines, 12-characters & spaces)	TAG3-015	31.61

Stem Extensions	Diaphragm Valve Stem Extension [3]	A-DPSE-xxx-000	Call for pricing

NOTES: 1 - Micro Limit Switches used on valve sizes ½" through 2".
2 - Limit Switches used on valve sizes 2-1/2" & larger
3 - Stem Extension Part Numbers: Enter size code for "xxx" in part number. Replace "000" with desired length code in part number; length is from top of valve to bottom of actuator.

Actuated Valves

Valve Actuation Questionnaire Checklist Ball Valves

Contact Name: _____ **Date:** _____

Business Name: _____

City: _____ **State:** _____ **Country:** _____

Phone: _____ **Fax:** _____ **E-mail:** _____

Project Name: _____

Ball Valves: **System Media Pressure (Required)** psi _____ kPa _____ Bar _____ **Valve Quantity Each** _____

Nominal Size in _____ mm _____ cm _____

Ball Valve Type :

- ☐ True Union Industrial
- ☐ True Union Standard
- ☐ Compact
- ☐ True Union Tee Style
- ☐ Other Valve Type _____
- ☐ Three Way Horizontal *(See 3-way orientation box below)*
- ☐ Three Way Vertical *(See 3-way orientation box below)*
- ☐ Tandem Three Way
- **Tandem 3-Way Orientation Document Required**

Body Material :

- ☐ PVC
- ☐ CPVC
- ☐ Low-Extractable PVC

O-ring Seals :

- ☐ EPDM
- ☐ FKM
- ☐ Other

(If Other Explain) _____

End Connector :

- ☐ Socket
- ☐ Threaded
- ☐ SR Threaded
- ☐ Flange
- ☐ Spigot
- ☐ Metric
  - ☐ DIN
  - ☐ JIS
- ☐ BSP (Thread)

Vertical 3- Way Orientation

- ☐ Single L Port
- ☐ Triple L Port
- ☐ Double L Port
- ☐ T Port

Horizontal 3- Way Orientation

- ☐ L Port
- ☐ T Port

Pneumatic ☐

Not all combinations may be available.

FailSafe Type - *(Position to which valve cycles upon air loss)*

- ☐ Double Acting (No FailSafe. Stays in last activated position)
- ☐ Spring Return - Close (FailSafe in closed position upon air loss)
- ☐ Spring Return - Open (FailSafe in open position upon air loss)
- ☐ Other: _____

Operating Air Pressure (psi) - *(Compressed air supply required to operate actuator)*

- ☐ 80-150 ☐ Other: _____

Override Type - *(Override used to cycle valve upon air loss)*

- ☐ Basic ☐ Declutchable ☐ Other: _____

Aux. Limit Switches- *(Additional mechanical switches to operate external lights, alarms etc. (set of 2)*

- ☐ SPDT- Mechanical ☐ SPDT - Proximity ☐ DPDT - Mechanical

Voltage Signal Type Specify Voltage: _____

Visual Indicator - *(Provides local visual valve position indication)*

- ☐ Low Profile ☐ Dome ☐ No Indicator

Positioner Type - *(Positioner accepts an input signal from PLC to control valve cycle).*

- ☐ **Pneumatic Positioner** *(Air supply required to operate valve)*

Signal Pressure - *(Air pressure required to position the valve)*

- ☐ 3-15 psi ☐ Other: _____
- ☐ **Electro-Pneumatic Positioner** *(Air and voltage supply required to operate)*

Signal Voltage Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

- ☐ With Transmitter - *(Sends output signal to PLC to provide valve position)*

Transmitter Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

NEMA Rating - *(Enclosure rating indicates level of ingress protection from fluids, solids and gases)*

- ☐ 4 ☐ 4x ☐ Other: _____

Solenoid Valve - *(Regulates actuator intake/exhaust air supply)*

- ☐ 3 & 4 Way ☐ Dual Coil *(Double Acting Actuators only)* ☐ Other: _____

Solenoid Valve Voltage

- ☐ 115 VAC ☐ 230 VAC ☐ Other: _____

NEMA Rating - *(Enclosure rating indicates level of ingress protection from fluids and solids)*

- ☐ 4 ☐ 4x ☐ Other: _____

☐ **Other Options:**

_____

_____

Electric ☐

Not all combinations may be available.

- ☐ Basic Two Position (90 Degree Travel Standard)
- ☐ 3 Position 90 ☐ 180 ☐

FailSafe Position (if required)

- ☐ Fail Open -FailSafe in open position upon power loss
- ☐ Fail Close-FailSafe in closed position upon power loss

Note: On "Fail Safe" Options Two Positions ONLY Override Not Recommended.

Voltage Supply Power:

- ☐ 115 VAC ☐ 230 VAC ☐ Other: _____

Frequency ☐ 50 Hertz ☐ 60 Hertz

Phase ☐ Single ☐ Three

Override Type - *(Override used to cycle valve upon power loss)*

- ☐ Basic ☐ Declutchable ☐ Other: _____

Duty Cycle *(Amount of work valve can accomplish before requiring rest)*

- ☐ 25% ☐ 75% ☐ Other/Min. Requirement : _____

NEMA Rating - *(Enclosure rating indicates level of ingress protection from fluids and solids)*

- ☐ 4 ☐ 4x ☐ Other: _____

Positioner Type - *(Positioner accepts an input signal from PLC to control valve cycle)*

- ☐ **Positioner with Transmitter**

Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

Transmitter -*(Sends output signal to PLC to provide valve position)*

Signal Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

- ☐ **Positioner - NO Transmitter**

Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

Auxiliary Limit Switches*(Additional mechanical switches to operate external lights, alarms etc.)*

- ☐ 2 ☐ 4 *(Set of 2 each)*

Standard Accessories -All options not available in all actuator combinations

- ☐ Torque Sensor
- ☐ Friction Brake
- ☐ Battery Backup
- ☐ LED Indicating Lights (red /green)
- ☐ Speed Control
- ☐ 2 Wire Control Relay
- ☐ Heater & Thermostat ☐ [On @ 41F] [Off @ 60.8F] ☐ [On @ 69.8F] [Off @ 89.6F] ☐ [On @ 62.6F] [Off @ 80.6F]

☐ **Other Options:**

_____

_____

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Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Valve Actuation Questionnaire Checklist Butterfly Valves

Contact Name: _____ **Date:** _____

Business Name: _____

City: _____ **State:** _____ **Country:** _____

Phone: _____ **Fax:** _____ **E-mail:** _____

Project Name: _____

Butterfly Valves: **System Media Pressure (Required)** psi _____ kPa _____ Bar _____ **Valve Quantity Each**

Nominal Size in _____ mm _____ cm _____ _____

Butterfly Valve Type :

- Standard ☐
- True Lug ☐ Tandem Diverting ☐
- Pool Valve ☐ Tandem Three Way ☐
- Wafer ☐ (Tandem 3-Way Orientation Document Required)
- Other Valve Type ☐ _____

Body Material :

- PVC ☐
- CPVC ☐
- Polypropylene ☐

O-ring Seals :

- Buna- N ☐
- EPDM ☐
- FKM ☐
- Other ☐

(If Other Explain) _____

Lug Materials :

- SS316 ☐
- Zinc ☐

☐ Other Information: _____

Pneumatic ☐

Not all combinations may be available.

FailSafe Type - *(Position to which valve cycles upon air loss)*

- ☐ Double Acting (No FailSafe. Stays in last activated position)
- ☐ Spring Return - Close (FailSafe in closed position upon air loss)
- ☐ Spring Return - Open (FailSafe in open position upon air loss)
- ☐ Other: _____

Operating Air Pressure (psi) - *(Compressed air supply required to operate actuator)*

☐ 80-150 ☐ Other: _____

Override Type - *(Override used to cycle valve upon air loss)*

☐ Basic ☐ Declutchable ☐ Other: _____

Aux. Limit Switches- *(Additional mechanical switches to operate external lights, alarms etc. (set of 2)*

☐ SPDT- Mechanical ☐ SPDT - Proximity ☐ DPDT - Mechanical

Voltage Signal Type Specify Voltage: _____

Visual Indicator - *(Provides local visual valve position indication)*

☐ Low Profile ☐ Dome

Positioner Type - *(Positioner accepts an input signal from PLC to control valve cycle).*

☐ **Pneumatic Positioner** *(Air supply required to operate valve)*

Signal Pressure - *(Air pressure required to position the valve)*

☐ 3-15 psi ☐ Other: _____

☐ **Electro-Pneumatic Positioner** *(Air and voltage supply required to operate)*

Signal Voltage Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

☐ With Transmitter - *(Sends output signal to PLC to provide valve position)*

Transmitter Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

NEMA Rating -*(Enclosure rating indicates level of ingress protection from fluids, solids and gases)*

☐ 4 ☐ 4x ☐ Other: _____

Solenoid Valve - *(Regulates actuator intake/exhaust air supply)*

☐ 3 & 4 Way ☐ Dual Coil *(Double Acting Actuators only)* ☐ Other: _____

Solenoid Valve Voltage

☐ 115 VAC ☐ 230 VAC ☐ Other: _____

NEMA Rating - *(Enclosure rating indicates level of ingress protection from fluids and solids)*

☐ 4 ☐ 4x ☐ Other: _____

☐ **Other Options:**

_____

_____

Electric ☐

Not all combinations may be available.

☐ Basic Two Position (90 Degree Travel Standard)

FailSafe Position (if required)

- ☐ Fail Open - Open (FailSafe in open position upon power loss)
- ☐ Fail Close - Close (FailSafe in closed position upon power loss)

Note: On "Fail Safe" options two positions ONLY Override Not Recommended.

Voltage Supply Power:

☐ 115 VAC ☐ 230 VAC ☐ Other: _____

Frequency ☐ 50 Hertz ☐ 60 Hertz

Phase ☐ Single ☐ Three

Override Type - *(Override used to cycle valve upon power loss)*

☐ Basic ☐ Declutchable ☐ Other: _____

Duty Cycle *(Amount of work valve can accomplish before requiring rest)*

☐ 25% ☐ 75% ☐ Other/Min. Requirement: _____

NEMA Rating - *(Enclosure rating indicates level of ingress protection from fluids and solids)*

☐ 4 ☐ 4x ☐ Other: _____

Positioner Type - *(Positioner accepts an input signal from PLC to control valve cycle)*

☐ **Positioner with Transmitter**

Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

Transmitter -*(Sends output signal to PLC to provide valve position)*

Signal Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

☐ **Positioner - NO Transmitter**

Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

Auxiliary Limit Switches*(Additional mechanical switches to operate external lights, alarms etc.)*

☐ 2 ☐ 4 *(Set of 2 each)*

Standard Accessories -All options not available in all actuator combinations

- ☐ Torque Sensor
- ☐ Battery Backup
- ☐ Speed Control
- ☐ Heater & Thermostat ☐ [On @ 41F] [Off @ 60.8F] ☐ [On @ 69.8F] [Off @ 89.6F] ☐ [On @ 62.6F] [Off @ 80.6F]

☐ Torque Sensor

☐ LED Indicating Lights (red /green)

☐ 2 Wire Control Relay

☐ **Other Options:**

_____

_____

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Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Actuated Valves

Valve Actuation Questionnaire Checklist Diaphragm Valves

Contact Name: _____ **Date:** _____

Business Name: _____

City: _____ **State:** _____ **Country:** _____

Phone: _____ **Fax:** _____ **E-mail:** _____

Project Name: _____

Diaphragm Valves: System Media Pressure (Required) psi _____ kPa _____ Bar _____ **Valve Quantity Each** _____

Nominal Size in _____ mm _____ cm _____

Diaphragm Valve Type :
- ☐ EPDM
- ☐ FKM
- ☐ PTFE/FKM
- ☐ PTFE/EPDM
- ☐ Other Valve Type _____

Body Material :
- ☐ PVC
- ☐ CPVC
- ☐ Low-Extractable PVC
- ☐ Polypropylene

End Connector O-rings 1/2" - 2":
- ☐ EPDM
- ☐ FKM
- ☐ PTFE/FKM
- ☐ PTFE/EPDM
- ☐ Other

(If Other Explain) _____

End Connector :
- ☐ Socket
- ☐ SR Threaded
- ☐ Flange
- ☐ Spigot

☐ Other information: _____

Not all combinations may be available.

☐ **Unitized Pneumatic**

☐ **Pneumatic**

FailSafe Type *-(Position to which valve cycles upon air loss)*
- ☐ Double Acting (No FailSafe. Stays in last activated position)
- ☐ Spring Return - Close (FailSafe in closed position upon air loss)
- ☐ Spring Return - Open (FailSafe in open position upon air loss)
- ☐ Other: _____

Operating Air Pressure (psi) - *(Compressed air supply required to operate actuator)*
☐ 80-116 ☐ Other: _____

Override Type - *(Override used to cycle valve upon air loss. Not available in sizes 1/2" -2")*
☐ Basic ☐ Declutchable ☐ Other: _____

Aux. Limit Switches- *(Additional mechanical switches to operate external lights, alarms etc. (set of 2)*
☐ SPDT- Mechanical ☐ SPDT - Proximity ☐ DPDT - Mechanical

Voltage Signal Type: Specify Voltage: _____

Visual Indicator - *(Provides local visual valve position indication)*
☐ Low Profile ☐ Dome

Positioner Type - *(Positioner accepts an input signal from PLC to control valve cycle).*

☐ **Pneumatic Positioner** *(Air supply required to operate valve)*

Signal Pressure - *(Air pressure required to position the valve)*
☐ 3-15 psi ☐ Other: _____

☐ **Electro-Pneumatic Positioner** *(Air and voltage supply required to operate)*

Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

☐ With Transmitter - *(Sends output signal to PLC to provide valve position)*

Transmitter Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

NEMA Rating -*(Enclosure rating indicates level of housing ingress protection from fluids and solids)*
☐ 4 ☐ 4x ☐ Other: _____

Solenoid Valve - *(Regulates actuator intake/exhaust air supply)*
☐ 3 way (Air-to-Spring) ☐ 4 way (*Double Acting Actuators only*) ☐ Other: _____

Solenoid Valve Voltage
☐ 115 VAC ☐ 230 VAC ☐ Other: _____

NEMA Rating -*(Enclosure rating indicates level of ingress protection from fluids, solids and gases)*
☐ 4 ☐ 4x ☐ Other: _____

☐ **Other Options:**

_____

_____

Not all combinations may be available.

☐ **Electric Multi Turn**

Voltage Supply Power:
☐ 115 VAC ☐ 230 VAC ☐ Other: _____

Frequency ☐ 50 Hertz ☐ 60 Hertz

Phase ☐ Single ☐ Three

Override Type - *(Override used to cycle valve upon power loss)*
☐ Basic ☐ Declutchable ☐ Other: _____

Duty Cycle *(Amount of work valve can accomplish before requiring rest)*
☐ 25% ☐ 75% ☐ Other: _____

NEMA Rating - *(Enclosure rating indicates level of ingress protection from fluids and solids)*
☐ 4 ☐ 4x ☐ Other: _____

Positioner Type - *(Positioner accepts an input signal from PLC to control valve cycle)*

☐ **Positioner with Transmitter**

Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

Transmitter -*(Sends output signal to PLC to provide valve position)*
Signal Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

☐ **Positioner - NO Transmitter**

Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

Auxiliary Limit Switches *(Additional mechanical switches to operate external lights, alarms etc.)*
☐ 2 ☐ 4 *(Set of 2 each)*

Standard Accessories -All options not available in all actuator combinations
- ☐ Torque Sensor
- ☐ Battery Backup
- ☐ LED Indicating Lights (red /green)
- ☐ Speed Control
- ☐ 2 Wire Control Relay
- ☐ Heater & Thermostat ☐ [On @ 41F] [Off @ 60.8F] ☐ [On @ 69.8F] [Off @ 89.6F] ☐ [On @ 62.6F] [Off @ 80.6F]

☐ **Other Options:**

_____

_____

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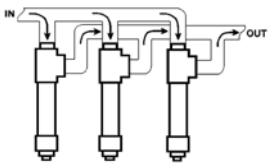
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Specially designed for agricultural and irrigation applications. Suitable for any application where cool, filtered water is required. Standard units utilize an internal-to-external filter cartridge. See following page for reverse flow (external to internal) filters.



- 200 psi Working Pressure Non-Shock @ 73°F (23°C)
- Filter Body is made from NSF®-PW Approved PVC Material
- Optional Screen Meshes
- Compact Design, Easy to Clean
- Lightweight, Easy to Install
- Filter Screens are designed using a standard perforated Stainless Steel Screen
- Mesh Sizes include an inner Stainless Steel Cloth with Spring Support (external cloth on reverse flow filters)
- Pressure loss: 100 GPM – 3 psi 50 GPM – 1.25 psi
- May be bushed to required pipe size (Bushings sold separately)

- When more than 100 gpm is required, filters may be installed in parallel
- When installing filter, allow space for removing filter screen for cleaning
- Remove stainless steel filter screen before solvent welding filter to pipe manifold
- When filters are installed in the direct sun, it is suggested the filter body be coated with a water-base latex paint having a high reflectance
- Installation in a shaded area is preferred



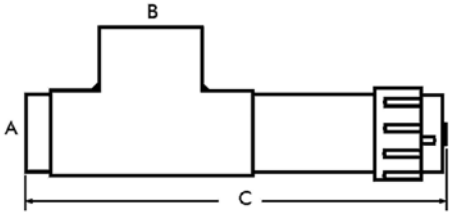
—CAUTION—

- WATER HAMMER MAY CAUSE SEVERE DAMAGE TO THE FILTER ASSEMBLY.
- BACK FLUSHING IS NOT RECOMMENDED.
- QUALITY GRADE THREAD SEALANT IS RECOMMENDED FOR ALL THREADED PVC CONNECTIONS.

Mesh Size	Hole Size (in.)	Part Number Extension
1/16" Holes	.0625	-16
1/32" Holes	.0312	-32
50 Mesh	.0117	-50
76 Mesh	.0095	-76
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.

Filter Dimensions & Weights



Series	A Inlet		B Outlet	C Overall Length	Screen Length	Filter Approx. Weight
	Socket	Spigot				
FLR	2-1/2	3	4	28	24	8
MFLR	2-1/2	3	4	16	12	4-3/4

Filter Assembly with Stainless Steel Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
100 GPM					
FL-16*	**2-1/2 /3 x 4**	1	0	020	555.11
FL-32*	**2-1/2 /3 x 4**	1	0	020	567.73
FL-50	**2-1/2 /3 x 4**	1	0	020	643.40
FL-76	**2-1/2 /3 x 4**	1	0	020	777.14
FL-100	**2-1/2 /3 x 4**	1	0	020	706.48
FL-150	**2-1/2 /3 x 4**	1	0	020	731.74
FL-200	**2-1/2 /3 x 4**	1	0	020	794.81
*Standard FL-16 and FL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet. NOTE: Filter Assemblies are furnished standard with a 1-1/4" IPS tapped cap (FL4a) for use with a valve, or may be plugged off (plug not furnished). Optional cap available with 1/4" IPS tapping for use with a pressure gauge — specify FL-5a when ordering.					
50 GPM					
MFL-16*	**2-1/2 /3 x 2**	1	0	020	466.82
MFL-32*	**2-1/2 /3 x 2**	1	0	020	474.37
MFL-50	**2-1/2 /3 x 2**	1	0	020	489.48
MFL-76	**2-1/2 /3 x 2**	1	0	020	592.98
MFL-100	**2-1/2 /3 x 2**	1	0	020	517.27
MFL-150	**2-1/2 /3 x 2**	1	0	020	542.49
MFL-200	**2-1/2 /3 x 2**	1	0	020	605.57
*Standard FL-16 and FL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet. NOTE: Filter Assemblies are furnished standard with a 1-1/4" IPS tapped cap (FL4a) for use with a valve, or may be plugged off (plug not furnished). Optional cap available with 1/4" IPS tapping for use with a pressure gauge — specify FL-5a when ordering.					

Filter Replacement Screens

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
100 GPM (24" Length)					
FL-16-1	**1/16" Holes**	3	0	020	222.04
FL-32-1	**1/32" Holes**	3	0	020	242.22
FL-50-1	**50 Mesh**	3	0	020	479.42

Filter Replacement Screens (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
100 GPM (24" Length)					
FL-76-1	**76 Mesh**	3	0	020	474.37
FL-100-1	**100 Mesh**	3	0	020	373.45
FL-150-1	**150 Mesh**	3	0	020	403.71
FL-200-1	**200 Mesh**	3	0	020	499.60
NOTE: When ordering replacement screens for FL and MFL Series Filters, please provide exact length of old screen within 1/64" to ensure proper fit of new screen in your filter body.					
50 GPM (12" Length)					
MFL-16-1	**1/16" Holes**	3	0	020	222.04
MFL-32-1	**1/32" Holes**	3	0	020	232.14
MFL-50-1	**50 Mesh**	3	0	020	252.33
MFL-76-1	**76 Mesh**	3	0	020	358.29
MFL-100-1	**100 Mesh**	3	0	020	277.57
MFL-150-1	**150 Mesh**	3	0	020	307.85
MFL-200-1	**200 Mesh**	3	0	020	378.46
NOTE: When ordering replacement screens for FL and MFL Series Filters, please provide exact length of old screen within 1/64" to ensure proper fit of new screen in your filter body.					

Filter Replacement Components

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
100 GPM Filter Body					
FL-11	**2-1/2 /3 X 4**	1	0	020	378.46
50 GPM Filter Body					
MFL-11	**2-1/2 /3 X 2**	1	0	020	290.17

Components for Old-Style Filters w/3" Bottom Cap

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Filter Cap w/Gasket					
FL-4A	**3X1-1/4**	70	0	020	31.55
FL-5A	**3X1/4**	70	0	020	31.55

Filters

Components for Old-Style Filters w/3" Bottom Cap

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Cap Gasket Only					
FCG-5	**3**	2	0	020	10.04

Components for New-Style Filters w/4" Bottom Cap

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Filter Cap w/O-rings					
FL-4B	**4X1-1/4**	25	0	020	57.97

Components for New-Style Filters w/4" Bottom Cap (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Filter Cap w/O-rings					
FL-5B	**4X1/4**	1	0	020	93.78
Includes Cap with Cap O-ring (1) and bottom Filter Bushing O-ring (1)					
Cap O-Ring Only					
B-242	**- - -**	100	0	901	.83
Filter Bushing O-Rings					
B-335-60	**- - -**	100	0	901	3.66
Each filter uses two (2) Filter Bushing O-rings for top and bottom screen seals					

Hose Filters



7 GPM Steel



7 GPM Plastic/Nylon

NOTE: It is recommended to connect the inlet of the Hose Filter to the system with a swivel adapter such as Spears® AP Series, to facilitate servicing of the filter element (refer to Hose Fittings).

Mesh Size	Hole Size (in.)	Part Number Extension
20 Mesh	.0331	-20
30 Mesh	.0232	-30
50 Mesh	.0117	-50
80 Mesh	.0070	-80
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.
Example: HF-50 = 50 Mesh

7 GPM Hose Filter Assembly

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
with Stainless Steel Screen					
HF-20	**3/4**	10	60	020	18.71
HF-30	**3/4**	10	60	020	18.71
HF-50	**3/4**	10	60	020	18.71
HF-80	**3/4**	10	60	020	18.71
HF-100	**3/4**	10	60	020	19.43
HF-150	**3/4**	10	60	020	19.67
HF-200	**3/4**	10	60	020	20.20
with Plastic/Nylon Screen					
HF-150N	**3/4**	10	60	020	19.67

Hose Filter Replacement Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Stainless Steel Screen					
HF-20-1W	**5**	25	150	020	6.84
HF-30-1W	**5**	25	150	020	6.84
HF-50-1W	**5**	25	150	020	6.84
HF-80-1W	**5**	25	150	020	6.84
HF-100-1W	**5**	25	150	020	10.11
HF-150-1W	**5**	25	150	020	10.11
HF-200-1W	**5**	25	150	020	10.11
Plastic/Nylon Screen					
HF-150-1NW	**4-3/4**	25	150	020	10.11

7 GPM Hose Filter Body Components

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Hose Filter Body w/o screen					
HF	**3/4**	10	60	020	14.07
Hose Washer					
W-100	**3/4**	50	1500	020	.04
Screen Washer					
S-W	**- - -**	600	0	901	.21

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Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

100 GPM and 50 GPM • PVC White • Buna O-ring Seal


100 GPM


50 GPM

- In-line Design Simplifies Installation.
- Allows Easy Parallel Filter Configuration for Increased Flow and Filtration.
- Removable Type 304 Stainless Steel Filter Cartridges in Assorted Perforations and Screen Mesh.
- Standard Flow Filter (Internal-to-External) Traps Sediment on Inside of Cartridge, Reverse Flow Filter (External-to-Internal) Traps Sediment on Outside of Cartridge.
- Convenient Bottom Drain with 1-1/4" NPT Stainless Steel Reinforced Plastic Thread and Plug. Optional Cap with 1/4" Outlet Available.
- 200 psi Working Pressure for Water @ 73°F (23°C).
- Manufactured from NSF® Certified PVC Material.

Mesh Size	Hole Size (in.)	Part Number Extension
1/16" Holes	.0625	-16
1/32" Holes	.0312	-32
50 Mesh	.0117	-50
76 Mesh	.0095	-76
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.
Example: TF-50 = 50 Mesh

100 GPM PVC White Tee Filter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Buna-N O-ring Seal with Stainless Steel Screen					
TF-16*	2-1/2 /3 x 2-1/2 /3	1	0	020	555.11
TF-32*	2-1/2 /3 x 2-1/2 /3	1	0	020	567.73
TF-50	2-1/2 /3 x 2-1/2 /3	1	0	020	643.40
TF-76	2-1/2 /3 x 2-1/2 /3	1	0	020	777.14
TF-100	2-1/2 /3 x 2-1/2 /3	1	0	020	706.48
TF-150	2-1/2 /3 x 2-1/2 /3	1	0	020	731.74
TF-200	2-1/2 /3 x 2-1/2 /3	1	0	020	794.81

50 GPM PVC White Tee Filter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Buna-N O-ring Seal with Stainless Steel Screen					
MTF-16*	2-1/2 /3 x 2-1/2 /3	1	0	020	466.82
MTF-32*	2-1/2 /3 x 2-1/2 /3	1	0	020	474.37
MTF-50	2-1/2 /3 x 2-1/2 /3	1	0	020	489.48
MTF-76	2-1/2 /3 x 2-1/2 /3	1	0	020	592.98
MTF-100	2-1/2 /3 x 2-1/2 /3	1	0	020	517.27
MTF-150	2-1/2 /3 x 2-1/2 /3	1	0	020	542.49
MTF-200	2-1/2 /3 x 2-1/2 /3	1	0	020	605.57

100 GPM PVC White Reverse Tee Filter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Buna-N O-ring Seal with Stainless Steel Screen					
TF-16*	2-1/2 /3 x 2-1/2 /3	1	0	020	555.11
TF-32*	2-1/2 /3 x 2-1/2 /3	1	0	020	567.73
TFR-50	2-1/2 /3 x 2-1/2 /3	1	0	020	643.40
TFR-76	2-1/2 /3 x 2-1/2 /3	1	0	020	777.14
TFR-100	2-1/2 /3 x 2-1/2 /3	1	0	020	706.48
TFR-150	2-1/2 /3 x 2-1/2 /3	1	0	020	731.74
TFR-200	2-1/2 /3 x 2-1/2 /3	1	0	020	794.81

50 GPM PVC White Reverse Tee Filter

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Buna-N O-ring Seal with Stainless Steel Screen					
MTF-16*	2-1/2 /3 x 2-1/2 /3	1	0	020	466.82
MTF-32*	2-1/2 /3 x 2-1/2 /3	1	0	020	474.37
MTFR-50	2-1/2 /3 x 2-1/2 /3	1	0	020	489.48
MTFR-76	2-1/2 /3 x 2-1/2 /3	1	0	020	592.98
MTFR-100	2-1/2 /3 x 2-1/2 /3	1	0	020	517.27
MTFR-150	2-1/2 /3 x 2-1/2 /3	1	0	020	542.49
MTFR-200	2-1/2 /3 x 2-1/2 /3	1	0	020	605.57

*Standard TF-16, TF-32, MTF-16 & MTF-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

100 GPM Filter Replacement Screens for TF Filters (24" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-16-1	**1/16" Holes**	3	0	020	222.04
FL-32-1	**1/32" Holes**	3	0	020	242.22
FL-50-1	**50 Mesh**	3	0	020	479.42

100 GPM Filter Replacement Screens for TF Filters (24" Length) (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-76-1	**76 Mesh**	3	0	020	474.37
FL-100-1	**100 Mesh**	3	0	020	373.45
FL-150-1	**150 Mesh**	3	0	020	403.71
FL-200-1	**200 Mesh**	3	0	020	499.60

NOTE: When ordering replacement screens for TF and MTF Series Filters, please provide exact length of old screen within 1/64" to insure proper fit of new screen in your filter body.

50 GPM Filter Replacement Screens for MTF Filters (12" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-16-1	**1/16" Holes**	3	0	020	222.04
MFL-32-1	**1/32" Holes**	3	0	020	232.14
MFL-50-1	**50 Mesh**	3	0	020	252.33
MFL-76-1	**76 Mesh**	3	0	020	358.29
MFL-100-1	**100 Mesh**	3	0	020	277.57
MFL-150-1	**150 Mesh**	3	0	020	307.85
MFL-200-1	**200 Mesh**	3	0	020	378.46

NOTE: When ordering replacement screens for TF and MTF Series Filters, please provide exact length of old screen within 1/64" to insure proper fit of new screen in your filter body.

100 GPM Reverse Flow Filter Replacement Screens for TFR Filters (24" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-16-1	**1/16" Holes**	3	0	020	222.04
FL-32-1	**1/32" Holes**	3	0	020	242.22
FLR-50-1	**50 Mesh**	3	0	020	243.39
FLR-76-1	**76 Mesh**	3	0	020	474.37
FLR-100-1	**100 Mesh**	3	0	020	337.02
FLR-150-1	**150 Mesh**	3	0	020	383.52
FLR-200-1	**200 Mesh**	3	0	020	474.62

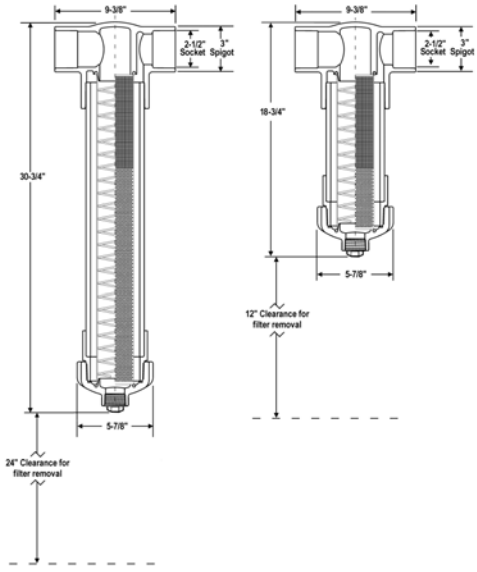
50 GPM Reverse Flow Filter Replacement Screens for MTFR Filters (12" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-16-1	**1/16" Holes**	3	0	020	222.04
MFL-32-1	**1/32" Holes**	3	0	020	232.14
MFLR-50-1	**50 Mesh**	3	0	020	256.21
MFLR-76-1	**76 Mesh**	3	0	020	358.29
MFLR-100-1	**100 Mesh**	3	0	020	263.67
MFLR-150-1	**150 Mesh**	3	0	020	292.44
MFLR-200-1	**200 Mesh**	3	0	020	359.53

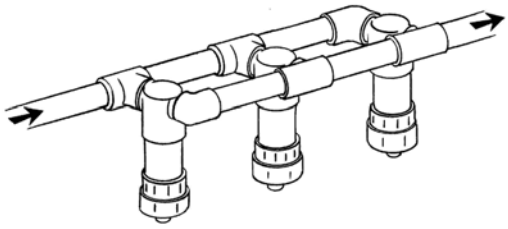
IN-LINE TECHNICAL INFORMATION

Dimensions

Filter includes drain plug for 1-1/4" NPT outlet. Optional valve for blow-out or filter cap with 1/4" NPT outlet can be purchased separately.

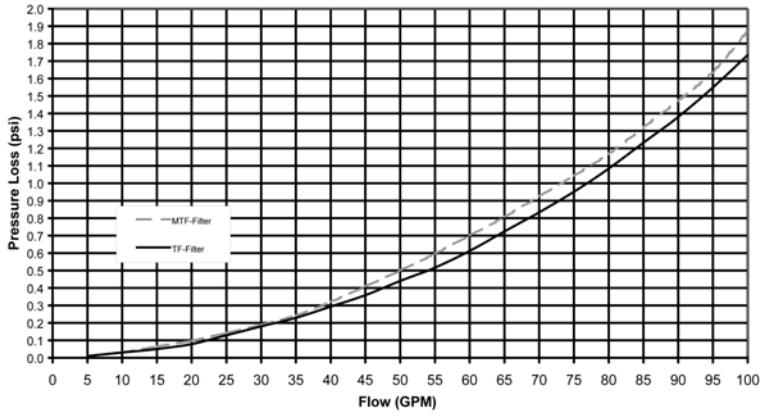


Parallel Filter Installation



- When more than 100 gpm is required, filters may be installed in parallel.
- When installing filter, allow space for removing filter screen for cleaning.
- Remove stainless steel filter screen before solvent welding filter to pipe manifold to avoid cement contact with screen.
- When filters are installed in the direct sun, it is suggested the filter body be coated with a water-base latex paint having a high reflectance.
- Installation in a shaded area is preferred.

Pressure Loss



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Spears® Manufacturing Company
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100 GPM



50 GPM

- Filter cartridge specially designed for external-to-internal filtration
- Traps sediment and debris on outside of filter (standard filters use internal-to-external flow)
- 100 GPM and 50 GPM styles available

100 GPM Reverse Flow Filter Assembly with Stainless Steel Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Socket x Socket/Spigot					
FLR-16*	**4X2-1/2 /3**	1	0	020	555.11
FLR-32*	**4X2-1/2 /3**	1	0	020	567.73
FLR-50	**4X2-1/2 /3**	1	0	020	643.40
FLR-76	**4X2-1/2 /3**	1	0	020	777.14
FLR-100	**4X2-1/2 /3**	1	0	020	706.48
FLR-150	**4X2-1/2 /3**	1	0	020	731.74
FLR-200	**4X2-1/2 /3**	1	0	020	794.81
*Standard FL-16 and FL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.					

50 GPM Filter Assembly with Stainless Steel Screen

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Socket x Socket/Spigot					
MFLR-16*	**2X2-1/2 /3**	1	0	020	466.82
MFLR-32*	**2X2-1/2 /3**	1	0	020	474.37
MFLR-50	**2X2-1/2 /3**	1	0	020	489.48
MFLR-76	**2X2-1/2 /3**	1	0	020	592.98
MFLR-100	**2X2-1/2 /3**	1	0	020	517.27
MFLR-150	**2X2-1/2 /3**	1	0	020	542.49
MFLR-200	**2X2-1/2 /3**	1	0	020	605.57
*Standard MFL-16 and MFL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.					

100 GPM Reverse Flow Filter Replacement Screens (24" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-16-1	**1/16" Holes**	3	0	020	222.04
FL-32-1	**1/32" Holes**	3	0	020	242.22
FLR-50-1	**50 Mesh**	3	0	020	243.39
FLR-76-1	**76 Mesh**	3	0	020	474.37
FLR-100-1	**100 Mesh**	3	0	020	337.02
FLR-150-1	**150 Mesh**	3	0	020	383.52
FLR-200-1	**200 Mesh**	3	0	020	474.62

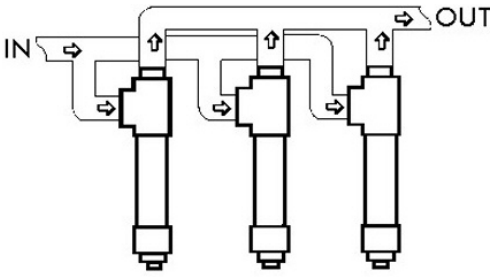
50 GPM Reverse Flow Filter Replacement Screens (12" Length)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-16-1	**1/16" Holes**	3	0	020	222.04
MFL-32-1	**1/32" Holes**	3	0	020	232.14
MFLR-50-1	**50 Mesh**	3	0	020	256.21
MFLR-76-1	**76 Mesh**	3	0	020	358.29
MFLR-100-1	**100 Mesh**	3	0	020	263.67
MFLR-150-1	**150 Mesh**	3	0	020	292.44
MFLR-200-1	**200 Mesh**	3	0	020	359.53

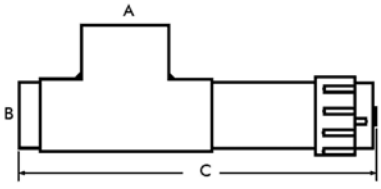
Mesh Size	Hole Size (in.)	Part Number Extension
1/16" Holes	.0625	-16
1/32" Holes	.0312	-32
50 Mesh	.0117	-50
76 Mesh	.0095	-76
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.
Example: FLR-50 = 50 Mesh

Typical Reverse Flow Application



- When more than 100 gpm is required, filters may be installed in parallel
- When installing filter, allow space for removing filter screen for cleaning
- Remove stainless steel filter screen before solvent welding filter to pipe manifold
- When filters are installed in direct sunlight, it is suggested the filter body be coated with a water-base latex paint having a high reflectance
- Installation in a shaded area is preferred



Series	A Inlet	B Outlet		C Overall Length	Screen Length	Filter Approx. Weight
		Socket	Spigot			
FLR	4	2-1/2	3	28	24	8
MFLR	4	2-1/2	3	16	12	4-3/4

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In-line Tee-Style Filters



Socket/Spigot

All Filters are 2-1/2"x 2-1/2"
Inlet/Outlet Connection

Note: 2-1/2" Socket is also a 3" Spigot

Pressure Rating @ 73°F (23°C), Water
200 psi

Mesh Size Codes

Mesh Size	Size Code
1/16" Holes	16
1/32" Holes	32
50 Mesh	50
76 Mesh	76
100 Mesh	100
150 Mesh	150
200 Mesh	200

Note: Standard flow filtration path is internal to external. Reverse-flow filtration flows from external to internal side of filter screen.

100 GPM PVC Gray Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					
16	TF2-16 **722.18**	TF3-16 **775.85**	1	0	295
32	TF2-32 **738.46**	TF3-32 **793.40**	1	0	295
50	TF2-50 **836.89**	TF3-50 **947.41**	1	0	295
76	TF2-76 **1010.88**	TF3-76 **1086.13**	1	0	295
100	TF2-100 **918.88**	TF3-100 **987.20**	1	0	295
150	TF2-150 **951.77**	TF3-150 **1022.47**	1	0	295
200	TF2-200 **1033.93**	TF3-200 **1110.76**	1	0	295

Standard TF2-16, TF2-32, TF3-16, TF3-32, MTF2-16, MTF2-32, MTF3-16 & MTF3-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

50 GPM PVC Gray Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					
16	MTF2-16 **607.18**	MTF3-16 **652.27**	1	0	295
32	MTF2-32 **617.01**	MTF3-32 **662.93**	1	0	295
50	MTF2-50 **636.66**	MTF3-50 **684.02**	1	0	295
76	MTF2-76 **771.17**	MTF3-76 **828.54**	1	0	295
100	MTF2-100 **672.75**	MTF3-100 **722.68**	1	0	295
150	MTF2-150 **705.62**	MTF3-150 **758.12**	1	0	295
200	MTF2-200 **787.60**	MTF3-200 **846.25**	1	0	295

Standard TF2-16, TF2-32, TF3-16, TF3-32, MTF2-16, MTF2-32, MTF3-16 & MTF3-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

100 GPM PVC Gray Reverse Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					
16	TF2-16 **722.18**	TF3-16 **775.85**	1	0	295
32	TF2-32 **738.46**	TF3-32 **793.40**	1	0	295
50	TFR2-50 **836.89**	TFR3-50 **899.08**	1	0	295
76	TFR2-76 **1010.88**	TFR3-76 **1086.13**	1	0	295
100	TFR2-100 **918.88**	TFR3-100 **987.20**	1	0	295
150	TFR2-150 **951.77**	TFR3-150 **1022.47**	1	0	295
200	TFR2-200 **1033.93**	TFR3-200 **1110.76**	1	0	295

100 GPM PVC Gray Reverse Tee Filter (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					

Standard TF2-16, TF2-32, TF3-16, TF3-32, MTF2-16, MTF2-32, MTF3-16 & MTF3-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

50 GPM PVC Gray Reverse Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					
16	MTF2-16 **607.18**	MTF3-16 **652.27**	1	0	295
32	MTF2-32 **617.01**	MTF3-32 **662.93**	1	0	295
50	MTFR2-50 **636.66**	MTFR3-50 **684.02**	1	0	295
76	MTFR2-76 **771.17**	MTFR3-76 **828.54**	1	0	295
100	MTFR2-100 **672.75**	MTFR3-100 **722.68**	1	0	295
150	MTFR2-150 **705.62**	MTFR3-150 **758.12**	1	0	295
200	MTFR2-200 **787.60**	MTFR3-200 **846.25**	1	0	295

Standard TF2-16, TF2-32, TF3-16, TF3-32, MTF2-16, MTF2-32, MTF3-16 & MTF3-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

100 GPM CPVC Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					
16	TF2-16C **934.36**	TF3-16C **1003.79**	1	0	296
32	TF2-32C **955.31**	TF3-32C **1026.52**	1	0	296
50	TF2-50C **1082.91**	TF3-50C **1163.12**	1	0	296
76	TF2-76C **1307.78**	TF3-76C **1405.26**	1	0	296
100	TF2-100C **1188.73**	TF3-100C **1277.18**	1	0	296
150	TF2-150C **1231.25**	TF3-150C **1322.93**	1	0	296
200	TF2-200C **1337.60**	TF3-200C **1436.98**	1	0	296

Standard TF2-16C, TF2-32C, TF3-16C, TF3-32C, MTF2-16C, MTF2-32C, MTF3-16C & MTF3-32C can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

50 GPM CPVC Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					
16	MTF2-16C **785.51**	MTF3-16C **843.82**	1	0	296
32	MTF2-32C **798.24**	MTF3-32C **857.68**	1	0	296
50	MTF2-50C **823.68**	MTF3-50C **884.92**	1	0	296
76	MTF2-76C **997.68**	MTF3-76C **1071.94**	1	0	296

50 GPM CPVC Tee Filter (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					
100	MTF2-100C **870.24**	MTF3-100C **934.85**	1	0	296
150	MTF2-150C **912.93**	MTF3-150C **979.63**	1	0	296
200	MTF2-200C **1018.96**	MTF3-200C **1094.81**	1	0	296

Standard TF2-16C, TF2-32C, TF3-16C, TF3-32C, MTF2-16C, MTF2-32C, MTF3-16C & MTF3-32C can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

100 GPM CPVC Reverse Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					
16	TF2-16C **934.36**	TF3-16C **1003.79**	1	0	296
32	TF2-32C **955.31**	TF3-32C **1026.52**	1	0	296
50	TFR2-50C **1082.91**	TFR3-50C **1163.12**	1	0	296
76	TFR2-76C **1307.78**	TFR3-76C **1405.26**	1	0	296
100	TFR2-100C **1188.73**	TFR3-100C **1277.18**	1	0	296
150	TFR2-150C **1231.25**	TFR3-150C **1322.93**	1	0	296
200	TFR2-200C **1337.60**	TFR3-200C **1436.98**	1	0	296

Standard TF2-16C, TF2-32C, TF3-16C, TF3-32C, MTF2-16C, MTF2-32C, MTF3-16C & MTF3-32C can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

50 GPM CPVC Reverse Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Stainless Steel Screen					
16	MTF2-16C **785.51**	MTF3-16C **843.82**	1	0	296
32	MTF2-32C **798.24**	MTF3-32C **857.68**	1	0	296
50	MTFR2-50C **823.68**	MTFR3-50C **884.92**	1	0	296
76	MTFR2-76C **997.68**	MTFR3-76C **1071.94**	1	0	296
100	MTFR2-100C **870.24**	MTFR3-100C **934.85**	1	0	296
150	MTFR2-150C **912.93**	MTFR3-150C **979.63**	1	0	296
200	MTFR2-200C **1018.96**	MTFR3-200C **1094.81**	1	0	296

Standard TF2-16C, TF2-32C, TF3-16C, TF3-32C, MTF2-16C, MTF2-32C, MTF3-16C & MTF3-32C can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

100 GPM Filter Replacement Screens for TF Filters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-16-1	**1/16" Holes**	3	0	020	222.04
FL-32-1	**1/32" Holes**	3	0	020	242.22
FL-50-1	**50 Mesh**	3	0	020	479.42
FL-76-1	**76 Mesh**	3	0	020	474.37
FL-100-1	**100 Mesh**	3	0	020	373.45
FL-150-1	**150 Mesh**	3	0	020	403.71
FL-200-1	**200 Mesh**	3	0	020	499.60

NOTE: When ordering replacement screens for TF Series Filters, please provide exact length of old screen within 1/64" to insure proper fit of new screen in your filter body.

50 GPM Filter Replacement Screens for MTF Filters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-16-1	**1/16" Holes**	3	0	020	222.04

50 GPM Filter Replacement Screens for MTF Filters (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-32-1	**1/32" Holes**	3	0	020	232.14
MFL-50-1	**50 Mesh**	3	0	020	252.33
MFL-76-1	**76 Mesh**	3	0	020	358.29
MFL-100-1	**100 Mesh**	3	0	020	277.57
MFL-150-1	**150 Mesh**	3	0	020	307.85
MFL-200-1	**200 Mesh**	3	0	020	378.46

NOTE: When ordering replacement screens for MTF Series Filters, please provide exact length of old screen within 1/64" to insure proper fit of new screen in your filter body.

100 GPM Reverse Flow Filter Replacement Screens for TFR Filters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FL-16-1	**1/16" Holes**	3	0	020	222.04
FL-32-1	**1/32" Holes**	3	0	020	242.22
FLR-50-1	**50 Mesh**	3	0	020	243.39
FLR-76-1	**76 Mesh**	3	0	020	474.37
FLR-100-1	**100 Mesh**	3	0	020	337.02
FLR-150-1	**150 Mesh**	3	0	020	383.52
FLR-200-1	**200 Mesh**	3	0	020	474.62

50 GPM Reverse Flow Filter Replacement Screens for MTFR Filters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MFL-16-1	**1/16" Holes**	3	0	020	222.04
MFL-32-1	**1/32" Holes**	3	0	020	232.14
MFLR-50-1	**50 Mesh**	3	0	020	256.21
MFLR-76-1	**76 Mesh**	3	0	020	358.29
MFLR-100-1	**100 Mesh**	3	0	020	263.67
MFLR-150-1	**150 Mesh**	3	0	020	292.44
MFLR-200-1	**200 Mesh**	3	0	020	359.53

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Socket



Flanged



SR Thread

Part numbers shown reflect a mesh size of 8. For different mesh sizes, substitute Mesh Code in part number as specified in chart below.

U.S. Standard Mesh Sieve No.	Sieve Opening Size (in.)	Part Number Mesh Code
8	0.094	8
12	0.062	12
20	0.033	20
30	0.024	30

Example: for 12 Mesh, specify
YS22P12-005
Additional Mesh Sizes available on request.



True Union

Pressure Rating @ 73°F (23°C), Water

1/2" - 2"	150 psi
3" - 4"	90 psi

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Temperature/Pressure
De-ratings Apply

PVC - Socket Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS22P8-005 **87.04**	YS22S8-005 **172.24**	YS32P8-005 **95.06**	YS32S8-005 **189.25**	1	18	102
3/4	YS22P8-007 **97.25**	YS22S8-007 **196.97**	YS32P8-007 **107.17**	YS32S8-007 **222.15**	1	18	102
1	YS22P8-010 **106.94**	YS22S8-010 **233.65**	YS32P8-010 **117.74**	YS32S8-010 **256.88**	1	12	102
1-1/4	YS22P8-012 **181.08**	YS22S8-012 **337.12**	YS32P8-012 **201.22**	YS32S8-012 **371.68**	1	8	102
1-1/2	YS22P8-015 **191.60**	YS22S8-015 **359.36**	YS32P8-015 **212.92**	YS32S8-015 **394.60**	1	8	102
2	YS22P8-020 **225.07**	YS22S8-020 **405.91**	YS32P8-020 **250.05**	YS32S8-020 **450.99**	1	4	102
3	YS22P8-030 **518.73**	YS22S8-030 **700.77**	YS32P8-030 **557.40**	YS32S8-030 **739.44**	1	0	102
4	YS22P8-040 **906.98**	YS22S8-040 **1135.74**	YS32P8-040 **976.26**	YS32S8-040 **1204.99**	1	0	102

PVC - SR Threaded Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS21P8-005SR **91.73**	YS21S8-005SR **176.94**	YS31P8-005SR **99.72**	YS31S8-005SR **193.93**	1	18	102
3/4	YS21P8-007SR **104.00**	YS21S8-007SR **203.71**	YS31P8-007SR **113.89**	YS31S8-007SR **228.94**	1	12	102
1	YS21P8-010SR **116.95**	YS21S8-010SR **243.69**	YS31P8-010SR **127.76**	YS31S8-010SR **266.94**	1	8	102
1-1/4	YS21P8-012SR **197.42**	YS21S8-012SR **353.45**	YS31P8-012SR **217.57**	YS31S8-012SR **388.01**	1	8	102
1-1/2	YS21P8-015SR **211.67**	YS21S8-015SR **379.44**	YS31P8-015SR **232.94**	YS31S8-015SR **414.79**	1	4	102
2	YS21P8-020SR **259.99**	YS21S8-020SR **440.82**	YS31P8-020SR **284.99**	YS31S8-020SR **485.93**	1	0	102

PVC - SR Threaded Ends (continued)

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
3	YS21P8-030SR **562.40**	YS21S8-030SR **744.27**	YS31P8-030SR **600.91**	YS31S8-030SR **1111.76**	1	0	102
4	YS21P8-040SR **952.08**	YS21S8-040SR **1180.84**	YS31P8-040SR **1250.13**	YS31S8-040SR **1250.13**	1	0	102

PVC - Flanged Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS23P8-005 **142.27**	YS23S8-005 **240.64**	YS33P8-005 **157.93**	YS33S8-005 **314.49**	1	8	102
3/4	YS23P8-007 **151.15**	YS23S8-007 **274.78**	YS33P8-007 **163.91**	YS33S8-007 **360.43**	1	8	102
1	YS23P8-010 **161.39**	YS23S8-010 **303.73**	YS33P8-010 **175.81**	YS33S8-010 **422.07**	1	8	102
1-1/4	YS23P8-012 **258.72**	YS23S8-012 **445.11**	YS33P8-012 **282.06**	YS33S8-012 **604.78**	1	4	102
1-1/2	YS23P8-015 **288.31**	YS23S8-015 **481.06**	YS33P8-015 **320.13**	YS33S8-015 **648.98**	1	4	102
2	YS23P8-020 **362.47**	YS23S8-020 **572.98**	YS33P8-020 **397.73**	YS33S8-020 **737.27**	1	0	102
3	YS23P8-030 **800.66**	YS23S8-030 **982.68**	YS33P8-030 **860.24**	YS33S8-030 **1042.78**	1	0	102
4	YS23P8-040 **1290.39**	YS23S8-040 **1519.16**	YS33P8-040 **1387.05**	YS33S8-040 **1615.79**	1	0	102

PVC Clear - Socket Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS22P8-005CL **87.04**	YS22S8-005CL **172.24**	YS32P8-005CL **95.06**	YS32S8-005CL **189.25**	1	18	103
3/4	YS22P8-007CL **97.25**	YS22S8-007CL **196.97**	YS32P8-007CL **107.17**	YS32S8-007CL **222.15**	1	18	103
1	YS22P8-010CL **106.94**	YS22S8-010CL **233.65**	YS32P8-010CL **117.74**	YS32S8-010CL **256.88**	1	12	103
1-1/4	YS22P8-012CL **181.08**	YS22S8-012CL **337.12**	YS32P8-012CL **201.22**	YS32S8-012CL **371.68**	1	8	103
1-1/2	YS22P8-015CL **191.60**	YS22S8-015CL **359.36**	YS32P8-015CL **212.92**	YS32S8-015CL **394.60**	1	8	103
2	YS22P8-020CL **225.07**	YS22S8-020CL **439.60**	YS32P8-020CL **250.05**	YS32S8-020CL **450.99**	1	4	103
3	YS22P8-030CL **518.73**	YS22S8-030CL **700.77**	YS32P8-030CL **557.40**	YS32S8-030CL **739.44**	1	0	103
4	YS22P8-040CL **906.98**	YS22S8-040CL **1135.74**	YS32P8-040CL **976.26**	YS32S8-040CL **1204.99**	1	0	103

PVC Clear - SR Threaded Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS21P8-005CLSR **91.73**	YS21S8-005CLSR **176.94**	YS31P8-005CLSR **99.72**	YS31S8-005CLSR **193.93**	1	18	103
3/4	YS21P8-007CLSR **104.00**	YS21S8-007CLSR **203.71**	YS31P8-007CLSR **113.89**	YS31S8-007CLSR **228.94**	1	12	103
1	YS21P8-010CLSR **116.95**	YS21S8-010CLSR **243.69**	YS31P8-010CLSR **127.76**	YS31S8-010CLSR **266.94**	1	8	103
1-1/4	YS21P8-012CLSR **197.42**	YS21S8-012CLSR **353.45**	YS31P8-012CLSR **217.57**	YS31S8-012CLSR **388.01**	1	8	103
1-1/2	YS21P8-015CLSR **211.67**	YS21S8-015CLSR **379.44**	YS31P8-015CLSR **232.94**	YS31S8-015CLSR **414.79**	1	4	103
2	YS21P8-020CLSR **259.99**	YS21S8-020CLSR **440.82**	YS31P8-020CLSR **284.99**	YS31S8-020CLSR **485.93**	1	0	103
3	YS21P8-030CLSR **562.40**	YS21S8-030CLSR **744.27**	YS31P8-030CLSR **600.91**	YS31S8-030CLSR **782.93**	1	0	103
4	YS21P8-040CLSR **952.08**	YS21S8-040CLSR **1180.84**	YS31P8-040CLSR **1250.13**	YS31S8-040CLSR **1250.13**	1	0	103

PVC Clear - Flanged Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS23P8-005CL **142.27**	YS23S8-005CL **240.64**	YS33P8-005CL **157.93**	YS33S8-005CL **314.49**	1	8	103
3/4	YS23P8-007CL **151.15**	YS23S8-007CL **274.78**	YS33P8-007CL **163.91**	YS33S8-007CL **360.43**	1	8	103
1	YS23P8-010CL **161.39**	YS23S8-010CL **303.73**	YS33P8-010CL **175.81**	YS33S8-010CL **422.07**	1	8	103
1-1/4	YS23P8-012CL **258.72**	YS23S8-012CL **445.11**	YS33P8-012CL **282.06**	YS33S8-012CL **604.78**	1	4	103

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PVC Clear - Flanged Ends (continued)

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1-1/2	YS23P8-015CL **288.31**	YS23S8-015CL **481.06**	YS33P8-015CL **320.13**	YS33S8-015CL **648.98**	1	4	103
2	YS23P8-020CL **362.47**	YS23S8-020CL **572.98**	YS33P8-020CL **397.73**	YS33S8-020CL **737.27**	1	0	103
3	YS23P8-030CL **800.66**	YS23S8-030CL **982.68**	YS33P8-030CL **860.24**	YS33S8-030CL **1042.78**	1	0	103
4	YS23P8-040CL **1290.39**	YS23S8-040CL **1519.16**	YS33P8-040CL **1387.05**	YS33S8-040CL **1615.79**	1	0	103

CPVC - Socket Ends

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS22C8-005C **232.20**	YS22S8-005C **319.13**	YS32C8-005C **260.02**	YS32S8-005C **358.72**	1	18	104
3/4	YS22C8-007C **255.13**	YS22S8-007C **362.93**	YS32C8-007C **287.23**	YS32S8-007C **407.93**	1	18	104
1	YS22C8-010C **324.19**	YS22S8-010C **448.89**	YS32C8-010C **365.17**	YS32S8-010C **503.75**	1	12	104
1-1/4	YS22C8-012C **470.62**	YS22S8-012C **647.68**	YS32C8-012C **566.36**	YS32S8-012C **685.83**	1	8	104
1-1/2	YS22C8-015C **505.52**	YS22S8-015C **669.04**	YS32C8-015C **587.58**	YS32S8-015C **748.02**	1	8	104
2	YS22C8-020C **715.75**	YS22S8-020C **838.72**	YS32C8-020C **756.31**	YS32S8-020C **914.78**	1	4	104
3	YS22C8-030C **853.81**	YS22S8-030C **1021.35**	YS32C8-030C **900.54**	YS32S8-030C **1098.69**	1	0	104
4	YS22C8-040C **1478.88**	YS22S8-040C **1691.52**	YS32C8-040C **1590.03**	YS32S8-040C **1818.78**	1	0	104

CPVC - SR Threaded Ends

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS21C8-005CSR **240.65**	YS21S8-005CSR **327.58**	YS31C8-005CSR **268.48**	YS31S8-005CSR **367.18**	1	18	104
3/4	YS21C8-007CSR **264.18**	YS21S8-007CSR **371.96**	YS31C8-007CSR **296.27**	YS31S8-007CSR **416.98**	1	12	104
1	YS21C8-010CSR **344.92**	YS21S8-010CSR **469.59**	YS31C8-010CSR **385.91**	YS31S8-010CSR **524.43**	1	8	104
1-1/4	YS21C8-012CSR **491.91**	YS21S8-012CSR **632.51**	YS31C8-012CSR **587.65**	YS31S8-012CSR **707.15**	1	8	104
1-1/2	YS21C8-015CSR **530.17**	YS21S8-015CSR **693.68**	YS31C8-015CSR **667.73**	YS31S8-015CSR **772.65**	1	4	104
2	YS21C8-020CSR **750.85**	YS21S8-020CSR **873.82**	YS31C8-020CSR **841.61**	YS31S8-020CSR **949.85**	1	0	104
3	YS21C8-030CSR **897.31**	YS21S8-030CSR **1064.85**	YS31C8-030CSR **960.15**	YS31S8-030CSR **1142.18**	1	0	104
4	YS21C8-040CSR **1523.98**	YS21S8-040CSR **1736.64**	YS31C8-040CSR **1635.14**	YS31S8-040CSR **1863.91**	1	0	104

CPVC - Flanged Ends

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS23C8-005C **374.44**	YS23S8-005C **459.72**	YS33C8-005C **415.61**	YS33S8-005C **512.87**	1	8	104
3/4	YS23C8-007C **397.73**	YS23S8-007C **489.04**	YS33C8-007C **431.29**	YS33S8-007C **545.78**	1	8	104
1	YS23C8-010C **424.71**	YS23S8-010C **543.37**	YS33C8-010C **462.66**	YS33S8-010C **605.78**	1	8	104
1-1/4	YS23C8-012C **680.81**	YS23S8-012C **838.08**	YS33C8-012C **742.20**	YS33S8-012C **933.22**	1	4	104
1-1/2	YS23C8-015C **758.69**	YS23S8-015C **931.21**	YS33C8-015C **842.40**	YS33S8-015C **1038.88**	1	4	104
2	YS23C8-020C **953.87**	YS23S8-020C **1164.35**	YS33C8-020C **1046.67**	YS33S8-020C **1218.31**	1	0	104
3	YS23C8-030C **1303.27**	YS23S8-030C **1472.44**	YS33C8-030C **1300.05**	YS33S8-030C **1583.59**	1	0	104
4	YS23C8-040C **2086.21**	YS23S8-040C **2298.85**	YS33C8-040C **2244.07**	YS33S8-040C **2472.85**	1	0	104

PVC Gray - True Union Socket Ends

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2AP8-005 **91.63**	YS2AS8-005 **181.29**	YS3AP8-005 **100.07**	YS3AS8-005 **199.22**	1	12	102
3/4	YS2AP8-007 **102.36**	YS2AS8-007 **207.33**	YS3AP8-007 **112.80**	YS3AS8-007 **233.86**	1	8	102

PVC Gray - True Union Socket Ends (continued)

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1	YS2AP8-010 **112.54**	YS2AS8-010 **245.96**	YS3AP8-010 **123.91**	YS3AS8-010 **270.43**	1	8	102
1-1/4	YS2AP8-012 **190.62**	YS2AS8-012 **355.49**	YS3AP8-012 **211.82**	YS3AS8-012 **391.22**	1	4	102
1-1/2	YS2AP8-015 **201.71**	YS2AS8-015 **378.27**	YS3AP8-015 **224.11**	YS3AS8-015 **415.39**	1	0	102
2	YS2AP8-020 **236.91**	YS2AS8-020 **427.24**	YS3AP8-020 **263.23**	YS3AS8-020 **474.74**	1	0	102
3	YS2AP8-030 **546.04**	YS2AS8-030 **737.64**	YS3AP8-030 **586.73**	YS3AS8-030 **778.36**	1	0	102
4	YS2AP8-040 **954.72**	YS2AS8-040 **1195.52**	YS3AP8-040 **1027.61**	YS3AS8-040 **1268.42**	1	0	102

PVC Gray - True Union Threaded Ends

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2BP8-005 **91.63**	YS2BS8-005 **181.29**	YS3BP8-005 **100.07**	YS3BS8-005 **199.22**	1	12	102
3/4	YS2BP8-007 **102.36**	YS2BS8-007 **207.33**	YS3BP8-007 **112.80**	YS3BS8-007 **233.86**	1	8	102
1	YS2BP8-010 **112.54**	YS2BS8-010 **245.96**	YS3BP8-010 **123.91**	YS3BS8-010 **270.43**	1	8	102
1-1/4	YS2BP8-012 **190.62**	YS2BS8-012 **355.49**	YS3BP8-012 **211.82**	YS3BS8-012 **391.22**	1	4	102
1-1/2	YS2BP8-015 **201.71**	YS2BS8-015 **378.27**	YS3BP8-015 **224.11**	YS3BS8-015 **415.39**	1	0	102
2	YS2BP8-020 **236.91**	YS2BS8-020 **427.24**	YS3BP8-020 **263.23**	YS3BS8-020 **474.74**	1	0	102
3	YS2BP8-030 **546.04**	YS2BS8-030 **737.64**	YS3BP8-030 **586.73**	YS3BS8-030 **778.36**	1	0	102
4	YS2BP8-040 **954.72**	YS2BS8-040 **1195.52**	YS3BP8-040 **1027.61**	YS3BS8-040 **1268.42**	1	0	102

PVC Gray - True Union SR Threaded Ends

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2BP8-005SR **96.54**	YS2BS8-005SR **186.22**	YS3BP8-005SR **104.99**	YS3BS8-005SR **204.16**	1	12	102
3/4	YS2BP8-007SR **109.49**	YS2BS8-007SR **214.43**	YS3BP8-007SR **119.88**	YS3BS8-007SR **240.98**	1	8	102
1	YS2BP8-010SR **123.08**	YS2BS8-010SR **256.48**	YS3BP8-010SR **134.45**	YS3BS8-010SR **280.98**	1	8	102
1-1/4	YS2BP8-012SR **207.80**	YS2BS8-012SR **372.05**	YS3BP8-012SR **229.01**	YS3BS8-012SR **408.42**	1	4	102
1-1/2	YS2BP8-015SR **222.80**	YS2BS8-015SR **399.41**	YS3BP8-015SR **245.21**	YS3BS8-015SR **436.62**	1	0	102
2	YS2BP8-020SR **273.66**	YS2BS8-020SR **464.01**	YS3BP8-020SR **300.00**	YS3BS8-020SR **511.52**	1	0	102
3	YS2BP8-030SR **591.82**	YS2BS8-030SR **783.44**	YS3BP8-030SR **632.51**	YS3BS8-030SR **824.15**	1	0	102
4	YS2BP8-040SR **1002.22**	YS2BS8-040SR **1243.00**	YS3BP8-040SR **1075.13**	YS3BS8-040SR **1315.92**	1	0	102

PVC Clear - True Union Socket Ends

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2AP8-005CL **91.63**	YS2AS8-005CL **181.29**	YS3AP8-005CL **100.07**	YS3AS8-005CL **199.22**	1	12	103
3/4	YS2AP8-007CL **102.36**	YS2AS8-007CL **207.33**	YS3AP8-007CL **112.80**	YS3AS8-007CL **233.86**	1	8	103
1	YS2AP8-010CL **112.54**	YS2AS8-010CL **245.96**	YS3AP8-010CL **123.91**	YS3AS8-010CL **270.43**	1	8	103
1-1/4	YS2AP8-012CL **190.62**	YS2AS8-012CL **354.86**	YS3AP8-012CL **211.82**	YS3AS8-012CL **391.22**	1	4	103
1-1/2	YS2AP8-015CL **201.71**	YS2AS8-015CL **378.27**	YS3AP8-015CL **224.11**	YS3AS8-015CL **415.39**	1	0	103
2	YS2AP8-020CL **236.91**	YS2AS8-020CL **427.24**	YS3AP8-020CL **263.23**	YS3AS8-020CL **474.74**	1	0	103
3	YS2AP8-030CL **546.04**	YS2AS8-030CL **737.64**	YS3AP8-030CL **586.73**	YS3AS8-030CL **778.36**	1	0	103
4	YS2AP8-040CL **954.72**	YS2AS8-040CL **1195.52**	YS3AP8-040CL **1027.61**	YS3AS8-040CL **1268.42**	1	0	103

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PVC Clear - True Union Threaded Ends

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM	Std Pk	Mstr Pk	Disc Code
1/2	YS2BP8-005CL **91.63**	YS2BS8-005CL **181.29**	YS3BP8-005CL **100.07**	YS3BS8-005CL **199.22**	1	12	103
3/4	YS2BP8-007CL **102.36**	YS2BS8-007CL **207.33**	YS3BP8-007CL **112.80**	YS3BS8-007CL **233.86**	1	8	103
1	YS2BP8-010CL **112.54**	YS2BS8-010CL **245.97**	YS3BP8-010CL **123.91**	YS3BS8-010CL **270.43**	1	8	103
1-1/4	YS2BP8-012CL **190.62**	YS2BS8-012CL **354.86**	YS3BP8-012CL **211.82**	YS3BS8-012CL **391.22**	1	4	103
1-1/2	YS2BP8-015CL **201.71**	YS2BS8-015CL **378.27**	YS3BP8-015CL **224.11**	YS3BS8-015CL **415.39**	1	0	103
2	YS2BP8-020CL **236.91**	YS2BS8-020CL **427.24**	YS3BP8-020CL **263.23**	YS3BS8-020CL **474.74**	1	0	103
3	YS2BP8-030CL **546.04**	YS2BS8-030CL **737.64**	YS3BP8-030CL **586.73**	YS3BS8-030CL **778.36**	1	0	103
4	YS2BP8-040CL **954.72**	YS2BS8-040CL **1195.52**	YS3BP8-040CL **1027.61**	YS3BS8-040CL **1268.42**	1	0	103

PVC Clear - True Union SR Threaded Ends

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2BP8-005CLSR **96.54**	YS2BS8-005CLSR **186.22**	YS3BP8-005CLSR **104.99**	YS3BS8-005CLSR **204.16**	1	12	103
3/4	YS2BP8-007CLSR **109.49**	YS2BS8-007CLSR **214.43**	YS3BP8-007CLSR **119.88**	YS3BS8-007CLSR **240.98**	1	8	103
1	YS2BP8-010CLSR **123.08**	YS2BS8-010CLSR **256.48**	YS3BP8-010CLSR **134.45**	YS3BS8-010CLSR **280.98**	1	8	103
1-1/4	YS2BP8-012CLSR **207.80**	YS2BS8-012CLSR **372.05**	YS3BP8-012CLSR **229.01**	YS3BS8-012CLSR **408.42**	1	4	103
1-1/2	YS2BP8-015CLSR **222.80**	YS2BS8-015CLSR **399.41**	YS3BP8-015CLSR **245.21**	YS3BS8-015CLSR **436.62**	1	0	103
2	YS2BP8-020CLSR **273.66**	YS2BS8-020CLSR **464.01**	YS3BP8-020CLSR **300.00**	YS3BS8-020CLSR **511.52**	1	0	103
3	YS2BP8-030CLSR **591.82**	YS2BS8-030CLSR **783.44**	YS3BP8-030CLSR **632.51**	YS3BS8-030CLSR **824.15**	1	0	103
4	YS2BP8-040CLSR **1002.22**	YS2BS8-040CLSR **1243.00**	YS3BP8-040CLSR **1075.13**	YS3BS8-040CLSR **1315.92**	1	0	103

CPVC - True Union Socket Ends

Size	EPDM CPVC Screen	EPDM SS Screen	FKM CPVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2AC8-005C **244.43**	YS2AS8-005C **335.93**	YS3AC8-005C **273.74**	YS3AS8-005C **377.59**	1	12	104
3/4	YS2AC8-007C **268.56**	YS2AS8-007C **382.03**	YS3AC8-007C **302.35**	YS3AS8-007C **429.40**	1	8	104
1	YS2AC8-010C **341.25**	YS2AS8-010C **472.54**	YS3AC8-010C **384.40**	YS3AS8-010C **530.24**	1	8	104
1-1/4	YS2AC8-012C **495.39**	YS2AS8-012C **681.77**	YS3AC8-012C **596.15**	YS3AS8-012C **722.96**	1	4	104
1-1/2	YS2AC8-015C **532.13**	YS2AS8-015C **704.24**	YS3AC8-015C **618.54**	YS3AS8-015C **787.38**	1	0	104
2	YS2AC8-020C **753.41**	YS2AS8-020C **882.85**	YS3AC8-020C **796.12**	YS3AS8-020C **962.93**	1	0	104
3	YS2AC8-030C **898.74**	YS2AS8-030C **1075.13**	YS3AC8-030C **964.91**	YS3AS8-030C **1156.51**	1	0	104
4	YS2AC8-040C **1556.71**	YS2AS8-040C **1780.54**	YS3AC8-040C **1673.73**	YS3AS8-040C **1914.53**	1	0	104

CPVC - True Union Threaded Ends

Size	EPDM CPVC Screen	EPDM SS Screen	FKM CPVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2BC8-005C **244.43**	YS2BS8-005C **335.93**	YS3BC8-005C **273.74**	YS3BS8-005C **377.59**	1	12	104
3/4	YS2BC8-007C **268.56**	YS2BS8-007C **382.03**	YS3BC8-007C **302.35**	YS3BS8-007C **429.40**	1	8	104
1	YS2BC8-010C **341.25**	YS2BS8-010C **472.54**	YS3BC8-010C **384.40**	YS3BS8-010C **530.24**	1	8	104
1-1/4	YS2BC8-012C **495.39**	YS2BS8-012C **681.77**	YS3BC8-012C **596.15**	YS3BS8-012C **721.94**	1	4	104
1-1/2	YS2BC8-015C **532.13**	YS2BS8-015C **704.24**	YS3BC8-015C **618.54**	YS3BS8-015C **787.38**	1	0	104
2	YS2BC8-020C **753.41**	YS2BS8-020C **882.85**	YS3BC8-020C **796.12**	YS3BS8-020C **962.93**	1	0	104
3	YS2BC8-030C **898.74**	YS2BS8-030C **1075.13**	YS3BC8-030C **950.39**	YS3BS8-030C **1156.51**	1	0	104
4	YS2BC8-040C **1556.71**	YS2BS8-040C **1780.54**	YS3BC8-040C **1673.73**	YS3BS8-040C **1914.53**	1	0	104

CPVC - True Union SR Threaded Ends

Size	EPDM CPVC Screen	EPDM SS Screen	FKM CPVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	YS2BC8-005CSR **253.34**	YS2BS8-005CSR **344.79**	YS3BC8-005CSR **282.61**	YS3BS8-005CSR **386.51**	1	12	104
3/4	YS2BC8-007CSR **278.08**	YS2BS8-007CSR **391.52**	YS3BC8-007CSR **311.87**	YS3BS8-007CSR **438.93**	1	12	104
1	YS2BC8-010CSR **363.05**	YS2BS8-010CSR **494.27**	YS3BC8-010CSR **406.20**	YS3BS8-010CSR **552.33**	1	8	104
1-1/4	YS2BC8-012CSR **517.78**	YS2BS8-012CSR **665.80**	YS3BC8-012CSR **618.56**	YS3BS8-012CSR **744.35**	1	4	104
1-1/2	YS2BC8-015CSR **558.05**	YS2BS8-015CSR **730.19**	YS3BC8-015CSR **702.85**	YS3BS8-015CSR **813.32**	1	0	104
2	YS2BC8-020CSR **790.38**	YS2BS8-020CSR **919.80**	YS3BC8-020CSR **885.91**	YS3BS8-020CSR **999.85**	1	0	104
3	YS2BC8-030CSR **944.55**	YS2BS8-030CSR **1120.91**	YS3BC8-030CSR **1010.67**	YS3BS8-030CSR **1202.29**	1	0	104
4	YS2BC8-040CSR **1604.18**	YS2BS8-040CSR **1828.04**	YS3BC8-040CSR **1721.20**	YS3BS8-040CSR **1961.98**	1	0	104

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Pressure Rating
@ 73°F (23°C), Water

1/2"-8"	150 psi
10"-12"	50 psi

Maximum Service Temperature

PVC = 140°F (60°C)

CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply

Important Ordering Information - Column headings indicate Elastomer seal type and Strainer Basket screen material. All Part Numbers shown designate 1/8" perforated (#6 Mesh Code) Strainer Basket Screens. To order other screen perforation sizing, replace the number "6" preceding the dash-separator with the corresponding Mesh Code from chart. Pricing is the same for all listed Mesh Codes.

Perforation Size	Mesh Code
1/16"	12
3/32"	8
1/8"	6
3/16"	4
1/4"	3
3/8"	2

Example: To order a 1/16" screen perforation in listed part number BS22P6-020, change the part number to BS22P12-020

Contact Spears® for additional perforations & wire mesh sizes

PVC - Socket Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	BS22P6-005 **407.06**	BS22S6-005 **650.98**	BS32P6-005 **428.48**	BS32S6-005 **672.40**	1	2	295
3/4	BS22P6-007 **407.06**	BS22S6-007 **650.98**	BS32P6-007 **428.48**	BS32S6-007 **672.40**	1	2	295
1	BS22P6-010 **650.98**	BS22S6-010 **650.98**	BS32P6-010 **428.48**	BS32S6-010 **672.40**	1	2	295
1-1/4	BS22P6-012 **745.59**	BS22S6-012 **1069.75**	BS32P6-012 **837.53**	BS32S6-012 **1202.23**	1	0	295
1-1/2	BS22P6-015 **745.59**	BS22S6-015 **1069.75**	BS32P6-015 **837.53**	BS32S6-015 **1202.23**	1	0	295
2	BS22P6-020 **745.59**	BS22S6-020 **1069.75**	BS32P6-020 **837.53**	BS32S6-020 **1202.23**	1	0	295
2-1/2	BS22P6-025 **1410.09**	BS22S6-025 **1973.29**	BS32P6-025 **1585.14**	BS32S6-025 **2217.25**	1	0	295
3	BS22P6-030 **1720.49**	BS22S6-030 **2283.11**	BS32P6-030 **1933.19**	BS32S6-030 **2565.33**	1	0	295
4	BS22P6-040 **2278.44**	BS22S6-040 **2925.52**	BS32P6-040 **2560.03**	BS32S6-040 **3278.08**	1	0	295
6	BS22P6-060 **3252.76**	BS22S6-060 **4372.12**	BS32P6-060 **3654.91**	BS32S6-060 **4918.53**	1	0	295
8	BS22P6-080 **4335.63**	BS22S6-080 **5857.16**	BS32P6-080 **4872.53**	BS32S6-080 **6582.47**	1	0	295
10	BS22P6-100 **8308.63**	BS22S6-100 **10482.52**	BS32P6-100 **9086.61**	BS32S6-100 **11527.94**	1	0	295
12	BS22P6-120 **10294.12**	BS22S6-120 **13187.22**	BS32P6-120 **11321.27**	BS32S6-120 **14568.98**	1	0	295

PVC - Flanged Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	BS23P6-005 **469.23**	BS23S6-005 **713.14**	BS33P6-005 **492.76**	BS33S6-005 **736.67**	1	0	295
3/4	BS23P6-007 **469.23**	BS23S6-007 **713.14**	BS33P6-007 **492.76**	BS33S6-007 **736.67**	1	0	295
1	BS23P6-010 **469.23**	BS23S6-010 **713.14**	BS33P6-010 **492.76**	BS33S6-010 **736.67**	1	0	295
1-1/4	BS23P6-012 **886.35**	BS23S6-012 **1211.54**	BS33P6-012 **996.79**	BS33S6-012 **1361.48**	1	0	295
1-1/2	BS23P6-015 **886.35**	BS23S6-015 **1186.03**	BS33P6-015 **996.79**	BS33S6-015 **1361.48**	1	0	295
2	BS23P6-020 **886.35**	BS23S6-020 **1211.54**	BS33P6-020 **996.79**	BS33S6-020 **1361.48**	1	0	295
2-1/2	BS23P6-025 **1626.86**	BS23S6-025 **2189.51**	BS33P6-025 **1828.06**	BS33S6-025 **2460.18**	1	0	295

PVC - Flanged Ends (continued)

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
3	BS23P6-030 **2065.51**	BS23S6-030 **2627.33**	BS33P6-030 **2320.78**	BS33S6-030 **2951.88**	1	0	295
4	BS23P6-040 **2691.94**	BS23S6-040 **3332.17**	BS33P6-040 **3024.81**	BS33S6-040 **3744.05**	1	0	295
6	BS23P6-060 **5745.36**	BS23S6-060 **6864.52**	BS33P6-060 **6455.43**	BS33S6-060 **7712.97**	1	0	295
8	BS23P6-080 **7571.16**	BS23S6-080 **9134.80**	BS33P6-080 **8507.20**	BS33S6-080 **10217.09**	1	0	295
10	BS23P6-100 **10093.94**	BS23S6-100 **12267.65**	BS33P6-100 **11341.56**	BS33S6-100 **13783.89**	1	0	295
12	BS23P6-120 **13812.05**	BS23S6-120 **16707.00**	BS33P6-120 **15519.16**	BS33S6-120 **18771.91**	1	0	295

PVC - Spigot Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	BS27P6-005 **407.06**	BS27S6-005 **650.98**	BS37P6-005 **428.48**	BS37S6-005 **672.40**	1	0	295
3/4	BS27P6-007 **407.06**	BS27S6-007 **650.98**	BS37P6-007 **428.48**	BS37S6-007 **672.40**	1	0	295
1	BS27P6-010 **407.06**	BS27S6-010 **650.98**	BS37P6-010 **428.48**	BS37S6-010 **672.40**	1	0	295
1-1/4	BS27P6-012 **745.59**	BS27S6-012 **1069.75**	BS37P6-012 **837.53**	BS37S6-012 **1202.23**	1	0	295
1-1/2	BS27P6-015 **745.59**	BS27S6-015 **1069.75**	BS37P6-015 **837.53**	BS37S6-015 **1202.23**	1	0	295
2	BS27P6-020 **745.59**	BS27S6-020 **1069.75**	BS37P6-020 **837.53**	BS37S6-020 **1202.23**	1	0	295
2-1/2	BS27P6-025 **1410.09**	BS27S6-025 **1973.32**	BS37P6-025 **1585.14**	BS37S6-025 **2217.25**	1	0	295
3	BS27P6-030 **1720.49**	BS27S6-030 **2283.11**	BS37P6-030 **1933.19**	BS37S6-030 **2565.33**	1	0	295
4	BS27P6-040 **2278.44**	BS27S6-040 **2925.52**	BS37P6-040 **2560.03**	BS37S6-040 **3278.08**	1	0	295
6	BS27P6-060 **3252.76**	BS27S6-060 **4372.12**	BS37P6-060 **3654.91**	BS37S6-060 **4918.53**	1	0	295
8	BS27P6-080 **4335.63**	BS27S6-080 **5857.16**	BS37P6-080 **4872.53**	BS37S6-080 **6582.47**	1	0	295
10	BS27P6-100 **8308.63**	BS27S6-100 **10482.52**	BS37P6-100 **9086.61**	BS37S6-100 **11527.94**	1	0	295
12	BS27P6-120 **10294.12**	BS27S6-120 **13187.22**	BS37P6-120 **11321.27**	BS37S6-120 **14568.98**	1	0	295

CPVC - Socket Ends

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	BS22C6-005C **634.49**	BS22S6-005C **878.39**	BS32C6-005C **666.55**	BS32S6-005C **910.46**	1	2	297
3/4	BS22C6-007C **634.49**	BS22S6-007C **878.39**	BS32C6-007C **666.55**	BS32S6-007C **910.46**	1	2	297
1	BS22C6-010C **634.49**	BS22S6-010C **878.39**	BS32C6-010C **666.55**	BS32S6-010C **910.46**	1	2	297
1-1/4	BS22C6-012C **1197.36**	BS22S6-012C **1522.57**	BS32C6-012C **1345.85**	BS32S6-012C **1710.55**	1	0	297
1-1/2	BS22C6-015C **1197.36**	BS22S6-015C **1522.57**	BS32C6-015C **1345.85**	BS32S6-015C **1710.55**	1	0	297
2	BS22C6-020C **1197.36**	BS22S6-020C **1522.57**	BS32C6-020C **1345.85**	BS32S6-020C **1710.55**	1	0	297
2-1/2	BS22C6-025C **1961.57**	BS22S6-025C **2522.36**	BS32C6-025C **2203.87**	BS32S6-025C **2834.37**	1	0	297
3	BS22C6-030C **2543.26**	BS22S6-030C **3106.03**	BS32C6-030C **2857.67**	BS32S6-030C **3489.79**	1	0	297
4	BS22C6-040C **3379.36**	BS22S6-040C **4019.18**	BS32C6-040C **3797.74**	BS32S6-040C **4515.97**	1	0	297
6	BS22C6-060C **4466.31**	BS22S6-060C **5587.52**	BS32C6-060C **5018.38**	BS32S6-060C **6277.95**	1	0	297
8	BS22C6-080C **6375.84**	BS22S6-080C **7897.74**	BS32C6-080C **7163.94**	BS32S6-080C **8873.88**	1	0	297
10	BS22C6-100C **11192.03**	BS22S6-100C **13364.49**	BS32C6-100C **12575.39**	BS32S6-100C **15016.73**	1	0	297
12	BS22C6-120C **14212.40**	BS22S6-120C **17107.55**	BS32C6-120C **15968.94**	BS32S6-120C **19222.87**	1	0	297

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CPVC - Flanged Ends

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	BS23C6-005C **694.41**	BS23S6-005C **938.31**	BS33C6-005C **730.83**	BS33S6-005C **974.74**	1	0	297
3/4	BS23C6-007C **694.41**	BS23S6-007C **938.31**	BS33C6-007C **730.83**	BS33S6-007C **974.74**	1	0	297
1	BS23C6-010C **694.41**	BS23S6-010C **938.31**	BS33C6-010C **730.83**	BS33S6-010C **974.74**	1	0	297
1-1/4	BS23C6-012C **1350.35**	BS23S6-012C **1673.28**	BS33C6-012C **1517.06**	BS33S6-012C **1880.14**	1	0	297
1-1/2	BS23C6-015C **1350.35**	BS23S6-015C **1673.28**	BS33C6-015C **1517.06**	BS33S6-015C **1880.14**	1	0	297
2	BS23C6-020C **1350.35**	BS23S6-020C **1673.28**	BS33C6-020C **1517.06**	BS33S6-020C **1880.14**	1	0	297
2-1/2	BS23C6-025C **2562.92**	BS23S6-025C **3124.68**	BS33C6-025C **2878.96**	BS33S6-025C **3511.07**	1	2	297
3	BS23C6-030C **3047.31**	BS23S6-030C **3810.92**	BS33C6-030C **3423.96**	BS33S6-030C **4056.04**	1	0	297
4	BS23C6-040C **3990.21**	BS23S6-040C **8240.56**	BS33C6-040C **4483.56**	BS33S6-040C **9258.82**	1	0	297
6	BS23C6-060C **7662.95**	BS23S6-060C **8783.12**	BS33C6-060C **8610.48**	BS33S6-060C **9868.63**	1	0	297
8	BS23C6-080C **9913.23**	BS23S6-080C **11435.37**	BS33C6-080C **11138.97**	BS33S6-080C **12848.89**	1	0	297
10	BS23C6-100C **13460.75**	BS23S6-100C **15632.63**	BS33C6-100C **15124.09**	BS33S6-100C **17565.43**	1	0	297
12	BS23C6-120C **18415.33**	BS23S6-120C **21309.48**	BS33C6-120C **20691.55**	BS33S6-120C **23946.35**	1	0	297

CPVC - Spigot Ends

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Disc Code
1/2	BS27C6-005C **634.49**	BS27S6-005C **878.39**	BS37C6-005C **666.55**	BS37S6-005C **910.46**	1	0	297
3/4	BS27C6-007C **634.49**	BS27S6-007C **878.39**	BS37C6-007C **666.55**	BS37S6-007C **910.46**	1	0	297
1	BS27C6-010C **634.49**	BS27S6-010C **878.39**	BS37C6-010C **666.55**	BS37S6-010C **910.46**	1	0	297
1-1/4	BS27C6-012C **1197.36**	BS27S6-012C **1522.57**	BS37C6-012C **1345.85**	BS37S6-012C **1710.55**	1	0	297
1-1/2	BS27C6-015C **1197.36**	BS27S6-015C **1522.57**	BS37C6-015C **1345.85**	BS37S6-015C **1710.55**	1	0	297
2	BS27C6-020C **1197.36**	BS27S6-020C **1522.57**	BS37C6-020C **1345.85**	BS37S6-020C **1710.55**	1	0	297
2-1/2	BS27C6-025C **1961.57**	BS27S6-025C **2522.36**	BS37C6-025C **2203.87**	BS37S6-025C **2834.37**	1	0	297
3	BS27C6-030C **2543.26**	BS27S6-030C **3106.03**	BS37C6-030C **2857.67**	BS37S6-030C **3489.79**	1	0	297
4	BS27C6-040C **3379.36**	BS27S6-040C **4019.18**	BS37C6-040C **3797.74**	BS37S6-040C **4515.97**	1	0	297
6	BS27C6-060C **4466.31**	BS27S6-060C **5587.52**	BS37C6-060C **5018.38**	BS37S6-060C **6277.95**	1	0	297
8	BS27C6-080C **6375.84**	BS27S6-080C **7897.74**	BS37C6-080C **7163.94**	BS37S6-080C **8873.88**	1	0	297
10	BS27C6-100C **11192.03**	BS27S6-100C **13364.49**	BS37C6-100C **12575.39**	BS37S6-100C **15016.73**	1	0	297
12	BS27C6-120C **14212.40**	BS27S6-120C **17107.55**	BS37C6-120C **15968.75**	BS37S6-120C **19222.87**	1	0	297

Duplex Basket Strainers

Custom configured and produced to order, Spears® Duplex Basket Strainer provides individual isolation of strainers for servicing and cleaning without shutting down the line. A center handle on the Duplex unit control valves allows selection of either strainer unit for isolation. Each Basket Strainer features a convenient quick release clamp cap equipped with safety pressure gauge and pressure release ball valve for safer system operation and strainer cleaning. Additional drain plug allows complete drain and flush of unit.



Multi-Featured Options:

- No Flow Shutdown Required
- Sizes 1/2 - 4" Constructed from Corrosion Resistant PVC or CPVC
- True Union Socket, Thread, or Flanged Connections
- Uses Spears® Standard Basket Strainers Configurations
- Simple Single-Throw Lever Operation
- Select EPDM or FKM Seal Options
- Multiple Strainer Mesh Options in Plastic or Stainless Steel
  (see Industrial Basket Strainer options in this catalog)

Pressure Rating @ 73°F (23°C), Water
1/2" - 4" 150 psi

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply

CONTACT SPEARS® FOR ADDITIONAL CUSTOM OPTIONS, SELECTION ASSISTANCE & PRICING



Pressure Rating @ 73°F (23°C), Water 50 psi

Maximum Service Temperature PVC = 140°F (60°C)

Temperature/Pressure De-ratings Apply

Suction Strainer is a special Basket Strainer design that reduces pressure drop, a critical element in suction line applications. While same-size (inlet/outlet) units are available, enlarged inlet on reducing sizes performs best in suction line applications. The internal Strainer Basket is bottom-drained for direct flushing through a 360° adjustable side mounted Discharge Valve Assembly (included). Bolt-on Bonnet is fitted with Top Sight-Glass.

Standard units listed have EPDM Seals and Stainless Steel 3/16" Perforated Screen (4–mesh). Contact Spears® for other Mesh Code or Elastomer seal options required.

PVC Suction Strainer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Flanged End					
SS23BS4SG-040	**4**	1	0	295	2980.31
SS23BS4SG-420	**4X2**	1	0	295	2838.95
SS23BS4SG-421	**4X2-1/2**	1	0	295	2850.05
SS23BS4SG-422	**4X3**	1	0	295	2857.31
SS23BS4SG-060	**6**	1	0	295	3887.53
SS23BS4SG-532	**6X4**	1	0	295	3755.69
SS23BS4SG-080	**8**	1	0	295	4269.93
SS23BS4SG-582	**8X4**	1	0	295	3882.68
SS23BS4SG-585	**8X6**	1	0	295	3905.21
SS23BS4SG-100	**10**	1	0	295	4776.56
SS23BS4SG-626	**10X6**	1	0	295	4648.64
SS23BS4SG-628	**10X8**	1	0	295	4701.59
SS23BS4SG-120	**12**	1	0	295	5251.89
SS23BS4SG-668	**12X8**	1	0	295	5124.93
SS23BS4SG-670	**12X10**	1	0	295	5168.08

Suction Strainer Stainless Steel Baskets 3/16" Perforation

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
SSS4-040	**4**	1	4	299	826.49
SSS4-060	**6**	1	2	299	879.25
SSS4-080	**8**	1	2	299	1101.83
SSS4-100	**10**	1	0	299	1197.65
SSS4-120	**12**	1	2	299	1468.25

Triple O-ring Sealed Telescoping Design
Available with 6" and 12" Travel



- Compact Installation - Eliminates Need For Expansion Loops
- EPDM or FKM Pressure O-ring Seal with Dual "Wiper" O-ring for Extended Life
- Support Piston Eliminates Binding, Minimizes Alignment Problems
- Excellent For Use as a Repair Coupling

PVC Fabricated Expansion Joints
6" Travel with EPDM O-rings

1/2" - 2" 235 psi @ 73°F (23°C)
2-1/2" - 12" 150 psi @ 73°F (23°C)
14" 100 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
826-005X6	1/2	10	0	085	313.03
826-007X6	3/4	6	0	085	336.52
826-010X6	1	5	0	085	340.31
826-012X6	1-1/4	4	0	085	395.55
826-015X6	1-1/2	4	0	085	419.43
826-020X6	2	2	0	085	469.18
826-025X6	2-1/2	1	0	085	535.15
826-030X6	3	1	0	085	555.51
826-040X6	4	1	0	085	596.17
826-060X6	6	1	0	085	982.20
826-080X6	8	1	0	085	1352.21
826-100X6	10	1	0	085	1587.88
826-120X6	12	1	0	085	2813.54
826-140X6	14	1	0	085	3213.82

FKM O-rings available on special order. Add a "V" preceding the dash (-) separator, e.g. 826V-005X6.

PVC Fabricated Expansion Joints
12" Travel with EPDM O-rings

1/2" - 2" 235 psi @ 73°F (23°C)
2-1/2" - 12" 150 psi @ 73°F (23°C)
14" 100 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
826-005X12	1/2	10	0	085	352.11
826-007X12	3/4	6	0	085	372.39
826-010X12	1	5	0	085	446.24
826-012X12	1-1/4	4	0	085	487.57
826-015X12	1-1/2	4	0	085	451.77
826-020X12	2	2	0	085	532.92
826-025X12	2-1/2	1	0	085	895.29
826-030X12	3	1	0	085	688.48
826-040X12	4	1	0	085	773.44
826-060X12	6	1	0	085	1126.68
826-080X12	8	1	0	085	1510.54
826-100X12	10	1	0	085	1846.74
826-120X12	12	1	0	085	2957.95
826-140X12	14	1	0	085	3283.27

FKM O-rings available on special order. Add a "V" preceding the dash (-) separator, e.g. 826V-005X12

CPVC Fabricated Expansion Joints
6" Travel with FKM O-rings

1/2" - 2" 235 psi @ 73°F (23°C)
2-1/2" - 12" 150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
826-005X6C	1/2	10	0	085	387.05
826-007X6C	3/4	6	0	085	423.54
826-010X6C	1	5	0	085	457.80
826-012X6C	1-1/4	4	0	085	480.84
826-015X6C	1-1/2	4	0	085	524.06
826-020X6C	2	2	0	085	664.05
826-025X6C	2-1/2	1	0	085	788.00
826-030X6C	3	1	0	085	915.43
826-040X6C	4	1	0	085	1350.14
826-060X6C	6	1	0	085	1451.36
826-080X6C	8	1	0	085	2753.19
826-100X6C	10	1	0	085	3514.77
826-120X6C	12	1	0	085	4662.63

EPDM O-rings available on special order. Add an "E" preceding the dash (-) separator, e.g. 826E-005X6C

CPVC Fabricated Expansion Joints
12" Travel with FKM O-rings

1/2" - 2" 235 psi @ 73°F (23°C)
2-1/2" - 12" 150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
826-005X12C	1/2	10	0	085	394.20
826-007X12C	3/4	6	0	085	452.06
826-010X12C	1	5	0	085	482.24
826-012X12C	1-1/4	4	0	085	539.76
826-015X12C	1-1/2	4	0	085	605.32
826-020X12C	2	2	0	085	772.65
826-025X12C	2 -1/2	1	0	085	1169.72
826-030X12C	3	1	0	085	940.04
826-040X12C	4	1	0	085	1557.18
826-060X12C	6	1	0	085	1715.44
826-080X12C	8	1	0	085	3284.37
826-100X12C	10	1	0	085	3847.76

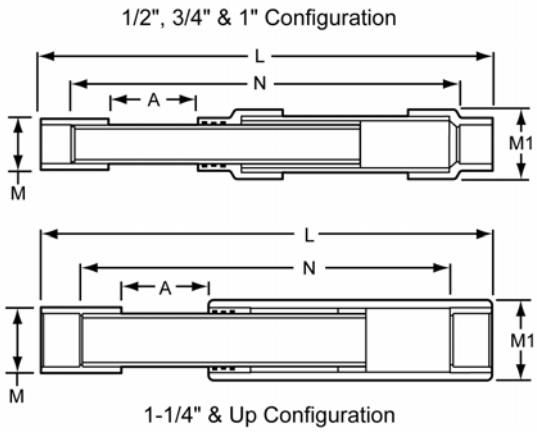
EPDM O-rings available on special order. Add an "E" preceding the dash (-) separator, e.g. 826E-005X12C

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

EXPANSION JOINT
REPAIR COUPLING
(Soc x Soc)

1/2" - 2" 235 psi @ 73°F (23°C)
2- 1/2" -12" 150 psi @ 73°F (23°C)
14" 100 psi @ 73°F (23°C)
NOTE: "A" = Midpoint of Extension



Part Number		Size	A	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC							PVC	CPVC
826-005X6	826-005X6C	1/2	3	13- 11/16	1- 9/32	1- 23/32	11- 15/16	.50	.55
826-007X6	826-007X6C	3/4	3	14- 13/16	1- 1/2	2- 1/16	12- 13/16	1.00	1.10
826-010X6	826-010X6C	1	3	15- 15/16	1- 23/32	2- 11/32	13- 11/16	1.00	1.10
826-012X6	826-012X6C	1- 1/4	3	15- 3/4	2- 7/32	2- 3/8	13- 3/8	1.50	1.65
826-015X6	826-015X6C	1- 1/2	3	16- 1/8	2- 11/32	2- 7/8	13- 7/16	2.00	2.20
826-020X6	826-020X6C	2	3	16- 15/16	2- 7/8	3- 1/2	13- 15/16	3.00	3.30
826-025X6	826-025X6C	2- 1/2	3	18- 7/8	4- 3/16	4- 1/2	14- 7/8	6.00	6.60
826-030X6	826-030X6C	3	3	18- 3/4	4- 3/16	4- 1/2	15- 1/4	6.00	6.60
826-040X6	826-040X6C	4	3	19- 3/4	5- 5/16	5- 9/16	15- 3/16	7.00	7.70
826-060X6	826-060X6C	6	3	22- 3/4	7- 11/16	8- 5/8	16- 3/4	26.50	29.15
826-080X6	826-080X6C	8	3	27- 1/4	9- 11/16	10- 3/4	19- 1/4	40.50	44.55
826-100X6	826-100X6C	10	3	35- 7/8	11- 13/16	12- 3/4	25- 7/8	67.00	73.70
826-120X6	826-120X6C	12	3	39- 1/2	14- 1/8	16	27- 1/2	134.00	147.40
826-140X6	---	14	3	49- 3/4	15- 5/8	16	34- 7/8	104.27	---

Part Number		Size	A	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC							PVC	CPVC
826-005X12	826-005X12C	1/2	6	16- 11/16	1- 9/32	1- 23/32	14- 15/16	.57	.63
826-007X12	826-007X12C	3/4	6	17- 13/16	1- 1/2	2- 1/16	15- 13/16	1.14	1.26
826-010X12	826-010X12C	1	6	18- 15/16	1- 23/32	2- 11/32	16- 11/16	1.14	1.26
826-012X12	826-012X12C	1- 1/4	6	18- 3/4	2- 7/32	2- 3/8	16- 3/8	1.71	1.88
826-015X12	826-015X12C	1- 1/2	6	19- 1/8	2- 11/32	2- 7/8	16- 7/16	2.28	2.51
826-020X12	826-020X12C	2	6	19- 15/16	2- 7/8	3- 1/2	16- 15/16	3.43	3.77
826-025X12	826-025X12C	2- 1/2	6	21- 7/8	4- 3/16	4- 1/2	17- 7/8	6.85	7.54
826-030X12	826-030X12C	3	6	21- 3/4	4- 3/16	4- 1/2	18- 1/4	6.85	7.54
826-040X12	826-040X12C	4	6	22- 3/4	5- 5/16	5- 9/16	18- 3/16	8.00	8.80
826-060X12	826-060X12C	6	6	25- 3/4	7- 11/16	8- 5/8	19- 3/4	30.27	33.30
826-080X12	826-080X12C	8	6	30- 1/4	9- 11/16	10- 3/4	22- 1/4	46.26	50.89
826-100X12	826-100X12C	10	6	38- 7/8	11- 13/16	12- 3/4	28- 7/8	76.53	84.19
826-120X12	---	12	6	42- 1/2	14- 1/8	16	30- 1/2	153.07	---
826-140X12	---	14	6	52- 3/4	15- 5/8	16	37- 7/8	159.00	---

PVC & CPVC Schedule 80 Elastomer Expansion Joint



Designed to allow for the expansion, contraction, lateral and angular movement of a piping system. Aids in noise and vibration dampening.

- Convenient, Double Union End Connections with Strong, Buttress Thread Union Nuts
- Internal Nylon Cord Reinforced Elastomer Bellows Tube
- Chemically Resistant Neoprene Elastomer with Optional EPDM Tube Available
- Double Spherical Arch Bellows Provides Improved Movement Capability
- Pressure rated to 150 psi @ 73°F (23°C)
- Suitable for Vacuum Service
- Available in Socket or Spears® Special Reinforced (SR) Female Plastic Thread End Connectors, IPS Sizes 3/4" through 3"

PVC Elastomer Expansion Joint
with Neoprene Bellows Soc



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
EJ02-007	**3/4**	10	0	085	197.85
EJ02-010	**1**	10	0	085	224.34
EJ02-012	**1-1/4**	15	0	085	239.02
EJ02-015	**1-1/2**	10	0	085	294.26
EJ02-020	**2**	8	0	085	360.58
EJ02-025	**2-1/2**	4	0	085	510.09
EJ02-030	**3**	2	0	085	701.17

PVC Elastomer Expansion Joint
with EPDM Bellows Soc



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
EJ22-007	**3/4**	10	0	085	201.88
EJ22-010	**1**	10	0	085	228.89
EJ22-012	**1-1/4**	15	0	085	246.41
EJ22-015	**1-1/2**	10	0	085	299.36
EJ22-020	**2**	8	0	085	367.94
EJ22-025	**2-1/2**	4	0	085	520.48
EJ22-030	**3**	2	0	085	715.45

PVC Elastomer Expansion Joint
with Neoprene Bellows SR Fipt - Stainless Steel Collar



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
EJ01-007SR	**3/4**	10	0	085	200.62
EJ01-010SR	**1**	10	0	085	228.47
EJ01-012SR	**1-1/4**	15	0	085	248.49
EJ01-015SR	**1-1/2**	10	0	085	317.23
EJ01-020SR	**2**	8	0	085	381.13
EJ01-025SR	**2-1/2**	4	0	085	555.41
EJ01-030SR	**3**	2	0	085	746.94

PVC Elastomer Expansion Joint
with EPDM Bellows SR Fipt - Stainless Steel Collar



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
EJ21-007SR	**3/4**	10	0	085	204.69
EJ21-010SR	**1**	10	0	085	233.14
EJ21-012SR	**1-1/4**	15	0	085	253.59
EJ21-015SR	**1-1/2**	10	0	085	323.68
EJ21-020SR	**2**	8	0	085	388.92
EJ21-025SR	**2-1/2**	4	0	085	563.59
EJ21-030SR	**3**	2	0	085	762.18

CPVC Elastomer Expansion Joint
with EPDM Bellows Soc



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
EJ22-007C	**3/4**	10	0	085	205.88
EJ22-010C	**1**	10	0	085	234.92
EJ22-012C	**1-1/4**	15	0	085	256.68
EJ22-015C	**1-1/2**	10	0	085	314.45
EJ22-020C	**2**	8	0	085	392.46
EJ22-025C	**2-1/2**	4	0	085	573.51
EJ22-030C	**3**	2	0	085	779.00

CPVC Elastomer Expansion Joint
with EPDM Bellows SR Fipt - Stainless Steel Collar



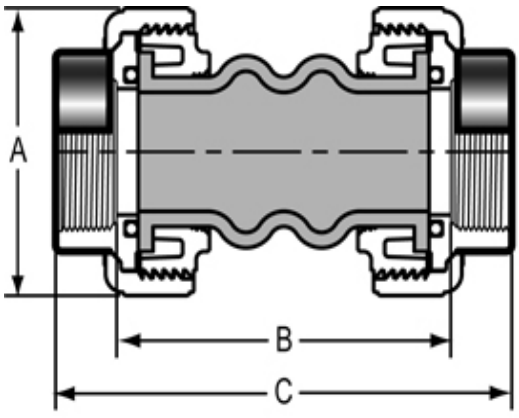
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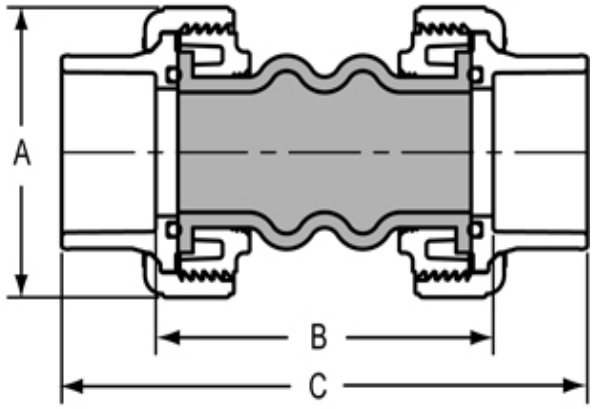
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
EJ21-007CSR	**3/4**	10	0	085	208.22
EJ21-010CSR	**1**	10	0	085	239.45
EJ21-012CSR	**1-1/4**	15	0	085	264.60
EJ21-015CSR	**1-1/2**	10	0	085	337.27
EJ21-020CSR	**2**	8	0	085	445.81
EJ21-025CSR	**2-1/2**	4	0	085	619.13
EJ21-030CSR	**3**	2	0	085	824.60

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Technical Information





Dimensions

Size	A	B		C		MAXIMUM MOVEMENTS			
		Socket	Thread	Socket	Thread	COMPRESSION	EXTENSION	LATERAL	ANGULAR
3/4	2-1/4	6-3/8	6-3/8	8-3/8	7-13/16	7/8	1/4	7/8	35°
1	2-9/16	5-15/16	6	8-3/16	7-3/4	7/8	1/4	7/8	25°
1-1/4	3-1/8	6-1/16	6-1/16	8-9/16	7-15/16	7/8	1/4	7/8	25°
1-1/2	3-9/16	5-7/8	5-7/8	8-5/8	7-3/4	7/8	1/4	7/8	20°
2	4-3/16	5-7/16	5-7/16	8-7/16	7-3/8	7/8	1/4	7/8	15°
2-1/2	6-1/8	6-3/16	6-3/16	9-3/4	9	7/8	1/4	7/8	15°
3	6-1/8	6-3/16	6-3/16	10	9	7/8	1/4	7/8	15°

(S119) Socket x Socket



(S118) Spigot x Socket

- Multi-function Telescoping Design
- Socket x Socket Configuration for Pipe Repair or Use as a Short-Stroke Expansion Joint
- Spigot x Socket Configuration for Replacing Damaged Fittings
- Both Configurations can be Easily Modified for Opposite Use
- Available in PVC White and PVC Gray
- Double O-ring Seal in EPDM or high-grade FKM
- 1/2" - 2" Pressure Rated to 235 PSI @ 73°F (23°C)
- 2-1/2" - 4" Pressure Rated to 200 PSI @ 73°F (23°C)
- 6" Pressure Rated to 150 PSI @ 73°F (23°C)
- NSF® Certified for Potable Water Use

PVC - Spig x Soc

PVC White with EPDM O-ring

Can be used as short-stroke Expansion Joint

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S118-05	**1/2**	25	0	025	5.56
S118-07	**3/4**	30	0	025	6.32
S118-10	**1**	15	0	025	7.29
S118-12	**1-1/4**	25	0	025	13.74
S118-15	**1-1/2**	25	0	025	14.96
S118-20	**2**	12	0	025	23.14
S118-25	**2-1/2**	5	0	025	33.57
S118-30	**3**	4	0	025	41.94
S118-40	**4**	2	0	025	73.40
S118-60	**6**	1	0	025	179.60

PVC - Spig x Soc

PVC Gray with EPDM O-ring

Can be used as short-stroke Expansion Joint

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S118E-05G	**1/2**	25	0	025	6.46
S118E-07G	**3/4**	24	0	025	7.34
S118E-10G	**1**	15	0	025	8.49
S118E-12G	**1-1/4**	12	0	025	15.97
S118E-15G	**1-1/2**	25	0	025	17.39
S118E-20G	**2**	12	0	025	26.92
S118E-25G	**2-1/2**	5	0	025	39.48
S118E-30G	**3**	4	0	025	49.33
S118E-40G	**4**	2	0	025	86.36
S118E-60G	**6**	1	0	025	230.85

PVC - Spig x Soc

PVC Gray with FKM O-ring

Can be used as short-stroke Expansion Joint

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S118V-05G	**1/2**	25	0	025	7.06
S118V-07G	**3/4**	24	0	025	8.05
S118V-10G	**1**	15	0	025	9.31
S118V-12G	**1-1/4**	12	0	025	17.49
S118V-15G	**1-1/2**	25	0	025	19.07
S118V-20G	**2**	12	0	025	29.51
S118V-25G	**2-1/2**	5	0	025	44.37
S118V-30G	**3**	4	0	025	55.42
S118V-40G	**4**	2	0	025	97.02
S118V-60G	**6**	1	0	025	262.34

PVC - Soc x Soc

PVC White with EPDM O-ring

Can be used as short-stroke Expansion Joint

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S119-05	**1/2**	30	0	025	5.56
S119-07	**3/4**	24	0	025	6.32
S119-10	**1**	20	0	025	7.29
S119-12	**1-1/4**	10	0	025	13.74
S119-15	**1-1/2**	16	0	025	14.96
S119-20	**2**	10	0	025	23.14

PVC - Soc x Soc (continued)

PVC White with EPDM O-ring

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S119-25	**2-1/2**	5	0	025	33.57
S119-30	**3**	4	0	025	41.94
S119-40	**4**	2	0	025	73.40
S119-60	**6**	1	0	025	179.60

PVC - Soc x Soc

PVC Gray with FKM O-ring

Can be used as short-stroke Expansion Joint

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S119V-05G	**1/2**	28	0	025	7.06
S119V-07G	**3/4**	24	0	025	8.05
S119V-10G	**1**	20	0	025	9.31
S119V-12G	**1-1/4**	10	0	025	17.49
S119V-15G	**1-1/2**	16	0	025	19.07
S119V-20G	**2**	10	0	025	29.51
S119V-25G	**2-1/2**	5	0	025	44.37
S119V-30G	**3**	4	0	025	55.42
S119V-40G	**4**	2	0	025	97.02
S119V-60G	**6**	1	0	025	262.34

PVC - Soc x Soc

PVC Gray with EPDM O-ring

Can be used as short-stroke Expansion Joint

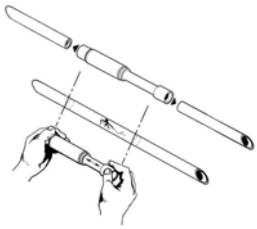
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S119E-05G	**1/2**	28	0	025	6.46
S119E-07G	**3/4**	24	0	025	7.34
S119E-10G	**1**	20	0	025	8.49
S119E-12G	**1-1/4**	10	0	025	15.97
S119E-15G	**1-1/2**	16	0	025	17.39
S119E-20G	**2**	10	0	025	26.92
S119E-25G	**2-1/2**	5	0	025	39.48
S119E-30G	**3**	4	0	025	49.33
S119E-60G	**6**	1	0	025	230.85

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

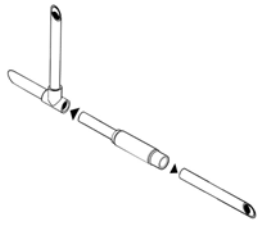
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Versatile Repair Capability

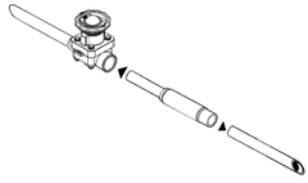
Spears® Repair Couplings provide a variety of system repair and alteration solutions. Use Socket x Socket configurations for quick pipe damage repair - can also be used as a short-stroke expansion joint to compensate for thermal expansion & contraction. Spigot x Socket configurations are excellent for lateral and riser add-ons, damaged fitting replacement, or for installing valves in existing piping systems. Order the wrong configuration? Simply cut coupling from Socket shaft end to function as a spigot or add a coupling to Spigot shaft end for Socket connections.



Pipe Damage Repair
Or Use as Expansion Joint



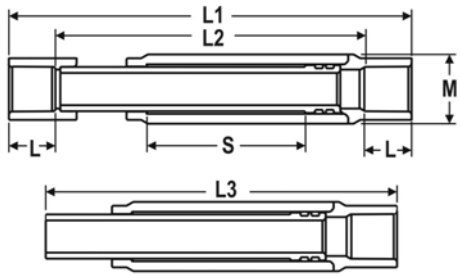
Lateral Add-on Or Fitting Replacement



Valve Retrofit Installation

Dimensions

Size	L	L1	L2	L3	S	M
1/2	11/16	7-5/8	5-7/8	6-17/32	2-13/16	1-7/16
3/4	23/32	9-3/8	8-1/4	7-23/32	3-7/8	1-23/32
1	15/16	10-1/8	7-7/8	8-13/32	3-31/32	2-1/16
1-1/4	31/32	10-7/8	8-3/8	8-7/8	3-31/32	2-13/32
1-1/2	1-1/16	11-3/8	8-5/8	9-3/32	4	2-21/32
2	1-3/16	12-1/4	9-1/4	9-31/32	4-1/4	3-3/16
2-1/2	1-3/4	15-7/8	12-3/8	13-7/8	6	3-15/16
3	1-7/8	16-1/8	12-3/8	14-1/8	6	4-9/16
4	2-1/4	17-3/4	13-1/4	15-1/4	6	5-11/16
6	3	22	16	18-3/4	6	8-3/8



INSTALLATION NOTE: For expansion joint applications, install with unit 1/2 extended. System must be supported and blocked against thrusts and movement under pressure. May be installed with flow in either direction.

Short Repair Couplings

Space Saving, Compact Version of Standard Repair Coupling
Requires 1/3 less Space

(SH119) Socket x Socket



(SH118) Spigot x Socket

- Compact Telescoping Design
- Socket x Socket Configuration for Pipe Repair or Use as a Short-Stroke Expansion Joint
- Spigot x Socket Configuration for Replacing Damaged Fittings
- Both Configurations can be Easily Modified for Opposite Use
- Available in PVC White, Sizes 1/2" - 2"
- EPDM Double O-ring Seal
- Pressure Rated to 235 PSI @ 73°F (23°C)
- NSF® Certified for Potable Water Use

PVC - Spig x Soc

PVC White with EPDM O-ring



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
SH118-05	**1/2**	36	0	025	5.56
SH118-07	**3/4**	30	0	025	6.32
SH118-10	**1**	35	0	025	7.29
SH118-12	**1-1/4**	25	0	025	13.74
SH118-15	**1-1/2**	32	0	025	14.96
SH118-20	**2**	15	0	025	23.14

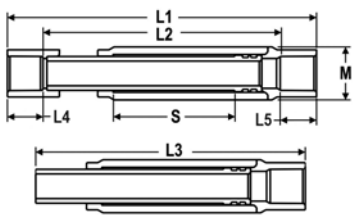
PVC - Soc x Soc

PVC White with EPDM O-ring



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
SH119-05	**1/2**	40	0	025	5.56
SH119-07	**3/4**	30	0	025	6.32
SH119-10	**1**	30	0	025	7.29
SH119-12	**1-1/4**	20	0	025	13.74
SH119-15	**1-1/2**	21	0	025	14.96
SH119-20	**2**	12	0	025	23.14

Dimensions



Size	L1	L2	L3	L4	L5	S	M
1/2	5-7/8	4-5/16	5-3/32	7/8	11/16	1-13/16	1-7/16
3/4	6-9/16	4-3/4	5-1/2	1	23/32	2-1/8	1-23/32
1	6-13/16	4-3/4	5-23/32	1-1/8	15/16	1-31/32	2-1/16
1-1/4	7-15/16	5-11/16	6-9/16	1-1/4	31/32	2-1/2	2-7/16
1-1/2	8-1/4	5-13/16	6-13/16	1-3/8	1-1/16	2-7/8	2-21/32
2	10-1/16	7-3/8	8-5/16	1-1/2	1-3/16	3-3/16	3-3/16

INSTALLATION NOTE: For expansion joint applications, install with unit 1/2 extended. System must be supported and blocked against thrusts and movement under pressure. May be installed with flow in either direction.

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC DWV Drain Waste & Vent Pipe

Schedule 40 Pipe
20' Lengths, Price Per Foot



List Price Per Foot

Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
PD-400-012	**1-1/4**	20	3920	947	2.90
PD-400-015	**1-1/2**	20	3020	947	3.29
PD-400-020	**2**	20	2100	947	4.52
PD-400-030	**3**	20	1160	947	8.90
PD-400-040	**4**	20	1020	947	12.46
PD-400-060	**6**	20	440	947	22.53

Schedule 40 Pipe (continued)
20' Lengths, Price Per Foot

Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
PD-400-080	**8**	20	280	947	39.95
PD-400-100	**10**	20	220	947	54.37
PD-400-120	**12**	20	120	947	78.75
PD-400-140	**14**	20	60	947	99.58
PD-400-160	**16**	20	400	947	105.07

PVC DWV Drain Waste Vent Fittings

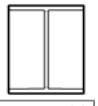
STANDARDS & SPECIFICATIONS

Standards provide greater assurance of product performance and consistency, and are available to assist design engineers in system specification. The most frequently referenced industry standards for plastic piping systems are ASTM Standard Specifications and Practices. Along with ASTM Standards, additional product specifications and certifications form the basis of product conformance to which Spears® products are manufactured.

ASTM D 2665 Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings.
ASTM D 3311 Drain, Waste, and Vent (DWV) Plastic Fittings Patterns.
ASTM F 1866 Poly (Vinyl Chloride) (PVC) Plastic Schedule 40 Drainage and DWV Fabricated Fittings.
ASTM D 1784 Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds.

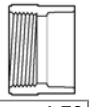
NSF® International Standard 14 (NSF®-dwv) Certified
NSF® International Certified to Uniform Plumbing Code (NSF®-U.P. Code)
See official listing

P100 Coupling
H x H



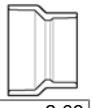
Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P100-015	**1-1/2**	100	7200	051	.88
P100-020	**2**	100	3600	051	1.18
P100-030	**3**	60	840	051	4.32
P100-040	**4**	25	450	051	7.46
P100-060	**6**	5	175	051	24.25
P100-080	**8**	8	64	051	59.41
P100-100	**10**	1	36	052	120.98
P100-120	**12**	1	21	052	206.04
P100-140	**14**	1	12	052	315.89

P101 Female Adapter
FPT x H



Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P101-015	**1-1/2**	100	4800	051	1.76
P101-020	**2**	100	3500	051	2.97
P101-030	**3**	35	1260	051	8.00
P101-040	**4**	10	480	051	10.24
P101-060	**6**	10	180	051	34.42

P102 Pipe Increaser - Reducer
H x H



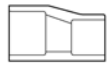
Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P102-251	**2X1-1/2**	25	4200	051	2.60
P102-337	**3X1-1/2**	25	1200	051	8.26
P102-338	**3X2**	20	960	051	6.34
P102-420	**4X2**	10	720	051	12.58
P102-422	**4X3**	20	720	051	13.38
3729-528*	**6X2**	1	120	390	106.04
3729-530*	**6X3**	1	120	390	104.38
P102-532	**6X4**	1	144	051	49.44
P102-582	**8X4**	2	96	051	75.33
P102-585	**8X6**	2	96	051	66.37
3729-624*	**10X4**	1	22	390	211.83

P102 Pipe Increaser - Reducer (continued)
H x H

Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P102-626	**10X6**	1	36	052	309.17
3729-626*	**10X6**	1	32	390	197.41
P102-628	**10X8**	1	36	052	206.34
3729-628*	**10X8**	1	24	390	138.17
3729-661*	**12X2**	1	12	390	513.37
3729-663*	**12X3**	1	8	390	509.97
3729-664*	**12X4**	1	12	390	398.29
3729-666*	**12X6**	1	12	390	302.00
P102-668	**12X8**	1	16	052	315.09
3729-670*	**12X10**	1	18	390	201.13
3729-691*	**14X2**	1	18	390	750.73
3729-694*	**14X4**	1	18	390	640.96
3729-696*	**14X6**	1	12	390	620.52
3729-698*	**14X8**	1	18	390	449.17
3729-700*	**14X10**	1	18	390	379.36
3729-702*	**14X12**	1	16	390	336.89

* Fabricated

Pipe Increaser - Eccentric Reducer
H x H



Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P102-338E	**3X2**	20	600	051	18.48
3729-528E3*	**6X2**	1	48	390	103.09
3729-530E2*	**6X3**	1	72	390	94.96
3729-532E2	**6X4**	1	96	390	47.48
3729-580E3*	**8X3**	1	22	390	195.86
3729-582E2*	**8X4**	1	22	390	97.80
3729-585E*	**8X6**	1	32	390	79.06
3729-624E2*	**10X4**	1	16	390	223.63
3729-626E*	**10X6**	1	20	390	205.62
3729-628E*	**10X8**	1	24	390	193.86
3729-664E3*	**12X4**	1	12	390	417.24
3729-666E2*	**12X6**	1	12	390	342.84
3729-668E2*	**12X8**	1	12	390	227.35
3729-670E*	**12X10**	1	18	390	197.12

Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each

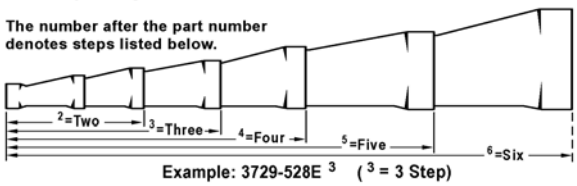
Pipe Increaser - Eccentric Reducer (continued)

H x H

Eccentric Reducer Footnotes

Multi-Step Configurations

The number after the part number denotes steps listed below.

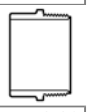


Example: 3729-528E [3] ([3] = 3 Step)

* Fabricated

P103 Trap Adapter - Male

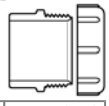
S x SLIP



P103-015	**1-1/2**	50	5250	051	2.39
P103-020	**2**	25	4200	051	6.59

P103P Trap Adapter - Male

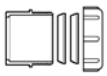
S x SLIP w/Plastic Nut - Built-in Washer



P103P-212	**1-1/2X1-1/4**	75	5400	051	2.73
P103P-015	**1-1/2**	50	5250	051	2.54
P103P-020	**2**	25	4200	051	8.74

P103R Trap Adapter - Male with 1-1/2 Plastic Nut & Washer and 1-1/2 x1-1/4 Washer

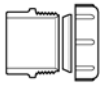
S x SLIP w/Plastic Nut



P103R-015	**1-1/2**	50	3600	051	2.62

P103X Trap Adapter-Male

S x SLIP w/Chrome Nut & Washer



P103X-212	**1-1/2X1-1/4**	100	7200	051	3.84
P103X-015	**1-1/2**	50	5250	051	11.10
P103X-020	**2**	25	4200	051	11.19

P104 Trap Adapter - Female

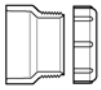
H x SLIP



P104-015	**1-1/2**	50	8400	051	1.86
P104-020	**2**	50	3600	051	5.36

P104P Trap Adapter - Female

H x SLIP w/Plastic Nut



P104P-212	**1-1/2X1-1/4**	50	5250	051	2.75
P104P-012	**1-1/4**	50	5250	051	8.12
P104P-015	**1-1/2**	50	5250	051	2.35

P104R Trap Adapter - Female w/1-1/2 Plastic Nut & Washer and 1-1/2x1-1/4 Washer

H x SLIP w/Plastic Nut

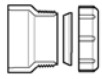


P104R-015	**1-1/2**	50	3600	051	2.66

Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each

P104X Trap Adapter - Female

H x SLIP w/Chrome Nut & Washer



P104X-212	**1-1/2X1-1/4**	50	3600	051	3.84
P104X-015	**1-1/2**	50	3600	051	3.44
P104X-020	**2**	50	3600	051	7.52

P000P HDPE Slip Joint Nut

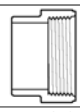
(Plastic Nut)



P000P-015	**1-1/2**	350	16800	051	.82
P000P-020	**2**	450	13500	051	1.31
P000P-169	**1-1/4X1-1/2**	400	19200	051	1.41

P105 Fitting Cleanout Adapter

S x FPT



P105-015	**1-1/2**	50	5250	051	2.01
P105-020	**2**	50	3600	051	2.84
P105-030	**3**	25	1200	051	8.03
P105-040	**4**	10	720	051	13.19
P105-060	**6**	10	180	051	35.33
P105-080	**8**	8	112	051	104.57

P105H Female Cleanout Adapter

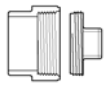
H x FPT



P105H-040	**4**	10	720	051	10.24
P105H-060	**6**	10	180	051	34.42

P105X Fitting Cleanout Adapter w/C.O. Plug

S x FPT



P105X-015	**1-1/2**	50	5250	051	3.02
P105X-020	**2**	50	3600	051	4.14
P105X-030	**3**	25	900	051	8.38
P105X-040	**4**	10	480	051	15.17
P105X-060	**6**	10	180	051	43.73
P105X-080	**8**	8	112	051	130.65
3978-100*	**10**	1	64	400	465.43
3978-120*	**12**	1	32	400	649.82
3978-140*	**14**	1	16	400	805.83

* Fabricated - PVC Gray with HDPE Plug

P106 Cleanout Plug

MPT



P106-015	**1-1/2**	50	12000	051	1.65
P106-020	**2**	50	8400	051	1.71
P106-025	**2-1/2**	50	5250	051	5.48
P106-030	**3**	25	2625	051	3.29
P106-040	**4**	30	2160	051	4.86
P106-060	**6**	10	1050	051	16.16
P106-080	**8**	12	576	051	84.21

P107 Flush Bushing

S x H



[1]Outlet-sized with Bushing

P107-251	**2X1-1/2**	50	8400	051	1.60
P107-337	**3X1-1/2**	30	2520	051	7.72
P107-338	**3X2**	30	2520	051	3.53
P107-420	**4X2**	30	1080	051	13.45
P107-422	**4X3**	30	1080	051	6.86
P107-532	**6X4**	10	300	051	35.58

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

P107 Flush Bushing (continued)
S x H

Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P107-582	**8X4**	3	144	051	70.34
P107-585	**8X6**	4	120	051	77.42
P107-624[1]	**10X4**	2	60	052	157.53
P107-626[1]	**10X6**	2	60	052	229.13
P107-628	**10X8**	4	56	052	255.39
P107-666[1]	**12X6**	2	42	052	342.77
P107-668[1]	**12X8**	1	42	052	352.69
P107-670	**12X10**	2	60	052	360.00

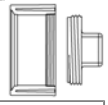
[1] Bushed

P108 Flush Bushing (Cleanout Adapter)
S x FPT



P108-212	**1-1/2X1-1/4**	50	12000	051	4.96
P108-628	**10X8**	4	56	052	490.12
P108-668	**12X8**	1	30	052	711.97

P108X Flush Bushing (Cleanout Adapter) w/Plug
S x FPT



P108X-628	**10X8**	1	56	052	721.20
P108X-668	**12X8**	1	30	052	1055.24

P109 Male Adapter (Will not accept tail piece)
MPT x H



P109-015	**1-1/2**	50	5250	051	1.81
P109-020	**2**	50	3600	051	2.35
P109-030	**3**	25	1200	051	6.77
P109-040	**4**	25	900	051	14.98
P109-060	**6**	7	245	051	45.11

P110 Flush C.O. Plug
MPT



P110-015	**1-1/2**	25	9600	051	6.68
P110-020	**2**	25	9600	051	5.59
P110-025	**2-1/2**	50	5250	051	7.02
P110-030	**3**	50	5250	051	6.47
P110-040	**4**	25	2400	051	6.35
P110-060	**6**	10	960	051	16.01

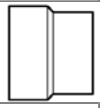
P116 Cap
SOC



P116-015	**1-1/2**	20	7680	051	3.74
P116-020	**2**	15	5760	051	6.21
P116-030	**3**	10	1680	051	10.77
P116-040	**4**	5	840	051	15.39
P116-060	**6**	5	240	051	38.85
P116-080	**8**	3	90	051	116.41
3747-100*	**10**	1	108	390	116.99
3747-120*	**12**	1	70	390	147.74
3747-140*	**14**	1	44	390	251.21

Note: 8" Cap is Domed Style
* Fabricated

P117 Adapter Coupling (Adapts S&D Spigot to DWV Spigot)
H x H



P117-040	**4**	20	700	051	14.45
P117-422	**4X3**	20	600	051	11.00

P118 Adapter Bushing (Adapts DWV Hub to S&D Spigot)
DWV SPIGOT x HUB



P118-030	**3**	25	1800	051	5.32
P118-040	**4**	10	1050	051	5.75

P119 No-Hub Adapter
S x H



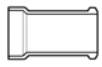
P119-015	**1-1/2**	25	4200	051	10.03
P119-020	**2**	25	2625	051	4.87
P119-030	**3**	20	960	051	7.04
P119-040	**4**	15	720	051	9.06
P119-251	**2X1-1/2**	35	3675	051	9.52
P119-422	**4X3**	10	720	051	11.58

P122 Spigot Adapter, Cast Iron
H x H



P122-040	**4**	15	210	051	18.80

P123 Hub Adapter, Cast Iron
H x S



P123-020	**2**	20	1440	051	7.89
P123-030	**3**	25	750	051	14.15
P123-040	**4**	10	350	051	24.74

P123R Hub Adapter, Cast Iron, Increaser (Plain End: Joint can be made with compression gasket or plastic lead & seal rope - Do Not use hot lead)
H x S



P123R-213	**1-1/2X2**	10	1680	051	9.04
P123R-342	**3X4**	10	350	051	16.68

P130 Repair Coupling
H x H



P130-015	**1-1/2**	25	6000	051	5.09
P130-020	**2**	25	2625	051	3.56
P130-030	**3**	10	960	051	8.98
P130-040	**4**	5	480	051	17.27
P130-060	**6**	5	175	051	63.48
P130-080	**8**	8	64	051	77.43
P130-100	**10**	1	36	052	167.65

P131 Test Cap



P131-015	**1-1/2**	100	38400	051	1.35
P131-020	**2**	100	24000	051	1.28
P131-030	**3**	50	8400	051	1.65
P131-040	**4**	100	4800	051	2.07

P300 1/4 Bend
H x H



P300-015	**1-1/2**	100	3000	051	1.98
P300-020	**2**	50	1500	051	2.91
P300-030	**3**	25	350	051	9.02
P300-040	**4**	10	180	051	16.47
P300-060	**6**	4	56	051	60.54
P300-080	**8**	2	28	051	122.61
P300-100	**10**	1	12	052	327.77

P300 1/4 Bend (continued)
H x H

Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P300-120	**12**	1	5	052	504.81

P300S 1/4 Bend with Side Inlet
ALL HUB



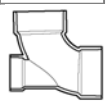
P300S-338	**3X3X2**	10	360	051	17.85

P302 1/4 Bend, Street
S x H



P302-015	**1-1/2**	100	3000	051	2.42
P302-020	**2**	50	1500	051	3.74
P302-030	**3**	20	360	051	9.27
P302-040	**4**	10	180	051	18.24
P302-060	**6**	4	56	051	84.33
P302-080	**8**	2	28	051	168.13
P302-100	**10**	1	12	052	326.37
P302-120	**12**	1	7	052	502.95

P303 1/4 Bend w/Low Heel Inlet
H x H x H



P303-338	**3X3X2**	25	200	051	15.76
P303-420	**4X4X2**	6	180	051	31.09

P304 Long Sweep 1/4 Bend
H x H



P304-015	**1-1/2**	50	1750	051	4.53
P304-020	**2**	25	875	051	4.88
P304-030	**3**	10	300	051	11.23
P304-040	**4**	5	150	051	21.42
P304-060[1]	**6**	5	35	051	82.46

6" size assembled from 2-Molded 1/8 Bends

P309 Long Sweep 1/4 Bend, Street
H x S



P309-015	**1-1/2**	50	1750	051	5.98
P309-020	**2**	25	900	051	7.60
P309-030	**3**	20	280	051	20.89
P309-040	**4**	5	150	051	32.18
P309-060	**6**	5	35	051	148.75

P310 1/4 Bend, Street w/Low Heel Inlet
H x S x H



P310-338	**3X3X2**	15	270	051	28.21

P319 1/6 Bend
H x H



P319-015	**1-1/2**	40	2880	051	3.55
P319-020	**2**	25	1200	051	4.73
P319-030	**3**	20	600	051	16.81
P319-040	**4**	10	180	051	23.89
3724-060*	**6**	1	56	390	127.62
3724-080*	**8**	1	28	390	182.08
3724-100*	**10**	1	16	390	305.13
3724-120*	**12**	1	6	390	399.78
3724-140*	**14**	1	4	390	732.80

* Fabricated

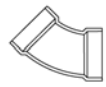
Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each

P320 1/6 Bend, Street
H X S



P320-015	**1-1/2**	40	2880	051	7.09
P320-020	**2**	25	1800	051	9.60
P320-030	**3**	20	360	051	22.49
P320-040	**4**	10	300	051	30.06

P321 1/8 Bend
H x H



P321-015	**1-1/2**	100	3000	051	1.81
P321-020	**2**	50	1500	051	2.79
P321-030	**3**	25	450	051	7.64
P321-040	**4**	15	270	051	13.13
P321-060	**6**	5	90	051	55.41
P321-080	**8**	1	36	051	110.13
P321-100	**10**	1	21	052	275.04
P321-120	**12**	1	12	052	378.46
3717-140*	**14**	1	6	390	512.16

* Fabricated

P323 1/8 Bend, Street
H x S



P323-015	**1-1/2**	100	3600	051	1.83
P323-020	**2**	50	1800	051	2.81
P323-030	**3**	25	450	051	7.34
P323-040	**4**	10	300	051	11.88
P323-060	**6**	5	90	051	67.86
P323-080	**8**	1	36	051	119.53
3727-100*	**10**	1	16	390	210.32
3727-120*	**12**	1	10	390	295.38
3727-140*	**14**	1	6	390	512.16

* Fabricated

P324 1/16 Bend
H x H



P324-015	**1-1/2**	50	3600	051	2.60
P324-020	**2**	25	1800	051	3.21
P324-030	**3**	20	720	051	8.24
P324-040	**4**	15	270	051	12.58
P324-060	**6**	3	105	051	75.65
P324-080	**8**	2	36	051	90.07
3716-100*	**10**	1	30	390	168.54
3716-120*	**12**	1	12	390	266.62
3716-140*	**14**	1	6	390	419.17

* Fabricated

P326 1/16 Bend, Street
H x S

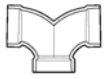


P326-015	**1-1/2**	50	3600	051	7.34
P326-020	**2**	25	1800	051	7.85
P326-030	**3**	20	720	051	12.36
P326-040	**4**	10	350	051	18.00
P326-060	**6**	5	90	051	73.27
P326-080	**8**	2	36	051	100.86
3742-100*	**10**	1	30	390	185.38
3742-120*	**12**	1	12	390	293.27
3742-140*	**14**	1	6	390	461.07

* Fabricated

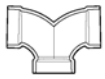
NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

P327 Double 1/4 Bend
H x H x H



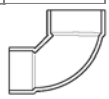
Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P327-015	1-1/2	20	1440	051	6.46
P327-020	2	25	875	051	9.04
P327-030	3	15	270	051	27.66
P327-040	4	6	108	051	38.18

P327 Double 1/4 Bend, Reducing
H x H x H



Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P327-241	2X1-1/2X1-1/2	25	1200	051	8.61

P329 Closet Bend, Reducing
H x H



Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P329-342	3X4	10	300	051	14.16

P330 Closet Bend, Reducing
H x S



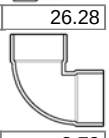
Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P330-342	3X4	10	300	051	19.16

P330X Closet Bend, Reducing with TEST CAP
H x S



Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P330X-342	3X4	10	300	051	26.28

P331 Vent Ell
H x H



Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P331-015	1-1/2	25	1800	051	3.78
P331-020	2	30	1440	051	5.27
P331-030	3	25	450	051	13.27
P331-040	4	10	180	051	33.38
P331-060	6	5	40	051	105.21
P331-080	8	2	28	051	109.64
P331-100	10	1	16	052	311.35
P331-120	12	1	12	052	479.61
3706-140*	14	1	2	390	520.49

* Fabricated

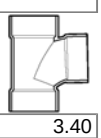
P333 Vent Ell, Street
H x S



Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P333-015	1-1/2	25	2400	051	3.21
P333-020	2	20	1440	051	5.49
P333-030	3	25	450	051	14.43
P333-040	4	10	180	051	50.07
3709-060*	6	1	32	390	122.13
3709-080*	8	1	16	390	168.00
3709-100*	10	1	10	390	280.72
3709-120*	12	1	5	390	409.11
3709-140*	14	1	2	390	565.74

* Fabricated

P400 Sanitary Tee
ALL HUB



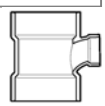
Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P400-015	1-1/2	60	1800	051	3.40
P400-020	2	35	630	051	5.02
P400-030	3	30	240	051	12.85
P400-040	4	5	150	051	22.38
P400-060	6	6	42	051	97.69
P400-080	8	2	16	051	292.44

P400 Sanitary Tee (continued)
ALL HUB

Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P400-100	10	1	7	052	766.27
P400-120	12	1	8	052	1068.24
3790-140*	14	1	3	390	1404.22

* Fabricated

P401 Sanitary Tee, Reducing
ALL HUB



Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P401-241	2X1-1/2X1-1/2	25	875	051	4.40
P401-251	2X2X1-1/2	50	900	051	4.43
P401-257	2X1-1/2X2	25	875	051	5.33
P401-337	3X3X1-1/2	10	350	051	8.15
P401-338	3X3X2	10	350	051	9.60
P401-420	4X4X2	10	300	051	20.94
P401-422	4X4X3	10	180	051	28.44
3790-528*	6X2	1	32	390	104.27
3790-530*	6X3	1	32	390	114.48
P401-532	6X4	4	72	051	94.51
3790-578*	8X2	1	16	390	159.32
3790-580*	8X3	1	16	390	210.53
3790-582*	8X4	1	16	390	199.78
3790-585*	8X6	1	8	390	239.32
3790-621*	10X2	1	8	390	244.49
3790-623*	10X3	1	8	390	248.63
3790-624*	10X4	1	8	390	266.39
3790-626*	10X6	1	8	390	342.84
3790-628*	10X8	1	6	390	419.78
3790-661*	12X2	1	6	390	410.27
3790-663*	12X3	1	6	390	414.95
3790-664*	12X4	1	4	390	427.08
3790-666*	12X6	1	6	390	465.66
3790-668*	12X8	1	6	390	518.46
3790-670*	12X10	1	6	390	653.08
3790-691*	14X2	1	4	390	556.37
3790-693*	14X3	1	4	390	603.71
3790-694*	14X4	1	6	390	609.61
3790-696*	14X6	1	4	390	727.02
3790-698*	14X8	1	4	390	829.24
3790-700*	14X10	1	4	390	996.07
3790-702*	14X12	1	2	390	1174.27

* Fabricated

P403 Sanitary Tee, Street
S x H x H



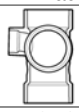
Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P403-015	1-1/2	20	1440	051	9.19
P403-020	2	25	750	051	10.02
P403-030	3	30	210	051	16.67
P403-040	4	10	140	051	43.53
P403-060	6	4	32	051	88.55
P403-080	8	2	16	051	302.98
P403-100	10	1	10	052	848.99
P403-120	12	1	8	052	1271.61

P404 Sanitary Tee, Street, Reducing
S x H x H



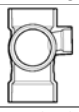
Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P404-241	2X1-1/2X1-1/2	50	1500	051	8.37
P404-251	2X2X1-1/2	50	700	051	7.84
P404-257	2X1-1/2X2	50	900	051	7.58
P404-337	3X3X1-1/2	10	350	051	17.43
P404-338	3X3X2	10	350	051	16.46
P404-420	4X4X2	5	240	051	26.28
P404-422	4X4X3	5	150	051	29.45

P416 Sanitary Tee with Left Side Inlet
ALL HUB



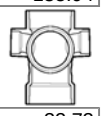
Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P416-337	**3X3X3X1-1/2**	10	180	051	24.88
P416-338	**3X3X3X2**	10	180	051	23.97
P416-420	**4X4X4X2**	4	120	051	42.85

P417 Sanitary Tee with Right Side Inlet
ALL HUB



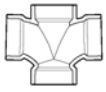
Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P417-337	**3X3X3X1-1/2**	10	180	051	24.88
P417-338	**3X3X3X2**	10	180	051	23.97
P417-420	**4X4X4X2**	10	80	051	135.94

P418 Sanitary Tee with R&L Side Inlets
ALL HUB



Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P418-337	**3X3X3X1-1/2**	5	175	051	32.73
P418-338	**3X3X3X2X2**	5	150	051	31.71
P418-420	**4X4X4X2X2**	5	90	051	138.50

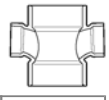
P428 Double Sanitary Tee
ALL HUB



Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P428-015	**1-1/2**	25	1200	051	6.98
P428-020	**2**	25	750	051	10.23
P428-030	**3**	8	240	051	28.62
P428-040	**4**	6	108	051	46.02
3791-060*	**6**	1	6	390	210.94
3791-080*	**8**	1	5	390	336.37
3791-100*	**10**	1	3	390	600.76
3791-120*	**12**	1	6	390	872.12
3791-140*	**14**	1	2	390	1510.54

* Fabricated

P429 Double Sanitary Tee, Reducing
ALL HUB



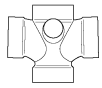
Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P429-251	**2X2X1-1/2X1-1/2**	25	900	051	7.72
P429-337	**3X3X1-1/2X1-1/2**	6	432	051	16.43
P429-338	**3X3X2X2**	10	300	051	17.27
P429-419	**4X4X1-1/2X1-1/2**	7	245	051	60.87
P429-420	**4X4X2X2**	7	245	051	38.07
P429-422	**4X4X3X3**	8	144	051	39.06
3791-528*	**6X2**	1	16	390	151.05
3791-530*	**6X3**	1	16	390	158.25
3791-532*	**6X4**	1	8	390	164.31
3791-578*	**8X2**	1	16	390	184.42
3791-580*	**8X3**	1	8	390	229.81
3791-582*	**8X4**	1	4	390	234.09
3791-585*	**8X6**	1	5	390	265.28
3791-621*	**10X2**	1	8	390	274.36
3791-623*	**10X3**	1	6	390	287.34
3791-624*	**10X4**	1	4	390	293.69
3791-626*	**10X6**	1	6	390	369.51
3791-628*	**10X8**	1	4	390	459.75
3791-661*	**12X2**	1	6	390	444.58
3791-663*	**12X3**	1	6	390	453.99
3791-664*	**12X4**	1	4	390	464.20
3791-666*	**12X6**	1	4	390	515.82
3791-668*	**12X8**	1	4	390	578.72
3791-670*	**12X10**	1	6	390	720.02
3791-691*	**14X2**	1	4	390	606.21
3791-693*	**14X3**	1	4	390	684.07
3791-694*	**14X4**	1	4	390	723.51
3791-696*	**14X6**	1	4	390	823.21

P429 Double Sanitary Tee, Reducing (continued)
ALL HUB

Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
3791-698*	**14X8**	1	4	390	905.67
3791-700*	**14X10**	1	4	390	1071.85
3791-702*	**14X12**	1	3	390	1264.80

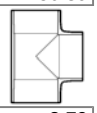
* Fabricated

P439 Double Sanitary Tee with R&L Side Inlets
ALL HUB



Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P439-338	**3X3X3X3X2X2**	4	120	051	36.53
P439-420	**4X4X4X4X2X2**	4	72	051	50.89

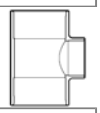
P441 Vent Tee
ALL HUB



Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P441-015	**1-1/2**	25	1800	051	8.79
P441-020	**2**	25	900	051	7.46
P441-030	**3**	10	300	051	23.20
P441-040	**4**	5	175	051	30.73
P441-060	**6**	4	32	051	83.43
P441-080	**8**	2	28	051	214.83
P441-100	**10**	1	12	052	400.47
P441-120	**12**	1	10	052	665.75
3701-140*	**14**	1	4	390	964.59

* Fabricated

P442 Vent Tee, Reducing
ALL HUB



Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P442-251	**2X1-1/2**	25	1200	051	9.00
3701-528*	**6X2**	1	40	390	100.71
3701-530*	**6X3**	1	24	390	105.78
P442-532	**6X4**	2	72	051	60.36
3701-578*	**8X2**	1	24	390	118.41
3701-580*	**8X3**	1	24	390	124.17
P442-582	**8X4**	2	36	051	66.38
P442-585	**8X6**	2	28	051	85.78
3701-621*	**10X2**	1	24	390	192.76
3701-623*	**10X3**	1	12	390	196.33
P442-624	**10X4**	1	12	052	255.69
P442-626	**10X6**	1	14	052	314.62
P442-628	**10X8**	1	12	052	354.92
3701-661*	**12X2**	1	10	390	257.35
3701-663*	**12X3**	1	8	390	261.15
P442-664	**12X4**	1	10	052	345.69
P442-666	**12X6**	1	10	052	394.75
P442-668	**12X8**	1	10	052	454.01
P442-670	**12X10**	1	10	052	541.74
3701-691*	**14X2**	1	12	390	408.13
3701-693*	**14X3**	1	8	390	451.72
3701-694*	**14X4**	1	12	390	503.61
3701-696*	**14X6**	1	6	390	591.03
3701-698*	**14X8**	1	6	390	704.67
3701-700*	**14X10**	1	6	390	801.01
3701-702*	**14X12**	1	4	390	947.58

* Fabricated

3701 Test Tee
SOC x FPT with Plug

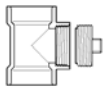


3701-060TEST*	**6**	1	48	390	411.12
3701-080TEST*	**8**	1	22	390	455.66
3701-100TEST*	**10**	1	11	390	669.71
3701-120TEST*	**12**	1	8	390	1140.53

* Fabricated

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

P444X Cleanout Tee w/C.O. Plug
H x H



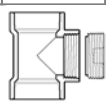
Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P444X-015	**1-1/2**	20	1440	051	8.62
P444X-020	**2**	10	720	051	9.96
P444X-030	**3**	10	350	051	19.02
P444X-040	**4**	10	180	051	29.93
P444X-060	**6**	2	70	051	151.92

P445 Flush C.O. Tee
H x H x FPT



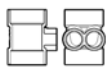
Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P445-015	**1-1/2**	20	2100	051	6.18
P445-020	**2**	25	1200	051	7.60
P445-030	**3**	10	360	051	15.17
P445-040	**4**	10	180	051	28.22
P445-060	**6**	3	54	051	94.78

P445X Flush C.O. Tee w/C.O. Plug
H x H



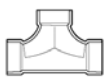
Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P445X-015	**1-1/2**	20	1440	051	8.07
P445X-020	**2**	10	1050	051	11.82
P445X-030	**3**	10	300	051	22.27
P445X-040	**4**	10	180	051	30.51
P445X-060	**6**	2	36	051	151.92

P447 Horizontal Twin Tee
ALL HUB



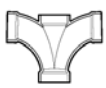
Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P447-337	**3X3X1-1/2X1-1/2**	5	360	051	45.01

P448 2-WAY Cleanout
ALL HUB



Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P448-030	**3**	12	216	051	30.66
P448-040	**4**	5	90	051	39.69

P500 Double Fixture Fitting
ALL HUB



Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P500-020	**2X2X2X2**	10	360	051	17.40
P500-030	**3X3X3X3**	10	80	051	37.61
P500-241	2X1-1/2X1-1/2X1-1/2	20	600	051	19.16
P500-251	**2X2X1-1/2X1-1/2**	20	600	051	20.02
P500-338	**3X2X3X3**	10	80	051	37.24

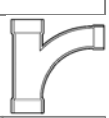
P501 Combination Wye and 1/8 Bend (One Piece)
ALL HUB



Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P501-015	**1-1/2**	50	900	051	7.40
P501-020	**2**	20	600	051	8.81
P501-030	**3**	10	180	051	21.38
P501-040	**4**	8	96	051	38.02
3777-060*	**6**	1	20	390	197.67
3777-080*	**8**	1	8	390	315.23
3777-100*	**10**	1	8	390	563.03
3777-120*	**12**	1	3	390	817.35
3777-140*	**14**	1	2	390	1415.75

* Fabricated

P502 Combination Wye and 1/8 Bend, Reducing (One Piece)
ALL HUB



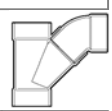
Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P502-251	**2X2X1-1/2**	20	700	051	10.64

P502 Combination Wye and 1/8 Bend, Reducing (One Piece) (continued)
ALL HUB

Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P502-337	**3X3X1-1/2**	15	450	051	18.44
P502-338	**3X3X2**	10	180	051	14.14
P502-420	**4X4X2**	5	150	051	23.58
P502-422	**4X4X3**	5	90	051	28.73
3777-528*	**6X2**	1	32	390	144.06
3777-532*	**6X4**	1	32	390	154.00
3777-578*	**8X2**	1	16	390	172.85
3777-580*	**8X3**	1	24	390	215.39
3777-621*	**10X2**	1	16	390	257.13
3777-623*	**10X3**	1	8	390	269.31
3777-624*	**10X4**	1	8	390	275.26
3777-626*	**10X6**	1	4	390	346.29
3777-628*	**10X8**	1	8	390	430.89
3777-661*	**12X2**	1	4	390	416.68
3777-663*	**12X3**	1	4	390	425.48
3777-664*	**12X4**	1	6	390	435.06
3777-666*	**12X6**	1	6	390	483.43
3777-668*	**12X8**	1	6	390	542.36
3777-670*	**12X10**	1	6	390	674.80
3777-691*	**14X2**	1	4	390	626.97
3777-693*	**14X3**	1	4	390	641.13
3777-694*	**14X4**	1	4	390	678.06
3777-696*	**14X6**	1	6	390	771.52
3777-698*	**14X8**	1	4	390	848.81
3777-700*	**14X10**	1	4	390	1004.55
3777-702*	**14X12**	1	4	390	1185.38

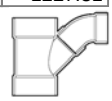
* Fabricated

P503 Combination Wye and 1/8 Bend (Two Piece)
ALL HUB



Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P503-030	**3**	10	180	051	23.98
P503-040	**4**	5	40	051	56.02
P503-060	**6**	4	28	051	173.84
P503-080	**8**	1	4	051	323.06
P503-100	**10**	1	4	052	1054.17
P503-120	**12**	1	0	052	1227.31

P504 Combination Wye and 1/8 Bend, Reducing (Two Piece)
ALL HUB



Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P504-422	**4X3**	5	90	051	43.22
P504-530	**6X3**	5	40	051	174.91
P504-532	**6X4**	5	35	051	161.64
P504-580	**8X3**	2	16	051	176.78
P504-582*	**8X4**	2	16	051	195.82
P504-585	**8X6**	1	8	051	349.04
P504-623*	**10X3**	1	12	052	349.75
P504-624*	**10X4**	1	8	052	370.33
P504-626	**10X6**	1	8	052	465.69
P504-628	**10X8**	1	8	052	579.69
P504-664	**12X4**	1	4	052	575.93
P504-666	**12X6**	1	4	052	598.25
P504-668	**12X8**	1	6	052	729.45
P504-670*	**12X10**	1	6	052	1080.85

* Bushed

P507 Double Combination Wye and 1/8 Bend
ALL HUB



Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P507-015	**1-1/2**	10	350	051	20.36
P507-020	**2**	10	300	051	30.57
P507-030	**3**	10	80	051	59.28
P507-040	**4**	5	35	051	118.25

P507 Double Combination Wye and 1/8 Bend (continued)

ALL HUB

Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P507-251	2X2X1-1/2X1-1/2	20	360	051	27.05
P507-338	3X3X2X2	10	80	051	50.25
P507-420	4X4X2X2	5	70	051	95.82
P507-422	4X4X3X3	5	40	051	94.38
3792-060*	6	1	6	390	217.44
3792-080*	8	1	5	390	346.78
3792-100*	10	1	1	390	619.33
3792-120*	12	1	1	390	899.09
3792-140*	14	1	2	390	1557.25
3792-528*	6X2	1	24	390	155.73
3792-530*	6X3	1	24	390	163.17
3792-532*	6X4	1	8	390	169.41
3792-578*	8X2	1	16	390	190.15
3792-580*	8X3	1	8	390	236.92
3792-582*	8X4	1	4	390	241.35
3792-585*	8X6	1	5	390	273.48
3792-621*	10X2	1	16	390	282.82
3792-623*	10X3	1	8	390	296.22
3792-624*	10X4	1	4	390	302.78
3792-626*	10X6	1	4	390	380.93
3792-628*	10X8	1	4	390	473.99
3792-661*	12X2	1	4	390	458.33
3792-663*	12X3	1	6	390	468.03
3792-664*	12X4	1	12	390	478.56
3792-666*	12X6	1	3	390	531.78
3792-668*	12X8	1	3	390	596.61
3792-670*	12X10	1	3	390	742.29
3792-691*	14X2	1	4	390	624.96
3792-693*	14X3	1	4	390	705.25
3792-694*	14X4	1	4	390	745.86
3792-696*	14X6	1	4	390	848.66
3792-698*	14X8	1	4	390	933.71
3792-700*	14X10	1	4	390	1105.02
3792-702*	14X12	1	4	390	1303.91

* Fabricated

P515 Combination Wye and 1/8 Bend with Left Side Inlet



ALL HUB

P515-338	3X3X3X2	10	140	051	43.94

P516 Combination Wye and 1/8 Bend with Right Side Inlet



ALL HUB

P516-338	3X3X3X2	10	140	051	43.94

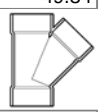
P517 Combination Wye and 1/8 Bend with R&L Side Inlets



ALL HUB

P517-338	3X3X3X2	10	80	051	49.34

P600 Wye



ALL HUB

P600-015	1-1/2	50	700	051	5.21
P600-020	2	25	750	051	6.11
P600-030	3	8	240	051	15.76
P600-040	4	8	144	051	29.18
P600-060	6	4	48	051	90.35
P600-080	8	1	12	051	210.47
P600-100	10	1	6	052	495.95
P600-120	12	1	4	052	805.65
3775-140*	14	1	4	390	1189.69

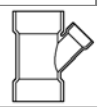
P600 Wye (continued)

ALL HUB

Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each

* Fabricated

P601 Wye, Reducing



ALL HUB

P601-241	2X1-1/2X1-1/2	25	875	051	8.62
P601-251	2X2X1-1/2	25	875	051	7.52
P601-257	2X1-1/2X2	10	480	051	11.80
P601-337	3X3X1-1/2	15	450	051	10.53
P601-338	3X3X2	12	360	051	11.91
P601-419	4X4X1-1/2	10	180	051	32.25
P601-420	4X4X2	10	180	051	16.29
P601-422	4X4X3	10	140	051	23.20
P601-528	6X6X2	5	40	051	90.95
P601-530	6X6X3	6	48	051	87.78
P601-532	6X6X4	5	40	051	66.41
P601-578	8X8X2	3	24	051	177.79
3775-580*	8X3	1	24	390	142.23
P601-582	8X8X4	2	28	051	163.46
P601-585	8X8X6	1	14	051	201.67
3775-621*	10X2	1	11	390	245.03
3775-623*	10X3	1	11	390	256.64
P601-624	10X10X4	1	12	052	282.51
P601-626	10X10X6	1	12	052	366.45
3775-626*	10X6	1	11	390	318.00
P601-628	10X10X8	1	10	052	433.64
3775-661*	12X2	1	6	390	291.54
3775-663*	12X3	1	6	390	302.76
3775-664*	12X4	1	6	390	313.12
P601-664	12X12X4	1	6	052	437.54
P601-666	12X12X6	1	6	052	477.73
3775-666*	12X6	1	6	390	373.12
P601-668	12X12X8	1	6	052	567.35
3775-668*	12X8	1	8	390	414.57
P601-670	12X12X10	1	6	052	635.34
3775-691*	14X2	1	4	390	591.88
3775-693*	14X3	1	4	390	620.75
3775-694*	14X4	1	6	390	631.15
3775-696*	14X6	1	4	390	681.23
3775-698*	14X8	1	4	390	779.57
3775-700*	14X10	1	4	390	833.31
3775-702*	14X12	1	4	390	1065.43
3775-756*	16X6	1	4	390	800.48
3775-786*	18X6	1	4	390	1211.79
3775-816*	20X6	1	3	390	1387.01
3775-906*	24X6	1	2	390	1900.94

* Fabricated

P602 Wye, Street



S x H x H

P602-015	1-1/2	50	1500	051	8.26
P602-020	2	30	540	051	9.82
P602-030	3	10	180	051	20.92
P602-040	4	10	80	051	41.44

P603 Wye, Street, Reducing



S x H x H

P603-251	2X2X1-1/2	25	875	051	11.26
P603-420	4X4X2	10	180	051	45.69
P603-422	4X4X3	10	80	051	38.80

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

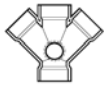
P611 Double Wye
ALL HUB



Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P611-015	**1-1/2**	40	720	051	11.79
P611-020	**2**	20	600	051	12.69
P611-030	**3**	15	120	051	32.73
P611-040	**4**	5	70	051	66.36
P611-060	**6**	2	16	051	130.43
3776-080*	**8**	1	5	390	299.66
3776-100*	**10**	1	4	390	439.52
3776-120*	**12**	1	3	390	717.57
3776-140*	**14**	1	3	390	1272.75

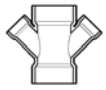
* Fabricated

P611S Double Wye, with 2" Side Inlet
ALL HUB



Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P611S-030	**3**	10	140	051	128.57

P612 Double Wye, Reducing
ALL HUB



Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P612-251	**2X2X1-1/2X1-1/2**	10	720	051	11.59
P612-337	**3X3X1-1/2X1-1/2**	10	300	051	23.14
P612-338	**3X3X2X2**	15	210	051	24.38
P612-420	**4X4X2X2**	5	150	051	39.80
P612-422	**4X4X3X3**	5	90	051	52.56
3776-528*	**6X2**	1	24	390	114.17
3776-530*	**6X3**	1	16	390	118.18
P612-532	**6X6X4X4**	5	35	051	132.74
3776-578*	**8X2**	1	16	390	163.16
3776-580*	**8X3**	1	12	390	174.32
3776-582*	**8X4**	1	8	390	181.71
3776-585*	**8X6**	1	4	390	229.44
3776-621*	**10X2**	1	4	390	232.25
3776-623*	**10X3**	1	8	390	242.66
3776-624*	**10X4**	1	8	390	254.81
3776-626*	**10X6**	1	4	390	315.23
3776-628*	**10X8**	1	4	390	381.69
3776-661*	**12X2**	1	4	390	314.38
3776-663*	**12X3**	1	4	390	324.72
3776-664*	**12X4**	1	4	390	331.99
3776-666*	**12X6**	1	4	390	395.19
3776-668*	**12X8**	1	4	390	504.43
3776-670*	**12X10**	1	3	390	645.79
3776-691*	**14X2**	1	3	390	606.52
3776-693*	**14X3**	1	3	390	634.83
3776-694*	**14X4**	1	3	390	661.52
3776-696*	**14X6**	1	3	390	736.45
3776-698*	**14X8**	1	3	390	853.44
3776-700*	**14X10**	1	3	390	901.92
3776-702*	**14X12**	1	3	390	1168.07
3776-756*	**16X6**	1	3	390	892.40
3776-786*	**18X6**	1	4	390	1308.65
3776-816*	**20X6**	1	1	390	1536.66
3776-906*	**24X6**	1	1	390	2081.00

* Fabricated

P335 Trap Elbow (for use with Traps only)
H x S



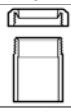
Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P335-030	**3**	30	540	051	14.43
P335-040	**4**	25	200	051	46.26

P700 Return Bend
H x H



Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P700-015	**1-1/2**	20	1440	051	5.22
P700-020	**2**	35	630	051	10.02
P700-030	**3**	8	240	051	27.85
P700-040	**4**	6	108	051	55.02
P700-060	**6**	2	36	051	121.25
P700-080	**8**	1	7	051	167.12

P704P Tail Piece Adapter
S x SLIP w/Plastic Nut - Built-in Washer



Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P704P-015	**1-1/2**	25	4200	051	3.55

P704X Tail Piece Adapter
S x SLIP w/Chrome Nut & Washer



Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P704X-015	**1-1/2**	25	4200	051	5.03

P706X P-Trap
H x H



Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P706X-015	**1-1/2**	25	875	051	6.54
P706X-020	**2**	20	360	051	8.60
P706X-030	**3**	10	80	051	29.89
P706X-040	**4**	4	72	051	68.17
P706X-060	**6**	2	14	051	209.80
P706X-080	**8**	1	7	051	408.22
P706X-100	**10**	1	1	052	1030.23
P706X-120	**12**	1	1	052	1404.34

P707X P-Trap w/Cleanout
H x H



Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P707X-015	**1-1/2**	10	720	051	10.80

P708P Adjustable P-Trap w/Plastic Nut
H x H



Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P708P-015	**1-1/2**	25	875	051	8.37
P708P-020	**2**	25	450	051	18.18

P711P L.A. Pattern P-Trap w/Plastic Nut
SLIP x H w/Plastic Nut & Washer



Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P711P-169	**1-1/4X1-1/2**	25	750	051	14.25
P711P-015	**1-1/2**	25	750	051	14.25

P711X L.A. Pattern P-Trap w/Chrome Nut
SLIP x H w/Chrome Nut & Washer



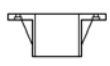
Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P711X-015	**1-1/2**	25	900	051	16.66

P800 Closet Flange
H

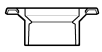
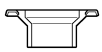
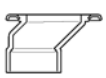
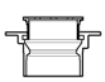


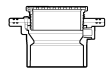
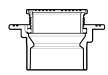
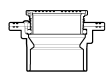
Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P800-422	**4X3**	25	750	051	7.67
P800-040	**4X4**	30	540	051	8.73

P800G Closet Flange w/Gussets
H



Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P800G-040	**4**	30	540	051	37.86

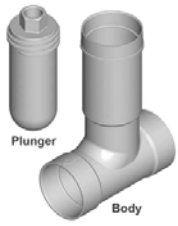
Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
P800KO Closet Flange with Knockout H					
P800KO-422	**4X3**	25	750	051	8.93
P800S Closet Flange with Stop H					
P800S-422	**4X3**	16	560	051	7.67
P801 Closet Flange, Reducing SPIGOT					
P801-422	**4X3**	25	750	051	9.33
P811 Closet Flange w/Adjustable Metal Ring H					
P811-040	**4**	30	540	051	21.25
P811-422	**4X3**	30	540	051	15.02
P811KO Closet Flange w/Adjustable Metal Ring and Knockout H					
P811KO-422	**4X3**	25	350	051	21.38
P812 Closet Flange w/Adjustable Metal Ring SPIGOT					
P812-040	**4**	25	450	051	23.18
P812-422	**4X3**	25	450	051	20.13
P813 Flush Closet Flange w/Adjustable Metal Ring Fits Over 3" Pipe or Inside 4" Pipe					
P813-422	**4X3**	25	750	051	20.13
P815 Flush Closet Flange Fits Over 3" Pipe or Inside 4" Pipe					
P815-040	**4X4 / 4X3**	25	750	051	14.76
P815KO Flush Closet Flange with Knockout Fits Over 3" Pipe or Inside 4" Pipe					
P815KO-040	**4X4 / 4X3**	25	750	051	14.28
P820 Offset Closet Flange w/Adjustable Metal Ring (1-1/2" Offset) H					
P820-422	**4X3**	15	450	051	26.54
Uniform Plumbing Code does not accept offset closet flanges					
Floor Drain with Stainless Steel Adjustable Top w/Round Grate					
P1500-015S	**1-1/2X5**	4	216	168	378.74
P1600-015S	**1-1/2X6**	4	216	168	407.98
P1700-015S	**1-1/2X7**	4	0	168	422.63
P1800-015S	**1-1/2X8**	4	216	168	543.58
P1500-020S	**2X5**	4	216	168	378.74
P1600-020S	**2X6**	4	400	168	407.98
P1700-020S	**2X7**	4	0	168	422.63

Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
Floor Drain with Stainless Steel Adjustable Top w/Round Grate (continued)					
P1800-020S	**2X8**	4	0	168	543.58
P1500-030S	**3X5**	4	216	168	378.74
P1600-030S	**3X6**	4	400	168	407.98
P1700-030S	**3X7**	2	54	168	422.63
P1800-030S	**3X8**	4	216	168	543.58
P1500-040S	**4X5**	4	216	168	378.74
P1600-040S	**4X6**	4	1	168	407.98
P1700-040S	**4X7**	4	400	168	422.63
P1800-040S	**4X8**	4	144	168	543.58
Floor Drain with Stainless Steel Adjustable Top w/Round Grate & Membrane Collar					
P150M-015S	**1-1/2X5**	4	216	168	407.47
P160M-015S	**1-1/2X6**	4	216	168	461.68
P170M-015S	**1-1/2X7**	4	0	168	475.68
P180M-015S	**1-1/2X8**	4	216	168	566.95
P150M-020S	**2X5**	1	175	168	407.47
P160M-020S	**2X6**	4	216	168	461.68
P170M-020S	**2X7**	4	0	168	475.68
P180M-020S	**2X8**	4	0	168	566.95
P150M-030S	**3X5**	4	216	168	407.47
P160M-030S	**3X6**	4	216	168	461.68
P170M-030S	**3X7**	2	54	168	475.68
P180M-030S	**3X8**	2	144	168	566.95
P150M-040S	**4X5**	4	216	168	407.47
P160M-040S	**4X6**	4	216	168	461.68
P170M-040S	**4X7**	4	192	168	475.68
P180M-040S	**4X8**	4	0	168	566.95
Floor Cleanout w/Stainless Steel Adjustable Round Top & Solid Access Cover					
P1510-015S	**1-1/2X5**	4	216	168	422.89
P1510-020S	**2X5**	6	210	168	422.89
P1510-030S	**3X5**	4	400	168	422.89
P1510-040S	**4X5**	4	400	168	422.89
Floor Cleanout w/Stainless Steel Adjustable Round Top, Solid Access Cover & Membrane Collar					
P151M-015S	**1-1/2X5**	4	216	168	445.43
P151M-020S	**2X5**	4	216	168	445.43
P151M-030S	**3X5**	4	216	168	445.43
P151M-040S	**4X5**	4	54	168	445.43
S119 Expansion Joint Soc x Soc - PVC White with EPDM O−ring					
S119-15	**1-1/2**	16	768	025	14.96
S119-20	**2**	10	480	025	23.14
S119-25	**2-1/2**	5	225	025	33.57
S119-30	**3**	4	144	025	41.94
S119-40	**4**	2	70	025	73.40
S119-60	**6**	1	36	025	179.60
826 Large Diameter Expansion Joint Soc x Soc - PVC Gray with EPDM O−ring					
826-080X6	**8**	1	12	085	1352.21
826-100X6	**10**	1	12	085	1587.88
826-120X6	**12**	1	4	085	2813.54

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Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
826 Large Diameter Expansion Joint (continued)					
Soc x Soc - PVC Gray with EPDM O–ring					
826-140X6	**14**	1	4	085	3213.82
Air Admittance Valve					
Spigot					
Maximum 6 DFU (Drainage Fixture Units)					
AAV-015	**1-1/2**	12	2016	285	51.16





Sewer Disconnect Application

Requires Purchase of SDC-040 Body and SDCP-040 Plunger, Sold Separately.

Screw-down Plunger installs in Body to provide temporary shut-off of Sewer line or to minimize sewage backup from sewer mains during flooding. Body accepts SDR-35 Sewer Pipe (or any ASTM D 3034 /D 2729 pipe), but can easily adapt to Schedule 40 drainage pipe using 4" IPS socket x Sewer spigot adapters, Spears® part no. 3729-04013IXS.

Standpipe to grade can be easily fabricated from user-supplied SDR-35 Sewer Pipe or optionally from Schedule 40 drainage pipe with the addition of a 4" Schedule 40 DWV socket Coupling, Spears® part no. P100-040. For Closure, a 4" Sewer Cap, Spears® part no. 4047-040; or 4" Schedule 40 DWV Cap, Spears® part no. P116-040 can be used as applicable.

A T-handle extension for easy Plunger operation can also be fabricated from user supplied 1" Schedule 40 pipe and a Tee fitting, Spears® part no. 401−010. See installation instructions included with product for additional detail.

Sewer Disconnect Body

Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
Sewer Socket X Sewer Socket.					
Requires Separate Purchase of SDCP-040 Plunger Requires Purchase of SDCP-040 Plunger					
SDC-040	**4**	6	108	055	72.66

Sewer Disconnect Plunger

Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
For Use With Sewer Disconnect Body. Requires Separate Purchase of SDC-040 Body Requires Purchase of SDC-040 Body					
SDCP-040	**4**	12	420	055	25.02

Industrial PVC Backwater Valves

Backwater Valves are designed to prevent backflow in numerous applications where easy service access for maintenance and cleaning is needed. Excellent for use in sanitary or storm sewer drainage systems to prevent waste back up due to inadequate drainage, for balancing multi-level ponds, aquaculture features or storage tank systems, and many other applications. Spears® Backwater Valve has been engineered for improved function and easier service, especially in buried service with use of optional Service-Access Extension available either preassembled with valve or as an add-on kit.

- Replaceable internal flapper assembly with EPDM Seat.
- Service-Access Extension available either preassembled with valve, as an add-on kit, or as valve & extension kit components with user supplied pipe.
- Direct Connection to ASTM D 2665 PVC DWV or other IPS size pipe. Spears® fabricated IPS x Sewer Adapters or DWV x Sewer & Drain Adapter Bushings are available for connection to ASTM D 3034 & ASTM D 2729 Sewer pipe.
- Pressure Rated to 43 psi (100 feet of head) @ 73°F (23°C).
- All extension kits can be cut shorter for custom application.
- Conforms to ASME/ANSI A112.14.1 for Backwater Valves.

PVC Backwater Valves



PVC Backwater Valves
Soc x Soc - Valve Only

Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
S275P	**2**	1	3840	055	59.05
S375P	**3**	2	210	055	59.17
S475P	**4**	1	54	055	65.55
S675P	**6**	1	30	055	279.26

PVC Backwater Valves with Extension Kit to Premade Length



PVC Backwater Valves with Extension Kit to Premade Length
Soc x Soc - Assembled with Extension

Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
S275P-120[1]	**2X12HT**	1	98	055	178.12
S275P-160[1]	**2X16HT**	1	98	055	191.59
S275P-200[1]	**2X20HT**	1	98	055	205.05
S275P-240[1]	**2X24HT**	1	98	055	218.53
S275P-360[1]	**2X36HT**	1	98	055	229.52
S275P-480[1]	**2X48HT**	1	98	055	252.25
S375P-120[1]	**3X12HT**	1	36	055	178.12
S375P-160[1]	**3X16HT**	1	15	055	191.59
S375P-200[1]	**3X20HT**	1	15	055	205.05
S375P-240[1]	**3X24HT**	1	15	055	218.53
S375P-360[1]	**3X36HT**	1	15	055	229.52
S375P-480[1]	**3X48HT**	1	15	055	252.25
S475P-120[1]	**4X12HT**	1	18	055	231.36
S475P-160[1]	**4X16HT**	1	12	055	249.59
S475P-200[1]	**4X20HT**	1	30	055	266.20
S475P-240[1]	**4X24HT**	1	30	055	283.85

PVC Backwater Valves with Extension Kit to Premade Length
Soc x Soc - Assembled with Extension (continued)

Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
S475P-360[1]	**4X36HT**	1	30	055	298.11
S475P-480[1]	**4X48HT**	1	30	055	327.60
S675P-120[1]	**6X12HT**	1	30	055	485.82
S675P-160[1]	**6X16HT**	1	30	055	524.14
S675P-200[1]	**6X20HT**	1	30	055	559.02
S675P-240[1]	**6X24HT**	1	30	055	596.16
S675P-360[1]	**6X36HT**	1	30	055	626.04
S675P-480[1]	**6X48HT**	1	1	055	687.95

[1] - Size designates nominal valve size x extension height (HT-top of valve to top of extension, inches)

PVC Service-Access Extension Kit Only to Premade Length



PVC Service-Access Extension Kit: includes factory assembled internal flap assembly, assembly extension pipe, and external extension housing with top access adapter. Requires solvent cement assembly to existing valve and uses existing threaded Access Plug. Standard Extensions are available in convenient increments of 12", 16", 20", 24", 36", and 48" (measured from top of valve to top of extension). Contact Spears® for pricing on custom cut lengths. All extension kits can be cut shorter in the field for custom fits prior to cementing access adapter in place.

PVC Service-Access Extension Kit Only to Premade Length

Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
SAEK-020-120[1]	**2X12HT**	1	65	055	55.55
SAEK-020-160[1]	**2X16HT**	1	36	055	57.14
SAEK-020-200[1]	**2X20HT**	1	5	055	58.65
SAEK-020-240[1]	**2X24HT**	1	5	055	61.46
SAEK-020-360[1]	**2X36HT**	1	5	055	64.37
SAEK-020-480[1]	**2X48HT**	1	5	055	67.52
SAEK-030-120[1]	**3X12HT**	1	65	055	60.24
SAEK-030-160[1]	**3X16HT**	1	36	055	68.00
SAEK-030-200[1]	**3X20HT**	1	0	055	72.04
SAEK-030-240[1]	**3X24HT**	1	49	055	81.19
SAEK-030-360[1]	**3X36HT**	1	30	055	96.04
SAEK-030-480[1]	**3X48HT**	1	30	055	113.59
SAEK-040-120[1]	**4X12HT**	1	36	055	89.83
SAEK-040-160[1]	**4X16HT**	1	12	055	101.27
SAEK-040-200[1]	**4X20HT**	1	12	055	124.92
SAEK-040-240[1]	**4X24HT**	1	12	055	136.79
SAEK-040-360[1]	**4X36HT**	1	12	055	172.06
SAEK-040-480[1]	**4X48HT**	1	12	055	198.64

PVC Service-Access Extension Kit Only to Premade Length (continued)

Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
SAEK-060-120[1]	**6X12HT**	1	4	055	160.94
SAEK-060-160[1]	**6X16HT**	1	12	055	182.92
SAEK-060-200[1]	**6X20HT**	1	6	055	207.41
SAEK-060-240[1]	**6X24HT**	1	6	055	237.97
SAEK-060-360[1]	**6X36HT**	1	6	055	295.39
SAEK-060-480[1]	**6X48HT**	1	7	055	366.67

[1] - Size designates nominal valve size x extension height (HT-top of valve to top of extension, inches)

PVC Backwater Valve with Extension Components





PVC Backwater Valve with Extension Components Soc x Soc - Components Must be assembled with user supplied pipe (see Table 1)

Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
S275P-AK	**2**	1	240	055	87.00
S375P-AK	**3**	1	105	055	87.00
S475P-AK	**4**	1	36	055	101.77
S675P-AK	**6**	1	14	055	360.38

PVC Backwater Valve Extension Components Only



PVC Backwater Valve Extension Components Only Must be assembled with user supplied pipe (see Table 1)

Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
S275P-ECK	**2**	1	240	055	46.33
S375P-ECK	**3**	1	168	055	46.33
S475P-ECK	**4**	1	72	055	60.37
S675P-ECK	**6**	1	48	055	126.83

PVC Backwater Valve Extension Components Only Must be assembled with user supplied pipe (see Table 1) (continued)

Table 1: User Supplied Pipe Requirements For Use With Extension Components

Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each

Valve Size	Acceptable RISER Pipe Types for User-Supplied Pipe	Acceptable HANDLE Pipe
2"	4" Class 125 PVC PIPE 4" Sch 40 PVC PIPE	Use any 3/4" IPS plastic pipe[1]
3"	5" Class 125 PVC PIPE 5" Sch 40 PVC PIPE[3] 6" D3034 (SDR 35) PVC SEWER PIPE[2]	
4"	8" Class 125 PVC PIPE 8" Sch 40 PVC PIPE	
6"	10" Class 125 PVC PIPE 10" Sch 40 PVC PIPE	

Note 1: Riser and Handle pipe are *not* the same length. Sch 40 and/or Sch 80 pipe as well as ABS may be used. Special cement must be used to join PVC to ABS.
Note 2: When 6" SDR35 pipe is used, adapter fits pipe inside diameter.
Note 3: DO NOT use Sch 80 for 3" Riser pipe.

Industrial Backwater Valve Flapper Repair Kit



Industrial Backwater Valve Flapper Repair Kit

Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
Complete Flapper Assembly replacement					
S275P-FRK	**2**	1	1680	055	34.48
S375P-FRK	**3**	1	1050	055	43.48
S475P-FRK	**4**	1	720	055	50.64
S675P-FRK	**6**	1	240	055	90.18

PVC Backwater Valve Metric Adapters

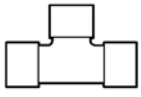


PVC Backwater Valve Metric Adapters

Part Number	Size	Std Pk	Pllt Qty	Disc Code	Price Each
Metric Socket x ASTM Spigot					
S275MA-063	**63mm X 2**	50	2400	055	15.28
S375MA-090	**90mm X 3**	25	750	055	16.42
S475MA-110	**110mm X 4**	10	480	055	19.45
S675MA-160	**160mm X 6**	4	120	055	44.89

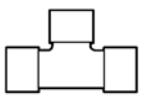
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TEE (Soc x Soc x Soc)



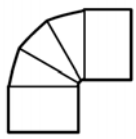
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
6	3701-060 **116.54**	3901-060 **202.68**
6X2	3701-528* **100.71**	3901-528 **151.01**
6X3	3701-530* **105.78**	3901-530 **158.12**
6X4	3701-532 **110.64**	3901-532 **164.16**
8	3701-080 **189.84**	3901-080 **321.71**
8X2	3701-578* **118.41**	3901-578 **211.51**
8X3	3701-580* **124.17**	3901-580 **238.31**
8X4	3701-582 **127.55**	3901-582 **243.62**
8X6	3701-585 **138.40**	3901-585 **252.93**
10	3701-100 **369.23**	3901-100 **501.78**
10X2	3701-621* **192.76**	3901-621 **298.43**
10X3	3701-623* **196.33**	3901-623 **325.04**
10X4	3701-624 **201.13**	3901-624 **367.71**
10X6	3701-626 **245.85**	3901-626 **449.32**
10X8	3701-628 **329.59**	3901-628 **470.85**
12	3701-120 **490.71**	3901-120 **691.36**
12X2	3701-661* **257.35**	3901-661 **369.58**
12X3	3701-663* **261.15**	3901-663 **430.71**
12X4	3701-664 **267.72**	3901-664 **489.34**
12X6	3701-666 **310.95**	3901-666 **569.33**
12X8	3701-668 **371.41**	3901-668 **626.84**
12X10	3701-670 **423.23**	3901-670 **635.05**
14	3701-140* **964.59**	3901-140 **1241.67**
14X2	3701-691* **408.13**	3901-691 **654.45**
14X3	3701-693* **451.72**	3901-693 **732.20**
14X4	3701-694* **503.61**	3901-694 **805.84**
14X6	3701-696* **591.03**	3901-696 **945.67**
14X8	3701-698* **704.67**	3901-698 **1133.01**
14X10	3701-700* **801.01**	3901-700 **1191.92**
14X12	3701-702* **947.58**	3901-702 **1203.49**
16	3701-160 **1365.40**	3901-160 **1956.12**
16X2	3701-751 **581.98**	3901-751 **839.04**
16X3	3701-753 **588.36**	3901-753 **928.06**
16X4	3701-754 **624.56**	3901-754 **999.23**
16X6	3701-756 **675.58**	3901-756 **1080.84**
16X8	3701-758 **790.88**	3901-758 **1266.11**
16X10	3701-760 **994.16**	3901-760 **1417.55**

TEE (Soc x Soc x Soc) (continued)



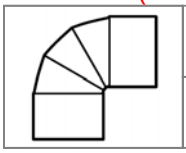
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
16X12	3701-762 **1128.88**	3901-762 **1797.08**
16X14	3701-764 **1339.73**	3901-764 **1858.28**
18	3701-180 **1696.84**	3901-180 **2111.91**
18X4	3701-784 **997.40**	3901-784 **1159.69**
18X6	3701-786 **1013.19**	3901-786 **1312.28**
18X8	3701-788 **1054.77**	3901-788 **1361.41**
18X10	3701-790 **1188.84**	3901-790 **1375.72**
18X12	3701-792 **1266.49**	3901-792 **1691.18**
18X14	3701-794 **1358.41**	3901-794 **1944.79**
18X16	3701-796 **1458.03**	3901-796 **1987.24**
20	3701-200 **2259.68**	3901-200 **3039.14**
20X4	3701-814 **1205.44**	3901-814 **1610.09**
20X6	3701-816 **1275.55**	3901-816 **1815.75**
20X8	3701-818 **1347.84**	3901-818 **2229.95**
20X10	3701-820 **1446.47**	3901-820 **2303.86**
20X12	3701-822 **1531.62**	3901-822 **2433.54**
20X14	3701-824 **1652.83**	3901-824 **2646.92**
20X16	3701-826 **1760.01**	3901-826 **2695.20**
20X18	3701-828 **1941.35**	3901-828 **2913.97**
24	3701-240 **2815.19**	3901-240 **3645.26**
24X4	3701-904 **1659.87**	3901-904 **1996.06**
24X6	3701-906 **1744.75**	3901-906 **2251.09**
24X8	3701-908 **1851.04**	3901-908 **2435.12**
24X10	3701-910 **1955.56**	3901-910 **2649.68**
24X12	3701-912 **2060.67**	3901-912 **2788.15**
24X14	3701-914 **2201.79**	3901-914 **3091.48**
24X16	3701-916 **2328.91**	3901-916 **3190.04**
24X18	3701-918 **2530.18**	3901-918 **3345.66**
24X20	3701-920 **2716.49**	3901-920 **3499.60**

90° ELBOW (Soc x Soc)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
6	3706-060 **115.05**	3906-060 **148.94**
8	3706-080 **159.83**	3906-080 **250.15**
10	3706-100 **252.65**	3906-100 **493.81**
12	3706-120 **388.64**	3906-120 **720.11**
14	3706-140* **520.49**	3906-140 **1059.49**
16	3706-160 **771.87**	3906-160 **1317.69**
18	3706-180 **1147.99**	3906-180 **1696.33**

90° ELBOW (Soc x Soc) (continued)



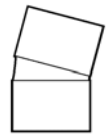
Size	SCH 40 LOW PR Disc Code: 390 Part Number Price Each	SCH 80 LOW PR Disc Code: 400 Part Number Price Each
20	3706-200 **1291.21**	3906-200 **2000.03**
24	3706-240 **1614.71**	3906-240 **2992.62**

11-1/4° ELBOW (Soc x Soc)



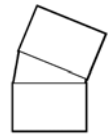
Size	SCH 40 LOW PR Disc Code: 390 Part Number Price Each	SCH 80 LOW PR Disc Code: 400 Part Number Price Each
4	3711-040 **41.13**	3911-040 **55.93**
6	3711-060 **66.07**	3911-060 **104.56**
8	3711-080 **111.69**	3911-080 **171.15**
10	3711-100 **168.54**	3911-100 **303.33**
12	3711-120 **266.62**	3911-120 **443.33**
14	3711-140 **419.17**	3911-140 **678.69**
16	3711-160 **571.40**	3911-160 **907.22**
18	3711-180 **639.49**	3911-180 **1171.17**
20	3711-200 **848.25**	3911-200 **1501.41**
24	3711-240 **1516.51**	3911-240 **1718.56**

15° ELBOW (Soc x Soc)



Size	SCH 40 LOW PR Disc Code: 390 Part Number Price Each	SCH 80 LOW PR Disc Code: 400 Part Number Price Each
4	3718-040 **41.13**	3918-040 **55.93**
6	3718-060 **66.07**	3918-060 **104.56**
8	3718-080 **111.69**	3918-080 **171.15**
10	3718-100 **168.54**	3918-100 **303.33**
12	3718-120 **266.62**	3918-120 **443.33**
14	3718-140 **419.17**	3918-140 **678.69**
16	3718-160 **571.40**	3918-160 **907.22**
18	3718-180 **639.49**	3918-180 **1171.17**
20	3718-200 **848.25**	3918-200 **1501.41**
24	3718-240 **1516.51**	3918-240 **1718.56**

22-1/2° ELBOW (Soc x Soc)



Size	SCH 40 LOW PR Disc Code: 390 Part Number Price Each	SCH 80 LOW PR Disc Code: 400 Part Number Price Each
4	3716-040 **41.13**	3916-040 **55.93**
6	3716-060 **66.07**	3916-060 **104.56**
8	3716-080 **111.69**	3916-080 **171.15**
10	3716-100* **168.54**	3916-100 **303.33**
12	3716-120* **266.62**	3916-120 **443.33**
14	3716-140* **419.17**	3916-140 **678.69**
16	3716-160 **571.40**	3916-160 **907.22**
18	3716-180 **686.21**	3916-180 **1171.17**
20	3716-200 **848.25**	3916-200 **1501.41**
24	3716-240 **1516.51**	3916-240 **1718.56**

22-1/2° STREET ELL (Spig x Soc)



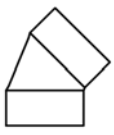
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
6	3742-060 **72.67**	3942-060 **114.98**
8	3742-080 **122.85**	3942-080 **188.25**
10	3742-100* **185.38**	3942-100 **333.67**
12	3742-120* **293.27**	3942-120 **487.67**
14	3742-140* **461.07**	3942-140 **746.57**
16	3742-160 **453.78**	3942-160 **997.94**
18	3742-180 **754.83**	3942-180 **1286.63**
20	3742-200 **1149.99**	3942-200 **1767.57**
24	3742-240 **1784.12**	3942-240 **2022.27**

30° ELBOW (Soc x Soc)



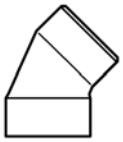
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
4	3715-040 **41.13**	3915-040 **55.93**
6	3715-060 **66.07**	3915-060 **104.56**
8	3715-080 **111.69**	3915-080 **171.15**
10	3715-100 **168.54**	3915-100 **303.33**
12	3715-120 **266.62**	3915-120 **443.33**
14	3715-140 **419.17**	3915-140 **678.69**
16	3715-160 **571.40**	3915-160 **907.22**
18	3715-180 **686.21**	3915-180 **1171.17**
20	3715-200 **848.25**	3915-200 **1501.41**
24	3715-240 **1516.51**	3915-240 **1718.56**

45° ELBOW (Soc x Soc)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
4	3717-040 **100.47**	3917-040 **122.94**
6	3717-060 **106.79**	3917-060 **175.23**
8	3717-080 **127.87**	3917-080 **188.29**
10	3717-100 **210.32**	3917-100 **344.93**
12	3717-120 **295.38**	3917-120 **493.09**
14	3717-140* **512.16**	3917-140 **708.63**
16	3717-160 **632.38**	3917-160 **917.65**
18	3717-180 **729.78**	3917-180 **1241.33**
20	3717-200 **996.44**	3917-200 **1559.17**
24	3717-240 **1324.03**	3917-240 **1835.55**

45° STREET ELL (Spig x Soc)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
4	3727-040 **100.47**	3927-040 **122.94**
6	3727-060 **106.79**	3927-060 **175.23**
8	3727-080 **127.87**	3927-080 **188.29**
10	3727-100* **210.32**	3927-100 **344.93**
12	3727-120* **295.38**	3927-120 **493.09**
14	3727-140* **512.16**	3927-140 **708.63**

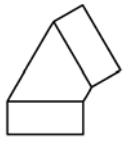
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45° STREET ELL (Spig x Soc) (continued)



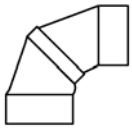
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
16	3727-160 **632.38**	3927-160 **917.65**
18	3727-180 **729.78**	3927-180 **1241.33**
20	3727-200 **996.44**	3927-200 **1559.17**
24	3727-240 **1324.03**	3927-240 **1835.55**

60° ELBOW (Soc x Soc)



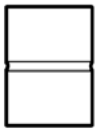
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
6	3724-060* **127.62**	3924-060 **186.16**
8	3724-080* **182.08**	3924-080 **312.74**
10	3724-100* **305.13**	3924-100 **586.19**
12	3724-120* **399.78**	3924-120 **862.77**
14	3724-140* **732.80**	3924-140 **1253.71**
16	3724-160 **890.94**	3924-160 **1523.31**
18	3724-180 **1144.59**	3924-180 **1696.33**
20	3724-200 **1221.01**	3924-200 **2000.03**
24	3724-240 **1573.16**	3924-240 **2136.66**

90° STREET ELL (Spig x Soc)



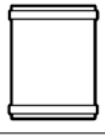
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
4	---	3909-040 **140.14**
6	3709-060* **122.13**	3909-060 **166.07**
8	3709-080* **168.00**	3909-080 **273.49**
10	3709-100* **280.72**	3909-100 **542.07**
12	3709-120* **409.11**	3909-120 **796.41**
14	3709-140* **565.74**	3909-140 **1163.83**
16	3709-160 **879.91**	3909-160 **1445.39**
18	3709-180 **1272.57**	3909-180 **1861.40**
20	3709-200 **1434.48**	3909-200 **2196.24**
24	3709-240 **1793.78**	3909-240 **2346.36**

COUPLING (Soc x Soc)



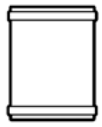
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
8	3729-080 **72.92**	3929-080 **161.42**
10	3729-100 **89.66**	3929-100 **175.80**
12	3729-120 **131.99**	3929-120 **202.64**
14	3729-140 **214.33**	3929-140 **405.21**
16	3729-160 **239.05**	3929-160 **481.75**
18	3729-180 **407.66**	3929-180 **949.59**
20	3729-200 **711.17**	3929-200 **1170.80**
24	3729-240 **987.67**	3929-240 **2019.72**

REPAIR COUPLING (Gasket x Gasket)



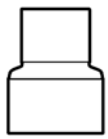
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
4	3728-040 **70.67**	3928-040 **82.57**
6	3728-060 **98.31**	3928-060 **116.36**
8	3728-080 **154.75**	3928-080 **196.84**

REPAIR COUPLING (Gasket x Gasket) (continued)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
10	3728-100 **204.17**	3928-100 **275.43**
12	3728-120 **256.14**	3928-120 **350.02**
14	3728-140 **444.46**	3928-140 **775.04**
16	3728-160 **654.84**	3928-160 **1162.79**
18	3728-180 **856.07**	3928-180 **1511.54**
20	3728-200 **1329.37**	3928-200 **1813.86**
24	3728-240 **1802.95**	3928-240 **2446.61**

REDUCER COUPLING (Soc x Soc)



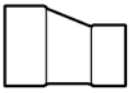
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
6X2	3729-528* **106.04**	3929-528 **183.86**
6X3	3729-530* **104.38**	3929-530 **135.82**
6X4	3729-532 **37.87**	3929-532 **89.36**
8X2	3729-578 **178.37**	3929-578 **248.39**
8X3	3729-580 **165.13**	3929-580 **217.09**
8X4	3729-582* **93.87**	3929-582 **171.56**
8X6	3729-585* **80.68**	3929-585 **157.88**
10X4	3729-624* **211.83**	3929-624 **403.03**
10X6	3729-626* **197.41**	3929-626 **321.58**
10X8	3729-628* **138.17**	3929-628 **171.88**
12X4	3729-664* **398.29**	3929-664 **579.08**
12X6	3729-666* **302.00**	3929-666 **477.46**
12X8	3729-668* **265.79**	3929-668 **414.33**
12X10	3729-670* **201.13**	3929-670 **254.49**
14X4	3729-694* **640.96**	3929-694 **783.55**
14X6	3729-696* **620.52**	3929-696 **699.88**
14X8	3729-698* **449.17**	3929-698 **688.42**
14X10	3729-700* **379.36**	3929-700 **581.19**
14X12	3729-702* **336.89**	3929-702 **371.54**
16X4	3729-754 **686.02**	3929-754 **1151.38**
16X6	3729-756 **631.89**	3929-756 **1079.43**
16X8	3729-758 **574.99**	3929-758 **1019.47**
16X10	3729-760 **513.52**	3929-760 **708.78**
16X12	3729-762 **466.20**	3929-762 **651.57**
16X14	3729-764 **404.32**	3929-764 **549.29**
18X6	3729-786 **1141.97**	3929-786 **1664.12**
18X8	3729-788 **968.57**	3929-788 **1539.96**
18X10	3729-790 **903.76**	3929-790 **1415.22**
18X12	3729-792 **846.17**	3929-792 **1182.77**

REDUCER COUPLING (Soc x Soc) (continued)



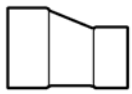
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
18X14	3729-794 **780.37**	3929-794 **1145.33**
18X16	3729-796 **582.94**	3929-796 **978.99**
20X6	3729-816 **1430.35**	3929-816 **2340.06**
20X8	3729-818 **1385.24**	3929-818 **2312.98**
20X10	3729-820 **1214.44**	3929-820 **2295.79**
20X12	3729-822 **1197.80**	3929-822 **2153.01**
20X14	3729-824 **1183.01**	3929-824 **2135.89**
20X16	3729-826 **1116.02**	3929-826 **1710.54**
20X18	3729-828 **985.94**	3929-828 **1179.55**
24X6	3729-906 **2876.69**	3929-906 **3956.64**
24X8	3729-908 **2794.27**	3929-908 **3923.63**
24X10	3729-910 **2310.33**	3929-910 **3910.22**
24X12	3729-912 **2234.16**	3929-912 **3847.04**
24X14	3729-914 **2118.48**	3929-914 **3834.16**
24X16	3729-916 **1945.19**	3929-916 **3686.85**
24X18	3729-918 **1722.43**	3929-918 **2810.95**
24X20	3729-920 **1294.84**	3929-920 **2520.93**

ECCENTRIC REDUCER COUPLING (Soc x Soc)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
3X2	3729-338E **33.63**	3929-338E **46.85**
4X2	3729-420E[2] **45.67**	3929-420E[2] **119.53**
4X3	3729-422E **42.21**	3929-422E **55.31**
6X2	3729-528E[3*] **103.09**	3929-528E[3] **155.61**
6X3	3729-530E[2*] **94.96**	3929-530E[2] **151.18**
6X4	3729-532E[2] **47.48**	3929-532E **115.31**
8X3	3729-580E[3*] **195.86**	3929-580E[3] **219.72**
8X4	3729-582E[2*] **97.80**	3929-582E[2] **199.43**
8X6	3729-585E* **79.06**	3929-585E **153.36**
10X4	3729-624E[2*] **223.63**	3929-624E[3] **337.48**
10X6	3729-626E* **205.62**	3929-626E[2] **286.43**
10X8	3729-628E* **193.86**	3929-628E **264.67**
12X4	3729-664E[3*] **417.24**	3929-664E[4] **516.08**
12X6	3729-666E[2*] **342.84**	3929-666E[3] **424.73**
12X8	3729-668E[2*] **227.35**	3929-668E[2] **366.94**
12X10	3729-670E* **197.12**	3929-670E **234.55**
14X6	3729-696E[3] **696.46**	3929-696E[4] **840.68**
14X8	3729-698E[3] **570.52**	3929-698E[3] **752.04**
14X10	3729-700E[2] **517.91**	3929-700E[2] **544.46**

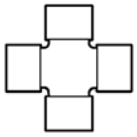
ECCENTRIC REDUCER COUPLING (Soc x Soc) (continued)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
14X12	3729-702E **316.62**	3929-702E **500.72**
16X6	3729-756E[3] **727.75**	3929-756E[5] **1553.20**
16X8	3729-758E[3] **717.55**	3929-758E[3] **1422.29**
16X10	3729-760E[2] **530.60**	3929-760E[3] **1034.67**
16X12	3729-762E **504.89**	3929-762E[2] **918.62**
16X14	3729-764E **448.63**	3929-764E **711.53**
18X6	3729-786E[4] **1034.39**	3929-786E[6] **2144.06**
18X8	3729-788E[4] **1019.07**	3929-788E[5] **2052.44**
18X10	3729-790E[3] **946.11**	3929-790E[4] **1917.95**
18X12	3729-792E[2] **853.85**	3929-792E[3] **1711.92**
18X14	3729-794E[2] **754.93**	3929-794E[2] **1411.37**
18X16	3729-796E **608.98**	3929-796E **1377.17**

2=Two-Step Design, 3=Three-Step Design, 4=Four-Step Design, 5=Five-Step Design, 6=Six−Step Design

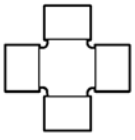
CROSS (Soc x Soc x Soc x Soc)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
4X2	---	3920-420 **128.75**
4X3	---	3920-422 **141.68**
6	3720-060 **149.72**	3920-060 **349.19**
6X2	3720-528 **112.39**	3920-528 **180.92**
6X3	3720-530 **133.09**	3920-530 **203.92**
6X4	3720-532 **146.74**	3920-532 **251.77**
8	3720-080 **302.39**	3920-080 **420.56**
8X2	3720-578 **194.14**	3920-578 **228.28**
8X3	3720-580 **210.04**	3920-580 **242.52**
8X4	3720-582 **230.75**	3920-582 **260.17**
8X6	3720-585 **290.34**	3920-585 **337.18**
10	3720-100 **492.23**	3920-100 **899.75**
10X2	3720-621 **206.18**	3920-621 **413.19**
10X3	3720-623 **237.47**	3920-623 **478.12**
10X4	3720-624 **272.42**	3920-624 **490.23**
10X6	3720-626 **312.40**	3920-626 **599.02**
10X8	3720-628 **438.59**	3920-628 **790.47**
12	3720-120 **648.92**	3920-120 **1267.88**
12X2	3720-661 **272.48**	3920-661 **559.38**
12X3	3720-663 **305.82**	3920-663 **625.27**
12X4	3720-664 **323.31**	3920-664 **652.46**
12X6	3720-666 **395.19**	3920-666 **757.61**
12X8	3720-668 **480.24**	3920-668 **905.02**

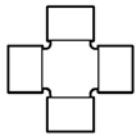
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CROSS (Soc x Soc x Soc x Soc) (continued)



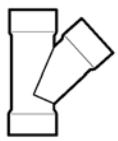
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
12X10	3720-670 **557.41**	3920-670 **1031.31**
14	3720-140 **1077.99**	3920-140 **2254.40**
14X2	3720-691 **531.85**	3920-691 **849.16**
14X3	3720-693 **592.18**	3920-693 **935.49**
14X4	3720-694 **657.46**	3920-694 **1045.88**
14X6	3720-696 **739.54**	3920-696 **1173.82**
14X8	3720-698 **852.00**	3920-698 **1350.13**
14X10	3720-700 **968.07**	3920-700 **1616.67**
14X12	3720-702 **1024.18**	3920-702 **1894.16**
16	3720-160 **1574.71**	3920-160 **2858.03**
16X2	3720-751 **729.81**	3920-751 **1151.72**
16X3	3720-753 **802.09**	3920-753 **1258.22**
16X4	3720-754 **832.74**	3920-754 **1332.33**
16X6	3720-756 **900.67**	3920-756 **1441.11**
16X8	3720-758 **1055.08**	3920-758 **1688.09**
16X10	3720-760 **1256.81**	3920-760 **1943.99**
16X12	3720-762 **1444.37**	3920-762 **2309.34**
16X14	3720-764 **1516.61**	3920-764 **2723.43**
18	3720-180 **2230.98**	3920-180 **3528.26**
18X4	3720-784 **902.92**	3920-784 **1681.48**
18X6	3720-786 **1273.02**	3920-786 **1921.92**
18X8	3720-788 **1442.29**	3920-788 **2292.78**
18X10	3720-790 **1559.93**	3920-790 **2598.43**
18X12	3720-792 **1658.54**	3920-792 **2882.65**
18X14	3720-794 **1747.72**	3920-794 **3080.84**
18X16	3720-796 **2028.41**	3920-796 **3346.52**
20	3720-200 **3795.47**	3920-200 **5956.54**
20X4	3720-814 **1594.17**	3920-814 **2209.73**
20X6	3720-816 **1655.49**	3920-816 **2390.37**
20X8	3720-818 **2056.62**	3920-818 **2601.24**
20X10	3720-820 **2349.43**	3920-820 **3053.78**
20X12	3720-822 **2451.60**	3920-822 **3380.00**
20X14	3720-824 **2666.73**	3920-824 **3651.53**
20X16	3720-826 **2999.00**	3920-826 **4060.64**
20X18	3720-828 **3244.81**	3920-828 **4843.02**
24	3720-240 **4998.78**	3920-240 **7220.62**
24X4	3720-904 **2037.68**	3920-904 **2439.46**

CROSS (Soc x Soc x Soc x Soc) (continued)



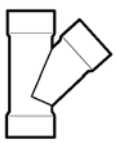
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
24X6	3720-906 **2419.31**	3920-906 **2781.83**
24X8	3720-908 **2575.44**	3920-908 **3630.64**
24X10	3720-910 **2753.22**	3920-910 **3940.81**
24X12	3720-912 **3032.13**	3920-912 **4520.83**
24X14	3720-914 **3118.65**	3920-914 **5306.63**
24X16	3720-916 **3456.43**	3920-916 **5626.53**
24X18	3720-918 **3860.25**	3920-918 **5909.71**
24X20	3720-920 **4674.09**	3920-920 **6293.38**

WYE (Soc x Soc x Soc)



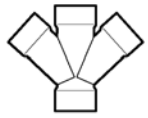
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
8	3775-080 **209.76**	3975-080 **350.74**
8X2	3775-578 **136.85**	3975-578 **248.07**
8X3	3775-580* **142.23**	3975-580 **274.40**
8X4	3775-582 **148.11**	3975-582 **281.26**
8X6	3775-585 **194.39**	3975-585 **284.15**
10	3775-100 **419.06**	3975-100 **626.00**
10X2	3775-621* **245.03**	3975-621 **361.17**
10X3	3775-623* **256.64**	3975-623 **376.44**
10X4	3775-624 **263.74**	3975-624 **387.13**
10X6	3775-626* **318.00**	3975-626 **489.19**
10X8	3775-628 **389.76**	3975-628 **532.74**
12	3775-120 **552.81**	3975-120 **947.13**
12X2	3775-661* **291.54**	3975-661 **607.47**
12X3	3775-663* **302.76**	3975-663 **614.74**
12X4	3775-664* **313.12**	3975-664 **625.08**
12X6	3775-666* **373.12**	3975-666 **681.95**
12X8	3775-668* **414.57**	3975-668 **757.75**
12X10	3775-670 **487.17**	3975-670 **890.28**
14	3775-140* **1189.69**	3975-140 **1438.45**
14X2	3775-691* **591.88**	3975-691 **972.38**
14X3	3775-693* **620.75**	3975-693 **987.19**
14X4	3775-694* **631.15**	3975-694 **995.13**
14X6	3775-696* **681.23**	3975-696 **1089.96**
14X8	3775-698* **779.57**	3975-698 **1207.59**
14X10	3775-700* **833.31**	3975-700 **1260.87**
14X12	3775-702* **1065.43**	3975-702 **1336.37**
16	3775-160 **1513.68**	3975-160 **2214.28**
16X2	3775-751 **672.53**	3975-751 **1127.92**

WYE (Soc x Soc x Soc) (continued)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
16X3	3775-753 **711.52**	3975-753 **1142.14**
16X4	3775-754 **743.78**	3975-754 **1190.00**
16X6	3775-756* **800.48**	3975-756 **1280.73**
16X8	3775-758 **912.76**	3975-758 **1349.63**
16X10	3775-760 **1096.51**	3975-760 **1477.49**
16X12	3775-762 **1194.15**	3975-762 **1979.85**
16X14	3775-764 **1447.09**	3975-764 **2107.73**
18	3775-180 **1740.56**	3975-180 **2974.62**
18X4	3775-784 **1192.58**	3975-784 **1538.05**
18X6	3775-786* **1211.79**	3975-786 **1563.84**
18X8	3775-788 **1251.29**	3975-788 **1685.66**
18X10	3775-790 **1331.20**	3975-790 **1734.58**
18X12	3775-792 **1457.91**	3975-792 **1909.45**
18X14	3775-794 **1593.88**	3975-794 **2319.26**
18X16	3775-796 **1689.82**	3975-796 **2796.19**
20	3775-200 **2565.14**	3975-200 **5072.83**
20X4	3775-814 **1381.98**	3975-814 **1793.96**
20X6	3775-816* **1387.01**	3975-816 **1940.66**
20X8	3775-818 **1489.00**	3975-818 **2412.35**
20X10	3775-820 **1540.94**	3975-820 **2510.82**
20X12	3775-822 **1739.48**	3975-822 **2764.03**
20X14	3775-824 **2023.20**	3975-824 **3203.15**
20X16	3775-826 **2222.05**	3975-826 **3289.81**
20X18	3775-828 **2401.45**	3975-828 **3438.77**
24	3775-240 **3191.86**	3975-240 **5712.04**
24X4	3775-904 **1723.04**	3975-904 **2554.79**
24X6	3775-906* **1900.94**	3975-906 **2806.17**
24X8	3775-908 **2014.48**	3975-908 **3248.67**
24X10	3775-910 **2165.69**	3975-910 **3293.49**
24X12	3775-912 **2234.85**	3975-912 **3612.23**
24X14	3775-914 **2341.93**	3975-914 **3809.29**
24X16	3775-916 **2474.88**	3975-916 **4369.00**
24X18	3775-918 **2647.92**	3975-918 **5130.01**
24X20	3775-920 **2988.49**	3975-920 **5297.14**

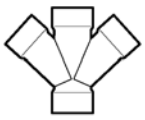
DOUBLE WYE (Soc x Soc x Soc x Soc)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
6	3776-060 **155.37**	3976-060 **198.88**
6X4	3776-532 **121.56**	3976-532 **184.73**
8	3776-080* **299.66**	3976-080 **383.58**
8X2	3776-578* **163.16**	3976-578 **219.36**
8X3	3776-580* **174.32**	3976-580 **227.07**
8X4	3776-582* **181.71**	3976-582 **258.49**
8X6	3776-585* **229.44**	3976-585 **330.33**
10	3776-100* **439.52**	3976-100 **703.25**
10X2	3776-621* **232.25**	3976-621 **389.52**
10X3	3776-623* **242.66**	3976-623 **399.37**
10X4	3776-624* **254.81**	3976-624 **407.68**
10X6	3776-626* **315.23**	3976-626 **504.35**
10X8	3776-628* **381.69**	3976-628 **609.32**
12	3776-120* **717.57**	3976-120 **1150.75**
12X2	3776-661* **314.38**	3976-661 **642.34**
12X3	3776-663* **324.72**	3976-663 **648.00**
12X4	3776-664* **331.99**	3976-664 **653.56**
12X6	3776-666* **395.19**	3976-666 **768.96**
12X8	3776-668* **504.43**	3976-668 **934.14**
12X10	3776-670* **645.79**	3976-670 **1054.87**
14	3776-140* **1272.75**	3976-140 **1598.38**
14X2	3776-691* **606.52**	3976-691 **1137.37**
14X3	3776-693* **634.83**	3976-693 **1170.91**
14X4	3776-694* **661.52**	3976-694 **1180.98**
14X6	3776-696* **736.45**	3976-696 **1207.59**
14X8	3776-698* **853.44**	3976-698 **1278.63**
14X10	3776-700* **901.92**	3976-700 **1349.63**
14X12	3776-702* **1168.07**	3976-702 **1520.15**
16	3776-160 **1670.46**	3976-160 **2484.22**
16X2	3776-751 **784.36**	3976-751 **1334.44**
16X3	3776-753 **831.25**	3976-753 **1345.64**
16X4	3776-754 **843.55**	3976-754 **1349.63**
16X6	3776-756* **892.40**	3976-756 **1427.78**
16X8	3776-758 **976.72**	3976-758 **1562.74**
16X10	3776-760 **1196.29**	3976-760 **1782.95**
16X12	3776-762 **1289.27**	3976-762 **1917.94**
16X14	3776-764 **1543.98**	3976-764 **2280.96**

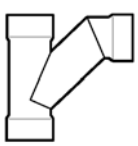
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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

DOUBLE WYE (Soc x Soc x Soc x Soc) (continued)



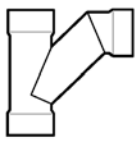
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
18	3776-180 **2333.55**	3976-180 **3280.63**
18X4	3776-784 **1287.89**	3976-784 **1727.73**
18X6	3776-786* **1308.65**	3976-786 **2003.32**
18X8	3776-788 **1403.52**	3976-788 **2055.40**
18X10	3776-790 **1708.82**	3976-790 **2073.48**
18X12	3776-792 **1740.68**	3976-792 **2227.84**
18X14	3776-794 **1869.08**	3976-794 **2534.33**
18X16	3776-796 **1918.24**	3976-796 **2962.29**
20	3776-200 **3034.21**	3976-200 **5298.00**
20X4	3776-814 **1460.77**	3976-814 **2126.39**
20X6	3776-816* **1536.66**	3976-816 **2261.37**
20X8	3776-818 **1562.11**	3976-818 **2445.94**
20X10	3776-820 **2057.14**	3976-820 **2805.79**
20X12	3776-822 **2251.89**	3976-822 **3113.53**
20X14	3776-824 **2459.34**	3976-824 **3268.93**
20X16	3776-826 **2683.66**	3976-826 **4157.19**
20X18	3776-828 **2935.08**	3976-828 **4420.68**
24	3776-240 **3777.89**	3976-240 **6837.86**
24X4	3776-904 **1882.15**	3976-904 **2764.03**
24X6	3776-906* **2081.00**	3976-906 **3032.61**
24X8	3776-908 **2135.27**	3976-908 **3319.81**
24X10	3776-910 **2246.54**	3976-910 **3489.24**
24X12	3776-912 **2378.29**	3976-912 **3578.63**
24X14	3776-914 **2527.22**	3976-914 **4817.62**
24X16	3776-916 **2749.42**	3976-916 **6018.28**
24X18	3776-918 **2776.77**	3976-918 **6102.65**
24X20	3776-920 **3568.63**	3976-920 **6434.39**

COMBO WYE (Soc x Soc x Soc)



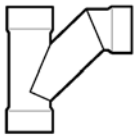
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
6	3777-060* **197.67**	3977-060 **316.37**
6X4	3777-532* **154.00**	3977-532 **277.92**
8	3777-080* **315.23**	3977-080 **521.24**
8X2	3777-578* **172.85**	3977-578 **343.01**
8X3	3777-580* **215.39**	3977-580 **351.41**
8X4	3777-582 **219.41**	3977-582 **359.07**
8X6	3777-585 **248.63**	3977-585 **397.77**
10	3777-100* **563.03**	3977-100 **994.48**
10X2	3777-621* **257.13**	3977-621 **416.77**

COMBO WYE (Soc x Soc x Soc) (continued)



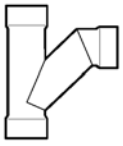
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
10X3	3777-623* **269.31**	3977-623 **432.57**
10X4	3777-624* **275.26**	3977-624 **440.43**
10X6	3777-626* **346.29**	3977-626 **554.08**
10X8	3777-628* **430.89**	3977-628 **724.55**
12	3777-120* **817.35**	3977-120 **1248.39**
12X2	3777-661* **416.68**	3977-661 **680.56**
12X3	3777-663* **425.48**	3977-663 **691.80**
12X4	3777-664* **435.06**	3977-664 **696.16**
12X6	3777-666* **483.43**	3977-666 **777.87**
12X8	3777-668* **542.36**	3977-668 **923.48**
12X10	3777-670* **674.80**	3977-670 **1079.76**
14	3777-140* **1415.75**	3977-140 **1909.08**
14X2	3777-691* **626.97**	3977-691 **1048.79**
14X3	3777-693* **641.13**	3977-693 **1060.88**
14X4	3777-694* **678.06**	3977-694 **1084.80**
14X6	3777-696* **771.52**	3977-696 **1234.46**
14X8	3777-698* **848.81**	3977-698 **1291.93**
14X10	3777-700* **1004.55**	3977-700 **1469.55**
14X12	3777-702* **1185.38**	3977-702 **1784.76**
16	3777-160 **1662.43**	3977-160 **2659.93**
16X2	3777-751 **814.92**	3977-751 **1325.36**
16X3	3777-753 **830.01**	3977-753 **1345.57**
16X4	3777-754 **849.79**	3977-754 **1359.59**
16X6	3777-756 **898.79**	3977-756 **1438.08**
16X8	3777-758 **988.82**	3977-758 **1633.82**
16X10	3777-760 **1118.77**	3977-760 **1790.06**
16X12	3777-762 **1200.98**	3977-762 **1921.45**
16X14	3777-764 **1474.36**	3977-764 **2313.36**
18	3777-180 **2093.48**	3977-180 **3631.98**
18X4	3777-784 **1276.35**	3977-784 **1611.27**
18X6	3777-786 **1316.11**	3977-786 **1709.26**
18X8	3777-788 **1351.61**	3977-788 **1883.52**
18X10	3777-790 **1438.76**	3977-790 **2025.79**
18X12	3777-792 **1495.47**	3977-792 **2673.08**
18X14	3777-794 **1698.01**	3977-794 **3058.29**
18X16	3777-796 **1931.37**	3977-796 **3288.36**
20	3777-200 **2712.71**	3977-200 **6691.89**

COMBO WYE (Soc x Soc x Soc) (continued)



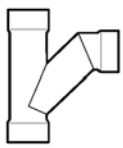
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
20X4	3777-814 **1411.21**	3977-814 **1782.68**
20X6	3777-816 **1528.28**	3977-816 **1974.18**
20X8	3777-818 **1557.25**	3977-818 **2459.12**
20X10	3777-820 **1632.52**	3977-820 **2748.87**
20X12	3777-822 **2051.89**	3977-822 **3247.02**
20X14	3777-824 **2160.07**	3977-824 **3578.75**
20X16	3777-826 **2416.89**	3977-826 **4557.56**
20X18	3777-828 **2469.81**	3977-828 **6231.77**
24	3777-240 **3664.36**	3977-240 **7126.43**
24X4	3777-904 **1881.34**	3977-904 **2885.79**
24X6	3777-906 **2054.36**	3977-906 **3070.49**
24X8	3777-908 **2291.68**	3977-908 **3201.52**
24X10	3777-910 **2453.49**	3977-910 **3784.07**
24X12	3777-912 **2555.56**	3977-912 **4073.09**
24X14	3777-914 **2602.65**	3977-914 **4859.00**
24X16	3777-916 **3009.60**	3977-916 **5672.76**
24X18	3777-918 **3215.08**	3977-918 **6430.65**
24X20	3777-920 **3266.33**	3977-920 **6825.43**

SANITARY TEE (Soc x Soc x Soc)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
6	3790-060 **169.97**	3990-060 **285.86**
6X4	3790-532* **127.34**	3990-532 **225.95**
8	3790-080* **311.44**	3990-080 **517.57**
8X2	3790-578* **159.32**	3990-578 **283.11**
8X3	3790-580* **210.53**	3990-580 **322.46**
8X4	3790-582* **199.78**	3990-582 **343.80**
8X6	3790-585* **239.32**	3990-585 **382.83**
10	3790-100* **556.81**	3990-100 **983.05**
10X2	3790-621* **244.49**	3990-621 **381.09**
10X3	3790-623* **248.63**	3990-623 **391.93**
10X4	3790-624* **266.39**	3990-624 **426.22**
10X6	3790-626* **342.84**	3990-626 **539.87**
10X8	3790-628* **419.78**	3990-628 **695.38**
12	3790-120* **797.33**	3990-120 **1213.62**
12X2	3790-661* **410.27**	3990-661 **644.24**
12X3	3790-663* **414.95**	3990-663 **654.80**
12X4	3790-664* **427.08**	3990-664 **681.95**
12X6	3790-666* **465.66**	3990-666 **763.64**

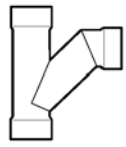
SANITARY TEE (Soc x Soc x Soc) (continued)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
12X8	3790-668* **518.46**	3990-668 **907.05**
12X10	3790-670* **653.08**	3990-670 **1050.83**
14	3790-140* **1404.22**	3990-140 **1860.47**
14X2	3790-691* **556.37**	3990-691 **1015.99**
14X3	3790-693* **603.71**	3990-693 **1031.33**
14X4	3790-694* **609.61**	3990-694 **1052.04**
14X6	3790-696* **727.02**	3990-696 **1199.59**
14X8	3790-698* **829.24**	3990-698 **1261.87**
14X10	3790-700* **996.07**	3990-700 **1434.56**
14X12	3790-702* **1174.27**	3990-702 **1724.44**
16	3790-160 **1806.57**	3990-160 **2220.06**
16X2	3790-751 **809.62**	3990-751 **1254.55**
16X3	3790-753 **817.55**	3990-753 **1305.12**
16X4	3790-754 **835.94**	3990-754 **1346.08**
16X6	3790-756 **888.59**	3990-756 **1424.26**
16X8	3790-758 **979.97**	3990-758 **1594.93**
16X10	3790-760 **1107.38**	3990-760 **1762.53**
16X12	3790-762 **1188.93**	3990-762 **1894.79**
16X14	3790-764 **1424.99**	3990-764 **2067.36**
18	3790-180 **1850.13**	3990-180 **3588.76**
18X4	3790-784 **985.94**	3990-784 **1559.91**
18X6	3790-786 **1057.42**	3990-786 **1654.58**
18X8	3790-788 **1326.53**	3990-788 **1845.04**
18X10	3790-790 **1509.42**	3990-790 **1991.28**
18X12	3790-792 **1550.57**	3990-792 **2593.32**
18X14	3790-794 **1767.65**	3990-794 **2667.31**
18X16	3790-796 **1908.27**	3990-796 **3268.85**
20	3790-200 **2499.27**	3990-200 **6588.60**
20X4	3790-814 **1043.73**	3990-814 **1748.97**
20X6	3790-816 **1194.28**	3990-816 **1900.33**
20X8	3790-818 **1288.25**	3990-818 **2414.16**
20X10	3790-820 **1453.43**	3990-820 **2684.02**
20X12	3790-822 **1627.40**	3990-822 **3173.36**
20X14	3790-824 **1935.36**	3990-824 **3442.62**
20X16	3790-826 **2231.48**	3990-826 **4476.45**
20X18	3790-828 **2404.57**	3990-828 **6197.12**
24	3790-240 **3270.01**	3990-240 **7070.49**

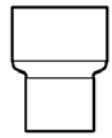
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SANITARY TEE (Soc x Soc x Soc) (continued)



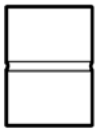
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
24X4	3790-904 **1528.33**	3990-904 **2818.45**
24X6	3790-906 **1696.79**	3990-906 **2955.02**
24X8	3790-908 **2251.96**	3990-908 **3091.56**
24X10	3790-910 **2434.87**	3990-910 **3703.02**
24X12	3790-912 **2544.26**	3990-912 **3988.01**
24X14	3790-914 **2595.61**	3990-914 **4807.60**
24X16	3790-916 **2976.74**	3990-916 **5518.78**
24X18	3790-918 **3120.46**	3990-918 **6346.68**
24X20	3790-920 **3233.16**	3990-920 **6703.52**

IPS X SEWER ADAPTER (Soc x Spig)



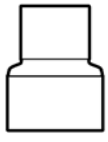
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
4	3729-04013IXS **17.51**	---
6	3729-06013IXS **36.95**	---
8	3729-08013IXS **71.53**	---
10	3729-10013IXS **193.69**	---
12	3729-12013IXS **210.73**	---

IPS X SEWER ADAPTER (Soc x Soc)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
4	3729-040IXS **30.11**	---
6	3729-060IXS **55.01**	---
8	3729-080IXS **88.39**	---
10	3729-100IXS **142.93**	---
12	3729-120IXS **211.54**	---

IPS X SEWER ADAPTER (Spig x Soc)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
4	3729-04031IXS **22.98**	---
6	3729-06031IXS **53.21**	---
8	3729-08031IXS **87.15**	---
10	3729-10031IXS **135.67**	---
12	3729-12031IXS **201.51**	---

CAP (Soc)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
10	3747-100* **116.99**	3947-100 **228.44**
12	3747-120* **147.74**	3947-120 **395.49**
14	3747-140* **251.21**	3947-140 **448.54**
16	3747-160 **321.58**	3947-160 **592.00**
18	3747-180 **355.83**	3947-180 **777.78**
20	3747-200 **626.78**	3947-200 **898.79**
24	3747-240 **926.49**	3947-240 **1042.91**

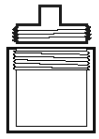
SPIGOT PLUG (Spigot)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
6	3749-060 **45.22**	3949-060 **136.77**
8	3749-080 **115.51**	3949-080 **230.84**
10	3749-100 **131.73**	3949-100 **291.85**
12	3749-120 **188.81**	3949-120 **464.69**
14	3749-140 **320.34**	---
16	3749-160 **390.34**	3949-160 **675.96**

CLEANOUT ADAPTER WITH PLUG (Spig x Cleanout)

SOLD AS SET ONLY (Non-Pressure Rated)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
2	---	3978-020* **96.63**
3	---	3978-030* **123.80**
4	---	3978-040* **155.58**
5	---	3978-050* **165.38**
6	---	3978-060* **175.20**
8	---	3978-080* **278.69**
10	---	3978-100* **465.43**
12	---	3978-120* **649.82**
14	---	3978-140* **805.83**
16	---	3978-160* **1584.95**
18	---	3978-180* **1897.85**
24	---	3978-240* **2332.21**

* HDPE Plug

Saddle

IPS O.D.x Socket Schedule 40



Non Pressure Rated

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3763-528	**6X2**	1	10	390	35.83
3763-530	**6X3**	1	10	390	36.68
3763-532	**6X4**	1	10	390	38.15
3763-578	**8X2**	1	10	390	52.81
3763-580	**8X3**	1	10	390	53.33
3763-582	**8X4**	1	10	390	53.98
3763-585	**8X6**	1	10	390	55.51
3763-621	**10X2**	1	5	390	66.74
3763-623	**10X3**	1	10	390	67.67
3763-624	**10X4**	1	8	390	67.95
3763-626	**10X6**	1	5	390	79.52
3763-628	**10X8**	1	5	390	127.61
3763-661	**12X2**	1	5	390	78.93
3763-663	**12X3**	1	10	390	80.39
3763-664	**12X4**	1	10	390	82.11
3763-666	**12X6**	1	4	390	95.22
3763-668	**12X8**	1	5	390	151.80
3763-670	**12X10**	1	4	390	219.51
3763-691	**14X2**	1	10	390	101.16
3763-693	**14X3**	1	8	390	168.11
3763-694	**14X4**	1	5	390	115.48
3763-696	**14X6**	1	10	390	117.80
3763-698	**14X8**	1	4	390	180.77

Saddle (continued)

IPS O.D.x Socket Schedule 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3763-700	**14X10**	1	3	390	232.54
3763-702	**14X12**	1	4	390	256.32
3763-751	**16X2**	1	5	390	107.66
3763-753	**16X3**	1	5	390	109.14
3763-754	**16X4**	1	10	390	110.80
3763-756	**16X6**	1	3	390	126.94
3763-758	**16X8**	1	3	390	188.67
3763-760	**16X10**	1	0	390	239.80
3763-762	**16X12**	1	0	390	265.75
3763-764	**16X14**	1	0	390	276.25
3763-781	**18X2**	1	5	390	157.82
3763-783	**18X3**	1	5	390	160.89
3763-784	**18X4**	1	10	390	163.35
3763-786	**18X6**	1	4	390	173.93
3763-788	**18X8**	1	0	390	253.79
3763-790	**18X10**	1	0	390	281.34
3763-792	**18X12**	1	0	390	289.11
3763-794	**18X14**	1	0	390	436.77
3763-796	**18X16**	1	0	390	570.18
3763-811	**20X2**	1	8	390	158.19
3763-813	**20X3**	1	4	390	160.36
3763-814	**20X4**	1	4	390	168.19
3763-816	**20X6**	1	0	390	175.66
3763-818	**20X8**	1	5	390	253.46
3763-820	**20X10**	1	0	390	281.35
3763-822	**20X12**	1	0	390	401.12
3763-824	**20X14**	1	0	390	437.67
3763-826	**20X16**	1	0	390	572.27
3763-828	**20X18**	1	0	390	648.56
3763-901	**24X2**	1	5	390	150.91
3763-903	**24X3**	1	5	390	166.80
3763-904	**24X4**	1	5	390	168.65
3763-906	**24X6**	1	5	390	178.92
3763-908	**24X8**	1	5	390	255.81
3763-910	**24X10**	1	0	390	284.56
3763-912	**24X12**	1	0	390	402.54
3763-914	**24X14**	1	0	390	450.77
3763-916	**24X16**	1	0	390	506.61
3763-918	**24X18**	1	0	390	682.74
3763-920	**24X20**	1	0	390	764.43

Saddle

IPS O.D. x Sockett Schedule 80



Non Pressure Rated

3963-528	**6X2**	1	5	400	60.22
3963-530	**6X3**	1	5	400	60.76
3963-532	**6X4**	1	5	400	61.28
3963-578	**8X2**	1	10	400	85.07
3963-580	**8X3**	1	8	400	86.11
3963-582	**8X4**	1	5	400	87.03
3963-585	**8X6**	1	5	400	89.06
3963-621	**10X2**	1	8	400	78.77
3963-623	**10X3**	1	5	400	79.88
3963-624	**10X4**	1	8	400	80.22
3963-626	**10X6**	1	5	400	93.28
3963-628	**10X8**	1	5	400	149.49
3963-661	**12X2**	1	10	400	93.06
3963-663	**12X3**	1	8	400	93.61
3963-664	**12X4**	1	5	400	94.40
3963-666	**12X6**	1	6	400	109.48
3963-668	**12X8**	1	2	400	172.28
3963-670	**12X10**	1	4	400	210.86
3963-691	**14X2**	1	5	400	114.61
3963-693	**14X3**	1	8	400	115.68

Saddle (continued)

IPS O.D. x Sockett Schedule 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3963-694	**14X4**	1	5	400	116.24
3963-696	**14X6**	1	5	400	132.32
3963-698	**14X8**	1	4	400	202.85
3963-700	**14X10**	1	3	400	259.77
3963-702	**14X12**	1	4	400	286.83
3963-751	**16X2**	1	8	400	120.69
3963-753	**16X3**	1	8	400	121.74
3963-754	**16X4**	1	10	400	122.43
3963-756	**16X6**	1	10	400	139.54
3963-758	**16X8**	1	3	400	208.08
3963-760	**16X10**	1	0	400	264.96
3963-762	**16X12**	1	0	400	294.28
3963-764	**16X14**	1	0	400	306.66
3963-781	**18X2**	1	8	400	177.31
3963-783	**18X3**	1	4	400	178.38
3963-784	**18X4**	1	5	400	179.19
3963-786	**18X6**	1	5	400	189.65
3963-788	**18X8**	1	5	400	278.65
3963-790	**18X10**	1	0	400	308.91
3963-792	**18X12**	1	0	400	440.55
3963-794	**18X14**	1	0	400	479.48
3963-796	**18X16**	1	0	400	627.41
3963-811	**20X2**	1	0	400	179.33
3963-813	**20X3**	1	4	400	179.75
3963-814	**20X4**	1	4	400	181.91
3963-816	**20X6**	1	0	400	190.82
3963-818	**20X8**	1	0	400	275.64
3963-820	**20X10**	1	5	400	305.68
3963-822	**20X12**	1	0	400	436.02
3963-824	**20X14**	1	0	400	475.54
3963-826	**20X16**	1	0	400	623.04
3963-828	**20X18**	1	0	400	707.43
3963-901	**24X2**	1	5	400	182.47
3963-903	**24X3**	1	5	400	183.44
3963-904	**24X4**	1	5	400	184.28
3963-906	**24X6**	1	5	400	192.29
3963-908	**24X8**	1	5	409	259.52
3963-910	**24X10**	1	5	400	307.00
3963-912	**24X12**	1	0	409	407.26
3963-914	**24X14**	1	0	400	473.88
3963-916	**24X16**	1	0	400	648.61
3963-918	**24X18**	1	0	400	731.41
3963-920	**24X20**	1	0	400	823.20

Stub Saddle

IPS O.D x Socket Schedule 40



Non Pressure Rated

3765-528	**6X2**	1	8	390	38.53
3765-530	**6X3**	1	4	390	39.44
3765-532	**6X4**	1	10	390	41.03
3765-578	**8X2**	1	10	390	56.79
3765-580	**8X3**	1	4	390	57.34
3765-582	**8X4**	1	8	390	58.04
3765-585	**8X6**	1	4	390	59.69
3765-621	**10X2**	1	5	390	71.75
3765-623	**10X3**	1	5	390	72.77
3765-624	**10X4**	1	4	390	92.22
3765-626	**10X6**	1	2	390	85.51
3765-628	**10X8**	1	2	390	137.21
3765-661	**12X2**	1	6	390	84.86
3765-663	**12X3**	1	5	390	86.44
3765-664	**12X4**	1	2	390	88.28
3765-666	**12X6**	1	2	390	102.32
3765-668	**12X8**	1	2	390	163.23

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Stub Saddle (continued)

IPS O.D x Socket Schedule 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3765-670	**12X10**	1	2	390	236.03
3765-691	**14X2**	1	10	390	108.77
3765-693	**14X3**	1	2	390	110.00
3765-694	**14X4**	1	5	390	111.38
3765-696	**14X6**	1	3	390	126.67
3765-698	**14X8**	1	0	390	193.11
3765-700	**14X10**	1	0	390	250.04
3765-702	**14X12**	1	0	390	275.62
3765-751	**16X2**	1	4	390	115.76
3765-753	**16X3**	1	5	390	117.35
3765-754	**16X4**	1	5	390	119.13
3765-756	**16X6**	1	2	390	136.48
3765-758	**16X8**	1	0	390	202.87
3765-760	**16X10**	1	0	390	257.85
3765-762	**16X12**	1	0	390	285.75
3765-764	**16X14**	1	0	390	297.04
3765-781	**18X2**	1	4	390	169.68
3765-783	**18X3**	1	10	390	133.45
3765-784	**18X4**	1	10	390	175.64
3765-786	**18X6**	1	2	390	187.02
3765-788	**18X8**	1	0	390	272.88
3765-790	**18X10**	1	0	390	302.51
3765-792	**18X12**	1	0	390	310.86
3765-794	**18X14**	1	0	390	469.63
3765-796	**18X16**	1	0	390	612.58
3765-811	**20X2**	1	0	390	170.09
3765-813	**20X3**	1	2	390	172.43
3765-814	**20X4**	1	2	390	180.85
3765-816	**20X6**	1	0	390	188.89
3765-818	**20X8**	1	0	390	272.54
3765-820	**20X10**	1	0	390	302.52
3765-822	**20X12**	1	0	390	431.33
3765-824	**20X14**	1	0	390	470.62
3765-826	**20X16**	1	0	390	615.34
3765-828	**20X18**	1	0	390	697.38
3765-901	**24X2**	1	4	390	162.25
3765-903	**24X3**	1	2	390	179.34
3765-904	**24X4**	1	4	390	181.35
3765-906	**24X6**	1	3	390	192.39
3765-908	**24X8**	1	0	390	275.06
3765-910	**24X10**	1	0	390	305.96
3765-912	**24X12**	1	0	390	432.83
3765-914	**24X14**	1	0	390	484.71
3765-916	**24X16**	1	0	390	544.75
3765-918	**24X18**	1	0	390	734.11
3765-920	**24X20**	1	0	390	821.97

Stub Saddle

IPS O.D.x Socket Schedule 80



Non Pressure Rated

3965-528	**6X2**	1	10	400	64.76
3965-530	**6X3**	1	3	400	65.32
3965-532	**6X4**	1	10	400	65.91
3965-578	**8X2**	1	5	409	85.99
3965-580	**8X3**	1	4	400	92.59
3965-582	**8X4**	1	6	400	93.58
3965-585	**8X6**	1	4	400	95.77
3965-621	**10X2**	1	6	400	84.71
3965-623	**10X3**	1	6	409	80.75
3965-624	**10X4**	1	4	400	86.26
3965-626	**10X6**	1	4	400	100.29
3965-628	**10X8**	1	4	400	160.74
3965-661	**12X2**	1	2	400	100.06
3965-663	**12X3**	1	2	400	101.13

Stub Saddle (continued)

IPS O.D.x Socket Schedule 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3965-664	**12X4**	1	2	400	101.51
3965-666	**12X6**	1	2	400	117.73
3965-668	**12X8**	1	2	400	185.25
3965-670	**12X10**	1	2	400	271.75
3965-691	**14X2**	1	4	400	123.25
3965-693	**14X3**	1	0	400	124.40
3965-694	**14X4**	1	5	400	124.98
3965-696	**14X6**	1	2	400	142.27
3965-700	**14X10**	1	0	400	279.33
3965-702	**14X12**	1	0	400	308.41
3965-751	**16X2**	1	5	400	129.77
3965-753	**16X3**	1	4	400	130.89
3965-754	**16X4**	1	3	400	131.63
3965-756	**16X6**	1	2	400	150.03
3965-758	**16X8**	1	3	400	223.75
3965-760	**16X10**	1	3	400	284.92
3965-762	**16X12**	1	0	400	316.43
3965-764	**16X14**	1	0	400	329.76
3965-781	**18X2**	1	2	400	190.64
3965-783	**18X3**	1	0	400	191.80
3965-784	**18X4**	1	0	400	192.67
3965-786	**18X6**	1	2	400	203.93
3965-788	**18X8**	1	0	400	299.62
3965-790	**18X10**	1	0	400	332.16
3965-792	**18X12**	1	0	400	473.71
3965-794	**18X14**	1	0	400	515.58
3965-796	**18X16**	1	0	400	674.63
3965-811	**20X2**	1	0	400	192.82
3965-813	**20X3**	1	2	400	193.27
3965-814	**20X4**	1	0	400	195.59
3965-816	**20X6**	1	0	400	205.17
3965-818	**20X8**	1	0	400	296.39
3965-820	**20X10**	1	0	400	328.69
3965-822	**20X12**	1	0	400	468.84
3965-824	**20X14**	1	0	400	511.33
3965-826	**20X16**	1	0	400	669.96
3965-828	**20X18**	1	0	400	760.68
3965-901	**24X2**	1	5	400	196.20
3965-903	**24X3**	1	5	400	197.24
3965-904	**24X4**	1	5	400	198.15
3965-906	**24X6**	1	3	400	206.78
3965-908	**24X8**	1	0	400	296.86
3965-910	**24X10**	1	0	400	330.12
3965-912	**24X12**	1	0	409	437.93
3965-914	**24X14**	1	0	400	509.55
3965-916	**24X16**	1	0	400	697.43
3965-918	**24X18**	1	0	400	786.46
3965-920	**24X20**	1	0	400	885.16

PRODUCT INFORMATION

APPLICATION

Spears® Copper Tube Size (CTS) fittings are manufactured from chlorinated polyvinyl chloride (CPVC) for use with SDR-11 piping systems of CTS outside diameter in hot and cold water distribution systems. Check state and local codes for application and restrictions.

CONFORMANCE STANDARDS

Spears® CPVC CTS fittings conform to ASTM D 2846 Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot and Cold Water Distribution Systems.

WORKING PRESSURE

Spears® CPVC CTS fittings have a continuous working pressure rating of 100 psi at 180°F (82°C) [400 psi at 73°F (23°C)].

PRODUCT CERTIFICATION

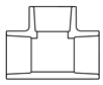
Spears® CPVC CTS fittings and Special Reinforced (SR) Thread transition adapters are tested and certified by the National Sanitation Foundation (NSF®) to ASTM D 2846 for use in Hot and Cold Water Distribution Systems, and for safe use in potable water systems under NSF® Standard 14/61.

TESTING

Once the system has been installed and allowed to cure properly, the system shall be tested in accordance with applicable code requirements. When testing with water (hydrostatic testing), the system must be slowly filled with water and the air bled from the highest and furthest points in the system before test pressure is applied. Failure to do so can cause damage to the piping system and could be harmful to the job site personnel should a failure occur. If a leak is found, the affected product must be cut out and discarded. A new section can be installed using couplings or other approved means.

TEE

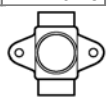
Socket x Socket x Socket



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4101-005	1/2	25	300	035	1.56
4101-007	3/4	25	200	035	2.92
4101-010	1	10	120	035	15.31
4101-012	1-1/4	10	80	035	23.48
4101-015	1-1/2	5	60	035	30.59
4101-020	2	5	0	035	49.45

DROP EAR TEE (Fitting with Bracket)

Socket x Socket x Socket



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DE4101-005	1/2	25	150	035	3.32

DROP EAR BRACKET ONLY

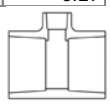
For 4101-005 and 4106-005



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DES-005	1/2	800	0	035	6.17

REDUCING TEE

Socket x Socket x Socket



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4101-074	1/2X1/2X3/4	25	300	035	5.42
4101-094	3/4X1/2X1/2	25	300	035	2.91
4101-095	3/4X1/2X3/4	25	300	035	2.91
4101-101	3/4X3/4X1/2	25	300	035	3.01
4101-102*	3/4X3/4X1	10	60	035	33.77
4101-120*	1X1/2X1/2	10	120	035	36.39
4101-121*	1X1/2X3/4	10	120	035	35.78
4101-122*	1X1/2X1	10	120	035	27.52
4101-124*	1X3/4X1/2	10	120	035	34.28
4101-125*	1X3/4X3/4	10	120	035	18.56
4101-126*	1X3/4X1	10	120	035	25.73
4101-130	1X1X1/2	10	120	035	17.39
4101-131	1X1X3/4	10	120	035	16.59
4101-138*	1-1/4X1/2X1/2	10	80	035	45.34
4101-139*	1-1/4X1/2X3/4	10	80	035	45.34
4101-142*	1-1/4X1/2X1-1/4	10	80	035	40.16
4101-146*	1-1/4X3/4X1/2	10	80	035	45.34
4101-147*	1-1/4X3/4X3/4	10	80	035	45.34
4101-148*	1-1/4X3/4X1	10	80	035	45.34
4101-149*	1-1/4X3/4X1-1/4	10	80	035	45.34
4101-156*	1-1/4X1X1/2	10	80	035	45.34
4101-157*	1-1/4X1X3/4	10	80	035	45.34
4101-158*	1-1/4X1X1	10	80	035	45.34
4101-159*	1-1/4X1X1-1/4	10	80	035	40.16
4101-166*	1-1/4X1-1/4X1/2	10	120	035	41.37
4101-167*	1-1/4X1-1/4X3/4	10	80	035	41.37
4101-168	1-1/4X1	10	40	035	37.75
4101-169*	1-1/4X1-1/4X1-1/2	5	40	035	56.35
4101-173*	1-1/2X1/2X1/2	5	40	035	56.35
4101-174*	1-1/2X1/2X3/4	5	40	035	56.35

REDUCING TEE (continued)

Socket x Socket x Socket

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4101-175*	1-1/2X1/2X1	5	40	035	56.35
4101-176*	1-1/2X1/2X1-1/4	5	40	035	56.35
4101-177*	1-1/2X1/2X1-1/2	5	40	035	40.16
4101-182*	1-1/2X3/4X1/2	5	40	035	56.35
4101-184*	1-1/2X3/4X3/4	5	40	035	56.35
4101-185*	1-1/2X3/4X1	5	40	035	56.35
4101-186*	1-1/2X3/4X1-1/4	5	40	035	56.35
4101-188*	1-1/2X3/4X1-1/2	5	40	035	40.16
4101-193*	1-1/2X1X1/2	5	40	035	56.35
4101-194*	1-1/2X1X3/4	5	40	035	56.35
4101-195*	1-1/2X1X1	5	40	035	37.75
4101-196*	1-1/2X1X1-1/4	5	40	035	53.52
4101-197*	1-1/2X1X1-1/2	5	40	035	40.16
4101-199*	1-1/2X1-1/4X1/2	5	40	035	56.35
4101-201*	1-1/2X1-1/4X3/4	5	40	035	56.35
4101-202*	1-1/2X1-1/4X1	5	40	035	56.35
4101-203*	1-1/2X1-1/4X1-1/4	5	40	035	56.35
4101-204*	1-1/2X1-1/4X1-1/2	5	40	035	40.16
4101-209*	1-1/2X1-1/2X1/2	25	0	035	40.16
4101-210*	1-1/2X1-1/2X3/4	5	30	035	41.24
4101-211	1-1/2X1	10	30	035	56.35
4101-212*	1-1/2X1-1/2X1-1/4	5	40	035	40.16
4101-213*	1-1/2X1-1/2X2	5	0	035	99.16
4101-216*	2X1/2X1/2	5	0	035	99.16
4101-217*	2X1/2X3/4	5	0	035	99.16
4101-218*	2X1/2X1	5	0	035	99.16
4101-219*	2X1/2X1-1/4	5	0	035	99.16
4101-220*	2X1/2X1-1/2	5	0	035	99.16
4101-221*	2X1/2X2	5	0	035	79.19
4101-222*	2X3/4X1/2	5	0	035	99.16
4101-223*	2X3/4X3/4	5	0	035	99.16
4101-224*	2X3/4X1	5	0	035	99.16
4101-225*	2X3/4X1-1/4	5	0	035	99.16
4101-226*	2X3/4X1-1/2	5	0	035	99.16
4101-227*	2X3/4X2	5	0	035	79.19
4101-228*	2X1X1/2	5	0	035	99.16
4101-229*	2X1X3/4	5	0	035	99.16
4101-230*	2X1X1	5	0	035	99.16
4101-231*	2X1X1-1/4	5	0	035	99.16
4101-232*	2X1X1-1/2	5	0	035	99.16
4101-233*	2X1X2	5	0	035	79.19
4101-234*	2X1-1/4X1/2	5	0	035	99.16
4101-235*	2X1-1/4X3/4	5	0	035	99.16
4101-236*	2X1-1/4X1	5	0	035	99.16
4101-237*	2X1-1/2X1/2	5	0	035	99.16
4101-238*	2X1-1/2X3/4	5	0	035	99.16
4101-239*	2X1-1/2X1	5	0	035	99.16
4101-240*	2X1-1/2X1-1/4	5	0	035	99.16
4101-241*	2X1-1/2X1-1/2	5	0	035	99.16
4101-242*	2X1-1/4X1-1/4	5	0	035	99.16
4101-243*	2X1-1/4X1-1/2	5	0	035	99.16
4101-244*	2X1-1/4X2	5	0	035	79.19
4101-247*	2X2X1/2	10	0	035	58.49

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

REDUCING TEE (continued)
Socket x Socket x Socket

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4101-248*	2X2X3/4	10	0	035	52.37
4101-249	2X1	5	15	035	49.62
4101-250*	2X2X1-1/4	5	0	035	49.62
4101-251	2X2X1-1/2	5	15	035	52.95
4101-257*	2X1-1/2X2	5	0	035	52.95

* Outlet sized with bushing.

90° ELL
Socket x Socket



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4106-005	1/2	25	600	035	1.21
4106-007	3/4	25	300	035	2.00
4106-010	1	10	150	035	5.84
4106-012	1-1/4	10	80	035	11.63
4106-015	1-1/2	10	80	035	20.99
4106-020	2	5	30	035	40.25

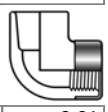
REDUCING 90° ELL
Socket x Socket



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4106-101	3/4X1/2	25	300	035	4.21
4106-130*	1X1/2	25	200	035	14.81
4106-131*	1X3/4	25	200	035	14.81
4106-167*	1-1/4X3/4	10	80	035	22.80
4106-168*	1-1/4X1	10	80	035	22.80
4106-209*	1-1/2X1/2	10	0	035	31.58
4106-210*	1-1/2X3/4	10	0	035	31.58
4106-211*	1-1/2X1	10	0	035	31.58
4106-212*	1-1/2X1-1/4	10	0	035	31.58
4106-247*	2X1/2	5	30	035	70.16
4106-248*	2X3/4	5	30	035	70.16
4106-249*	2X1	5	30	035	70.16
4106-250*	2X1-1/4	5	30	035	70.16
4106-251*	2X1-1/2	5	30	035	70.16

* Outlet sized with bushing.

SPECIAL REINFORCED 90° ELL
Socket x SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4107-005SR	1/2	50	300	035	9.01

ZINC DROP EAR REINFORCED CTS 90° ELL (One Piece Unit)
Socket x SR Fipt - Zinc Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DEZ4107-005SR	1/2	10	150	035	20.26

DROP EAR 90° ELL (Fitting with Bracket)
Socket x Socket



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DE4106-005	1/2	25	150	035	3.62

DROP EAR BRACKET ONLY
For 4101-005 and 4106-005



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DES-005	1/2	800	0	035	6.17

DROP EAR SPECIAL REINFORCED 90° ELL (Fitting Plus Bracket)
Socket x SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DE4107-005SR	1/2	10	200	035	13.93

DROP EAR BRACKET ONLY
For 4107-005SR



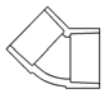
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DET-005	1/2	400	0	035	6.17

90° STREET ELL
Spigot x Socket



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4109-005	1/2	25	500	035	1.43
4109-007	3/4	25	300	035	2.24
4109-010	1	10	100	035	10.25

45° ELL
Socket x Socket



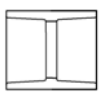
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4117-005	1/2	25	500	035	1.54
4117-007	3/4	25	300	035	2.66
4117-010	1	10	100	035	6.77
4117-012	1-1/4	10	120	035	14.34
4117-015	1-1/2	10	80	035	20.78
4117-020	2	10	0	035	43.51

45° STREET ELL
Spigot x Socket



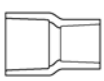
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4127-005	1/2	25	600	035	3.26
4127-007	3/4	25	400	035	4.37
4127-010	1	10	150	035	12.56

COUPLING
Socket x Socket



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4129-005	1/2	25	600	035	1.00
4129-007	3/4	25	300	035	1.32
4129-010	1	10	250	035	5.94
4129-012	1-1/4	10	120	035	7.67
4129-015	1-1/2	10	120	035	10.84
4129-020	2	10	0	035	20.64

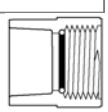
REDUCER COUPLING
Socket x Socket



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4129-101	3/4X1/2	25	300	035	2.12
4129-130	1X1/2	25	150	035	12.52
4129-131	1X3/4	25	150	035	6.78
4129-166*	1-1/4X1/2	10	120	035	15.69
4129-167*	1-1/4X3/4	10	120	035	15.69
4129-168*	1-1/4X1	10	120	035	22.33
4129-209*	1-1/2X1/2	10	80	035	21.28
4129-210*	1-1/2X3/4	10	60	035	21.28
4129-211*	1-1/2X1	10	60	035	21.28
4129-212*	1-1/2X1-1/4	10	80	035	21.28
4129-247*	2X1/2	10	0	035	46.09
4129-248*	2X3/4	10	0	035	46.09
4129-249	2X1	10	0	035	46.09
4129-250*	2X1-1/4	10	0	035	46.09
4129-251*	2X1-1/2	10	0	035	46.09

* Outlet sized with bushing.

FEMALE ADAPTER with Gasket
Socket x NPSC



For Cold Water Service Only

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4135-005OR	1/2	25	200	035	4.71
4135-007OR	3/4	25	300	035	6.68

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

FEMALE ADAPTER with Gasket (continued)
Socket x NPSC

4135-010OR	**1**	5	100	035	7.62

GASKET SEALED BRASS THREAD TRANSITION FEMALE ADAPTER

Socket x Gasket FPT - Use NO Thread Sealant

NSF Certified Lead Free

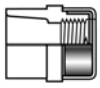
4135-005BRG	**1/2**	25	150	035	40.21
4135-007BRG	**3/4**	25	150	035	44.28
4135-010BRG	**1**	15	90	035	132.09
4135-012BRG	**1-1/4**	15	60	035	250.97
4135-015BRG	**1-1/2**	10	40	035	327.12
4135-020BRG	**2**	8	32	035	480.95

GASKET SEALED BRASS THREAD TRANSITION REDUCING FEMALE ADADPTER

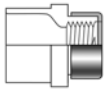
Socket x Gasket FPT - Use NO Thread Sealant

NSF Certified Lead Free

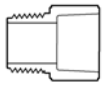
4135-101BRG	**3/4X1/2**	25	150	035	43.77
4135-130BRG	**1X1/2**	50	0	035	69.15

SPECIAL REINFORCED FEMALE ADAPTER

Socket x SR Fipt - Stainless Steel Collar

4135-005SR	**1/2**	25	200	035	6.96
4135-007SR	**3/4**	25	300	035	7.65
4135-010SR	**1**	5	100	035	9.71

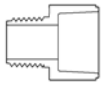
SPECIAL REINFORCED REDUCING FEMALE ADAPTER

Socket x SR Fipt - Stainless Steel Collar

4135-131SR	**1X3/4**	25	150	035	15.28

MALE ADAPTER

Mipt x Socket

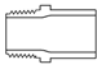
For Cold Water Service Only

4136-005	**1/2**	25	600	035	1.26
4136-007	**3/4**	25	300	035	2.15
4136-010	**1**	10	250	035	10.16
4136-012	**1-1/4**	25	200	035	15.74
4136-015	**1-1/2**	10	80	035	19.41
4136-020	**2**	10	80	035	32.00

REDUCING MALE ADAPTER

Mipt x Socket

For Cold Water Service Only

4136-074	**1/2X3/4**	25	600	035	4.60
4136-101	**3/4X1/2**	25	600	035	4.93

MALE ADAPTER

Mipt x Spigot

For Cold Water Service Only

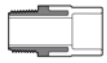
4161-005	**1/2**	50	700	035	3.91

REINFORCED MALE ADADPTER (Internal Stainless Steel Reinforced)

R Mipt x Socket - Stainless Steel Sleeve

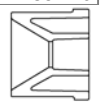
4136-005R	**1/2**	25	300	035	8.93
4136-007R	**3/4**	25	300	035	9.93
4136-010R	**1**	10	120	035	14.79

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

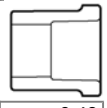
TRANSITION MALE ADAPTER w/BRASS THREAD

Brass Mipt x Socket

NSF Certified Lead Free

4136-005BR	**1/2**	60	360	035	40.21
4136-007BR	**3/4**	40	160	035	44.28
4136-010BR	**1**	10	60	035	132.09
4136-012BR	**1-1/4**	10	60	035	162.92
4136-015BR	**1-1/2**	10	40	035	215.06
4136-020BR	**2**	8	32	035	357.49

REDUCER BUSHING

Spigot x Socket

4137-101	**3/4X1/2**	25	600	035	1.51
4137-130	**1X1/2**	10	300	035	4.95
4137-131	**1X3/4**	10	400	035	4.95
4137-166	**1-1/4X1/2**	10	120	035	6.86
4137-167	**1-1/4X3/4**	10	300	035	6.42
4137-168	**1-1/4X1**	10	300	035	5.61
4137-209	**1-1/2X1/2**	25	100	035	8.07
4137-210	**1-1/2X3/4**	25	100	035	8.07
4137-211	**1-1/2X1**	10	120	035	7.92
4137-212	**1-1/2X1-1/4**	10	200	035	7.92
4137-247	**2X1/2**	10	60	035	19.16
4137-248	**2X3/4**	10	60	035	17.88
4137-249	**2X1**	10	60	035	17.88
4137-250	**2X1-1/4**	10	120	035	19.16
4137-251	**2X1-1/2**	10	120	035	17.88

TRANSITION BUSHING

IPS Spigot x CTS Socket

4140-005	**1/2**	10	600	035	6.40
4140-007	**3/4**	10	600	035	6.68
4140-010	**1**	10	400	035	7.38
4140-012	**1-1/4**	10	60	035	9.14
4140-015	**1-1/2**	10	60	035	11.52
4140-020	**2**	10	60	035	12.56

TRANSITION COUPLING

IPS Socket x CTS Socket

4141-007	**3/4**	25	300	035	4.36
4141-010	**1**	10	150	035	7.69

CAP

Socket

4147-005	**1/2**	25	600	035	1.09
4147-007	**3/4**	25	300	035	1.39
4147-010	**1**	10	400	035	5.07
4147-012	**1-1/4**	10	120	035	6.97
4147-015	**1-1/2**	10	120	035	10.72
4147-020	**2**	10	80	035	21.63

CTS Union

Socket with EPDM O-ring Seal

100 psi Maximum Internal Pressure @ 180°F (82°C)

4197-005	**1/2**	25	150	035	14.25
4197-007	**3/4**	10	60	035	21.69
4197-010	**1**	10	60	035	28.00

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

1/4-Turn Angle Supply Stop



Socket x NPT

100 psi @ 180°F (82°C)
1/2" & 3/8" Male Thread for Connection to Female Flexible Supply Line

7722-005	**1/2**	50	400	217	16.43
7722-073	**1/2X3/8**	50	400	217	16.43

1/4-Turn Angle Supply Stop



SR FPT x NPT

100 psi @ 180°F (82°C)
1/2" & 3/8" Male Thread for Connection to Female Flexible Supply Line

7721-005SR	**1/2**	50	400	217	40.69
7721-073SR	**1/2X3/8**	50	400	217	40.69

CPVC CTS Ball Valves



Socket with EPDM O-ring Seal

100 psi Maximum Internal Pressure @ 180°F (82°C)

1922-005	**1/2**	50	200	217	33.39
1922-007	**3/4**	25	0	217	39.47
1922-010	**1**	25	0	217	45.53
1922-012	**1-1/4**	20	0	217	70.68
1922-015	**1-1/2**	20	0	217	101.94
1922-020	**2**	8	0	217	130.59

For additional valve information, please refer to Spears® Technical Information part 2 This book.

CPVC CTS Pipe - SDR 11



10' Lengths, Price Per Foot

List Price Per Foot

CTS-005	**1/2**	500	0	034	.92
CTS-007	**3/4**	250	0	034	1.65
CTS-010	**1**	150	0	034	3.39
CTS-012	**1-1/4**	100	0	034	5.03
CTS-015	**1-1/2**	100	0	034	6.67
CTS-020	**2**	50	0	034	11.29

- Pipe sold in bag quantities only - no broken bags
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.
- See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

CPVC CTS PIPE WEIGHTS:
CTS-005 Weight per Foot .090 lbs; per Bag Weight 45 lbs.
CTS-007 Weight per Foot .149l bs; per Bag Weight 37.25 lbs.
CTS-010 Weight per Foot .239 lbs; per Bag Weight 35.85 lbs.
CTS-012 Weight per Foot .353 lbs; per Bag Weight 35.3 lbs.
CTS-015 Weight per Foot .489 lbs; per Bag Weight 48.9 lbs.
CTS-020 Weight per Foot .810 lbs; per Bag Weight 40.5 lbs.

CPVC CTS Pipe - SDR 11



20' Lengths, Price Per Foot

List Price Per Foot

CTS-005-20	**1/2**	1000	0	034	.92
CTS-007-20	**3/4**	500	0	034	1.65
CTS-010-20	**1**	300	0	034	3.39
CTS-012-20	**1-1/4**	200	0	034	5.03
CTS-015-20	**1-1/2**	200	0	034	6.67
CTS-020-20	**2**	100	0	034	11.29

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

CPVC CTS Pipe - SDR 11 (continued)

20' Lengths, Price Per Foot

- Pipe sold in bag quantities only - no broken bags
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.
- See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

CPVC CTS PIPE WEIGHTS:
CTS-005 Weight per Foot .090 lbs; per Bag Weight 90 lbs.
CTS-007 Weight per Foot .149 lbs; per Bag Weight 74.5l bs.
CTS-010 Weight per Foot .239 lbs; per Bag Weight 71.7 lbs.
CTS-012 Weight per Foot .353 lbs; per Bag Weight 70.6 lbs.
CTS-015 Weight per Foot .489 lbs; per Bag Weight 97.8 lbs.
CTS-020 Weight per Foot .830 lbs; per Bag Weight 83 lbs.

CPVC CTS Coiled Pipe - SDR 11



100 ft. Coil, Price Per Foot

List Price Per Foot

CTS-005-100	**1/2**	100	0	034	1.08
CTS-007-100	**3/4**	100	0	034	1.96
CTS-010-100	**1**	100	0	034	3.86

- Pipe sold in coil quantities only - no broken coils
- No return on Coiled Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.
- See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

CPVC CTS COILED PIPE WEIGHTS:
CTS-005-100 Weight per Foot .090 lbs; per Coil Weight 9 lbs.
CTS-007-100 Weight per Foot .149 lbs; per Coil Weight 14.9 lbs.
CTS-010-100 Weight per Foot .239 lbs; per Coil Weight 23.9 lbs.

WARNING:
Banded coils will expand when opened. Excercize caution to avoid injury during banding removal.

CTS TUBING STRAPS



Std Pk Bag of 25 For Anchoring CTS Pipe

Sold in Full Bag Quantity Only

556A	**1/2**	25	500	901	.94
556B	**3/4**	25	500	901	.94

CTS TUBE TALON with NAIL



Std Pk Bag Quantities as Specified. For Anchoring CTS Pipe

Sold in Full Bag Quantity Only

555A	**1/2**	100	1000	901	1.04
555B	**3/4**	100	1000	901	1.58
555C	**1**	50	500	901	4.44

EverTUFF® CTS One Step CPVC Solvent Cement



CTS5-005	**1/4 Pint**	24	0	701	9.01
CTS5-010	**1/2 Pint**	24	0	701	14.34
CTS5-020	**Pint**	12	0	701	23.23
CTS5-030	**Quart**	12	0	701	40.42
CTS5-040	**Gallon**	6	0	701	138.29

Cap Daubers



DHP-38	**3/8" for 1/2 Pint**	50	400	710	1.23
DHP-50	**1/2" for 1/2 Pint**	50	400	710	1.23

Cap Daubers (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DHP-75	**3/4" for 1/2 Pint**	50	0	710	1.31
DP-50	**1/2" for Pint**	50	0	710	1.23
DP-75	**3/4" for Pint**	50	0	710	1.31
DP-125	**1-1/4" for Pint**	50	0	710	1.58
DQ-50	**1/2" for Quart**	50	0	710	1.23
DQ-75	**3/4" for Quart**	50	0	710	1.23
DQ-125	**1-1/4" for Quart**	50	0	710	1.58

3/8" Diameter for pipe sizes to 3/4"
1/2" Diameter for pipe sizes to 1"
3/4" Diameter for pipe size to 1-1/2"
1-1/4" Diameter for pipe size 1-1/2" to 3"

Can-Mate Daubers

Adjustable Plastic Applicator with Telescoping Stem for use with Standard 1/2 Pint, Pint and Quart Cans



CM-50	**1/2"**	50	0	710	5.26
CM-75	**3/4"**	50	0	710	5.26
CM-150	**1-1/4"**	50	0	710	5.26

1/2" Diameter for pipe sizes to 1"
3/4" Diameter for pipe size to 1-1/2"
1-1/4" Diameter for pipe size 1-1/2" to 3"

Deburring Tool

Cone Type for pipe from 1/2" through 2"



DEB-2	**1/2 to 2 Pipe**	1	6	710	97.71

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Spears® Low-Extractable SCHEDULE 80 PIPE

NOMINAL PIPE SIZE	PART NUMBER	AVG. OD	AVG. ID	MIN. WALL	MAX. W.P. PSI*	LBS/FT	LGTHS/ CARTONS
1/2"	LXT-005	.840	.528	.147	420	.202	22
3/4"	LXT-007	1.050	.724	.154	340	.273	22
1"	LXT-010	1.315	.935	.179	320	.402	18
1-1/4"	LXT-012	1.660	1.256	.191	260	.554	14
1-1/2"	LXT-015	1.900	1.476	.200	240	.673	11
2"	LXT-020	2.375	1.913	.218	200	.932	8
3"	LXT-030	3.500	2.864	.300	190	1.903	5
4"	LXT-040	4.500	3.786	.337	160	2.782	2
6"	LXT-060	6.625	5.709	.432	140	5.313	1

* PSI water, non-shock @ 73°F (23°C) with solvent welded connections.
Standard Length - 15 feet. All pipe is double-bagged and boxed on-line for high purity environments.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Spears® Low-Extractable Schedule 80 Pipe



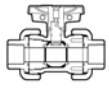
15' Lengths, Price Per Foot

List Price Per Foot

LXT-005	**1/2**	300	0	064	4.81
LXT-007	**3/4**	255	0	064	6.52
LXT-010	**1**	150	0	064	9.60
LXT-012	**1-1/4**	120	0	064	13.28
LXT-015	**1-1/2**	105	0	064	16.07
LXT-020	**2**	75	0	064	22.29
LXT-030	**3**	45	0	064	45.47
LXT-040	**4**	30	0	064	66.47
LXT-060	**6**	15	0	064	154.11

See Spears® Low-Extractable Schedule 80 Pipe Chart for additional information.

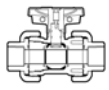
Spears® True Union 2000 Industrial Ball Valves w/Handle Lockout & Safe-T-Block™ Design



EPDM O-ring

1829-005BL	**1/2**	1	18	066	93.55
1829-007BL	**3/4**	1	18	066	114.64
1829-010BL	**1**	1	12	066	145.44
1829-012BL	**1-1/4**	1	8	066	192.79
1829-015BL	**1-1/2**	1	8	066	252.12
1829-020BL	**2**	1	4	066	355.94
1822-030BL	**3**	1	0	066	658.63
1822-040BL	**4**	1	0	066	1113.46

Spears® True Union 2000 Industrial Ball Valves w/Handle Lockout & Safe-T-Block™ Design



FKM O-rings

1839-005BL	**1/2**	1	18	066	109.25
1839-007BL	**3/4**	1	18	066	129.23
1839-010BL	**1**	1	12	066	175.08
1839-012BL	**1-1/4**	1	8	066	244.26
1839-015BL	**1-1/2**	1	8	066	319.88
1839-020BL	**2**	1	4	066	418.69
1832-030BL	**3**	1	0	066	813.73
1832-040BL	**4**	1	0	066	1374.87

Spears® True Union 2000 Industrial T-Style Ball Valve



EPDM

Mainline Tee x Socket/Spigot

Safe-T-Block™ Design

182901-005BL	**1/2**	1	12	066	357.84
182901-007BL	**3/4**	1	8	066	391.01
182901-010BL	**1**	1	8	066	331.20
182901-012BL	**1-1/4**	1	0	066	369.44
182901-015BL	**1-1/2**	1	0	066	382.80
182901-020BL	**2**	1	0	066	408.95
182901-101BL	**3/4X1/2**	1	12	066	363.73
182901-130BL	**1X1/2**	1	8	066	377.36
182901-131BL	**1X3/4**	1	8	066	398.39
182901-166BL	**1-1/4X1/2**	1	8	066	403.68
182901-167BL	**1-1/4X3/4**	1	8	066	405.77
182901-168BL	**1-1/4X1**	1	8	066	465.12
182901-209BL	**1-1/2X1/2**	1	8	066	453.40
182901-210BL	**1-1/2X3/4**	1	8	066	405.77
182901-211BL	**1-1/2X1**	1	8	066	482.65
182901-247BL	**2X1/2**	1	8	066	517.75
182901-248BL	**2X3/4**	1	8	066	558.66
182901-249BL	**2X1**	1	8	066	587.96
182901-251BL	**2X1-1/2**	1	8	066	609.54
182901-333BL	**3X1/2**	1	0	066	681.59

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Spears® True Union 2000 Industrial T-Style Ball Valve (continued)

EPDM

Mainline Tee x Socket/Spigot

182901-335BL	**3X1**	1	0	066	848.65
182901-337BL	**3X1-1/2**	1	0	066	813.19
182901-338BL	**3X2**	1	0	066	892.20
182901-417BL	**4X1**	1	0	066	877.56
182901-419BL	**4X1-1/2**	1	0	066	977.03
182901-420BL	**4X2**	1	0	066	1164.22
182901-528BL	**6X2**	1	0	066	1520.66
182901-578BL	**8X2**	1	0	066	2243.64

Includes Plugged end with additional Socket and Threaded end connectors.

Spears® True Union 2000 Industrial T-Style Ball Valve



FKM

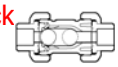
Mainline Tee x Socket/Spigot

Safe-T-Block™ Design

183901-005BL	**1/2**	1	12	066	374.69
183901-007BL	**3/4**	1	8	066	410.36
183901-010BL	**1**	1	8	066	427.41
183901-015BL	**1-1/2**	1	0	066	441.55
183901-020BL	**2**	1	0	066	502.77
183901-101BL	**3/4X1/2**	1	12	066	380.60
183901-130BL	**1X1/2**	1	8	066	394.23
183901-131BL	**1X3/4**	1	8	066	417.74
183901-166BL	**1-1/4X1/2**	1	8	066	420.55
183901-167BL	**1-1/4X3/4**	1	8	066	425.12
183901-168BL	**1-1/4X1**	1	8	066	494.15
183901-209BL	**1-1/2X1/2**	1	8	066	420.55
183901-210BL	**1-1/2X3/4**	1	8	066	425.12
183901-211BL	**1-1/2X1**	1	8	066	494.15
183901-247BL	**2X1/2**	1	8	066	534.64
183901-248BL	**2X3/4**	1	8	066	578.02
183901-249BL	**2X1**	1	8	066	617.00
183901-251BL	**2X1-1/2**	1	8	066	726.59
183901-333BL	**3X1/2**	1	0	066	698.44
183901-335BL	**3X1**	1	0	066	742.80
183901-337BL	**3X1-1/2**	1	0	066	849.44
183901-338BL	**3X2**	1	0	066	959.67
183901-417BL	**4X1**	1	0	066	906.60
183901-419BL	**4X1-1/2**	1	0	066	1013.25
183901-420BL	**4X2**	1	0	066	1231.74
183901-528BL	**6X2**	1	0	066	1588.17
183901-578BL	**8X2**	1	0	066	2311.13

Includes Plugged end with additional Socket and Threaded end connectors.

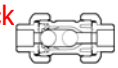
Spears® True Union 2000 Industrial Ball Check Valves



EPDM O-rings

4529-005BL	**1/2**	1	18	066	136.92
4529-007BL	**3/4**	1	18	066	165.42
4529-010BL	**1**	1	18	066	189.37
4529-012BL	**1-1/4**	1	12	066	335.40
4529-015BL	**1-1/2**	1	8	066	354.80
4529-020BL	**2**	1	8	066	593.23
4522-030BL	**3**	1	0	066	832.82
4522-040BL	**4**	1	0	066	1562.25

Spears® True Union 2000 Industrial Ball Check Valves



FKM O-rings

4539-005BL	**1/2**	1	18	066	151.74
4539-007BL	**3/4**	1	18	066	182.53
4539-010BL	**1**	1	18	066	205.56
4539-012BL	**1-1/4**	1	12	066	347.94

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Spears® True Union 2000 Industrial Ball Check Valves (continued)

FKM O-rings

4539-015BL	**1-1/2**	1	8	066	376.66
4539-020BL	**2**	1	8	066	616.06
4532-030BL	**3**	1	0	066	887.04
4532-040BL	**4**	1	0	066	1645.98

Spears® Diaphragm Valves

EPDM O-ring Seals EPDM Backed PTFE Diaphragm



2729T-005BL	**1/2**	1	12	066	258.19
2729T-007BL	**3/4**	1	8	066	277.39
2729T-010BL	**1**	1	8	066	324.23
2729T-012BL	**1-1/4**	1	4	066	438.31
2729T-015BL	**1-1/2**	1	4	066	531.98
2729T-020BL	**2**	1	0	066	698.91

Note: Both socket and threaded end connectors are provided with valve sizes 1/2" -2" Diaphragm valves. Valves carry a maximum pressure rating of 150 psi for water, non-shock, @ 73°F (23°C).

Spears® T-style "Zero Dead Leg" Diaphragm Valve

Mainline Tee x Spigot

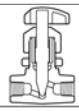
EPDM O-ring Seals EPDM Backed PTFE Diaphragm



2797TZD-005BL	**1/2**	1	8	066	344.91
2797TZD-007BL	**3/4**	1	8	066	368.28
2797TZD-010BL	**1X1**	1	8	066	533.54
2797TZD-015BL	**1-1/2**	1	4	066	806.49
2797TZD-020BL	**2X2**	1	0	066	921.56
2797TZD-130BL	**1X1/2**	1	8	066	346.95
2797TZD-131BL	**1X3/4**	1	8	066	369.15
2797TZD-247BL	**2X1/2**	1	8	066	373.69
2797TZD-249BL	**2X1**	1	12	066	558.61
2797TZD-251BL	**2X1-1/2**	1	4	066	798.52

Spears® Needle Valve

Globe Pattern - FIPT

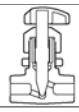


5591-002BL	**1/4**	1	18	066	124.88
5591-003BL	**3/8**	1	18	066	124.88

Replaceable PTFE Stem Seal - no elastomer or lubricants used. Needle valves carry a maximum internal pressure rating of 235 psi at 73°F (23°C).

Spears® Needle Valve

Globe Pattern - Soc

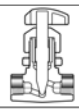


5592-002BL	**1/4**	1	18	066	124.88
5592-003BL	**3/8**	1	18	066	124.88
5592-005BL	**1/2**	1	18	066	129.95

Replaceable PTFE Stem Seal - no elastomer or lubricants used. Needle valves carry a maximum internal pressure rating of 235 psi at 73°F (23°C).

Spears® Needle Valve

Globe Pattern - SR FIPT

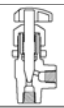


5591-005BLSR	**1/2**	1	18	066	132.57

Replaceable PTFE Stem Seal - no elastomer or lubricants used. Needle valves carry a maximum internal pressure rating of 235 psi at 73°F (23°C).

Spears® Needle Valve

Angle Pattern - FIPT



5691-002BL	**1/4**	1	18	066	124.88
5691-003BL	**3/8**	1	18	066	124.88

Replaceable PTFE Stem Seal - no elastomer or lubricants used. Needle valves carry a maximum internal pressure rating of 235 psi at 73°F (23°C).

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Spears® Needle Valve

Angle Pattern - Soc

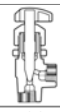


5692-002BL	**1/4**	1	18	066	124.88
5692-003BL	**3/8**	1	18	066	124.88
5692-005BL	**1/2**	1	18	066	132.57

Replaceable PTFE Stem Seal - no elastomer or lubricants used. Needle valves carry a maximum internal pressure rating of 235 psi at 73°F (23°C).

Spears® Needle Valve

Angle Pattern - SR FIPT



5691-005BLSR	**1/2**	1	18	066	132.57

Replaceable PTFE Stem Seal - no elastomer or lubricants used. Needle valves carry a maximum internal pressure rating of 235 psi at 73°F (23°C).

Spears® Gauge Guards

PTFE Diaphragm 1/4" Inlet Connection



G0004-002BL	**No Gauge**	1	18	623	141.86
G30V4-002BL	**0-30 in-Hg**	1	18	623	219.41
G0154-002BL	**0-15 psi**	1	18	623	207.37
G0304-002BL	**0-30 psi**	1	18	623	207.37
G0604-002BL	**0-60 psi**	1	18	623	207.37
G1004-002BL	**0-100 psi**	1	18	623	207.37
G1604-002BL	**0-160 psi**	1	18	623	207.37
G2004-002BL	**0-200 psi**	1	18	623	207.37
G3004-002BL	**0-300 psi**	1	18	623	207.37

"No Gauge" designates Gauge Guard only, unfilled. Other units are pre-filled and factory assembled with gauge specified in Size column. Gauge Guards carry a maximum pressure rating to 235 psi @ 73°F (23°C) and full vacuum service on vacuum gauges. All inlet connections are Spears® patented Special Reinforced (SR) female plastic NPT thread.

Spears® Gauge Guards

PTFE Diaphragm 1/2" Inlet Connection



G0004-005BL	**No Gauge**	1	18	623	141.86
G30V4-005BL	**0-30 in-Hg**	1	18	623	219.41
G0154-005BL	**0-15 psi**	1	18	623	207.37
G0304-005BL	**0-30 psi**	1	18	623	207.37
G0604-005BL	**0-60 psi**	1	18	623	207.37
G1004-005BL	**0-100 psi**	1	18	623	207.37
G1604-005BL	**0-160 psi**	1	18	623	207.37
G2004-005BL	**0-200 psi**	1	18	623	207.37
G3004-005BL	**0-300 psi**	1	18	623	207.37

"No Gauge" designates Gauge Guard only, unfilled. Other units are pre-filled and factory assembled with gauge specified in Size column. Gauge Guards carry a maximum pressure rating to 235 psi @ 73°F (23°C) and full vacuum service on vacuum gauges. All inlet connections are Spears® patented Special Reinforced (SR) female plastic NPT thread.

Spears® Gauge Guards

FKM Diaphragm 1/4" Inlet Connection



G0003-002BL	**No Gauge**	1	18	623	141.86
G30V3-002BL	**0-30 in-Hg**	1	18	623	219.41
G0153-002BL	**0-15 psi**	1	18	623	207.37
G0303-002BL	**0-30 psi**	1	18	623	207.37
G0603-002BL	**0-60 psi**	1	18	623	207.37
G1003-002BL	**0-100 psi**	1	18	623	207.37
G1603-002BL	**0-160 psi**	1	18	623	207.37
G2003-002BL	**0-200 psi**	1	18	623	207.37
G3003-002BL	**0-300 psi**	1	18	623	207.37

"No Gauge" designates Gauge Guard only, unfilled. Other units are pre-filled and factory assembled with gauge specified in Size column. Gauge Guards carry a maximum pressure rating to 235 psi @ 73°F (23°C) and full vacuum service on vacuum gauges. All inlet connections are Spears® patented Special Reinforced (SR) female plastic NPT thread.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Spears® Gauge Guards
FKM Diaphragm 1/2" Inlet Connection



G0003-005BL	**No Gauge**	1	18	623	141.86
G30V3-005BL	**0-30 in-Hg**	1	18	623	219.41
G0153-005BL	**0-15 psi**	1	18	623	207.37
G0303-005BL	**0-30 psi**	1	18	623	207.37
G0603-005BL	**0-60 psi**	1	18	623	207.37
G1003-005BL	**0-100 psi**	1	18	623	207.37
G1603-005BL	**0-160 psi**	1	18	623	207.37
G2003-005BL	**0-200 psi**	1	18	623	207.37
G3003-005BL	**0-300 psi**	1	18	623	207.37

"No Gauge" designates Gauge Guard only, unfilled. Other units are pre-filled and factory assembled with gauge specified in Size column. Gauge Guards carry a maximum pressure rating to 235 psi @ 73°F (23°C) and full vacuum service on vacuum gauges. All inlet connections are Spears® patented Special Reinforced (SR) female plastic NPT thread.

Spears® Gauge Guards
EPDM Diaphragm 1/4" Inlet Connection



G0002-002BL	**No Gauge**	1	18	623	136.19
G30V2-002BL	**0-30 in-Hg**	1	18	623	210.63
G0152-002BL	**0-15 psi**	1	18	623	199.09
G0302-002BL	**0-30 psi**	1	18	623	199.09
G0602-002BL	**0-60 psi**	1	18	623	199.09
G1002-002BL	**0-100 psi**	1	18	623	199.09
G1602-002BL	**0-160 psi**	1	18	623	199.09
G2002-002BL	**0-200 psi**	1	18	623	199.09
G3002-002BL	**0-300 psi**	1	18	623	199.09

"No Gauge" designates Gauge Guard only, unfilled. Other units are pre-filled and factory assembled with gauge specified in Size column. Gauge Guards carry a maximum pressure rating to 235 psi @ 73°F (23°C) and full vacuum service on vacuum gauges. All inlet connections are Spears® patented Special Reinforced (SR) female plastic NPT thread.

Spears® Gauge Guards
EPDM Diaphragm 1/2" Inlet Connection



G0002-005BL	**No Gauge**	1	18	623	136.19
G30V2-005BL	**0-30 in-Hg**	1	18	623	210.63
G0152-005BL	**0-15 psi**	1	18	623	199.09
G0302-005BL	**0-30 psi**	1	18	623	199.09
G0602-005BL	**0-60 psi**	1	18	623	199.09
G1002-005BL	**0-100 psi**	1	18	623	199.09
G1602-005BL	**0-160 psi**	1	18	623	199.09
G2002-005BL	**0-200 psi**	1	18	623	199.09
G3002-005BL	**0-300 psi**	1	18	623	199.09

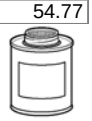
"No Gauge" designates Gauge Guard only, unfilled. Other units are pre-filled and factory assembled with gauge specified in Size column. Gauge Guards carry a maximum pressure rating to 235 psi @ 73°F (23°C) and full vacuum service on vacuum gauges. All inlet connections are Spears® patented Special Reinforced (SR) female plastic NPT thread.

LX-5 Low Extractable One-Step Cement



LX5C-020	**Pint**	12	0	702	33.96
LX5C-030	**Quart**	12	0	702	54.77

Empty Can



MT-654*	**Pint**	12	0	710	5.50
MT-651*	**Quart**	12	0	710	7.14
MT-653**	**Quart**	12	0	710	8.36

MT-651 & MT-654 cans have1-3/4" Screw Neck size
MT-653 is a TT Paint Type can

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Brush
For Pint and Quart cans



KD-110	**4-1/2" Length**	25	0	710	9.59
KD-112	**5-1/2" length**	25	0	710	9.59

Fits1-3/4" Screw Cap

Roller



3020	**3" length**	20	0	710	16.03

Fits Paint Type Quart Can (MT-653). For use with pipe sizes 3" to 6"

Cap Dauber



DP-75	**3/4" for Pint**	50	0	710	1.31
DP-125	**1-1/4" for Pint**	50	0	710	1.58
DQ-125	**1-1/4" for Quart**	50	0	710	1.58

1/2" Diameter for pipe sizes to 1"
3/4" Diameter for pipe size to 1-1/2"
1-1/4" Diameter for pipe size 1-1/2" to 3"

Can-Mate Dauber



CM-75	**3/4"**	50	0	710	5.26
CM-150	**1-1/4"**	50	0	710	5.26

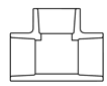
1/2" Diameter for pipe sizes to 1"
3/4" Diameter for pipe size to 1-1/2"
1-1/4" Diameter for pipe size 1-1/2" to 3"

Deburring Tool
Cone Type for pipe from 1/2" through 2"



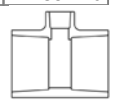
DEB-2	**1/2 to 2 Pipe**	1	6	710	97.71

Tee
Soc



801-005BL	**1/2**	25	0	065	7.27
801-007BL	**3/4**	15	120	065	8.88
801-010BL	**1**	15	0	065	13.09
801-012BL	**1-1/4**	10	0	065	20.40
801-015BL	**1-1/2**	10	0	065	30.63
801-020BL	**2**	10	0	065	48.63
801-030BL	**3**	5	0	065	140.51
801-040BL	**4**	5	0	065	234.93
801-060BL	**6**	4	0	065	352.40

Reducing Tee
Soc



801-131BL	**1X1X3/4**	15	0	065	12.22
801-211BL	**1-1/2X1-1/2X1**	10	0	065	26.55
801-249BL	**2X2X1**	10	0	065	33.61
801-251BL	**2X2X1-1/2**	10	0	065	33.61
801-338BL	**3X3X2**	5	0	065	61.63
801-422BL	**4X4X3**	5	0	065	99.63
801-530BL	**6X6X3**	4	0	065	422.69
801-532BL	**6X6X4**	5	0	065	422.69

90° Ell
Soc



806-005BL	**1/2**	20	160	065	4.51

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Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

90° Ell (continued)
Soc

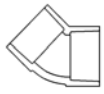
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
806-007BL	3/4	20	160	065	5.39
806-010BL	1	10	80	065	10.68
806-012BL	1-1/4	10	0	065	17.05
806-015BL	1-1/2	10	0	065	25.23
806-020BL	2	25	0	065	42.62
806-030BL	3	5	0	065	109.29
806-040BL	4	5	0	065	201.75
806-060BL	6	4	0	065	302.62

90° Sweep Ell
Soc



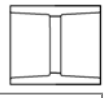
806-005SBL	1/2	25	100	065	6.43
806-007SBL	3/4	25	0	065	7.71
806-010SBL	1	25	0	065	15.26
806-012SBL	1-1/4	25	0	065	24.37
806-015SBL	1-1/2	25	0	065	36.02
806-020SBL	2	25	0	065	60.89

45° Ell
Soc



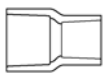
817-005BL	1/2	20	240	065	7.21
817-007BL	3/4	10	120	065	9.86
817-010BL	1	15	120	065	11.83
817-012BL	1-1/4	10	0	065	20.57
817-015BL	1-1/2	10	0	065	22.81
817-020BL	2	10	0	065	36.02
817-030BL	3	5	0	065	135.52
817-040BL	4	5	0	065	197.68
817-060BL	6	5	0	065	296.53

Coupling
Soc



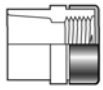
829-005BL	1/2	25	300	065	3.25
829-007BL	3/4	15	180	065	3.73
829-010BL	1	15	120	065	6.86
829-012BL	1-1/4	10	80	065	10.35
829-015BL	1-1/2	10	0	065	21.34
829-020BL	2	10	0	065	30.63
829-030BL	3	5	0	065	49.83
829-040BL	4	5	0	065	90.65
829-060BL	6	4	0	065	192.45

Reducer Coupling
Soc



829-101BL	3/4X1/2	50	0	065	8.66
829-131BL	1X3/4	25	200	065	12.62
829-168BL	1-1/4X1	25	0	065	25.63
829-211BL	1-1/2X1	25	0	065	26.88
829-212BL	1-1/2X1-1/4	25	0	065	33.21
829-249BL	2X1	10	0	065	30.32
829-251BL	2X1-1/2	10	0	065	30.32
829-338BL	3X2	8	0	065	74.39
829-420BL	4X2	4	0	065	141.83
829-422BL	4X3	4	0	065	136.49
829-532BL	6X4	4	0	065	523.09

Special Reinforced Female Adapter
Soc x SR Fipt

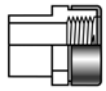


835-005SRBL	1/2	25	300	065	6.74

Special Reinforced Female Adapter (continued)
Soc x SR Fipt

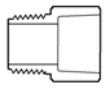
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
835-007SRBL	3/4	25	200	065	8.26
835-010SRBL	1	25	0	065	13.28
835-012SRBL	1-1/4	10	80	065	17.15
835-015SRBL	1-1/2	10	80	065	21.45
835-020SRBL	2	10	0	065	40.67
835-030SRBL	3	5	0	065	54.99
835-040SRBL	4	5	0	065	88.25

Special Reinforced Reducing Spigot Female Adapter
Spig x SR Fipt



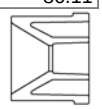
878-072SRBL	1/2X1/4	25	450	065	13.43
878-098SRBL	3/4X1/4	50	300	065	18.55
878-128SRBL	1X1/4	50	0	065	19.08

Male Adapter
Mipt x Soc



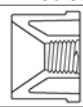
836-005BL	1/2	25	300	065	8.25
836-007BL	3/4	25	200	065	9.12
836-010BL	1	10	60	065	15.80
836-012BL	1-1/4	10	80	065	18.47
836-015BL	1-1/2	10	80	065	26.55
836-020BL	2	10	0	065	38.37
836-030BL	3	5	0	065	60.54
836-040BL	4	5	0	065	86.11

Reducer Bushing Flush Style
Spig x Soc



837-101BL	3/4X1/2	50	0	065	4.91
837-130BL	1X1/2	50	0	065	7.24
837-131BL	1X3/4	50	0	065	7.24
837-166BL	1-1/4X1/2	25	0	065	10.27
837-168BL	1-1/4X1	25	200	065	10.27
837-210BL	1-1/2X3/4	25	0	065	13.98
837-211BL	1-1/2X1	25	200	065	13.98
837-212BL	1-1/2X1-1/4	25	200	065	13.98
837-249BL	2X1	10	80	065	19.96
837-251BL	2X1-1/2	10	80	065	19.96
837-338BL	3X2	10	0	065	54.86
837-422BL	4X3	6	0	065	94.97
837-532BL	6X4	5	0	065	150.88

Reducer Bushing Flush Style
Spig x Fipt



838-072BL	1/2X1/4	50	400	065	6.28
838-073BL	1/2X3/8	50	600	065	6.28
838-098BL	3/4X1/4	50	0	065	4.15
838-101BL	3/4X1/2	50	0	065	4.15
838-129BL	1X3/8	50	400	065	6.54
838-130BL	1X1/2	50	0	065	6.54
838-131BL	1X3/4	50	0	065	6.54
838-210BL	1-1/2X3/4	25	200	065	17.17
838-211BL	1-1/2X1	25	200	065	17.17

Cap
Soc



847-005BL	1/2	25	300	065	6.95
847-007BL	3/4	25	300	065	7.29
847-010BL	1	15	180	065	12.96
847-012BL	1-1/4	10	120	065	15.65

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Cap (continued)

Soc

847-015BL	**1-1/2**	10	80	065	22.35
847-020BL	**2**	10	80	065	30.91
847-030BL	**3**	5	0	065	73.88
847-040BL	**4**	5	0	065	124.56
847-060BL	**6**	4	0	065	420.95

Union

Soc x Soc EPDM O-ring Seals



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

897-005BL	**1/2**	10	60	065	12.43
897-007BL	**3/4**	10	40	065	15.60
897-010BL	**1**	10	40	065	20.40
897-012BL	**1-1/4**	5	20	065	29.42
897-015BL	**1-1/2**	5	0	065	40.23
897-020BL	**2**	5	0	065	60.65
8097-030BL	**3**	5	0	065	102.73
8097-040BL	**4**	4	0	065	142.14

Union

Soc x Soc FKM O-ring Seals



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

857-005BL	**1/2**	10	60	065	15.26
857-007BL	**3/4**	10	40	065	18.62
857-010BL	**1**	10	40	065	25.81
857-012BL	**1-1/4**	5	20	065	34.83
857-015BL	**1-1/2**	5	0	065	48.63
857-020BL	**2**	5	0	065	73.85
8057-030BL	**3**	5	0	065	125.25
8057-040BL	**4**	4	0	065	173.37

Flange Soc Van Stone Style

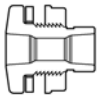


Rated @ 150 psi Working Pressure @ 73°F (23°C)

854-005BL	**1/2**	25	0	065	21.40
854-007BL	**3/4**	25	0	065	22.91
854-010BL	**1**	15	0	065	25.51
854-012BL	**1-1/4**	15	0	065	26.29
854-015BL	**1-1/2**	20	0	065	26.84
854-020BL	**2**	10	0	065	35.67
854-030BL	**3**	10	0	065	60.92
854-040BL	**4**	5	0	065	77.05
854-060BL	**6**	4	0	065	172.61

PVC New Style Standard Tank Adapters with EPDM Gaskets

Soc

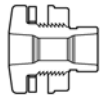


150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8170E-005BL	**1/2**	25	0	065	41.83
8170E-007BL	**3/4**	25	0	065	47.47
8170E-010BL	**1**	25	0	065	54.49
8170E-012BL	**1-1/4**	20	0	065	68.97
8170E-015BL	**1-1/2**	20	0	065	72.38
8170E-020BL	**2**	15	0	065	104.33
8170E-030BL	**3**	4	0	065	176.42
8170E-040BL	**4**	2	0	065	292.86

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

PVC New Style Standard Tank Adapters with FKM Gaskets



Soc

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8170V-005BL	**1/2**	25	0	065	54.84
8170V-007BL	**3/4**	25	0	065	63.09
8170V-010BL	**1**	25	0	065	73.03
8170V-012BL	**1-1/4**	20	0	065	89.73
8170V-015BL	**1-1/2**	20	0	065	93.53
8170V-020BL	**2**	15	0	065	141.60
8170V-030BL	**3**	4	0	065	242.61
8170V-040BL	**4**	2	0	065	537.40

Wrench Sets



Body Wrench & Nut Wrench

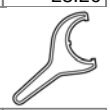
TAW-005	**1/2**	1	25	299	21.89
TAW-007	**3/4**	1	25	299	22.32
TAW-010	**1**	1	25	299	23.21
TAW-012	**1-1/4**	1	20	299	26.18
TAW-015	**1-1/2**	1	20	299	28.40
TAW-020	**2**	1	10	299	32.35
TAW-030	**3**	1	10	299	39.44
TAW-040	**4**	1	10	299	42.26

Individual Body Wrench



TAW1-005	**1/2**	250	0	299	12.28
TAW1-007	**3/4**	220	0	299	12.52
TAW1-010	**1**	200	0	299	13.03
TAW1-012	**1-1/4**	300	0	299	14.76
TAW1-015	**1-1/2**	150	0	299	15.89
TAW1-020	**2**	100	0	299	17.25
TAW1-030	**3**	74	0	299	22.61
TAW1-040	**4**	35	0	299	23.26

Individual Nut Wrench



TAW2-005	**1/2**	200	0	299	12.28
TAW2-007	**3/4**	160	0	299	12.52
TAW2-010	**1**	110	0	299	13.03
TAW2-012	**1-1/4**	200	0	299	14.76
TAW2-015	**1-1/2**	120	0	299	15.89
TAW2-020	**2**	100	0	299	17.25
TAW2-030	**3**	40	0	299	22.61
TAW2-040	**4**	35	0	299	23.26

Standard Deck Mount Lab Fixture

Base with Valve, Gooseneck & Serrated Tip with Needle Valve-Metered Flow

LF1000-BLN	**LXT, PTFE Seal**	1	0	066	376.37

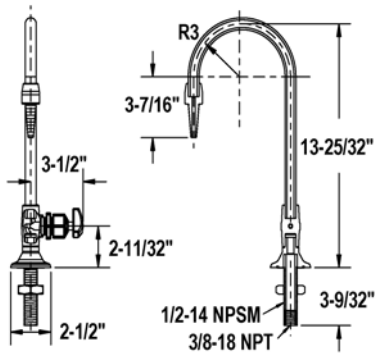
NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Standard Deck Mount Lab Fixture (continued)

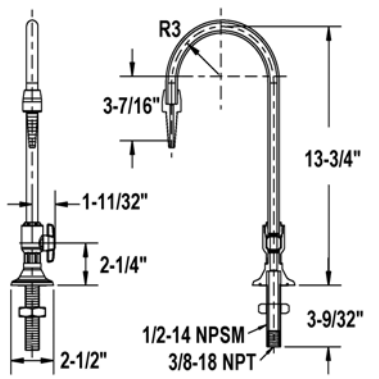
Base with Valve, Gooseneck & Serrated Tip with Needle Valve-Metered Flow



Standard Deck Mount Lab Fixture

With Ball Valve-Direct Flow

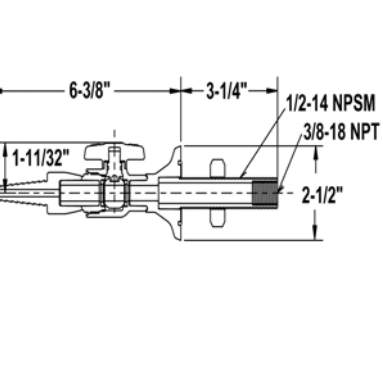
LF1002-BL	**LXT, EPDM Seal**	1	0	066	314.74
LF1003-BL	**LXT, FKM Seal**	1	0	066	349.72



Panel Mount Turret Lab Fixture

Base with Valve & Serrated Tip with Ball Valve-Direct Flow

LF3002-BL	**PVC, EPDM Seal**	1	0	066	309.60
LF3003-BL	**PVC, FKM Seal**	1	0	066	344.04

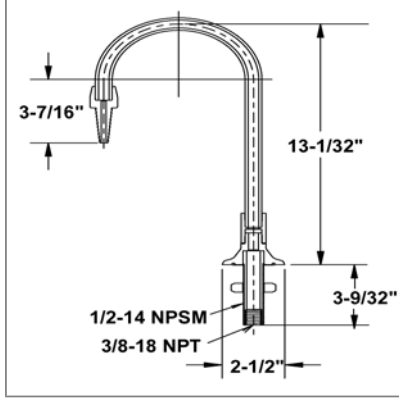


Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Deck Mount Gooseneck

Base with Gooseneck & Serrated Tip - For use with Remote Valve

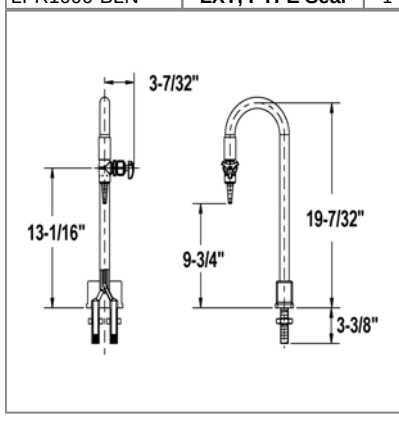
LF100-BL	**LXT**	1	0	066	258.28



Recirculating Deck Mount Lab Fixture

Base with Gooseneck, Valve & Serrated Tip with Needle Valve - Metered Flow

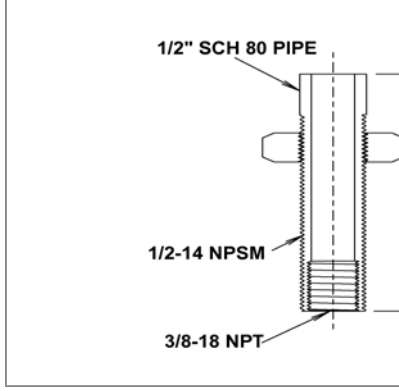
LFR1000-BLN	**LXT, PTFE Seal**	1	0	066	784.05



Fixture Connection Nipple

With Locknut (Included on all fixtures listed above)

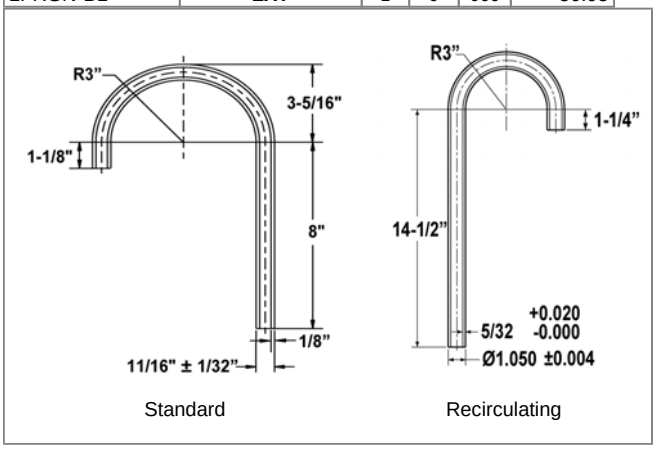
LF500-BL	**LXT**	1	0	066	42.78



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Standard & Recirculating Gooseneck Only

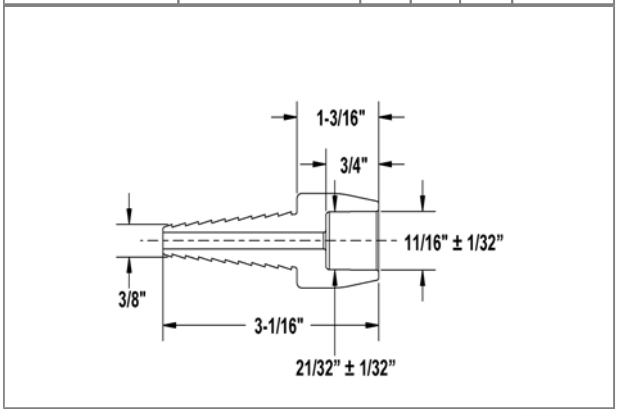
LFGN-BL	**LXT**	1	0	066	36.36
LFRGN-BL	**LXT**	1	0	066	50.95



Standard Recirculating

Straight Serrated Tip Only

LF400-BL	**LXT**	600	0	066	7.69

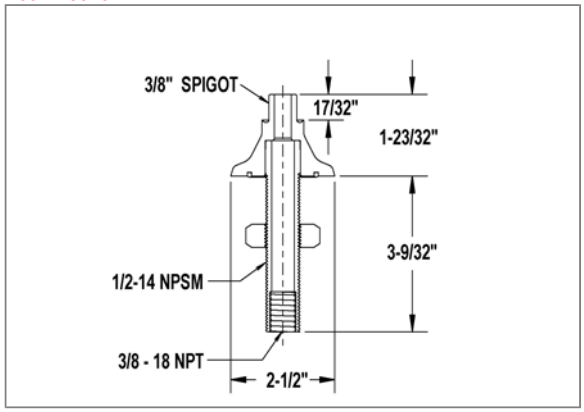


Base Only
Deck Mount

LFB-BL	**LXT**	1	0	066	5.38

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Base Only (continued)
Deck Mount



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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

LabWaste™ CPVC Corrosive Waste Drainage Systems

P093 Elastomer Transition Coupling - Glass/IPS Pipe



IPS Clamp Joint x IPS Clamp Joint

For connection to plain end Glass or any same-size IPS pipe systems. Shielded FKM (Fluorocarbon) w/gear clamps.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P093-015	1-1/2	20	0	171	816.21
P093-020	2	10	0	171	833.16
P093-030	3	10	0	171	846.53
P093-040	4	10	0	171	872.04
P093-060	6	5	0	171	892.53

P094 Elastomer Transition Coupling-Duriron

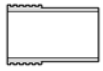


IPS Clamp Joint x Duriron Clamp Joint

For connection to Duriron plain end pipe. Shielded FKM (Fluorocarbon) w/gear clamps.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P094-015	1-1/2	20	0	171	666.21
P094-020	2	10	0	171	687.79
P094-030	3	10	0	171	713.48
P094-040	4	10	0	171	727.57

P095 Duriron Transition Fitting



Mechanical Joint x Pipe Size

For connection to Duriron system. Requires Duriron mechanical joint coupling.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P095-015C	1-1/2	30	0	169	51.67
P095-020C	2	16	0	169	65.39
P095-030C	3	9	0	169	109.12
P095-040C	4	5	0	169	150.81

P096 Grooved Coupling



Grv x Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P096-015C	1-1/2	10	60	169	25.89
P096-020C	2	10	80	169	34.83
P096-030C	3	10	0	169	68.25
P096-040C	4	5	0	169	116.13
P096-060C	6	5	0	169	166.14

P097 Duriron Transition Coupling



Spig x Caulk Joint

For connection to Duriron system. Requires packing and plastic lead. Warning: Do not use hot lead or oiled Oakum

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P097-015C	1-1/2	25	0	169	51.67
P097-020C	2	15	0	169	65.39
P097-030C	3	6	0	169	109.12
P097-040C	4	6	0	169	150.81

P098 Glass Transition Coupling

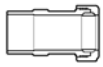


Spig x Clamp

For connection to glass system. Requires use of clamp from glass system manufacturer.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P098-015C	1-1/2	50	0	169	38.76
P098-020C	2	30	0	169	52.31
P098-030C	3	20	0	169	81.82
P098-040C	4	12	0	169	105.58
P098-060C	6	12	0	169	183.32

P099 Transition Coupling



H x Compression

For connection to PP or PVDF systems. Requires Safety Retaining Groove Tool. Contact Spears®.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P099-015C	1-1/2	16	0	169	107.07
P099-020C	2	12	0	169	121.75
P099-030C	3	4	0	169	152.49
P099-040C	4	4	0	169	182.35
P099-060C	6	1	0	169	211.28
P099-080C	8	1	0	169	639.49

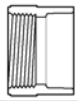
P100 Coupling



H x H

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P100-015C	1-1/2	100	0	160	25.45
P100-020C	2	100	0	160	31.77
P100-030C	3	60	0	160	40.65
P100-040C	4	25	0	160	57.85
P100-060C	6	5	0	160	91.68
P100-080C	8	8	0	159	247.26
P100-100C	10	1	0	159	358.54
P100-120C	12	1	0	159	503.80
P100-140C	14	1	0	159	639.71

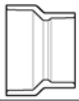
P101 Female Adapter



Fpt x H

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P101-015C	1-1/2	100	0	160	20.02
P101-020C	2	100	0	160	27.27
P101-030C	3	30	0	160	45.01
P101-040C	4	6	0	160	86.52
P101-060C	6	10	0	160	144.94

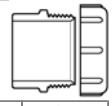
P102 Increaser - Reducer



H x H

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P102-251C	2X1-1/2	25	0	160	49.81
P102-337C	3X1-1/2	25	0	160	52.58
P102-338C	3X2	20	0	160	57.85
P102-420C	4X2	10	0	160	63.58
P102-422C	4X3	20	0	160	69.37
P102-530C	6X3	6	0	160	97.46
P102-532C	6X4	4	0	160	117.29
P102-582C	8X4	2	0	159	214.78
P102-585C	8X6	2	0	159	158.27
P102-624C	10X4	2	0	159	362.57
P102-626C	10X6	1	0	159	387.84
P102-628C	10X8	1	0	159	405.04
P102-666C	12X6	1	0	159	496.38
P102-668C	12X8	1	0	159	562.56
P102-670C	12X10	1	0	159	619.22

P103P Trap Adapter - Male



Spig x Slip with Plastic Nut

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P103P-015C	1-1/2	50	0	160	21.17
P103P-020C	2	25	0	160	24.75

P104R Trap Adapter - Female



w/1-1/2 Plastic Nut & Washer and 1-1/2x1-1/4 Washer H x Slip w/Plastic Nut

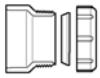
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P104R-015C	1-1/2	50	0	160	23.21

LabWaste™ CPVC Corrosive Waste Drainage Systems

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

P104X Trap Adapter - Female

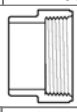
H x Slip w/Chrome Nut & Washer



P104X-015C	**1-1/2**	50	0	160	24.69

P105 Cleanout Adapter

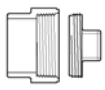
Spig x Fpt



P105-015C	**1-1/2**	50	0	160	20.02
P105-020C	**2**	50	0	160	21.41
P105-030C	**3**	25	0	160	41.26
P105-040C	**4**	10	0	160	73.72
P105-060C	**6**	10	0	160	129.73
P105-080C	**8**	8	0	159	200.72

P105X Cleanout Adapter with Square Head Plug

Spig



P105X-015C	**1-1/2**	50	0	160	21.08
P105X-020C	**2**	50	0	160	24.85
P105X-030C	**3**	25	0	160	45.85
P105X-040C	**4**	10	0	160	78.88
P105X-060C	**6**	10	0	160	136.44
P105X-080C	**8**	6	0	159	371.45

P106 Square Head Cleanout Plug

Mpt



P106-015C	**1-1/2**	50	400	160	7.29
P106-020C	**2**	50	0	160	7.97
P106-030C	**3**	25	0	160	13.92
P106-040C	**4**	30	0	160	15.61
P106-060C	**6**	10	0	160	36.43
P106-080C	**8**	12	0	159	188.32

P107 Flush Bushing

Spig x H



P107-251C	**2X1-1/2**	50	0	160	27.14
P107-337C	**3X1-1/2**	30	0	160	28.69
P107-338C	**3X2**	30	0	160	31.28
P107-420C	**4X2**	30	0	160	69.41
P107-422C	**4X3**	30	0	160	71.03
P107-530C[1]	**6X3**	10	0	160	130.28
P107-532C	**6X4**	10	0	160	124.25
P107-582C	**8X4**	4	0	159	451.59
P107-585C	**8X6**	4	0	159	471.13
P107-624C[1]	**10X4**	4	0	159	877.52
P107-628C	**10X8**	4	0	159	690.39
P107-670C	**12X10**	2	0	159	860.76

[1]Outlet-sized with Bushing

P108 Flush Bushing (Cleanout Adapter)

Spig x FPT



P108-212C	**1-1/2X1-1/4**	50	200	160	6.45

P109 Male Adapter

Mpt x H



P109-015C	**1-1/2**	50	0	160	19.80
P109-020C	**2**	50	0	160	23.97
P109-030C	**3**	25	0	160	39.41
P109-040C	**4**	25	0	160	82.16
P109-060C	**6**	7	0	160	220.89

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

P110 Counter Sunk Cleanout Plug

Mpt



P110-015C	**1-1/2**	25	150	160	12.14
P110-020C	**2**	25	150	160	13.19
P110-030C	**3**	50	0	160	13.63
P110-040C	**4**	25	0	160	15.34
P110-060C	**6**	10	0	160	33.25

P116 Cap

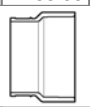
Socket



P116-015C	**1-1/2**	20	240	160	19.80
P116-020C	**2**	15	180	160	23.69
P116-030C	**3**	10	0	160	40.93
P116-040C	**4**	5	0	160	83.44
P116-060C	**6**	5	0	160	137.42
P116-080C	**8**	3	0	159	238.55

P119 No-Hub Adapter

S x H



P119-015C	**1-1/2**	25	0	160	34.86
P119-020C	**2**	25	0	160	37.19
P119-030C	**3**	20	0	160	46.85
P119-040C	**4**	15	0	160	68.42
P119-060C	**6**	5	0	160	148.59

P123 Hub Adapter

H x S

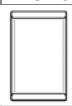


For connection to Cast Iron system. Requires packing and plastic lead. Warning: Do not use hot lead or oiled Oakum

P123-020C	**2**	20	0	160	41.33
P123-030C	**3**	25	0	160	52.06

P130 Repair Coupling

H x H



P130-015C	**1-1/2**	25	200	160	26.56
P130-020C	**2**	25	0	160	15.72
P130-030C	**3**	10	0	160	52.06
P130-040C	**4**	5	0	160	87.35

P300 1/4 Bend (90° Ell)

H x H



P300-015C	**1-1/2**	100	0	160	32.58
P300-020C	**2**	50	0	160	40.48
P300-030C	**3**	25	0	160	68.73
P300-040C	**4**	10	0	160	109.37
P300-060C	**6**	4	0	160	283.02
P300-080C	**8**	2	0	159	394.48
P300-100C	**10**	1	0	159	911.72
P300-120C	**12**	1	0	159	1528.73

P300S 1/4 Bend w/Side Inlet (90° Ell)

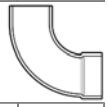
All Hub



P300S-338C	**3X3X2**	10	0	160	151.17

P302 1/4 Bend, Street (90° Street Ell)

H x Spig



P302-015C	**1-1/2**	100	0	160	38.26

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LabWaste™ CPVC Corrosive Waste Drainage Systems

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P302 1/4 Bend, Street (90° Street Ell) (continued)					
H x Spig					
P302-020C	**2**	25	0	160	48.56
P302-030C	**3**	20	0	160	65.01
P302-040C	**4**	10	0	160	103.28
P302-060C	**6**	4	0	160	250.60
P302-080C	**8**	2	0	159	389.94
P302-100C	**10**	1	0	159	908.25
P302-120C	**12**	1	0	159	1513.09
P303 1/4 Bend w/Low Heel Inlet					
H x H x H					
P303-338C	**3X3X2**	25	0	160	95.05
P303-420C	**4X4X2**	6	0	160	196.21
P304 1/4 Bend, Long Sweep (90° LS Ell)					
H x H					
P304-015C	**1-1/2**	50	0	160	33.71
P304-020C	**2**	25	0	160	45.96
P304-030C	**3**	10	0	160	78.62
P304-040C	**4**	5	0	160	113.00
P304-060C	**6**	5	0	160	363.26
P309 1/4 Bend Long Sweep, Street (90° LS Street Ell)					
H x Spig					
P309-015C	**1-1/2**	50	0	160	35.45
P309-020C	**2**	25	0	160	47.52
P309-030C	**3**	20	0	160	80.92
P309-040C	**4**	5	0	160	114.99
P309-060C	**6**	5	0	160	294.86
P319 1/6 Bend (60° Ell)					
H x H					
P319-015C	**1-1/2**	40	0	160	32.66
P319-020C	**2**	25	0	160	39.43
P319-030C	**3**	20	0	160	71.23
P319-040C	**4**	10	0	160	114.20
P319-060CF	**6**	1	4	160	320.99
P320 1/6 Bend, Street (60° Street Ell)					
H x Spig					
P320-015C	**1-1/2**	40	0	160	32.66
P320-020C	**2**	25	0	160	39.43
P320-030C	**3**	20	0	160	71.97
P320-040C	**4**	10	0	160	114.20
P321 1/8 Bend (45° Ell)					
H x H					
P321-015C	**1-1/2**	100	0	160	32.01
P321-020C	**2**	50	0	160	39.00
P321-030C	**3**	25	0	160	71.57
P321-040C	**4**	15	0	160	81.11
P321-060C	**6**	5	0	160	236.92
P321-080C	**8**	1	0	159	341.61
P321-100C	**10**	1	0	159	651.34
P321-120C	**12**	1	0	159	1180.06

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P323 1/8 Bend, Street (45° Street Ell)					
H x Spig					
P323-015C	**1-1/2**	100	0	160	24.25
P323-020C	**2**	50	0	160	27.54
P323-030C	**3**	25	0	160	61.04
P323-040C	**4**	10	0	160	62.64
P323-060C	**6**	5	0	160	225.06
P323-080C	**8**	1	0	159	259.23
P324 1/16 Bend (22-1/2° Ell)					
H x H					
P324-015C	**1-1/2**	50	0	160	32.66
P324-020C	**2**	25	0	160	38.94
P324-030C	**3**	20	0	160	70.40
P324-040C	**4**	15	0	160	86.72
P324-060C	**6**	3	0	160	234.68
P324-080C	**8**	2	0	159	254.73
P326 1/16 Bend, Street (22–1/2° Street Ell)					
H x Spig					
P326-015C	**1-1/2**	50	0	160	29.05
P326-020C	**2**	25	0	160	38.94
P326-030C	**3**	20	0	160	70.40
P326-040C	**4**	10	0	160	86.72
P326-060C	**6**	5	0	160	201.94
P326-080C	**8**	2	0	159	244.71
P327 Double 1/4 Bend (3 Way Ell)					
All Hub					
P327-015C	**1-1/2**	20	0	160	65.76
P327-020C	**2**	25	0	160	114.93
P327-030C	**3**	15	0	160	146.92
P327-040C	**4**	6	0	160	160.81
P327-241C	**2X1-1/2X1-1/2**	25	0	160	106.18
P331 Vent Ell					
H x H					
P331-015C	**1-1/2**	25	0	160	32.29
P331-020C	**2**	30	0	160	37.86
P331-030C	**3**	25	0	160	65.51
P331-040C	**4**	10	0	160	105.06
P331-060C	**6**	5	0	160	162.95
P333 Vent Ell, Street					
H x Spig					
P333-015C	**1-1/2**	25	0	160	34.54
P333-020C	**2**	20	0	160	40.88
P333-030C	**3**	25	0	160	72.79
P333-040C	**4**	10	0	160	116.73
P400 Sanitary Tee					
All Hub					
P400-015C	**1-1/2**	100	0	160	40.48
P400-020C	**2**	35	0	160	48.48
P400-030C	**3**	30	0	160	97.04
P400-040C	**4**	5	0	160	145.34
P400-060C	**6**	6	0	160	411.80
P400-080C	**8**	2	0	159	675.07

LabWaste™ CPVC Corrosive Waste Drainage Systems

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P400 Sanitary Tee (continued)					
All Hub					
P400-100C	**10**	1	0	159	1514.34
P400-120C	**12**	1	0	159	2134.00
P401 Sanitary Tee, Reducing					
All Hub					
P401-241C	**2X1-1/2X1-1/2**	25	0	160	48.40
P401-251C	**2X2X1-1/2**	50	0	160	48.40
P401-257C	**2X1-1/2X2**	25	0	160	50.59
P401-337C	**3X3X1-1/2**	10	0	160	84.22
P401-338C	**3X3X2**	10	0	160	90.55
P401-420C	**4X4X2**	10	0	160	129.86
P401-422C	**4X4X3**	10	0	160	135.68
P401-532C	**6X4**	4	0	160	339.24
P401-582C	**8X4**	2	0	159	1149.63
P403 Sanitary Tee, Street					
S x H x H					
P403-015C	**1-1/2**	20	0	160	47.62
P403-020C	**2**	25	0	160	57.73
P403-030C	**3**	30	0	160	115.23
P403-040C	**4**	10	0	160	173.01
P403-060C	**6**	6	0	160	472.74
P403-080C	**8**	2	0	159	772.07
P403-100C	**10**	1	0	159	1839.25
P403-120C	**12**	1	0	159	2632.60
P404 Sanitary Tee, Street, Reducing					
S x H x H					
P404-241C	**2X1-1/2X1-1/2**	50	0	160	49.35
P404-251C	**2X1-1/2**	50	0	160	53.36
P404-337C	**3X3X1-1/2**	10	0	160	94.34
P404-338C	**3X3X2**	10	0	160	100.62
P428 Double Sanitary Tee					
All Hub					
P428-015C	**1-1/2**	25	0	160	60.99
P428-020C	**2**	25	0	160	71.91
P428-030C	**3**	8	0	160	96.18
P428-040C	**4**	6	0	160	128.36
P429 Double Sanitary Tee, Reducing					
All Hub					
P429-241C	**2X1-1/2X1-1/2X1-1/2**	25	0	160	80.24
P429-251C	**2X2X1-1/2X1-1/2**	25	0	160	80.33
P429-337C	**3X3X1-1/2X1-1/2**	6	0	160	124.78
P429-338C	**3X3X2X2**	10	0	160	135.17
P429-419C	**4X4X1-1/2X1-1/2**	7	0	160	133.66
P429-420C	**4X4X2X2**	7	0	160	135.56
P429-422C	**4X4X3X3**	8	0	160	149.66
P441 Vent Tee					
All Hub					
P441-020C	**2**	25	0	160	79.24
P441-030C	**3**	10	0	160	101.93
P441-040C	**4**	5	0	160	143.93
P441-060C	**6**	4	0	160	352.21
P441-080C	**8**	2	0	159	693.73

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P444X Cleanout Tee w/Plug					
H x H x Fpt					
P444X-015C	**1-1/2**	20	0	160	48.20
P444X-020C	**2**	10	0	160	53.25
P444X-030C	**3**	10	0	160	111.65
P444X-040C	**4**	10	0	160	152.05
P444X-060C	**6**	2	0	160	410.65
P445 Cleanout Tee					
H x H x Fpt					
P445-015C	**1-1/2**	20	0	160	40.89
P445-020C	**2**	25	0	160	45.28
P445-030C	**3**	10	0	160	97.74
P445-040C	**4**	10	0	160	136.44
P445-060C	**6**	3	0	160	428.82
P445X Cleanout Tee with Counter Sunk Plug					
H x H					
P445X-015C	**1-1/2**	20	0	160	48.20
P445X-020C	**2**	10	0	160	53.25
P445X-030C	**3**	10	0	160	111.65
P445X-040C	**4**	10	0	160	152.05
P445X-060C	**6**	3	0	160	459.69
P448 2-WAY Cleanout					
All Hub					
P448-030C	**3**	12	0	160	165.14
P448-040C	**4**	5	0	160	232.61
P500 Double Fixture Fitting					
All Hub					
P500-020C	**2X2X2X2**	10	0	160	94.08
P500-030C	**3X3X3X3**	10	0	160	193.97
P500-241C	**2X1-1/2X1-1/2X1-1/2**	20	0	160	85.08
P500-251C	**2X2X1-1/2X1-1/2**	20	0	160	87.29
P500-338C	**3X2X3X3**	10	0	160	176.53
P501 Combo Wye + 1/8 Bend (Long Turn Tee Wye)					
All Hub					
P501-015C	**1-1/2**	50	0	160	53.87
P501-020C	**2**	20	0	160	71.88
P501-030C	**3**	10	0	160	114.76
P501-040C	**4**	8	0	160	162.99
P502 Combination Wye + 1/8 Bend Reducing (Long Turn Tee Wye)					
All Hub					
P502-251C	**2X2X1-1/2**	20	0	160	64.71
P502-337C	**3X3X1-1/2**	15	0	160	95.45
P502-338C	**3X3X2**	10	0	160	103.40
P502-420C	**4X4X2**	5	0	160	143.17
P502-422C	**4X4X3**	5	0	160	150.22
P502-578C	**8X8X2**	1	0	159	368.08
P503 Combination Wye and 1/8 Bend (Two Piece)					
All Hub					
P503-060C	**6**	4	0	160	440.54
P503-080C	**8**	1	0	159	810.59

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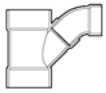
LabWaste™ CPVC Corrosive Waste Drainage Systems

P503 Combination Wye and 1/8 Bend (Two Piece) (continued)

All Hub

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P503-100C	10	1	0	159	1055.32

P504 Combination Wye and 1/8 Bend, Reducing (Two Piece)



All Hub

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P504-241C	2X1-1/2X1-1/2	5	0	160	83.82
P504-528C	6X2	5	0	160	298.13
P504-530C	6X3	5	0	160	333.45
P504-532C	6X4	5	0	160	346.29
P504-582C	8X4	2	0	159	536.11
P504-585C	8X6	1	0	159	544.18
P504-623C	10X3	1	0	159	661.94
P504-624C	10X4	1	0	159	711.43
P504-626C	10X6	1	0	159	745.97
P504-628C	10X8	1	0	159	832.23
P504-664C	12X4	1	0	159	1572.91
P504-668C	12X8	1	0	159	1381.96
P504-670C	12X10	1	0	159	1590.82

P507 Double Combination Wye and 1/8 Bend



All Hub

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P507-020C	2	10	0	160	142.11
P507-030C	3	10	0	160	244.23
P507-040C	4	5	0	160	462.81
P507-060C	6	2	0	160	1047.58
P507-338C	3X3X2X2	10	0	160	204.75
P507-422C	4X4X3X3	5	0	160	256.39
P507-530C	6X6X3X3	2	0	160	543.99
P507-532C	6X6X4X4	1	0	160	620.78

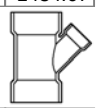
P600 45° Wye



All Hub

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P600-015C	1-1/2	50	0	160	41.26
P600-020C	2	25	0	160	57.88
P600-030C	3	8	0	160	103.16
P600-040C	4	8	0	160	150.37
P600-060C	6	4	0	160	381.74
P600-080C	8	1	0	159	415.51
P600-100C	10	1	0	159	654.03
P600-120C	12	1	0	159	1434.67

P601 45° Wye, Reducing



All Hub

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P601-241C	2X1-1/2X1-1/2	25	0	160	58.62
P601-251C	2X2X1-1/2	25	0	160	57.88
P601-337C	3X3X1-1/2	15	0	160	88.82
P601-338C	3X3X2	12	0	160	96.17
P601-419C	4X4X1-1/2	10	0	160	130.59
P601-420C	4X4X2	10	0	160	138.41
P601-422C	4X4X3	10	0	160	144.34
P601-528C[1]	6X6X2	5	0	160	282.14
P601-530C	6X6X3	6	0	160	245.22
P601-532C	6X6X4	5	0	160	247.89
P601-580C	8X8X3	2	0	159	282.18
P601-582C	8X8X4	1	0	159	288.77
P601-585C	8X8X6	1	0	159	321.38
P601-624C[1]	10X10X4	1	0	159	709.37
P601-626C	10X10X6	1	0	159	570.92
P601-628C	10X10X8	1	0	159	593.76
P601-661C[1]	12X12X2	1	0	159	1740.49

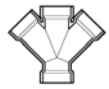
P601 45° Wye, Reducing (continued)

All Hub

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P601-663C[1]	12X12X3	1	0	159	1755.57
P601-664C[1]	12X12X4	1	0	159	1759.68
P601-666C[1]	12X12X6	1	0	159	1765.59
P601-668C[1]	12X12X8	1	0	159	1874.68
P601-670C[1]	12X10	1	0	159	1827.94

[1]Sized with Bushing

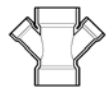
P611 Double Wye



All Hub

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P611-015C	1-1/2	40	0	160	77.43
P611-020C	2	20	0	160	81.85
P611-030C	3	15	0	160	147.96
P611-040C	4	5	0	160	337.53
P611-060C	6	2	0	160	586.97

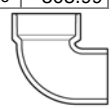
P612 Double Wye, Reducing



All Hub

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P612-241C	2X1-1/2X1-1/2X1-1/2	10	0	160	120.64
P612-251C	2X2X1-1/2X1-1/2	10	0	160	122.81
P612-337C	3X3X1-1/2X1-1/2	10	0	160	136.92
P612-338C	3X3X2X2	15	0	160	151.13
P612-420C	4X4X2X2	5	0	160	292.67
P612-422C	4X4X3X3	5	0	160	299.00
P612-532C	6X6X4X4	5	0	160	505.99

P335 Trap Elbow (for use with Traps only)



H x S

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P335-030C	3	30	0	160	81.58
P335-040C	4	25	0	160	189.40

P700 Return Bend



H x H

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P700-015C	1-1/2	20	0	160	54.00
P700-020C	2	35	0	160	75.42
P700-030C	3	8	0	160	112.20
P700-040C	4	6	0	160	213.74
P700-060C	6	2	0	160	309.94
P700-080C	8	1	0	159	419.34

P704P Tail Piece Adapter



Spig x Slip w/Plastic Nut

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P704P-015C	1-1/2	25	0	160	21.17

P705 S-Trap



H x H

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P705-015C	1-1/2	25	0	160	84.72
P705-020C	2	25	0	160	118.22
P705-030C	3	10	0	160	215.37
P705-040C	4	5	0	160	389.69

P705R Running Trap



H x H

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P705R-015C	1-1/2	25	0	160	84.72
P705R-020C	2	25	0	160	118.22
P705R-030C	3	10	0	160	215.37
P705R-040C	4	5	0	160	389.27

LabWaste™ CPVC Corrosive Waste Drainage Systems

P706X P-Trap
H x H



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P706X-015C	1-1/2	25	0	160	63.53
P706X-020C	2	20	0	160	88.66
P706X-030C	3	10	0	160	160.93
P706X-040C	4	4	0	160	286.06
P706X-060C	6	2	0	160	849.08
P706X-080C	8	1	0	159	1003.98
P706X-100C	10	1	0	159	1599.89
P706X-120C	12	1	0	159	1797.72

P707X P-Trap w/Cleanout
H x H



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P707X-015C	1-1/2	10	0	160	71.09

P708P P-Trap w/Plastic Nut (Union Connection)
H x H



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P708P-015C	1-1/2	25	0	160	55.32
P708P-020C	2	25	0	160	95.82

P711P L.A Pattern P-Trap w/Plastic Nut
(Union Connection w/Slip Joint) Slip x H w/Plastic Nut



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P711P-015C	1-1/2	25	0	160	120.93

P712 Jar Trap
Spig x H



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P712-015C	1-1/2	1	0	169	109.33

P712P Jar Trap w/Tail Piece Adapter
Slip x H



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P712P-015C	1-1/2	1	0	169	130.49

P720 Drum Trap
H x H



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
P720-015C	1-1/2	4	0	160	265.62
P720-020C	2	4	0	160	420.74
P720-030C	3	4	0	160	582.91
P720-040C	4	4	0	160	668.98

854 Flange, Van Stone Style
Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
854-015C	1-1/2	20	0	090	40.95
854-020C	2	10	0	090	49.59
854-030C	3	10	0	090	107.56
854-040C	4	5	0	090	145.25
854-060C	6	5	0	090	247.51
854-080C	8	2	0	090	744.72
854-100C	10	2	0	091	1792.81
854-120C	12	2	0	091	2690.18
854-140C	14	1	0	095	3031.38
854-160C	16	1	0	095	3789.24

Waste Assembly
Sink Outlet



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
LWWA-1	1-1/2	10	0	169	96.48

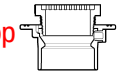
LabWaste™ Air Admittance Valve
Spigot



Maimum 6 DFU (Drainage Fixture Units)

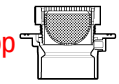
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
AAV-015C	1-1/2	12	0	286	58.32

LW1500 Floor Drain with CPVC Adjustable Top w/5" Round Grate



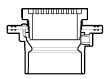
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
LW1500-015C	1-1/2X5	4	0	169	389.75
LW1500-020C	2X5	4	0	169	389.75
LW1500-030C	3X5	4	0	169	389.75
LW1500-040C	4X5	4	0	169	389.75

LW1520 Floor Drain with CPVC Adjustable Top w/5" Round Grate & Strainer



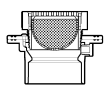
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
LW1520-015C	1-1/2X5	3	0	169	445.64
LW1520-020C	2X5	3	0	169	445.64
LW1520-030C	3X5	3	0	169	445.64
LW1520-040C	4X5	3	0	169	445.64

LW150M Floor Drain with CPVC Adjustable Top w/5" Round Grate & Membrane Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
LW150M-015C	1-1/2X5	4	0	169	432.41
LW150M-020C	2X5	4	0	169	432.41
LW150M-030C	3X5	4	0	169	432.41
LW150M-040C	4X5	4	0	169	432.41

LW152M Floor Drain with CPVC Adjustable Top w/5" Round Grate, Strainer & Membrane Collar



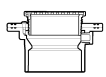
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
LW152M-015C	1-1/2X5	4	0	169	486.81
LW152M-020C	2X5	4	0	169	486.81
LW152M-030C	3X5	4	0	169	486.81
LW152M-040C	4X5	4	0	169	486.81

Floor Drain with Stainless Steel Adjustable Top w/Round Grate



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
LW1500-015S	1-1/2X5	4	0	169	411.80
LW1600-015S	1-1/2X6	4	0	169	430.93
LW1700-015S	1-1/2X7	4	0	169	458.88
LW1800-015S	1-1/2X8	4	0	169	598.59
LW1500-020S	2X5	4	0	169	411.80
LW1600-020S	2X6	4	0	169	430.93
LW1700-020S	2X7	4	0	169	458.88
LW1800-020S	2X8	4	0	169	598.59
LW1500-030S	3X5	4	0	169	411.80
LW1600-030S	3X6	4	0	169	430.93
LW1700-030S	3X7	2	0	169	458.88
LW1800-030S	3X8	4	0	169	598.59
LW1500-040S	4X5	4	0	169	411.80
LW1600-040S	4X6	4	0	169	430.93
LW1700-040S	4X7	4	0	169	458.88
LW1800-040S	4X8	4	0	169	598.59

Floor Drain with Stainless Steel Adjustable Top w/Round Grate & Membrane Collar



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
LW150M-015S	1-1/2X5	4	0	169	454.45
LW160M-015S	1-1/2X6	4	0	169	473.57
LW170M-015S	1-1/2X7	4	0	169	501.53

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

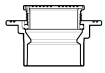
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

LabWaste™ CPVC Corrosive Waste Drainage Systems

Floor Drain with Stainless Steel Adjustable Top w/Round Grate & Membrane Collar (continued)

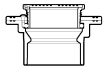
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
LW180M-015S	**1-1/2X8**	4	0	169	641.24
LW150M-020S	**2X5**	1	5	169	454.45
LW160M-020S	**2X6**	4	0	169	473.57
LW170M-020S	**2X7**	4	0	169	501.53
LW180M-020S	**2X8**	4	0	169	641.24
LW150M-030S	**3X5**	4	0	169	454.45
LW160M-030S	**3X6**	4	0	169	473.57
LW170M-030S	**3X7**	4	0	169	501.53
LW180M-030S	**3X8**	2	0	169	641.24
LW150M-040S	**4X5**	4	0	169	454.45
LW160M-040S	**4X6**	4	0	169	473.57
LW170M-040S	**4X7**	4	0	169	501.53
LW180M-040S	**4X8**	4	0	169	641.24

LW1510 Floor Cleanout w/Stainless Steel Adjustable Round Top & Solid Access Cover



LW1510-015S	**1-1/2X5**	4	0	169	441.22
LW1510-020S	**2X5**	6	0	169	441.22
LW1510-030S	**3X5**	4	0	169	441.22
LW1510-040S	**4X5**	4	0	169	441.22

LW151M Floor Cleanout w/Stainless Steel Adjustable Round Top, Solid Access Cover & Membrane Collar



LW151M-015S	**1-1/2X5**	4	0	169	470.65
LW151M-020S	**2X5**	4	0	169	470.65
LW151M-030S	**3X5**	4	0	169	470.65
LW151M-040S	**4X5**	4	0	169	470.65

LWTP CPVC Tail Piece

May be cut to desired length



LWTP-015060	**1-1/2X6**	10	0	169	40.32
LWTP-015120	**1-1/2X12**	20	0	169	60.48
LWTP-015140	**1-1/2X14**	20	0	169	74.95

LWTPN CPVC Tail Piece with Nut

May be cut to desired length



LWTPN-015060	**1-1/2X6**	10	0	169	50.88
LWTPN-015120	**1-1/2X12**	20	0	169	71.04
LWTPN-015140	**1-1/2X14**	20	0	169	81.38

LabWaste™ CPVC Pipe

10' Lengths, Price Per Foot



List Price Per Foot, may be cut to desired length

LW-015	**1-1/2**	10	0	161	7.26
LW-020	**2**	10	0	161	9.82
LW-030	**3**	10	0	161	17.76
LW-040	**4**	10	0	161	25.21
LW-060	**6**	10	0	161	45.51
LW-080	**8**	10	0	157	87.92
LW-100	**10**	10	0	157	142.35
LW-120	**12**	10	0	157	188.06
LW-140	**14**	10	0	158	229.34
LW-160	**16**	10	0	158	299.31

20' length available upon request

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

LW-5 LabWaste™ One-Step CPVC Cement



LW5-020	**Pint**	12	0	704	45.51
LW5-030	**Quart**	12	0	704	60.67
LW5-040	**Gallon**	6	0	704	246.82
LW5-050	**5 Gallon**	1	0	704	1234.15

AVERAGE NUMBER OF JOINTS Per Quart of Solvent Cement

PIPE DIAMETER	NUMBER OF JOINTS
1/2"	300
3/4"	200
1"	125
1-1/2"	90
2"	60
3"	40
4"	30
6"	10
8"	5
10"	2-3
12"	1-2

These figures are based on laboratory tests. Due to many field variations, these should be used as a general guide only.

Empty Cans



MT-654*	**Pint**	12	0	710	5.50
MT-651*	**Quart**	12	0	710	7.14
MT-653**	**Quart**	12	0	710	8.36
MT-647	**Gallon**	6	0	710	16.88
MT-648	**Gallon**	6	0	710	18.72

MT-647, MT-651 & MT-654 have 1-3/4 Screw Neck
MT-648 has 2-7/8" Screw Neck
MT-653 is Paint-Type Can

Brush

For Pint and Quart Cans



KD-110	**4-1/2" Length**	25	0	710	9.59
KD-112	**5-1/2" length**	25	0	710	9.59

1" Brush w/1-3/4" Screw Cap, for pipe size 3/4" - 2"

Cap Swab



5020	**4" Length**	24	0	710	14.89

Fits 1-3/4" Neck Quart Cans (MT-651). 4" length for pipe size 3" to 8"

Large Mouth Can Swab



4020	**4" Length**	24	0	710	21.96

Fits 2-7/8" Neck Gallon Can MT-648

Swab with Heavy Handle



4520	**4" length**	12	0	710	18.59

For Pipe Sizes 6" & Larger

Roller



3020	**3" length**	20	0	710	16.03

Fits Paint Type Quart Can (MT-653). For use with pipe sizes 3" to 6"

LabWaste™ CPVC Corrosive Waste Drainage Systems

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Large Roller



7020	**7" length**	20	0	710	19.97
Fits 2-78" Neck Gallon Can MT-648					

Roller with Heavy Handle



Replaceable Cover

5520	**4" length**	12	0	710	15.17
6520	**6" length**	12	0	710	18.59
For Pipe Sizes 6" & Larger					

Cap Dauber



DP-75	**3/4" for Pint**	50	0	710	1.31
DP-125	**1-1/4" for Pint**	50	0	710	1.58
DQ-125	**1-1/4" for Quart**	50	0	710	1.58
DP Fits Pint Cans DQ Fits Quart Cans					

Can-Mate Dauber



CM-75	**3/4"**	50	0	710	5.26
CM-150	**1-1/4"**	50	0	710	5.26
3/4" Diameter for pipe size to 1-1/2" 1-1/4" Diameter for pipe size 1-1/2" to 3"					

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Acid Neutralization/Dilution Tanks for Use With **LabWaste™ CPVC Systems**

Neutralization or dilution tanks are required by codes for the purpose of neutralizing corrosive wastes. Corrosive liquids, spent acids or other harmful chemicals that destroy or damage a drain, sewer, soil or waste pipe, or create noxious or toxic fumes or interfere with sewage treatment processes are prohibited from discharge into the plumbing system without being neutralized or treated. Spears® offers a standard selection of HDPE tanks in 5 gallon to 3000 gallon capacities and CPVC tanks in 5 gallon to 55 gallon capacities with connection and vent options listed below, plus convenient 1- gallon Dilution Tank designed for under-sink installation. Tanks can also be produced in virtually any custom size, shape, or connection configuration. Contact Spears® Technical Services with desired specifications for custom quotation.

Standard HDPE Round Tanks Technical Information
Construction: HDPE – High Density Polyethylene

Tank Capacity US Gallons	Approx Useable Capacity, US Gallons		Inside Dimension Dia. x Ht. (in.)	Wall Thickness (in.)	Approx Weight (lbs)	Standard Inlet & Outlet Connection Size (in.)	Standard Fitting Connection	**LabWaste™** Transition Connection Fitting[3]	Optional[4] Vent Connection Size (in.)	Approx. Centerline Height (in.)[5]		
	Without Limestone	With Limestone								Inlet	Outlet	Vent
5	3	1	11 x 14	3/16	10	1-1/2 or 2	Mipt	P101	1-1/2 or 2	11	8	12
15	7	2	18 x 15	3/16	20	1-1/2 or 2	Mipt	P101	1-1/2 or 2	11	8	12
30	19	6	18 x 29	3/16	35	3	Mipt	P101	2 or 3	23	19	25
55	35	12	22 x 36	3/16	50	4	Mipt	P101	3 or 4	27	23	31
100	77	26	28 x 42	1/4	85	4	Mipt	P101	3 or 4	35	31	37
150	105	35	31 x 48	1/4	100	4	Mipt	P101	3 or 4	38	34	42
175	135	45	30 x 60	1/4	125	4	Mipt	P101	3 or 4	51	47	54
200	137	46	36 x 48	1/4	125	4 or 6	Mipt/Flange	P101/854	4 or 6	38	34	42
275	186	62	42 x 48	1/4	160	4 or 6	Mipt/Flange	P101/854	4 or 6	38	34	42
300	230	76	36 x 74	5/16	175	4 or 6	Mipt/Flange	P101/854	4 or 6	61	56	65
350	243	81	48 x 48	5/16	200	4 or 6	Mipt/Flange	P101/854	4 or 6	38	34	42
500	395	132	52 x 60	3/8	225	4 or 6	Mipt/Flange	P101/854	4 or 6	51	47	54
550	447	149	48 x 72	3/8	275	4 or 6	Mipt/Flange	P101/854	4 or 6	64	60	67
650	548	183	48 x 84	3/8	375	4 or 6	Mipt/Flange	P101/854	4 or 6	75	71	76
1200	1052	351	69 x 84	3/8	600	4 or 6	Mipt/Flange	P101/854	4 or 6	74	68	76
2000[1]	1559	521	84 x 84	1/2	850	4 or 6	Mipt/Flange	P101/854	4 or 6	74	68	76
3000[1]	2203	735	95 x 97	1/2	1350	4 or 6	Mipt/Flange	P101/854	4 or 6	87	83	91

Standard CPVC Round Tanks Technical Information
Construction: Chlorinated Polyvinyl Chloride (CPVC)

Tank Capacity US Gallons	Approx Useable Capacity, US Gallons		Inside Dimension Dia. x Ht. (in.)	Wall Thickness (in.)	Approx Weight (lbs)	Standard[2] Inlet & Outlet Connection Size (in.)	Standard Fitting Connection	**LabWaste™** Transition Connection Fitting[3]	Optional[4] Vent Connection Size (in.)	Approx. Centerline Height (in.)[5]		
	Without Limestone	With Limestone								Inlet	Outlet	Vent
5	5	3	12-3/8 x 14-11/16	3/16	20	1-1/2 or 2	Soc	direct	1-1/2 or 2	11	8	12
15	15	7	17-11/16 x 17-1/4	3/16	35	1-1/2 or 2	Soc	direct	1-1/2 or 2	11	8	12
30	30	18	17-5/8 x 33	3/16	54	3	Soc	direct	2 or 3	23	18	25
55	55	35	23-1/2 x 38-1/2	1/4	70	4	Soc	direct	3 or 4	27	23	31

Important Notes

1 Larger HDPE tanks may include exterior steel banding or fiberglass reinforcement for additional strength. Special ordered optional inspection manhole ports are recommended for larger tanks (includes cover with neoprene gasket, stainless steel nuts, bolts, and washers).

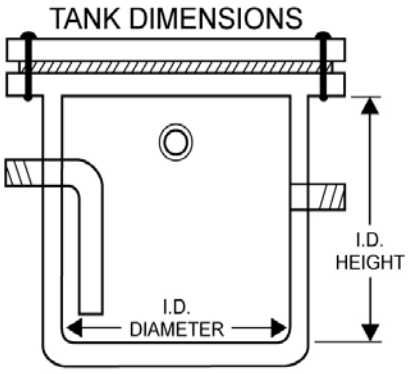
2 All tanks can be special ordered with Mipt, Flanged (150#), and Fipt connections or varying combinations other than standard connections specified. Inlets or vents may also be custom ordered for installation in covers instead of tank sides.

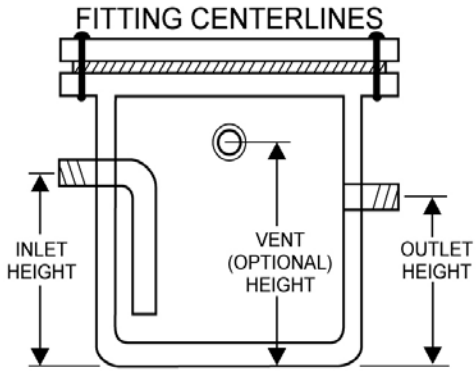
3 For transitions from Mipt HDPE tank connections to **LabWaste™** piping use part numbers P101-xxxC, Female Adapter. CPVC tank sockets can be cemented directly to **LabWaste™** piping. For transitions from ALL flanged connections to **LabWaste™** piping use part numbers 854-xxxC, Flange (xxx = size code).

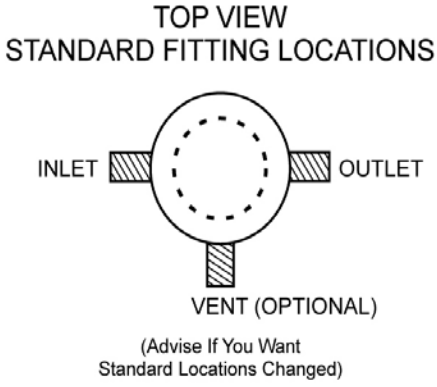
4 Venting is required by codes but may be accomplished either at the tank or in-line.

5 Neutralization tanks and tank extensions are not warranted for direct burial applications. Tanks must be properly placed and secured with no applied stresses, within a dry concrete vault with use of a protective traffic cover as deemed appropriate. However, if direct burial is used without warranty, custom centerlines must be furnished from top of cover down to fitting centerline instead of specified tank bottom to fittings centerline since tank heights can vary.

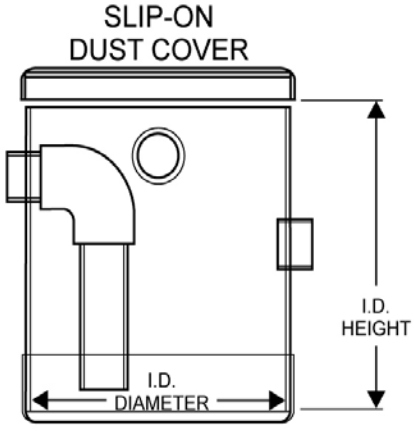
HDPE Tanks

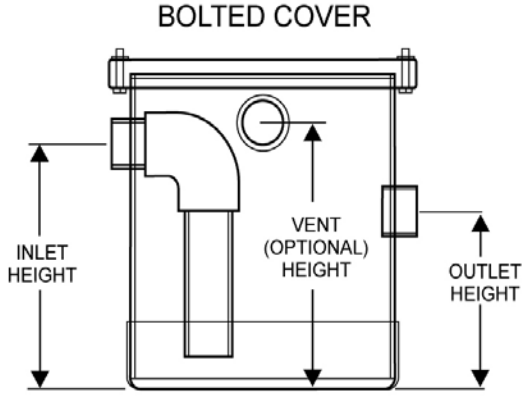






CPVC Tanks





PRICE SCHEDULE

LabWaste™ Standard HDPE Round Neutralization Tanks

Nominal US Gallons	Inlet & Outlet Size (in.)	Inlet & Outlet Connection	HDPE Tank Part No./ Price	Disc Code
5	1-1/2	Mipt	T20051414B 871.11	169
5	2	Mipt	T20052424B 871.11	169
15	1-1/2	Mipt	T20151414B 1,368.89	169
15	2	Mipt	T20152424B 1,368.89	169
30	3	Mipt	T20303434B 1,953.78	169
55	4	Mipt	T20554444B 2,483.91	169
100	4	Mipt	T21004444B 3,297.78	169
150	4	Mipt	T21504444B 4,293.33	169
175	4	Mipt	T21754444B 5,600.00	169
200	4	Mipt	T22004444B 6,097.78	169
275	4	Mipt	T22754444B 7,155.56	169
300	4	Mipt	T23004444B 7,840.00	169
350	4	Mipt	T23504444B 8,151.11	169
500	4	Mipt	T25004444B 11,200.00	169
550	4	Mipt	T25504444B 13,253.33	169
650	4	Mipt	T26504444B 14,746.67	169
1200	4	Mipt	T212C4444B 27,253.33	169
2000	4	Mipt	T220C4444B 37,955.56	169
3000	4	Mipt	T230C4444B 52,204.44	169

Optional Vent Outlet (recommended) for HDPE Tank			
Vent Size (in.)	Vent Connection	Add-on to Part No. / and to Price	Disc Code
1-1/2	Mipt	14 149.33	169
2	Mipt	24 149.33	169
3	Mipt	34 211.55	169
4	Mipt	44 298.66	169
6	Mipt	63 497.77	169

Example: T20051414B14

LabWaste™ Standard CPVC Round Neutralization Tanks

Additional Inlet/Outlet Sizes, Combinations & Custom Configurations Available

Nominal US Gallons	Inlet & Outlet Size (in.)	Inlet & Outlet Connection	CPVC Tank Part No./Price		Disc Code
			Dust (slip) Cover	Bolted Cover	
5	1-1/2	Soc	T30051212A 1,394.75	T30051212B 3,205.14	169
5	2	Soc	T30052222A 1,394.75	T30052222B 3,205.14	169
15	1-1/2	Soc	T30151212A 1,926.04	T30151212B 4,455.49	169
15	2	Soc	T30152222A 1,926.04	T30152222B 4,455.49	169
30	3	Soc	T30303232A 2,575.76	T30303232B 5,004.89	169
55	4	Soc	T30554242A 4,974.78	T30554242B 8,237.62	169

Optional Vent Outlet (recommended) for CPVC Tank

Vent Size (in.)	Vent Connection	Add-on to Part No. / and to Price	Disc Code
1-1/2	Soc	12 147.07	169
2	Soc	22 147.07	169
3	Soc	32 220.62	169
4	Soc	42 294.15	169

Example: T30051212A12

Neutralization Tank Sizing Table

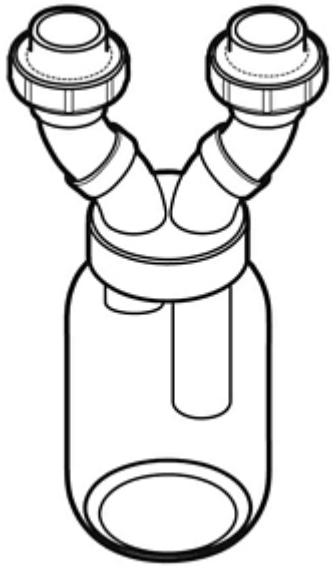
The following recommendation from the American Society of Plumbing Engineers (ASPE) may be used as a guideline for sizing tanks according to the number of lab sinks.

Number of Lab Sinks	Tank Size, Gal (L)	
2	5	(18.9)
4	15	(56.8)
8	30	(113.6)
16	55	(208.2)
22	75	(283.9)
27	90	(340.7)
30	108	(408.8)
40	150	(567.8)
50	175	(662.4)
60	200	(757.0)
75	275	(1040.9)
110	360	(1362.6)
150	500	(1898.5)
175	550	(2081.8)
200	650	(2460.3)
300	1200	(4542)
500	2000	(7570)
600	3000	(11355)

Note: For commercial and industrial laboratories, the number of lab sinks should be multiplied by a 0.5 use factor. (ASPE Data Book Vol. 3, Page 42, 2001).

LabWaste™ 1-Gallon CPVC Dilution Tanks

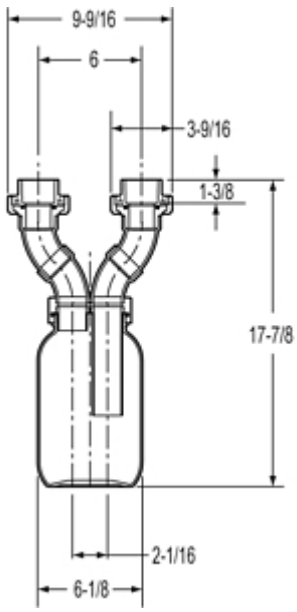
Provides chemical dilution from water rinse during use. Designed for under-sink installations. CPVC construction with Glass or PP Jar type tank.



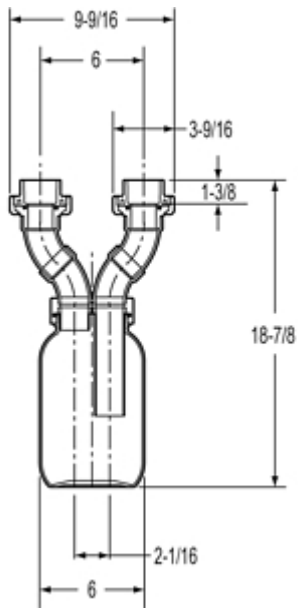
Nominal US Gallons	Inlet & Outlet Size (in.)	Inlet & Outlet Connection	CPVC Tank Part Glass Jar Tank No./Price	Disc Code
1	1-1/2	Socket Union	T3001G1515 404.45	169

Nominal US Gallons	Inlet & Outlet Size (in.)	Inlet & Outlet Connection	CPVC Tank Part Polypropylene Jar Tank No./Price	Disc Code
1	1-1/2	Socket Union	T3001P1515 291.20	169

Dimensions



Glass



Polypropylene

LabWaste™ 1-Gallon CPVC Dilution Traps

Provides chemical dilution from water rinse during use. Designed for under-sink installations as a trap. CPVC construction with Glass or PP Jar type tank.

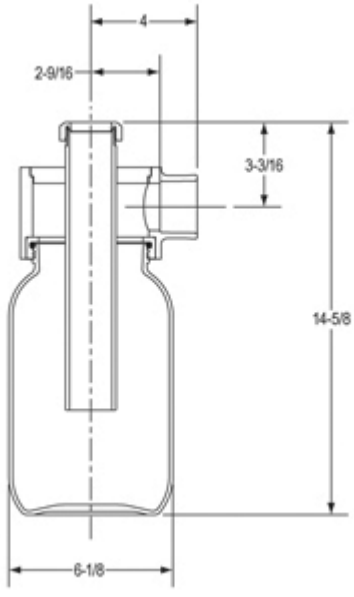


Nominal US Gallons	Inlet & Outlet Size (in.)	Inlet	Outlet	CPVC Tank Part Glass Jar Tank No./Price	Disc Code
1	1-1/2	Slip	Socket	T4001G1612 404.45	169

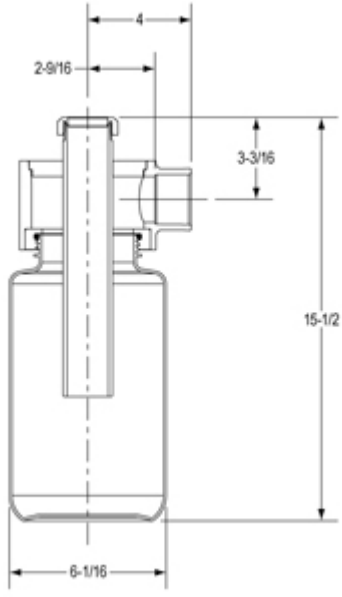
Nominal US Gallons	Inlet & Outlet Size (in.)	Inlet	Outlet	CPVC Tank Part Polypropylene Jar Tank No./Price	Disc Code
1	1-1/2	Slip	Socket	T4001P1612 291.20	169

Note: Slip connections are for sink drain tailpiece.

Dimensions

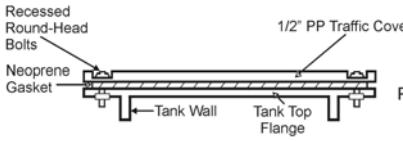


Glass

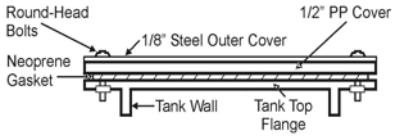


Polypropylene

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com



Light-Duty
Pedestrian Traffic Covers



Heavy-Duty
Pedestrian Traffic Covers

Pedestrian Traffic Covers

Traffic Covers are priced and ordered separately with tank order in lieu of standard tank cover. Constructed from 1/2" white PP with recessed bolts and anchoring nuts. Covers are designed for light pedestrian traffic and flush floor installation.

Part Number	Tank Size Range	List Price Each	Disc Code
PTC-5	5-gal thru 55-gal	735.38	169
PTC-100	100-gal thru 300-gal	882.44	169
PTC-350	350-gal thru 650-gal	1,250.13	169
PTC-1200	1200-gal thru 3000-gal	2,206.12	169

Heavy-Duty Pedestrian Traffic Covers

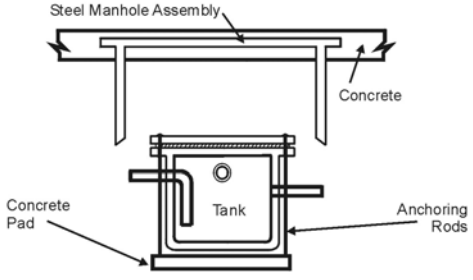
Traffic Covers are priced and ordered separately with tank order in lieu of standard tank cover. Constructed with 1/8" steel, primer coated, over 1/2" white PP with round head slotted bolts and anchoring nuts. Heavy-Duty Traffic Covers are designed for heavy pedestrian traffic and flush floor installation.

Part Number	Tank Size Range	List Price Each	Disc Code
HPTC-5	5-gal thru 55-gal	1,470.74	169
HPTC-100	100-gal thru 300-gal	1,911.95	169
HPTC-350	350-gal thru 650-gal	2,500.25	169
HPTC-1200	1200-gal thru 3000-gal	4,412.22	169

Vehicular Traffic Covers

Vehicular Traffic Covers are priced and ordered separately with tank. Covers are constructed from minimum 3/8" Diamond Plate steel supported by an external steel frame. Standard tank covers are used on tanks located below these steel manhole assemblies. Requires concrete pad below tank. Check with factory for frame height (may be extended in the field).

Part Number	Cover Size	Tank Application	Approx. Wt.(lbs.)	List Price Each	Disc Code
VTC18R	18" round	Fits 5-gallon units	100	735.38	169
VTC24S	24" square	Fits 5-gallon units	100	1,029.52	169
VTC30R	30" round	Fits 15 & 30-gallon units	150	1,456.02	169
VTC30S	30" square			1,456.02	169
VTC36R	36" round	Fits 55-gallon units	200	2,059.04	169
VTC36S	36" square			2,059.04	169
VTC42R	42" round	Fits 100, 150 & 175-gallon units	300	2,941.46	169
VTC42S	42" square			2,941.46	169
VTC48R	48" round	Fits 200 & 300-gallon units	400	3,676.85	169
VTC48S	48" square			3,676.85	169
VTC54R	54" round	Fits 275-gallon units	500	5,882.96	169
VTC54S	54" square			5,882.96	169
VTC60R	60" round	Fits 350, 550 & 650-gallon units	750	6,618.33	169
VTC60S	60" square			6,618.33	169



Vehicular Traffic Covers with Manhole Assembly

LabWaste™ Manhole Ports, Tank Extensions and Limestone Chips

Optional Inspection Manhole Ports & Tank Extensions

Manhole Assemblies are priced and ordered separately with tank order in lieu of standard tank cover. Assemblies include matching covers, Neoprene gaskets and stainless steel nuts, bolts, and washers; fabricated into the standard tank cover.

Part Number	Manhole Size	List Price Each	Disc Code
MH180	18	1,176.60	169
MH110	11	764.79	169
MH060	6	573.58	169
MH040	4	441.22	169

Tank Extensions

Tanks may be special ordered with extensions to increase the overall height of the tank. Extensions ranging from 1" to almost two (2) times the tank height are at a charge of double the list price for the basic tank. For example, a 55−gallon tank has a height of 36". Extended tank heights of 37" to 70" are twice the price of a standard 55-gallon tank. For higher extensions, contact Spears®. Special covers are needed for flush floor, in-ground installations. Standard covers are not designed for any traffic or load bearing.

Limestone Chips for Acid Neutralization Tanks

Most state and local codes require the addition of a neutralization medium in acid waste tanks with the addition of water for dilution prior to discharge into a sanitary sewer system. Limestone must be 1" to 3" in diameter with a calcium carbonate content of at least 90%. Spears® offers high grade Limestone Chips having a calcium carbonate content of approximately 95%. The use of Limestone Chips is generally one of the best and least expensive means of acid neutralization, but may be used in conjunction with more sophisticated chemical treatments if necessary.

How Much to Use: The following is a guideline for pounds of Limestone Chips to use for one (1) tank filling (charge). It is recommended that sufficient quantity be ordered for more than one filling.

Tank Size (gallons)	Approx. Pounds
5	50
15	100
30	200
55	500
100	1,000
150	1,750
175	1,900
200	2,500
275	3,200
300	3,200
350	4,000
500	5,000
550	7,500
650	9,000
1200	11,000
2000	16,000
3000	25,000

Maintenance: Tanks should be inspected routinely for accumulation of precipitated sludge and debris that must be cleaned out (usually scooped out) and for periodic addition of limestone and water if necessary. While once every one to three months may be sufficient, professional assistance should be sought to establish a proper schedule based on actual use. Note: Tank must be filled with water prior to carefully adding Limestone Chips to charge the system. Request instruction sheet.

Standard 50-lb. Bags
Regular & Dolomitic Limestone

Limestone Chips are conveniently packaged in 50-lb. plastic bags but may be special ordered loose. Actual bag weight may vary by + 15%. Special dolomitic limestone is used for wastes predominantly composed of sulfuric acid (battery acid). Allow three to five weeks delivery.

Part Number	List Price Each				Disc Code
	1-4 bags	5-20 bags	21-39 bags	40 & up bags	
Regular Limestone					
RLC-50	73.54	66.19	58.82	44.11	169
Dolomitic Limestone					
DLC-50	147.07	132.36	117.66	88.25	169

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

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Lab Ball Valves



Socket/Threaded Valve Only

Pressure Rating @ 73°F (23°C), Water
1/4" - 3/8" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service

All Valves Assembled with Silicone-Free, Water Soluble Lubricant

Valve & Adapters includes:
1 - Threaded 1/4" Valve
2 - O-ring Sealed 1/4" MPT x Mipt Adapters
2 - EPDM or FKM O-rings (AS568-013 size)
1 - End Connector Wrench
2 - O-ring Sealed 1/4" MPT x 3/8" I.D. Tubing Barb Adapters
- OR -
2 - O-ring Sealed 1/4" MPT x 1/4" I.D. Tubing Barb Adapters



Valve & Adapters

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Valve & Adapters Threaded Ends					
1/4X1/4T	1529-002A **25.75**	1539-002A **26.92**	1	25	218
1/4X3/8T	1529-002 **25.75**	1539-002 **26.92**	1	25	218
Valve only Threaded Ends					
1/4	1521-002 **20.58**	1531-002 **22.91**	50	200	218
3/8	1521-003 **28.93**	1531-003 **32.07**	50	200	218
Valve only Socket Ends					
1/4	1522-002 **20.58**	1532-002 **23.28**	50	200	218
3/8	1522-003 **28.93**	1532-003 **32.07**	50	200	218

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
Valve & Adapters Threaded Ends					
1/4X1/4T	1529-002CA **30.91**	1539-002CA **31.51**	1	25	219
1/4X3/8T	1529-002C **30.91**	1539-002C **31.51**	1	25	219
Valve only Threaded Ends					
1/4	1521-002C **24.75**	1531-002C **27.21**	50	200	219
3/8	1521-003C **34.71**	1531-003C **32.53**	50	200	219
Valve only Socket Ends					
1/4	1522-002C **24.75**	1532-002C **29.45**	50	200	219
3/8	1522-003C **34.71**	1532-003C **38.53**	50	200	219

Needle Valves



Pressure Rating @ 73°F (23°C), Water
PVC or CPVC 235 psi
PP 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
PP = 180°F (82°C)
Solid PTFE Stem Seals
No Elastomer or Lubricants used
Valves include Panel Mounting Nut

PVC Needle Valve

Size	Threaded	Socket	SR Threaded	Std Pk	Mstr Pk	Disc Code
Globe Pattern						
1/4	5591-002 71.27	5592-002 71.27	---	1	18	218
3/8	5591-003 71.27	5592-003 71.27	5591-003SR 65.01	1	18	218
1/2	5591-005 79.11	5592-005 79.11	5591-005SR 81.23	1	18	218
Angle Pattern						
1/4	5691-002 71.27	5692-002 71.27	---	1	18	218
3/8	5691-003 71.27	5692-003 71.27	---	1	18	218
1/2	5691-005 79.11	5692-005 79.11	5691-005SR 81.23	1	18	218

CPVC Needle Valve

Size	Threaded	Socket	SR Threaded	Std Pk	Mstr Pk	Disc Code
Globe Pattern						
1/4	5591-002C 83.94	5592-002C 83.94	---	1	18	219
3/8	5591-003C 83.94	5592-003C 83.94	5591-003CSR 83.75	1	18	219
1/2	5591-005C 88.77	5592-005C 88.77	5591-005CSR 91.04	1	18	219
Angle Pattern						
1/4	5691-002C 83.94	5692-002C 83.94	---	1	18	219
3/8	5691-003C 83.94	5692-003C 83.94	---	1	18	219
1/2	5691-005C 88.77	5692-005C 88.77	5691-005CSR 91.04	1	18	219

PP Needle Valve

Size	Threaded	Socket	SR Threaded	Std Pk	Mstr Pk	Disc Code
Globe Pattern						
1/4	5591-002P 78.54	---	---	1	18	219
3/8	5591-003P 78.54	---	---	1	18	219
1/2	---	---	5591-005PSR 86.85	1	18	219
Angle Pattern						
1/4	5691-002P 78.54	---	---	1	18	219
3/8	5691-003P 78.54	---	---	1	18	219
1/2	---	---	5691-005PSR 86.85	1	18	219

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Gauge Guards



Connections use Spears® Patented Special Reinforced (SR) Female Threads on Pressure Inlet (1/4" or 1/2")

Pressure Rating
235 psi @ 73°F
16 BAR @ 22°C
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
PP = 180°F (82°C)
Temperature/Pressure De-ratings Apply
Rated for Full Vacuum Service

Gauge Guards are pre-filled with glycerin-water on units with Factory Installed Gauges.
"No Gauge" units are to be filled by end user.

PVC GAUGE GUARDS

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Disc Code
PTFE Diaphragm					
No Gauge	G0004-002 **103.83**	G0004-005 **103.83**	1	18	624
0-30 in-Hg	G30V4-002 **175.28**	G30V4-005 **175.28**	1	18	624
0-15 psi	G0154-002 **165.69**	G0154-005 **165.69**	1	18	624
0-30 psi	G0304-002 **165.69**	G0304-005 **165.69**	1	18	624
0-60 psi	G0604-002 **165.69**	G0604-005 **165.69**	1	18	624
0-100 psi	G1004-002 **165.69**	G1004-005 **165.69**	1	18	624
0-160 psi	G1604-002 **165.69**	G1604-005 **165.69**	1	18	624
0-200 psi	G2004-002 **165.69**	G2004-005 **165.69**	1	18	624
0-300 psi	G3004-002 **165.69**	G3004-005 **165.69**	1	18	624
FKM Diaphragm					
No Gauge	G0003-002 **103.83**	G0003-005 **103.83**	1	18	624
0-30 in-Hg	G30V3-002 **175.28**	G30V3-005 **175.28**	1	18	624
0-15 psi	G0153-002 **165.69**	G0153-005 **165.69**	1	18	624
0-30 psi	G0303-002 **165.69**	G0303-005 **165.69**	1	18	624
0-60 psi	G0603-002 **165.69**	G0603-005 **165.69**	1	18	624
0-100 psi	G1003-002 **165.69**	G1003-005 **165.69**	1	18	624
0-160 psi	G1603-002 **165.69**	G1603-005 **165.69**	1	18	624
0-200 psi	G2003-002 **165.69**	G2003-005 **165.69**	1	18	624
0-300 psi	G3003-002 **165.69**	G3003-005 **165.69**	1	18	624
EPDM Diaphragm					
No Gauge	G0002-002 **99.63**	G0002-005 **99.63**	1	18	624
0-30 in-Hg	G30V2-002 **168.24**	G30V2-005 **168.24**	1	18	624
0-15 psi	G0152-002 **159.12**	G0152-005 **159.12**	1	18	624
0-30 psi	G0302-002 **159.12**	G0302-005 **159.12**	1	18	624

PVC GAUGE GUARDS (continued)

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Disc Code
EPDM Diaphragm					
0-60 psi	G0602-002 **159.12**	G0602-005 **159.12**	1	18	624
0-100 psi	G1002-002 **159.12**	G1002-005 **159.12**	1	18	624
0-160 psi	G1602-002 **159.12**	G1602-005 **159.12**	1	18	624
0-200 psi	G2002-002 **159.12**	G2002-005 **159.12**	1	18	624
0-300 psi	G3002-002 **159.12**	G3002-005 **159.12**	1	18	624

CPVC GAUGE GUARDS

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Disc Code
PTFE Diaphragm					
No Gauge	G0004-002C **134.98**	G0004-005C **134.98**	1	18	625
0-30 in-Hg	G30V4-002C **227.88**	G30V4-005C **227.88**	1	18	625
0-15 psi	G0154-002C **215.43**	G0154-005C **215.43**	1	18	625
0-30 psi	G0304-002C **215.43**	G0304-005C **215.43**	1	18	625
0-60 psi	G0604-002C **215.43**	G0604-005C **215.43**	1	18	625
0-100 psi	G1004-002C **215.43**	G1004-005C **215.43**	1	18	625
0-160 psi	G1604-002C **215.43**	G1604-005C **215.43**	1	18	625
0-200 psi	G2004-002C **215.43**	G2004-005C **215.43**	1	18	625
0-300 psi	G3004-002C **215.43**	G3004-005C **215.43**	1	18	625
FKM Diaphragm					
No Gauge	G0003-002C **134.98**	G0003-005C **134.98**	1	18	625
0-30 in-Hg	G30V3-002C **227.88**	G30V3-005C **227.88**	1	18	625
0-15 psi	G0153-002C **215.43**	G0153-005C **215.43**	1	18	625
0-30 psi	G0303-002C **215.43**	G0303-005C **215.43**	1	18	625
0-60 psi	G0603-002C **215.43**	G0603-005C **215.43**	1	18	625
0-100 psi	G1003-002C **215.43**	G1003-005C **215.43**	1	18	625

CPVC GAUGE GUARDS (continued)

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Disc Code
FKM Diaphragm					
0-160 psi	G1603-002C **215.43**	G1603-005C **215.43**	1	18	625
0-200 psi	G2003-002C **215.43**	G2003-005C **215.43**	1	18	625
0-300 psi	G3003-002C **215.43**	G3003-005C **215.43**	1	18	625
EPDM Diaphragm					
No Gauge	G0002-002C **129.60**	G0002-005C **129.60**	1	18	625
0-30 in-Hg	G30V2-002C **218.74**	G30V2-005C **218.74**	1	18	625
0-15 psi	G0152-002C **206.91**	G0152-005C **206.91**	1	18	625
0-30 psi	G0302-002C **206.91**	G0302-005C **206.91**	1	18	625
0-60 psi	G0602-002C **206.91**	G0602-005C **206.91**	1	18	625
0-100 psi	G1002-002C **206.91**	G1002-005C **206.91**	1	18	625
0-160 psi	G1602-002C **206.91**	G1602-005C **206.91**	1	18	625
0-200 psi	G2002-002C **206.91**	G2002-005C **206.91**	1	18	625
0-300 psi	G3002-002C **206.91**	G3002-005C **206.91**	1	18	625

PP GAUGE GUARDS

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Disc Code
PTFE Diaphragm					
No Gauge	G0004-002P **121.51**	G0004-005P **121.51**	1	18	626
0-30 in-Hg	G30V4-002P **186.67**	G30V4-005P **186.67**	1	18	626
0-15 psi	G0154-002P **177.54**	G0154-005P **177.54**	1	18	626
0-30 psi	G0304-002P **177.54**	G0304-005P **177.54**	1	18	626
0-60 psi	G0604-002P **177.54**	G0604-005P **177.54**	1	18	626
0-100 psi	G1004-002P **177.54**	G1004-005P **177.54**	1	18	626
0-160 psi	G1604-002P **177.54**	G1604-005P **177.54**	1	18	626
0-200 psi	G2004-002P **177.54**	G2004-005P **177.54**	1	18	626
0-300 psi	G3004-002P **177.54**	G3004-005P **177.54**	1	18	626
FKM Diaphragm					
No Gauge	G0003-002P **121.51**	G0003-005P **121.51**	1	18	626
0-30 in-Hg	G30V3-002P **186.67**	G30V3-005P **186.67**	1	18	626
0-15 psi	G0153-002P **177.54**	G0153-005P **177.54**	1	18	626
0-30 psi	G0303-002P **177.54**	G0303-005P **177.54**	1	18	626
0-60 psi	G0603-002P **177.54**	G0603-005P **177.54**	1	18	626
0-100 psi	G1003-002P **177.54**	G1003-005P **177.54**	1	18	626
0-160 psi	G1603-002P **177.54**	G1603-005P **177.54**	1	18	626
0-200 psi	G2003-002P **177.54**	G2003-005P **177.54**	1	18	626
0-300 psi	G3003-002P **177.54**	G3003-005P **177.54**	1	18	626
EPDM Diaphragm					
No Gauge	G0002-002P **116.71**	G0002-005P **116.71**	1	18	626
0-30 in-Hg	G30V2-002P **179.18**	G30V2-005P **179.18**	1	18	626
0-15 psi	G0152-002P **170.51**	G0152-005P **170.51**	1	18	626

PP GAUGE GUARDS (continued)

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Disc Code
EPDM Diaphragm					
0-30 psi	G0302-002P **170.51**	G0302-005P **170.51**	1	18	626
0-60 psi	G0602-002P **170.51**	G0602-005P **170.51**	1	18	626
0-100 psi	G1002-002P **170.51**	G1002-005P **170.51**	1	18	626
0-160 psi	G1602-002P **170.51**	G1602-005P **170.51**	1	18	626
0-200 psi	G2002-002P **170.51**	G2002-005P **170.51**	1	18	626
0-300 psi	G3002-002P **170.51**	G3002-005P **170.51**	1	18	626

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

100% Corrosion Resistance - No Metal Parts

Spears® Lab Fixtures have *no metal parts*; this provides full resistance to internal or environmental corrosion. These fixtures are compatible with all laboratory service lines. Lab Fixtures are produced from PVC (gray) and CPVC (for hot water), or special Low-Extractable PVC for high purity applications, and are available in a variety of types and configurations.

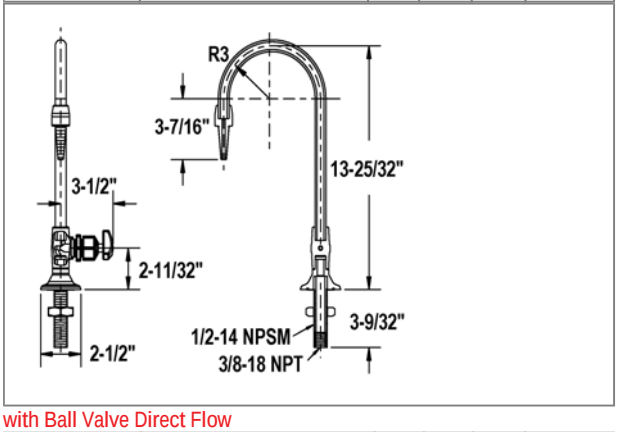
- Deck Mount – base configuration for horizontal surface mounting.
- Panel Mount – base configuration for vertical surface mounting.
- Standard Gooseneck Units – select all-plastic needle valve unit (no elastomer seals) for metered flow or ball valve unit (choice of EPDM or FKM seals) for direct flow. Unit includes valve, gooseneck with serrated tip, and base with nut for mounting. Select Deck or Panel Mount style.
- Standard Turret Units – direct flow ball valve (choice of EPDM or FKM seals) with serrated tip and base with connecting nipple and nut for mounting. Select Deck or Panel Mount style.
- Remote Valve Units (No Valve) – same as standard units less valve for use with remotely located valve.
- Recirculating Units – Special design provides continuous water motion without dead-leg areas of contamination and potential bacteria build-up. Internal supply tube fully circulates water through the entire fixture when connected to circulating water supply. Unit features gooseneck with terminally mounted all-plastic needle valve and serrated tip (no elastomer seals) for metered flow. Base is Deck Mount only with inlet and outlet connecting nipples with mounting nuts.

NPT - American National Standard Tapered Pipe Thread • NPSM - American National Standard Straight Thread For Free Fitting Mechanical Joints

For information on Spears® Low Extractable PVC see publication LXT-4

Standard Gooseneck Units - Deck Mount Lab Fixture -

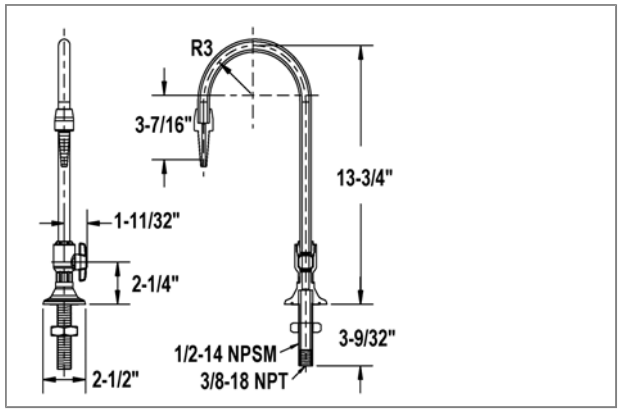
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Base with Valve, Gooseneck & Serrated Tip with Needle Valve-Metered Flow					
LF1000-N	PVC, PTFE Seal	1	0	218	189.25
LF1000-CN	CPVC, PTFE Seal	1	0	219	236.28
LF1000-BLN	LXT, PTFE Seal	1	0	066	376.37



with Ball Valve Direct Flow					
LF1002	PVC, EPDM Seal	1	0	218	158.08
LF1003	PVC, FKM Seal	1	0	218	175.64
LF1002-C	CPVC, EPDM Seal	1	0	219	197.60
LF1003-C	CPVC, FKM Seal	1	0	219	219.55
LF1002-BL	LXT, EPDM Seal	1	0	066	314.74
LF1003-BL	LXT, FKM Seal	1	0	066	349.72

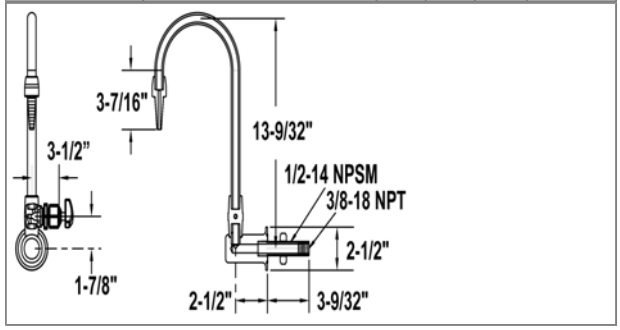
Standard Gooseneck Units - Deck Mount Lab Fixture - (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
with Ball Valve Direct Flow					



Standard Gooseneck Units - Panel Mount Lab Fixture -

Base with Valve, Gooseneck & Serrated Tip with Needle Valve-Metered Flow					
LF2000-N	PVC, PTFE Seal	1	0	218	275.81
LF2000-CN	CPVC, PTFE Seal	1	0	219	344.75



Standard Gooseneck Units - Panel Mount Lab Fixture -

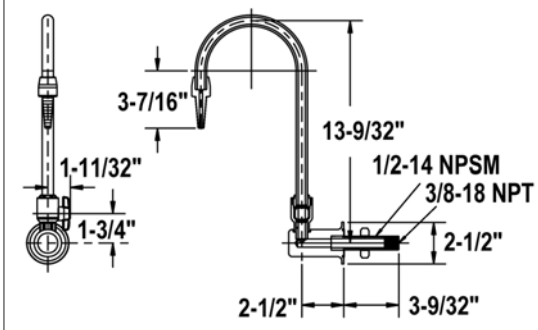
with Ball Valve-Direct Flow					
LF2002	PVC, EPDM Seal	3	0	218	237.77

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Standard Gooseneck Units - Panel Mount Lab Fixture - (continued)

with Ball Valve-Direct Flow

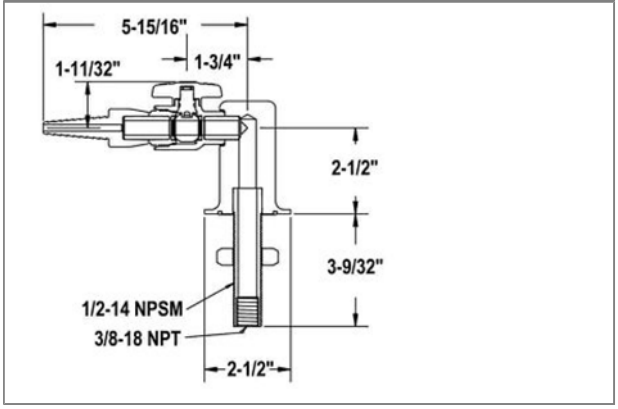
LF2003	PVC, FKM Seal	3	0	218	264.20
LF2002-C	CPVC, EPDM Seal	1	0	219	297.23
LF2003-C	CPVC, FKM Seal	1	0	219	330.23



Standard Turret Units - Deck Mount Turret Lab Fixtures Base -

with Valve & Serrated Tip with Ball Valve-Direct Flow

LF4002	PVC, EPDM Seal	1	0	218	200.62
LF4003	PVC, FKM Seal	1	0	218	222.91
LF4002-C	PVC, EPDM Seal	1	0	219	250.77
LF4003-C	PVC, FKM Seal	1	0	219	278.64



Standard Turret Units - Panel Mount Turret Lab Fixture Base -

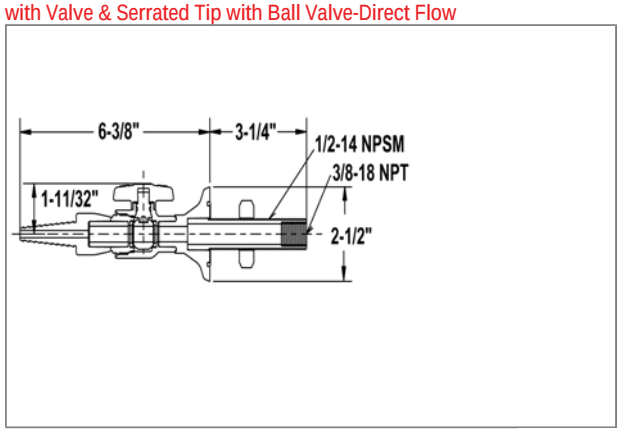
with Valve & Serrated Tip with Ball Valve-Direct Flow

LF3002	PVC, EPDM Seal	1	0	218	155.49
LF3003	PVC, FKM Seal	1	0	218	172.79
LF3002-C	PVC, EPDM Seal	1	0	219	194.39
LF3003-C	PVC, FKM Seal	1	0	219	215.99
LF3002-BL	PVC, EPDM Seal	1	0	066	309.60
LF3003-BL	PVC, FKM Seal	1	0	066	344.04

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Standard Turret Units - Panel Mount Turret Lab Fixture Base - (continued)

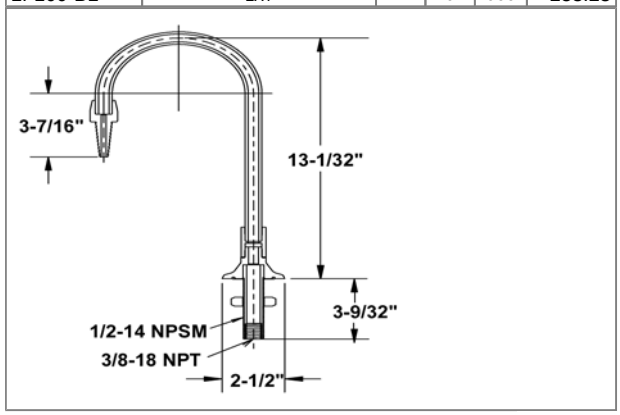
with Valve & Serrated Tip with Ball Valve-Direct Flow



Remote Valve Units (No Valve) - Deck Mount Gooseneck -

Base with Gooseneck & Serrated Tip

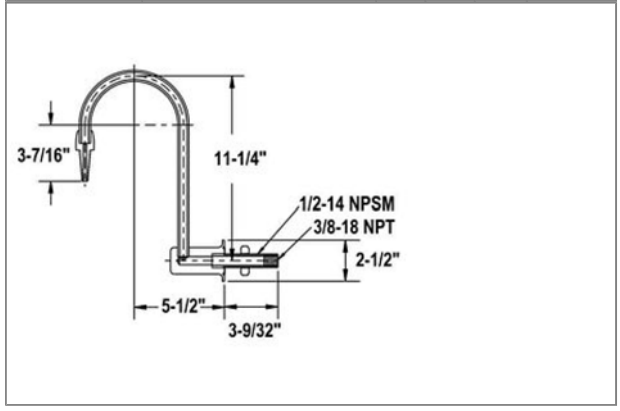
LF100	PVC	1	0	218	129.73
LF100-C	CPVC	1	0	219	162.17
LF100-BL	LXT	1	0	066	258.28



Remote Valve Units (No Valve) - Panel Mount Gooseneck -

Base with Gooseneck & Serrated Tip

LF104	PVC	1	0	218	160.24
LF104-C	CPVC	1	0	219	200.31



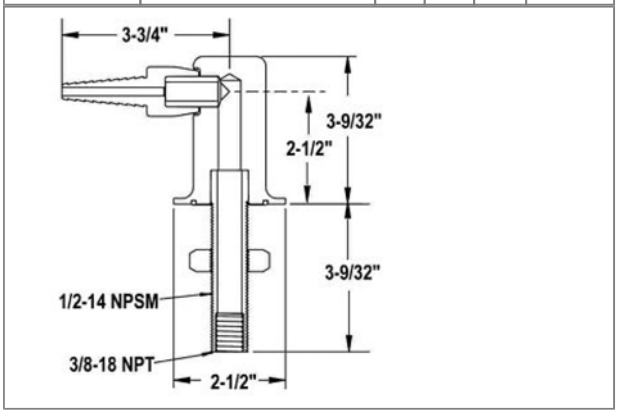
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Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Remote Valve Units (No Valve) - Deck Mount Turret -

Base with Serrated Tip

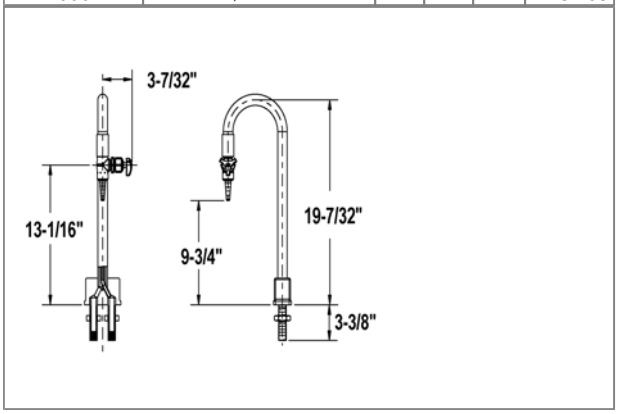
LF300	PVC	1	0	218	42.75
LF300-C	CPVC	1	0	219	53.44



Recirculating Units - Recirculating Deck Mount Lab Fixture -

Base with Gooseneck, Valve & Serrated Tip with Needle Valve

LFR1000-N	PVC, PTFE Seal	1	0	218	329.36
LFR1000-CN	CPVC, PTFE Seal	1	0	219	492.24
LFR1000-BLN	LXT, PTFE Seal	1	0	066	784.05



Accessory/ Replacement - Fixture Connection Nipple -

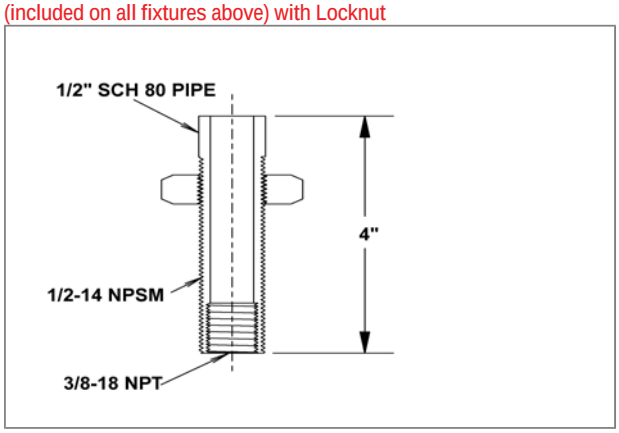
(included on all fixtures above) with Locknut

LF500	PVC	1	0	218	21.46
LF500-C	CPVC	1	0	219	26.84
LF500-BL	LXT	1	0	066	42.78

Accessory/ Replacement - Fixture Connection Nipple - (continued)

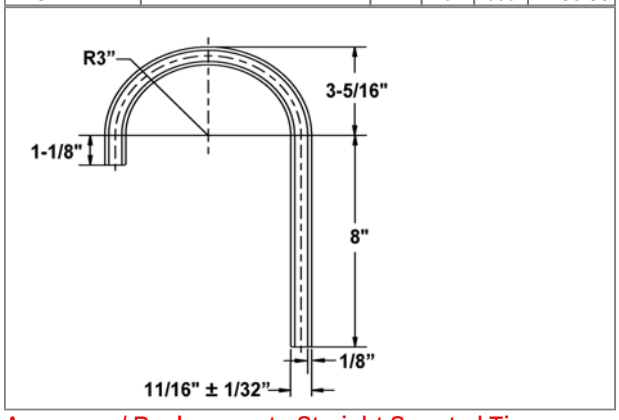
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

(included on all fixtures above) with Locknut



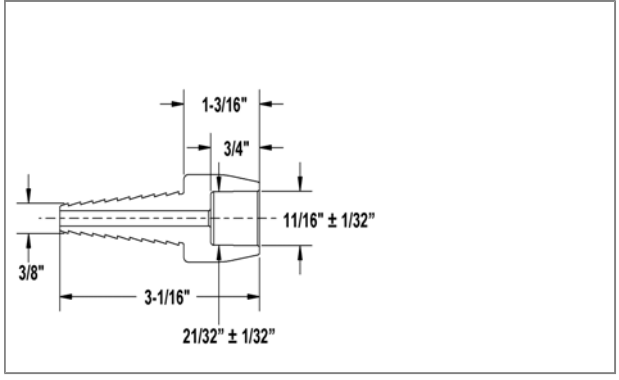
Accessory/ Replacement - Gooseneck (3/8")

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
LFGN	PVC	1	0	218	18.24
LFGN-C	CPVC	1	0	219	22.83
LFGN-BL	LXT	1	0	066	36.36



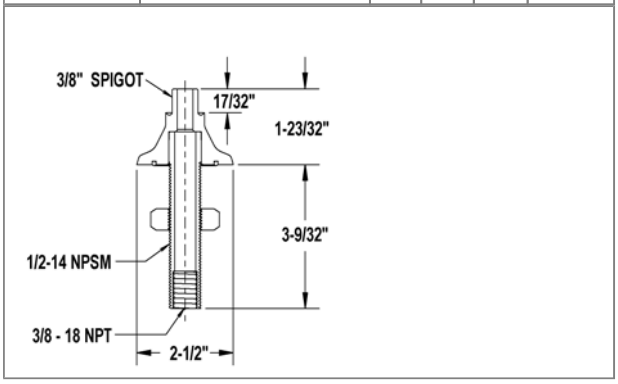
Accessory/ Replacement - Straight Serrated Tip

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
LF400	PVC	600	0	218	3.86
LF400-C	CPVC	600	0	219	4.85
LF400-BL	LXT	600	0	066	7.69



Accessory/ Replacement - Base

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Deck Mount					
LFB	PVC	1	0	218	7.87
LFB-C	CPVC	1	0	219	9.40
LFB-BL	LXT	1	0	066	5.38



Seamless Round Duct & Duct Fittings

Spears® Fabricated Duct Fittings are formed from extruded Seamless Round Duct to provide the high corrosion resistance of thermoplastics in PVC and higher temperature handling in CPVC materials for aggressive corrosive fume exhaust and drain applications.

- Excellent Chemical Resistance to a wide range of corrosive fumes, gasses and fluids.
- Large interior diameters for optimum flow characteristics.
- Light weight provides easier handling, installation, and fabrication for lower overall installed cost.

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Round Seamless Duct Dimensions

Size (in.)	AVG. O.D.	AVG. O.D.TOL.	O /R TOL.	MIN. Wall	AVG. Wall	MAX. Wall	PVC lbs. Per Ft.	CPVC lbs. Per Ft.
6	6.625	+/- .020	+/- .050	0.172	0.187	0.202	2.275	2.555
8	8.625	+/- .020	+/- .075	0.172	0.187	0.202	2.982	3.349
10	10.750	+/- .025	+/- .075	0.172	0.187	0.202	3.733	4.192
12	12.750	+/- .025	+/- .075	0.172	0.187	0.202	4.440	4.986
14	14.000	+/- .030	+/- .075	0.172	0.187	0.202	4.884	5.485
16	16.000	+/- .030	+/- .075	0.172	0.187	0.202	5.586	6.273
18	18.000	+/- .040	+/- .080	0.172	0.187	0.202	6.750	7.580
20	20.000	+/- .070	+/- .140	0.199	0.219	0.239	8.144	9.146
24	24.000	+/- .090	+/- .180	0.230	0.250	0.270	11.163	12.536

O/R = Out of Round at time of production

Cold Rolled Fabricated Duct

Round duct above 24" nominal size is cold rolled from extruded PVC or CPVC sheet material. The seam is thermal fused utilizing a computerized welding machine. The sheet edges are heated and pressed together pneumatically achieving 100% weld strength using no filler rod. Wall thickness is 3/16" for sizes up to 32" diameter. Above 32" diameter, 1/4" material will be used, unless otherwise specified. Cold rolled duct is produced in 4' lengths. Large duct fittings can be fabricated to order. Contact Spears® with requirements for additional information.

SMACNA FLANGE SPECIFICATIONS

Nominal Duct Size	Flange Outside Dia.	Flange Thickness	Bolt Circle Dia.	Bolt Hole Dia.	No. Of Bolts
6	10"	1/4"	8-1/2"	5/16"	8
7	11"	1/4"	9-1/2"	5/16"	8
8	12"	1/4"	10-1/2"	5/16"	10
9	13"	1/4"	11-1/2"	5/16"	10
10	14"	1/4"	12-1/2"	5/16"	12
11	15"	1/4"	13-1/2"	5/16"	12
12	16"	1/4"	14-3/8"	5/16"	16
14	18"	1/4"	16-1/2"	5/16"	16
16	20"	1/4"	18-1/2"	5/16"	18
18	22"	1/4"	20-1/2"	5/16"	20
20	24"	1/4"	22-1/2"	5/16"	22
24	28"	1/4"	26-1/2"	5/16"	24

PVC & CPVC Round Seamless Duct

10 ft.PVC Duct - Plain End

Price Per Foot



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PD-430-060-10	**6**	10	0	748	13.00
PD-430-080-10	**8**	10	0	748	16.37
PD-430-100-10	**10**	10	0	748	20.51
PD-430-120-10	**12**	10	0	748	24.39
PD-430-140-10	**14**	10	0	948	88.12
PD-430-160-10	**16**	10	0	948	100.68
PD-430-180-10	**18**	10	0	948	148.98
PD-430-200-10	**20**	10	0	948	187.03
PD-430-240-10	**24**	10	0	948	237.45

• Pipe sold in individual lengths or lift quantities. No cut lengths.
• No return on Pipe
• Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and

20 ft. PVC Duct - Plain End

Price Per Foot



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PD-430-060	**6**	20	0	748	13.00
PD-430-080	**8**	20	0	748	16.37
PD-430-100	**10**	20	0	748	20.51
PD-430-120	**12**	20	0	748	24.39
PD-430-140	**14**	20	0	948	88.12
PD-430-160	**16**	20	0	948	100.68
PD-430-180	**18**	20	0	948	148.98
PD-430-200	**20**	20	0	948	187.03
PD-430-240	**24**	20	0	948	237.45

• Pipe sold in individual lengths or lift quantities. No cut lengths.
• No return on Pipe
• Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and

10 ft.CPVC Duct - Plain End

Price Per Foot



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PD-430-060C-10	**6**	10	0	749	26.09
PD-430-080C-10	**8**	10	0	749	34.22
PD-430-100C-10	**10**	10	0	749	42.83
PD-430-120C-10	**12**	10	0	749	50.93
PD-430-140C-10	**14**	10	0	949	329.74
PD-430-160C-10	**16**	10	0	949	399.11

• Pipe sold in individual lengths or lift quantities. No cut lengths.
• No return on Pipe
• Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and

20 ft.CPVC Duct - Plain End

Price Per Foot



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PD-430-060C	**6**	20	0	749	26.09
PD-430-080C	**8**	20	0	749	34.22
PD-430-100C	**10**	20	0	749	42.83
PD-430-120C	**12**	20	0	749	50.93
PD-430-140C	**14**	20	0	949	329.74
PD-430-160C	**16**	20	0	949	399.11
PD-430-180C	**18**	20	0	949	458.73
PD-430-200C	**20**	20	0	949	628.86
PD-430-240C	**24**	20	0	949	742.95

• Pipe sold in individual lengths or lift quantities. No cut lengths.
• No return on Pipe
• Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and

PVC & CPVC Cold Rolled Fabricated Duct

4' PVC Cold Rolled Duct - Plain End

Price Per Foot



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PD-430-260	**26X4**	4	0	434	434.63
PD-430-280	**28X4**	4	0	434	517.75
PD-430-300	**30X4**	4	0	434	635.16
PD-430-320	**32X4**	4	0	434	684.18
PD-430-360	**36X4**	4	0	434	774.33
PD-430-380	**38X4**	4	0	434	840.62
PD-430-400	**40X4**	4	0	434	861.79
PD-430-420	**42X4**	4	0	434	1457.89
PD-430-460	**46X4**	4	0	434	1070.85
PD-430-480	**48X4**	4	0	434	1150.28

• Pipe sold in individual lengths or lift quantities. No cut lengths.
• No return on Pipe
• Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and

4' CPVC Cold Rolled Duct - Plain End

Price Per Foot



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PD-430-260C	**26X4**	4	0	435	1299.24
PD-430-280C	**28X4**	4	0	435	1495.12
PD-430-300C	**30X4**	4	0	435	1659.65

4' CPVC Cold Rolled Duct - Plain End (continued)

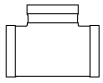
Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PD-430-320C	**32X4**	4	0	435	1713.17
PD-430-360C	**36X4**	4	0	435	1831.13
PD-430-380C	**38X4**	4	0	435	2026.00
PD-430-400C	**40X4**	4	0	435	2122.95
PD-430-420C	**42X4**	4	0	435	2226.37
PD-430-460C	**46X4**	4	0	435	2504.78
PD-430-480C	**48X4**	4	0	435	2886.56

• Pipe sold in individual lengths or lift quantities. No cut lengths.
• No return on Pipe
• Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and

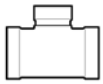
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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC TEE
Belled Socket



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4301-060	6	1	4	430	195.44
4301-080	8	1	0	430	248.74
4301-100	10	1	0	430	313.76
4301-120	12	1	0	430	345.68
4301-140	14	1	0	430	402.09
4301-160	16	1	0	430	518.00
4301-180	18	1	0	430	681.71
4301-200	20	1	0	430	1001.78
4301-240	24	1	0	430	1338.91

PVC REDUCING TEE
Belled Socket



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4301-532	6X4	1	4	430	217.64
4301-582	8X4	1	2	430	226.61
4301-585	8X6	1	0	430	240.18
4301-624	10X4	1	2	430	255.11
4301-626	10X6	1	0	430	266.86
4301-628	10X8	1	0	430	328.80
4301-664	12X4	1	2	430	306.21
4301-666	12X6	1	0	430	345.67
4301-668	12X8	1	0	430	368.42
4301-670	12X10	1	0	430	427.12
4301-694	14X4	1	0	430	344.56
4301-696	14X6	1	0	430	373.25
4301-698	14X8	1	0	430	398.89
4301-700	14X10	1	0	430	438.93
4301-702	14X12	1	0	430	515.43
4301-754	16X4	1	0	430	381.26
4301-756	16X6	1	0	430	405.20
4301-758	16X8	1	0	430	457.99
4301-760	16X10	1	0	430	510.48
4301-762	16X12	1	0	430	547.31
4301-764	16X14	1	0	430	619.26
4301-784	18X4	1	0	430	425.42
4301-786	18X6	1	0	430	446.36
4301-788	18X8	1	0	430	506.54
4301-790	18X10	1	0	430	553.36
4301-792	18X12	1	0	430	621.04
4301-794	18X14	1	0	430	677.44
4301-796	18X16	1	0	430	784.84
4301-814	20X4	1	0	430	480.28
4301-816	20X6	1	0	430	494.20
4301-818	20X8	1	0	430	559.35
4301-820	20X10	1	0	430	587.44
4301-822	20X12	1	0	430	675.23
4301-824	20X14	1	0	430	744.53
4301-826	20X16	1	0	430	871.72
4301-828	20X18	1	0	430	1042.61
4301-904	24X4	1	0	430	504.17
4301-906	24X6	1	0	430	526.11
4301-908	24X8	1	0	430	604.68
4301-910	24X10	1	0	430	687.16
4301-912	24X12	1	0	430	800.71
4301-914	24X14	1	0	430	884.81
4301-916	24X16	1	0	430	976.71
4301-918	24X18	1	0	430	1163.41
4301-920	24X20	1	0	430	1335.48

PVC 90° ELBOW
Belled Socket



General Purpose 2-piece Construction

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4306-060	6	1	2	430	154.41
4306-080	8	1	2	430	174.00
4306-100	10	1	0	430	209.96
4306-120	12	1	0	430	236.77
4306-140	14	1	0	430	279.15
4306-160	16	1	0	430	360.64
4306-180	18	1	0	430	501.91
4306-200	20	1	0	430	763.47
4306-240	24	1	0	430	920.99

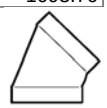
PVC 90° ELBOW 5-Piece
Belled Socket



SMACNA Compliant 5-Piece Construction

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
43065-060	6	1	0	430	348.95
43065-080	8	1	0	430	367.83
43065-100	10	1	0	430	422.18
43065-120	12	1	0	430	487.32
43065-140	14	1	0	430	572.49
43065-160	16	1	0	430	644.68
43065-180	18	1	0	431	876.29
43065-200	20	1	0	430	952.05
43065-240	24	1	0	431	1693.76

PVC 45° ELBOW
Belled Socket



General Purpose 1-piece Construction

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4317-060	6	1	4	430	108.18
4317-080	8	1	6	430	134.86
4317-100	10	1	2	430	146.18
4317-120	12	1	2	430	181.07
4317-140	14	1	0	430	213.91
4317-160	16	1	0	430	259.23
4317-180	18	1	0	430	378.37
4317-200	20	1	0	430	519.06
4317-240	24	1	0	430	675.51

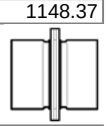
PVC 45° ELBOW 3-Piece
Belled Socket



SMACNA Compliant 3-Piece Construction

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
43173-060	6	1	0	430	127.09
43173-080	8	1	0	430	167.40
43173-100	10	1	0	430	195.73
43173-120	12	1	0	430	215.77
43173-140	14	1	0	430	264.52
43173-160	16	1	0	430	395.63
43173-180	18	1	0	430	548.58
43173-200	20	1	0	430	885.88
43173-240	24	1	0	430	1148.37

PVC BLAST GATE
Belled End



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
43BG-060	6	1	0	430	258.55
43BG-080	8	1	2	430	293.91
43BG-100	10	1	0	430	311.52
43BG-120	12	1	2	430	390.34
43BG-140	14	1	0	430	518.13
43BG-160	16	1	0	430	575.77

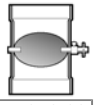
PVC BLAST GATE (continued)

Belled End

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
43BG-180	**18**	1	0	430	679.24
43BG-200	**20**	1	0	430	770.89
43BG-240	**24**	1	2	430	1050.39

PVC BUTTERFLY DAMPER

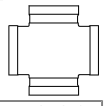
Belled Socket



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
43BD-060	**6**	1	2	430	253.23
43BD-080	**8**	1	2	430	261.00
43BD-100	**10**	1	0	430	298.97
43BD-120	**12**	1	0	430	320.38
43BD-140	**14**	1	2	430	428.96
43BD-160	**16**	1	0	430	478.03
43BD-180	**18**	1	0	430	648.80
43BD-200	**20**	1	0	430	764.57
43BD-240	**24**	1	0	430	988.14

PVC CROSS

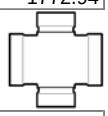
Belled Socket



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4320-060	**6**	1	0	430	342.65
4320-080	**8**	1	0	430	471.57
4320-100	**10**	1	0	430	562.41
4320-120	**12**	1	0	430	610.04
4320-140	**14**	1	0	430	755.08
4320-160	**16**	1	0	430	863.81
4320-180	**18**	1	0	430	1101.48
4320-200	**20**	1	0	430	1345.92
4320-240	**24**	1	0	430	1772.94

PVC REDUCING CROSS

Belled Socket



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4320-532	**6X4**	1	3	430	326.08
4320-582	**8X4**	1	0	430	403.63
4320-585	**8X6**	1	0	430	427.18
4320-624	**10X4**	1	0	430	445.39
4320-626	**10X6**	1	0	430	499.44
4320-628	**10X8**	1	0	430	526.84
4320-664	**12X4**	1	0	430	434.61
4320-666	**12X6**	1	0	430	475.74
4320-668	**12X8**	1	0	430	535.12
4320-670	**12X10**	1	0	430	569.61
4320-694	**14X4**	1	0	430	469.28
4320-696	**14X6**	1	0	430	539.87
4320-698	**14X8**	1	0	430	603.91
4320-700	**14X10**	1	0	430	656.12
4320-702	**14X12**	1	0	430	728.13
4320-754	**16X4**	1	0	430	607.36
4320-756	**16X6**	1	0	430	670.03
4320-758	**16X8**	1	0	430	720.99
4320-760	**16X10**	1	0	430	756.97
4320-762	**16X12**	1	0	430	790.67
4320-764	**16X14**	1	0	430	829.96
4320-784	**18X4**	1	0	430	688.06
4320-786	**18X6**	1	0	430	779.58
4320-788	**18X8**	1	0	430	823.31
4320-790	**18X10**	1	0	430	877.88
4320-792	**18X12**	1	0	430	932.33
4320-794	**18X14**	1	0	430	1010.23
4320-796	**18X16**	1	0	430	1055.69
4320-814	**20X4**	1	0	430	805.77
4320-816	**20X6**	1	0	430	892.74
4320-818	**20X8**	1	0	430	957.83
4320-820	**20X10**	1	0	430	1007.82

PVC REDUCING CROSS (continued)

Belled Socket

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4320-822	**20X12**	1	0	430	1072.34
4320-824	**20X14**	1	0	430	1144.23
4320-826	**20X16**	1	0	430	1209.94
4320-828	**20X18**	1	0	430	1303.33
4320-904	**24X4**	1	0	430	886.73
4320-906	**24X6**	1	0	430	903.81
4320-908	**24X8**	1	0	430	998.81
4320-910	**24X10**	1	0	430	1101.76
4320-912	**24X12**	1	0	430	1215.39
4320-914	**24X14**	1	0	430	1328.07
4320-916	**24X16**	1	0	430	1423.28
4320-918	**24X18**	1	0	430	1573.12
4320-920	**24X20**	1	0	430	1673.15

PVC COUPLING

Belled Socket



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4329-060	**6**	1	4	430	41.82
4329-080	**8**	1	4	430	49.12
4329-100	**10**	1	2	430	57.87
4329-120	**12**	1	4	430	65.37
4329-140	**14**	1	2	430	71.69
4329-160	**16**	1	2	430	88.52
4329-180	**18**	1	2	430	129.31
4329-200	**20**	1	0	430	199.81
4329-240	**24**	1	0	430	270.51

PVC REDUCER COUPLING

Belled Socket



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4329-532	**6X4**	1	4	430	54.63
4329-582	**8X4**	1	5	430	168.92
4329-585	**8X6**	1	8	430	71.63
4329-624	**10X4**	1	2	430	315.72
4329-626	**10X6**	1	2	430	196.28
4329-628	**10X8**	1	4	430	92.04
4329-664	**12X4**	1	2	430	351.65
4329-666	**12X6**	1	2	430	339.61
4329-668	**12X8**	1	2	430	245.75
4329-670	**12X10**	1	4	430	107.13
4329-694	**14X4**	1	0	430	873.45
4329-696	**14X6**	1	0	430	632.81
4329-698	**14X8**	1	0	430	372.07
4329-700	**14X10**	1	0	430	307.37
4329-702	**14X12**	1	4	430	175.85
4329-754	**16X4**	1	0	430	1055.04
4329-756	**16X6**	1	0	430	854.63
4329-758	**16X8**	1	0	430	616.41
4329-760	**16X10**	1	0	430	428.77
4329-762	**16X12**	1	0	430	365.37
4329-764	**16X14**	1	0	430	198.73
4329-784	**18X4**	1	0	430	1318.09
4329-786	**18X6**	1	0	430	1076.65
4329-788	**18X8**	1	0	430	922.83
4329-790	**18X10**	1	0	430	630.28
4329-792	**18X12**	1	0	430	541.80
4329-794	**18X14**	1	0	430	457.41
4329-796	**18X16**	1	0	430	228.25
4329-814	**20X4**	1	0	430	1575.16
4329-816	**20X6**	1	0	430	1348.47
4329-818	**20X8**	1	0	430	1099.32
4329-820	**20X10**	1	0	430	988.61
4329-822	**20X12**	1	0	430	863.45
4329-824	**20X14**	1	0	430	647.56
4329-826	**20X16**	1	0	430	630.86

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC REDUCER COUPLING (continued)
Belled Socket

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4329-828	**20X18**	1	0	430	402.61
4329-904	**24X4**	1	0	430	2011.81
4329-906	**24X6**	1	0	430	1799.31
4329-908	**24X8**	1	0	430	1564.77
4329-910	**24X10**	1	0	430	1335.45
4329-912	**24X12**	1	0	430	1126.77
4329-914	**24X14**	1	0	430	991.54
4329-916	**24X16**	1	0	430	812.80
4329-918	**24X18**	1	0	430	746.55
4329-920	**24X20**	1	0	430	732.43

PVC SLEEVE COUPLING
Socket (No Stop)



4329S-060	**6**	1	5	430	34.57
4329S-080	**8**	1	8	430	45.46
4329S-100	**10**	1	4	430	51.21
4329S-120	**12**	1	4	430	55.95
4329S-140	**14**	1	4	430	71.77
4329S-160	**16**	1	0	430	79.41
4329S-180	**18**	1	2	430	104.97
4329S-200	**20**	1	2	430	131.77
4329S-240	**24**	1	2	430	152.81

PVC FLAT CAP
Belled Socket



4347-060	**6**	1	10	430	85.94
4347-080	**8**	1	5	430	87.47
4347-100	**10**	1	5	430	94.33
4347-120	**12**	1	4	430	103.16
4347-140	**14**	1	4	430	166.32
4347-160	**16**	1	2	430	181.24
4347-180	**18**	1	4	430	197.48
4347-200	**20**	1	5	430	294.34
4347-240	**24**	1	4	430	300.91

PVC RAIN CAP
Belled Socket Style A



4347-060A	**6**	1	4	430	654.49
4347-080A	**8**	1	0	430	657.58
4347-100A	**10**	1	0	430	684.87
4347-120A	**12**	1	0	430	709.16
4347-140A	**14**	1	0	430	776.63
4347-160A	**16**	1	0	430	847.71
4347-180A	**18**	1	0	430	1131.03
4347-200A	**20**	1	0	430	1203.56
4347-240A	**24**	1	0	430	1363.67

PVC RAIN CAP
Belled Socket Style B



4347-060B	**6**	1	0	430	618.17
4347-080B	**8**	1	0	430	699.53
4347-100B	**10**	1	0	430	756.36
4347-120B	**12**	1	8	430	823.57
4347-140B	**14**	1	0	430	925.79
4347-160B	**16**	1	0	430	1123.08
4347-180B	**18**	1	0	430	1357.80
4347-200B	**20**	1	0	430	1557.86
4347-240B	**24**	1	0	430	1803.25

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

PVC DUCT FLANGE
Belled Socket One Piece



SMACNA Bolt Pattern

4351S-060	**6**	1	5	430	89.06
4351S-080	**8**	1	2	430	113.20
4351S-100	**10**	1	4	430	120.96
4351S-120	**12**	1	2	430	141.12
4351S-140	**14**	1	0	430	154.79
4351S-160	**16**	1	0	430	199.67
4351S-180	**18**	1	3	430	297.61
4351S-200	**20**	1	0	430	365.05
4351S-240	**24**	1	0	430	392.96

See SMACNA Flange Specifications at the front of this catalog.
Also available in ANSI Class 150 Bolt Pattern.

PVC BLIND DUCT FLANGE
One Piece



Class 150 Bolt Pattern

4353-060	**6**	1	36	430	86.16
4353-080	**8**	1	52	430	108.08
4353-100	**10**	1	18	430	119.23
4353-120	**12**	1	50	430	143.32
4353-140	**14**	1	50	430	182.39
4353-160	**16**	1	50	430	207.37
4353-180	**18**	1	50	430	252.56
4353-200	**20**	1	57	430	352.25
4353-240	**24**	1	0	430	379.19

PVC BLIND DUCT FLANGE
One Piece

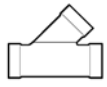


SMACNA Bolt Pattern

4353S-060	**6**	1	0	430	91.68
4353S-080	**8**	1	10	430	114.98
4353S-100	**10**	1	52	430	126.83
4353S-120	**12**	1	52	430	152.47
4353S-140	**14**	1	52	430	194.04
4353S-160	**16**	1	50	430	220.60
4353S-180	**18**	1	50	430	273.36
4353S-200	**20**	1	50	430	374.72
4353S-240	**24**	1	0	430	403.38

See SMACNA Flange Specifications at the front of this catalog.

PVC WYE
Belled Socket



4375-060	**6**	1	2	430	269.26
4375-080	**8**	1	0	430	324.63
4375-100	**10**	1	0	430	402.40
4375-120	**12**	1	0	430	536.22
4375-140	**14**	1	0	430	620.92
4375-160	**16**	1	0	430	1550.58
4375-180	**18**	1	0	430	2007.47
4375-200	**20**	1	0	430	2772.00
4375-240	**24**	1	0	430	3303.08

PVC REDUCING WYE
Belled Socket



4375-532	**6X4**	1	2	430	262.41
4375-582	**8X4**	1	2	430	286.95
4375-585	**8X6**	1	0	430	301.05
4375-624	**10X4**	1	0	430	326.49
4375-626	**10X6**	1	0	430	350.00

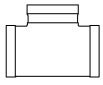
PVC REDUCING WYE (continued)

Belled Socket

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4375-628	**10X8**	1	0	430	383.87
4375-664	**12X4**	1	0	430	357.27
4375-666	**12X6**	1	0	430	375.95
4375-668	**12X8**	1	0	430	426.53
4375-670	**12X10**	1	0	430	477.57
4375-694	**14X4**	1	0	430	417.56
4375-696	**14X6**	1	0	430	446.82
4375-698	**14X8**	1	0	430	478.85
4375-700	**14X10**	1	0	430	546.82
4375-702	**14X12**	1	0	430	613.18
4375-754	**16X4**	1	0	430	495.47
4375-756	**16X6**	1	0	430	530.00
4375-758	**16X8**	1	0	430	549.11
4375-760	**16X10**	1	0	430	580.81
4375-762	**16X12**	1	0	430	634.52
4375-764	**16X14**	1	0	430	721.45
4375-784	**18X4**	1	0	430	582.82
4375-786	**18X6**	1	0	430	607.93
4375-788	**18X8**	1	0	430	661.99
4375-790	**18X10**	1	0	430	694.73
4375-792	**18X12**	1	0	430	731.80
4375-794	**18X14**	1	0	430	831.25
4375-796	**18X16**	1	0	430	973.41
4375-814	**20X4**	1	0	430	656.27
4375-816	**20X6**	1	0	430	698.42
4375-818	**20X8**	1	0	430	741.72
4375-820	**20X10**	1	0	430	784.27
4375-822	**20X12**	1	0	430	833.02
4375-824	**20X14**	1	0	430	885.91
4375-826	**20X16**	1	0	430	1058.38
4375-828	**20X18**	1	0	430	1217.75
4375-904	**24X4**	1	0	430	788.36
4375-906	**24X6**	1	0	430	832.94
4375-908	**24X8**	1	0	430	911.36
4375-910	**24X10**	1	0	430	1006.84
4375-912	**24X12**	1	0	430	1072.54
4375-914	**24X14**	1	0	430	1174.48
4375-916	**24X16**	1	0	430	1224.60
4375-918	**24X18**	1	0	430	1389.19
4375-920	**24X20**	1	0	430	1570.23

CPVC TEE

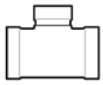
Belled Socket



4301-060C	**6**	1	4	432	360.15
4301-080C	**8**	1	0	432	478.45
4301-100C	**10**	1	0	432	669.47
4301-120C	**12**	1	0	432	809.41
4301-140C	**14**	1	0	432	950.03
4301-160C	**16**	1	0	432	1177.17
4301-180C	**18**	1	0	432	1401.20
4301-200C	**20**	1	0	432	1941.87
4301-240C	**24**	1	0	432	2772.78

CPVC REDUCING TEE

Belled Socket



4301-532C	**6X4**	1	4	432	309.52
4301-582C	**8X4**	1	2	432	356.71
4301-585C	**8X6**	1	0	432	413.52
4301-624C	**10X4**	1	2	432	446.33
4301-626C	**10X6**	1	0	432	510.95
4301-628C	**10X8**	1	0	432	560.99
4301-664C	**12X4**	1	2	432	514.34
4301-666C	**12X6**	1	0	432	549.19

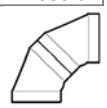
CPVC REDUCING TEE (continued)

Belled Socket

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4301-668C	**12X8**	1	0	432	669.08
4301-670C	**12X10**	1	0	432	784.43
4301-694C	**14X4**	1	0	432	651.06
4301-696C	**14X6**	1	0	432	685.04
4301-698C	**14X8**	1	0	432	763.65
4301-700C	**14X10**	1	0	432	887.67
4301-702C	**14X12**	1	0	432	921.61
4301-754C	**16X4**	1	0	432	716.19
4301-756C	**16X6**	1	0	432	753.87
4301-758C	**16X8**	1	0	432	837.64
4301-760C	**16X10**	1	0	432	974.03
4301-762C	**16X12**	1	0	432	1040.11
4301-764C	**16X14**	1	0	432	1197.68
4301-784C	**18X4**	1	0	432	905.43
4301-786C	**18X6**	1	0	432	973.61
4301-788C	**18X8**	1	0	432	1034.41
4301-790C	**18X10**	1	0	432	1112.28
4301-792C	**18X12**	1	0	432	1183.27
4301-794C	**18X14**	1	0	432	1333.15
4301-796C	**18X16**	1	0	432	1380.98
4301-814C	**20X4**	1	0	432	1085.99
4301-816C	**20X6**	1	0	432	1132.58
4301-818C	**20X8**	1	0	432	1272.57
4301-820C	**20X10**	1	0	432	1328.35
4301-822C	**20X12**	1	0	432	1413.14
4301-824C	**20X14**	1	0	432	1519.52
4301-826C	**20X16**	1	0	432	1693.93
4301-828C	**20X18**	1	0	432	1938.11
4301-904C	**24X4**	1	0	432	1256.68
4301-906C	**24X6**	1	0	432	1445.33
4301-908C	**24X8**	1	0	432	1537.57
4301-910C	**24X10**	1	0	432	1618.53
4301-912C	**24X12**	1	0	432	1759.26
4301-914C	**24X14**	1	0	432	1891.67
4301-916C	**24X16**	1	0	432	2012.42
4301-918C	**24X18**	1	0	432	2356.34
4301-920C	**24X20**	1	0	432	2688.01

CPVC 90° ELBOW

Belled Socket



General Purpose 2-piece Construction

4306-060C	**6**	1	2	432	254.42
4306-080C	**8**	1	2	432	341.00
4306-100C	**10**	1	0	432	463.78
4306-120C	**12**	1	0	432	554.60
4306-140C	**14**	1	0	432	697.02
4306-160C	**16**	1	0	432	854.78
4306-180C	**18**	1	0	432	1076.97
4306-200C	**20**	1	0	432	1523.86
4306-240C	**24**	1	0	432	2038.44

CPVC 90° ELBOWS 5-Piece

Belled Socket

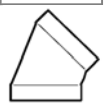


SMACNA Compliant 5-Piece Construction

43065-060C	**6**	1	2	432	405.72
43065-080C	**8**	1	0	432	591.20
43065-100C	**10**	1	0	432	727.93
43065-120C	**12**	1	0	432	1773.69
43065-140C	**14**	1	0	432	1908.01
43065-160C	**16**	1	0	432	2810.71
43065-180C	**18**	1	0	432	3469.44
43065-200C	**20**	1	0	432	3914.52
43065-240C	**24**	1	0	432	6107.87

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

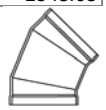
CPVC 45° ELBOW
Belled Socket



General Purpose 1-piece Construction

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4317-060C	**6**	1	4	432	194.45
4317-080C	**8**	1	6	432	260.16
4317-100C	**10**	1	2	432	351.56
4317-120C	**12**	1	2	432	425.17
4317-140C	**14**	1	0	432	524.20
4317-160C	**16**	1	0	432	603.62
4317-180C	**18**	1	0	432	813.52
4317-200C	**20**	1	0	432	1097.86
4317-240C	**24**	1	0	432	1543.68

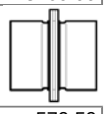
CPVC 45° ELBOW 3-Piece
Belled Socket



SMACNA Compliant 3-Piece Construction

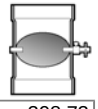
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
43173-060C	**6**	1	0	432	261.41
43173-080C	**8**	1	0	432	421.43
43173-100C	**10**	1	0	432	739.92
43173-120C	**12**	1	0	432	1022.26
43173-140C	**14**	1	0	432	1076.86
43173-160C	**16**	1	0	432	1551.86
43173-180C	**18**	1	0	432	1641.59
43173-200C	**20**	1	0	432	2112.76
43173-240C	**24**	1	0	432	3109.99

CPVC BLAST GATE
Belled End



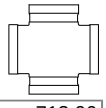
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
43BG-060C	**6**	1	0	432	579.59
43BG-080C	**8**	1	2	432	710.85
43BG-100C	**10**	1	0	432	877.18
43BG-120C	**12**	1	0	432	1003.48
43BG-140C	**14**	1	2	432	1255.25
43BG-160C	**16**	1	0	432	1481.27
43BG-180C	**18**	1	0	432	1881.20
43BG-200C	**20**	1	0	432	2276.20
43BG-240C	**24**	1	0	432	3072.85

CPVC BUTTERFLY DAMPER
Belled Socket



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
43BD-060C	**6**	1	2	432	398.73
43BD-080C	**8**	1	4	432	435.55
43BD-100C	**10**	1	0	432	562.32
43BD-120C	**12**	1	4	432	682.36
43BD-140C	**14**	1	0	432	817.14
43BD-160C	**16**	1	0	432	949.45
43BD-180C	**18**	1	0	432	1212.74
43BD-200C	**20**	1	0	432	1467.73
43BD-240C	**24**	1	0	432	1990.68

CPVC CROSS
Belled Socket

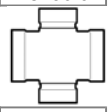


Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4320-060C	**6**	1	0	432	713.06
4320-080C	**8**	1	0	432	947.33
4320-100C	**10**	1	0	432	1325.55
4320-120C	**12**	1	0	432	1602.64
4320-140C	**14**	1	0	432	1881.06
4320-160C	**16**	1	0	432	2330.81
4320-180C	**18**	1	0	432	2774.37
4320-200C	**20**	1	0	432	3844.93

CPVC CROSS (continued)
Belled Socket

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4320-240C	**24**	1	0	432	5490.07

CPVC REDUCING CROSS
Belled Socket



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4320-532C	**6X4**	1	3	432	631.96
4320-582C	**8X4**	1	0	432	783.74
4320-585C	**8X6**	1	0	432	827.03
4320-624C	**10X4**	1	0	432	883.72
4320-626C	**10X6**	1	0	432	1011.69
4320-628C	**10X8**	1	0	432	1110.74
4320-664C	**12X4**	1	0	432	1018.40
4320-666C	**12X6**	1	0	432	1087.40
4320-668C	**12X8**	1	0	432	1324.80
4320-670C	**12X10**	1	0	432	1553.17
4320-694C	**14X4**	1	0	432	1289.11
4320-696C	**14X6**	1	0	432	1356.42
4320-698C	**14X8**	1	0	432	1512.03
4320-700C	**14X10**	1	0	432	1757.59
4320-702C	**14X12**	1	0	432	1824.79
4320-754C	**16X4**	1	0	432	1418.04
4320-756C	**16X6**	1	0	432	1492.68
4320-758C	**16X8**	1	0	432	1658.56
4320-760C	**16X10**	1	0	432	1928.57
4320-762C	**16X12**	1	0	432	2059.37
4320-764C	**16X14**	1	0	432	2371.42
4320-784C	**18X4**	1	0	432	1792.80
4320-786C	**18X6**	1	0	432	1927.72
4320-788C	**18X8**	1	0	432	2048.15
4320-790C	**18X10**	1	0	432	2202.31
4320-792C	**18X12**	1	0	432	2342.88
4320-794C	**18X14**	1	0	432	2639.63
4320-796C	**18X16**	1	0	432	2734.35
4320-814C	**20X4**	1	0	432	2150.27
4320-816C	**20X6**	1	0	432	2242.52
4320-818C	**20X8**	1	0	432	2519.69
4320-820C	**20X10**	1	0	432	2630.14
4320-822C	**20X12**	1	0	432	2798.02
4320-824C	**20X14**	1	0	432	3008.60
4320-826C	**20X16**	1	0	432	3354.00
4320-828C	**20X18**	1	0	432	3837.44
4320-904C	**24X4**	1	0	432	2488.23
4320-906C	**24X6**	1	0	432	2861.77
4320-908C	**24X8**	1	0	432	3044.40
4320-910C	**24X10**	1	0	432	3204.63
4320-912C	**24X12**	1	0	432	3483.33
4320-914C	**24X14**	1	0	432	3745.48
4320-916C	**24X16**	1	0	432	3984.57
4320-918C	**24X18**	1	0	432	4665.54
4320-920C	**24X20**	1	0	432	5322.25

CPVC COUPLING
Belled Socket



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4329-060C	**6**	1	4	432	89.34
4329-080C	**8**	1	8	432	113.92
4329-100C	**10**	1	2	432	150.05
4329-120C	**12**	1	3	432	167.13
4329-140C	**14**	1	2	432	206.78
4329-160C	**16**	1	0	432	225.63
4329-180C	**18**	1	0	432	282.06
4329-200C	**20**	1	0	432	354.61
4329-240C	**24**	1	2	432	436.20

CPVC REDUCER COUPLING
Belled Socket



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4329-532C	6X4	1	4	432	174.40
4329-582C	8X4	1	8	432	429.45
4329-585C	8X6	1	8	432	168.94
4329-624C	10X4	1	2	432	591.59
4329-626C	10X6	1	2	432	438.02
4329-628C	10X8	1	4	432	224.09
4329-664C	12X4	1	2	432	836.02
4329-666C	12X6	1	2	432	662.23
4329-668C	12X8	1	2	432	575.65
4329-670C	12X10	1	0	432	306.56
4329-694C	14X4	1	0	432	1073.81
4329-696C	14X6	1	0	432	859.06
4329-698C	14X8	1	0	432	730.22
4329-700C	14X10	1	0	432	748.28
4329-702C	14X12	1	0	432	419.64
4329-754C	16X4	1	0	432	1398.69
4329-756C	16X6	1	0	432	1113.62
4329-758C	16X8	1	0	432	943.75
4329-760C	16X10	1	0	432	896.24
4329-762C	16X12	1	0	432	872.14
4329-764C	16X14	1	0	432	539.16
4329-784C	18X4	1	0	432	1691.65
4329-786C	18X6	1	0	432	1358.77
4329-788C	18X8	1	0	432	1151.48
4329-790C	18X10	1	0	432	1090.41
4329-792C	18X12	1	0	432	1050.51
4329-794C	18X14	1	0	432	1021.39
4329-796C	18X16	1	0	432	633.68
4329-814C	20X4	1	0	432	2205.26
4329-816C	20X6	1	0	432	1778.45
4329-818C	20X8	1	0	432	1515.09
4329-820C	20X10	1	0	432	1429.32
4329-822C	20X12	1	0	432	1370.56
4329-824C	20X14	1	0	432	1293.01
4329-826C	20X16	1	0	432	1269.95
4329-828C	20X18	1	0	432	925.63
4329-904C	24X4	1	0	432	2833.35
4329-906C	24X6	1	0	432	2282.32
4329-908C	24X8	1	0	432	1968.77
4329-910C	24X10	1	0	432	1841.96
4329-912C	24X12	1	0	432	1772.81
4329-914C	24X14	1	0	432	1672.46
4329-916C	24X16	1	0	432	1580.76
4329-918C	24X18	1	0	432	1526.20
4329-920C	24X20	1	0	432	1469.36

CPVC SLEEVE COUPLING
Socket (No Stop)



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4329S-060C	6	1	5	432	95.66
4329S-080C	8	1	6	432	122.84
4329S-100C	10	1	0	432	161.93
4329S-120C	12	1	3	432	180.45
4329S-140C	14	1	2	432	223.28
4329S-160C	16	1	0	432	243.82
4329S-180C	18	1	2	432	304.73
4329S-200C	20	1	2	432	383.84
4329S-240C	24	1	2	432	471.27

CPVC FLAT CAP
Belled Socket

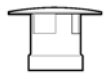


Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4347-060C	6	1	6	432	164.84

CPVC FLAT CAP (continued)
Belled Socket

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4347-080C	8	1	5	432	196.39
4347-100C	10	1	4	432	228.97
4347-120C	12	1	5	432	261.46
4347-140C	14	1	4	432	294.17
4347-160C	16	1	2	432	338.01
4347-180C	18	1	5	432	426.78
4347-200C	20	1	5	432	612.77
4347-240C	24	1	5	432	653.85

CPVC RAIN CAP
Belled Socket Style A



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4347-060AC	6	1	2	432	778.84
4347-080AC	8	1	0	432	1065.66
4347-100AC	10	1	0	432	1238.94
4347-120AC	12	1	0	432	1498.81
4347-140AC	14	1	0	432	2022.99
4347-160AC	16	1	0	432	2308.48
4347-180AC	18	1	0	432	2660.46
4347-200AC	20	1	0	432	3884.20
4347-240AC	24	1	0	432	4582.34

CPVC RAIN CAP
Belled Socket Style B



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4347-060BC	6	1	0	432	697.25
4347-080BC	8	1	0	432	1033.97
4347-100BC	10	1	0	432	1253.53
4347-120BC	12	1	0	432	1506.33
4347-140BC	14	1	0	432	2030.46
4347-160BC	16	1	0	432	2312.04
4347-180BC	18	1	0	432	2834.09
4347-200BC	20	1	0	432	4168.22
4347-240BC	24	1	0	432	4539.20

CPVC DUCT FLANGE
Belled Socket One Piece



SMACNA Bolt Pattern

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4351S-060C	6	1	4	432	203.36
4351S-080C	8	1	2	432	235.38
4351S-100C	10	1	4	432	290.58
4351S-120C	12	1	2	432	309.06
4351S-140C	14	1	0	432	358.39
4351S-160C	16	1	4	432	417.05
4351S-180C	18	1	0	432	557.87
4351S-200C	20	1	0	432	677.37
4351S-240C	24	1	0	432	954.24

See SMACNA Flange Specifications at the end of this catalog.
Also available in ANSI Class 150 Bolt Pattern.

CPVC BLIND DUCT FLANGE
One Piece



Class 150 Bolt Pattern

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4353-060C	6	1	36	432	204.69
4353-080C	8	1	36	432	235.20
4353-100C	10	1	18	432	283.69
4353-120C	12	1	4	432	311.93
4353-140C	14	1	6	432	370.51
4353-160C	16	1	0	432	407.99
4353-180C	18	1	0	432	580.07
4353-200C	20	1	14	432	718.74
4353-240C	24	1	0	432	958.88

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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC BLIND DUCT FLANGE
One Piece



SMACNA Bolt Pattern

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4353S-060C	**6**	1	52	432	217.77
4353S-080C	**8**	1	52	432	250.21
4353S-100C	**10**	1	52	432	301.80
4353S-120C	**12**	1	52	432	331.82
4353S-140C	**14**	1	52	432	394.17
4353S-160C	**16**	1	50	432	438.43
4353S-180C	**18**	1	50	432	617.13
4353S-200C	**20**	1	50	432	764.60
4353S-240C	**24**	1	57	432	1019.46

See SMACNA Flange Specifications at the end of this catalog.

CPVC WYE
Belled Socket



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4375-060C	**6**	1	2	432	401.52
4375-080C	**8**	1	0	432	530.89
4375-100C	**10**	1	0	432	800.27
4375-120C	**12**	1	0	432	1014.26
4375-140C	**14**	1	0	432	2667.16
4375-160C	**16**	1	0	432	4382.06
4375-180C	**18**	1	0	432	5221.37
4375-200C	**20**	1	0	432	7571.46
4375-240C	**24**	1	0	432	9881.69

CPVC REDUCING WYE
Belled Socket



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4375-532C	**6X4**	1	2	432	405.54
4375-582C	**8X4**	1	2	432	490.65
4375-585C	**8X6**	1	0	432	494.04
4375-624C	**10X4**	1	0	432	586.49
4375-626C	**10X6**	1	0	432	598.46
4375-628C	**10X8**	1	0	432	710.47
4375-664C	**12X4**	1	0	432	670.74
4375-666C	**12X6**	1	0	432	690.45
4375-668C	**12X8**	1	0	432	806.37
4375-670C	**12X10**	1	0	432	1368.73
4375-694C	**14X4**	1	0	432	736.63
4375-696C	**14X6**	1	0	432	746.25
4375-698C	**14X8**	1	0	432	910.05
4375-700C	**14X10**	1	0	432	1060.51
4375-702C	**14X12**	1	0	432	2224.74
4375-754C	**16X4**	1	0	432	779.34
4375-756C	**16X6**	1	0	432	784.55
4375-758C	**16X8**	1	0	432	956.75
4375-760C	**16X10**	1	0	432	1139.04
4375-762C	**16X12**	1	0	432	1257.05
4375-764C	**16X14**	1	0	432	1378.12
4375-784C	**18X4**	1	0	432	844.53
4375-786C	**18X6**	1	0	432	856.66
4375-788C	**18X8**	1	0	432	1007.84
4375-790C	**18X10**	1	0	432	1244.24
4375-792C	**18X12**	1	0	432	1382.71
4375-794C	**18X14**	1	0	432	1657.34
4375-796C	**18X16**	1	0	432	1872.68
4375-814C	**20X4**	1	0	432	1543.13
4375-816C	**20X6**	1	0	432	1612.85
4375-818C	**20X8**	1	0	432	1749.76
4375-820C	**20X10**	1	0	432	1818.47
4375-822C	**20X12**	1	0	432	2271.45
4375-824C	**20X14**	1	0	432	2354.17
4375-826C	**20X16**	1	0	432	2542.56

CPVC REDUCING WYE (continued)
Belled Socket

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4375-828C	**20X18**	1	0	432	2731.40
4375-904C	**24X4**	1	0	432	1733.51
4375-906C	**24X6**	1	0	432	1832.82
4375-908C	**24X8**	1	0	432	2102.01
4375-910C	**24X10**	1	0	432	2385.38
4375-912C	**24X12**	1	0	432	2566.85
4375-914C	**24X14**	1	0	432	2693.75
4375-916C	**24X16**	1	0	432	2827.23
4375-918C	**24X18**	1	0	432	3150.64
4375-920C	**24X20**	1	0	432	3513.84

DOUBLE CONTAINMENT SYSTEM DESIGN

Spears® Double Containment (DC) Fittings are constructed from standard fittings that are to be *assembled on the jobsite*. Spears® DC fittings work with standard pipe for both Carrier and Containment lines. Carrier fittings are equipped with special extender couplings for connection to carrier pipe. Simple, slip-on centralizer brackets used on the carrier pipe support this assembly inside the containment pipe. This design allows the carrier fitting to "float" within the containment fitting, allowing ease of movement for installation while reducing problems associated with thermal expansion and contraction during operation. This simplified approach to double containment makes installation very easy. However, successful installation requires proper design and planning of system layout, a basic understanding of how Spears® double containment fitting design works, and specific attention to a proper sequence of general assembly. See *Double Containment Design & Installation Guide* for additional details on design, installation and different configuration applications. DC fitting sizes are listed through 12", but additional sizes are available on request.

CONFIGURATIONS

DC Pipe: Spears® DC Fittings can be used with any standard pipe of the corresponding size and schedule. As a result, pipe is not listed in this Price Schedule.
DC Fittings: Each configuration includes all components to form an internal Carrier Fitting with applicable Extender-Couplings and an external Containment fitting. Each DC Fitting configuration is specified as Carrier Material & Schedule x Containment Material & Schedule. Refer to example below (additional information is found in specific fitting sections).

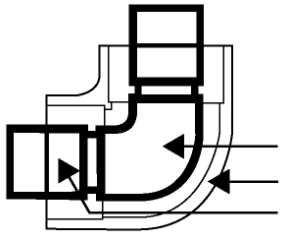
Note: Assembled carrier/containment pipe available on request. Contact Spears® for additional information.

Example

A Double Containment 90° Ell having a 1/2" Schedule 40 Carrier and 2" Schedule 40 Containment pipe would be listed as follows:

Product Name — DC 90° Ell
Configuration Description — PVC Sch 40 x PVC Sch 40

Part Number	Size	Disc Code	Price Each
DC06-A005-A020	1/2X2	470	32.78



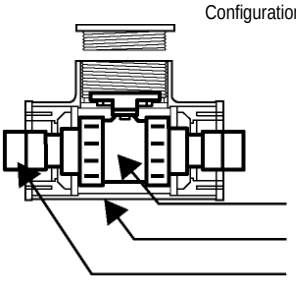
Centralizer Brackets should be ordered separately for Carrier pipe support in runs of Containment pipe.
Valve Boxes: Like DC Fittings, Valve Boxes include all necessary components for connection to the designated Carrier x Containment system. Valve Boxes include the applicable True Union Industrial Ball Valve, Ball Check Valve, or Diaphragm Valve, with designated elastomer seals. Refer to example below (additional information is found in specific Valve Box sections).

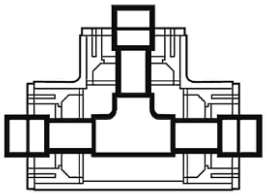
Example

A Valve Box with True Union 2000 Industrial Ball Valve having a 1/2" valve with Schedule 40 Carrier and 2" Schedule 40 Containment pipe would be listed as follows:

Product Name — Valve Box, with PVC True Union 2000 Industrial Ball Valve
Configuration Description — PVC Sch 40 x PVC Sch 40

Size	EPDM	FKM	Disc Code
1/2X2	VBA20-A005-A020 **280.17**	VBA30-A005-A020 **285.10**	470





DC Tees are made from standard Spears® pressure fittings in designated material and Schedule selected. Included are separate internal Carrier and external Containment fittings of the same configuration. Carrier fittings are equipped with extenders to facilitate cement assembly. Certain combinations use larger Containment tees that are bushed to specified size.

Important Note: Some Tees are shipped with the Carrier Tee branch extender separated from the Carrier Tee assembly to facilitate assembly. The Carrier Tee branch extension must be cemented in place after the run Carrier Tee assembly is completed. See *Double Containment Design & Installation Guide* for proper installation.

Centralizers are used inside the Containment piping system, but not inside fittings, installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

[1] Configuration uses larger size Containment Tee with Outlets Bushed down

DC Tee PVC Sch 40 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC01-A005-A020	**1/2X2**	1	8	470	43.32
DC01-A007-A030	**3/4X3**	1	10	470	60.33
DC01-A010-A030	**1X3**	1	10	470	62.47
DC01-A015-A040	**1-1/2X4**	1	4	470	82.12
DC01-A020-A040[1]	**2X4**	1	4	470	294.54
DC01-A030-A060	**3X6**	1	2	470	680.28
DC01-A040-A080	**4X8**	1	2	470	414.36
DC01-A060-A100	**6X10**	1	0	470	1028.82
DC01-A080-A120	**8X12**	1	0	470	1573.28

DC Tee PVC Sch 40 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC01-A005-G020	**1/2X2**	1	8	470	114.81
DC01-A007-G030	**3/4X3**	1	10	470	367.00
DC01-A010-G030	**1X3**	1	10	470	369.15
DC01-A015-G040	**1-1/2X4**	1	4	470	637.35
DC01-A020-G040[1]	**2X4**	1	4	470	1130.42
DC01-A030-G060	**3X6**	1	2	470	1428.14
DC01-A040-G080	**4X8**	1	2	470	2115.85

DC Tee PVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC01-B005-A020	**1/2X2**	1	9	470	69.09
DC01-B007-A030	**3/4X3**	1	10	470	91.73
DC01-B010-A030	**1X3**	1	10	470	94.83
DC01-B015-A040	**1-1/2X4**	1	4	470	143.63
DC01-B020-A040[1]	**2X4**	1	2	470	356.12
DC01-B030-A060	**3X6**	1	2	470	819.77
DC01-B040-A080	**4X8**	1	2	470	970.95
DC01-B060-A100	**6X10**	1	0	470	1537.65
DC01-B080-A120	**8X12**	1	0	470	2456.25

DC Tee PVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC01-B005-G020	**1/2X2**	1	9	470	140.47
DC01-B007-G030	**3/4X3**	1	10	470	399.45
DC01-B010-G030	**1X3**	1	10	470	402.07
DC01-B015-G040	**1-1/2X4**	1	4	470	704.07
DC01-B020-G040	**2X4**	1	2	470	2702.39
DC01-B030-G060	**3X6**	1	2	470	1088.83
DC01-B040-G080	**4X8**	1	2	470	2265.19

DC Tee PVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC01-B005-B020	**1/2X2**	1	10	470	106.39
DC01-B007-B030	**3/4X3**	1	10	470	128.26
DC01-B010-B030	**1X3**	1	5	470	131.27
DC01-B015-B040	**1-1/2X4**	1	4	470	177.72
DC01-B020-B040[1]	**2X4**	1	0	470	663.87
DC01-B030-B060[1]	**3X6**	1	2	470	991.53
DC01-B040-B080	**4X8**	1	0	470	1227.55
DC01-B060-B100	**6X10**	1	0	470	1517.74
DC01-B080-B120	**8X12**	1	0	470	3502.40

DC Tee CPVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC01-C005-A020	**1/2X2**	1	10	470	75.14
DC01-C007-A030	**3/4X3**	1	5	470	98.85
DC01-C010-A030	**1X3**	1	10	470	111.26
DC01-C015-A040	**1-1/2X4**	1	4	470	184.97
DC01-C020-A040[1]	**2X4**	1	3	470	411.23
DC01-C030-A060	**3X6**	1	2	470	950.32
DC01-C040-A080	**4X8**	1	0	470	757.61
DC01-C060-A100	**6X10**	1	0	470	1766.48
DC01-C080-A120	**8X12**	1	0	470	2781.34

DC Tee CPVC Sch 80 x PVC Sch 80

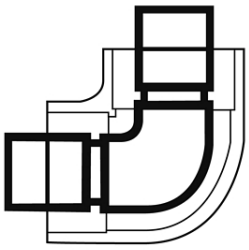
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC01-C005-B020	**1/2X2**	1	9	470	112.35
DC01-C007-B030	**3/4X3**	1	5	470	135.31
DC01-C010-B030	**1X3**	1	5	470	147.83
DC01-C015-B040	**1-1/2X4**	1	4	470	213.83
DC01-C020-B040[1]	**2X4**	1	4	470	742.23
DC01-C030-B060	**3X6**	1	2	470	1353.71
DC01-C040-B080	**4X8**	1	0	470	987.58
DC01-C060-B100	**6X10**	1	0	470	2825.52
DC01-C080-B120	**8X12**	1	0	470	3440.76

DC Tee CPVC Sch 80 x CPVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC01-C005-C020	**1/2X2**	1	10	470	117.85
DC01-C007-C030	**3/4X3**	1	10	470	199.16
DC01-C010-C030	**1X3**	1	5	470	211.68
DC01-C015-C040	**1-1/2X4**	1	5	470	308.63
DC01-C020-C040[1]	**2X4**	1	0	470	513.23
DC01-C030-C060	**3X6**	1	2	470	1081.06
DC01-C040-C080	**4X8**	1	2	470	1663.62
DC01-C060-C100	**6X10**	1	0	470	2908.24
DC01-C080-C120	**8X12**	1	0	470	5253.18

DC Tee CPVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC01-C005-G020	**1/2X2**	1	9	470	146.06
DC01-C007-G030	**3/4X3**	1	5	470	405.52
DC01-C010-G030	**1X3**	1	10	470	418.04
DC01-C015-G040	**1-1/2X4**	1	6	470	787.84
DC01-C020-G040[1]	**2X4**	1	6	470	2741.34
DC01-C030-G060[1]	**3X6**	1	2	470	1787.00
DC01-C040-G080	**4X8**	1	2	470	2383.74



DC 90° Ells are made from standard Spears® pressure fittings in designated material and Schedule selected. Included are separate internal Carrier and external Containment fittings of the same configuration. Carrier fittings are equipped with extenders to facilitate cement assembly. See *Double Containment Design & Installation Guide* for proper installation.

Centralizers are used inside the Containment piping system, but not inside fittings, installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

DC 90° Ell PVC Sch 40 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC06-A005-A020	**1/2X2**	1	25	470	34.51
DC06-A007-A030	**3/4X3**	1	10	470	44.98
DC06-A010-A030	**1X3**	1	10	470	46.48
DC06-A015-A040	**1-1/2X4**	1	5	470	59.67
DC06-A020-A040	**2X4**	1	5	470	75.93
DC06-A030-A060	**3X6**	2	0	470	152.33
DC06-A040-A080	**4X8**	1	2	470	295.95
DC06-A060-A100	**6X10**	1	0	470	968.87
DC06-A080-A120	**8X12**	1	0	470	1420.85

DC 90° Ell PVC Sch 40 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC06-A005-G020	**1/2X2**	1	25	470	92.07
DC06-A007-G030	**3/4X3**	1	10	470	254.03
DC06-A010-G030	**1X3**	1	4	470	255.61
DC06-A015-G040	**1-1/2X4**	1	5	470	433.89
DC06-A020-G040	**2X4**	1	8	470	450.16
DC06-A030-G060	**3X6**	1	2	470	791.11
DC06-A040-G080	**4X8**	1	2	470	1384.05

DC 90° Ell PVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC06-B005-A020	**1/2X2**	1	25	470	48.26
DC06-B007-A030	**3/4X3**	1	10	470	63.59
DC06-B010-A030	**1X3**	1	10	470	66.59
DC06-B015-A040	**1-1/2X4**	1	5	470	92.63
DC06-B020-A040	**2X4**	1	5	470	109.58
DC06-B030-A060	**3X6**	1	2	470	236.12
DC06-B040-A080	**4X8**	1	2	470	398.84
DC06-B060-A100	**6X10**	1	0	470	1173.99
DC06-B080-A120	**8X12**	1	0	470	1754.57

DC 90° Ell PVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC06-B005-G020	**1/2X2**	1	25	470	105.44
DC06-B007-G030	**3/4X3**	1	10	470	272.60
DC06-B010-G030	**1X3**	1	10	470	275.59
DC06-B015-G040	**1-1/2X4**	1	8	470	465.54
DC06-B020-G040	**2X4**	1	4	470	469.59
DC06-B030-G060	**3X6**	1	4	470	234.93
DC06-B040-G080	**4X8**	1	2	470	1486.96

DC 90° Ell PVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC06-B005-B020	**1/2X2**	1	20	470	56.20
DC06-B007-B030	**3/4X3**	1	10	470	80.58
DC06-B010-B030	**1X3**	1	10	470	83.61
DC06-B015-B040	**1-1/2X4**	1	5	470	113.36
DC06-B020-B040	**2X4**	1	4	470	117.55
DC06-B030-B060	**3X6**	2	0	470	290.48
DC06-B040-B080	**4X8**	1	2	470	563.22
DC06-B060-B100	**6X10**	1	0	470	2055.33
DC06-B080-B120	**8X12**	1	0	470	2874.16

DC 90° Ell CPVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC06-C005-A020	**1/2X2**	1	8	470	51.81
DC06-C007-A030	**3/4X3**	1	5	470	68.27
DC06-C010-A030	**1X3**	1	5	470	79.43
DC06-C015-A040	**1-1/2X4**	1	8	470	129.05
DC06-C020-A040	**2X4**	1	5	470	155.74
DC06-C030-A060	**3X6**	1	5	470	302.64
DC06-C040-A080	**4X8**	1	2	470	582.09
DC06-C060-A100	**6X10**	1	0	470	1545.61
DC06-C080-A120	**8X12**	1	0	470	2965.48

DC 90° Ell CPVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC06-C005-B020	**1/2X2**	1	25	470	59.76
DC06-C007-B030	**3/4X3**	1	5	470	85.27
DC06-C010-B030	**1X3**	1	5	470	109.64
DC06-C015-B040	**1-1/2X4**	1	4	470	151.11
DC06-C020-B040	**2X4**	1	4	470	177.79
DC06-C030-B060	**3X6**	1	0	470	396.81
DC06-C040-B080	**4X8**	1	2	470	746.47
DC06-C060-B100	**6X10**	1	0	470	2426.91
DC06-C080-B120	**8X12**	1	0	470	4085.25

DC 90° Ell CPVC Sch 80 x CPVC Sch 80

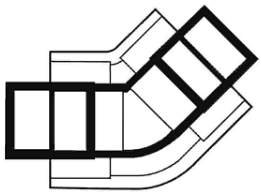
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC06-C005-C020	**1/2X2**	1	25	470	83.61
DC06-C007-C030	**3/4X3**	1	10	470	147.61
DC06-C010-C030	**1X3**	1	5	470	158.36
DC06-C015-C040	**1-1/2X4**	1	5	470	279.35
DC06-C020-C040	**2X4**	1	4	470	298.11
DC06-C030-C060	**3X6**	1	2	470	519.85
DC06-C040-C080	**4X8**	1	2	470	1199.99
DC06-C060-C100	**6X10**	1	0	470	2972.03
DC06-C080-C120	**8X12**	1	0	470	4904.56

DC 90° Ell CPVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC06-C005-G020	**1/2X2**	1	23	470	109.38
DC06-C007-G030	**3/4X3**	1	4	470	277.68
DC06-C010-G030	**1X3**	1	5	470	288.42
DC06-C015-G040	**1-1/2X4**	1	8	470	503.29
DC06-C020-G040	**2X4**	1	8	470	529.86
DC06-C030-G060	**3X6**	1	5	470	981.41
DC06-C040-G080	**4X8**	1	2	470	1673.05

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Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com



DC 45° Ells are made from standard Spears® pressure fittings in designated material and Schedule selected. Included are separate internal Carrier and external Containment fittings of the same configuration. Carrier fittings are equipped with extenders to facilitate cement assembly. See *Double Containment Design & Installation Guide* for proper installation.

Centralizers are used inside the Containment piping system, but not inside fittings, installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

DC 45° Ell PVC Sch 40 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC17-A005-A020	**1/2X2**	1	25	470	35.52
DC17-A007-A030	**3/4X3**	1	5	470	50.17
DC17-A010-A030	**1X3**	1	5	470	51.38
DC17-A015-A040	**1-1/2X4**	1	5	470	68.27
DC17-A020-A040	**2X4**	1	4	470	84.16
DC17-A030-A060	**3X6**	2	0	470	157.27
DC17-A040-A080	**4X8**	1	3	470	292.29
DC17-A060-A100	**6X10**	1	0	470	696.24
DC17-A080-A120	**8X12**	1	0	470	1145.46

DC 45° Ell PVC Sch 40 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC17-A005-G020	**1/2X2**	1	25	470	111.24
DC17-A007-G030	**3/4X3**	1	8	470	321.71
DC17-A010-G030	**1X3**	1	5	470	322.84
DC17-A015-G040	**1-1/2X4**	1	5	470	569.01
DC17-A020-G040	**2X4**	1	4	470	571.93
DC17-A030-G060	**3X6**	1	2	470	1013.56
DC17-A040-G080	**4X8**	1	3	470	1222.25

DC 45° Ell PVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC17-B005-A020	**1/2X2**	1	25	470	51.12
DC17-B007-A030	**3/4X3**	1	8	470	73.05
DC17-B010-A030	**1X3**	1	10	470	78.25
DC17-B015-A040	**1-1/2X4**	1	5	470	110.60
DC17-B020-A040	**2X4**	1	5	470	132.21
DC17-B030-A060	**3X6**	1	7	470	277.18
DC17-B040-A080	**4X8**	1	2	470	468.49
DC17-B060-A100	**6X10**	1	0	470	932.77
DC17-B080-A120	**8X12**	1	0	470	1445.42

DC 45° Ell PVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC17-B005-G020	**1/2X2**	1	10	470	119.18
DC17-B007-G030	**3/4X3**	1	8	470	344.60
DC17-B010-G030	**1X3**	1	5	470	351.22
DC17-B015-G040	**1-1/2X4**	1	5	470	600.13
DC17-B020-G040	**2X4**	1	5	470	619.98
DC17-B030-G060	**3X6**	1	4	470	1133.36
DC17-B040-G080	**4X8**	1	3	470	1873.04

DC 45° Ell PVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC17-B005-B020	**1/2X2**	1	10	470	75.16
DC17-B007-B030	**3/4X3**	1	8	470	125.94
DC17-B010-B030	**1X3**	1	5	470	136.42
DC17-B015-B040	**1-1/2X4**	1	5	470	205.97
DC17-B020-B040	**2X4**	1	5	470	214.20
DC17-B030-B060	**3X6**	1	2	470	357.23
DC17-B040-B080	**4X8**	1	2	470	623.89
DC17-B060-B100	**6X10**	1	0	470	1530.56
DC17-B080-B120	**8X12**	1	0	470	2116.07

DC 45° Ell CPVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC17-C005-A020	**1/2X2**	1	25	470	53.76
DC17-C007-A030	**3/4X3**	1	8	470	75.84
DC17-C010-A030	**1X3**	1	10	470	88.37
DC17-C015-A040	**1-1/2X4**	1	5	470	141.31
DC17-C020-A040	**2X4**	1	5	470	165.85
DC17-C030-A060	**3X6**	1	5	470	271.63
DC17-C040-A080	**4X8**	1	3	470	542.15
DC17-C060-A100	**6X10**	1	0	470	1367.03
DC17-C080-A120	**8X12**	1	0	470	2740.09

DC 45° Ell CPVC Sch 80 x PVC Sch 80

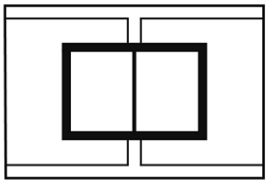
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC17-C005-B020	**1/2X2**	1	25	470	77.08
DC17-C007-B030	**3/4X3**	1	5	470	128.72
DC17-C010-B030	**1X3**	1	5	470	140.84
DC17-C015-B040	**1-1/2X4**	1	4	470	160.58
DC17-C020-B040	**2X4**	1	5	470	185.32
DC17-C030-B060	**3X6**	1	5	470	382.32
DC17-C040-B080	**4X8**	1	2	470	697.06
DC17-C060-B100	**6X10**	1	0	470	1962.17
DC17-C080-B120	**8X12**	1	0	470	3410.74

DC 45° Ell CPVC Sch 80 x CPVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC17-C005-C020	**1/2X2**	1	10	470	87.66
DC17-C007-C030	**3/4X3**	1	8	470	158.40
DC17-C010-C030	**1X3**	1	10	470	170.92
DC17-C015-C040	**1-1/2X4**	1	5	470	246.99
DC17-C020-C040	**2X4**	1	5	470	271.73
DC17-C030-C060	**3X6**	1	2	470	617.20
DC17-C040-C080	**4X8**	1	2	470	1234.23
DC17-C060-C100	**6X10**	1	0	470	3738.62
DC17-C080-C120	**8X12**	1	0	470	5136.51

DC 45° Ell CPVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC17-C005-G020	**1/2X2**	1	10	470	120.99
DC17-C007-G030	**3/4X3**	1	8	470	347.38
DC17-C010-G030	**1X3**	1	10	470	359.89
DC17-C015-G040	**1-1/2X4**	1	5	470	642.35
DC17-C020-G040	**2X4**	1	5	470	653.83
DC17-C030-G060	**3X6**	1	5	470	1217.66
DC17-C040-G080	**4X8**	1	3	470	2060.25



DC Couplings are made from standard Spears® pressure fittings in designated material and Schedule selected. Included are separate internal Carrier and external Containment fittings of the same configuration (no extenders required on Couplings). See *Double Containment Design & Installation Guide* for proper installation.

Centralizers are used inside the Containment piping system, but not inside fittings, installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

DC Coupling PVC Sch 40 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC29-A005-A020	**1/2X2**	1	25	470	2.74
DC29-A007-A030	**3/4X3**	1	10	470	8.56
DC29-A010-A030	**1X3**	1	10	470	9.00
DC29-A015-A040	**1-1/2X4**	1	6	470	13.02
DC29-A020-A040	**2X4**	1	10	470	13.82
DC29-A030-A060	**3X6**	1	4	470	44.37
DC29-A040-A080	**4X8**	1	6	470	79.49
DC29-A060-A100	**6X10**	1	2	470	234.56
DC29-A080-A120	**8X12**	1	0	470	462.79

DC Coup PVC Sch 40 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC29-A005-G020	**1/2X2**	1	10	470	37.43
DC29-A007-G030	**3/4X3**	1	10	470	127.42
DC29-A010-G030	**1X3**	1	10	470	127.79
DC29-A015-G040	**1-1/2X4**	1	6	470	184.62
DC29-A020-G040	**2X4**	1	8	470	185.41
DC29-A030-G060	**3X6**	1	4	470	351.39
DC29-A040-G080	**4X8**	1	6	470	604.84

DC Coupling PVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC29-B005-A020	**1/2X2**	1	25	470	8.28
DC29-B007-A030	**3/4X3**	1	10	470	16.16
DC29-B010-A030	**1X3**	1	5	470	16.28
DC29-B015-A040	**1-1/2X4**	1	6	470	25.17
DC29-B020-A040	**2X4**	1	5	470	26.18
DC29-B030-A060	**3X6**	1	4	470	77.88
DC29-B040-A080	**4X8**	1	6	470	119.94
DC29-B060-A100	**6X10**	1	2	470	309.94
DC29-B080-A120	**8X12**	1	4	470	546.88

DC Coup PVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC29-B005-G020	**1/2X2**	1	10	470	42.88
DC29-B007-G030	**3/4X3**	1	10	470	134.94
DC29-B010-G030	**1X3**	1	10	470	135.14
DC29-B015-G040	**1-1/2X4**	1	6	470	191.47
DC29-B020-G040	**2X4**	1	8	470	197.78
DC29-B030-G060	**3X6**	1	4	470	344.32
DC29-B040-G080	**4X8**	1	4	470	638.11

DC Coupling PVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC29-B005-B020	**1/2X2**	1	10	470	20.62
DC29-B007-B030	**3/4X3**	1	5	470	49.59
DC29-B010-B030	**1X3**	1	5	470	49.80
DC29-B015-B040	**1-1/2X4**	1	5	470	65.61
DC29-B020-B040	**2X4**	1	8	470	66.61
DC29-B030-B060	**3X6**	1	8	470	153.25
DC29-B040-B080	**4X8**	1	4	470	204.03
DC29-B060-B100	**6X10**	1	2	470	633.80
DC29-B080-B120	**8X12**	1	0	470	753.85

DC Coupling CPVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC29-C005-A020	**1/2X2**	1	25	470	8.69
DC29-C007-A030	**3/4X3**	1	10	470	16.89
DC29-C010-A030	**1X3**	1	10	470	19.99
DC29-C015-A040	**1-1/2X4**	1	6	470	34.16
DC29-C020-A040	**2X4**	1	6	470	37.84
DC29-C030-A060	**3X6**	1	4	470	100.04
DC29-C040-A080	**4X8**	1	6	470	151.40
DC29-C060-A100	**6X10**	1	2	470	394.58
DC29-C080-A120	**8X12**	1	4	470	925.68

DC Coupling CPVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC29-C005-B020	**1/2X2**	1	10	470	20.52
DC29-C007-B030	**3/4X3**	1	5	470	50.40
DC29-C010-B030	**1X3**	1	5	470	53.51
DC29-C015-B040	**1-1/2X4**	1	6	470	74.60
DC29-C020-B040	**2X4**	1	4	470	75.98
DC29-C030-B060	**3X6**	1	4	470	175.37
DC29-C040-B080	**4X8**	1	4	470	215.34
DC29-C060-B100	**6X10**	1	2	470	638.99
DC29-C080-B120	**8X12**	1	0	470	1132.53

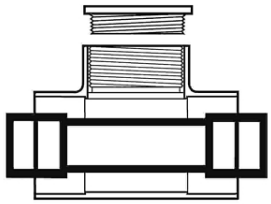
DC Coupling CPVC Sch 80 x CPVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC29-C005-C020	**1/2X2**	1	10	470	32.68
DC29-C007-C030	**3/4X3**	1	5	470	72.57
DC29-C010-C030	**1X3**	1	10	470	75.63
DC29-C015-C040	**1-1/2X4**	1	5	470	106.07
DC29-C020-C040	**2X4**	1	8	470	109.73
DC29-C030-C060	**3X6**	1	4	470	260.06
DC29-C040-C080	**4X8**	1	4	470	614.33
DC29-C060-C100	**6X10**	1	2	470	864.21
DC29-C080-C120	**8X12**	1	0	470	1311.19

DC Coup CPVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DC29-C005-G020	**1/2X2**	1	10	470	43.28
DC29-C007-G030	**3/4X3**	1	10	470	135.76
DC29-C010-G030	**1X3**	1	10	470	138.85
DC29-C015-G040	**1-1/2X4**	1	6	470	205.78
DC29-C020-G040	**2X4**	1	6	470	209.43
DC29-C030-G060	**3X6**	1	10	470	393.28
DC29-C040-G080	**4X8**	1	6	470	676.74

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Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com



DC Access Tees are made from standard Spears® pressure fittings in designated material and Schedule selected. Included is an internal Carrier pipe section equipped with couplings and an external Containment Tee fitting equipped with a threaded Plug on the branch for access. See *Double Containment Design & Installation Guide* for proper installation.

Centralizers are used inside the Containment piping system, but not inside fittings, installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

DC Access Tee PVC Sch 40 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCAT-A005-A020	**1/2X2**	1	10	470	42.41
DCAT-A007-A030	**3/4X3**	1	5	470	70.63
DCAT-A010-A030	**1X3**	1	5	470	71.51
DCAT-A015-A040	**1-1/2X4**	1	3	470	100.55
DCAT-A020-A040	**2X4**	1	5	470	131.16
DCAT-A030-A060	**3X6**	1	4	470	361.41
DCAT-A040-A080	**4X8**	1	0	470	753.43
DCAT-A060-A100	**6X10**	1	0	470	1714.91
DCAT-A080-A120	**8X12**	1	0	470	2421.59

DC Access Tee PVC Sch 40 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCAT-A005-G020	**1/2X2**	1	10	470	214.78
DCAT-A007-G030	**3/4X3**	1	10	470	570.43
DCAT-A010-G030	**1X3**	1	10	470	571.33
DCAT-A015-G040	**1-1/2X4**	1	6	470	939.09
DCAT-A020-G040	**2X4**	1	6	470	951.28
DCAT-A030-G060	**3X6**	1	4	470	1291.93
DCAT-A040-G080	**4X8**	1	0	470	2371.73

DC Access Tee PVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCAT-B005-A020	**1/2X2**	1	10	470	53.53
DCAT-B007-A030	**3/4X3**	1	10	470	85.66
DCAT-B010-A030	**1X3**	1	6	470	86.09
DCAT-B015-A040	**1-1/2X4**	1	6	470	124.87
DCAT-B020-A040	**2X4**	1	6	470	137.48
DCAT-B030-A060	**3X6**	1	4	470	428.44
DCAT-B040-A080	**4X8**	1	2	470	834.27
DCAT-B060-A100	**6X10**	1	0	470	1878.81
DCAT-B080-A120	**8X12**	1	0	470	2680.34

DC Access Tee PVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCAT-B005-G020	**1/2X2**	1	10	470	259.34
DCAT-B007-G030	**3/4X3**	1	10	470	585.48
DCAT-B010-G030	**1X3**	1	10	470	585.78
DCAT-B015-G040	**1-1/2X4**	1	3	470	962.09
DCAT-B020-G040	**2X4**	1	6	470	965.43
DCAT-B030-G060	**3X6**	1	4	470	1358.95
DCAT-B040-G080	**4X8**	1	2	470	2452.57

DC Access Tee PVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCAT-B005-B020	**1/2X2**	1	5	470	88.87
DCAT-B007-B030	**3/4X3**	1	5	470	162.11
DCAT-B010-B030	**1X3**	1	5	470	162.64
DCAT-B015-B040	**1-1/2X4**	1	5	470	278.77
DCAT-B020-B040	**2X4**	1	5	470	291.37
DCAT-B030-B060	**3X6**	1	4	470	643.88
DCAT-B040-B080	**4X8**	1	2	470	1069.58

DC Access Tee PVC Sch 80 x PVC Sch 80 (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCAT-B060-B100	**6X10**	1	0	470	2897.51
DCAT-B080-B120	**8X12**	1	0	470	3523.17

DC Access Tee CPVC Sch 80xPVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCAT-C007-A030	**3/4X3**	1	5	470	87.29
DCAT-C010-A030	**1X3**	1	6	470	93.51
DCAT-C015-A040	**1-1/2X4**	1	6	470	142.84
DCAT-C020-A040	**2X4**	1	6	470	160.77
DCAT-C030-A060	**3X6**	1	4	470	459.55
DCAT-C040-A080	**4X8**	1	2	470	895.64
DCAT-C060-A100	**6X10**	1	0	470	2048.17
DCAT-C080-A120	**8X12**	1	0	470	2678.48

DC Access Tee CPVC Sch 80xPVC Sch 80

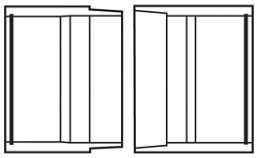
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCAT-C005-B020	**1/2X2**	1	10	470	89.66
DCAT-C007-B030	**3/4X3**	1	5	470	163.71
DCAT-C010-B030	**1X3**	1	5	470	169.93
DCAT-C015-B040	**1-1/2X4**	1	5	470	235.75
DCAT-C020-B040	**2X4**	1	5	470	314.66
DCAT-C030-B060	**3X6**	1	4	470	712.05
DCAT-C040-B080	**4X8**	1	2	470	1330.55
DCAT-C060-B100	**6X10**	1	0	470	2849.31
DCAT-C080-B120	**8X12**	1	0	470	4457.02

DC Access Tee CPVC Sch 80 x CPVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCAT-C005-C020	**1/2X2**	1	10	470	149.91
DCAT-C007-C030	**3/4X3**	1	5	470	495.66
DCAT-C010-C030	**1X3**	1	6	470	500.42
DCAT-C015-C040	**1-1/2X4**	1	5	470	707.60
DCAT-C020-C040	**2X4**	1	5	470	714.94
DCAT-C030-C060	**3X6**	1	4	470	1530.16
DCAT-C040-C080	**4X8**	1	2	470	3886.15
DCAT-C060-C100	**6X10**	1	0	470	4155.95
DCAT-C080-C120	**8X12**	1	0	470	6333.11

DC Access Tee CPVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCAT-C005-G020	**1/2X2**	1	10	470	278.92
DCAT-C007-G030	**3/4X3**	1	5	470	587.09
DCAT-C010-G030	**1X3**	1	5	470	593.32
DCAT-C015-G040	**1-1/2X4**	1	3	470	981.39
DCAT-C020-G040	**2X4**	1	6	470	988.74
DCAT-C030-G060	**3X6**	1	4	470	1413.88
DCAT-C040-G080	**4X8**	1	2	470	2525.98



DC Closure Fittings are special split couplings for joining meeting runs of Containment piping, such as before the final Termination Fitting. Closure Fittings consist of a male component and a female component. An internal O-ring on each component serves as a "cement-wiper" during installation to assure a proper joint. A "One-step" type cement should be used to facilitate rapid assembly. See *Double Containment Design & Installation Guide* for proper installation.

Centralizers are used inside the Containment piping system, but not inside fittings, installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

DC Closure Fitting PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCCF-A030	**3**	1	10	470	469.84
DCCF-A040	**4**	1	5	470	481.39
DCCF-A060	**6**	1	2	470	500.98
DCCF-A080	**8**	1	0	470	691.06
DCCF-A100	**10**	1	2	470	762.33
DCCF-A120	**12**	1	2	470	1204.21

DC Closure Fitting PVC Sch 80

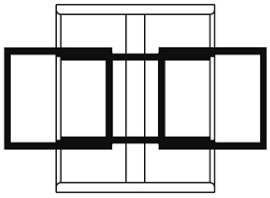
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCCF-B020	**2**	1	10	470	469.42
DCCF-B030	**3**	1	10	470	477.47
DCCF-B040	**4**	1	5	470	491.98
DCCF-B060	**6**	1	2	470	521.09
DCCF-B080	**8**	1	3	470	690.85
DCCF-B100	**10**	1	2	470	916.82
DCCF-B120	**12**	1	0	470	1469.69

DC Closure Fitting CPVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCCF-C020	**2**	1	10	470	476.56
DCCF-C030	**3**	1	10	470	496.43
DCCF-C040	**4**	1	5	470	518.13
DCCF-C060	**6**	1	2	470	631.55
DCCF-C080	**8**	1	3	470	849.59
DCCF-C100	**10**	1	2	470	1581.61
DCCF-C120	**12**	1	0	470	2509.35

DC Closure Fitting PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCCF-G030	**3**	1	10	470	524.27
DCCF-G040	**4**	1	5	470	544.68
DCCF-G060	**6**	1	2	470	646.06
DCCF-G080	**8**	1	6	470	960.03



DC Isolation Couplers are to isolate a containment section for improved location identification if a leak is detected. When cemented into place, a suitable seal is formed for isolation of the containment sections. See *Double Containment Design & Installation Guide* for proper installation.

Centralizers are used inside the Containment piping system, but not inside fittings, installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

DC Isolation Coupler
PVC Sch 40 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCDB-A005-A020	**1/2X2**	1	5	470	34.66
DCDB-A007-A030	**3/4X3**	1	5	470	55.20
DCDB-A010-A030	**1X3**	1	5	470	55.48
DCDB-A015-A040	**1-1/2X4**	1	6	470	61.19
DCDB-A020-A040	**2X4**	1	4	470	65.41
DCDB-A030-A060	**3X6**	1	4	470	104.88
DCDB-A040-A080	**4X8**	1	4	470	150.91
DCDB-A060-A100	**6X10**	1	10	470	201.48
DCDB-A080-A120	**8X12**	1	0	470	340.80

DC Isolation Coupler
PVC Sch 40 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCDB-A005-G020	**1/2X2**	1	5	470	80.06
DCDB-A007-G030	**3/4X3**	1	5	470	98.96
DCDB-A010-G030	**1X3**	1	5	470	207.14
DCDB-A015-G040	**1-1/2X4**	1	4	470	238.53
DCDB-A020-G040	**2X4**	1	4	470	246.84
DCDB-A030-G060	**3X6**	1	4	470	270.03
DCDB-A040-G080	**4X8**	1	4	470	340.58

DC Isolation Coupler
PVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCDB-B005-A020	**1/2X2**	1	5	470	50.03
DCDB-B007-A030	**3/4X3**	1	5	470	59.91
DCDB-B010-A030	**1X3**	1	4	470	66.08
DCDB-B015-A040	**1-1/2X4**	1	4	470	70.66
DCDB-B020-A040	**2X4**	1	4	470	76.37
DCDB-B030-A060	**3X6**	1	5	470	109.55
DCDB-B040-A080	**4X8**	1	4	470	164.01
DCDB-B060-A100	**6X10**	1	0	470	214.33
DCDB-B080-A120	**8X12**	1	0	470	368.66

DC Isolation Coupler
PVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCDB-B005-G020	**1/2X2**	1	5	470	105.58
DCDB-B010-G030	**1X3**	1	5	470	211.97
DCDB-B015-G040	**1-1/2X4**	1	4	470	274.21
DCDB-B020-G040	**2X4**	1	4	470	300.16
DCDB-B030-G060	**3X6**	1	5	470	333.31
DCDB-B040-G080	**4X8**	1	4	470	393.49

DC Isolation Coupler
PVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCDB-B005-B020	**1/2X2**	1	5	470	127.97
DCDB-B007-B030	**3/4X3**	1	5	470	156.97
DCDB-B010-B030	**1X3**	1	5	470	188.31
DCDB-B015-B040	**1-1/2X4**	1	4	470	198.65

DC Isolation Coupler
PVC Sch 80 x PVC Sch 80 (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCDB-B020-B040	**2X4**	1	4	470	209.66
DCDB-B030-B060	**3X6**	1	4	470	226.51
DCDB-B040-B080	**4X8**	1	4	470	245.25
DCDB-B060-B100	**6X10**	1	0	470	251.23
DCDB-B080-B120	**8X12**	1	0	470	413.15

DC Isolation Coupler
CPVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCDB-C005-A020	**1/2X2**	1	5	470	51.38
DCDB-C007-A030	**3/4X3**	1	5	470	68.91
DCDB-C010-A030	**1X3**	1	5	470	69.67
DCDB-C015-A040	**1-1/2X4**	1	4	470	81.77
DCDB-C020-A040	**2X4**	1	4	470	114.37
DCDB-C030-A060	**3X6**	1	5	470	185.21
DCDB-C040-A080	**4X8**	1	4	470	312.12
DCDB-C060-A100	**6X10**	1	0	470	480.38
DCDB-C080-A120	**8X12**	1	0	470	529.17

DC Isolation Coupler
CPVC Sch 80 x PVC 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCDB-C005-B020	**1/2X2**	1	5	470	51.81
DCDB-C007-B030	**3/4X3**	1	5	470	60.98
DCDB-C010-B030	**1X3**	1	5	470	61.76
DCDB-C015-B040	**1-1/2X4**	1	4	470	86.92
DCDB-C020-B040	**2X4**	1	4	470	119.49
DCDB-C030-B060	**3X6**	1	5	470	195.22
DCDB-C040-B080	**4X8**	1	4	470	329.80
DCDB-C060-B100	**6X10**	1	0	470	517.32
DCDB-C080-B120	**8X12**	1	0	470	555.64

DC Isolation Coupler
CPVC Sch 80 x CPVC Sch 80

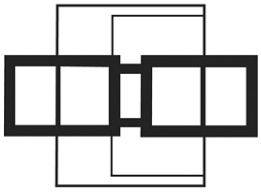
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCDB-C005-C020	**1/2X2**	1	4	470	105.31
DCDB-C007-C030	**3/4X3**	1	5	470	116.43
DCDB-C010-C030	**1X3**	1	5	470	244.78
DCDB-C015-C040	**1-1/2X4**	1	4	470	265.84
DCDB-C020-C040	**2X4**	1	4	470	297.64
DCDB-C030-C060	**3X6**	1	4	470	385.98
DCDB-C040-C080	**4X8**	1	4	470	393.65
DCDB-C060-C100	**6X10**	1	0	470	658.07
DCDB-C080-C120	**8X12**	1	0	470	1023.19

DC Isolation Coupler
CPVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCDB-C005-G020	**1/2X2**	1	5	470	111.40
DCDB-C007-G030	**3/4X3**	1	5	470	122.60
DCDB-C010-G030	**1X3**	1	5	470	254.71

DC Isolation Coupler
CPVC Sch 80 x PVC Sch 40 Clear (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCDB-C015-G040	**1-1/2X4**	1	4	470	348.33
DCDB-C020-G040	**2X4**	1	4	470	380.89
DCDB-C030-G060	**3X6**	1	5	470	404.78



DC Termination Fittings are a special configuration for starting or stopping the containment portion of a system. Termination Fittings consist of a reducer coupling to accept the Containment pipe that is pre-fabricated to an internal extender coupling for connection to existing Carrier system. See *Double Containment Design & Installation Guide* for proper installation.

Centralizers are used inside the Containment piping system, but not inside fittings, installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

DC Term Fitting PVC Sch 40 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCTM-A005-A020	**1/2X2**	8	0	470	114.81
DCTM-A007-A030	**3/4X3**	1	7	470	120.80
DCTM-A010-A030	**1X3**	9	0	470	126.52
DCTM-A015-A040	**1-1/2X4**	4	0	470	136.57
DCTM-A020-A040	**2X4**	4	0	470	143.38
DCTM-A030-A060	**3X6**	1	2	470	195.61
DCTM-A040-A080	**4X8**	1	3	470	255.15
DCTM-A060-A100	**6X10**	1	2	470	483.08
DCTM-A080-A120	**8X12**	1	2	470	781.44

DC Term Fitting PVC Sch 40 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCTM-A005-G020	**1/2X2**	8	0	470	149.42
DCTM-A007-G030	**3/4X3**	1	7	470	244.51
DCTM-A010-G030	**1X3**	1	9	470	245.39
DCTM-A015-G040	**1-1/2X4**	1	4	470	308.18
DCTM-A020-G040	**2X4**	1	4	470	315.08
DCTM-A030-G060	**3X6**	1	2	470	488.85
DCTM-A040-G080	**4X8**	1	3	470	780.49

DC Term Fitting PVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCTM-B005-A020	**1/2X2**	8	0	470	125.94
DCTM-B007-A030	**3/4X3**	9	0	470	140.68
DCTM-B010-A030	**1X3**	8	0	470	141.09
DCTM-B015-A040	**1-1/2X4**	4	0	470	160.91
DCTM-B020-A040	**2X4**	5	0	470	168.21
DCTM-B030-A060	**3X6**	1	4	470	262.64
DCTM-B040-A080	**4X8**	1	3	470	335.99
DCTM-B060-A100	**6X10**	1	0	470	639.71
DCTM-B080-A120	**8X12**	1	3	470	949.65

DC Term Fitting PVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCTM-B005-G020	**1/2X2**	9	0	470	165.12
DCTM-B007-G030	**3/4X3**	10	0	470	263.33
DCTM-B010-G030	**1X3**	8	0	470	263.75
DCTM-B015-G040	**1-1/2X4**	1	4	470	335.91
DCTM-B020-G040	**2X4**	5	0	470	342.66
DCTM-B030-G060	**3X6**	1	2	470	561.39
DCTM-B040-G080	**4X8**	1	3	470	985.48

DC Term Fitting PVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCTM-B005-B020	**1/2X2**	10	0	470	142.87
DCTM-B007-B030	**3/4X3**	8	0	470	177.99
DCTM-B010-B030	**1X3**	8	0	470	178.41
DCTM-B015-B040	**1-1/2X4**	4	0	470	204.19
DCTM-B020-B040	**2X4**	4	0	470	211.48
DCTM-B030-B060	**3X6**	1	2	470	343.53
DCTM-B040-B080	**4X8**	1	2	470	427.39

DC Term Fitting PVC Sch 80 x PVC Sch 80 (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCTM-B060-B100	**6X10**	1	2	470	976.65
DCTM-B080-B120	**8X12**	1	3	470	1177.33

DC Term Fitting CPVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCTM-C005-A020	**1/2X2**	8	0	470	126.73
DCTM-C007-A030	**3/4X3**	1	8	470	142.28
DCTM-C010-A030	**1X3**	8	0	470	148.53
DCTM-C015-A040	**1-1/2X4**	4	0	470	178.88
DCTM-C020-A040	**2X4**	3	0	470	191.52
DCTM-C030-A060	**3X6**	1	2	470	306.99
DCTM-C040-A080	**4X8**	1	3	470	398.96
DCTM-C060-A100	**6X10**	1	2	470	808.09
DCTM-C080-A120	**8X12**	1	3	470	1707.23

DC Term Fitting CPVC Sch 80 x PVC Sch 80

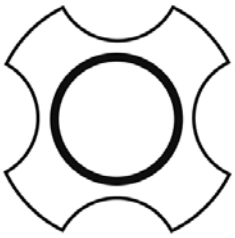
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCTM-C005-B020	**1/2X2**	8	0	470	143.67
DCTM-C007-B030	**3/4X3**	8	0	470	179.60
DCTM-C010-B030	**1X3**	8	0	470	185.82
DCTM-C015-B040	**1-1/2X4**	4	0	470	222.14
DCTM-C020-B040	**2X4**	1	4	470	234.79
DCTM-C030-B060	**3X6**	1	2	470	387.78
DCTM-C040-B080	**4X8**	1	3	470	490.34
DCTM-C060-B100	**6X10**	1	2	470	1146.08
DCTM-C080-B120	**8X12**	1	3	470	1934.75

DC Term Fitting CPVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCTM-C005-G020	**1/2X2**	8	0	470	171.46
DCTM-C007-G030	**3/4X3**	10	0	470	283.14
DCTM-C010-G030	**1X3**	1	9	470	294.12
DCTM-C015-G040	**1-1/2X4**	10	0	470	385.94
DCTM-C020-G040	**2X4**	3	0	470	398.59
DCTM-C030-G060	**3X6**	1	15	470	674.59
DCTM-C040-G080	**4X8**	1	3	470	1021.40

DC Term Fitting CPVC Sch 80 x CPVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DCTM-C005-C020	**1/2X2**	9	0	470	215.23
DCTM-C007-C030	**3/4X3**	8	0	470	219.94
DCTM-C010-C030	**1X3**	4	0	470	226.16
DCTM-C015-C040	**1-1/2X4**	4	0	470	286.26
DCTM-C020-C040	**2X4**	4	0	470	298.88
DCTM-C030-C060	**3X6**	1	3	470	541.38
DCTM-C040-C080	**4X8**	1	2	470	967.82
DCTM-C060-C100	**6X10**	1	2	470	1473.00
DCTM-C080-C120	**8X12**	1	3	470	2368.27



Centralizers are a simple slip-on design that are positioned and held in place by a few wraps of clean-room adhesive on each side. Centralizers hold the Carrier piping centrally located within the Containment piping and are designed with an annular space for routing of leak detection cable, if used. See *Double Containment Design & Installation Guide* for proper installation.

The following Spacing Chart can be used as a guide for determining the quantity of Centralizers needed, based on temperature and Carrier pipe size and schedule selected.

RECOMMENDED MINIMUM CENTRALIZER SUPPORT SPACING (ft.) *

Carrier Size (in.)	PVC SCHEDULE 40 CARRIER Temperature °F					PVC SCHEDULE 80 CARRIER Temperature °F					CPVC SCHEDULE 80 CARRIER Temperature °F					
	60°	80°	100°	120°	140°	60°	80°	100°	120°	140°	73°	100°	120°	140°	160°	180°
1/2	4-1/2	4-1/2	4	2-1/2	2-1/2	5	4-1/2	4-1/2	3	2-1/2	5-1/2	5	4-1/2	4-1/2	3	2-1/2
3/4	5	4-1/2	4	2-1/2	2-1/2	5-1/2	5	4-1/2	3	2-1/2	5-1/2	5-1/2	5	4-1/2	3	2-1/2
1	5-1/2	5	4-1/2	3	2-1/2	6	5-1/2	5	3-1/2	3	6	6	5-1/2	5	3-1/2	2
1-1/2	6	5-1/2	5	3-1/2	3	6-1/2	6	5-1/2	3-1/2	3-1/2	7	6-1/2	6	5-1/2	3-1/2	3-1/2
2	6	5-1/2	5	3-1/2	3	7	6-1/2	6	4	3-1/2	7	7	6-1/2	6	4	3-1/2
3	7	7	6	4	3-1/2	8	7-1/2	7	4-1/2	4	8	8	7-1/2	7	4-1/2	4
4	7-1/2	7	6-1/2	4-1/2	4	9	8-1/2	7-1/2	5	4-1/2	9	8-1/2	8	7-1/2	5	4-1/2
6	8-1/2	8	7-1/2	5	4-1/2	10	9-1/2	9	6	5	10	9-1/2	9	8	5-1/2	5
8	9	8-1/2	8	5	4-1/2	11	10-1/2	9-1/2	6-1/2	5-1/2	11	10-1/2	10	9	6	5-1/2
10	10	9	8-1/2	5-1/2	5	12	11	10	7	6	11-1/2	11	10-1/2	9-1/2	6-1/2	6
12	11-1/2	10-1/2	9-1/2	6-1/2	5-1/2	13	12	10-1/2	7-1/2	6-1/2	12-1/2	12	11-1/2	10-1/2	7-1/2	6-1/2

Note: Specified minimum spacing can also be used for system support according to the secondary Containment pipe size and schedule used. Where practical, system support should correspond to internal carrier support (centralizers) to minimize concentrated point loads.

* Note: Data furnished is based on raw material manufacturer's information. This information can be considered a reliable recommendation, but not a guarantee. Actual service conditions and system parameters should be evaluated by qualified personnel.

DC Centralizer IPS O.D. x Sch 40 White I.D.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Carrier x Containment					
DCCT-H005-A020	**1/2X2**	55	330	470	13.23
DCCT-H007-A030	**3/4X3**	55	220	470	14.73
DCCT-H010-A030	**1X3**	55	220	470	14.73
DCCT-H015-A040	**1-1/2X4**	55	0	470	19.11
DCCT-H020-A040	**2X4**	55	0	470	19.11
DCCT-H030-A060	**3X6**	55	0	470	24.41
DCCT-H040-A080	**4X8**	55	0	470	30.16
DCCT-H060-A100	**6X10**	25	0	470	39.13
DCCT-H080-A120	**8X12**	25	0	470	49.13

DC Centralizer IPS O.D. x Sch 40 Clear I.D.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Carrier x Containment					
DCCT-H005-G020	**1/2X2**	55	330	470	13.23
DCCT-H007-G020	**3/4X2**	55	330	470	13.23
DCCT-H010-G030	**1X3**	55	220	470	14.73
DCCT-H015-G040	**1-1/2X4**	55	220	470	19.11
DCCT-H020-G040	**2X4**	55	0	470	19.11
DCCT-H030-G060	**3X6**	55	0	470	24.41
DCCT-H040-G080	**4X8**	55	0	470	30.16

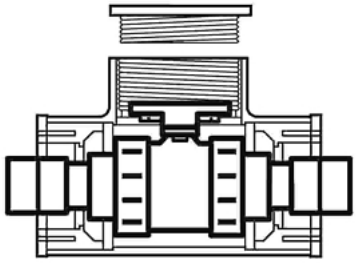
DC Centralizer IPS O.D. x Sch 80 PVC I.D.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Carrier x Containment					
DCCT-H005-B020	**1/2X2**	55	330	470	13.23
DCCT-H007-B020	**3/4X2**	55	330	470	13.23
DCCT-H010-B030	**1X3**	55	220	470	14.73
DCCT-H015-B040	**1-1/2X4**	55	0	470	19.11
DCCT-H020-B040	**2X4**	55	0	470	19.11
DCCT-H030-B060	**3X6**	55	0	470	24.41
DCCT-H040-B080	**4X8**	55	0	470	30.16
DCCT-H060-B100	**6X10**	25	0	470	39.13
DCCT-H080-B120	**8X12**	20	0	470	49.13

DC Centralizer IPS O.D. x Sch 80 CPVC I.D.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Carrier x Containment					
DCCT-H005-C020	**1/2X2**	55	330	470	13.23
DCCT-H007-C030	**3/4X3**	55	220	470	14.73
DCCT-H010-C030	**1X3**	55	220	470	14.73
DCCT-H015-C040	**1-1/2X4**	55	0	470	19.11
DCCT-H020-C040	**2X4**	55	0	470	19.11
DCCT-H030-C060	**3X6**	55	0	470	24.41
DCCT-H040-C080	**4X8**	55	0	470	30.16
DCCT-H060-C100	**6X10**	1	24	470	39.13
DCCT-H080-C120	**8X12**	20	0	470	49.13

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DC Ball Valve Boxes are made from a standard Spears® Tee fitting in designated material and Schedule selected, which is fitted with Carrier pipe size Ball Valve and bushed to specified Containment size. Includes Containment Valve Box fitting with threaded Access Plug, True Union 2000 Industrial Ball Valve with Lockout Handle and Centralizers for positioning valve in box. Carrier valves are equipped with extenders to facilitate cement assembly. See *Double Containment Design & Installation Guide* for proper installation.

True Union 2000 Industrial Ball Valve Specifications, Sizes 1/2" - 2":

Material:	PVC/CPVC
Seats:	PTFE
Seals:	EPDM/FKM
PR, Water:	235 psi @ 73°F (23°C), 1/2" - 2"

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply
All Valves assembled with Silicone-Free, Water Soluble Lubricant

Contact Spears® for Pricing & Availability on Additional Sizes, Optional External Stem & Handle Extensions, Custom Elastomer Seals, or Seat & Seal Repair Kits

While Valve Boxes include Centralizers for valve, additional Centralizers are used inside the Containment piping system installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

Valve Box, with PVC True Union 2000 Industrial Ball Valve
PVC Sch 40 x PVC Sch 40

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBA20-A005-A020 294.92	VBA30-A005-A020 300.11	1	0	470
3/4X3	VBA20-A007-A030 307.17	VBA30-A007-A030 313.34	1	5	470
1X3	VBA20-A010-A030 315.89	VBA30-A010-A030 323.29	1	0	470
1-1/2X4	VBA20-A015-A040 542.13	VBA30-A015-A040 554.06	1	0	470
2X4	VBA20-A020-A040 616.43	VBA30-A020-A040 576.02	1	0	470

Valve Box, with PVC True Union 2000 Industrial Ball Valve
PVC Sch 40 x PVC Sch 40 Clear

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBA20-A005-G020 1308.18	VBA30-A005-G020 1313.37	1	0	470
3/4X3	VBA20-A007-G030 1316.97	VBA30-A007-G030 1323.14	1	0	470
1X3	VBA20-A010-G030 1327.69	VBA30-A010-G030 1336.14	1	0	470
1-1/2X4	VBA20-A015-G040 2387.56	VBA30-A015-G040 2399.48	1	0	470
2X4	VBA20-A020-G040 2423.22	VBA30-A020-G040 2438.36	1	0	470

Valve Box, with PVC True Union 2000 Industrial Ball Valve
PVC Sch 80 x PVC Sch 40

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBA20-B005-A020 309.49	VBA30-B005-A020 314.69	1	5	470
3/4X3	VBA20-B007-A030 322.21	VBA30-B007-A030 328.37	1	0	470

Valve Box, with PVC True Union 2000 Industrial Ball Valve
PVC Sch 80 x PVC Sch 40 (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1X3	VBA20-B010-A030 333.06	VBA30-B010-A030 626.58	1	0	470
1-1/2X4	VBA20-B015-A040 575.59	VBA30-B015-A040 730.40	1	0	470
2X4	VBA20-B020-A040 633.16	VBA30-B020-A040 758.16	1	0	470

Valve Box, with PVC True Union 2000 Industrial Ball Valve
PVC Sch 80 x PVC Sch 40 Clear

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBA20-B005-G020 1318.61	VBA30-B005-G020 1323.80	1	0	470
3/4X3	VBA20-B007-G030 1332.08	VBA30-B007-G030 1338.25	1	0	470
1X3	VBA20-B010-G030 1342.87	VBA30-B010-G030 1350.54	1	0	470
1-1/2X4	VBA20-B015-G040 2417.84	VBA30-B015-G040 2429.78	1	0	470
2X4	VBA20-B020-G040 2454.53	VBA30-B020-G040 2469.04	1	0	470

Valve Box, with PVC True Union 2000 Industrial Ball Valve
PVC Sch 80 x PVC Sch 80

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBA20-B005-B020 441.42	VBA30-B005-B020 623.96	1	0	470
3/4X3	VBA20-B007-B030 632.26	VBA30-B007-B030 638.43	1	0	470
1X3	VBA20-B010-B030 642.33	VBA30-B010-B030 649.38	1	0	470
1-1/2X4	VBA20-B015-B040 833.28	VBA30-B015-B040 845.34	1	0	470

Valve Box, with PVC True Union 2000 Industrial Ball Valve
PVC Sch 80 x PVC Sch 80 (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2X4	VBA20-B020-B040 978.56	VBA30-B020-B040 993.17	1	0	470

Valve Box, with CPVC True Union 2000 Industrial Ball Valve
CPVC Sch 80 x PVC Sch 40

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBA20-C005-A020 333.21	VBA30-C005-A020 340.00	1	0	470
3/4X3	VBA20-C007-A030 345.96	VBA30-C007-A030 354.54	1	0	470
1X3	VBA20-C010-A030 366.87	VBA30-C010-A030 377.03	1	0	470
1-1/2X4	VBA20-C015-A040 649.68	VBA30-C015-A040 683.83	1	0	470
2X4	VBA20-C020-A040 698.25	VBA30-C020-A040 1075.27	1	0	470

Valve Box, with CPVC True Union 2000 Industrial Ball Valve
CPVC Sch 80 x PVC Sch 80

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBA20-C005-B020 635.17	VBA30-C005-B020 641.96	1	0	470
3/4X3	VBA20-C007-B030 656.06	VBA30-C007-B030 664.63	1	5	470
1X3	VBA20-C010-B030 676.92	VBA30-C010-B030 687.08	1	4	470
1-1/2X4	VBA20-C015-B040 1009.69	VBA30-C015-B040 1027.96	1	3	470
2X4	VBA20-C020-B040 1068.99	VBA30-C020-B040 1099.72	1	5	470

Valve Box, with CPVC True Union 2000 Industrial Ball Valve
CPVC Sch 80 x CPVC Sch 80

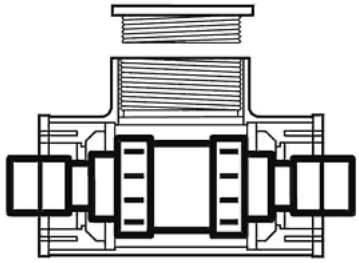
Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBA20-C005-C020 959.13	VBA30-C005-C020 965.91	1	0	470
3/4X3	VBA20-C007-C030 983.27	VBA30-C007-C030 991.85	1	3	470
1X3	VBA20-C010-C030 1024.84	VBA30-C010-C030 1839.80	1	3	470
1-1/2X4	VBA20-C015-C040 1983.59	VBA30-C015-C040 2000.69	1	3	470
2X4	VBA20-C020-C040 2042.49	VBA30-C020-C040 2073.22	1	5	470

Valve Box, with CPVC True Union 2000 Industrial Ball Valve
CPVC Sch 80 x PVC Sch 40 Clear

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBA20-C005-G020 1334.95	VBA30-C005-G020 1341.73	1	4	470
3/4X3	VBA20-C007-G030 1355.83	VBA30-C007-G030 1364.40	1	0	470
1X3	VBA20-C010-G030 1376.68	VBA30-C010-G030 1410.68	1	5	470
1-1/2X4	VBA20-C015-G040 2480.95	VBA30-C015-G040 920.21	1	0	470
2X4	VBA20-C020-G040 2540.12	VBA30-C020-G040 2570.85	1	0	470

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Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com



DC Ball Check Valve Boxes are made from a standard Spears® Tee fitting in designated material and Schedule selected, which is fitted with Carrier pipe size Ball Check Valve and bushed to specified Containment size. Includes Containment Valve Box fitting with threaded Access Plug, True Union 2000 Industrial Ball Check Valve and Centralizers for positioning valve in box. Carrier valves are equipped with extenders to facilitate cement assembly. See *Double Containment Design & Installation Guide* for proper installation.

True Union 2000 Industrial Ball Check Valve Specifications, Sizes 1/2" - 2":

Material: PVC/CPVC
Seals: EPDM/FKM
PR, Water: 235 psi @ 73°F (23°C), 1/2" - 2"

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply
All Valves assembled with Silicone-Free, Water Soluble Lubricant

Contact Spears® for Pricing & Availability on Additional Sizes, Custom Elastomer Seals, or Seat & Seal Repair Kits

General Installation Information: Ball check valves may be installed in either horizontal or vertical position. A minimum of ten (10) pipe diameters' distance maintained from any pump or other source of turbulence. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of flow.

While Valve Boxes include Centralizers for valve, additional Centralizers are used inside the Containment piping system installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

Valve Box, with PVC True Union 2000 Industrial Ball Check Valve
PVC Sch 40 x PVC Sch 40

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBC2-A005-A020 299.28	VBC3-A005-A020 305.95	1	4	470
3/4X3	VBC2-A007-A030 309.68	VBC3-A007-A030 316.97	1	4	470
1X3	VBC2-A010-A030 322.39	VBC3-A010-A030 330.92	1	0	470
1-1/2X4	VBC2-A015-A040 567.82	VBC3-A015-A040 581.57	1	3	470
2X4	VBC2-A020-A040 615.11	VBC3-A020-A040 634.17	1	3	470

Valve Box, with PVC True Union 2000 Industrial Ball Check Valve
PVC Sch 40 x PVC Sch 40 Clear

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBC2-A005-G020 1314.63	VBC3-A005-G020 1320.35	1	4	470
3/4X3	VBC2-A007-G030 1324.80	VBC3-A007-G030 1332.08	1	4	470
1X3	VBC2-A010-G030 1337.51	VBC3-A010-G030 1346.06	1	3	470
1-1/2X4	VBC2-A015-G040 2409.67	VBC3-A015-G040 2423.43	1	3	470
2X4	VBC2-A020-G040 2456.83	VBC3-A020-G040 2475.89	1	3	470

Valve Box, with PVC True Union 2000 Industrial Ball Check Valve
PVC Sch 80 x PVC Sch 40

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBC2-B005-A020 315.68	VBC3-B005-A020 322.36	1	4	470
3/4X3	VBC2-B007-A030 330.01	VBC3-B007-A030 337.29	1	4	470

Valve Box, with PVC True Union 2000 Industrial Ball Check Valve
PVC Sch 80 x PVC Sch 40 (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1X3	VBC2-B010-A030 342.27	VBC3-B010-A030 344.14	1	3	470
1-1/2X4	VBC2-B015-A040 592.16	VBC3-B015-A040 605.89	1	3	470
2X4	VBC2-B020-A040 639.71	VBC3-B020-A040 658.77	1	3	470

Valve Box, with PVC True Union 2000 Industrial Ball Check Valve
PVC Sch 80 x PVC Sch 40 Clear

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBC2-B005-G020 1325.52	VBC3-B005-G020 1332.20	1	4	470
3/4X3	VBC2-B007-G030 1339.84	VBC3-B007-G030 1347.13	1	4	470
1X3	VBC2-B010-G030 1352.11	VBC3-B010-G030 605.89	1	3	470
1-1/2X4	VBC2-B015-G040 2434.01	VBC3-B015-G040 2447.75	1	3	470
2X4	VBC2-B020-G040 2481.47	VBC3-B020-G040 1029.38	1	3	470

Valve Box, with PVC True Union 2000 Industrial Ball Check Valve
PVC Sch 80 x PVC Sch 80

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBC2-B005-B020 625.76	VBC3-B005-B020 631.72	1	4	470
3/4X3	VBC2-B007-B030 640.07	VBC3-B007-B030 647.36	1	4	470
1X3	VBC2-B010-B030 652.33	VBC3-B010-B030 459.32	1	3	470
1-1/2X4	VBC2-B015-B040 962.69	VBC3-B015-B040 976.44	1	3	470

Valve Box, with PVC True Union 2000 Industrial Ball Check Valve
PVC Sch 80 x PVC Sch 80 (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
2X4	VBC2-B020-B040 1010.31	VBC3-B020-B040 1029.36	1	3	470

Valve Box, with CPVC True Union 2000 Industrial Ball Check Valve
CPVC Sch 80 x PVC Sch 40

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBC2-C005-A020 346.80	VBC3-C005-A020 355.59	1	4	470
3/4X3	VBC2-C007-A030 366.97	VBC3-C007-A030 377.31	1	4	470
1X3	VBC2-C010-A030 391.71	VBC3-C010-A030 402.03	1	3	470
1-1/2X4	VBC2-C015-A040 702.31	VBC3-C015-A040 723.06	1	4	470
2X4	VBC2-C020-A040 772.92	VBC3-C020-A040 801.65	1	4	470

Valve Box, with CPVC True Union 2000 Industrial Ball Check Valve
CPVC Sch 80 x PVC Sch 80

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBC2-C005-B020 651.59	VBC3-C005-B020 660.37	1	4	470
3/4X3	VBC2-C007-B030 671.76	VBC3-C007-B030 682.09	1	4	470
1X3	VBC2-C010-B030 694.81	VBC3-C010-B030 706.97	1	3	470
1-1/2X4	VBC2-C015-B040 999.45	VBC3-C015-B040 1020.20	1	3	470
2X4	VBC2-C020-B040 1075.38	VBC3-C020-B040 1104.12	1	0	470

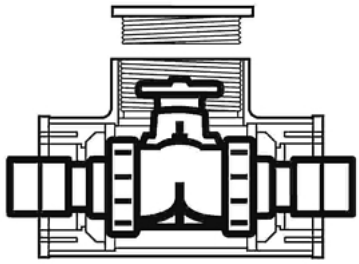
Valve Box, with CPVC True Union 2000 Industrial Ball Check Valve
CPVC Sch 80 x CPVC Sch 80

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBC2-C005-C020 1031.77	VBC3-C005-C020 1040.56	1	0	470
3/4X3	VBC2-C007-C030 1052.07	VBC3-C007-C030 1062.40	1	4	470
1X3	VBC2-C010-C030 1074.98	VBC3-C010-C030 1087.14	1	4	470
1-1/2X4	VBC2-C015-C040 1868.85	VBC3-C015-C040 1889.62	1	3	470
2X4	VBC2-C020-C040 1936.81	VBC3-C020-C040 1965.56	1	3	470

Valve Box, with CPVC True Union 2000 Industrial Ball Check Valve
CPVC Sch 80 x PVC Sch 40 Clear

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBC2-C005-G020 1323.97	VBC3-C005-G020 1332.75	1	4	470
3/4X3	VBC2-C007-G030 1371.68	VBC3-C007-G030 1382.01	1	4	470
1X3	VBC2-C010-G030 1394.58	VBC3-C010-G030 1406.73	1	3	470
1-1/2X4	VBC2-C015-G040 2515.74	VBC3-C015-G040 2536.49	1	4	470
2X4	VBC2-C020-G040 2586.34	VBC3-C020-G040 2615.09	1	4	470

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com



DC Diaphragm Valve Boxes are made from a standard Spears® Tee fitting in designated material and Schedule selected, which is fitted with Carrier pipe size Diaphragm Valve and bushed to specified Containment size. Includes Containment Valve Box fitting with threaded Access Plug, True Union Diaphragm Valve and Centralizers for positioning valve in box. Carrier valves are equipped with extenders to facilitate cement assembly. See *Double Containment Design & Installation Guide* for proper installation.

True Union Diaphragm Valve Specifications, Sizes 1/2" - 2":

Material: PVC/CPVC
Seals: EPDM/FKM
PR, Water: 235 psi @ 73°F (23°C), 1/2" - 2"

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply
No Lubricants in Media Contact Area

Contact Spears® for Pricing & Availability on Additional Sizes, Elastomer Backed PTFE Diaphragms, or Diaphragm & Seal Repair Kits.

While Valve Boxes include Centralizers for valve, additional Centralizers are used inside the Containment piping system installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

Valve Box, with PVC True Union Diaphragm Valve PVC Sch 40 x PVC Sch 40

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBD20-A005-A020 380.66	VBD30-A005-A020 394.93	1	0	470
3/4X3	VBD20-A007-A030 398.35	VBD30-A007-A030 414.55	1	0	470
1X3	VBD20-A010-A030 433.12	VBD30-A010-A030 450.87	1	0	470
1-1/2X4	VBD20-A015-A040 738.49	VBD30-A015-A040 782.71	1	0	470
2X4	VBD20-A020-A040 791.87	VBD30-A020-A040 853.82	1	0	470

Valve Box, with PVC True Union Diaphragm Valve PVC Sch 40 x PVC Sch 40 Clear

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBD20-A005-G020 1390.48	VBD30-A005-G020 1404.76	1	0	470
3/4X3	VBD20-A007-G030 1434.64	VBD30-A007-G030 1450.85	1	0	470
1X3	VBD20-A010-G030 1469.57	VBD30-A010-G030 1487.33	1	0	470
1-1/2X4	VBD20-A015-G040 2581.06	VBD30-A015-G040 2625.27	1	0	470
2X4	VBD20-A020-G040 2634.39	VBD30-A020-G040 2696.34	1	0	470

Valve Box, with PVC True Union Diaphragm Valve PVC Sch 80 x PVC Sch 40

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBD20-B005-A020 391.78	VBD30-B005-A020 406.04	1	0	470
3/4X3	VBD20-B007-A030 413.38	VBD30-B007-A030 429.59	1	0	470
1X3	VBD20-B010-A030 447.69	VBD30-B010-A030 465.45	1	0	470

Valve Box, with PVC True Union Diaphragm Valve PVC Sch 80 x PVC Sch 40 (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1-1/2X4	VBD20-B015-A040 762.99	VBD30-B015-A040 807.20	1	0	470
2X4	VBD20-B020-A040 816.60	VBD30-B020-A040 878.55	1	0	470

Valve Box, with PVC True Union Diaphragm Valve PVC Sch 80 x PVC Sch 40 Clear

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBD20-B005-G020 1430.49	VBD30-B005-G020 1444.76	1	0	470
3/4X3	VBD20-B007-G030 1449.67	VBD30-B007-G030 1465.88	1	0	470
1X3	VBD20-B010-G030 1483.99	VBD30-B010-G030 1501.75	1	0	470
1-1/2X4	VBD20-B015-G040 2605.40	VBD30-B015-G040 2649.61	1	0	470
2X4	VBD20-B020-G040 2659.17	VBD30-B020-G040 2721.12	1	0	470

Valve Box, with PVC True Union Diaphragm Valve PVC Sch 80 x PVC Sch 80

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBD20-B005-B020 701.82	VBD30-B005-B020 716.11	1	0	470
3/4X3	VBD20-B007-B030 723.38	VBD30-B007-B030 739.59	1	0	470
1X3	VBD20-B010-B030 757.67	VBD30-B010-B030 775.43	1	0	470
1-1/2X4	VBD20-B015-B040 1115.61	VBD30-B015-B040 1159.82	1	0	470
2X4	VBD20-B020-B040 1169.38	VBD30-B020-B040 1231.33	1	0	470

Valve Box, with CPVC True Union Diaphragm Valve CPVC Sch 80 x PVC Sch 40

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBD20-C005-A020 491.73	VBD30-C005-A020 555.78	1	0	470
3/4X3	VBD20-C007-A030 522.32	VBD30-C007-A030 637.62	1	0	470
1X3	VBD20-C010-A030 589.54	VBD30-C010-A030 675.31	1	0	470
1-1/2X4	VBD20-C015-A040 937.07	VBD30-C015-A040 1040.33	1	0	470
2X4	VBD20-C020-A040 973.87	VBD30-C020-A040 1095.31	1	0	470

Valve Box, with CPVC True Union Diaphragm Valve CPVC Sch 80 x PVC Sch 80

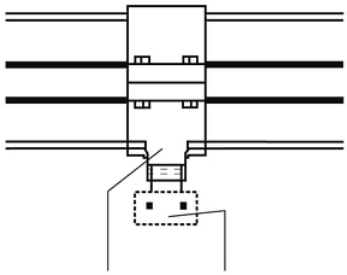
Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBD20-C005-B020 761.13	VBD30-C005-B020 825.20	1	5	470
3/4X3	VBD20-C007-B030 832.38	VBD30-C007-B030 947.69	1	6	470
1X3	VBD20-C010-B030 877.61	VBD30-C010-B030 963.39	1	6	470
1-1/2X4	VBD20-C015-B040 1307.94	VBD30-C015-B040 1384.72	1	4	470
2X4	VBD20-C020-B040 1344.74	VBD30-C020-B040 1466.17	1	0	470

Valve Box, with CPVC True Union Diaphragm Valve CPVC Sch 80 x CPVC Sch 80

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBD20-C005-C020 1089.14	VBD30-C005-C020 1153.20	1	0	470
3/4X3	VBD20-C007-C030 1159.59	VBD30-C007-C030 1274.91	1	0	470
1X3	VBD20-C010-C030 1204.77	VBD30-C010-C030 1290.55	1	0	470
1-1/2X4	VBD20-C015-C040 2133.62	VBD30-C015-C040 2210.38	1	0	470
2X4	VBD20-C020-C040 2170.41	VBD30-C020-C040 2291.85	1	0	470

Valve Box, with CPVC True Union Diaphragm Valve CPVC Sch 80 x PVC Sch 40 Clear

Size	EPDM	FKM	Std Pk	Mstr Pk	Disc Code
1/2X2	VBD20-C005-G020 1501.41	VBD30-C005-G020 1565.47	1	0	470
3/4X3	VBD20-C007-G030 1532.14	VBD30-C007-G030 1647.46	1	0	470
1X3	VBD20-C010-G030 1577.39	VBD30-C010-G030 1663.16	1	0	470
1-1/2X4	VBD20-C015-G040 2779.19	VBD30-C015-G040 2855.62	1	0	470
2X4	VBD20-C020-G040 2815.99	VBD30-C020-G040 2937.42	1	0	470



Leak Detection Sensor Saddles are special devices which can be installed on the Containment system where a "low-point" is desired for leak detection apparatus. Spears® Clamp-on style saddles feature an internal O-ring seal to allow easy installation anywhere on the containment piping. Saddles may also be used in Containment high points for air relief or for connection of Containment drainage valves (see note below). See *Double Containment Design & Installation Guide* for proper installation.

Clamp-on Saddle Specifications, Containment sizes 2" - 8":

Material:	PVC White/PVC Gray/CPVC
Seals:	EPDM/FKM
Hardware:	Stainless Steel (no fluid contact)
Outlet:	Special Reinforced (SR) Female Plastic thread 1/2" or 3/4" NPT (see note below)
PR, Water:	235 psi @ 73°F (23°C), 2" - 4" 200 psi @ 73°F (23°C), 6" 150 psi @ 73°F (23°C), 8"

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply

Note: Saddles specified in this catalog are for listed containment pipe sizes through 8", with 1/2" or 3/4" NPT connections. For a wide variety of additional pipe and outlet sizes, including solvent weld outlets, please refer to Spears® *PVC/CPVC Clamp-On & Hot-Tap Saddles*.

PVC White Clamp-On Saddle x SR Thread

with EPDM O-ring Seal & SS Hardware

2"-4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
467SE-247SR	2X1/2	3/4	1	10	046	53.52
467SE-248SR	2X3/4	7/8	1	10	046	53.52
467SE-333SR[1]	3X1/2	7/8	1	10	046	71.82
467SE-334SR	3X3/4	7/8	1	10	046	71.82
467SE-415SR[1]	4X1/2	1-1/8	1	10	046	90.12
467SE-416SR[1]	4X3/4	1-1/8	1	10	046	90.12
467SE-523SR[1]	6X1/2	1-1/8	1	4	046	151.43
467SE-524SR[1]	6X3/4	1-1/8	1	4	046	151.43
467SE-573SR[1]	8X1/2	4	1	0	046	217.25
467SE-574SR[1]	8X3/4	4	1	0	046	217.25

1-Outlet Sized with Adapter
PVC White Saddles with FKM O-ring seals available by special order

PVC Gray Clamp-On Saddle x SR Thread

with EPDM O-ring Seal & SS Hardware

2"-4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
867S-247SR	2X1/2	3/4	1	10	086	57.77
867S-248SR	2X3/4	7/8	1	10	086	57.77
867S-333SR[1]	3X1/2	7/8	1	10	086	77.67
867S-334SR	3X3/4	7/8	1	10	086	77.67
867S-415SR[1]	4X1/2	1-1/8	1	10	086	97.79
867S-416SR[1]	4X3/4	1-1/8	1	10	086	97.79
867S-523SR[1]	6X1/2	1-1/8	1	4	086	141.37
867S-524SR[1]	6X3/4	1-1/8	1	4	086	141.37
867S-573SR[1]	8X1/2	4	1	0	086	262.14
867S-574SR[1]	8X3/4	4	1	0	086	262.14

1- Outlet sized with Adapter

PVC Gray Clamp-On Saddle x SR Thread

with FKM O-ring Seal & SS Hardware

2"-4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
867SV-247SR	2X1/2	3/4	1	10	086	64.64
867SV-248SR	2X3/4	7/8	1	10	086	64.64
867SV-333SR[1]	3X1/2	7/8	1	10	086	86.42
867SV-334SR	3X3/4	7/8	1	10	086	86.42
867SV-415SR[1]	4X1/2	1-1/8	1	10	086	109.12
867SV-416SR[1]	4X3/4	1-1/8	1	10	086	109.12
867SV-523SR[1]	6X1/2	1-1/8	1	4	086	160.27
867SV-524SR[1]	6X3/4	1-1/8	1	4	086	160.27
867SV-573SR[1]	8X1/2	4	1	0	086	286.42
867SV-574SR[1]	8X3/4	4	1	0	086	286.42

PVC Gray Clamp-On Saddle x SR Thread (continued)

with FKM O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each

1-Outlet sized with Adapter

CPVC Gray Clamp-On Saddle x SR Thread

with EPDM O-ring Seal & SS Hardware

2"-4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
867S-247CSR	2X1/2	3/4	1	10	096	96.75
867S-248CSR	2X3/4	7/8	1	10	096	96.75
867S-333CSR[1]	3X1/2	7/8	1	10	096	129.51
867S-334CSR	3X3/4	7/8	1	10	096	129.51
867S-415CSR[1]	4X1/2	1-1/8	1	10	096	162.99
867S-416CSR[1]	4X3/4	1-1/8	1	10	096	162.99
867S-523CSR[1]	6X1/2	1-1/8	1	4	096	271.65
867S-524CSR[1]	6X3/4	1-1/8	1	4	096	271.65
867S-573CSR	8X1/2	4	1	0	096	482.60
867S-574CSR[1]	8X3/4	4	1	0	096	482.60

1-Outlet sized with Adapter

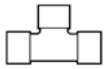
with FKM O-ring Seal & SS Hardware

2"-4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Disc Code	Price Each
867SV-247CSR	2X1/2	3/4	1	10	096	107.72
867SV-248CSR	2X3/4	7/8	1	10	096	107.72
867SV-333CSR[1]	3X1/2	7/8	1	10	096	144.71
867SV-334CSR	3X3/4	7/8	1	10	096	144.71
867SV-415CSR[1]	4X1/2	1-1/8	1	10	096	182.83
867SV-416CSR[1]	4X3/4	1-1/8	1	10	096	182.83
867SV-523CSR[1]	6X1/2	1-1/8	1	4	096	304.72
867SV-524CSR[1]	6X3/4	1-1/8	1	4	096	304.72
867SV-573CSR[1]	8X1/2	4	1	0	096	524.93
867SV-574CSR[1]	8X3/4	4	1	0	096	524.93

1-Outlet sized with Adapter

Tee
Soc x Soc x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-102502	**6**	1	8	300	46.59
280-102499	**6X2**	1	6	300	36.79
280-102500	**6X3**	1	4	300	39.88
280-102501	**6X4**	1	4	300	41.73
280-102507	**8**	1	2	300	73.79
280-102503	**8X2**	1	2	300	47.46
280-102504	**8X3**	1	3	300	56.39
280-102505	**8X4**	1	2	300	58.85
280-102506	**8X6**	1	0	300	67.43
280-102513	**10**	1	0	300	92.01
280-102508	**10X2**	1	0	300	74.81
280-102509	**10X3**	1	0	300	76.04
280-102510	**10X4**	1	0	300	77.93
280-102511	**10X6**	1	0	300	79.73
280-102512	**10X8**	1	0	300	85.49
280-102520	**12**	1	0	300	149.65
280-102514	**12X2**	1	2	300	98.14
280-102515	**12X3**	1	0	300	104.32
280-102516	**12X4**	1	0	300	109.16
280-102517	**12X6**	1	0	300	111.33
280-102518	**12X8**	1	0	300	116.59
280-102519	**12X10**	1	0	300	127.58
280-102528	**15**	1	0	300	296.92
280-102521	**15X2**	1	0	300	159.47
280-102522	**15X3**	1	0	300	159.47
280-102523	**15X4**	1	0	300	165.62
280-102524	**15X6**	1	0	300	170.51
280-102525	**15X8**	1	0	300	190.15
280-102526	**15X10**	1	0	300	212.21
280-102527	**15X12**	1	0	300	247.80
280-102537	**18**	1	0	300	516.55
280-102529	**18X2**	1	0	300	300.56
280-102530	**18X3**	1	0	300	302.98
280-102531	**18X4**	1	0	300	305.48
280-102532	**18X6**	1	0	300	311.61
280-102533	**18X8**	1	0	300	316.54
280-102534	**18X10**	1	0	300	345.99
280-102535	**18X12**	1	0	300	381.59
280-102536	**18X15**	1	0	300	417.15
280-102547	**20**	1	0	300	639.23
280-102538	**20X2**	1	0	300	380.34
280-102539	**20X3**	1	0	300	384.27
280-102540	**20X4**	1	0	300	390.14
280-102541	**20X6**	1	0	300	402.44
280-102542	**20X8**	1	0	300	411.01
280-102543	**20X10**	1	0	300	455.16
280-102544	**20X12**	1	0	300	483.40
280-102545	**20X15**	1	0	300	519.02
280-102546	**20X18**	1	0	300	584.00

90° Elbow
Soc x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-100812	**6**	1	4	300	73.61
280-100813	**8**	1	2	300	90.75
280-100814	**10**	1	0	300	144.79
280-100815	**12**	1	0	300	190.15
280-100816	**15**	1	0	300	310.38
280-100817	**18**	1	0	300	537.36
280-100818	**20**	1	0	300	723.93

11-1/4° Elbow
Soc x Soc



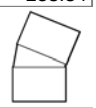
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-100114	**6**	1	10	300	23.32
280-100115	**8**	1	4	300	33.15
280-100116	**10**	1	2	300	47.82
280-100117	**12**	1	2	300	66.24
280-100118	**15**	1	0	300	114.09
280-100119	**18**	1	0	300	196.32
280-100120	**20**	1	0	300	249.05

15° Elbow
Soc x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-100234	**6**	1	10	300	23.32
280-100235	**8**	1	4	300	33.15
280-100236	**10**	1	2	300	47.82
280-100237	**12**	1	2	300	66.24
280-100238	**15**	1	0	300	114.09
280-100239	**18**	1	0	300	199.97
280-100240	**20**	1	0	300	258.84

22-1/2° Elbow
Soc x Soc



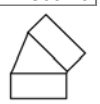
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-100354	**6**	1	4	300	23.32
280-100355	**8**	1	3	300	33.15
280-100356	**10**	1	2	300	47.82
280-100357	**12**	1	2	300	66.24
280-100358	**15**	1	0	300	114.09
280-100359	**18**	1	0	300	199.97
280-100360	**20**	1	0	300	258.84

30° Elbow
Soc x Soc



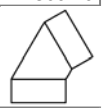
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-100474	**6**	1	8	300	39.23
280-100475	**8**	1	4	300	57.61
280-100476	**10**	1	2	300	71.15
280-100477	**12**	1	2	300	116.59
280-100478	**15**	1	0	300	187.72
280-100479	**18**	1	0	300	332.45
280-100480	**20**	1	0	300	369.29

45° Elbow
Soc x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-100592	**6**	1	4	300	39.23
280-100593	**8**	1	4	300	57.61
280-100594	**10**	1	2	300	71.15
280-100595	**12**	1	2	300	116.59
280-100596	**15**	1	0	300	187.72
280-100597	**18**	1	0	300	332.45
280-100598	**20**	1	0	300	369.29

60° Elbow
Soc x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-100702	**6**	1	4	300	73.61
280-100703	**8**	1	2	300	90.75
280-100704	**10**	1	0	300	144.79
280-100705	**12**	1	0	300	190.15
280-100706	**15**	1	0	300	310.38
280-100707	**18**	1	0	300	537.36
280-100708	**20**	1	0	300	723.93

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Coupling
Soc x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-100001	**4 IPS**	1	10	300	15.89
280-100002	**6**	1	5	300	19.61
280-100003	**8**	1	6	300	22.07
280-100004	**10**	1	4	300	30.68
280-100005	**12**	1	4	300	41.73
280-100006	**15**	1	0	300	73.61
280-100007	**18**	1	0	300	131.24
280-100008	**20**	1	0	300	161.93

Reducer
Soc x Soc



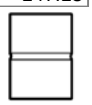
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-100928	**8X6**	1	2	300	34.35
2829-626	**10X6**	1	4	300	138.38
280-100931	**10X8**	1	4	300	52.76
280-100933	**12X6**	1	6	300	197.32
280-100934	**12X8**	1	4	300	153.36
280-100935	**12X10**	1	4	300	76.09
2829-726	**15X6**	1	0	300	342.43
2829-728	**15X8**	1	0	309	245.95
280-100939	**15X10**	1	0	300	174.87
280-100940	**15X12**	1	0	300	115.28
2829-786	**18X6**	1	0	300	514.23
2829-788	**18X8**	1	0	300	483.79
280-100944	**18X10**	1	0	300	423.29
280-100945	**18X12**	1	0	300	379.04
280-100946	**18X15**	1	0	300	185.26
2829-816	**20X6**	1	0	300	791.83
2829-818	**20X8**	1	0	300	753.89
2829-820	**20X10**	1	0	300	697.04
2829-822	**20X12**	1	0	300	640.64
2829-825	**20X15**	1	0	300	523.91
280-100953	**20X18**	1	0	300	271.12

PIP x IPS Reducer
Soc x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-101536	**6X4**	1	4	300	27.59
280-101537	**8X6**	1	8	300	39.88
280-101538	**10X8**	1	4	300	52.76
280-101534	**12X8**	1	4	300	153.36
280-101539	**12X10**	1	4	300	92.00
280-101540	**15X12**	1	0	300	147.18

IPS X PIP Adapter
Soc x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-101649	**6**	1	4	300	30.68
280-101650	**8**	1	4	300	45.36
280-101651	**10**	1	4	300	71.15
280-101652	**12**	1	4	300	100.59

Concrete Adapter
Soc x Concrete



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-101761	**6X6**	1	5	300	29.44
280-101762	**8X8**	1	6	300	42.92
280-101763	**10X10**	1	4	300	66.24
280-101764	**12X12**	1	4	300	93.20
280-101765	**12X14**	1	0	300	99.34
280-101766	**15X14**	1	0	300	137.37
280-101767	**15X15**	1	0	300	141.09

Concrete Adapter (continued)
Soc x Concrete

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-101768	**15X16**	1	0	300	143.55
280-101769	**18X18**	1	0	300	166.85
280-101770	**20X20**	1	0	300	208.56

Linegate Valve Adapter
Linegate x Soc



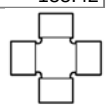
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-101777	**6**	1	6	300	24.45
280-101778	**8**	1	6	300	27.74
280-101779	**10**	1	4	300	44.20
280-101780	**12**	1	4	300	62.58
280-101781	**15**	1	0	300	107.94
2845-180	**18**	1	0	300	155.42

Linegate Valve PIP Adapter
Linegate x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
2845-180P	**18**	1	0	300	155.42

Cross
Soc x Soc x Soc x Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-103286	**6**	1	0	300	77.27
280-103283	**6X2**	1	0	300	61.33
280-103284	**6X3**	1	0	300	61.33
280-103285	**6X4**	1	4	300	67.43
280-103291	**8**	1	0	300	105.54
280-103287	**8X2**	1	0	300	85.85
280-103288	**8X3**	1	0	300	85.85
280-103289	**8X4**	1	0	300	92.00
280-103290	**8X6**	1	0	300	96.87
280-103297	**10**	1	0	300	143.55
280-103292	**10X2**	1	2	300	85.85
280-103293	**10X3**	1	0	300	88.95
280-103294	**10X4**	1	0	300	92.00
280-103295	**10X6**	1	0	300	103.06
280-103296	**10X8**	1	0	300	117.73
280-103304	**12**	1	0	300	199.97
280-103298	**12X2**	1	0	300	115.95
280-103299	**12X3**	1	0	300	117.13
280-103300	**12X4**	1	0	300	120.20
280-103301	**12X6**	1	0	300	130.04
280-103302	**12X8**	1	0	300	141.09
280-103303	**12X10**	1	0	300	170.51
280-103321	**15**	1	0	300	381.59
280-103313	**15X2**	1	0	300	170.51
280-103314	**15X3**	1	0	300	174.21
280-103315	**15X4**	1	0	300	182.82
280-103316	**15X6**	1	0	300	193.84
280-103317	**15X8**	1	0	300	208.56
280-103318	**15X10**	1	0	300	246.62
280-103319	**15X12**	1	0	300	296.92
280-103342	**18**	1	0	300	612.22
280-103332	**18X2**	1	0	300	331.26
280-103333	**18X3**	1	0	300	334.35
280-103334	**18X4**	1	0	300	337.42
280-103335	**18X6**	1	0	300	345.99
280-103336	**18X8**	1	0	300	355.79
280-103337	**18X10**	1	0	300	404.84
280-103338	**18X12**	1	0	300	430.69
280-103340	**18X15**	1	0	300	490.80
280-103354	**20**	1	0	300	806.11
280-103343	**20X2**	1	0	300	464.98
280-103344	**20X3**	1	0	300	468.66
280-103345	**20X4**	1	0	300	472.38

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Cross (continued)					
Soc x Soc x Soc x Soc					
280-103346	**20X6**	1	0	300	483.40
280-103347	**20X8**	1	0	300	495.68
280-103348	**20X10**	1	0	300	531.23
280-103349	**20X12**	1	0	300	571.75
280-103351	**20X15**	1	0	300	598.73
280-103353	**20X18**	1	0	300	703.03
Orchard Riser					
Saddle x Riser					
2880-04030	**4X4**	1	0	301	35.52
2880-53230	**6X4**	1	25	301	35.52
2880-06030	**6X6**	1	25	301	61.33
2880-58230	**8X4**	1	25	301	35.52
2880-58530	**8X6**	1	25	301	46.59
2880-08030	**8X8**	1	12	301	85.89
2880-62430	**10X4**	1	30	301	36.79
2880-62630	**10X6**	1	20	301	46.59
2880-62830	**10X8**	1	16	301	63.79
2880-10030	**10X10**	1	6	301	122.65
2880-66430	**12X4**	1	25	301	38.01
2880-66630	**12X6**	1	20	301	46.59
2880-66830	**12X8**	1	12	301	63.79
2880-67030	**12X10**	1	9	301	88.31
2880-12030	**12X12**	1	6	301	171.75
2880-72430	**15X4**	1	25	301	40.46
2880-72630	**15X6**	1	25	301	53.94
2880-72830	**15X8**	1	12	301	72.39
2880-73030	**15X10**	1	9	301	100.59
2880-73230	**15X12**	1	6	301	138.62
2880-15030	**15X15**	1	4	301	287.08
2880-78430	**18X4**	1	25	301	44.20
2880-78630	**18X6**	1	25	301	52.46
2880-78830	**18X8**	1	10	301	76.09
2880-79030	**18X10**	1	9	301	101.82
2880-79230	**18X12**	1	6	301	157.01
2880-79530	**18X15**	1	4	301	226.96
2880-18030	**18X18**	1	3	301	430.62
2880-81430	**20X4**	1	0	301	46.62
2880-81630	**20X6**	1	12	301	61.36
2880-81830	**20X8**	1	12	301	92.00
2880-82030	**20X10**	1	6	301	143.56
2880-82230	**20X12**	1	5	301	174.21
2880-82530	**20X15**	1	0	301	256.46
2880-82830	**20X18**	1	0	301	315.31
2880-20030	**20X20**	1	2	301	555.82
Erosion Pot Riser					
Saddle x Riser x Pot					
2881-53232	**6X4X8**	1	16	301	67.99
2881-06032	**6X6X10**	1	0	301	81.36
2881-58232	**8X4X8**	1	20	301	67.99
2881-58532	**8X6X10**	1	0	301	81.36
2881-08032	**8X8X12**	1	0	301	115.05
2881-62432	**10X4X8**	1	16	301	67.99
2881-62632	**10X6X10**	1	0	301	81.36
2881-62832	**10X8X12**	1	12	301	115.05
2881-10032	**10X10X15**	1	0	301	158.07
2881-66432	**12X4X8**	1	20	301	67.99
2881-66632	**12X6X10**	1	12	301	81.36
2881-66832	**12X8X12**	1	12	301	115.05
2881-67032	**12X10X15**	1	0	301	158.07
2881-12032	**12X12X18**	1	0	301	209.24
2881-72432	**15X4X8**	1	0	301	67.99

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Erosion Pot Riser (continued)					
Saddle x Riser x Pot					
2881-72632	**15X6X10**	1	12	301	81.36
2881-72832	**15X8X12**	1	0	301	115.05
2881-73032	**15X10X15**	1	0	301	158.07
2881-73232	**15X12X18**	1	0	301	209.24
2881-15032	**15X15X20**	1	0	301	308.03
2881-78432	**18X4X8**	1	0	301	67.99
2881-78632	**18X6X10**	1	0	301	81.36
2881-78832	**18X8X12**	1	0	301	115.05
2881-79032	**18X10X15**	1	0	301	158.07
2881-79232	**18X12X18**	1	0	301	209.24
2881-79532	**18X15X20**	1	0	301	308.03
2881-81432	**20X4X8**	1	0	301	67.99
2881-81632	**20X6X10**	1	0	301	81.36
2881-81832	**20X8X12**	1	0	301	115.05
2881-82032	**20X10X15**	1	0	301	158.07
2881-82232	**20X12X18**	1	0	301	209.24
2881-82532	**20X15X20**	1	0	301	308.03
Mechanical Vent Assembly					
Saddle x Riser/Vent					
2882-420	**4X2**	1	10	301	67.43
2882-422	**4X3**	1	0	301	104.24
2882-528	**6X2**	1	10	301	67.43
2882-530	**6X3**	1	5	301	104.24
2882-532	**6X4**	1	5	301	144.79
2882-578	**8X2**	1	8	301	67.43
2882-580	**8X3**	1	4	301	104.24
2882-582	**8X4**	1	8	301	144.79
2882-621	**10X2**	1	10	301	67.43
2882-623	**10X3**	1	5	301	104.24
2882-624	**10X4**	1	3	301	144.79
2882-661	**12X2**	1	10	301	67.43
2882-663	**12X3**	1	5	301	104.24
2882-664	**12X4**	1	4	301	144.79
2882-721	**15X2**	1	0	301	67.44
2882-723	**15X3**	1	6	301	104.24
2882-724	**15X4**	1	4	301	144.79
2882-781	**18X2**	1	0	301	67.44
2882-783	**18X3**	1	0	301	104.24
2882-784	**18X4**	1	4	301	144.79
2882-811	**20X2**	1	0	301	67.44
2882-813	**20X3**	1	0	301	104.24
2882-814	**20X4**	1	0	301	144.79
Mechanical Vent Riser					
Saddle x Riser/Vent x Chamber					
2883-52842	**6X2X4**	1	0	301	78.52
2883-57842	**8X2X6**	1	0	301	84.66
2883-58042	**8X3X6**	1	0	301	106.71
2883-62142	**10X2X8**	1	12	301	103.06
2883-62342	**10X3X8**	1	8	301	122.65
2883-62442	**10X4X8**	1	12	301	144.79
2883-66142	**12X2X10**	1	0	301	132.48
2883-66342	**12X3X10**	1	16	301	150.88
2883-66442	**12X4X10**	1	12	301	171.75
2883-72442	**15X4X12**	1	6	301	223.27
2883-78442	**18X4X15**	1	0	301	288.31
2883-81442	**20X4X18**	1	0	301	406.12
Vent Base					
Saddle x Riser x Outlet					
2888-532020	**6X4X2**	1	2	301	50.94

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Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Vent Base (continued)
Saddle x Riser x Outlet

2888-585030	**8X6X3**	1	0	301	157.60
2888-585040	**8X6X4**	1	4	301	79.73
2888-628060	**10X8X6**	1	0	301	122.65
2888-670060	**12X10X6**	1	0	301	130.04
2888-732080	**15X12X8**	1	0	301	195.05
2888-795080	**18X15X8**	1	0	301	269.94
2888-828080	**20X18X8**	1	0	301	488.35

Low Head Wye
Soc x Soc



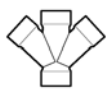
2875-060	**6**	1	2	300	86.11
2875-080	**8**	1	0	300	113.89
2875-100	**10**	1	0	300	148.17
2875-120	**12**	1	0	300	206.43
2875-150	**15**	1	0	300	319.35
2875-183	**18**	1	0	300	767.89
2875-200	**20**	1	0	300	1029.76

Reducing Low Head Wye
Soc x Soc



2875-532	**6X4**	1	4	300	67.15
2875-585	**8X6**	1	0	300	99.34
2875-626	**10X6**	1	0	300	127.04
2875-628	**10X8**	1	0	300	134.01
2875-666	**12X6**	1	0	300	139.62
2875-668	**12X8**	1	0	300	160.28
2875-670	**12X10**	1	0	300	171.22
2875-726	**15X6**	1	0	300	188.21
2875-728	**15X8**	1	0	300	203.99
2875-730	**15X10**	1	0	300	223.41
2875-732	**15X12**	1	0	300	245.28
2875-786	**18X6**	1	0	300	303.59
2875-788	**18X8**	1	0	300	308.39
2875-790	**18X10**	1	0	300	337.00
2875-792	**18X12**	1	0	300	371.67
2875-795	**18X15**	1	0	300	406.34
2875-816	**20X6**	1	0	300	379.47
2875-818	**20X8**	1	0	300	385.47
2875-820	**20X10**	1	0	300	421.24
2875-822	**20X12**	1	0	300	464.58
2875-825	**20X15**	1	0	300	507.94
2875-828	**20X18**	1	0	300	893.68

Double Wye
Soc x Soc



2876-060	**6**	1	0	300	135.23
2876-080	**8**	1	0	300	154.05
2876-100	**10**	1	0	300	257.96
2876-120	**12**	1	0	300	308.09
2876-150	**15**	1	0	300	476.64
2876-183	**18**	1	0	300	1292.38
2876-200	**20**	1	0	300	1837.24

Reducing Double Wye
Soc x Soc



2876-585	**8X6**	1	0	300	108.76
2876-626	**10X6**	1	0	300	154.05
2876-628	**10X8**	1	0	300	170.38
2876-666	**12X6**	1	0	300	208.39
2876-668	**12X8**	1	0	300	239.23

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Reducing Double Wye (continued)
Soc x Soc

2876-670	**12X10**	1	0	300	286.01
2876-726	**15X6**	1	0	300	280.91
2876-728	**15X8**	1	0	300	304.45
2876-730	**15X10**	1	0	300	333.47
2876-732	**15X12**	1	0	300	452.14
2876-786	**18X6**	1	0	300	453.14
2876-788	**18X8**	1	0	300	460.28
2876-790	**18X10**	1	0	300	502.98
2876-792	**18X12**	1	0	300	554.74
2876-795	**18X15**	1	0	300	606.48
2876-816	**20X6**	1	0	300	625.86
2876-818	**20X8**	1	0	300	642.18
2876-820	**20X10**	1	0	300	657.37
2876-822	**20X12**	1	0	300	693.40
2876-825	**20X15**	1	0	300	758.11
2876-828	**20X18**	1	0	300	1402.01

End Cap
Soc



280-107539	**4 IPS**	1	10	300	11.04
280-107540	**6**	1	10	300	12.26
280-107541	**8**	10	0	300	20.83
280-107542	**10**	1	10	300	33.15
280-107543	**12**	1	10	300	51.52
280-107545	**15**	1	5	300	72.39
280-107547	**18**	1	5	300	132.48
280-107548	**20**	1	5	300	177.89

Surface Reducer
Soc



280-102013	**6X2**	1	10	300	19.61
280-102015	**6X3**	1	10	300	19.61
280-102016	**6X4**	1	10	300	19.61
280-102018	**8X2**	1	10	300	26.95
280-102020	**8X3**	1	10	300	26.95
280-102021	**8X4**	1	10	300	26.95
280-102022	**8X6**	1	10	300	26.95
280-102024	**10X2**	1	10	300	53.94
280-102026	**10X3**	1	10	300	53.94
280-102027	**10X4**	1	10	300	53.94
280-102028	**10X6**	1	10	300	53.94
280-102029	**10X8**	1	10	300	53.94
280-102031	**12X2**	1	10	300	66.24
280-102033	**12X3**	1	10	300	66.24
280-102034	**12X4**	1	10	300	66.24
280-102035	**12X6**	1	10	300	66.24
280-102036	**12X8**	1	10	300	66.24
280-102037	**12X10**	1	10	300	66.24
280-102048	**15X2**	1	5	300	93.20
280-102050	**15X3**	1	5	300	93.20
280-102051	**15X4**	1	5	300	93.20
280-102052	**15X6**	1	5	300	93.20
280-102053	**15X8**	1	5	300	93.20
280-102054	**15X10**	1	5	300	93.20
280-102055	**15X12**	1	5	300	93.20
280-102067	**18X2**	1	5	300	139.85
280-102069	**18X3**	1	4	300	139.85
280-102070	**18X4**	1	5	300	139.85
280-102071	**18X6**	1	5	300	139.85
280-102072	**18X8**	1	5	300	139.85
280-102073	**18X10**	1	5	300	139.85
280-102074	**18X12**	1	5	300	139.85
280-102075	**18X15**	1	5	300	139.85

Surface Reducer (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-102077	**20X2**	1	0	300	185.26
280-102136	**20X3**	1	0	300	185.26
280-102137	**20X4**	1	5	300	185.26
280-102138	**20X6**	1	5	300	185.26
280-102139	**20X8**	1	5	300	185.26
280-102140	**20X10**	1	5	300	185.26
280-102141	**20X12**	1	5	300	185.26
280-102142	**20X15**	1	5	300	185.26
280-102143	**20X18**	1	5	300	185.26

Saddle

Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-101788	**4X2**	1	40	300	19.61
280-101789	**6X2**	1	10	300	19.61
280-101790	**8X2**	1	10	300	19.61
280-101791	**10X2**	1	10	300	19.61
280-101792	**12X2**	1	10	300	19.61
280-101793	**15X2**	1	10	300	19.61
280-101794	**18X2**	1	20	300	19.61
280-101795	**20X2**	1	10	300	20.83
280-101796	**4X3**	1	5	300	20.83
280-101797	**6X3**	1	10	300	20.83
280-101798	**8X3**	1	10	300	20.83
280-101799	**10X3**	1	10	300	20.83
280-101800	**12X3**	1	10	300	20.83
280-101801	**15X3**	1	10	300	20.83
280-101802	**18X3**	1	20	300	20.83
280-101803	**20X3**	1	10	300	30.92
280-101804	**6X4**	1	10	300	23.32
280-101805	**8X4**	1	10	300	23.32
280-101806	**10X4**	1	10	300	23.32
280-101807	**12X4**	1	10	300	23.32
280-101808	**15X4**	1	10	300	23.32
280-101809	**18X4**	1	10	300	23.32
280-101810	**20X4**	1	8	300	23.32
280-101811	**8X6**	1	8	300	29.44
280-101812	**10X6**	1	8	300	29.44
280-101813	**12X6**	1	8	300	29.44
280-101814	**15X6**	1	8	300	29.44
280-101815	**18X6**	1	10	300	29.44
280-101816	**20X6**	1	7	300	33.15
280-101817	**10X8**	1	8	300	34.35
280-101818	**12X8**	1	8	300	34.35
280-101819	**15X8**	1	8	300	34.35
280-101820	**18X8**	1	8	300	38.01
280-101821	**20X8**	1	8	300	53.94
280-101822	**12X10**	1	10	300	41.73
280-101823	**15X10**	1	10	300	47.82
280-101824	**18X10**	1	10	300	49.05
280-101825	**20X10**	1	7	300	90.75
280-101826	**15X12**	1	5	300	63.79
280-101827	**18X12**	1	3	300	82.16
280-101828	**20X12**	1	0	300	99.34
280-101829	**18X15**	1	0	300	106.71
280-101830	**20X15**	1	0	300	136.16
280-101831	**20X18**	1	0	300	150.88

Stub Saddle

Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-101883	**4X2**	1	10	300	24.45
280-101884	**6X2**	1	10	300	24.45
280-101885	**8X2**	1	10	300	24.45
280-101886	**10X2**	1	10	300	24.45

Stub Saddle (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-101887	**12X2**	1	10	300	25.75
280-101888	**15X2**	1	10	300	28.22
280-101889	**18X2**	1	10	300	28.22
280-101890	**20X2**	1	10	300	31.88
280-101891	**4X3**	1	10	300	29.44
280-101892	**6X3**	1	5	300	29.44
280-101893	**8X3**	1	5	300	29.44
280-101894	**10X3**	1	5	300	29.44
280-101895	**12X3**	1	5	300	31.88
280-101896	**15X3**	1	5	300	31.88
280-101897	**18X3**	1	10	300	31.88
280-101898	**20X3**	1	5	300	34.35
280-101899	**6X4**	1	10	300	34.35
280-101900	**8X4**	1	10	300	34.35
280-101901	**10X4**	1	10	300	34.35
280-101902	**12X4**	1	10	300	34.35
280-101903	**15X4**	1	10	300	34.35
280-101904	**18X4**	1	10	300	36.09
280-101905	**20X4**	1	10	300	36.79
280-101906	**8X6**	1	6	300	40.46
280-101907	**10X6**	1	8	300	40.46
280-101908	**12X6**	1	6	300	40.46
280-101909	**15X6**	1	8	300	42.92
280-101910	**18X6**	1	10	300	42.92
280-101911	**20X6**	1	7	300	49.05
280-101912	**10X8**	1	4	300	53.94
280-101913	**12X8**	1	3	300	53.94
280-101914	**15X8**	1	5	300	57.61
280-101915	**18X8**	1	5	300	61.33
280-101916	**20X8**	1	0	300	77.27
280-101917	**12X10**	1	3	300	71.15
280-101918	**15X10**	1	5	300	74.84
280-101919	**18X10**	1	4	300	76.09
280-101920	**20X10**	1	0	300	117.73
280-101921	**15X12**	1	0	300	106.71
280-101922	**18X12**	1	0	300	123.91
280-101923	**20X12**	1	0	300	141.09
280-101924	**18X15**	1	0	300	166.85
280-101925	**20X15**	1	0	300	197.51
280-101926	**20X18**	1	0	300	240.45

Same Size Saddle

Soc



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-101937	**6X6**	1	10	300	33.71
280-101938	**8X8**	1	5	300	49.05
280-101939	**10X10**	1	5	300	67.43
280-101940	**12X12**	1	4	300	98.14
280-101941	**15X15**	1	0	300	147.18
280-101942	**18X18**	1	0	300	251.52
280-101943	**20X20**	1	0	300	343.53

Same Size Stub Saddle

Soc

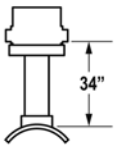


Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
280-101949	**6X6**	1	5	300	58.85
280-101950	**8X8**	1	4	300	94.21
280-101951	**10X10**	1	0	300	115.28
280-101952	**12X12**	1	0	300	131.24
280-101953	**15X15**	1	0	300	196.32
280-101954	**18X18**	1	0	300	341.08
280-101955	**20X20**	1	0	300	398.72

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Size	Disc Code	Part Number List Price Each	
DISTRIBUTING GATE RISER (Saddle x Riser x Pot)			
GATES NOT INCLUDED IN PRICE (See CHART #1 on Next Page)			
6x4x8	301	2884-53234 103.08	_ _ _
8x4x8	301	2884-58234 103.08	_ _ _
8x6x10	301	2884-58534 132.48	_ _ _
10x4x8	301	2884-62434 103.08	_ _ _
10x6x10	301	2884-62634 132.48	_ _ _
10x8x12	301	2884-62834 196.32	_ _ _
12x4x8	301	2884-66434 103.08	_ _ _
12x6x10	301	2884-66634 132.48	_ _ _
12x8x12	301	2884-66834 196.32	_ _ _
12x10x15	301	2884-67034 280.36	_ _ _
15x4x8	301	2884-72334 103.08	_ _ _
15x6x10	301	2884-72634 132.48	_ _ _
15x8x12	301	2884-72834 196.32	_ _ _
15x10x15	301	2884-73034 281.00	_ _ _
15x12x18	301	2884-73234 510.40	_ _ _
18x4x8	301	2884-78434 103.08	_ _ _
18x6x10	301	2884-78634 132.48	_ _ _
18x8x12	301	2884-78834 196.32	_ _ _
18x10x15	301	2884-79034 280.36	_ _ _
18x12x18	301	2884-79234 510.40	_ _ _
20x4x8	301	2884-81434 103.08	_ _ _
20x6x10	301	2884-81634 132.48	_ _ _
20x8x12	301	2884-81834 196.34	_ _ _
20x10x15	301	2884-82034 280.36	_ _ _
20x12x18	301	2884-82234 510.40	_ _ _



HOW TO ORDER A DISTRIBUTING GATE RISER

Choose the Distributing Gate Riser size required:
Example: 6 x 4 x 8
(6" Saddle x 4" Riser x 8" Pot)
Part Number 2884-53234 _ _ _

Next, choose the Gate size required from CHART #1:
Example: 2-1/2" Gates
(Code Number "2")

Next, add this Code Number to the end of the Part Number:
Example: 2884-53234 2 _ _

Next, choose the position required for the gates from CHART #2:
Example: Standard 2-Way Gates
(Code Number "05")

Next, add this Code Number to the very end of the Part Number:
Example: 2884-532342 0 5

The Part Number is now complete for a
6" Saddle x 4" Riser x 8" Pot
with 2-1/2" Standard 2-Way Gates –

2884–53234205

HOW TO CALCULATE A DISTRIBUTING GATE RISER TOTAL LIST PRICE EACH WITH GATES INSTALLED

Find the base unit List Price Each at left:
Example: $103.08

Next, find the List Price Each for the size of Gate required from CHART #1:
Example: 2-1/2" Gate – $15.92 each

Next, multiply the Gate price by the number of Gates required:
Example: $15.92 x 2 = $31.84

Next, add this amount to the base unit price, for the Total List Price Each:
Example: $103.08 + $31.84 = $134.92

The Total List Price Each for a
6" Saddle x 4" Riser x 8" Pot with 2-1/2"
Standard 2-Way Gates installed is

$134.92

CHART #1

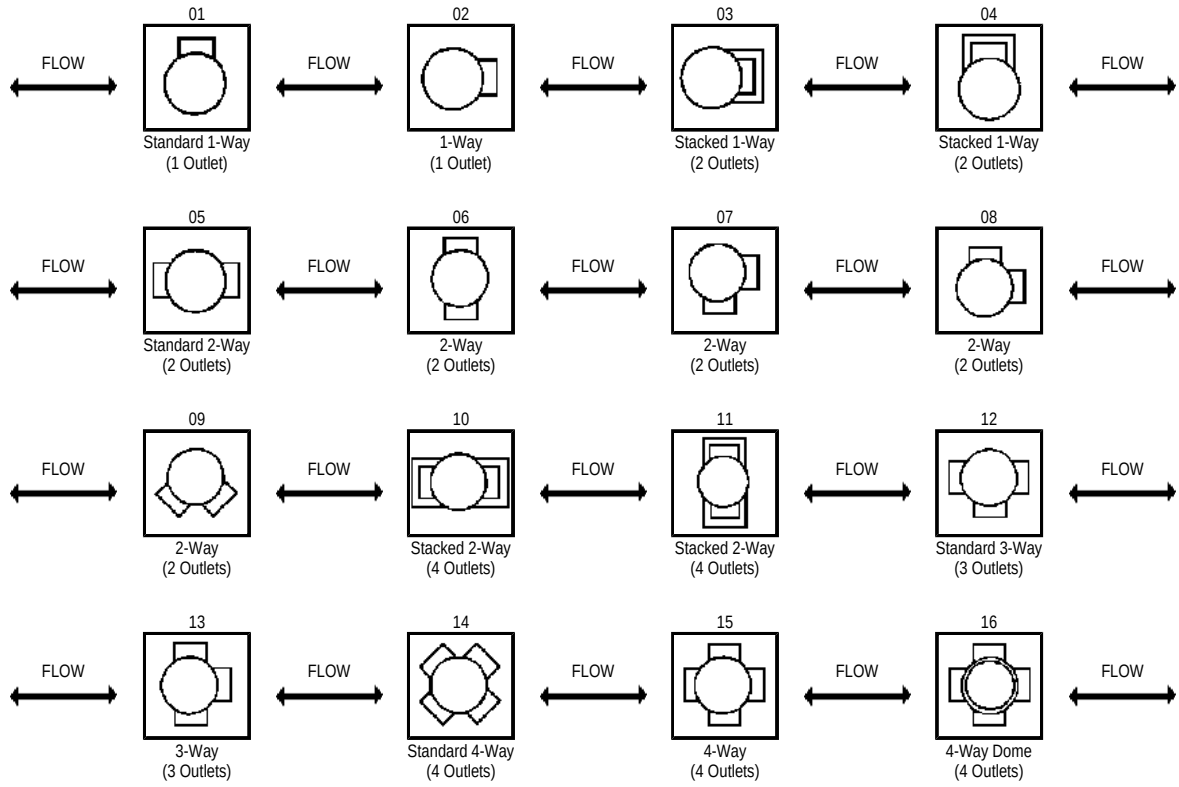
Gate/Hole Size	Distributing Gate Size Code	Disc Code	List Price Each Installed
2" Gate	1	301	13.49
2- 1/2" Gate	2	301	15.92
3" Gate	3	301	18.38
4" Gate	4	301	26.98
2" Hole*	5	301	—
2- 1/2" Hole*	6	301	—
3" Hole*	7	301	—
4" Hole*	8	301	—

* Hole Size Codes MUST be chosen ONLY when ordering with NO GATES INSTALLED.

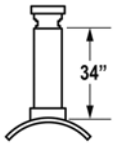
Number code for Gate Hole positioning must also be chosen from CHART #2 below.

CHART #2

Number Codes for Gate Quantity & Positioning on Saddle



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Spears® Manufacturing Company
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Part Number Size	Disc Code	List Price Each			
RITE FLO RISER (Saddle x Riser)					
GATES NOT INCLUDED IN PRICE (See CHART #3 on Next Page)		1 Outlet	2 Outlets	3 Outlets	4 Outlets
					
2885-58534 _ _ _ 8x6	301	124.62	128.53	131.15	133.41
2885-62634 _ _ _ 10x6	301	124.62	128.53	131.15	133.41
2885-66634 _ _ _ 12x6	301	124.62	128.53	131.15	133.41
2885-72634 _ _ _ 15x6	301	124.62	128.53	131.15	133.41
2885-78634 _ _ _ 18x6	301	124.62	128.53	131.15	133.41
2885-81634 _ _ _ 20x6	301	124.62	128.53	131.15	133.41

HOW TO ORDER A RITE FLO RISER

Choose the Rite Flo Riser size required:
Example: 8 x 6 Riser
(8" Saddle x 6" Riser)
Part Number 2885-58534 _ _ _

Next, choose the Gate size required from CHART #3:
Example: 3" Gates
(Code Number "3")

Next, add this Code Number to the end of the Part Number:
Example: 2885-58534 3 _ _

Next, choose the position required for the gates from CHART #4:
Example: Standard 2-Way (2 Outlets)
(Code Number "05")

Next, add this Code Number to the very end of the Part Number:
Example: 2885-585343 0 5

The Part Number is now complete for an 8" Saddle x 6" Standard 2-Way Riser with 3" Gates –

2885-58534305

HOW TO CALCULATE A RITE FLO RISER TOTAL LIST PRICE EACH WITH GATES INSTALLED

Find the base unit List Price Each at left:
Example: $133.41

Next, find the List Price Each for the 3" Gate required from CHART #3:
Example: 3" Gate – $47.20 each

Next, multiply the Gate price by the number of Gates required:
Example: $47.20 x 4 = $188.80

Next, add this amount to the base unit price, for the Total List Price Each:
Example: $133.41 + $188.80 = $322.21

The Total List Price Each for a 8" Saddle x 6" 4-Way Dome Riser with 3" Gates installed is

$322.21

CHART #3

Gate/Hole Size	Gate Size Code	Disc Code	Rite Flo List Price Each Installed
3" Gate	3	301	47.20
2" Hole*	5	301	—
3" Hole*	7	301	—

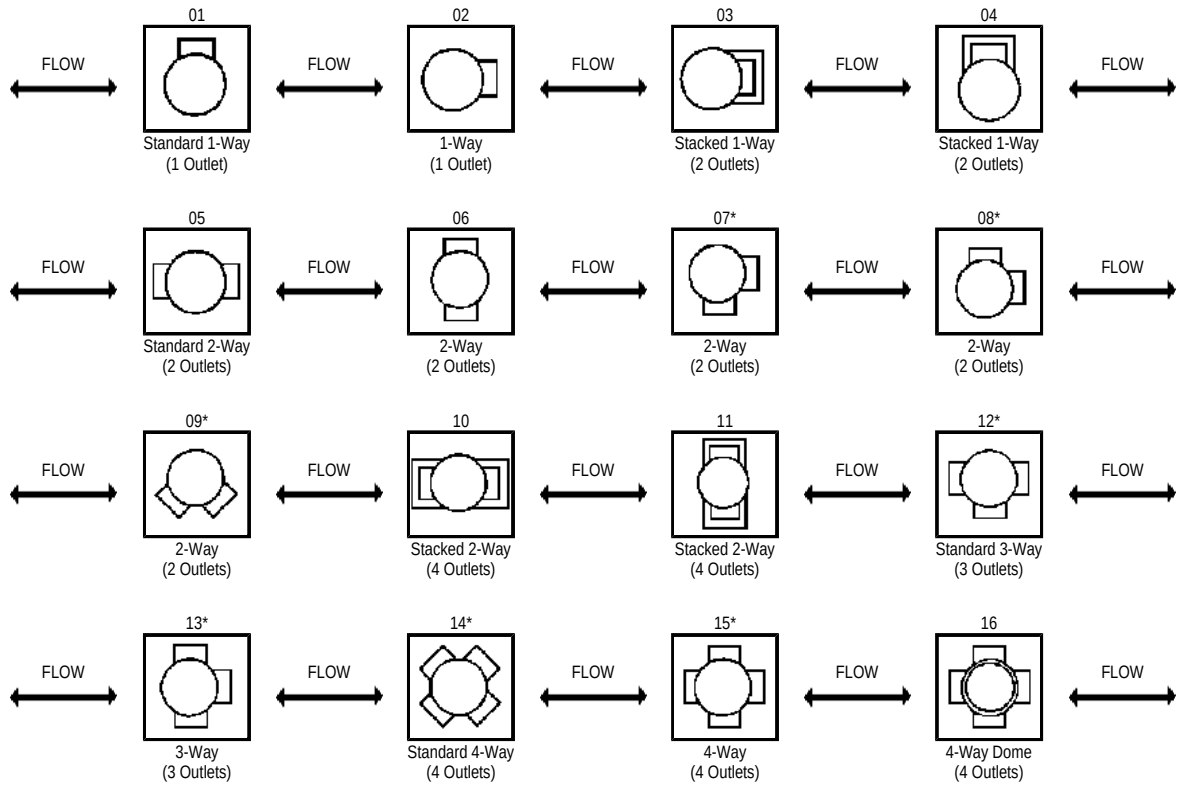
* Hole Size Codes MUST be chosen ONLY when ordering with NO GATES INSTALLED.

Number code for Gate Hole positioning must also be chosen from CHART #4 below.

NOTE: 3" Rite Flo Gates can be installed on 6" Risers ONLY.

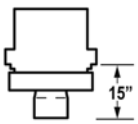
CHART #4

Number Codes for Gate Quantity & Positioning on Saddle



*Staggered gates are provided for Rite Flo Risers to allow adequate room for gates to operate properly.

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Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

	Size	Disc Code	Part Number List Price Each
DISTRIBUTING GATE REPAIR UNIT (Riser x Pot)			
GATES NOT INCLUDED IN PRICE (See CHART #5 on Next Page)			
	4x8	301	28840-42715 _ _ _ 85.89
	6x10	301	28840-53715 _ _ _ 115.33
	8x12	301	28840-59115 _ _ _ 165.61
	10x15	301	28840-63515 _ _ _ 218.92
	12x18	301	28840-67815 _ _ _ 413.51

HOW TO ORDER DISTRIBUTING GATE AND RITE FLO RISER REPAIR UNITS

Choose the Repair Unit size required:
Example: 4 x 8 Distributing Gate Repair Unit
(4" Riser x 8" Pot)
Part Number 28840-42715 _ _ _

Next, choose the Gate size required from CHART #5:
Example: 2" Gate
(Code Number "1")

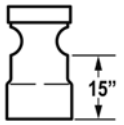
Next, add this Code Number to the end of the Part Number:
Example: 28840-42715 1 _ _

Next, choose the position required for the gates from CHART #6:
Example: 4-Way
(Code Number "14")

Next, add this Code Number to the very end of the Part Number:
Example: 28840-427151 1 4

The Part Number is now complete for a
4" Riser x 8" Pot Distributing Gate Riser Repair Unit with 2" 4-Way Gates –

28840–42715114

	Part Number Size	Disc Code	List Price Each			
RITE FLO RISER REPAIR UNIT						
GATES NOT INCLUDED IN PRICE (See CHART #5 on Next Page)			1 Outlet	2 Outlets	3 Outlets	4 Outlets
	28850-06015 6" _ _ _	301	62.95	68.18	73.39	78.67

HOW TO CALCULATE DISTRIBUTING GATE AND RITE FLO RISER REPAIR UNITS TOTAL LIST PRICE EACH WITH GATES INSTALLED

Find the base unit List Price Each above:
Example: $85.89

Next, find the List Price Each for the size of Gate required from CHART #5:
Example: 2" Gate – $13.50 each

Next, multiply the Gate price by the number of Gates required:
Example: $13.50 x 4 = $54.00

Next, add this amount to the base unit price, for the Total List Price Each:
Example: $85.89 + $54.00 = $139.89

The Total List Price Each for a
4" Riser x 8" Pot Distributing Gate Riser Repair Unit
with 2" 4-Way Gates installed is

$139.89

CHART #5

Gate/Hole Size	Gate Size Code	Disc Code	Distributing Gate List Price Each Installed	Rite Flo Gate List Price Each Installed
2" Gate	1	301	13.49	—
2- 1/2" Gate	2	301	15.92	—
3" Gate	3	301	18.38	47.20
4" Gate	4	301	26.98	—
2" Hole*	5	301	—	—
2- 1/2" Hole*	6	301	—	—
3" Hole*	7	301	—	—
4" Hole*	8	301	—	—

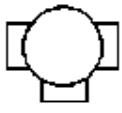
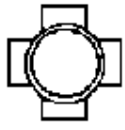
* Hole Size Codes MUST be chosen ONLY when ordering with NO GATES INSTALLED.

Number code for Gate Hole positioning must also be chosen from CHART #6 below.

NOTE: 3" Rite Flo Gates can be installed on 6" Risers ONLY.

CHART #6

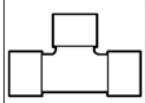
Repair Unit Number Codes for Gate Quantity & Positioning

02  1-Way (1 Outlet)	04  Stacked 1-Way (2 Outlets)	06  2-Way (2 Outlets)	08*  2-Way (2 Outlets)
10  Stacked 2-Way (4 Outlets)	12*  3-Way (3 Outlets)	14*  4-Way (4 Outlets)	16  4-Way Dome (4 Outlets)

*Staggered gates are provided for Rite Flo Riser Repair Units
to allow adequate room for gate to operate properly.

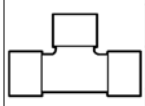
All Low Head PIP Fabricated Fittings showing size outlets of 4" and under are IPS size on that outlet

Tee (Socket)



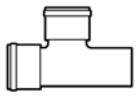
Size	80 PSI Disc Code: 310 Part Number / Price Each	100 PSI Disc Code: 320 Part Number / Price Each	125 PSI Disc Code: 330 Part Number / Price Each
6	290-102502 **89.55**	300-102502 **107.15**	3301-060P **107.73**
6X2	290-102499 **62.58**	300-102499 **72.39**	3301-528P **81.24**
6X3	290-102500 **67.43**	300-102500 **77.27**	3301-530P **87.42**
6X4	290-102501 **69.93**	300-102501 **80.94**	3301-532P **90.69**
8	290-102507 **154.43**	300-102507 **158.24**	3301-080P **215.97**
8X2	290-102503 **77.27**	300-102503 **89.55**	3301-578P **122.51**
8X3	290-102504 **85.85**	300-102504 **96.87**	3301-580P **133.51**
8X4	290-102505 **96.87**	300-102505 **105.54**	3301-582P **144.42**
8X6	290-102506 **115.28**	300-102506 **130.04**	3301-585P **178.94**
10	290-102513 **223.27**	300-102513 **254.00**	3301-100P **322.38**
10X2	290-102508 **112.85**	300-102508 **123.91**	3301-621P **170.32**
10X3	290-102509 **123.91**	300-102509 **158.24**	3301-623P **216.73**
10X4	290-102510 **143.55**	300-102510 **161.93**	3301-624P **223.28**
10X6	290-102511 **158.24**	300-102511 **165.62**	3301-626P **244.97**
10X8	290-102512 **182.82**	300-102512 **220.85**	3301-628P **303.81**
12	290-102520 **316.54**	300-102520 **404.84**	3301-120P **506.86**
12X2	290-102514 **149.65**	300-102514 **179.06**	3301-661P **266.96**
12X3	290-102515 **176.69**	300-102515 **214.68**	3301-663P **295.07**
12X4	290-102516 **199.97**	300-102516 **238.01**	3301-664P **325.83**
12X6	290-102517 **210.99**	300-102517 **258.84**	3301-666P **356.63**
12X8	290-102518 **249.05**	300-102518 **305.48**	3301-668P **422.18**
12X10	290-102519 **287.08**	300-102519 **352.11**	3301-670P **468.41**
15	290-102528 **592.58**	300-102528 **696.89**	3301-150P **905.48**
15X2	290-102521 **276.06**	300-102521 **322.65**	3301-721P **404.84**
15X3	290-102522 **290.78**	300-102522 **339.85**	3301-723P **430.69**
15X4	290-102523 **299.36**	300-102523 **354.58**	3301-724P **445.36**
15X6	290-102524 **325.09**	300-102524 **390.14**	3301-726P **504.26**
15X8	290-102525 **375.41**	300-102525 **436.78**	3301-728P **580.36**
15X10	290-102526 **425.73**	300-102526 **516.55**	3301-730P **656.39**
15X12	290-102527 **487.04**	300-102527 **580.36**	3301-732P **757.67**
18	290-102537 **917.74**	300-102537 **1069.86**	3301-180P **1523.89**
18X2	290-102529 **479.53**	300-102529 **523.85**	3301-781P **639.23**
18X3	290-102530 **494.45**	300-102530 **537.36**	3301-783P **715.27**
18X4	290-102531 **547.19**	300-102531 **591.39**	3301-784P **761.92**
18X6	290-102532 **563.14**	300-102532 **612.22**	3301-786P **780.33**
18X8	290-102533 **586.47**	300-102533 **637.99**	3301-788P **871.11**
18X10	290-102534 **619.59**	300-102534 **685.85**	3301-790P **952.08**

Tee (Socket) (continued)



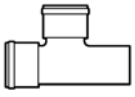
Size	80 PSI Disc Code: 310 Part Number / Price Each	100 PSI Disc Code: 320 Part Number / Price Each	125 PSI Disc Code: 330 Part Number / Price Each
18X12	290-102535 **685.85**	300-102535 **814.69**	3301-792P **1069.86**
18X15	290-102536 **795.05**	300-102536 **985.22**	3301-795P **1245.38**
21	290-102558 **1693.18**	300-102558 **1992.56**	3301-210P **2271.07**
21X2	290-102548 **695.20**	300-102548 **873.56**	3301-841P **993.81**
21X3	290-102549 **712.15**	300-102549 **879.68**	3301-843P **1011.02**
21X4	290-102550 **736.14**	300-102550 **889.52**	3301-844P **1055.17**
21X6	290-102551 **780.33**	300-102551 **1078.45**	3301-846P **1209.78**
21X8	290-102552 **833.06**	300-102552 **1110.36**	3301-848P **1260.05**
21X10	290-102553 **888.27**	300-102553 **1152.07**	3301-850P **1318.97**
21X12	290-102554 **972.97**	300-102554 **1163.14**	3301-852P **1640.42**
21X15	290-102555 **1072.34**	300-102555 **1333.66**	3301-855P **1874.77**
21X18	290-102556 **1251.44**	300-102556 **1523.89**	3301-858P **2138.60**
24	290-102570 **2311.60**	300-102570 **2666.15**	3301-240P **2725.08**
24X2	290-102559 **917.74**	300-102559 **1084.60**	3301-901P **1171.69**
24X3	290-102560 **976.61**	300-102560 **1143.51**	3301-903P **1230.60**
24X4	290-102561 **1031.86**	300-102561 **1230.60**	3301-904P **1318.97**
24X6	290-102562 **1087.08**	300-102562 **1318.97**	3301-906P **1406.08**
24X8	290-102563 **1158.23**	300-102563 **1406.08**	3301-908P **1523.89**
24X10	290-102564 **1192.57**	300-102564 **1523.89**	3301-910P **1640.42**
24X12	290-102565 **1289.53**	300-102565 **1640.42**	3301-912P **1758.20**
24X15	290-102566 **1415.85**	300-102566 **1787.67**	3301-915P **1933.69**
24X18	290-102567 **1612.21**	300-102567 **2022.00**	3301-918P **2197.47**
24X21	290-102569 **1813.39**	300-102569 **2166.74**	3301-921P **2607.26**
27	2901-270 **3501.91**	3001-270 **4148.83**	3301-270P **5133.46**
27X4	2901-934 **1248.57**	3001-934 **1567.65**	3301-934P **1958.03**
27X6	2901-936 **1317.42**	3001-936 **1687.79**	3301-936P **2109.55**
27X8	2901-938 **1402.36**	3001-938 **1806.63**	3301-938P **2259.69**
27X10	2901-940 **1420.94**	3001-940 **1931.77**	3301-940P **2416.06**
27X12	2901-942 **1561.67**	3001-942 **2087.01**	3301-942P **2608.71**
27X15	2901-945 **1714.12**	3001-945 **2297.20**	3301-945P **2872.63**
27X18	2901-948 **1952.92**	3001-948 **2604.86**	3301-948P **3255.45**
27X21	2901-951 **2197.16**	3001-951 **2771.29**	3301-951P **3463.31**
27X24	2901-954 **2801.35**	3001-954 **3421.93**	3301-954P **4276.42**

Tee (Gasket x Spigot x Gasket)



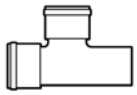
Size	80 PSI Disc Code: 310 Part Number / Price Each	100 PSI Disc Code: 320 Part Number / Price Each	125 PSI Disc Code: 330 Part Number / Price Each
6	290-103062 **184.02**	300-103062 **190.15**	3301-060232P **202.88**
6X4	290-103061 **159.47**	300-103061 **177.89**	3301-532232P **191.69**
8	290-103067 **233.13**	300-103067 **254.00**	3301-080232P **305.08**

Tee (Gasket x Spigot x Gasket) (continued)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
8X4	290-103065 **196.32**	300-103065 **215.91**	3301-582232P **229.00**
8X6	290-103066 **220.85**	300-103066 **228.21**	3301-585232P **267.02**
10	290-103073 **348.45**	300-103073 **386.49**	3301-100232P **457.88**
10X4	290-103070 **304.27**	300-103070 **316.54**	3301-624232P **331.04**
10X6	290-103071 **310.38**	300-103071 **330.02**	3301-626232P **368.09**
10X8	290-103072 **342.29**	300-103072 **354.58**	3301-628232P **400.12**
12	290-103080 **480.94**	300-103080 **525.13**	3301-120232P **634.93**
12X4	290-103076 **354.58**	300-103076 **398.72**	3301-664232P **444.23**
12X6	290-103077 **364.38**	300-103077 **412.21**	3301-666232P **476.63**
12X8	290-103078 **422.05**	300-103078 **424.52**	3301-668232P **508.14**
12X10	290-103079 **434.34**	300-103079 **468.66**	3301-670232P **571.55**
15	290-103088 **768.05**	300-103088 **949.65**	3301-150232P **1138.56**
15X4	290-103083 **569.29**	300-103083 **601.16**	3301-724232P **791.36**
15X6	290-103084 **576.38**	300-103084 **696.89**	3301-726232P **841.64**
15X8	290-103085 **607.31**	300-103085 **709.17**	3301-728232P **873.56**
15X10	290-103086 **653.92**	300-103086 **727.59**	3301-730232P **917.74**
15X12	290-103087 **696.89**	300-103087 **791.36**	3301-732232P **976.27**
18	290-103097 **1224.46**	300-103097 **1423.23**	3301-180232P **1834.27**
18X4	290-103091 **738.60**	300-103091 **823.26**	3301-784232P **1012.20**
18X6	290-103092 **791.36**	300-103092 **885.82**	3301-786232P **1107.92**
18X8	290-103093 **808.55**	300-103093 **999.97**	3301-788232P **1202.40**
18X10	290-103094 **899.35**	300-103094 **1044.12**	3301-790232P **1296.87**
18X12	290-103095 **975.40**	300-103095 **1107.92**	3301-792232P **1360.71**
18X15	290-103096 **1019.57**	300-103096 **1170.48**	3301-795232P **1455.14**
21	2901-210232 **1927.53**	3001-210232 **2371.74**	3301-210232P **2896.81**
21X4	290-103110 **1145.98**	300-103110 **1392.60**	3301-844232P **1676.01**
21X6	290-103111 **1158.23**	300-103111 **1423.23**	3301-846232P **1707.89**
21X8	290-103112 **1219.57**	300-103112 **1499.33**	3301-848232P **1790.09**
21X10	290-103113 **1257.60**	300-103113 **1518.94**	3301-850232P **1847.74**
21X12	290-103114 **1380.34**	300-103114 **1613.43**	3301-852232P **2024.46**
21X15	290-103115 **1494.43**	300-103115 **1676.01**	3301-855232P **2182.71**
21X18	290-103116 **1690.73**	300-103116 **2024.46**	3301-858232P **2467.40**
24	2901-240232 **4322.97**	3001-240232 **4579.35**	3301-240232P **6243.22**
24X6	2901-906232 **3074.15**	3001-906232 **3483.32**	3301-906232P **4354.19**
24X8	2901-908232 **3235.31**	3001-908232 **3612.11**	3301-908232P **4579.20**
24X10	2901-910232 **3400.77**	3001-910232 **3677.29**	3301-910232P **4879.46**
24X12	2901-912232 **3584.27**	3001-912232 **3773.58**	3301-912232P **5095.95**

Tee (Gasket x Spigot x Gasket) (continued)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
24X15	2901-915232 **3772.13**	3001-915232 **3935.01**	3301-915232P **5353.69**
24X18	2901-918232 **3967.42**	3001-918232 **4127.62**	3301-918232P **5611.53**
24X21	2901-921232 **4177.64**	3001-921232 **4386.61**	3301-921232P **5934.20**
27	2901-270232 **6503.11**	3001-270232 **7255.56**	3301-270232P **9191.09**
27X6	2901-936232 **3842.27**	3001-936232 **4354.06**	3301-936232P **5482.61**
27X8	2901-938232 **4043.65**	3001-938232 **4579.28**	3301-938232P **5740.28**
27X10	2901-940232 **4251.53**	3001-940232 **4837.07**	3301-940232P **5998.07**
27X12	2901-942232 **4481.67**	3001-942232 **5095.99**	3301-942232P **6288.28**
27X15	2901-945232 **4716.81**	3001-945232 **5353.69**	3301-945232P **6514.74**
27X18	2901-948232 **4960.88**	3001-948232 **5643.92**	3301-948232P **7030.25**
27X21	2901-951232 **5222.40**	3001-951232 **5934.33**	3301-951232P **7416.87**
27X24	2901-954232 **5497.60**	3001-954232 **6192.08**	3301-954232P **7836.11**

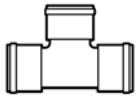
Tee (Gasketed)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-103174 **184.02**	300-103174 **190.15**	3301-0602P **202.88**
6X4	290-103173 **159.47**	300-103173 **177.89**	3301-5322P **191.69**
8	290-103179 **233.13**	300-103179 **254.00**	3301-0802P **305.08**
8X4	290-103177 **196.32**	300-103177 **215.91**	3301-5822P **229.00**
8X6	290-103178 **220.85**	300-103178 **228.21**	3301-5852P **267.02**
10	290-103185 **348.45**	300-103185 **386.49**	3301-1002P **457.88**
10X4	290-103182 **304.27**	300-103182 **316.54**	3301-6242P **331.04**
10X6	290-103183 **310.38**	300-103183 **330.02**	3301-6262P **368.09**
10X8	290-103184 **342.29**	300-103184 **354.58**	3301-6282P **400.12**
12	290-103192 **480.94**	300-103192 **525.13**	3301-1202P **634.93**
12X4	290-103188 **354.58**	300-103188 **398.72**	3301-6642P **444.23**
12X6	290-103189 **364.38**	300-103189 **412.21**	3301-6662P **476.62**
12X8	290-103190 **422.05**	300-103190 **424.52**	3301-6682P **508.14**
12X10	290-103191 **434.34**	300-103191 **468.66**	3301-6702P **571.55**
15	290-103200 **768.05**	300-103200 **949.65**	3301-1502P **1138.56**
15X4	290-103195 **569.29**	300-103195 **601.16**	3301-7242P **791.36**
15X6	290-103196 **576.38**	300-103196 **696.89**	3301-7262P **841.64**
15X8	290-103197 **607.31**	300-103197 **709.17**	3301-7282P **873.56**
15X10	290-103198 **653.92**	300-103198 **727.59**	3301-7302P **917.74**
15X12	290-103199 **696.89**	300-103199 **791.36**	3301-7322P **980.33**
18	290-103209 **1224.46**	300-103209 **1423.23**	3301-1802P **1834.27**
18X4	290-103203 **738.60**	300-103203 **823.26**	3301-7842P **1012.20**
18X6	290-103204 **791.36**	300-103204 **885.82**	3301-7862P **1107.92**
18X8	290-103205 **808.55**	300-103205 **999.97**	3301-7882P **1202.40**

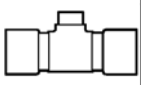
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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Tee (Gasketed) (continued)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
18X10	290-103206 **899.35**	300-103206 **1044.12**	3301-7902P **1296.87**
18X12	290-103207 **975.40**	300-103207 **1107.92**	3301-7922P **1360.71**
18X15	290-103208 **1019.57**	300-103208 **1170.48**	3301-7952P **1455.14**
21	290-103230 **1927.53**	300-103230 **2371.74**	3301-2102P **2896.81**
21X4	290-103222 **1145.98**	300-103222 **1392.60**	3301-8442P **1676.01**
21X6	290-103223 **1158.23**	300-103223 **1423.23**	3301-8462P **1707.89**
21X8	290-103224 **1219.57**	300-103224 **1499.33**	3301-8482P **1790.09**
21X10	290-103225 **1257.60**	300-103225 **1518.94**	3301-8502P **1847.74**
21X12	290-103226 **1380.34**	300-103226 **1613.43**	3301-8522P **2024.46**
21X15	290-103227 **1494.43**	300-103227 **1676.01**	3301-8552P **2182.71**
21X18	290-103228 **1690.73**	300-103228 **2024.46**	3301-8582P **2467.40**
24	2901-2402 **4322.97**	3001-2402 **4579.35**	3301-2402P **6243.22**
24X6	2901-9062 **3074.15**	3001-9062 **3483.32**	3301-9062P **4354.19**
24X8	2901-9082 **3235.31**	3001-9082 **3612.11**	3301-9082P **4579.20**
24X10	2901-9102 **3400.77**	3001-9102 **3677.29**	3301-9102P **4879.46**
24X12	2901-9122 **3584.27**	3001-9122 **3773.58**	3301-9122P **5095.95**
24X15	2901-9152 **3772.13**	3001-9152 **3935.01**	3301-9152P **5353.69**
24X18	2901-9182 **3967.42**	3001-9182 **4127.62**	3301-9182P **5611.53**
24X21	2901-9212 **4177.64**	3001-9212 **4386.61**	3301-9212P **5934.20**
27	2901-2702 **6503.11**	3001-2702 **7255.56**	3301-2702P **9191.09**
27X6	2901-9362 **3842.27**	3001-9362 **4354.06**	3301-9362P **5482.61**
27X8	2901-9382 **4043.65**	3001-9382 **4579.28**	3301-9382P **5740.28**
27X10	2901-9402 **4251.53**	3001-9402 **4837.07**	3301-9402P **5998.07**
27X12	2901-9422 **4481.67**	3001-9422 **5095.99**	3301-9422P **6288.28**
27X15	2901-9452 **4716.81**	3001-9452 **5353.69**	3301-9452P **6514.74**
27X18	2901-9482 **4960.88**	3001-9482 **5643.92**	3301-9482P **7030.25**
27X21	2901-9512 **5222.40**	3001-9512 **5934.33**	3301-9512P **7416.87**
27X24	2901-9542 **5497.60**	3001-9542 **6192.08**	3301-9542P **7836.11**

Reinforced Tee (Soc x Soc x Fipt)



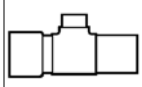
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6X2	---	300-202152 **75.27**	3302-528P **114.54**
6X3	---	300-202154 **82.16**	3302-530P **131.24**
6X4	---	300-202155 **92.00**	3302-532P **134.95**
8X2	---	300-202157 **114.09**	3302-578P **185.38**
8X3	---	300-202159 **120.20**	3302-580P **197.95**
8X4	---	300-202160 **130.04**	3302-582P **167.85**
10X2	---	300-202162 **155.83**	3302-621P **209.27**
10X3	---	300-202164 **191.37**	3302-623P **259.22**

Reinforced Tee (Soc x Soc x Fipt) (continued)



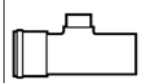
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
10X4	---	300-202165 **204.89**	3302-624P **255.07**
12X2	---	300-202167 **238.01**	3302-661P **257.58**
12X3	---	300-202169 **263.75**	3302-663P **283.15**
12X4	---	300-202170 **301.80**	3302-664P **331.39**
15X2	---	300-202172 **392.28**	3302-721P **453.93**
15X3	---	300-202174 **417.29**	3302-723P **478.49**
15X4	---	300-202175 **447.51**	3302-724P **490.80**

Reinforced Tee (Soc x Spig x Fipt)



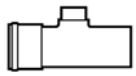
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6X2	---	300-202222 **62.58**	---
6X3	---	300-202224 **73.61**	---
6X4	---	300-202225 **85.85**	---
8X2	---	300-202227 **100.59**	---
8X3	---	300-202229 **110.41**	---
8X4	---	300-202230 **120.20**	---
10X2	---	300-202232 **149.61**	---
10X3	---	300-202234 **182.82**	---
10X4	---	300-202235 **193.84**	---
12X2	---	300-202237 **223.27**	---
12X3	---	300-202239 **255.17**	---
12X4	---	300-202240 **290.78**	---
15X2	---	300-202242 **390.14**	3302-72113P **441.69**
15X3	---	300-202244 **413.46**	3302-72313P **472.38**
15X4	---	300-202245 **440.43**	3302-72413P **484.61**

Reinforced Tee (Gasket x Spig x Fipt)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6X2	---	300-202362 **107.94**	---
6X3	---	300-202364 **139.85**	---
6X4	---	300-202365 **146.01**	---
8X2	---	300-202367 **152.13**	---
8X3	---	300-202369 **177.89**	---
8X4	---	300-202370 **196.32**	---
10X2	---	300-202372 **228.21**	---
10X3	---	300-202374 **240.45**	---
10X4	---	300-202375 **250.25**	---
12X2	---	300-202377 **316.54**	---
12X3	---	300-202379 **342.29**	---
12X4	---	300-202380 **354.58**	---
15X2	---	300-202382 **442.92**	3302-72123P **539.55**
15X3	---	300-202384 **468.66**	3302-72323P **578.24**

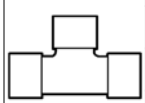
Reinforced Tee (Gasket x Spig x Fipt) (continued)

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
	15X4	---	300-202385 **506.71**	3302-72423P **630.48**

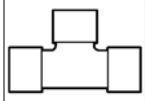
Reinforced Tee (Gasket x Fipt)

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
	6X2	---	300-202432 **114.09**	---
	6X3	---	300-202434 **139.85**	---
	6X4	---	300-202435 **152.13**	---
	8X2	---	300-202437 **171.75**	---
	8X3	---	300-202439 **187.72**	---
	8X4	---	300-202440 **202.42**	---
	10X2	---	300-202442 **247.80**	---
	10X3	---	300-202444 **272.35**	---
	10X4	---	300-202445 **291.97**	---
	12X2	---	300-202447 **348.45**	---
	12X3	---	300-202449 **366.82**	---
	12X4	---	300-202450 **392.63**	---
	15X2	---	300-202452 **506.71**	3302-7212P **619.11**
	15X3	---	300-202454 **525.13**	3302-7232P **672.68**
	15X4	---	300-202455 **550.91**	3302-7242P **707.42**

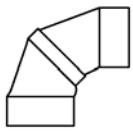
PIP X IPS Tee (Socket)

	Size	80 PIP Disc Code: 310 Part Number Price Each	100 PIP Disc Code: 320 Part Number Price Each	125 PIP Disc Code: 330 Part Number Price Each
	6	2901-060PXI **84.18**	3001-060PXI **107.15**	3301-060PXI **107.73**
	8	2901-080PXI **154.43**	3001-080PXI **215.28**	3301-080PXI **215.97**
	8X6	2901-585PXI **108.37**	3001-585PXI **130.04**	3301-585PXI **168.20**
	10	2901-100PXI **209.87**	3001-100PXI **254.00**	3301-100PXI **322.38**
	10X6	2901-626PXI **148.75**	300-102821 **165.62**	3301-626PXI **230.27**
	10X8	2901-628PXI **171.85**	3001-628PXI **339.99**	3301-628PXI **285.58**
	12	2901-120PXI **316.54**	3001-120PXI **404.84**	3301-120PXI **476.45**
	12X6	2901-666PXI **251.54**	300-102599 **258.84**	3301-666PXI **335.23**
	12X8	2901-668PXI **234.11**	300-102607 **305.48**	3301-668PXI **396.85**
	12X10	2901-670PXI **287.08**	3001-670PXI **352.11**	3301-670PXI **440.31**
	15X6	2901-726PXI **305.59**	300-102708 **390.14**	3301-726PXI **474.01**
	15X8	2901-728PXI **352.88**	300-102709 **492.14**	3301-728PXI **545.54**
	15X10	2901-730PXI **400.18**	3001-730PXI **516.55**	3301-730PXI **617.01**
	15X12	2901-732PXI **457.82**	300-102817 **580.36**	3301-732PXI **712.21**
	18X6	2901-786PXI **529.35**	3001-786PXI **612.22**	3301-786PXI **733.51**
	18X8	2901-788PXI **551.28**	3001-788PXI **637.99**	3301-788PXI **818.84**
	18X10	2901-790PXI **619.59**	3001-790PXI **685.85**	3301-790PXI **894.96**

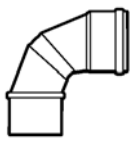
PIP X IPS Tee (Socket) (continued)

	Size	80 PIP Disc Code: 310 Part Number Price Each	100 PIP Disc Code: 320 Part Number Price Each	125 PIP Disc Code: 330 Part Number Price Each
	18X12	2901-792PXI **685.85**	3001-792PXI **814.69**	3301-792PXI **1005.67**
	21X6	2901-846PXI **780.33**	3001-846PXI **1078.08**	3301-846PXI **1137.19**
	21X8	2901-848PXI **783.08**	3001-848PXI **1110.36**	3301-848PXI **1184.45**
	21X10	2901-850PXI **888.27**	3001-850PXI **1152.07**	3301-850PXI **1239.83**
	21X12	2901-852PXI **914.59**	3001-852PXI **1163.14**	3301-852PXI **1542.00**
	24X6	2901-906PXI **1087.08**	3001-906PXI **1318.97**	3301-906PXI **1321.72**
	24X8	2901-908PXI **1158.23**	3001-908PXI **1406.08**	3301-908PXI **1432.46**
	24X10	2901-910PXI **1192.57**	3001-910PXI **1523.89**	3301-910PXI **1542.00**
	24X12	2901-912PXI **1212.16**	3001-912PXI **1640.42**	3301-912PXI **1652.71**

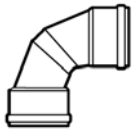
90° Elbow (Socket)

	6	290-100812 **121.46**	300-100812 **142.33**	3306-060P **176.45**
	8	290-100813 **164.40**	300-100813 **224.55**	3306-080P **256.04**
	10	290-100814 **269.93**	300-100814 **316.54**	3306-100P **353.34**
	12	290-100815 **347.17**	300-100815 **444.11**	3306-120P **459.67**
	15	290-100816 **579.12**	300-100816 **688.32**	3306-150P **787.68**
	18	290-100817 **871.11**	300-100817 **1025.67**	3306-180P **1348.39**
	21	290-100819 **1363.12**	300-100819 **1652.67**	3306-210P **2030.60**
	24	290-100820 **3046.54**	300-100820 **3633.02**	3306-240P **3826.83**
	27	2906-270 **3245.43**	3006-270 **3853.56**	3306-270P **4260.29**

90° Elbow (Gasket x Spigot)

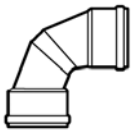
	6	290-100878 **147.18**	300-100878 **159.47**	3306-06023P **234.72**
	8	290-100879 **233.13**	300-100879 **255.17**	3306-08023P **304.95**
	10	290-100880 **347.17**	300-100880 **393.81**	3306-10023P **471.04**
	12	290-100881 **472.38**	300-100881 **559.47**	3306-12023P **677.71**
	15	290-100882 **905.48**	300-100882 **1143.51**	3306-15023P **1289.53**
	18	290-100883 **1518.94**	300-100883 **1758.20**	3306-18023P **1787.67**
	21	290-100885 **2201.15**	300-100885 **2639.19**	3306-21023P **3187.65**
	24	2906-24023 **3513.18**	3006-24023 **3992.52**	3306-24023P **4992.22**
	27	2906-27023 **4767.00**	3006-27023 **5521.54**	3306-27023P **6563.63**

90° Elbow (Gasketed)

	6	290-100900 **147.18**	300-100900 **159.47**	3306-0602P **234.72**
	8	290-100901 **233.13**	300-100901 **255.17**	3306-0802P **304.95**
	10	290-100902 **347.17**	300-100902 **393.81**	3306-1002P **471.04**
	12	290-100903 **472.38**	300-100903 **559.47**	3306-1202P **677.71**
	15	290-100904 **905.48**	300-100904 **1143.51**	3306-1502P **1289.53**
	18	290-100905 **1518.94**	300-100905 **1758.20**	3306-1802P **1787.67**
	21	290-100907 **2201.15**	300-100907 **2639.19**	3306-2102P **3187.65**
	24	2906-2402 **3513.18**	3006-2402 **3992.52**	3306-2402P **4992.22**

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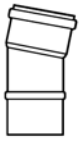
90° Elbow (Gasketed) (continued)

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
	27	2906-2702 **4767.00**	3006-2702 **5521.54**	3306-2702P **6563.63**

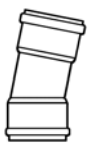
11-1/4° Elbow (Socket)

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
	6	290-100114 **33.15**	300-100114 **39.23**	3311-060P **48.57**
	8	290-100115 **53.94**	300-100115 **58.85**	3311-080P **72.28**
	10	290-100116 **96.87**	300-100116 **111.63**	3311-100P **140.02**
	12	290-100117 **137.37**	300-100117 **155.83**	3311-120P **192.71**
	15	290-100118 **213.47**	300-100118 **261.29**	3311-150P **339.85**
	18	290-100119 **366.82**	300-100119 **434.34**	3311-180P **539.85**
	21	290-100121 **612.22**	300-100121 **698.09**	3311-210P **909.17**
	24	290-100122 **823.26**	300-100122 **909.17**	3311-240P **981.54**
	27	2911-270 **1032.16**	3011-270 **1102.41**	3311-270P **1433.89**

11-1/4° Elbow (Gasket x Spigot)

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
	6	290-100186 **98.14**	300-100186 **120.20**	3311-06023P **139.99**
	8	290-100187 **159.47**	300-100187 **177.89**	3311-08023P **208.33**
	10	290-100188 **239.24**	300-100188 **263.75**	3311-10023P **305.67**
	12	290-100189 **325.09**	300-100189 **380.34**	3311-12023P **441.98**
	15	290-100190 **572.98**	300-100190 **628.17**	3311-15023P **743.53**
	18	290-100191 **907.92**	300-100191 **1040.43**	3311-18023P **1236.77**
	21	290-100193 **1341.02**	300-100193 **1442.91**	3311-21023P **1875.99**
	24	2911-24023 **2219.44**	3011-24023 **2511.59**	3311-24023P **3152.73**
	27	2911-27023 **2871.55**	3011-27023 **3248.12**	3311-27023P **3925.54**

11-1/4° Elbow (Gasketed)

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
	6	290-100210 **98.14**	300-100210 **120.20**	3311-0602P **139.99**
	8	290-100211 **159.47**	300-100211 **177.89**	3311-0802P **208.33**
	10	290-100212 **239.24**	300-100212 **263.75**	3311-1002P **305.67**
	12	290-100213 **325.09**	300-100213 **380.34**	3311-1202P **441.98**
	15	290-100214 **572.98**	300-100214 **628.17**	3311-1502P **743.53**
	18	290-100215 **907.92**	300-100215 **1040.43**	3311-1802P **1236.77**
	21	290-100217 **1341.02**	300-100217 **1442.91**	3311-2102P **1875.99**
	24	2911-2402 **2219.44**	3011-2402 **2511.59**	3311-2402P **3152.73**
	27	2911-2702 **2871.55**	3011-2702 **3248.12**	3311-2702P **3925.54**

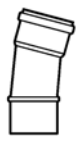
15° Elbow (Socket)

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
	6	290-100234 **33.15**	300-100234 **39.23**	3318-060P **48.57**
	8	290-100235 **53.94**	300-100235 **58.85**	3318-080P **72.28**
	10	290-100236 **96.87**	300-100236 **111.63**	3318-100P **140.02**
	12	290-100237 **137.37**	300-100237 **155.83**	3318-120P **192.71**

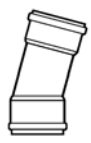
15° Elbow (Socket) (continued)

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PIP Disc Code: 330 Part Number Price Each
	15	290-100238 **213.47**	300-100238 **261.29**	3318-150P **339.85**
	18	290-100239 **366.82**	300-100239 **434.34**	3318-180P **539.85**
	21	290-100241 **612.22**	300-100241 **698.09**	3318-210P **909.17**
	24	290-100242 **823.26**	300-100242 **909.17**	3318-240P **981.54**
	27	2918-270 **1032.16**	3018-270 **1102.41**	3318-270P **1433.89**

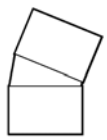
15° Elbow (Gasket x Spigot)

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PIP Disc Code: 330 Part Number Price Each
	6	290-100306 **98.14**	300-100306 **120.20**	3318-06023P **139.99**
	8	290-100307 **159.47**	300-100307 **177.89**	3318-08023P **208.33**
	10	290-100308 **239.24**	300-100308 **263.75**	3318-10023P **305.67**
	12	290-100309 **325.09**	300-100309 **380.34**	3318-12023P **441.98**
	15	290-100310 **572.98**	300-100310 **628.17**	3318-15023P **743.53**
	18	290-100311 **907.92**	300-100311 **1040.43**	3318-18023P **1236.77**
	21	290-100313 **1341.02**	300-100313 **1442.91**	3318-21023P **1875.99**
	24	2918-24023 **2219.44**	3018-24023 **2511.59**	3318-24023P **3152.73**
	27	2918-27023 **2871.55**	3018-27023 **3248.12**	3318-27023P **3925.54**

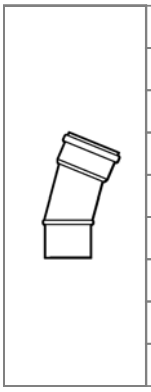
15° Elbow (Gasketed)

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PIP Disc Code: 330 Part Number Price Each
	6	290-100330 **98.14**	300-100330 **120.20**	3318-0602P **139.99**
	8	290-100331 **159.47**	300-100331 **177.89**	3318-0802P **208.33**
	10	290-100332 **239.24**	300-100332 **263.75**	3318-1002P **305.67**
	12	290-100333 **325.09**	300-100333 **380.34**	3318-1202P **441.98**
	15	290-100334 **572.98**	300-100334 **628.17**	3318-1502P **743.53**
	18	290-100335 **907.92**	300-100335 **1040.43**	3318-1802P **1236.77**
	21	290-100336 **1341.06**	300-100336 **1442.91**	3318-2102P **1875.99**
	24	2918-2402 **2219.44**	3018-2402 **2511.59**	3318-2402P **3152.73**
	27	2918-2702 **2871.55**	3018-2702 **3248.12**	3318-2702P **3925.54**

22-1/2° Elbow (Socket)

	Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PIP Disc Code: 330 Part Number Price Each
	6	290-100354 **33.15**	300-100354 **39.23**	3316-060P **47.84**
	8	290-100355 **53.94**	300-100355 **58.85**	3316-080P **71.68**
	10	290-100356 **96.87**	300-100356 **111.63**	3316-100P **140.02**
	12	290-100357 **137.37**	300-100357 **155.83**	3316-120P **192.71**
	15	290-100358 **213.47**	300-100358 **261.29**	3316-150P **339.85**
	18	290-100359 **366.82**	300-100359 **434.34**	3316-180P **539.85**
	21	290-100361 **612.22**	300-100361 **698.09**	3316-210P **909.17**
	24	290-100362 **823.26**	300-100362 **909.17**	3316-240P **981.54**
	27	2916-270 **1032.16**	3016-270 **1102.41**	3316-270P **1433.89**

22-1/2° Elbow (Gasket x Spigot)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-100426 **98.14**	300-100426 **120.20**	3316-06023P **139.99**
8	290-100427 **159.47**	300-100427 **177.89**	3316-08023P **208.33**
10	290-100428 **239.24**	300-100428 **263.75**	3316-10023P **305.67**
12	290-100429 **325.09**	300-100429 **380.34**	3316-12023P **441.98**
15	290-100430 **572.98**	300-100430 **628.17**	3316-15023P **743.53**
18	290-100431 **907.92**	300-100431 **1040.43**	3316-18023P **1236.77**
21	290-100433 **1341.02**	300-100433 **1442.91**	3316-21023P **1875.99**
24	2916-24023 **2219.44**	3016-24023 **2511.59**	3316-24023P **3152.73**
27	2916-27023 **2871.55**	3016-27023 **3248.12**	3316-27023P **3925.54**

22-1/2° Elbow (Gasketed)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-100450 **98.14**	300-100450 **120.20**	3316-0602P **139.99**
8	290-100451 **159.47**	300-100451 **177.89**	3316-0802P **208.33**
10	290-100452 **239.24**	300-100452 **263.75**	3316-1002P **305.67**
12	290-100453 **325.09**	300-100453 **380.34**	3316-1202P **441.98**
15	290-100454 **572.98**	300-100454 **628.17**	3316-1502P **743.53**
18	290-100455 **907.92**	300-100455 **1040.43**	3316-1802P **1236.77**
21	290-100457 **1341.02**	300-100457 **1442.91**	3316-2102P **1875.99**
24	2916-2402 **2219.44**	3016-2402 **2511.59**	3316-2402P **3152.73**
27	2916-2702 **2871.55**	3016-2702 **3248.12**	3316-2702P **3925.54**

30° Elbow (Socket)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-100474 **50.27**	300-100474 **52.76**	3315-060P **67.48**
8	290-100475 **76.09**	300-100475 **92.00**	3315-080P **113.92**
10	290-100476 **117.73**	300-100476 **138.62**	3315-100P **172.42**
12	290-100477 **169.27**	300-100477 **206.12**	3315-120P **228.61**
15	290-100478 **267.44**	300-100478 **320.22**	3315-150P **396.27**
18	290-100479 **436.78**	300-100479 **533.71**	3315-180P **668.65**
21	290-100481 **706.72**	300-100481 **861.34**	3315-210P **1084.60**
24	290-100482 **2015.89**	300-100482 **2343.47**	3315-240P **2460.04**
27	2915-270 **2221.92**	3015-270 **2499.78**	3315-270P **2753.83**

30° Elbow (Gasket x Spigot)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-100546 **122.65**	300-100546 **141.09**	3315-06023P **168.47**
8	290-100547 **184.02**	300-100547 **199.97**	3315-08023P **237.75**
10	290-100548 **258.84**	300-100548 **287.08**	3315-10023P **336.21**
12	290-100549 **348.45**	300-100549 **408.57**	3315-12023P **480.14**
15	290-100550 **709.17**	300-100550 **826.96**	3315-15023P **923.86**
18	290-100551 **996.25**	300-100551 **1171.69**	3315-18023P **1464.93**
21	290-100553 **1484.59**	300-100553 **1268.36**	3315-21023P **2085.81**
24	2915-24023 **2381.81**	3015-24023 **3266.20**	3315-24023P **3383.18**

30° Elbow (Gasket x Spigot) (continued)



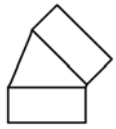
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
27	2915-27023 **3217.97**	3015-27023 **3755.29**	3315-27023P **4397.72**

30° Elbow (Gasketed)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-100570 **122.65**	300-100570 **141.09**	3315-0602P **168.47**
8	290-100571 **184.02**	300-100571 **199.97**	3315-0802P **237.75**
10	290-100572 **258.84**	300-100572 **287.08**	3315-1002P **336.21**
12	290-100573 **348.45**	300-100573 **408.57**	3315-1202P **480.14**
15	290-100574 **709.17**	300-100574 **826.96**	3315-1502P **923.86**
18	290-100575 **996.25**	300-100575 **1171.69**	3315-1802P **1464.93**
21	290-100577 **1484.59**	300-100577 **1268.36**	3315-2102P **2085.81**
24	2915-2402 **2382.07**	3015-2402 **3266.20**	3315-2402P **3383.18**
27	2915-2702 **3217.97**	3015-2702 **3755.29**	3315-2702P **4397.72**

45°Elbow (Socket)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-100592 **50.27**	300-100592 **52.76**	3317-060P **67.51**
8	290-100593 **76.09**	300-100593 **92.00**	3317-080P **113.92**
10	290-100594 **117.73**	300-100594 **138.62**	3317-100P **172.42**
12	290-100595 **169.27**	300-100595 **206.12**	3317-120P **228.61**
15	290-100596 **267.44**	300-100596 **320.22**	3317-150P **396.27**
18	290-100597 **436.78**	300-100597 **533.71**	3317-180P **668.65**
21	290-100599 **706.72**	300-100599 **861.34**	3317-210P **1084.60**
24	290-100600 **2015.89**	300-100600 **2343.47**	3317-240P **2460.04**
27	2917-270 **2221.92**	3017-270 **2499.78**	3317-270P **2753.83**

45°Elbow (Gasket x Spigot)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-100658 **122.65**	300-100658 **141.09**	3317-06023P **168.47**
8	290-100659 **184.02**	300-100659 **199.97**	3317-08023P **237.75**
10	290-100660 **258.84**	300-100660 **287.08**	3317-10023P **336.21**
12	290-100661 **348.45**	300-100661 **408.57**	3317-12023P **480.14**
15	290-100662 **709.17**	300-100662 **826.96**	3317-15023P **923.86**
18	290-100663 **996.25**	300-100663 **1171.69**	3317-18023P **1464.93**
21	290-100665 **1484.59**	300-100665 **1268.36**	3317-21023P **2085.81**
24	2917-24023 **2382.07**	3017-24023 **3266.20**	3317-24023P **3383.18**
27	2917-27023 **3217.97**	3017-27023 **3755.29**	3317-27023P **4397.72**

45°Elbow (Gasketed)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-100680 **122.65**	300-100680 **141.09**	3317-0602P **168.47**
8	290-100681 **184.02**	300-100681 **199.97**	3317-0802P **237.75**
10	290-100682 **258.84**	300-100682 **287.08**	3317-1002P **336.21**
12	290-100683 **348.45**	300-100683 **408.57**	3317-1202P **480.14**

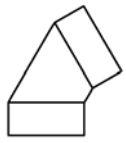
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45°Elbow (Gasketed) (continued)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
15	290-100684 **709.17**	300-100684 **826.96**	3317-1502P **923.86**
18	290-100685 **996.25**	300-100685 **1171.69**	3317-1802P **1464.93**
21	290-100687 **1484.59**	300-100687 **1765.59**	3317-2102P **2085.81**
24	2917-2402 **2382.07**	3017-2402 **3266.20**	3317-2402P **3383.18**
27	2917-2702 **3217.97**	3017-2702 **3755.29**	3317-2702P **4397.72**

60° Elbow (Socket)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-100702 **121.46**	300-100702 **142.33**	3324-060P **176.45**
8	290-100703 **164.40**	300-100703 **224.55**	3324-080P **256.01**
10	290-100704 **269.93**	300-100704 **316.54**	3324-100P **353.34**
12	290-100705 **347.17**	300-100705 **444.11**	3324-120P **459.67**
15	290-100706 **579.12**	300-100706 **688.32**	3324-150P **787.68**
18	290-100707 **871.11**	300-100707 **1025.67**	3324-180P **1348.39**
21	290-100709 **1363.12**	300-100709 **1652.67**	3324-210P **2030.60**
24	290-100710 **3046.54**	300-100710 **3633.02**	3324-240P **3826.83**
27	2924-270 **3245.43**	3024-270 **3853.56**	3324-270P **4260.29**

60° Elbow (Gasket x Spigot)



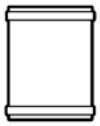
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-100768 **147.18**	300-100768 **159.47**	3324-06023P **234.72**
8	290-100769 **233.13**	300-100769 **255.17**	3324-08023P **304.95**
10	290-100770 **347.17**	300-100770 **393.81**	3324-10023P **471.04**
12	290-100771 **472.38**	300-100771 **559.47**	3324-12023P **677.71**
15	290-100772 **905.48**	300-100772 **1143.51**	3324-15023P **1289.53**
18	290-100773 **1518.94**	300-100773 **1758.20**	3324-18023P **1787.67**
21	290-100775 **2201.15**	300-100775 **2639.19**	3324-21023P **3187.65**
24	2924-24023 **3513.18**	3024-24023 **3992.52**	3324-24023P **4992.22**
27	2924-27023 **4767.00**	3024-27023 **5521.54**	3324-27023P **6563.63**

60° Elbow (Gasketed)



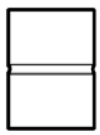
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-100790 **147.18**	300-100790 **159.47**	3324-0602P **234.72**
8	290-100791 **233.13**	300-100791 **255.17**	3324-0802P **304.95**
10	290-100792 **347.17**	300-100792 **393.81**	3324-1002P **471.04**
12	290-100793 **472.38**	300-100793 **559.47**	3324-1202P **677.71**
15	290-100794 **905.48**	300-100794 **1143.51**	3324-1502P **1289.53**
18	290-100795 **1518.94**	300-100795 **1758.20**	3324-1802P **1787.67**
21	290-100797 **2201.15**	300-100797 **2639.19**	3324-2102P **3187.65**
24	2924-2402 **3513.18**	3024-2402 **3992.52**	3324-2402P **4992.22**
27	2924-2702 **4767.00**	3024-2702 **5521.54**	3324-2702P **6563.63**

Repair Coupling (Gasketed)



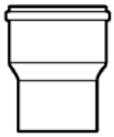
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	2928-060 **98.24**	3028-060 **111.63**	3328-060P **127.58**
8	2928-080 **137.62**	3028-080 **158.24**	3328-080P **190.12**
10	2928-100 **237.58**	3028-100 **254.00**	3328-100P **299.59**
12	2928-120 **331.39**	3028-120 **348.45**	3328-120P **414.85**
15	2928-150 **494.45**	3028-150 **519.02**	3328-150P **628.17**
18	2928-180 **823.82**	3028-180 **949.65**	3328-180P **1307.73**
21	2928-210 **1138.33**	3028-210 **1366.62**	3328-210P **1837.55**
24	2928-240 **1578.09**	3028-240 **1894.93**	3328-240P **2570.13**
27	2928-270 **2021.01**	3028-270 **2522.91**	3328-270P **3211.64**

Coupling (Socket)



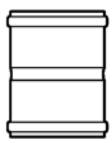
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-100002 **29.44**	300-100002 **33.15**	3329-060P **43.92**
8	290-100003 **36.79**	300-100003 **45.36**	3329-080P **55.85**
10	290-100004 **61.33**	300-100004 **72.39**	3329-100P **89.37**
12	290-100005 **92.00**	300-100005 **111.63**	3329-120P **145.09**
15	290-100006 **139.85**	300-100006 **191.37**	3329-150P **217.99**
18	290-100007 **320.22**	300-100007 **402.44**	3329-180P **490.69**
21	290-100009 **425.73**	300-100009 **703.03**	3329-210P **793.75**
24	290-100010 **747.17**	300-100010 **937.36**	3329-240P **954.62**
27	2929-270 **905.76**	3029-270 **1128.48**	3329-270P **1743.17**
30	2929-300 **1187.95**	3029-300 **1832.56**	---

Coupling (Gasket x Spigot)



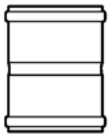
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-100068 **61.33**	300-100068 **65.01**	3329-06023P **81.35**
8	290-100069 **93.20**	300-100069 **100.59**	3329-08023P **128.77**
10	290-100070 **138.62**	300-100070 **147.18**	3329-10023P **191.23**
12	290-100071 **170.51**	300-100071 **199.97**	3329-12023P **250.99**
15	290-100072 **263.75**	300-100072 **398.72**	3329-15023P **463.79**
18	290-100073 **442.92**	300-100073 **539.85**	3329-18023P **610.22**
21	290-100075 **647.83**	300-100075 **837.99**	3329-21023P **929.94**
24	2929-24023 **791.36**	3029-24023 **1053.89**	3329-24023P **1316.86**
27	2929-27023 **1027.62**	3029-27023 **1284.38**	3329-27023P **1605.76**

Coupling (Gasketed)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	290-100090 **73.61**	300-100090 **82.16**	3329-0602P **106.32**
8	290-100091 **134.95**	300-100091 **152.28**	3329-0802P **174.62**
10	290-100092 **172.69**	300-100092 **193.84**	3329-1002P **256.74**
12	290-100093 **217.18**	300-100093 **283.68**	3329-1202P **285.58**
15	290-100094 **349.64**	300-100094 **521.42**	3329-1502P **542.26**
18	290-100095 **584.00**	300-100095 **615.94**	3329-1802P **770.05**
21	290-100097 **730.02**	300-100097 **996.25**	3329-2102P **1133.41**

Coupling (Gasketed) (continued)



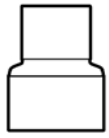
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
24	2929-2402 **1225.75**	3029-2402 **1326.19**	3329-2402P **1591.69**
27	2929-2702 **1412.60**	3029-2702 **1657.74**	3329-2702P **2073.12**

Reducer Coupling (Socket)



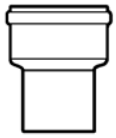
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6X2	2929-528 **62.74**	3029-528 **111.20**	---
6X2-1/2	---	3029-529 **92.82**	---
6X3	---	3029-530 **96.87**	---
6X4	2929-532 **36.24**	3029-532 **40.48**	3329-532P **43.17**
8X2	2929-578 **156.55**	---	---
8X2-1/2	---	3029-579 **161.92**	---
8X3	---	3029-580 **169.72**	---
8X4	2929-582 **103.05**	300-100927 **110.57**	3329-582P **128.64**
8X6	2929-585 **53.65**	300-100928 **62.58**	3329-585P **72.54**
10X2	2929-621 **185.06**	3029-621 **227.92**	---
10X2-1/2	---	3029-622 **187.26**	---
10X3	---	3029-623 **133.67**	---
10X4	2929-624 **141.76**	3029-624 **164.38**	3329-624P **180.64**
10X6	2929-626 **117.21**	300-100930 **128.77**	3329-626P **126.52**
10X8	2929-628 **73.69**	300-100931 **85.85**	3329-628P **160.42**
12X2	---	3029-661 **455.60**	---
12X2-1/2	---	3029-662 **311.31**	---
12X3	---	3029-663 **281.94**	---
12X4	2929-664 **203.46**	3029-664 **212.21**	3329-664P **309.44**
12X6	2929-666 **186.56**	300-100933 **198.77**	3329-666P **286.61**
12X8	2929-668 **130.00**	300-100934 **137.79**	3329-668P **250.87**
12X10	2929-670 **107.36**	300-100935 **123.91**	3329-670P **236.67**
15X2	2929-721 **464.68**	---	---
15X3	2929-723 **422.94**	3029-723 **487.43**	---
15X4	2929-724 **438.67**	3029-724 **469.40**	3329-724P **556.32**
15X6	2929-726 **414.73**	3029-726 **443.76**	3329-726P **482.86**
15X8	2929-728 **389.20**	3029-728 **420.35**	3329-728P **453.02**
15X10	2929-730 **268.53**	3029-730 **336.16**	3329-730P **365.64**
15X12	2929-732 **173.34**	300-100940 **199.97**	3329-732P **344.96**
18X4	2929-784 **853.66**	3029-784 **958.60**	3329-784P **1015.27**
18X6	2929-786 **889.07**	3029-786 **937.97**	3329-786P **994.15**
18X8	2929-788 **819.58**	3029-788 **868.76**	3329-788P **929.58**
18X10	2929-790 **527.42**	3029-790 **568.67**	3329-790P **642.64**

Reducer Coupling (Socket) (continued)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
18X12	2929-792 **517.04**	3029-792 **534.17**	3329-792P **605.64**
18X15	2929-795 **310.71**	300-100946 **364.38**	3329-795P **442.92**
21X3	2929-843 **1060.92**	---	---
21X4	2929-844 **1084.28**	3029-844 **1142.83**	3329-844P **1234.27**
21X6	2929-846 **1038.74**	3029-846 **1101.05**	3329-846P **1172.63**
21X8	2929-848 **866.92**	3029-848 **910.63**	3329-848P **934.56**
21X10	2929-850 **803.05**	3029-850 **848.03**	3329-850P **876.77**
21X12	2929-852 **808.61**	3029-852 **776.64**	3329-852P **823.25**
21X15	2929-855 **711.96**	3029-855 **754.59**	3329-855P **904.83**
21X18	2929-858 **428.55**	300-100960 **501.79**	3329-858P **629.44**
24X3	2929-903 **1684.06**	3029-903 **1016.94**	---
24X6	2929-906 **1719.93**	3029-906 **1834.22**	3329-906P **1999.29**
24X8	2929-908 **1631.80**	3029-908 **1711.24**	3329-908P **1804.79**
24X10	2929-910 **1553.34**	3029-910 **1637.21**	3329-910P **1758.00**
24X12	2929-912 **1359.62**	3029-912 **1440.82**	3329-912P **1538.79**
24X15	2929-915 **989.16**	3029-915 **1068.29**	3329-915P **1081.53**
24X18	2929-918 **938.59**	3029-918 **1004.28**	3329-918P **1072.17**
24X20	---	3029-920 **1380.34**	---
24X21	2929-921 **635.31**	300-100969 **738.60**	3329-921P **898.09**
27X6	2929-936 **2236.27**	3029-936 **2387.36**	3329-936P **2578.36**
27X8	2929-938 **2080.05**	3029-938 **2257.80**	3329-938P **2411.02**
27X10	2929-940 **1950.16**	3029-940 **2077.73**	3329-940P **2220.99**
27X12	2929-942 **1832.18**	3029-942 **1942.12**	3329-942P **2097.17**
27X15	2929-945 **1443.26**	3029-945 **1542.17**	3329-945P **1645.57**
27X18	2929-948 **1353.89**	3029-948 **1448.05**	3329-948P **1524.12**
27X21	2929-951 **1122.86**	3029-951 **1344.85**	3329-951P **1437.85**
27X24	2929-954 **873.35**	3029-954 **1089.17**	3329-954P **1358.20**
30X18	2929-978 **2702.25**	3029-978 **3375.63**	---
30X21	---	3029-981 **2847.40**	---
30X24	2929-984 **2022.41**	3029-984 **2539.97**	---
30X27	2929-987 **2006.92**	3029-987 **2160.51**	---

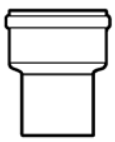
Reducer Coupling (Gasket x Spigot)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6X4	2929-53223 **87.36**	300-101310 **89.55**	3329-53223P **127.69**
8X4	2929-58223 **198.41**	300-100927 **110.57**	3329-58223P **247.40**
8X6	2929-58523 **105.15**	300-101312 **127.58**	3329-58523P **165.67**
10X4	2929-62423 **290.01**	3029-62423 **316.12**	3329-62423P **347.38**
10X6	2929-62623 **225.41**	300-100930 **128.77**	3329-62623P **282.65**

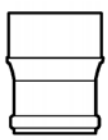
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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Reducer Coupling (Gasket x Spigot) (continued)



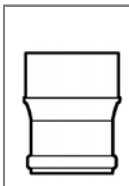
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
10X8	2929-62823 **171.39**	300-101315 **184.02**	3329-62823P **253.20**
12X4	2929-66423 **391.26**	3029-66423 **408.09**	3329-66423P **572.17**
12X6	2929-66623 **358.76**	300-100933 **198.77**	3329-66623P **551.16**
12X8	2929-66823 **249.99**	300-100934 **137.79**	3329-66823P **482.45**
12X10	2929-67023 **240.05**	300-101319 **269.93**	3329-67023P **329.66**
15X4	2929-72423 **843.62**	3029-72423 **902.68**	3329-72423P **1138.13**
15X6	2929-72623 **797.55**	3029-72623 **853.38**	3329-72623P **872.87**
15X8	2929-72823 **748.47**	3029-72823 **808.37**	3329-72823P **858.23**
15X10	2929-73023 **516.38**	3029-73023 **646.46**	3329-73023P **749.65**
15X12	2929-73223 **412.58**	300-101324 **449.05**	3329-73223P **579.58**
18X4	2929-78423 **1746.44**	3029-78423 **1843.46**	3329-78423P **1952.44**
18X6	2929-78623 **1709.75**	3029-78623 **1803.79**	3329-78623P **1911.80**
18X8	2929-78823 **1575.99**	3029-78823 **1670.67**	3329-78823P **1787.64**
18X10	2929-79023 **1014.26**	3029-79023 **1093.62**	3329-79023P **1235.85**
18X12	2929-79223 **994.33**	3029-79223 **1027.24**	3329-79223P **1164.69**
18X15	2929-79523 **726.66**	300-101330 **853.97**	3329-79523P **885.82**
21X6	2929-84623 **1997.56**	3029-84623 **2117.48**	3329-84623P **2255.06**
21X8	2929-84823 **1733.84**	3029-84823 **1750.52**	3329-84823P **1797.23**
21X10	2929-85023 **1544.35**	3029-85023 **1630.82**	3329-85023P **1686.08**
21X12	2929-85223 **1436.22**	3029-85223 **1493.54**	3329-85223P **1583.17**
21X15	2929-85523 **1369.15**	3029-85523 **1451.15**	3329-85523P **1541.57**
21X18	2929-85823 **1076.09**	300-101344 **1364.54**	3329-85823P **1455.14**
24X6	2929-90623 **3307.55**	3029-90623 **3527.34**	3329-90623P **3844.22**
24X8	2929-90823 **3138.08**	3029-90823 **3290.84**	3329-90823P **3470.75**
24X10	2929-91023 **2987.18**	3029-91023 **3147.78**	3329-91023P **3380.76**
24X12	2929-91223 **2614.64**	3029-91223 **2769.77**	3329-91223P **2959.20**
24X15	2929-91523 **1902.23**	3029-91523 **2054.42**	3329-91523P **2689.13**
24X18	2929-91823 **1804.97**	3029-91823 **2026.63**	3329-91823P **2559.72**
24X21	2929-92123 **1605.79**	3029-92123 **1992.56**	3329-92123P **2440.59**
27X6	2929-93623 **4300.52**	3029-93623 **4591.08**	3329-93623P **4957.64**
27X8	2929-93823 **3999.88**	3029-93823 **4341.37**	3329-93823P **4634.60**
27X10	2929-94023 **3750.31**	3029-94023 **4007.35**	3329-94023P **4270.36**
27X12	2929-94223 **3521.21**	3029-94223 **3734.26**	3329-94223P **4032.09**
27X15	2929-94523 **2774.36**	3029-94523 **2964.51**	3329-94523P **3521.21**
27X18	2929-94823 **2595.66**	3029-94823 **2783.52**	3329-94823P **3405.93**
27X21	2929-95123 **2295.54**	3029-95123 **2584.20**	3329-95123P **3358.55**
27X24	2929-95423 **2247.96**	3029-95423 **2826.59**	3329-95423P **3323.27**

Reducer Coupling (Spigot x Gasket)



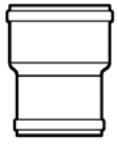
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6X4	2929-53232 **83.20**	300-101383 **86.25**	3329-53232P **110.99**
8X4	2929-58232 **190.48**	3029-58232 **204.15**	3329-58232P **237.51**
8X6	2929-58532 **100.95**	300-101385 **120.20**	3329-58532P **128.27**
10X4	2929-62432 **278.41**	3029-62432 **303.47**	3329-62432P **333.49**
10X6	2929-62632 **216.38**	3029-62632 **237.74**	3329-62632P **271.36**
10X8	2929-62832 **158.63**	300-101388 **179.34**	3329-62832P **229.05**
12X4	2929-66432 **375.62**	3029-66432 **391.77**	3329-66432P **549.28**
12X6	2929-66632 **344.40**	3029-66632 **366.97**	3329-66632P **529.11**
12X8	2929-66832 **240.00**	3029-66832 **277.26**	3329-66832P **463.05**
12X10	2929-67032 **229.49**	300-101392 **254.00**	3329-67032P **323.96**
15X4	2929-72432 **809.86**	3029-72432 **866.57**	3329-72432P **1092.61**
15X6	2929-72632 **765.64**	3029-72632 **819.26**	3329-72632P **891.44**
15X8	2929-72832 **718.55**	3029-72832 **776.03**	3329-72832P **823.89**
15X10	2929-73032 **495.62**	3029-73032 **620.59**	3329-73032P **719.66**
15X12	2929-73232 **337.00**	300-101397 **392.63**	3329-73232P **557.00**
18X4	2929-78432 **1676.59**	3029-78432 **1769.72**	3329-78432P **1874.35**
18X6	2929-78632 **1641.35**	3029-78632 **1731.62**	3329-78632P **1835.34**
18X8	2929-78832 **1512.95**	3029-78832 **1603.84**	3329-78832P **1716.14**
18X10	2929-79032 **973.45**	3029-79032 **1049.86**	3329-79032P **1186.42**
18X12	2929-79232 **954.54**	3029-79232 **986.16**	3329-79232P **1118.11**
18X15	2929-79532 **660.74**	300-101403 **759.46**	3329-79532P **852.76**
21X6	2929-84632 **1917.66**	3029-84632 **2032.79**	3329-84632P **2164.85**
21X8	2929-84832 **1664.48**	3029-84832 **1680.49**	3329-84832P **1773.22**
21X10	2929-85032 **1458.75**	3029-85032 **1565.58**	3329-85032P **1618.64**
21X12	2929-85232 **1378.79**	3029-85232 **1433.80**	3329-85232P **1518.66**
21X15	2929-85532 **1314.38**	3029-85532 **1392.96**	3329-85532P **1479.87**
21X18	2929-85832 **1015.26**	300-101417 **1144.72**	3329-85832P **1328.80**
24X6	2929-90632 **3175.24**	3029-90632 **3386.24**	3329-90632P **3690.55**
24X8	2929-90832 **3012.56**	3029-90832 **3159.20**	3329-90832P **3331.92**
24X10	2929-91032 **2867.69**	3029-91032 **3021.87**	3329-91032P **3245.66**
24X12	2929-91232 **2510.31**	3029-91232 **2658.98**	3329-91232P **2840.82**
24X15	2929-91532 **1826.41**	3029-91532 **1973.86**	3329-91532P **2581.57**
24X18	2929-91832 **1732.77**	3029-91832 **1945.56**	3329-91832P **2456.55**
24X21	2929-92132 **1580.17**	3029-92132 **1902.99**	3329-92132P **2116.43**
27X6	2929-93632 **4128.48**	3029-93632 **4407.61**	3329-93632P **4759.34**
27X8	2929-93832 **3839.89**	3029-93832 **4167.44**	3329-93832P **4445.21**
27X10	2929-94032 **3600.20**	3029-94032 **3847.06**	3329-94032P **4099.54**

Reducer Coupling (Spigot x Gasket) (continued)



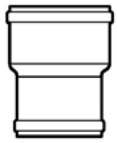
Size	80 PSI Disc Code: 310 Part Number / Price Each	100 PSI Disc Code: 320 Part Number / Price Each	125 PSI Disc Code: 330 Part Number / Price Each
27X12	2929-94232 **3380.36**	3029-94232 **3584.91**	3329-94232P **3870.82**
27X15	2929-94532 **2663.56**	3029-94532 **2845.92**	3329-94532P **3379.47**
27X18	2929-94832 **2491.83**	3029-94832 **2672.18**	3329-94832P **3269.68**
27X21	2929-95132 **2203.71**	3029-95132 **2480.83**	3329-95132P **3030.51**
27X24	2929-95432 **2208.33**	3029-95432 **2644.97**	3329-95432P **3189.63**

Reducer Coupling (Gasketed)



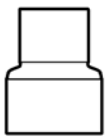
Size	80 PSI Disc Code: 310 Part Number / Price Each	100 PSI Disc Code: 320 Part Number / Price Each	125 PSI Disc Code: 330 Part Number / Price Each
6X4	2929-5322 **101.18**	300-101456 **120.20**	3329-5322P **152.82**
8X4	2929-5822 **226.66**	3029-5822 **242.94**	3329-5822P **282.62**
8X6	2929-5852 **127.97**	300-101458 **158.24**	3329-5852P **196.69**
10X4	2929-6242 **331.29**	3029-6242 **361.13**	3329-6242P **395.51**
10X6	2929-6262 **257.91**	3029-6262 **282.92**	3329-6262P **322.93**
10X8	2929-6282 **224.53**	300-101461 **254.00**	3329-6282P **317.47**
12X4	2929-6642 **446.99**	3029-6642 **466.41**	3329-6642P **653.65**
12X6	2929-6662 **409.84**	3029-6662 **436.69**	3329-6662P **629.64**
12X8	2929-6682 **334.02**	3029-6682 **389.87**	3329-6682P **551.03**
12X10	2929-6702 **301.62**	300-101465 **348.45**	3329-6702P **438.95**
15X4	2929-7242 **964.94**	3029-7242 **1031.35**	3329-7242P **1300.27**
15X6	2929-7262 **911.12**	3029-7262 **974.92**	3329-7262P **1061.81**
15X8	2929-7282 **855.06**	3029-7282 **923.48**	3329-7282P **980.43**
15X10	2929-7302 **589.69**	3029-7302 **719.88**	3329-7302P **856.41**
15X12	2929-7322 **444.96**	300-101470 **506.71**	3329-7322P **633.08**
18X4	2929-7842 **1994.62**	3029-7842 **2105.94**	3329-7842P **2229.96**
18X6	2929-7862 **1953.20**	3029-7862 **2060.64**	3329-7862P **2184.05**
18X8	2929-7882 **1800.41**	3029-7882 **1908.58**	3329-7882P **2042.23**
18X10	2929-7902 **1158.40**	3029-7902 **1249.34**	3329-7902P **1411.83**
18X12	2929-7922 **1135.85**	3029-7922 **1173.53**	3329-7922P **1331.17**
18X15	2929-7952 **794.96**	300-101476 **885.82**	3329-7952P **1012.20**
21X6	2929-8462 **2281.98**	3029-8462 **2419.01**	3329-8462P **2576.17**
21X8	2929-8482 **1980.74**	3029-8482 **1998.88**	3329-8482P **2109.45**
21X10	2929-8502 **1735.92**	3029-8502 **1862.79**	3329-8502P **1926.59**
21X12	2929-8522 **1640.77**	3029-8522 **1706.22**	3329-8522P **1807.51**
21X15	2929-8552 **1563.66**	3029-8552 **1657.22**	3329-8552P **1760.72**
21X18	2929-8582 **1301.41**	300-101489 **1392.60**	3329-8582P **1549.64**
24X6	2929-9062 **3778.03**	3029-9062 **4030.37**	3329-9062P **4390.45**
24X8	2929-9082 **3585.23**	3029-9082 **3759.45**	3329-9082P **3964.98**
24X10	2929-9102 **3412.27**	3029-9102 **3595.15**	3329-9102P **3861.67**
24X12	2929-9122 **2986.98**	3029-9122 **3164.19**	3329-9122P **3381.08**

Reducer Coupling (Gasketed) (continued)



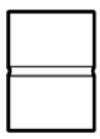
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24X15	2929-9152 **2173.25**	3029-9152 **2348.89**	3329-9152P **3072.04**
24X18	2929-9182 **2122.01**	3029-9182 **2315.02**	3329-9182P **2923.18**
24X21	2929-9212 **2097.08**	3029-9212 **2289.48**	3329-9212P **2902.71**
27X6	2929-9362 **4913.56**	3029-9362 **5202.76**	3329-9362P **5663.49**
27X8	2929-9382 **4570.49**	3029-9382 **4958.93**	3329-9382P **5289.24**
27X10	2929-9402 **4284.12**	3029-9402 **4577.58**	3329-9402P **4878.12**
27X12	2929-9422 **4021.82**	3029-9422 **4265.69**	3329-9422P **4605.94**
27X15	2929-9452 **3169.85**	3029-9452 **3385.34**	3329-9452P **4020.45**
27X18	2929-9482 **2964.31**	3029-9482 **3179.78**	3329-9482P **3890.02**
27X21	2929-9512 **2741.77**	3029-9512 **3070.28**	3329-9512P **3836.15**
27X24	2929-9542 **2644.95**	3029-9542 **2935.37**	3329-9542P **3740.96**

PIP X IPS Reducer (Socket)



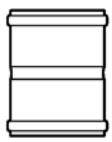
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6X4	2929-532 **36.24**	---	---
8X6	---	300-101537 **47.82**	---
10X6	---	3029-626PXI **147.37**	---
10X8	---	300-101538 **108.75**	---
12X10	---	300-101539 **131.24**	---
15X10	---	300-101541 **331.26**	---
15X12	---	300-101540 **225.75**	---

IPS X PIP Adapter (Socket)



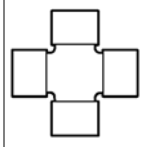
Size			
6	---	300-101649 **39.23**	---
8	---	300-101650 **56.39**	---
10	---	300-101651 **94.48**	---
12	---	300-101652 **147.18**	---

IPS X PIP Adapter (Gasketed)



Size			
6	---	300-101747 **95.66**	---
8	---	300-101748 **156.15**	---
10	---	300-101749 **224.58**	---
12	---	300-101750 **316.54**	---

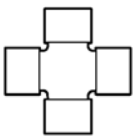
Cross (Socket)



Size			
6	290-103286 **101.82**	300-103286 **141.09**	3320-060P **175.58**
6X2	290-103283 **77.27**	300-103283 **89.55**	3320-528P **109.28**
6X3	290-103284 **84.66**	300-103284 **100.59**	3320-530P **118.02**
6X4	290-103285 **92.00**	300-103285 **107.94**	3320-532P **124.01**
8	290-103291 **172.97**	300-103291 **206.12**	3320-080P **254.14**
8X2	290-103287 **95.66**	300-103287 **115.28**	3320-578P **132.56**
8X3	290-103288 **104.24**	300-103288 **126.35**	3320-580P **148.58**
8X4	290-103289 **111.63**	300-103289 **134.95**	3320-582P **168.12**

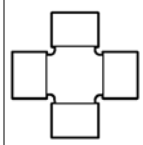
NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Cross (Socket) (continued)



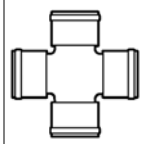
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8X6	290-103290 **130.04**	300-103290 **155.83**	3320-585P **192.71**
10	290-103297 **293.21**	300-103297 **354.58**	3320-100P **411.99**
10X2	290-103292 **147.18**	300-103292 **153.36**	3320-621P **171.88**
10X3	290-103293 **158.24**	300-103293 **179.06**	3320-623P **194.53**
10X4	290-103294 **176.69**	300-103294 **191.37**	3320-624P **236.41**
10X6	290-103295 **199.97**	300-103295 **214.68**	3320-626P **264.92**
10X8	290-103296 **234.31**	300-103296 **261.29**	3320-628P **323.76**
12	290-103304 **455.16**	300-103304 **536.17**	3320-120P **662.04**
12X2	290-103298 **220.85**	300-103298 **225.75**	3320-661P **285.98**
12X3	290-103299 **244.14**	300-103299 **246.62**	3320-663P **311.48**
12X4	290-103300 **249.05**	300-103300 **269.93**	3320-664P **333.67**
12X6	290-103301 **267.44**	300-103301 **296.92**	3320-666P **367.91**
12X8	290-103302 **311.61**	300-103302 **345.99**	3320-668P **378.88**
12X10	290-103303 **366.82**	300-103303 **417.15**	3320-670P **514.80**
15	290-103321 **761.92**	300-103321 **923.86**	3320-150P **1177.87**
15X2	290-103313 **311.61**	300-103313 **352.11**	3320-721P **411.01**
15X3	290-103314 **316.54**	300-103314 **373.00**	3320-723P **449.05**
15X4	290-103315 **331.26**	300-103315 **381.59**	3320-724P **466.20**
15X6	290-103316 **364.38**	300-103316 **422.05**	3320-726P **483.40**
15X8	290-103317 **430.69**	300-103317 **483.40**	3320-728P **660.09**
15X10	290-103318 **498.12**	300-103318 **601.16**	3320-730P **799.95**
15X12	290-103319 **586.47**	300-103319 **703.03**	3320-732P **914.01**
18	290-103342 **1318.97**	300-103342 **1494.43**	3320-180P **1904.21**
18X2	290-103332 **466.20**	300-103332 **545.97**	3320-781P **711.58**
18X3	290-103333 **478.49**	300-103333 **571.75**	3320-783P **750.88**
18X4	290-103334 **495.68**	300-103334 **584.00**	3320-784P **797.46**
18X6	290-103335 **531.23**	300-103335 **630.63**	3320-786P **879.68**
18X8	290-103336 **588.91**	300-103336 **689.54**	3320-788P **996.25**
18X10	290-103337 **650.25**	300-103337 **747.17**	3320-790P **1143.51**
18X12	290-103338 **759.46**	300-103338 **923.86**	3320-792P **1295.65**
18X15	290-103340 **920.20**	300-103340 **1201.20**	3320-795P **1538.60**
21	290-103367 **1947.19**	300-103367 **2461.23**	3320-210P **2929.97**
21X2	290-103355 **711.58**	300-103355 **907.92**	3320-841P **932.46**
21X3	290-103356 **742.28**	300-103356 **956.99**	3320-843P **1055.17**
21X4	290-103357 **785.22**	300-103357 **996.25**	3320-844P **1177.87**
21X6	290-103358 **835.49**	300-103358 **1055.17**	3320-846P **1272.29**
21X8	290-103359 **903.01**	300-103359 **1143.51**	3320-848P **1406.08**

Cross (Socket) (continued)



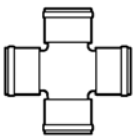
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21X10	290-103360 **976.61**	300-103360 **1260.05**	3320-850P **1553.32**
21X12	290-103361 **1093.20**	300-103361 **1406.08**	3320-852P **1728.78**
21X15	290-103363 **1253.93**	300-103363 **1640.42**	3320-855P **1992.56**
21X18	290-103365 **1502.99**	300-103365 **1963.12**	3320-858P **2431.81**
24	290-103381 **2783.93**	300-103381 **3280.85**	3320-240P **4511.54**
24X2	290-103368 **981.54**	300-103368 **1177.87**	3320-901P **1226.94**
24X3	290-103369 **1030.59**	300-103369 **1226.94**	3320-903P **1282.16**
24X4	290-103370 **1093.20**	300-103370 **1289.53**	3320-904P **1348.39**
24X6	290-103371 **1186.43**	300-103371 **1374.16**	3320-906P **1435.54**
24X8	290-103372 **1260.05**	300-103372 **1494.43**	3320-908P **1582.75**
24X10	290-103373 **1348.39**	300-103373 **1612.21**	3320-910P **1758.20**
24X12	290-103374 **1464.93**	300-103374 **1787.67**	3320-912P **1933.69**
24X15	290-103376 **1758.20**	300-103376 **2022.00**	3320-915P **2197.47**
24X18	290-103378 **1992.56**	300-103378 **2343.47**	3320-918P **2636.73**
24X21	290-103380 **2372.92**	300-103380 **2783.93**	3320-921P **3193.74**
27	2920-270 **4215.02**	3020-270 **4967.07**	3320-270P **6456.02**
27X4	2920-934 **1246.62**	3020-934 **1561.47**	3320-934P **2029.38**
27X6	2920-936 **1438.81**	3020-936 **1666.69**	3320-936P **2168.18**
27X8	2920-938 **1527.60**	3020-938 **1811.69**	3320-938P **2355.95**
27X10	2920-940 **1632.80**	3020-940 **1953.22**	3320-940P **2539.85**
27X12	2920-942 **1774.16**	3020-942 **2165.78**	3320-942P **2815.11**
27X15	2920-945 **2129.36**	3020-945 **2449.77**	3320-945P **3184.38**
27X18	2920-948 **2412.35**	3020-948 **2839.00**	3320-948P **3675.84**
27X21	2920-951 **2875.19**	3020-951 **3371.97**	3320-951P **4385.44**
27X24	2920-954 **3371.93**	3020-954 **3973.74**	3320-954P **5164.61**

Cross (Gasketed)



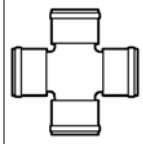
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6	290-104001 **245.32**	300-104001 **252.69**	3320-0602P **303.23**
6X4	290-104000 **227.32**	300-104000 **233.13**	3320-5322P **260.82**
8	290-104006 **343.53**	300-104006 **364.38**	3320-0802P **438.25**
8X4	290-104004 **273.45**	300-104004 **282.15**	3320-5822P **352.88**
8X6	290-104005 **311.24**	300-104005 **318.99**	3320-5852P **379.64**
10	290-104012 **510.38**	300-104012 **512.84**	3320-1002P **604.24**
10X4	290-104009 **364.06**	300-104009 **368.07**	3320-6242P **433.96**
10X6	290-104010 **398.72**	300-104010 **411.01**	3320-6262P **458.31**
10X8	290-104011 **427.60**	300-104011 **460.11**	3320-6282P **515.01**
12	290-104019 **732.51**	300-104019 **761.92**	3320-1202P **916.42**
12X4	290-104015 **441.69**	300-104015 **472.38**	3320-6642P **600.67**

Cross (Gasketed) (continued)



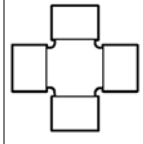
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12X6	290-104016 **478.49**	300-104016 **515.27**	3320-6662P **639.71**
12X8	290-104017 **539.85**	300-104017 **588.91**	3320-6682P **656.60**
12X10	290-104018 **625.72**	300-104018 **662.58**	3320-6702P **777.35**
15	290-104036 **1143.51**	300-104036 **1318.97**	3320-1502P **1656.36**
15X4	290-104030 **662.58**	300-104030 **834.32**	3320-7242P **886.45**
15X6	290-104031 **711.58**	300-104031 **889.52**	3320-7262P **923.18**
15X8	290-104032 **797.46**	300-104032 **950.86**	3320-7282P **981.54**
15X10	290-104033 **920.20**	300-104033 **1042.91**	3320-7302P **1104.26**
15X12	290-104034 **977.92**	300-104034 **1165.60**	3320-7322P **1318.97**
18	290-104057 **1758.20**	300-104057 **1992.56**	3320-1802P **2515.26**
18X4	290-104049 **981.54**	300-104049 **1104.26**	3320-7842P **1128.76**
18X6	290-104050 **1067.42**	300-104050 **1226.94**	3320-7862P **1282.45**
18X8	290-104051 **1202.40**	300-104051 **1349.63**	3320-7882P **1368.99**
18X10	290-104052 **1288.28**	300-104052 **1472.36**	3320-7902P **1524.79**
18X12	290-104053 **1411.01**	300-104053 **1595.01**	3320-7922P **1668.69**
18X15	2920-7952 **1614.22**	3020-7952 **1814.67**	3320-7952P **2143.55**
21	290-104082 **2910.36**	300-104082 **3875.43**	3320-2102P **4101.00**
21X4	290-104072 **1570.49**	300-104072 **2657.15**	3320-8442P **3147.16**
21X6	290-104073 **1680.88**	300-104073 **2760.37**	3320-8462P **3212.73**
21X8	290-104074 **1840.40**	300-104074 **2879.75**	3320-8482P **3356.98**
21X10	290-104075 **2024.46**	300-104075 **3045.68**	3320-8502P **3435.63**
21X12	290-104076 **2269.87**	300-104076 **3212.21**	3320-8522P **3593.00**
21X15	290-104078 **2515.26**	300-104078 **3359.35**	3320-8552P **3615.11**
21X18	290-104080 **2699.29**	300-104080 **3709.48**	3320-8582P **3804.26**
24	2920-2402 **5516.67**	3020-2402 **6595.12**	3320-2402P **8222.40**
24X4	2920-9042 **2877.74**	3020-9042 **3199.51**	3320-9042P **3998.76**
24X6	2920-9062 **2889.88**	3020-9062 **3230.39**	3320-9062P **4014.24**
24X8	2920-9082 **3120.58**	3020-9082 **3468.63**	3320-9082P **4334.80**
24X10	2920-9102 **3377.53**	3020-9102 **3751.98**	3320-9102P **4688.87**
24X12	2920-9122 **3634.61**	3020-9122 **4037.34**	3320-9122P **5045.31**
24X15	2920-9152 **4211.38**	3020-9152 **4678.82**	3320-9152P **5848.73**
24X18	2920-9182 **4652.59**	3020-9182 **5168.58**	3320-9182P **6461.76**
24X21	2920-9212 **5350.72**	3020-9212 **5945.69**	3320-9212P **7431.11**
27	2920-2702 **7673.88**	3020-2702 **11029.28**	3320-2702P **13751.19**
27X4	2920-9342 **3382.29**	3020-9342 **4000.89**	3320-9342P **4998.58**
27X6	2920-9362 **3630.57**	3020-9362 **4016.54**	3320-9362P **5071.82**
27X8	2920-9382 **3891.62**	3020-9382 **4336.81**	3320-9382P **5421.37**

Cross (Gasketed) (continued)



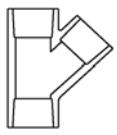
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27X10	2920-9402 **4221.51**	3020-9402 **4688.98**	3320-9402P **5862.76**
27X12	2920-9422 **4543.27**	3020-9422 **5049.19**	3320-9422P **6310.13**
27X15	2920-9452 **5263.71**	3020-9452 **5848.56**	3320-9452P **7311.73**
27X18	2920-9482 **5816.17**	3020-9482 **6461.76**	3320-9482P **8075.85**
27X21	2920-9512 **6688.39**	3020-9512 **7431.11**	3320-9512P **9290.89**
27X24	2920-9542 **7240.95**	3020-9542 **8222.56**	3320-9542P **10278.47**

PIP X IPS Cross (Socket)



	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6	2920-060PXI **101.82**	3020-060PXI **141.09**	3320-060PXI **175.58**
8	2920-080PXI **172.97**	3020-080PXI **206.12**	3320-080PXI **254.14**
8X6	2920-585PXI **122.24**	3020-585PXI **155.83**	3320-585PXI **192.71**
10	2920-100PXI **293.21**	3020-100PXI **354.58**	3320-100PXI **411.99**
10X6	2920-626PXI **187.97**	300-103700 **214.68**	3320-626PXI **249.02**
10X8	2920-628PXI **220.24**	3020-628PXI **291.83**	3320-628PXI **304.34**
12	2920-120PXI **455.16**	3020-120PXI **536.17**	3320-120PXI **662.04**
12X6	2920-666PXI **267.44**	3020-666PXI **296.92**	3320-666PXI **345.83**
12X8	2920-668PXI **311.61**	3020-668PXI **345.99**	3320-668PXI **729.43**
12X10	2920-670PXI **344.81**	3020-670PXI **417.15**	3320-670PXI **483.92**
15X6	2920-726PXI **342.52**	3020-726PXI **422.05**	3320-726PXI **454.40**
15X8	2920-728PXI **404.85**	3020-728PXI **483.40**	3320-728PXI **620.48**
15X10	2920-730PXI **468.23**	3020-730PXI **601.16**	3320-730PXI **751.95**
15X12	2920-732PXI **551.28**	3020-732PXI **703.03**	3320-732PXI **859.17**
18X6	2920-786PXI **531.23**	3020-786PXI **630.63**	3320-786PXI **879.68**
18X8	2920-788PXI **553.57**	3020-788PXI **689.54**	3320-788PXI **936.47**
18X10	2920-790PXI **650.25**	3020-790PXI **747.17**	3320-790PXI **1074.89**
18X12	2920-792PXI **759.46**	3020-792PXI **923.86**	3320-792PXI **1217.92**
21X6	2920-846PXI **875.21**	3020-846PXI **1055.17**	3320-846PXI **1195.96**
21X8	2920-848PXI **903.01**	3020-848PXI **1143.51**	3320-848PXI **1321.72**
21X10	2920-850PXI **976.61**	3020-850PXI **1260.05**	3320-850PXI **1460.12**
21X12	2920-852PXI **1027.61**	3020-852PXI **1406.08**	3320-852PXI **1625.05**
24X6	2920-906PXI **1186.43**	3020-906PXI **1374.16**	3320-906PXI **1349.40**
24X8	2920-908PXI **1260.05**	3020-908PXI **1494.43**	3320-908PXI **1487.78**
24X10	2920-910PXI **1348.39**	3020-910PXI **1612.21**	3320-910PXI **1652.71**
24X12	2920-912PXI **1464.93**	3020-912PXI **1787.67**	3320-912PXI **1817.67**

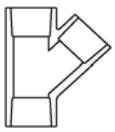
Wyes (Socket)



6	2975-060 **193.72**	---	---
6X4	2975-532 **108.97**	---	---
8	2975-080 **205.64**	---	---
8X4	2975-582 **178.48**	---	---

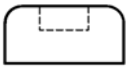
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Wyes (Socket) (continued)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
8X6	2975-585 **290.84**	---	---
10	2975-100 **323.82**	---	---
10X4	2975-624 **198.36**	---	---
10X6	2975-626 **208.63**	---	---
10X8	2975-628 **266.78**	---	---
12	2975-120 **463.55**	---	---
12X4	2975-664 **235.29**	---	---
12X6	2975-666 **257.32**	---	---
12X8	2975-668 **290.76**	---	---
12X10	2975-670 **310.29**	---	---
15	2975-150 **928.65**	---	---
15X4	2975-724 **373.21**	---	---
15X6	2975-726 **399.42**	---	---
15X8	2975-728 **483.19**	---	---
15X10	2975-730 **519.02**	---	---
15X12	2975-732 **717.49**	---	---
18	2975-187 **1356.41**	---	---
18X4	2975-784 **585.98**	---	---
18X6	2975-786 **621.27**	---	---
18X8	2975-788 **686.02**	---	---
18X10	2975-790 **715.55**	---	---
18X12	2975-792 **938.63**	---	---
18X15	2975-795 **1176.62**	---	---

Surface Reducer (Socket)



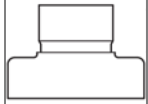
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6X2	---	300-102013 **49.05**	---
6X3	---	300-102015 **49.05**	---
8X2	---	300-102018 **92.00**	---
8X3	---	300-102020 **92.00**	---
8X4	---	300-102021 **92.00**	---
10X2	---	300-102024 **116.59**	---
10X3	---	300-102026 **116.59**	---
10X4	---	300-102027 **116.59**	---
10X6	---	300-102028 **116.59**	---
12X2	---	300-102031 **171.75**	---
12X3	---	300-102033 **171.75**	---
12X4	---	300-102034 **171.75**	---
12X6	---	300-102035 **171.75**	---

Surface Reducer (Socket) (continued)



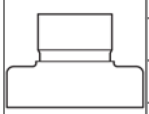
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
12X8	---	300-102036 **171.75**	---
15X2	---	300-102048 **312.75**	---
15X3	---	300-102050 **312.75**	---
15X4	---	300-102051 **312.75**	---
15X6	---	300-102052 **312.75**	---
15X8	---	300-102053 **312.75**	---
15X10	---	300-102054 **312.75**	---
18X2	---	300-102067 **472.38**	---
18X3	---	300-102069 **472.38**	---
18X4	---	300-102070 **472.38**	---
18X6	---	300-102071 **472.38**	---
18X8	---	300-102072 **472.38**	---
18X10	---	300-102073 **472.38**	---
18X12	---	300-102074 **472.38**	---
21X2	---	300-102088 **779.13**	---
21X3	---	300-102089 **779.13**	---
21X4	---	300-102090 **779.13**	---
21X6	---	300-102091 **779.13**	---
21X8	---	300-102092 **779.13**	---
21X10	---	300-102093 **779.13**	---
21X12	---	300-102094 **779.13**	---
21X15	---	300-102095 **779.13**	---

Stub Surface Reducer (Socket)



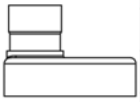
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6X4	---	30040-532 **120.85**	---
8X4	---	30040-582 **138.64**	---
8X6	---	30040-585 **148.02**	---
10X4	---	30040-624 **157.51**	---
10X6	---	30040-626 **166.36**	---
10X8	---	30040-628 **174.94**	---
12X4	---	30040-664 **177.31**	---
12X6	---	30040-666 **180.89**	---
12X8	---	30040-668 **208.49**	---
12X10	---	30040-670 **240.16**	---
15X4	---	30040-724 **290.84**	---
15X6	---	30040-726 **304.26**	---
15X8	---	30040-728 **319.22**	---
15X10	---	30040-730 **352.28**	---

Stub Surface Reducer (Socket) (continued)



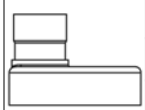
Size	80 PSI Disc Code: 310 Part Number Price Each		100 PSI Disc Code: 320 Part Number Price Each		125 PSI Disc Code: 330 Part Number Price Each	
15X12	---		30040-732	363.27	---	
18X4	---		30040-784	695.20	---	
18X6	---		30040-786	715.28	---	
18X8	---		30040-788	730.60	---	
18X10	---		30040-790	757.43	---	
18X12	---		30040-792	778.33	---	
18X15	---		30040-795	891.63	---	
21X4	---		30040-844	964.83	---	
21X6	---		30040-846	974.55	---	
21X8	---		30040-848	1001.13	---	
21X10	---		30040-850	1034.19	---	
21X12	---		30040-852	1047.96	---	
21X15	---		30040-855	1161.64	---	
21X18	---		30040-858	1282.81	---	
24X4	---		30040-904	1089.32	---	
24X6	---		30040-906	1096.77	---	
24X8	---		30040-908	1124.53	---	
24X10	---		30040-910	1157.58	---	
24X12	---		30040-912	1172.25	---	
24X15	---		30040-915	1286.03	---	
24X18	---		30040-918	1407.25	---	
24X21	---		30040-921	1669.24	---	

Eccentric Stub Surface Reducer (Socket)



Size	80 PSI Disc Code: 310 Part Number Price Each		100 PSI Disc Code: 320 Part Number Price Each		125 PSI Disc Code: 330 Part Number Price Each	
6X2	---		3040-528E	81.44	---	
6X3	---		3040-530E	82.08	---	
6X4	---		3040-532E	85.06	---	
8X2	---		3040-578E	105.57	---	
8X3	---		3040-580E	106.75	---	
8X4	---		3040-582E	108.63	---	
8X6	---		3040-585E	119.84	---	
10X2	---		3040-621E	127.58	---	
10X3	---		3040-623E	133.47	---	
10X4	---		3040-624E	142.20	---	
10X6	---		3040-626E	146.48	---	
10X8	---		3040-628E	165.98	---	
12X2	---		3040-661E	180.34	---	
12X4	---		3040-664E	212.21	---	

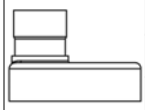
Eccentric Stub Surface Reducer (Socket) (continued)



Size	80 PSI Disc Code: 310 Part Number Price Each		100 PSI Disc Code: 320 Part Number Price Each		125 PSI Disc Code: 330 Part Number Price Each	
12X6	---		3040-666E	221.77	---	
12X8	---		3040-668E	227.31	---	
15X2	---		3040-721E	193.41	---	
15X3	---		3040-723E	220.98	---	
15X4	---		3040-724E	228.27	---	
15X6	---		3040-726E	232.98	---	
15X8	---		3040-728E	252.47	---	
15X10	---		3040-730E	277.29	---	
15X12	---		3040-732E	310.62	---	
18X2	---		3040-781E	448.98	---	
18X3	---		3040-783E	453.17	---	
18X4	---		3040-784E	457.53	---	
18X6	---		3040-786E	465.19	---	
18X8	---		3040-788E	484.71	---	
18X10	---		3040-790E	504.68	---	
18X12	---		3040-792E	538.03	---	
18X15	---		3040-795E	601.58	---	
21X2	---		3040-841E	558.24	---	
21X3	---		3040-843E	563.05	---	
21X4	---		3040-844E	566.21	---	
21X6	---		3040-846E	573.87	---	
21X8	---		3040-848E	593.38	---	
21X10	---		3040-850E	613.39	---	
21X12	---		3040-852E	646.73	---	
21X15	---		3040-855E	710.28	---	
21X18.701	---		3040-858E	788.99	---	
24X2	---		3040-901E	895.24	---	
24X3	---		3040-903E	902.05	---	
24X6	---		3040-906E	1045.25	---	
24X8	---		3040-908E	1064.77	---	
24X10	---		3040-910E	1084.77	---	
24X12	---		3040-912E	1118.08	---	
24X15	---		3040-915E	1171.69	---	
24X18	---		3040-918E	1260.38	---	
24X21	---		3040-921E	1392.98	---	
27X3	---		3040-933E	1642.45	---	
27X4	---		3040-934E	1643.67	---	

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Eccentric Stub Surface Reducer (Socket) (continued)



Size	80 PSI Disc Code: 310 Part Number / Price Each		100 PSI Disc Code: 320 Part Number / Price Each		125 PSI Disc Code: 330 Part Number / Price Each	
27X6	---		3040-936E	**1654.46**	---	
27X8	---		3040-938E	**1673.98**	---	
27X10	---		3040-940E	**1693.96**	---	
27X12	---		3040-942E	**1727.31**	---	
27X15	---		3040-945E	**1780.88**	---	
27X18	---		3040-948E	**1869.58**	---	
27X21	---		3040-951E	**2002.20**	---	
27X24	---		3040-954E	**4354.15**	---	
30X18	---		3040-978E	**2850.04**	---	

Cap (Socket)



Size	80 PSI Disc Code: 310 Part Number / Price Each		100 PSI Disc Code: 320 Part Number / Price Each		125 PSI Disc Code: 330 Part Number / Price Each	
6	---		300-107540	**49.05**	---	
8	---		300-107541	**62.58**	---	
10	---		300-107542	**100.59**	---	
12	---		300-107543	**132.48**	---	
15	---		300-107545	**215.91**	---	
18	---		300-107547	**421.81**	---	
21	---		300-107549	**645.34**	---	
24	---		300-107550	**882.46**	---	
27	---		3047-270	**1107.38**	---	
30	---		3047-300	**2705.66**	---	

Saddle (Socket)



Size	80 PSI Disc Code: 310 Part Number / Price Each		100 PSI Disc Code: 320 Part Number / Price Each		125 PSI Disc Code: 330 Part Number / Price Each	
6X2	---		300-101789	**61.33**	---	
6X3	---		300-101797	**73.61**	---	
6X4	---		300-101804	**85.85**	---	
8X2	---		300-101790	**61.33**	---	
8X3	---		300-101798	**73.61**	---	
8X4	---		300-101805	**85.85**	---	
8X6	---		300-101811	**98.14**	---	
10X2	---		300-101791	**61.33**	---	
10X3	---		300-101799	**73.61**	---	
10X4	---		300-101806	**85.85**	---	
10X6	---		300-101812	**98.14**	---	
10X8	---		300-101817	**110.41**	---	
12X2	---		300-101792	**61.33**	---	
12X3	---		300-101800	**73.61**	---	
12X4	---		300-101807	**85.85**	---	
12X6	---		300-101813	**98.14**	---	

Saddle (Socket) (continued)



Size	80 PSI Disc Code: 310 Part Number / Price Each		100 PSI Disc Code: 320 Part Number / Price Each		125 PSI Disc Code: 330 Part Number / Price Each	
12X8	---		300-101818	**110.41**	---	
12X10	---		300-101822	**122.65**	---	
15X2	---		300-101793	**61.33**	---	
15X3	---		300-101801	**88.61**	---	
15X4	---		300-101808	**85.85**	---	
15X6	---		300-101814	**98.14**	---	
15X8	---		300-101819	**110.41**	---	
15X10	---		300-101823	**122.65**	---	
15X12	---		300-101826	**170.62**	---	
18X2	---		300-101794	**61.33**	---	
18X3	---		300-101802	**131.61**	---	
18X4	---		300-101809	**167.82**	---	
18X6	---		300-101815	**202.64**	---	
18X8	---		300-101820	**216.49**	---	
18X10	---		300-101824	**249.22**	---	
18X12	---		300-101827	**262.77**	---	
18X15	---		300-101829	**402.01**	---	

NOTE: When assembling Spears® Saddles to PVC pipe, Spears® Manufacturing Company recommends Industrial Polychemical Service (IPS) #719 Solvent Cement and #P-68 Primer, or equivalent. Although good connections may be accomplished without Saddle Straps, Spears® Manufacturing Company recommends the use of clamp or strap device during the asssembly step to insure good compression between the pipe and fitting surfaces as the solvent cures. PVC Fabricated Saddle connections are designed for use in low pressure open ended systems and are not intended for use in high pressure applications. For further details, contact Spears® Technical Services Department.

Stub Saddle (Socket)



Size	80 PSI Disc Code: 310 Part Number / Price Each		100 PSI Disc Code: 320 Part Number / Price Each		125 PSI Disc Code: 330 Part Number / Price Each	
6X2	---		300-101884	**85.85**	---	
6X3	---		300-101892	**94.48**	---	
6X4	---		300-101899	**109.16**	---	
8X2	---		300-101885	**85.85**	---	
8X3	---		300-101893	**94.48**	---	
8X4	---		300-101900	**109.16**	---	
8X6	---		300-101906	**134.95**	---	
10X2	---		300-101886	**85.85**	---	
10X3	---		300-101894	**94.48**	---	
10X4	---		300-101901	**109.16**	---	
10X6	---		300-101907	**134.95**	---	
10X8	---		300-101912	**176.69**	---	
12X2	---		300-101887	**85.85**	---	
12X3	---		300-101895	**94.48**	---	
12X4	---		300-101902	**109.16**	---	

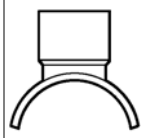
Glue-on Saddles

Stub Saddle (Socket) (continued)



Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
12X6	---	300-101908 **134.95**	---
12X8	---	300-101913 **176.69**	---
12X10	---	300-101917 **191.37**	---
15X2	---	300-101888 **123.91**	---
15X3	---	300-101896 **137.37**	---
15X4	---	300-101903 **143.55**	---
15X6	---	300-101909 **148.43**	---
15X8	---	300-101914 **176.69**	---
15X10	---	300-101918 **203.64**	---
15X12	---	300-101921 **268.67**	---
18X2	---	300-101889 **202.42**	---
18X3	---	300-101897 **207.34**	---

Stub Saddle (Socket) (continued)

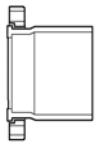


Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
18X4	---	300-101904 **250.25**	---
18X6	---	300-101910 **318.99**	---
18X8	---	300-101915 **341.08**	---
18X10	---	300-101919 **392.63**	---
18X12	---	300-101922 **452.77**	---
18X15	---	300-101924 **633.08**	---

NOTE: When assembling Spears® Saddles to PVC pipe, Spears® Manufacturing Company recommends Industrial Polychemical Service (IPS) #719 Solvent Cement and #P-68 Primer, or equivalent. Although good connections may be accomplished without Saddle Straps, Spears® Manufacturing Company recommends the use of clamp or strap device during the assembly step to insure good compression between the pipe and fitting surfaces as the solvent cures. PVC Fabricated Saddle connections are designed for use in low pressure open ended systems and are not intended for use in high pressure applications. For further details, contact Spears® Technical Services Department.

Pipe Flanges

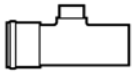
Flange x PIP (Socket)



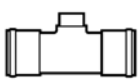
Size	80 PSI Disc Code: 310 Part Number Price Each	100 PSI Disc Code: 320 Part Number Price Each	125 PSI Disc Code: 330 Part Number Price Each
6X6.140	---	---	354-060F **133.67**
8X8.160	---	---	354-080F **202.42**
10X10.200	---	---	354-100F **284.61**
12X12.240	---	---	354-120F **412.21**
14X15.300	---	---	354-150F **1098.76**
16X15.300	---	---	354-151F **1253.46**
18X18.360	---	354-182F **1904.21**	---
18X18.701	---	354-181F **1904.21**	---
20X22.047	---	354-201F **2900.51**	---
24X24.803	---	354-241F **4247.72**	---

PIP =Plastic Irrigation Pipe (PIP dimensions are NOT the same as IPS dimensions.)
Sizes 6" through 16" are furnished with Plastic Ring.
Sizes 18" Through 24" are furnished with Steel Ring.

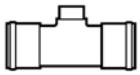
Tee (Gasket x Spigot x Fipt)

	Size	CLASS 63 Disc Code: 340 Part Number Price Each	CLASS 100 Disc Code: 350 Part Number Price Each	CLASS 125 Disc Code: 360 Part Number Price Each	CLASS 160 Disc Code: 370 Part Number Price Each	CLASS 200 Disc Code: 380 Part Number Price Each
	**4X1-1/2**	---	---	---	340-102356 **189.49**	350-102356 **220.87**
	4X2	---	---	---	340-102357 **189.49**	350-102357 **220.87**
	4X2-1/2	---	---	---	340-102358 **202.32**	350-102358 **234.83**
	4X3	---	---	---	340-102359 **202.32**	---
	6X1-1/2	---	---	---	340-102361 **275.58**	350-102361 **287.19**
	6X2	---	---	---	340-102362 **275.58**	350-102362 **287.19**
	6X2-1/2	---	---	---	340-102363 **293.03**	350-102363 **299.97**
	6X3	---	---	---	340-102364 **293.03**	350-102364 **299.97**
	6X4	---	---	---	340-102365 **304.60**	350-102365 **316.24**
	8X1-1/2	---	---	---	340-102366 **336.01**	350-102366 **409.26**
	8X2	---	---	---	340-102367 **336.01**	350-102367 **409.26**
	8X2-1/2	---	---	---	340-102368 **353.45**	350-102368 **426.69**
	8X3	---	---	---	340-102369 **353.45**	350-102369 **426.69**
	8X4	---	---	---	340-102370 **382.52**	350-102370 **444.12**
	10X2	---	---	---	340-102372 **570.87**	350-102372 **623.20**
	10X2-1/2	---	---	---	340-102373 **605.77**	---
	10X3	---	---	---	340-102374 **605.77**	350-102374 **653.43**
	10X4	---	---	---	340-102375 **637.13**	350-102375 **687.17**
	12X2	---	---	---	340-102377 **760.40**	350-102377 **818.52**
	12X2-1/2	---	---	---	340-102378 **792.95**	---
	12X3	---	---	---	340-102379 **792.95**	350-102379 **862.69**
	12X4	---	---	---	340-102380 **830.18**	350-102380 **906.91**

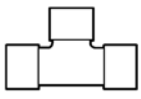
Tee (Gasket x Gasket x Fipt)

	**4X1-1/2**	---	---	---	340-102426 **209.28**	350-102426 **229.06**
	4X2	---	---	---	340-102427 **209.28**	350-102427 **229.06**
	4X2-1/2	---	---	---	340-102428 **227.86**	350-102428 **246.48**
	4X3	---	---	---	340-102429 **227.86**	350-102429 **246.48**
	6X1-1/2	---	---	---	340-102431 **301.12**	350-102431 **316.24**
	6X2	---	---	---	340-102432 **301.12**	350-102432 **316.24**
	6X2-1/2	---	---	---	340-102433 **312.76**	350-102433 **331.39**
	6X3	---	---	---	340-102434 **312.76**	350-102434 **331.39**
	6X4	---	---	---	340-102435 **322.06**	350-102435 **345.33**
	8X1-1/2	---	---	---	340-102436 **368.59**	350-102436 **441.82**
	8X2	---	---	---	340-102437 **368.59**	350-102437 **441.82**
	8X2-1/2	---	---	---	340-102438 **390.66**	350-102438 **465.06**
	8X3	---	---	---	340-102439 **390.66**	350-102439 **465.06**
	8X4	---	---	---	340-102440 **415.07**	350-102440 **641.20**

Tee (Gasket x Gasket x Fipt) (continued)

	Size	CLASS 63 Disc Code: 340 Part Number Price Each	CLASS 100 Disc Code: 350 Part Number Price Each	CLASS 125 Disc Code: 360 Part Number Price Each	CLASS 160 Disc Code: 370 Part Number Price Each	CLASS 200 Disc Code: 380 Part Number Price Each
	**10X2**	---	---	---	340-102442 **624.35**	350-102442 **687.17**
	10X2-1/2	---	---	---	340-102443 **653.43**	350-102443 **725.55**
	10X3	---	---	---	340-102444 **653.43**	350-102444 **725.55**
	10X4	---	---	---	340-102445 **689.44**	350-102445 **754.56**
	12X2	---	---	---	340-102447 **805.40**	350-102447 **876.67**
	12X2-1/2	---	---	---	340-102448 **845.27**	---
	12X3	---	---	---	340-102449 **845.27**	350-102449 **920.85**
	12X4	---	---	---	340-102450 **888.27**	350-102450 **965.04**

Tee (Soc x Soc x Soc)

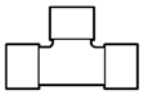
	**6**	310-102502 **72.27**	320-102502 **145.69**	330-102502 **161.97**	340-102502 **285.59**	350-102502 **302.22**
	6X2	310-102499 **57.08**	320-102499 **75.75**	330-102499 **90.89**	340-102499 **226.69**	350-102499 **235.45**
	6X3	310-102500 **60.60**	320-102500 **85.06**	330-102500 **96.71**	340-102500 **241.20**	350-102500 **247.16**
	6X4	310-102501 **66.44**	320-102501 **93.25**	330-102501 **108.38**	340-102501 **249.94**	350-102501 **264.61**
	8	310-102507 **121.25**	320-102507 **184.15**	330-102507 **217.99**	340-102507 **447.66**	350-102507 **532.53**
	8X2	310-102503 **79.25**	320-102503 **100.23**	330-102503 **108.38**	340-102503 **288.35**	350-102503 **318.58**
	8X3	310-102504 **85.06**	320-102504 **111.86**	330-102504 **121.25**	340-102504 **323.23**	350-102504 **345.33**
	8X4	310-102505 **90.89**	320-102505 **127.00**	330-102505 **138.65**	340-102505 **341.83**	350-102505 **362.76**
	8X6	310-102506 **108.38**	320-102506 **163.18**	330-102506 **172.48**	340-102506 **396.48**	350-102506 **430.18**
	10	310-102513 **180.64**	320-102513 **256.38**	330-102513 **354.32**	340-102513 **695.27**	350-102513 **845.27**
	10X2	310-102508 **108.38**	320-102508 **132.83**	330-102508 **170.15**	340-102508 **408.12**	350-102508 **485.98**
	10X3	310-102509 **127.00**	320-102509 **153.83**	330-102509 **200.47**	340-102509 **438.36**	350-102509 **517.37**
	10X4	310-102510 **144.54**	320-102510 **172.48**	330-102510 **226.09**	340-102510 **474.39**	350-102510 **555.75**
	10X6	310-102511 **157.35**	320-102511 **189.98**	330-102511 **250.55**	340-102511 **522.04**	350-102511 **611.55**
	10X8	310-102512 **167.83**	320-102512 **220.28**	330-102512 **298.36**	340-102512 **588.33**	350-102512 **687.17**
	12	310-102520 **248.24**	320-102520 **404.44**	330-102520 **531.47**	340-102520 **989.47**	350-102520 **1306.84**
	12X2	310-102514 **186.52**	320-102514 **200.47**	330-102514 **262.27**	340-102514 **539.46**	350-102514 **640.65**
	12X3	310-102515 **192.29**	320-102515 **212.13**	330-102515 **284.38**	340-102515 **575.55**	350-102515 **690.63**
	12X4	310-102516 **199.32**	320-102516 **236.60**	330-102516 **314.71**	340-102516 **615.07**	350-102516 **737.09**
	12X6	310-102517 **205.12**	320-102517 **270.40**	330-102517 **354.32**	340-102517 **683.68**	350-102517 **835.96**
	12X8	310-102518 **216.80**	320-102518 **298.36**	330-102518 **398.65**	340-102518 **761.55**	350-102518 **891.78**
	12X10	310-102519 **222.58**	320-102519 **356.66**	330-102519 **473.19**	340-102519 **851.09**	350-102519 **1044.09**
	15X2	310-102521** **221.46**	---	---	---	---
	15X3	310-102522** **233.09**	---	---	---	---
	15X4	310-102523** **258.75**	---	---	---	---
	15X6	310-102524** **264.58**	---	---	---	---
	15X8	310-102525** **284.38**	---	---	---	---
	15X10	310-102526** **298.36**	---	---	---	---

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

	Size	CLASS 63 Disc Code: 340 Part Number Price Each	CLASS 100 Disc Code: 350 Part Number Price Each	CLASS 125 Disc Code: 360 Part Number Price Each	CLASS 160 Disc Code: 370 Part Number Price Each	CLASS 200 Disc Code: 380 Part Number Price Each

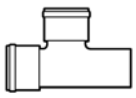
Tee (Soc x Soc x Soc) (continued)



Size	CLASS 63	CLASS 100	CLASS 125	CLASS 160	CLASS 200
15X12	310-102527** **336.83**	---	---	---	---
15X15	310-102528* **428.92**	---	---	---	---

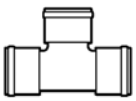
* 15" PIP O.D.
** 15" PIP O.D. x IPS

Tee (Gasket x Spigot x Gasket)



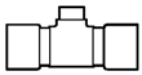
Size	CLASS 63	CLASS 100	CLASS 125	CLASS 160	CLASS 200
4	---	320-103058 **116.54**	330-103058 **121.25**	340-103058 **221.46**	350-103058 **248.47**
6	---	320-103062 **169.01**	330-103062 **180.64**	340-103062 **342.98**	350-103062 **395.29**
6X4	---	320-103061 **144.54**	330-103061 **174.81**	340-103061 **304.60**	350-103061 **327.86**
8	---	320-103067 **233.62**	330-103067 **300.71**	340-103067 **509.26**	350-103067 **640.65**
8X4	---	320-103065 **182.35**	330-103065 **199.32**	340-103065 **380.18**	350-103065 **462.75**
8X6	---	320-103066 **212.13**	330-103066 **251.77**	340-103066 **420.89**	350-103066 **526.69**
10	---	320-103073 **396.29**	330-103073 **481.38**	340-103073 **833.66**	350-103073 **1051.96**
10X4	---	320-103070 **272.73**	330-103070 **348.47**	340-103070 **559.27**	350-103070 **702.26**
10X6	---	320-103071 **300.71**	330-103071 **378.82**	340-103071 **611.55**	350-103071 **766.20**
10X8	---	320-103072 **334.52**	330-103072 **420.76**	340-103072 **687.17**	350-103072 **865.04**
12	---	320-103080 **554.80**	330-103080 **662.03**	---	---
12X4	---	320-103076 **368.32**	330-103076 **451.12**	340-103076 **731.31**	350-103076 **918.49**
12X6	---	320-103077 **392.79**	330-103077 **456.89**	340-103077 **804.58**	350-103077 **1011.55**
12X8	---	320-103078 **434.74**	330-103078 **481.38**	340-103078 **891.78**	350-103078 **1110.36**
12X10	---	320-103079 **495.37**	330-103079 **540.83**	340-103079 **1009.22**	350-103079 **1256.85**
12X12	---	---	---	340-103080 **1183.57**	---

Tee (Gasket x Gasket x Gasket)



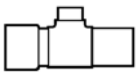
Size	CLASS 63	CLASS 100	CLASS 125	CLASS 160	CLASS 200
4	---	320-103170 **139.85**	330-103170 **191.08**	340-103170 **219.76**	350-103170 **272.07**
6	---	320-103174 **163.18**	330-103174 **216.80**	340-103174 **366.24**	350-103174 **397.61**
6X4	---	320-103173 **144.54**	330-103173 **205.12**	340-103173 **316.24**	350-103173 **339.49**
8	---	320-103179 **289.04**	330-103179 **312.76**	340-103179 **570.87**	350-103179 **673.19**
8X4	---	320-103177 **216.80**	330-103177 **241.26**	340-103177 **447.66**	350-103177 **497.60**
8X6	---	320-103178 **222.58**	330-103178 **272.73**	340-103178 **497.60**	350-103178 **549.98**
10	---	320-103185 **420.76**	330-103185 **529.14**	340-103185 **935.96**	350-103185 **1098.76**
10X4	---	320-103182 **322.86**	330-103182 **400.95**	340-103182 **702.26**	350-103182 **716.20**
10X6	---	320-103183 **346.18**	330-103183 **418.42**	340-103183 **745.28**	350-103183 **777.87**
10X8	---	320-103184 **376.47**	330-103184 **487.22**	340-103184 **833.66**	350-103184 **876.67**
12	---	320-103192 **585.13**	330-103192 **765.77**	340-103192 **1301.06**	350-103192 **1519.65**
12X4	---	320-103188 **412.58**	330-103188 **487.22**	340-103188 **891.78**	350-103188 **932.47**
12X6	---	320-103189 **423.12**	330-103189 **501.17**	340-103189 **974.32**	350-103189 **1031.31**
12X8	---	320-103190 **445.26**	330-103190 **601.45**	340-103190 **1067.56**	350-103190 **1127.79**
12X10	---	320-103191 **529.14**	330-103191 **641.08**	340-103191 **1198.77**	350-103191 **1276.62**

Reinforced Tee (Soc x Soc x Fipt)



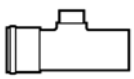
Size	CLASS 63 Disc Code: 340 Part Number / Price Each	CLASS 100 Disc Code: 350 Part Number / Price Each	CLASS 125 Disc Code: 360 Part Number / Price Each	CLASS 160 Disc Code: 370 Part Number / Price Each	CLASS 200 Disc Code: 380 Part Number / Price Each
6X2	---	---	330-202152 **81.59**	---	---
6X3	---	---	330-202154 **93.25**	---	---
6X4	---	---	330-202155 **106.03**	---	---
8X2	---	---	330-202157 **117.71**	---	---
8X3	---	---	330-202159 **137.52**	---	---
8X4	---	---	330-202160 **150.31**	---	---
10X2	---	---	330-202162 **181.79**	---	---
10X3	---	---	330-202164 **212.13**	---	---
10X4	---	---	330-202165 **231.92**	---	---
12X2	---	---	330-202167 **262.27**	---	---
12X3	---	---	330-202169 **292.57**	---	---
12X4	---	---	330-202170 **322.86**	---	---

Reinforced Tee (Soc x Spigot x Fipt)



Size	CLASS 63 Disc Code: 340 Part Number / Price Each	CLASS 100 Disc Code: 350 Part Number / Price Each	CLASS 125 Disc Code: 360 Part Number / Price Each	CLASS 160 Disc Code: 370 Part Number / Price Each	CLASS 200 Disc Code: 380 Part Number / Price Each
6X2	---	---	330-202222 **81.59**	---	---
6X3	---	---	330-202224 **93.25**	---	---
6X4	---	---	330-202225 **106.03**	---	---
8X2	---	---	330-202227 **116.54**	---	---
8X3	---	---	330-202229 **130.48**	---	---
8X4	---	---	330-202230 **143.32**	---	---
10X2	---	---	330-202232 **172.48**	---	---
10X3	---	---	330-202234 **201.61**	---	---
10X4	---	---	330-202235 **222.58**	---	---
12X2	---	---	330-202237 **249.41**	---	---
12X3	---	---	330-202239 **278.57**	---	---
12X4	---	---	330-202240 **310.05**	---	---

Reinforced Tee (Gasket x Spigot x Fipt)



Size	CLASS 63 Disc Code: 340 Part Number / Price Each	CLASS 100 Disc Code: 350 Part Number / Price Each	CLASS 125 Disc Code: 360 Part Number / Price Each	CLASS 160 Disc Code: 370 Part Number / Price Each	CLASS 200 Disc Code: 380 Part Number / Price Each
6X2	---	---	330-202362 **139.85**	---	---
6X3	---	---	330-202364 **159.64**	---	---
6X4	---	---	330-202365 **169.01**	---	---
8X2	---	---	330-202367 **174.81**	---	---
8X3	---	---	330-202369 **186.52**	---	---
8X4	---	---	330-202370 **199.32**	---	---
10X2	---	---	330-202372 **264.58**	---	---
10X3	---	---	330-202374 **285.55**	---	---
10X4	---	---	330-202375 **313.53**	---	---
12X2	---	---	330-202377 **361.31**	---	---
12X3	---	---	330-202379 **391.61**	---	---
12X4	---	---	330-202380 **420.76**	---	---

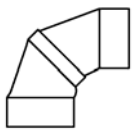
NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Reinforced Tee (Gasket x Gasket x Fipt)



Size	CLASS 63 Disc Code: 340 Part Number / Price Each	CLASS 100 Disc Code: 350 Part Number / Price Each	CLASS 125 Disc Code: 360 Part Number / Price Each	CLASS 160 Disc Code: 370 Part Number / Price Each	CLASS 200 Disc Code: 380 Part Number / Price Each
6X2	---	---	330-202432 **169.01**	---	---
6X3	---	---	330-202434 **180.64**	---	---
6X4	---	---	330-202435 **192.29**	---	---
8X2	---	---	330-202437 **210.96**	---	---
8X3	---	---	330-202439 **222.58**	---	---
8X4	---	---	330-202440 **241.26**	---	---
10X2	---	---	330-202442 **328.69**	---	---
10X3	---	---	330-202444 **346.18**	---	---
10X4	---	---	330-202445 **382.29**	---	---
12X2	---	---	330-202447 **445.26**	---	---
12X3	---	---	330-202449 **487.22**	---	---
12X4	---	---	330-202450 **509.40**	---	---

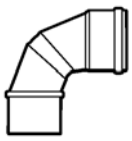
90° Elbow (Soc x Soc)



Size	CLASS 63 Disc Code: 340 Part Number / Price Each	CLASS 100 Disc Code: 350 Part Number / Price Each	CLASS 125 Disc Code: 360 Part Number / Price Each	CLASS 160 Disc Code: 370 Part Number / Price Each	CLASS 200 Disc Code: 380 Part Number / Price Each
6	310-100812 **79.25**	320-100812 **102.53**	330-100812 **114.20**	340-100812 **294.15**	350-100812 **318.58**
8	310-100813 **108.38**	320-100813 **157.35**	330-100813 **187.62**	340-100813 **408.12**	350-100813 **462.75**
10	310-100814 **169.01**	320-100814 **245.93**	330-100814 **297.21**	340-100814 **620.88**	350-100814 **762.71**
12	310-100815 **241.26**	320-100815 **342.64**	330-100815 **454.58**	340-100815 **899.91**	350-100815 **1023.18**
15	310-100816* **451.12**	---	---	---	---

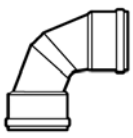
* 15" PIP O.D.

90° Elbow (Gasket x Spigot)



Size	CLASS 63 Disc Code: 340 Part Number / Price Each	CLASS 100 Disc Code: 350 Part Number / Price Each	CLASS 125 Disc Code: 360 Part Number / Price Each	CLASS 160 Disc Code: 370 Part Number / Price Each	CLASS 200 Disc Code: 380 Part Number / Price Each
4	---	---	330-100877 **177.00**	---	---
6	---	320-100878 **207.48**	330-100878 **238.94**	340-100878 **389.47**	350-100878 **409.26**
8	---	320-100879 **314.71**	330-100879 **385.82**	340-100879 **555.75**	350-100879 **596.47**
10	---	320-100880 **458.07**	330-100880 **607.23**	340-100880 **804.58**	350-100880 **982.45**
12	---	320-100881 **614.26**	330-100881 **723.83**	340-100881 **1081.34**	350-100881 **1242.91**

90° Elbow (Gasket x Gasket)



Size	CLASS 63 Disc Code: 340 Part Number / Price Each	CLASS 100 Disc Code: 350 Part Number / Price Each	CLASS 125 Disc Code: 360 Part Number / Price Each	CLASS 160 Disc Code: 370 Part Number / Price Each	CLASS 200 Disc Code: 380 Part Number / Price Each
4	---	---	330-100899 **177.00**	340-100899 **263.92**	350-100899 **293.03**
6	---	320-100900 **207.48**	330-100900 **238.94**	340-100900 **389.47**	350-100900 **409.26**
8	---	320-100901 **314.71**	330-100901 **385.82**	340-100901 **555.75**	350-100901 **596.47**
10	---	320-100902 **458.07**	330-100902 **607.23**	340-100902 **804.58**	350-100902 **982.45**
12	---	320-100903 **614.26**	330-100903 **723.83**	3406-1202 **900.63**	350-100903 **1242.91**

11-1/4° Elbow (Soc x Soc)

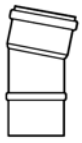


Size	CLASS 63 Disc Code: 340 Part Number / Price Each	CLASS 100 Disc Code: 350 Part Number / Price Each	CLASS 125 Disc Code: 360 Part Number / Price Each	CLASS 160 Disc Code: 370 Part Number / Price Each	CLASS 200 Disc Code: 380 Part Number / Price Each
4	---	---	330-100113 **33.76**	340-100113 **37.38**	350-100113 **44.84**
6	310-100114 **30.25**	320-100114 **39.64**	330-100114 **47.76**	340-100114 **52.31**	350-100114 **55.79**
8	310-100115 **47.76**	320-100115 **60.60**	330-100115 **94.37**	340-100115 **90.68**	350-100115 **102.31**
10	310-100116 **67.57**	320-100116 **96.71**	330-100116 **134.04**	340-100116 **156.98**	350-100116 **210.40**
12	310-100117 **109.51**	320-100117 **151.53**	330-100117 **217.99**	340-100117 **246.48**	350-100117 **351.15**

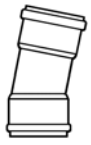
11-1/4° Elbow (Soc x Soc) (continued)

	Size	CLASS 63 Disc Code: 340 Part Number Price Each	CLASS 100 Disc Code: 350 Part Number Price Each	CLASS 125 Disc Code: 360 Part Number Price Each	CLASS 160 Disc Code: 370 Part Number Price Each	CLASS 200 Disc Code: 380 Part Number Price Each
	**15**	310-100118 **184.15**	**---**	**---**	---	---

11-1/4° Elbow (Gasket x Spigot)

	**4**	**---**	**---**	330-100185 **121.25**	340-100185 **134.55**	350-100185 **165.57**
	6	**---**	320-100186 **135.19**	330-100186 **169.01**	340-100186 **186.87**	350-100186 **204.63**
	8	**---**	320-100187 **165.51**	330-100187 **252.93**	340-100187 **274.06**	350-100187 **330.20**
	10	**---**	320-100188 **283.25**	330-100188 **336.83**	340-100188 **389.47**	350-100188 **573.17**
	12	**---**	320-100189 **378.82**	330-100189 **456.89**	340-100189 **567.40**	350-100189 **789.48**

11-1/4° Elbow (Gasket x Gasket)

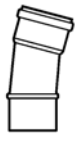
	**4**	**---**	**---**	330-100209 **121.25**	340-100209 **134.55**	350-100209 **165.57**
	6	**---**	320-100210 **135.19**	330-100210 **169.01**	340-100210 **186.87**	350-100210 **204.63**
	8	**---**	320-100211 **165.51**	330-100211 **252.93**	340-100211 **274.06**	350-100211 **330.20**
	10	**---**	320-100212 **283.25**	330-100212 **336.83**	340-100212 **389.47**	350-100212 **573.17**
	12	**---**	320-100213 **378.82**	330-100213 **456.89**	340-100213 **567.40**	350-100213 **789.48**

15° Elbow (Soc x Soc)

	**4**	**---**	**---**	330-100233 **33.76**	340-100233 **37.38**	350-100233 **44.84**
	6	310-100234 **30.25**	320-100234 **39.64**	330-100234 **47.76**	340-100234 **52.31**	350-100234 **55.79**
	8	310-100235 **47.76**	320-100235 **60.60**	330-100235 **73.39**	340-100235 **90.68**	350-100235 **104.32**
	10	310-100236 **67.57**	320-100236 **96.71**	330-100236 **134.04**	340-100236 **156.98**	350-100236 **210.40**
	12	310-100237 **109.51**	320-100237 **151.53**	330-100237 **217.99**	340-100237 **246.48**	350-100237 **351.15**
	15	310-100238* **184.15**	**---**	**---**	---	---

* 15" PIP O.D.

15° Elbow (Gasket x Spigot)

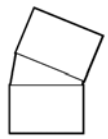
	**4**	**---**	**---**	330-100305 **121.25**	340-100305 **134.55**	350-100305 **165.57**
	6	**---**	320-100306 **135.19**	330-100306 **169.01**	340-100306 **186.87**	350-100306 **204.63**
	8	**---**	320-100307 **165.51**	330-100307 **252.93**	340-100307 **274.06**	350-100307 **330.20**
	10	**---**	320-100308 **283.25**	330-100308 **336.83**	340-100308 **389.47**	350-100308 **573.17**
	12	**---**	320-100309 **378.82**	330-100309 **456.89**	340-100309 **567.40**	350-100309 **789.48**

15° Elbow (Gasket x Gasket)

	**4**	**---**	**---**	330-100329 **121.25**	340-100329 **134.55**	350-100329 **165.57**
	6	**---**	320-100330 **135.19**	330-100330 **169.01**	340-100330 **186.87**	350-100330 **204.63**
	8	**---**	320-100331 **177.89**	330-100331 **252.93**	340-100331 **274.06**	350-100331 **330.20**
	10	**---**	320-100332 **263.75**	330-100332 **336.83**	340-100332 **389.47**	350-100332 **573.17**
	12	**---**	320-100333 **380.32**	330-100333 **456.89**	340-100333 **567.40**	350-100333 **789.48**

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22-1/2° Elbow (Soc x Soc)

	Size	CLASS 63 Disc Code: 340 Part Number Price Each	CLASS 100 Disc Code: 350 Part Number Price Each	CLASS 125 Disc Code: 360 Part Number Price Each	CLASS 160 Disc Code: 370 Part Number Price Each	CLASS 200 Disc Code: 380 Part Number Price Each
	4	---	---	330-100353 **33.76**	340-100353 **37.38**	350-100353 **44.84**
	6	310-100354 **30.25**	320-100354 **39.64**	330-100354 **47.76**	340-100354 **52.31**	350-100354 **55.79**
	8	310-100355 **47.76**	320-100355 **60.60**	330-100355 **73.39**	340-100355 **90.68**	350-100355 **104.32**
	10	310-100356 **67.57**	320-100356 **96.71**	330-100356 **134.04**	340-100356 **156.98**	350-100356 **210.40**
	12	310-100357 **109.51**	320-100357 **151.53**	330-100357 **217.99**	340-100357 **246.48**	350-100357 **351.15**
	15	310-100358* **184.15**	---	---	---	---

* 15" PIP O.D.

22-1/2° Elbow (Gasket x Spigot)

	Size	CLASS 63 Disc Code: 340 Part Number Price Each	CLASS 100 Disc Code: 350 Part Number Price Each	CLASS 125 Disc Code: 360 Part Number Price Each	CLASS 160 Disc Code: 370 Part Number Price Each	CLASS 200 Disc Code: 380 Part Number Price Each
	4	---	---	330-100425 **121.25**	340-100425 **134.55**	350-100425 **165.57**
	6	---	320-100426 **135.19**	330-100426 **169.01**	340-100426 **186.87**	350-100426 **204.63**
	8	---	320-100427 **165.51**	330-100427 **252.93**	340-100427 **274.06**	350-100427 **330.20**
	10	---	320-100428 **283.25**	330-100428 **336.83**	340-100428 **389.47**	350-100428 **573.17**
	12	---	320-100429 **378.82**	330-100429 **456.89**	340-100429 **567.40**	350-100429 **789.48**

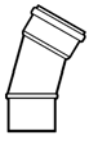
22-1/2° Elbow (Gasket x Gasket)

	Size	CLASS 63 Disc Code: 340 Part Number Price Each	CLASS 100 Disc Code: 350 Part Number Price Each	CLASS 125 Disc Code: 360 Part Number Price Each	CLASS 160 Disc Code: 370 Part Number Price Each	CLASS 200 Disc Code: 380 Part Number Price Each
	4	---	---	330-100449 **121.25**	340-100449 **134.55**	350-100449 **165.57**
	6	---	320-100450 **135.19**	330-100450 **169.01**	340-100450 **186.87**	350-100450 **204.63**
	8	---	320-100451 **165.51**	330-100451 **252.93**	340-100451 **274.06**	350-100451 **330.20**
	10	---	320-100452 **283.25**	330-100452 **336.83**	340-100452 **389.47**	350-100452 **573.17**
	12	---	320-100453 **378.82**	330-100453 **456.89**	340-100453 **567.40**	350-100453 **789.48**

30° Elbow (Soc x Soc)

	Size	CLASS 63 Disc Code: 340 Part Number Price Each	CLASS 100 Disc Code: 350 Part Number Price Each	CLASS 125 Disc Code: 360 Part Number Price Each	CLASS 160 Disc Code: 370 Part Number Price Each	CLASS 200 Disc Code: 380 Part Number Price Each
	4	---	---	330-100473 **41.94**	340-100473 **88.31**	350-100473 **146.81**
	6	310-100474 **41.94**	320-100474 **52.46**	330-100474 **59.42**	340-100474 **216.26**	350-100474 **261.36**
	8	310-100475 **61.74**	320-100475 **87.41**	330-100475 **92.05**	340-100475 **294.15**	350-100475 **351.15**
	10	310-100476 **89.75**	320-100476 **134.04**	330-100476 **189.98**	340-100476 **455.78**	350-100476 **549.98**
	12	310-100477 **145.69**	320-100477 **195.80**	330-100477 **278.57**	340-100477 **660.40**	350-100477 **768.54**
	15	310-100478 **217.99**	---	---	---	---

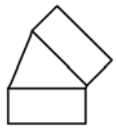
30° Elbow (Gasket x Spigot)

	Size	CLASS 63 Disc Code: 340 Part Number Price Each	CLASS 100 Disc Code: 350 Part Number Price Each	CLASS 125 Disc Code: 360 Part Number Price Each	CLASS 160 Disc Code: 370 Part Number Price Each	CLASS 200 Disc Code: 380 Part Number Price Each
	4	---	---	330-100545 **139.13**	340-100545 **167.42**	350-100545 **175.56**
	6	---	320-100546 **180.64**	330-100546 **192.29**	340-100546 **248.82**	350-100546 **304.60**
	8	---	320-100547 **222.58**	330-100547 **270.40**	340-100547 **366.24**	350-100547 **453.43**
	10	---	320-100548 **313.53**	330-100548 **397.42**	340-100548 **608.07**	350-100548 **756.95**
	12	---	320-100549 **433.61**	330-100549 **576.95**	340-100549 **804.58**	350-100549 **949.93**

30° Elbow (Gasket x Gasket)

	Size	CLASS 63 Disc Code: 340 Part Number Price Each	CLASS 100 Disc Code: 350 Part Number Price Each	CLASS 125 Disc Code: 360 Part Number Price Each	CLASS 160 Disc Code: 370 Part Number Price Each	CLASS 200 Disc Code: 380 Part Number Price Each
	4	---	---	330-100569 **139.13**	340-100569 **167.42**	350-100569 **175.56**
	6	---	320-100570 **180.64**	330-100570 **192.29**	340-100570 **248.82**	350-100570 **304.60**
	8	---	320-100571 **222.58**	330-100571 **270.40**	340-100571 **366.24**	350-100571 **453.43**
	10	---	320-100572 **313.53**	330-100572 **397.42**	340-100572 **608.07**	350-100572 **756.95**
	12	---	320-100573 **433.61**	330-100573 **576.95**	340-100573 **804.58**	350-100573 **949.93**

45° Elbow (Soc x Soc)



Size	CLASS 63 Disc Code: 340 Part Number / Price Each	CLASS 100 Disc Code: 350 Part Number / Price Each	CLASS 125 Disc Code: 360 Part Number / Price Each	CLASS 160 Disc Code: 370 Part Number / Price Each	CLASS 200 Disc Code: 380 Part Number / Price Each
6	310-100592 **41.94**	320-100592 **52.46**	330-100592 **59.42**	340-100592 **216.26**	350-100592 **225.54**
8	310-100593 **61.74**	320-100593 **87.41**	330-100593 **92.05**	340-100593 **294.15**	350-100593 **351.15**
10	310-100594 **89.75**	320-100594 **134.04**	330-100594 **189.98**	340-100594 **455.78**	350-100594 **549.98**
12	310-100595 **145.69**	320-100595 **195.80**	330-100595 **278.57**	340-100595 **660.40**	350-100595 **768.54**
15	310-100596* **217.99**	---	---	---	---

* 15" PIP O.D.

45° Elbow (Gasket x Spigot)



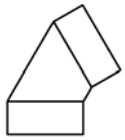
Size	CLASS 63 Disc Code: 340 Part Number / Price Each	CLASS 100 Disc Code: 350 Part Number / Price Each	CLASS 125 Disc Code: 360 Part Number / Price Each	CLASS 160 Disc Code: 370 Part Number / Price Each	CLASS 200 Disc Code: 380 Part Number / Price Each
4	---	---	330-100657 **139.13**	340-100657 **167.42**	350-100657 **175.56**
6	---	320-100658 **141.09**	330-100658 **192.29**	340-100658 **248.82**	350-100658 **304.60**
8	---	320-100659 **199.97**	330-100659 **270.40**	340-100659 **366.24**	350-100659 **453.43**
10	---	320-100660 **287.06**	330-100660 **397.42**	340-100660 **608.07**	350-100660 **755.13**
12	---	320-100661 **408.54**	330-100661 **576.95**	340-100661 **804.58**	350-100661 **949.93**

45° Elbow (Gasket x Gasket)



Size	CLASS 63 Disc Code: 340 Part Number / Price Each	CLASS 100 Disc Code: 350 Part Number / Price Each	CLASS 125 Disc Code: 360 Part Number / Price Each	CLASS 160 Disc Code: 370 Part Number / Price Each	CLASS 200 Disc Code: 380 Part Number / Price Each
4	---	---	330-100679 **139.13**	340-100679 **167.42**	350-100679 **175.56**
6	---	320-100680 **141.09**	330-100680 **192.29**	340-100680 **248.82**	350-100680 **304.60**
8	---	320-100681 **199.97**	330-100681 **270.40**	340-100681 **366.24**	350-100681 **453.43**
10	---	320-100682 **287.06**	330-100682 **397.42**	340-100682 **608.07**	350-100682 **756.95**
12	---	320-100683 **433.58**	330-100683 **576.95**	340-100683 **804.58**	350-100683 **949.93**

60° Elbow (Soc x Soc)



Size	CLASS 63 Disc Code: 340 Part Number / Price Each	CLASS 100 Disc Code: 350 Part Number / Price Each	CLASS 125 Disc Code: 360 Part Number / Price Each	CLASS 160 Disc Code: 370 Part Number / Price Each	CLASS 200 Disc Code: 380 Part Number / Price Each
4	---	---	330-100701 **75.01**	---	---
6	310-100702 **79.25**	320-100702 **102.53**	330-100702 **114.20**	340-100702 **294.15**	350-100702 **318.58**
8	310-100703 **108.38**	320-100703 **157.35**	330-100703 **187.62**	340-100703 **408.12**	350-100703 **462.75**
10	310-100704 **169.01**	320-100704 **245.93**	330-100704 **297.21**	340-100704 **620.88**	350-100704 **762.71**
12	310-100705 **241.26**	320-100705 **342.64**	330-100705 **454.58**	340-100705 **899.91**	350-100705 **1023.18**
15	310-100706* **451.12**	---	---	---	---

* 15" PIP O.D.

60° Elbow (Gasket x Spigot)



Size	CLASS 63 Disc Code: 340 Part Number / Price Each	CLASS 100 Disc Code: 350 Part Number / Price Each	CLASS 125 Disc Code: 360 Part Number / Price Each	CLASS 160 Disc Code: 370 Part Number / Price Each	CLASS 200 Disc Code: 380 Part Number / Price Each
4	---	---	330-100767 **177.00**	340-100767 **263.92**	350-100767 **293.03**
6	---	320-100768 **207.48**	330-100768 **238.94**	340-100768 **389.47**	350-100768 **409.26**
8	---	320-100769 **314.71**	330-100769 **385.82**	340-100769 **555.75**	350-100769 **596.47**
10	---	320-100770 **458.07**	330-100770 **607.23**	340-100770 **804.58**	350-100770 **982.45**
12	---	320-100771 **614.26**	330-100771 **723.83**	340-100771 **1081.34**	350-100771 **1242.91**

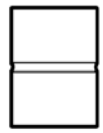
60° Elbow (Gasket x Gasket)



Size	CLASS 63 Disc Code: 340 Part Number / Price Each	CLASS 100 Disc Code: 350 Part Number / Price Each	CLASS 125 Disc Code: 360 Part Number / Price Each	CLASS 160 Disc Code: 370 Part Number / Price Each	CLASS 200 Disc Code: 380 Part Number / Price Each
4	---	---	330-100789 **177.00**	340-100789 **263.92**	350-100789 **293.03**
6	---	320-100790 **207.48**	330-100790 **238.94**	340-100790 **389.47**	350-100790 **409.26**
8	---	320-100791 **314.71**	330-100791 **385.82**	340-100791 **555.75**	350-100791 **596.47**
10	---	320-100792 **458.07**	330-100792 **607.23**	340-100792 **804.58**	350-100792 **982.45**
12	---	320-100793 **614.26**	330-100793 **723.83**	340-100793 **1081.34**	350-100793 **1242.91**

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Coupling (Soc x Soc)



Size	CLASS 63 Disc Code 340 Part Number Price Each	CLASS 100 Disc Code 350 Part Number Price Each	CLASS 125 Disc Code 360 Part Number Price Each	CLASS 160 Disc Code 370 Part Number Price Each	CLASS 200 Disc Code 380 Part Number Price Each
6	310-100002 **22.15**	320-100002 **26.77**	330-100002 **30.25**	340-100002 **36.02**	350-100002 **44.20**
8	310-100003 **38.44**	320-100003 **46.60**	330-100003 **50.13**	340-100003 **66.31**	350-100003 **84.86**
10	310-100004 **45.46**	320-100004 **76.92**	330-100004 **92.05**	340-100004 **105.28**	350-100004 **184.87**
12	310-100005 **69.93**	320-100005 **120.03**	330-100005 **148.04**	340-100005 **168.60**	350-100005 **277.88**
15	310-100006* **104.91**	**---**	**---**	---	---

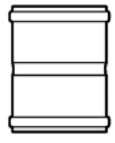
* 15" PIP O.D.

Coupling (Gasket x Spigot)



4	---	320-100067 **40.77**	330-100067 **52.46**	340-100067 **58.54**	350-100067 **70.88**
6	---	320-100068 **64.06**	330-100068 **69.93**	340-100068 **94.19**	350-100068 **99.99**
8	---	320-100069 **103.72**	330-100069 **125.84**	340-100069 **150.00**	350-100069 **167.42**
10	---	320-100070 **137.52**	330-100070 **167.83**	340-100070 **219.76**	350-100070 **277.88**
12	---	320-100071 **189.98**	330-100071 **228.44**	340-100071 **330.20**	350-100071 **397.61**

Coupling (Gasket x Gasket)



4	---	320-100089 **64.06**	330-100089 **75.75**	340-100089 **83.03**	350-100089 **91.33**
6	---	320-100090 **96.71**	330-100090 **108.38**	340-100090 **113.89**	350-100090 **144.16**
8	---	320-100091 **144.54**	330-100091 **157.35**	340-100091 **170.56**	350-100091 **190.68**
10	---	320-100092 **205.12**	330-100092 **228.44**	340-100092 **275.58**	350-100092 **330.20**
12	---	320-100093 **270.40**	330-100093 **313.53**	340-100093 **362.76**	350-100093 **491.79**

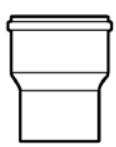
Reducer Coupling (Soc x Soc)



6X4	310-100926 **30.25**	320-100926 **33.76**	330-100926 **38.44**	340-100926 **40.65**	350-100926 **51.15**
8X6	310-100928 **39.64**	320-100928 **53.58**	330-100928 **59.42**	340-100928 **65.09**	350-100928 **70.88**
10X8	310-100931 **55.93**	320-100931 **106.44**	330-100931 **95.56**	340-100931 **120.91**	350-100931 **144.16**
12X10	310-100935 **97.93**	320-100935 **145.69**	330-100935 **181.79**	340-100935 **222.06**	350-100935 **237.19**
15X12	310-100940** **184.15**	**---**	**---**	---	---

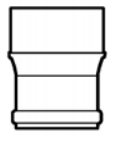
** 15" PIP O.D. x IPS

Reducer Coupling (Gasket x Spigot)



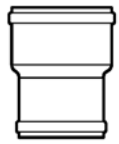
6X4	---	320-101310 **96.51**	330-101310 **114.20**	340-101310 **133.67**	350-101310 **147.65**
8X6	---	320-101312 **138.65**	330-101312 **169.01**	340-101312 **208.09**	350-101312 **231.38**
10X8	---	320-101315 **192.29**	330-101315 **228.44**	340-101315 **286.03**	350-101315 **325.54**
12X10	---	320-101319 **272.73**	330-101319 **328.69**	340-101319 **462.75**	350-101319 **522.04**

Reducer Coupling (Spigot x Gasket)



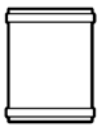
6X4	---	320-101383 **90.89**	330-101383 **102.53**	340-101383 **111.63**	350-101383 **127.87**
8X6	---	320-101385 **121.25**	330-101385 **144.54**	340-101385 **184.87**	350-101385 **210.40**
10X8	---	320-101388 **180.64**	330-101388 **222.58**	340-101388 **268.60**	350-101388 **316.24**
12X10	---	320-101392 **270.40**	330-101392 **310.05**	340-101392 **436.00**	350-101392 **511.57**

Reducer Coupling (Gasket x Gasket)



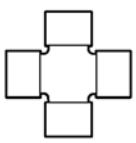
Size	CLASS 63 Disc Code: 340	CLASS 100 Disc Code: 350	CLASS 125 Disc Code: 360	CLASS 160 Disc Code: 370	CLASS 200 Disc Code: 380
	Part Number Price Each	Part Number Price Each	Part Number Price Each	Part Number Price Each	Part Number Price Each
6X4	---	320-101456 **121.25**	330-101456 **132.83**	340-101456 **156.98**	350-101456 **172.06**
8X6	---	320-101458 **174.81**	330-101458 **192.29**	340-101458 **252.28**	350-101458 **275.58**
10X8	---	320-101461 **241.26**	330-101461 **300.71**	340-101461 **360.39**	350-101461 **526.69**
12X10	---	320-101465 **334.52**	330-101465 **378.82**	340-101465 **478.53**	350-101465 **783.66**

Repair Coupling (Gasket x Gasket)



4	---	3228-040 **70.78**	3328-040 **75.75**	3428-040 **100.04**	3528-040 **121.36**
6	---	3228-060 **99.16**	3328-060 **102.53**	3428-060 **127.95**	3528-060 **148.20**
8	---	3228-080 **151.31**	3328-080 **157.35**	3428-080 **183.17**	3528-080 **199.64**
10	---	3228-100 **216.02**	3328-100 **234.27**	3428-100 **288.46**	3528-100 **320.23**
12	---	3228-120 **289.41**	3328-120 **313.53**	3428-120 **375.58**	3528-120 **447.24**
14	---	3228-140 **415.63**	3328-140 **437.32**	3428-140 **474.68**	---
16	---	3228-160 **548.04**	3328-160 **622.56**	3428-160 **675.27**	---

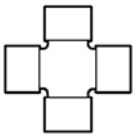
Cross (Soc x Soc x Soc x Soc)



4X2	---	320-103280 **58.25**	330-103280 **87.41**	---	---
4X3	---	320-103281 **64.06**	330-103281 **90.33**	---	---
6	310-103286 **96.71**	320-103286 **167.83**	330-103286 **189.98**	340-103286 **391.80**	350-103286 **430.18**
6X2	310-103283 **66.44**	320-103283 **72.27**	330-103283 **96.71**	340-103283 **287.19**	350-103283 **289.52**
6X3	310-103284 **75.75**	320-103284 **90.89**	330-103284 **121.25**	340-103284 **298.80**	350-103284 **304.60**
6X4	310-103285 **81.59**	320-103285 **102.53**	330-103285 **138.65**	340-103285 **322.06**	350-103285 **345.33**
8	310-103291 **125.84**	320-103291 **217.99**	330-103291 **264.58**	340-103291 **590.63**	350-103291 **631.35**
8X2	310-103287 **85.06**	320-103287 **108.38**	330-103287 **121.25**	340-103287 **368.59**	350-103287 **374.22**
8X3	310-103288 **90.89**	320-103288 **121.25**	330-103288 **132.83**	340-103288 **380.18**	350-103288 **420.89**
8X4	310-103289 **103.72**	320-103289 **138.65**	330-103289 **159.64**	340-103289 **406.92**	350-103289 **444.12**
8X6	310-103290 **114.20**	320-103290 **169.01**	330-103290 **200.47**	340-103290 **474.39**	350-103290 **509.26**
10	310-103297 **203.97**	320-103297 **325.17**	330-103297 **456.89**	340-103297 **976.66**	350-103297 **1041.43**
10X2	310-103292 **103.72**	320-103292 **150.31**	330-103292 **178.32**	340-103292 **570.87**	350-103292 **619.75**
10X3	310-103293 **114.20**	320-103293 **170.15**	330-103293 **214.43**	340-103293 **579.01**	350-103293 **634.80**
10X4	310-103294 **125.84**	320-103294 **189.98**	330-103294 **242.43**	340-103294 **628.99**	350-103294 **666.22**
10X6	310-103295 **139.85**	320-103295 **210.96**	330-103295 **282.06**	340-103295 **702.26**	350-103295 **742.97**
10X8	310-103296 **159.64**	320-103296 **258.75**	330-103296 **350.84**	340-103296 **789.48**	350-103296 **845.27**
12	310-103304 **318.19**	320-103304 **501.17**	330-103304 **737.80**	340-103304 **1446.39**	350-103304 **1671.94**
12X2	310-103298 **148.04**	320-103298 **198.14**	330-103298 **289.04**	340-103298 **725.55**	350-103298 **731.31**
12X3	310-103299 **161.97**	320-103299 **228.44**	330-103299 **300.71**	340-103299 **764.03**	350-103299 **803.57**
12X4	310-103300 **172.48**	320-103300 **273.16**	330-103300 **336.83**	340-103300 **862.69**	350-103300 **876.67**
12X6	310-103301 **181.79**	320-103301 **284.38**	330-103301 **386.96**	340-103301 **947.58**	350-103301 **965.04**
12X8	310-103302 **209.79**	320-103302 **332.17**	330-103302 **454.58**	340-103302 **1058.02**	350-103302 **1081.34**
12X10	310-103303 **250.55**	320-103303 **412.58**	330-103303 **576.95**	340-103303 **1212.65**	350-103303 **1256.85**

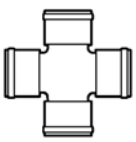
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Cross (Soc x Soc x Soc x Soc) (continued)

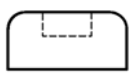
	Size	CLASS 63 Disc Code: 340 Part Number Price Each	CLASS 100 Disc Code: 350 Part Number Price Each	CLASS 125 Disc Code: 360 Part Number Price Each	CLASS 160 Disc Code: 370 Part Number Price Each	CLASS 200 Disc Code: 380 Part Number Price Each
	**15**	310-103321* **540.83**	---	---	---	---
	15X2	310-103313** **233.09**	---	---	---	---
	15X3	310-103314** **262.27**	---	---	---	---
	15X4	310-103315** **289.04**	---	---	---	---
	15X6	310-103316** **331.03**	---	---	---	---
	15X8	310-103317** **361.31**	---	---	---	---
	15X10	310-103318** **391.61**	---	---	---	---
	15X12	310-103319** **433.61**	---	---	---	---

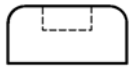
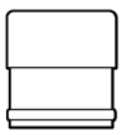
* 15" PIP O.D.
** 15" PIP O.D. x IPS

Cross (Gasket x Gasket x Gasket x Gasket)

	**4**	---	320-103997 **203.97**	330-103997 **221.46**	340-103997 **276.84**	350-103997 **298.99**
	6	---	320-104001 **237.75**	330-104001 **298.36**	340-104001 **497.60**	350-104001 **631.35**
	6X4	---	320-104000 **215.63**	330-104000 **273.89**	340-104000 **391.80**	350-104000 **491.79**
	8	---	320-104006 **389.31**	330-104006 **445.26**	340-104006 **772.04**	350-104006 **959.24**
	8X4	---	320-104004 **291.38**	330-104004 **337.99**	340-104004 **534.78**	350-104004 **642.96**
	8X6	---	320-104005 **349.64**	330-104005 **384.60**	340-104005 **641.80**	350-104005 **748.76**
	10	---	320-104012 **585.13**	330-104012 **773.98**	340-104012 **1285.93**	350-104012 **1432.42**
	10X4	---	320-104009 **407.94**	330-104009 **495.37**	340-104009 **695.27**	350-104009 **830.18**
	10X6	---	320-104010 **466.20**	330-104010 **512.85**	340-104010 **851.09**	350-104010 **947.58**
	10X8	---	320-104011 **524.52**	330-104011 **670.22**	340-104011 **1046.43**	350-104011 **1081.34**
	12	---	320-104019 **793.75**	330-104019 **1086.36**	340-104019 **1791.69**	350-104019 **2017.25**
	12X4	---	320-104015 **582.79**	330-104015 **641.08**	340-104015 **1019.64**	350-104015 **1169.65**
	12X6	---	320-104016 **641.08**	330-104016 **676.03**	340-104016 **1169.16**	350-104016 **1247.56**
	12X8	---	320-104017 **699.34**	330-104017 **792.60**	340-104017 **1319.61**	350-104017 **1348.72**
	12X10	---	320-104018 **745.99**	330-104018 **955.78**	340-104018 **1546.39**	350-104018 **1578.94**

Surface Reducer (Soc)

	**6X2**	310-102013 **32.62**	---	330-102013 **46.60**	---	---
	6X3	310-102015 **32.62**	---	330-102015 **46.60**	---	---
	6X4	310-102016 **32.62**	---	---	---	---
	8X2	310-102018 **44.23**	---	330-102018 **93.25**	---	---
	8X3	310-102020 **44.23**	---	330-102020 **93.25**	---	---
	8X4	310-102021 **44.23**	---	330-102021 **93.25**	---	---
	8X6	310-102022 **44.23**	---	3340-585 **93.25**	---	---
	10X2	310-102024 **71.07**	---	330-102024 **145.69**	---	---
	10X3	310-102026 **71.07**	---	330-102026 **145.69**	---	---
	10X4	310-102027 **71.07**	---	330-102027 **145.69**	---	---
	10X6	310-102028 **71.07**	---	330-102028 **145.69**	---	---

	Size	CLASS 63 Disc Code: 340 Part Number Price Each	CLASS 100 Disc Code: 350 Part Number Price Each	CLASS 125 Disc Code: 360 Part Number Price Each	CLASS 160 Disc Code: 370 Part Number Price Each	CLASS 200 Disc Code: 380 Part Number Price Each
Surface Reducer (Soc) (continued)						
	**10X8**	310-102029 **71.07**	---	330-102029 **145.69**	---	---
	12X2	310-102031 **87.41**	---	330-102031 **262.27**	---	---
	12X3	310-102033 **87.41**	---	330-102033 **262.27**	---	---
	12X4	310-102034 **87.41**	---	330-102034 **262.27**	---	---
	12X6	310-102035 **87.41**	---	330-102035 **262.27**	---	---
	12X8	310-102036 **87.41**	---	330-102036 **262.27**	---	---
	12X10	310-102037 **87.41**	---	330-102037 **262.27**	---	---
Cap (Soc)						
	**6**	310-107540 **22.15**	---	330-107540 **43.11**	---	---
	8	310-107541 **40.77**	---	330-107541 **55.93**	---	---
	10	310-107542 **69.93**	---	330-107542 **89.75**	---	---
	12	310-107543 **85.59**	---	330-107543 **172.48**	---	---
Cap (Gasket)						
	**4**	---	---	330-107565 **78.64**	---	---
	6	---	---	330-107566 **111.86**	---	---
	8	---	---	330-107567 **189.98**	---	---
	10	---	---	330-107568 **306.51**	---	---
	12	---	---	330-107569 **462.73**	---	---
Saddle (Soc)						
	**6**	310-101937 **31.47**	---	---	---	---
	6X2	310-101789 **24.44**	---	330-101789 **69.93**	---	---
	6X3	310-101797 **26.77**	---	330-101797 **81.59**	---	---
	6X4	310-101804 **30.25**	---	330-101804 **93.25**	---	---
	8	310-101938 **46.60**	---	---	---	---
	8X2	310-101790 **24.44**	---	330-101790 **69.93**	---	---
	8X3	310-101798 **26.77**	---	330-101798 **81.59**	---	---
	8X4	310-101805 **30.25**	---	330-101805 **93.25**	---	---
	8X6	310-101811 **31.47**	---	330-101811 **104.91**	---	---
	10	310-101939 **72.27**	---	---	---	---
	10X2	310-101791 **24.44**	---	330-101791 **69.93**	---	---
	10X3	310-101799 **26.77**	---	330-101799 **81.59**	---	---
	10X4	310-101806 **30.25**	---	330-101806 **93.25**	---	---
	10X6	310-101812 **31.47**	---	330-101812 **104.91**	---	---
	10X8	310-101817 **46.60**	---	330-101817 **116.54**	---	---
	12	310-101940 **108.12**	---	---	---	---
	12X2	310-101792 **32.78**	---	330-101792 **69.93**	---	---

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Saddle (Soc) (continued)

	Size	CLASS 63 Disc Code: 340 Part Number Price Each	CLASS 100 Disc Code: 350 Part Number Price Each	CLASS 125 Disc Code: 360 Part Number Price Each	CLASS 160 Disc Code: 370 Part Number Price Each	CLASS 200 Disc Code: 380 Part Number Price Each
	**12X3**	310-101800 **26.77**	**---**	330-101800 **81.59**	---	---
	12X4	310-101807 **30.25**	**---**	330-101807 **93.25**	---	---
	12X6	310-101813 **31.47**	**---**	330-101813 **104.91**	---	---
	12X8	310-101818 **46.60**	**---**	330-101818 **116.54**	---	---
	12X10	310-101822 **72.27**	**---**	330-101822 **128.20**	---	---

Stub Saddle (Soc)

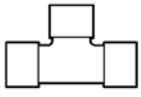
	**6**	310-101949 **51.25**	**---**	**---**	---	---
	6X2	310-101884 **33.76**	**---**	330-101884 **61.74**	---	---
	6X3	310-101892 **39.64**	**---**	330-101892 **67.57**	---	---
	6X4	310-101899 **45.46**	**---**	330-101899 **75.75**	---	---
	8	310-101950 **69.93**	**---**	**---**	---	---
	8X2	310-101885 **33.76**	**---**	330-101885 **61.74**	---	---
	8X3	310-101893 **39.64**	**---**	330-101893 **67.57**	---	---
	8X4	310-101900 **45.46**	**---**	330-101900 **75.75**	---	---
	8X6	310-101906 **51.25**	**---**	330-101906 **92.05**	---	---
	10	310-101951 **96.71**	**---**	**---**	---	---
	10X2	310-101886 **33.76**	**---**	330-101886 **61.74**	---	---
	10X3	310-101894 **39.64**	**---**	330-101894 **67.57**	---	---
	10X4	310-101901 **45.46**	**---**	330-101901 **75.75**	---	---
	10X6	310-101907 **51.25**	**---**	330-101907 **92.05**	---	---
	10X8	310-101912 **69.93**	**---**	330-101912 **106.03**	---	---
	12	310-101952 **121.25**	**---**	**---**	---	---
	12X2	310-101887 **33.76**	**---**	330-101887 **61.74**	---	---
	12X3	310-101895 **39.64**	**---**	330-101895 **67.57**	---	---
	12X4	310-101902 **45.46**	**---**	330-101902 **87.44**	---	---
	12X6	310-101908 **51.25**	**---**	330-101908 **92.05**	---	---
	12X8	310-101913 **69.93**	**---**	330-101913 **106.03**	---	---
	12X10	310-101917 **96.71**	**---**	330-101917 **111.86**	---	---

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Tee, Class 125 Molded					
12501-100	**10**	1	0	361	378.71
12501-120	**12**	1	0	361	568.02
90° Elbow, Class 125 Molded					
12506-100	**10**	1	0	361	317.65
12506-120	**12**	1	0	361	485.84
45° Elbow, Class 125 Molded					
12517-100	**10**	1	0	361	203.04
12517-120	**12**	1	0	361	297.73
Coupling, Class 125 Molded					
12529-100	**10**	1	0	361	98.39
12529-120	**12**	1	0	361	158.24
Reducer Coupling, Class 125 Molded					
12529-626	**10X6**	1	0	361	164.04
12529-628	**10X8**	1	0	361	102.16
12529-668	**12X8**	1	0	361	244.08
12529-670	**12X10**	1	0	361	194.32
Reducer Bushing, Class 125 Molded					
12537-626	**10X6**	1	2	361	155.73
12537-628	**10X8**	1	4	361	155.73
12537-668	**12X8**	1	2	361	280.33
12537-670	**12X10**	1	2	361	278.63

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

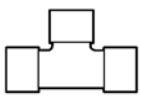
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

TEE (Soc x Soc x Soc)



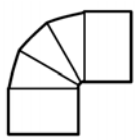
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
6	3701-060 **116.54**	3901-060 **202.68**
6X2	3701-528* **100.71**	3901-528 **151.01**
6X3	3701-530* **105.78**	3901-530 **158.12**
6X4	3701-532 **110.64**	3901-532 **164.16**
8	3701-080 **189.84**	3901-080 **321.71**
8X2	3701-578* **118.41**	3901-578 **211.51**
8X3	3701-580* **124.17**	3901-580 **238.31**
8X4	3701-582 **127.55**	3901-582 **243.62**
8X6	3701-585 **138.40**	3901-585 **252.93**
10	3701-100 **369.23**	3901-100 **501.78**
10X2	3701-621* **192.76**	3901-621 **298.43**
10X3	3701-623* **196.33**	3901-623 **325.04**
10X4	3701-624 **201.13**	3901-624 **367.71**
10X6	3701-626 **245.85**	3901-626 **449.32**
10X8	3701-628 **329.59**	3901-628 **470.85**
12	3701-120 **490.71**	3901-120 **691.36**
12X2	3701-661* **257.35**	3901-661 **369.58**
12X3	3701-663* **261.15**	3901-663 **430.71**
12X4	3701-664 **267.72**	3901-664 **489.34**
12X6	3701-666 **310.95**	3901-666 **569.33**
12X8	3701-668 **371.41**	3901-668 **626.84**
12X10	3701-670 **423.23**	3901-670 **635.05**
14	3701-140* **964.59**	3901-140 **1241.67**
14X2	3701-691* **408.13**	3901-691 **654.45**
14X3	3701-693* **451.72**	3901-693 **732.20**
14X4	3701-694* **503.61**	3901-694 **805.84**
14X6	3701-696* **591.03**	3901-696 **945.67**
14X8	3701-698* **704.67**	3901-698 **1133.01**
14X10	3701-700* **801.01**	3901-700 **1191.92**
14X12	3701-702* **947.58**	3901-702 **1203.49**
16	3701-160 **1365.40**	3901-160 **1956.12**
16X2	3701-751 **581.98**	3901-751 **839.04**
16X3	3701-753 **588.36**	3901-753 **928.06**
16X4	3701-754 **624.56**	3901-754 **999.23**
16X6	3701-756 **675.58**	3901-756 **1080.84**
16X8	3701-758 **790.88**	3901-758 **1266.11**
16X10	3701-760 **994.16**	3901-760 **1417.55**

TEE (Soc x Soc x Soc) (continued)



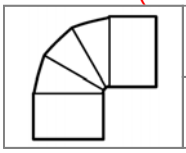
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
16X12	3701-762 **1128.88**	3901-762 **1797.08**
16X14	3701-764 **1339.73**	3901-764 **1858.28**
18	3701-180 **1696.84**	3901-180 **2111.91**
18X4	3701-784 **997.40**	3901-784 **1159.69**
18X6	3701-786 **1013.19**	3901-786 **1312.28**
18X8	3701-788 **1054.77**	3901-788 **1361.41**
18X10	3701-790 **1188.84**	3901-790 **1375.72**
18X12	3701-792 **1266.49**	3901-792 **1691.18**
18X14	3701-794 **1358.41**	3901-794 **1944.79**
18X16	3701-796 **1458.03**	3901-796 **1987.24**
20	3701-200 **2259.68**	3901-200 **3039.14**
20X4	3701-814 **1205.44**	3901-814 **1610.09**
20X6	3701-816 **1275.55**	3901-816 **1815.75**
20X8	3701-818 **1347.84**	3901-818 **2229.95**
20X10	3701-820 **1446.47**	3901-820 **2303.86**
20X12	3701-822 **1531.62**	3901-822 **2433.54**
20X14	3701-824 **1652.83**	3901-824 **2646.92**
20X16	3701-826 **1760.01**	3901-826 **2695.20**
20X18	3701-828 **1941.35**	3901-828 **2913.97**
24	3701-240 **2815.19**	3901-240 **3645.26**
24X4	3701-904 **1659.87**	3901-904 **1996.06**
24X6	3701-906 **1744.75**	3901-906 **2251.09**
24X8	3701-908 **1851.04**	3901-908 **2435.12**
24X10	3701-910 **1955.56**	3901-910 **2649.68**
24X12	3701-912 **2060.67**	3901-912 **2788.15**
24X14	3701-914 **2201.79**	3901-914 **3091.48**
24X16	3701-916 **2328.91**	3901-916 **3190.04**
24X18	3701-918 **2530.18**	3901-918 **3345.66**
24X20	3701-920 **2716.49**	3901-920 **3499.60**

90° ELBOW (Soc x Soc)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
6	3706-060 **115.05**	3906-060 **148.94**
8	3706-080 **159.83**	3906-080 **250.15**
10	3706-100 **252.65**	3906-100 **493.81**
12	3706-120 **388.64**	3906-120 **720.11**
14	3706-140* **520.49**	3906-140 **1059.49**
16	3706-160 **771.87**	3906-160 **1317.69**
18	3706-180 **1147.99**	3906-180 **1696.33**

90° ELBOW (Soc x Soc) (continued)



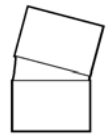
Size	SCH 40 LOW PR Disc Code: 390 Part Number Price Each	SCH 80 LOW PR Disc Code: 400 Part Number Price Each
20	3706-200 **1291.21**	3906-200 **2000.03**
24	3706-240 **1614.71**	3906-240 **2992.62**

11-1/4° ELBOW (Soc x Soc)



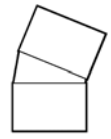
Size	SCH 40 LOW PR Disc Code: 390 Part Number Price Each	SCH 80 LOW PR Disc Code: 400 Part Number Price Each
4	3711-040 **41.13**	3911-040 **55.93**
6	3711-060 **66.07**	3911-060 **104.56**
8	3711-080 **111.69**	3911-080 **171.15**
10	3711-100 **168.54**	3911-100 **303.33**
12	3711-120 **266.62**	3911-120 **443.33**
14	3711-140 **419.17**	3911-140 **678.69**
16	3711-160 **571.40**	3911-160 **907.22**
18	3711-180 **639.49**	3911-180 **1171.17**
20	3711-200 **848.25**	3911-200 **1501.41**
24	3711-240 **1516.51**	3911-240 **1718.56**

15° ELBOW (Soc x Soc)



Size	SCH 40 LOW PR Disc Code: 390 Part Number Price Each	SCH 80 LOW PR Disc Code: 400 Part Number Price Each
4	3718-040 **41.13**	3918-040 **55.93**
6	3718-060 **66.07**	3918-060 **104.56**
8	3718-080 **111.69**	3918-080 **171.15**
10	3718-100 **168.54**	3918-100 **303.33**
12	3718-120 **266.62**	3918-120 **443.33**
14	3718-140 **419.17**	3918-140 **678.69**
16	3718-160 **571.40**	3918-160 **907.22**
18	3718-180 **639.49**	3918-180 **1171.17**
20	3718-200 **848.25**	3918-200 **1501.41**
24	3718-240 **1516.51**	3918-240 **1718.56**

22-1/2° ELBOW (Soc x Soc)



Size	SCH 40 LOW PR Disc Code: 390 Part Number Price Each	SCH 80 LOW PR Disc Code: 400 Part Number Price Each
4	3716-040 **41.13**	3916-040 **55.93**
6	3716-060 **66.07**	3916-060 **104.56**
8	3716-080 **111.69**	3916-080 **171.15**
10	3716-100* **168.54**	3916-100 **303.33**
12	3716-120* **266.62**	3916-120 **443.33**
14	3716-140* **419.17**	3916-140 **678.69**
16	3716-160 **571.40**	3916-160 **907.22**
18	3716-180 **686.21**	3916-180 **1171.17**
20	3716-200 **848.25**	3916-200 **1501.41**
24	3716-240 **1516.51**	3916-240 **1718.56**

22-1/2° STREET ELL (Spig x Soc)



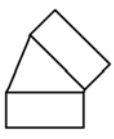
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
6	3742-060 **72.67**	3942-060 **114.98**
8	3742-080 **122.85**	3942-080 **188.25**
10	3742-100* **185.38**	3942-100 **333.67**
12	3742-120* **293.27**	3942-120 **487.67**
14	3742-140* **461.07**	3942-140 **746.57**
16	3742-160 **453.78**	3942-160 **997.94**
18	3742-180 **754.83**	3942-180 **1286.63**
20	3742-200 **1149.99**	3942-200 **1767.57**
24	3742-240 **1784.12**	3942-240 **2022.27**

30° ELBOW (Soc x Soc)



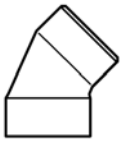
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
4	3715-040 **41.13**	3915-040 **55.93**
6	3715-060 **66.07**	3915-060 **104.56**
8	3715-080 **111.69**	3915-080 **171.15**
10	3715-100 **168.54**	3915-100 **303.33**
12	3715-120 **266.62**	3915-120 **443.33**
14	3715-140 **419.17**	3915-140 **678.69**
16	3715-160 **571.40**	3915-160 **907.22**
18	3715-180 **686.21**	3915-180 **1171.17**
20	3715-200 **848.25**	3915-200 **1501.41**
24	3715-240 **1516.51**	3915-240 **1718.56**

45° ELBOW (Soc x Soc)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
4	3717-040 **100.47**	3917-040 **122.94**
6	3717-060 **106.79**	3917-060 **175.23**
8	3717-080 **127.87**	3917-080 **188.29**
10	3717-100 **210.32**	3917-100 **344.93**
12	3717-120 **295.38**	3917-120 **493.09**
14	3717-140* **512.16**	3917-140 **708.63**
16	3717-160 **632.38**	3917-160 **917.65**
18	3717-180 **729.78**	3917-180 **1241.33**
20	3717-200 **996.44**	3917-200 **1559.17**
24	3717-240 **1324.03**	3917-240 **1835.55**

45° STREET ELL (Spig x Soc)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
4	3727-040 **100.47**	3927-040 **122.94**
6	3727-060 **106.79**	3927-060 **175.23**
8	3727-080 **127.87**	3927-080 **188.29**
10	3727-100* **210.32**	3927-100 **344.93**
12	3727-120* **295.38**	3927-120 **493.09**
14	3727-140* **512.16**	3927-140 **708.63**

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Spears® Manufacturing Company
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45° STREET ELL (Spig x Soc) (continued)



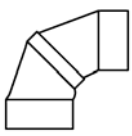
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
16	3727-160 **632.38**	3927-160 **917.65**
18	3727-180 **729.78**	3927-180 **1241.33**
20	3727-200 **996.44**	3927-200 **1559.17**
24	3727-240 **1324.03**	3927-240 **1835.55**

60° ELBOW (Soc x Soc)



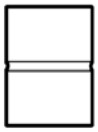
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
4	3724-040 **121.35**	---
6	3724-060* **127.62**	3924-060 **186.16**
8	3724-080* **182.08**	3924-080 **312.74**
10	3724-100* **305.13**	3924-100 **586.19**
12	3724-120* **399.78**	3924-120 **862.77**
14	3724-140* **732.80**	3924-140 **1253.71**
16	3724-160 **890.94**	3924-160 **1523.31**
18	3724-180 **1144.59**	3924-180 **1696.33**
20	3724-200 **1221.01**	3924-200 **2000.03**
24	3724-240 **1573.16**	3924-240 **2136.66**

90° STREET ELL (Spig x Soc)



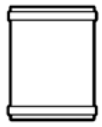
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
4	---	3909-040 **140.14**
6	3709-060* **122.13**	3909-060 **166.07**
8	3709-080* **168.00**	3909-080 **273.49**
10	3709-100* **280.72**	3909-100 **542.07**
12	3709-120* **409.11**	3909-120 **796.41**
14	3709-140* **565.74**	3909-140 **1163.83**
16	3709-160 **879.91**	3909-160 **1445.39**
18	3709-180 **1272.57**	3909-180 **1861.40**
20	3709-200 **1434.48**	3909-200 **2196.24**
24	3709-240 **1793.78**	3909-240 **2346.36**

COUPLING (Soc x Soc)



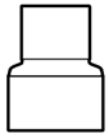
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
8	3729-080 **72.92**	3929-080 **161.42**
10	3729-100 **89.66**	3929-100 **175.80**
12	3729-120 **131.99**	3929-120 **202.64**
14	3729-140 **214.33**	3929-140 **405.21**
16	3729-160 **239.05**	3929-160 **481.75**
18	3729-180 **407.66**	3929-180 **949.59**
20	3729-200 **711.17**	3929-200 **1170.80**
24	3729-240 **987.67**	3929-240 **2019.72**

REPAIR COUPLING (Gasket x Gasket)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
4	3728-040 **70.67**	3928-040 **82.57**
6	3728-060 **98.31**	3928-060 **116.36**
8	3728-080 **154.75**	3928-080 **196.84**
10	3728-100 **204.17**	3928-100 **275.43**
12	3728-120 **256.14**	3928-120 **350.02**
14	3728-140 **444.46**	3928-140 **775.04**
16	3728-160 **654.84**	3928-160 **1162.79**
18	3728-180 **856.07**	3928-180 **1511.54**
20	3728-200 **1329.37**	3928-200 **1813.86**
24	3728-240 **1802.95**	3928-240 **2446.61**

REDUCER COUPLING (Soc x Soc)



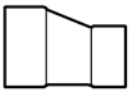
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
6X2	3729-528* **106.04**	3929-528 **183.86**
6X3	3729-530* **104.38**	3929-530 **135.82**
6X4	3729-532 **37.87**	3929-532 **89.36**
8X2	3729-578 **178.37**	3929-578 **248.39**
8X3	3729-580 **165.13**	3929-580 **217.09**
8X4	3729-582* **93.87**	3929-582 **171.56**
8X6	3729-585* **80.68**	3929-585 **157.88**
10X4	3729-624* **211.83**	3929-624 **403.03**
10X6	3729-626* **197.41**	3929-626 **321.58**
10X8	3729-628* **138.17**	3929-628 **171.88**
12X4	3729-664* **398.29**	3929-664 **579.08**
12X6	3729-666* **302.00**	3929-666 **477.46**
12X8	3729-668* **265.79**	3929-668 **414.33**
12X10	3729-670* **201.13**	3929-670 **254.49**
14X4	3729-694* **640.96**	3929-694 **783.55**
14X6	3729-696* **620.52**	3929-696 **699.88**
14X8	3729-698* **449.17**	3929-698 **688.42**
14X10	3729-700* **379.36**	3929-700 **581.19**
14X12	3729-702* **336.89**	3929-702 **371.54**
16X4	3729-754 **686.02**	3929-754 **1151.38**
16X6	3729-756 **631.89**	3929-756 **1079.43**
16X8	3729-758 **574.99**	3929-758 **1019.47**
16X10	3729-760 **513.52**	3929-760 **708.78**
16X12	3729-762 **466.20**	3929-762 **651.57**
16X14	3729-764 **404.32**	3929-764 **549.29**
18X6	3729-786 **1141.97**	3929-786 **1664.12**

REDUCER COUPLING (Soc x Soc) (continued)



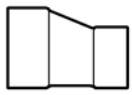
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
18X8	3729-788 **968.57**	3929-788 **1539.96**
18X10	3729-790 **903.76**	3929-790 **1415.22**
18X12	3729-792 **846.17**	3929-792 **1182.77**
18X14	3729-794 **780.37**	3929-794 **1145.33**
18X16	3729-796 **582.94**	3929-796 **978.99**
20X6	3729-816 **1430.35**	3929-816 **2340.06**
20X8	3729-818 **1385.24**	3929-818 **2312.98**
20X10	3729-820 **1214.44**	3929-820 **2295.79**
20X12	3729-822 **1197.80**	3929-822 **2153.01**
20X14	3729-824 **1183.01**	3929-824 **2135.89**
20X16	3729-826 **1116.02**	3929-826 **1710.54**
20X18	3729-828 **985.94**	3929-828 **1179.55**
24X6	3729-906 **2876.69**	3929-906 **3956.64**
24X8	3729-908 **2794.27**	3929-908 **3923.63**
24X10	3729-910 **2310.33**	3929-910 **3910.22**
24X12	3729-912 **2234.16**	3929-912 **3847.04**
24X14	3729-914 **2118.48**	3929-914 **3834.16**
24X16	3729-916 **1945.19**	3929-916 **3686.85**
24X18	3729-918 **1722.43**	3929-918 **2810.95**
24X20	3729-920 **1294.84**	3929-920 **2520.93**

ECCENTRIC REDUCER COUPLING (Soc x Soc)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
3X2	3729-338E **33.63**	3929-338E **46.85**
4X2	3729-420E[2] **45.67**	3929-420E[2] **119.53**
4X3	3729-422E **42.21**	3929-422E **55.31**
6X2	3729-528E[3*] **103.09**	3929-528E[3] **155.61**
6X3	3729-530E[2*] **94.96**	3929-530E[2] **151.18**
6X4	3729-532E[2] **47.48**	3929-532E **115.31**
8X3	3729-580E[3*] **195.86**	3929-580E[3] **219.72**
8X4	3729-582E[2*] **97.80**	3929-582E[2] **199.43**
8X6	3729-585E* **79.06**	3929-585E **153.36**
10X4	3729-624E[2*] **223.63**	3929-624E[3] **337.48**
10X6	3729-626E* **205.62**	3929-626E[2] **286.43**
10X8	3729-628E* **193.86**	3929-628E **264.67**
12X4	3729-664E[3*] **417.24**	3929-664E[4] **516.08**
12X6	3729-666E[2*] **342.84**	3929-666E[3] **424.73**
12X8	3729-668E[2*] **227.35**	3929-668E[2] **366.94**
12X10	3729-670E* **197.12**	3929-670E **234.55**

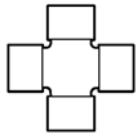
ECCENTRIC REDUCER COUPLING (Soc x Soc) (continued)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
14X6	3729-696E[3] **696.46**	3929-696E[4] **840.68**
14X8	3729-698E[3] **570.52**	3929-698E[3] **752.04**
14X10	3729-700E[2] **517.91**	3929-700E[2] **544.46**
14X12	3729-702E **316.62**	3929-702E **500.72**
16X6	3729-756E[3] **727.75**	3929-756E[5] **1553.20**
16X8	3729-758E[3] **717.55**	3929-758E[3] **1422.29**
16X10	3729-760E[2] **530.60**	3929-760E[3] **1034.67**
16X12	3729-762E **504.89**	3929-762E[2] **918.62**
16X14	3729-764E **448.63**	3929-764E **711.53**
18X6	3729-786E[4] **1034.39**	3929-786E[6] **2144.06**
18X8	3729-788E[4] **1019.07**	3929-788E[5] **2052.44**
18X10	3729-790E[3] **946.11**	3929-790E[4] **1917.95**
18X12	3729-792E[2] **853.85**	3929-792E[3] **1711.92**
18X14	3729-794E[2] **754.93**	3929-794E[2] **1411.37**
18X16	3729-796E **608.98**	3929-796E **1377.17**

2=Two-Step Design, 3=Three-Step Design, 4=Four-Step Design, 5=Five-Step Design, 6=Six−Step Design

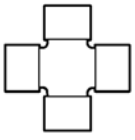
CROSS (Soc x Soc x Soc x Soc)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
4	3720-040 **256.96**	**---**
4X2	**---**	3920-420 **128.75**
4X3	**---**	3920-422 **141.68**
6	3720-060 **149.72**	3920-060 **349.19**
6X2	3720-528 **112.39**	3920-528 **180.92**
6X3	3720-530 **133.09**	3920-530 **203.92**
6X4	3720-532 **146.74**	3920-532 **251.77**
8	3720-080 **302.39**	3920-080 **420.56**
8X2	3720-578 **194.14**	3920-578 **228.28**
8X3	3720-580 **210.04**	3920-580 **242.52**
8X4	3720-582 **230.75**	3920-582 **260.17**
8X6	3720-585 **290.34**	3920-585 **337.18**
10	3720-100 **492.23**	3920-100 **899.75**
10X2	3720-621 **206.18**	3920-621 **413.19**
10X3	3720-623 **237.47**	3920-623 **478.12**
10X4	3720-624 **272.42**	3920-624 **490.23**
10X6	3720-626 **312.40**	3920-626 **599.02**
10X8	3720-628 **438.59**	3920-628 **790.47**
12	3720-120 **648.92**	3920-120 **1267.88**
12X2	3720-661 **272.48**	3920-661 **559.38**

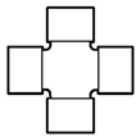
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CROSS (Soc x Soc x Soc x Soc) (continued)



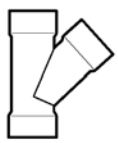
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
12X3	3720-663 **305.82**	3920-663 **625.27**
12X4	3720-664 **323.31**	3920-664 **652.46**
12X6	3720-666 **395.19**	3920-666 **757.61**
12X8	3720-668 **480.24**	3920-668 **905.02**
12X10	3720-670 **557.41**	3920-670 **1031.31**
14	3720-140 **1077.99**	3920-140 **2254.40**
14X2	3720-691 **531.85**	3920-691 **849.16**
14X3	3720-693 **592.18**	3920-693 **935.49**
14X4	3720-694 **657.46**	3920-694 **1045.88**
14X6	3720-696 **739.54**	3920-696 **1173.82**
14X8	3720-698 **852.00**	3920-698 **1350.13**
14X10	3720-700 **968.07**	3920-700 **1616.67**
14X12	3720-702 **1024.18**	3920-702 **1894.16**
16	3720-160 **1574.71**	3920-160 **2858.03**
16X2	3720-751 **729.81**	3920-751 **1151.72**
16X3	3720-753 **802.09**	3920-753 **1258.22**
16X4	3720-754 **832.74**	3920-754 **1332.33**
16X6	3720-756 **900.67**	3920-756 **1441.11**
16X8	3720-758 **1055.08**	3920-758 **1688.09**
16X10	3720-760 **1256.81**	3920-760 **1943.99**
16X12	3720-762 **1444.37**	3920-762 **2309.34**
16X14	3720-764 **1516.61**	3920-764 **2723.43**
18	3720-180 **2230.98**	3920-180 **3528.26**
18X4	3720-784 **902.92**	3920-784 **1681.48**
18X6	3720-786 **1273.02**	3920-786 **1921.92**
18X8	3720-788 **1442.29**	3920-788 **2292.78**
18X10	3720-790 **1559.93**	3920-790 **2598.43**
18X12	3720-792 **1658.54**	3920-792 **2882.65**
18X14	3720-794 **1747.72**	3920-794 **3080.84**
18X16	3720-796 **2028.41**	3920-796 **3346.52**
20	3720-200 **3795.47**	3920-200 **5956.54**
20X4	3720-814 **1594.17**	3920-814 **2209.73**
20X6	3720-816 **1655.49**	3920-816 **2390.37**
20X8	3720-818 **2056.62**	3920-818 **2601.24**
20X10	3720-820 **2349.43**	3920-820 **3053.78**
20X12	3720-822 **2451.60**	3920-822 **3380.00**
20X14	3720-824 **2666.73**	3920-824 **3651.53**

CROSS (Soc x Soc x Soc x Soc) (continued)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
20X16	3720-826 **2999.00**	3920-826 **4060.64**
20X18	3720-828 **3244.81**	3920-828 **4843.02**
24	3720-240 **4998.78**	3920-240 **7220.62**
24X4	3720-904 **2037.68**	3920-904 **2439.46**
24X6	3720-906 **2419.31**	3920-906 **2781.83**
24X8	3720-908 **2575.44**	3920-908 **3630.64**
24X10	3720-910 **2753.22**	3920-910 **3940.81**
24X12	3720-912 **3032.13**	3920-912 **4520.83**
24X14	3720-914 **3118.65**	3920-914 **5306.63**
24X16	3720-916 **3456.43**	3920-916 **5626.53**
24X18	3720-918 **3860.25**	3920-918 **5909.71**
24X20	3720-920 **4674.09**	3920-920 **6293.38**

WYE (Soc x Soc x Soc)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
8	3775-080 **209.76**	3975-080 **350.74**
8X2	3775-578 **136.85**	3975-578 **248.07**
8X3	3775-580* **142.23**	3975-580 **274.40**
8X4	3775-582 **148.11**	3975-582 **281.26**
8X6	3775-585 **194.39**	3975-585 **284.15**
10	3775-100 **419.06**	3975-100 **626.00**
10X2	3775-621* **245.03**	3975-621 **361.17**
10X3	3775-623* **256.64**	3975-623 **376.44**
10X4	3775-624 **263.74**	3975-624 **387.13**
10X6	3775-626* **318.00**	3975-626 **489.19**
10X8	3775-628 **389.76**	3975-628 **532.74**
12	3775-120 **552.81**	3975-120 **947.13**
12X2	3775-661* **291.54**	3975-661 **607.47**
12X3	3775-663* **302.76**	3975-663 **614.74**
12X4	3775-664* **313.12**	3975-664 **625.08**
12X6	3775-666* **373.12**	3975-666 **681.95**
12X8	3775-668* **414.57**	3975-668 **757.75**
12X10	3775-670 **487.17**	3975-670 **890.28**
14	3775-140* **1189.69**	3975-140 **1438.45**
14X2	3775-691* **591.88**	3975-691 **972.38**
14X3	3775-693* **620.75**	3975-693 **987.19**
14X4	3775-694* **631.15**	3975-694 **995.13**
14X6	3775-696* **681.23**	3975-696 **1089.96**
14X8	3775-698* **779.57**	3975-698 **1207.59**

WYE (Soc x Soc x Soc) (continued)

Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
14X10	3775-700* **833.31**	3975-700 **1260.87**
14X12	3775-702* **1065.43**	3975-702 **1336.37**
16	3775-160 **1513.68**	3975-160 **2214.28**
16X2	3775-751 **672.53**	3975-751 **1127.92**
16X3	3775-753 **711.52**	3975-753 **1142.14**
16X4	3775-754 **743.78**	3975-754 **1190.00**
16X6	3775-756* **800.48**	3975-756 **1280.73**
16X8	3775-758 **912.76**	3975-758 **1349.63**
16X10	3775-760 **1096.51**	3975-760 **1477.49**
16X12	3775-762 **1194.15**	3975-762 **1979.85**
16X14	3775-764 **1447.09**	3975-764 **2107.73**
18	3775-180 **1740.56**	3975-180 **2974.62**
18X4	3775-784 **1192.58**	3975-784 **1538.05**
18X6	3775-786* **1211.79**	3975-786 **1563.84**
18X8	3775-788 **1251.29**	3975-788 **1685.66**
18X10	3775-790 **1331.20**	3975-790 **1734.58**
18X12	3775-792 **1457.91**	3975-792 **1909.45**
18X14	3775-794 **1593.88**	3975-794 **2319.26**
18X16	3775-796 **1689.82**	3975-796 **2796.19**
20	3775-200 **2565.14**	3975-200 **5072.83**
20X4	3775-814 **1381.98**	3975-814 **1793.96**
20X6	3775-816* **1387.01**	3975-816 **1940.66**
20X8	3775-818 **1489.00**	3975-818 **2412.35**
20X10	3775-820 **1540.94**	3975-820 **2510.82**
20X12	3775-822 **1739.48**	3975-822 **2764.03**
20X14	3775-824 **2023.20**	3975-824 **3203.15**
20X16	3775-826 **2222.05**	3975-826 **3289.81**
20X18	3775-828 **2401.45**	3975-828 **3438.77**
24	3775-240 **3191.86**	3975-240 **5712.04**
24X4	3775-904 **1723.04**	3975-904 **2554.79**
24X6	3775-906* **1900.94**	3975-906 **2806.17**
24X8	3775-908 **2014.48**	3975-908 **3248.67**
24X10	3775-910 **2165.69**	3975-910 **3293.49**
24X12	3775-912 **2234.85**	3975-912 **3612.23**
24X14	3775-914 **2341.93**	3975-914 **3809.29**
24X16	3775-916 **2474.88**	3975-916 **4369.00**
24X18	3775-918 **2647.92**	3975-918 **5130.01**

WYE (Soc x Soc x Soc) (continued)

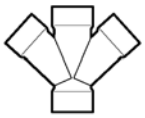
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
24X20	3775-920 **2988.49**	3975-920 **5297.14**

DOUBLE WYE (Soc x Soc x Soc x Soc)

Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
6	3776-060 **155.37**	3976-060 **198.88**
6X4	3776-532 **121.56**	3976-532 **184.73**
8	3776-080* **299.66**	3976-080 **383.58**
8X2	3776-578* **163.16**	3976-578 **219.36**
8X3	3776-580* **174.32**	3976-580 **227.07**
8X4	3776-582* **181.71**	3976-582 **258.49**
8X6	3776-585* **229.44**	3976-585 **330.33**
10	3776-100* **439.52**	3976-100 **703.25**
10X2	3776-621* **232.25**	3976-621 **389.52**
10X3	3776-623* **242.66**	3976-623 **399.37**
10X4	3776-624* **254.81**	3976-624 **407.68**
10X6	3776-626* **315.23**	3976-626 **504.35**
10X8	3776-628* **381.69**	3976-628 **609.32**
12	3776-120* **717.57**	3976-120 **1150.75**
12X2	3776-661* **314.38**	3976-661 **642.34**
12X3	3776-663* **324.72**	3976-663 **648.00**
12X4	3776-664* **331.99**	3976-664 **653.56**
12X6	3776-666* **395.19**	3976-666 **768.96**
12X8	3776-668* **504.43**	3976-668 **934.14**
12X10	3776-670* **645.79**	3976-670 **1054.87**
14	3776-140* **1272.75**	3976-140 **1598.38**
14X2	3776-691* **606.52**	3976-691 **1137.37**
14X3	3776-693* **634.83**	3976-693 **1170.91**
14X4	3776-694* **661.52**	3976-694 **1180.98**
14X6	3776-696* **736.45**	3976-696 **1207.59**
14X8	3776-698* **853.44**	3976-698 **1278.63**
14X10	3776-700* **901.92**	3976-700 **1349.63**
14X12	3776-702* **1168.07**	3976-702 **1520.15**
16	3776-160 **1670.46**	3976-160 **2484.22**
16X2	3776-751 **784.36**	3976-751 **1334.44**
16X3	3776-753 **831.25**	3976-753 **1345.64**
16X4	3776-754 **843.55**	3976-754 **1349.63**
16X6	3776-756* **892.40**	3976-756 **1427.78**

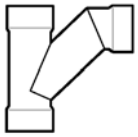
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DOUBLE WYE (Soc x Soc x Soc x Soc) (continued)



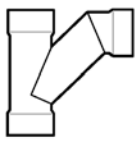
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
16X8	3776-758 **976.72**	3976-758 **1562.74**
16X10	3776-760 **1196.29**	3976-760 **1782.95**
16X12	3776-762 **1289.27**	3976-762 **1917.94**
16X14	3776-764 **1543.98**	3976-764 **2280.96**
18	3776-180 **2333.55**	3976-180 **3280.63**
18X4	3776-784 **1287.89**	3976-784 **1727.73**
18X6	3776-786* **1308.65**	3976-786 **2003.32**
18X8	3776-788 **1403.52**	3976-788 **2055.40**
18X10	3776-790 **1708.82**	3976-790 **2073.48**
18X12	3776-792 **1740.68**	3976-792 **2227.84**
18X14	3776-794 **1869.08**	3976-794 **2534.33**
18X16	3776-796 **1918.24**	3976-796 **2962.29**
20	3776-200 **3034.21**	3976-200 **5298.00**
20X4	3776-814 **1460.77**	3976-814 **2126.39**
20X6	3776-816* **1536.66**	3976-816 **2261.37**
20X8	3776-818 **1562.11**	3976-818 **2445.94**
20X10	3776-820 **2057.14**	3976-820 **2805.79**
20X12	3776-822 **2251.89**	3976-822 **3113.53**
20X14	3776-824 **2459.34**	3976-824 **3268.93**
20X16	3776-826 **2683.66**	3976-826 **4157.19**
20X18	3776-828 **2935.08**	3976-828 **4420.68**
24	3776-240 **3777.89**	3976-240 **6837.86**
24X4	3776-904 **1882.15**	3976-904 **2764.03**
24X6	3776-906* **2081.00**	3976-906 **3032.61**
24X8	3776-908 **2135.27**	3976-908 **3319.81**
24X10	3776-910 **2246.54**	3976-910 **3489.24**
24X12	3776-912 **2378.29**	3976-912 **3578.63**
24X14	3776-914 **2527.22**	3976-914 **4817.62**
24X16	3776-916 **2749.42**	3976-916 **6018.28**
24X18	3776-918 **2776.77**	3976-918 **6102.65**
24X20	3776-920 **3568.63**	3976-920 **6434.39**

COMBO WYE (Soc x Soc x Soc)



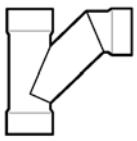
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
6	3777-060* **197.67**	3977-060 **316.37**
6X4	3777-532* **154.00**	3977-532 **277.92**
8	3777-080* **315.23**	3977-080 **521.24**
8X2	3777-578* **172.85**	3977-578 **343.01**
8X3	3777-580* **215.39**	3977-580 **351.41**

COMBO WYE (Soc x Soc x Soc) (continued)



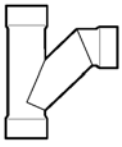
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
8X4	3777-582 **219.41**	3977-582 **359.07**
8X6	3777-585 **248.63**	3977-585 **397.77**
10	3777-100* **563.03**	3977-100 **994.48**
10X2	3777-621* **257.13**	3977-621 **416.77**
10X3	3777-623* **269.31**	3977-623 **432.57**
10X4	3777-624* **275.26**	3977-624 **440.43**
10X6	3777-626* **346.29**	3977-626 **554.08**
10X8	3777-628* **430.89**	3977-628 **724.55**
12	3777-120* **817.35**	3977-120 **1248.39**
12X2	3777-661* **416.68**	3977-661 **680.56**
12X3	3777-663* **425.48**	3977-663 **691.80**
12X4	3777-664* **435.06**	3977-664 **696.16**
12X6	3777-666* **483.43**	3977-666 **777.87**
12X8	3777-668* **542.36**	3977-668 **923.48**
12X10	3777-670* **674.80**	3977-670 **1079.76**
14	3777-140* **1415.75**	3977-140 **1909.08**
14X2	3777-691* **626.97**	3977-691 **1048.79**
14X3	3777-693* **641.13**	3977-693 **1060.88**
14X4	3777-694* **678.06**	3977-694 **1084.80**
14X6	3777-696* **771.52**	3977-696 **1234.46**
14X8	3777-698* **848.81**	3977-698 **1291.93**
14X10	3777-700* **1004.55**	3977-700 **1469.55**
14X12	3777-702* **1185.38**	3977-702 **1784.76**
16	3777-160 **1662.43**	3977-160 **2659.93**
16X2	3777-751 **814.92**	3977-751 **1325.36**
16X3	3777-753 **830.01**	3977-753 **1345.57**
16X4	3777-754 **849.79**	3977-754 **1359.59**
16X6	3777-756 **898.79**	3977-756 **1438.08**
16X8	3777-758 **988.82**	3977-758 **1633.82**
16X10	3777-760 **1118.77**	3977-760 **1790.06**
16X12	3777-762 **1200.98**	3977-762 **1921.45**
16X14	3777-764 **1474.36**	3977-764 **2313.36**
18	3777-180 **2093.48**	3977-180 **3631.98**
18X4	3777-784 **1276.35**	3977-784 **1611.27**
18X6	3777-786 **1316.11**	3977-786 **1709.26**
18X8	3777-788 **1351.61**	3977-788 **1883.52**
18X10	3777-790 **1438.76**	3977-790 **2025.79**

COMBO WYE (Soc x Soc x Soc) (continued)



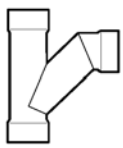
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
18X12	3777-792 **1495.47**	3977-792 **2673.08**
18X14	3777-794 **1698.01**	3977-794 **3058.29**
18X16	3777-796 **1931.37**	3977-796 **3288.36**
20	3777-200 **2712.71**	3977-200 **6691.89**
20X4	3777-814 **1411.21**	3977-814 **1782.68**
20X6	3777-816 **1528.28**	3977-816 **1974.18**
20X8	3777-818 **1557.25**	3977-818 **2459.12**
20X10	3777-820 **1632.52**	3977-820 **2748.87**
20X12	3777-822 **2051.89**	3977-822 **3247.02**
20X14	3777-824 **2160.07**	3977-824 **3578.75**
20X16	3777-826 **2416.89**	3977-826 **4557.56**
20X18	3777-828 **2469.81**	3977-828 **6231.77**
24	3777-240 **3664.36**	3977-240 **7126.43**
24X4	3777-904 **1881.34**	3977-904 **2885.79**
24X6	3777-906 **2054.36**	3977-906 **3070.49**
24X8	3777-908 **2291.68**	3977-908 **3201.52**
24X10	3777-910 **2453.49**	3977-910 **3784.07**
24X12	3777-912 **2555.56**	3977-912 **4073.09**
24X14	3777-914 **2602.65**	3977-914 **4859.00**
24X16	3777-916 **3009.60**	3977-916 **5672.76**
24X18	3777-918 **3215.08**	3977-918 **6430.65**
24X20	3777-920 **3266.33**	3977-920 **6825.43**

SANITARY TEE (Soc x Soc x Soc)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
6	3790-060 **169.97**	3990-060 **285.86**
6X4	3790-532* **127.34**	3990-532 **225.95**
8	3790-080* **311.44**	3990-080 **517.57**
8X2	3790-578* **159.32**	3990-578 **283.11**
8X3	3790-580* **210.53**	3990-580 **322.46**
8X4	3790-582* **199.78**	3990-582 **343.80**
8X6	3790-585* **239.32**	3990-585 **382.83**
10	3790-100* **556.81**	3990-100 **983.05**
10X2	3790-621* **244.49**	3990-621 **381.09**
10X3	3790-623* **248.63**	3990-623 **391.93**
10X4	3790-624* **266.39**	3990-624 **426.22**
10X6	3790-626* **342.84**	3990-626 **539.87**
10X8	3790-628* **419.78**	3990-628 **695.38**
12	3790-120* **797.33**	3990-120 **1213.62**

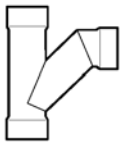
SANITARY TEE (Soc x Soc x Soc) (continued)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
12X2	3790-661* **410.27**	3990-661 **644.24**
12X3	3790-663* **414.95**	3990-663 **654.80**
12X4	3790-664* **427.08**	3990-664 **681.95**
12X6	3790-666* **465.66**	3990-666 **763.64**
12X8	3790-668* **518.46**	3990-668 **907.05**
12X10	3790-670* **653.08**	3990-670 **1050.83**
14	3790-140* **1404.22**	3990-140 **1860.47**
14X2	3790-691* **556.37**	3990-691 **1015.99**
14X3	3790-693* **603.71**	3990-693 **1031.33**
14X4	3790-694* **609.61**	3990-694 **1052.04**
14X6	3790-696* **727.02**	3990-696 **1199.59**
14X8	3790-698* **829.24**	3990-698 **1261.87**
14X10	3790-700* **996.07**	3990-700 **1434.56**
14X12	3790-702* **1174.27**	3990-702 **1724.44**
16	3790-160 **1806.57**	3990-160 **2220.06**
16X2	3790-751 **809.62**	3990-751 **1254.55**
16X3	3790-753 **817.55**	3990-753 **1305.12**
16X4	3790-754 **835.94**	3990-754 **1346.08**
16X6	3790-756 **888.59**	3990-756 **1424.26**
16X8	3790-758 **979.97**	3990-758 **1594.93**
16X10	3790-760 **1107.38**	3990-760 **1762.53**
16X12	3790-762 **1188.93**	3990-762 **1894.79**
16X14	3790-764 **1424.99**	3990-764 **2067.36**
18	3790-180 **1850.13**	3990-180 **3588.76**
18X4	3790-784 **985.94**	3990-784 **1559.91**
18X6	3790-786 **1057.42**	3990-786 **1654.58**
18X8	3790-788 **1326.53**	3990-788 **1845.04**
18X10	3790-790 **1509.42**	3990-790 **1991.28**
18X12	3790-792 **1550.57**	3990-792 **2593.32**
18X14	3790-794 **1767.65**	3990-794 **2667.31**
18X16	3790-796 **1908.27**	3990-796 **3268.85**
20	3790-200 **2499.27**	3990-200 **6588.60**
20X4	3790-814 **1043.73**	3990-814 **1748.97**
20X6	3790-816 **1194.28**	3990-816 **1900.33**
20X8	3790-818 **1288.25**	3990-818 **2414.16**
20X10	3790-820 **1453.43**	3990-820 **2684.02**
20X12	3790-822 **1627.40**	3990-822 **3173.36**

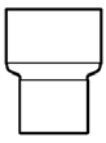
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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

SANITARY TEE (Soc x Soc x Soc) (continued)



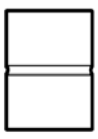
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
20X14	3790-824 **1935.36**	3990-824 **3442.62**
20X16	3790-826 **2231.48**	3990-826 **4476.45**
20X18	3790-828 **2404.57**	3990-828 **6197.12**
24	3790-240 **3270.01**	3990-240 **7070.49**
24X4	3790-904 **1528.33**	3990-904 **2818.45**
24X6	3790-906 **1696.79**	3990-906 **2955.02**
24X8	3790-908 **2251.96**	3990-908 **3091.56**
24X10	3790-910 **2434.87**	3990-910 **3703.02**
24X12	3790-912 **2544.26**	3990-912 **3988.01**
24X14	3790-914 **2595.61**	3990-914 **4807.60**
24X16	3790-916 **2976.74**	3990-916 **5518.78**
24X18	3790-918 **3120.46**	3990-918 **6346.68**
24X20	3790-920 **3233.16**	3990-920 **6703.52**

IPS X SEWER ADAPTER (Soc x Spig)



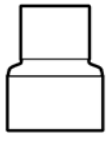
Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
4	3729-04013IXS **17.51**	---
6	3729-06013IXS **36.95**	---
8	3729-08013IXS **71.53**	---
10	3729-10013IXS **193.69**	---
12	3729-12013IXS **210.73**	---

IPS X SEWER ADAPTER (Soc x Soc)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
4	3729-040IXS **30.11**	---
6	3729-060IXS **55.01**	---
8	3729-080IXS **88.39**	---
10	3729-100IXS **142.93**	---
12	3729-120IXS **211.54**	---

IPS X SEWER ADAPTER (Spig x Soc)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
4	3729-04031IXS **22.98**	---
6	3729-06031IXS **53.21**	---
8	3729-08031IXS **87.15**	---
10	3729-10031IXS **135.67**	---
12	3729-12031IXS **201.51**	---

CAP (Soc)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
10	3747-100* **116.99**	3947-100 **228.44**
12	3747-120* **147.74**	3947-120 **395.49**
14	3747-140* **251.21**	3947-140 **448.54**
16	3747-160 **321.58**	3947-160 **592.00**
18	3747-180 **355.83**	3947-180 **777.78**
20	3747-200 **626.78**	3947-200 **898.79**

CAP (Soc) (continued)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
24	3747-240 **926.49**	3947-240 **1042.91**

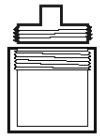
SPIGOT PLUG (Spigot)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
6	3749-060 **45.22**	3949-060 **136.77**
8	3749-080 **115.51**	3949-080 **230.84**
10	3749-100 **131.73**	3949-100 **291.85**
12	3749-120 **188.81**	3949-120 **464.69**
14	3749-140 **320.34**	---
16	3749-160 **390.34**	3949-160 **675.96**

CLEANOUT ADAPTER WITH PLUG (Spig x Cleanout)

SOLD AS SET ONLY (Non-Pressure Rated)



Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
2	---	3978-020* **96.63**
3	---	3978-030* **123.80**
4	---	3978-040* **155.58**
5	---	3978-050* **165.38**
6	---	3978-060* **175.20**
8	---	3978-080* **278.69**
10	---	3978-100* **465.43**
12	---	3978-120* **649.82**
14	---	3978-140* **805.83**
16	---	3978-160* **1584.95**
18	---	3978-180* **1897.85**
24	---	3978-240* **2332.21**

* HDPE Plug

Saddle

IPS O.D.x Socket Schedule 40



Non Pressure Rated

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3763-528	**6X2**	1	10	390	35.83
3763-530	**6X3**	1	10	390	36.68
3763-532	**6X4**	1	10	390	38.15
3763-578	**8X2**	1	10	390	52.81
3763-580	**8X3**	1	10	390	53.33
3763-582	**8X4**	1	10	390	53.98
3763-585	**8X6**	1	10	390	55.51
3763-621	**10X2**	1	5	390	66.74
3763-623	**10X3**	1	10	390	67.67
3763-624	**10X4**	1	8	390	67.95
3763-626	**10X6**	1	5	390	79.52
3763-628	**10X8**	1	5	390	127.61
3763-661	**12X2**	1	5	390	78.93
3763-663	**12X3**	1	10	390	80.39
3763-664	**12X4**	1	10	390	82.11
3763-666	**12X6**	1	4	390	95.22

Saddle (continued)
IPS O.D.x Socket Schedule 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3763-668	**12X8**	1	5	390	151.80
3763-670	**12X10**	1	4	390	219.51
3763-691	**14X2**	1	10	390	101.16
3763-693	**14X3**	1	8	390	168.11
3763-694	**14X4**	1	5	390	115.48
3763-696	**14X6**	1	10	390	117.80
3763-698	**14X8**	1	4	390	180.77
3763-700	**14X10**	1	3	390	232.54
3763-702	**14X12**	1	4	390	256.32
3763-751	**16X2**	1	5	390	107.66
3763-753	**16X3**	1	5	390	109.14
3763-754	**16X4**	1	10	390	110.80
3763-756	**16X6**	1	3	390	126.94
3763-758	**16X8**	1	3	390	188.67
3763-760	**16X10**	1	0	390	239.80
3763-762	**16X12**	1	0	390	265.75
3763-764	**16X14**	1	0	390	276.25
3763-781	**18X2**	1	5	390	157.82
3763-783	**18X3**	1	5	390	160.89
3763-784	**18X4**	1	10	390	163.35
3763-786	**18X6**	1	4	390	173.93
3763-788	**18X8**	1	0	390	253.79
3763-790	**18X10**	1	0	390	281.34
3763-792	**18X12**	1	0	390	289.11
3763-794	**18X14**	1	0	390	436.77
3763-796	**18X16**	1	0	390	570.18
3763-811	**20X2**	1	8	390	158.19
3763-813	**20X3**	1	4	390	160.36
3763-814	**20X4**	1	4	390	168.19
3763-816	**20X6**	1	0	390	175.66
3763-818	**20X8**	1	5	390	253.46
3763-820	**20X10**	1	0	390	281.35
3763-822	**20X12**	1	0	390	401.12
3763-824	**20X14**	1	0	390	437.67
3763-826	**20X16**	1	0	390	572.27
3763-828	**20X18**	1	0	390	648.56
3763-901	**24X2**	1	5	390	150.91
3763-903	**24X3**	1	5	390	166.80
3763-904	**24X4**	1	5	390	168.65
3763-906	**24X6**	1	5	390	178.92
3763-908	**24X8**	1	5	390	255.81
3763-910	**24X10**	1	0	390	284.56
3763-912	**24X12**	1	0	390	402.54
3763-914	**24X14**	1	0	390	450.77
3763-916	**24X16**	1	0	390	506.61
3763-918	**24X18**	1	0	390	682.74
3763-920	**24X20**	1	0	390	764.43

Saddle
IPS O.D. x Sockett Schedule 80



Non Pressure Rated

3963-528	**6X2**	1	5	400	60.22
3963-530	**6X3**	1	5	400	60.76
3963-532	**6X4**	1	5	400	61.28
3963-578	**8X2**	1	10	400	85.07
3963-580	**8X3**	1	8	400	86.11
3963-582	**8X4**	1	5	400	87.03
3963-585	**8X6**	1	5	400	89.06
3963-621	**10X2**	1	8	400	78.77
3963-623	**10X3**	1	5	400	79.88
3963-624	**10X4**	1	8	400	80.22
3963-626	**10X6**	1	5	400	93.28
3963-628	**10X8**	1	5	400	149.49
3963-661	**12X2**	1	10	400	93.06

Saddle (continued)
IPS O.D. x Sockett Schedule 80

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3963-663	**12X3**	1	8	400	93.61
3963-664	**12X4**	1	5	400	94.40
3963-666	**12X6**	1	6	400	109.48
3963-668	**12X8**	1	2	400	172.28
3963-670	**12X10**	1	4	400	210.86
3963-691	**14X2**	1	5	400	114.61
3963-693	**14X3**	1	8	400	115.68
3963-694	**14X4**	1	5	400	116.24
3963-696	**14X6**	1	5	400	132.32
3963-698	**14X8**	1	4	400	202.85
3963-700	**14X10**	1	3	400	259.77
3963-702	**14X12**	1	4	400	286.83
3963-751	**16X2**	1	8	400	120.69
3963-753	**16X3**	1	8	400	121.74
3963-754	**16X4**	1	10	400	122.43
3963-756	**16X6**	1	10	400	139.54
3963-758	**16X8**	1	3	400	208.08
3963-760	**16X10**	1	0	400	264.96
3963-762	**16X12**	1	0	400	294.28
3963-764	**16X14**	1	0	400	306.66
3963-781	**18X2**	1	8	400	177.31
3963-783	**18X3**	1	4	400	178.38
3963-784	**18X4**	1	5	400	179.19
3963-786	**18X6**	1	5	400	189.65
3963-788	**18X8**	1	5	400	278.65
3963-790	**18X10**	1	0	400	308.91
3963-792	**18X12**	1	0	400	440.55
3963-794	**18X14**	1	0	400	479.48
3963-796	**18X16**	1	0	400	627.41
3963-811	**20X2**	1	0	400	179.33
3963-813	**20X3**	1	4	400	179.75
3963-814	**20X4**	1	4	400	181.91
3963-816	**20X6**	1	0	400	190.82
3963-818	**20X8**	1	0	400	275.64
3963-820	**20X10**	1	5	400	305.68
3963-822	**20X12**	1	0	400	436.02
3963-824	**20X14**	1	0	400	475.54
3963-826	**20X16**	1	0	400	623.04
3963-828	**20X18**	1	0	400	707.43
3963-901	**24X2**	1	5	400	182.47
3963-903	**24X3**	1	5	400	183.44
3963-904	**24X4**	1	5	400	184.28
3963-906	**24X6**	1	5	400	192.29
3963-908	**24X8**	1	5	409	259.52
3963-910	**24X10**	1	5	400	307.00
3963-912	**24X12**	1	0	409	407.26
3963-914	**24X14**	1	0	400	473.88
3963-916	**24X16**	1	0	400	648.61
3963-918	**24X18**	1	0	400	731.41
3963-920	**24X20**	1	0	400	823.20

Stub Saddle
IPS O.D x Socket Schedule 40



Non Pressure Rated

3765-528	**6X2**	1	8	390	38.53
3765-530	**6X3**	1	4	390	39.44
3765-532	**6X4**	1	10	390	41.03
3765-578	**8X2**	1	10	390	56.79
3765-580	**8X3**	1	4	390	57.34
3765-582	**8X4**	1	8	390	58.04
3765-585	**8X6**	1	4	390	59.69
3765-621	**10X2**	1	5	390	71.75
3765-623	**10X3**	1	5	390	72.77
3765-624	**10X4**	1	4	390	92.22

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Stub Saddle (continued)

IPS O.D x Socket Schedule 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3765-626	**10X6**	1	2	390	85.51
3765-628	**10X8**	1	2	390	137.21
3765-661	**12X2**	1	6	390	84.86
3765-663	**12X3**	1	5	390	86.44
3765-664	**12X4**	1	2	390	88.28
3765-666	**12X6**	1	2	390	102.32
3765-668	**12X8**	1	2	390	163.23
3765-670	**12X10**	1	2	390	236.03
3765-691	**14X2**	1	10	390	108.77
3765-693	**14X3**	1	2	390	110.00
3765-694	**14X4**	1	5	390	111.38
3765-696	**14X6**	1	3	390	126.67
3765-698	**14X8**	1	0	390	193.11
3765-700	**14X10**	1	0	390	250.04
3765-702	**14X12**	1	0	390	275.62
3765-751	**16X2**	1	4	390	115.76
3765-753	**16X3**	1	5	390	117.35
3765-754	**16X4**	1	5	390	119.13
3765-756	**16X6**	1	2	390	136.48
3765-758	**16X8**	1	0	390	202.87
3765-760	**16X10**	1	0	390	257.85
3765-762	**16X12**	1	0	390	285.75
3765-764	**16X14**	1	0	390	297.04
3765-781	**18X2**	1	4	390	169.68
3765-783	**18X3**	1	10	390	133.45
3765-784	**18X4**	1	10	390	175.64
3765-786	**18X6**	1	2	390	187.02
3765-788	**18X8**	1	0	390	272.88
3765-790	**18X10**	1	0	390	302.51
3765-792	**18X12**	1	0	390	310.86
3765-794	**18X14**	1	0	390	469.63
3765-796	**18X16**	1	0	390	612.58
3765-811	**20X2**	1	0	390	170.09
3765-813	**20X3**	1	2	390	172.43
3765-814	**20X4**	1	2	390	180.85
3765-816	**20X6**	1	0	390	188.89
3765-818	**20X8**	1	0	390	272.54
3765-820	**20X10**	1	0	390	302.52
3765-822	**20X12**	1	0	390	431.33
3765-824	**20X14**	1	0	390	470.62
3765-826	**20X16**	1	0	390	615.34
3765-828	**20X18**	1	0	390	697.38
3765-901	**24X2**	1	4	390	162.25
3765-903	**24X3**	1	2	390	179.34
3765-904	**24X4**	1	4	390	181.35
3765-906	**24X6**	1	3	390	192.39
3765-908	**24X8**	1	0	390	275.06
3765-910	**24X10**	1	0	390	305.96
3765-912	**24X12**	1	0	390	432.83
3765-914	**24X14**	1	0	390	484.71
3765-916	**24X16**	1	0	390	544.75
3765-918	**24X18**	1	0	390	734.11
3765-920	**24X20**	1	0	390	821.97

Stub Saddle

IPS O.D.x Socket Schedule 80



Non Pressure Rated

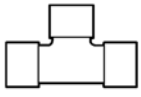
3965-528	**6X2**	1	10	400	64.76
3965-530	**6X3**	1	3	400	65.32
3965-532	**6X4**	1	10	400	65.91
3965-578	**8X2**	1	5	409	85.99
3965-580	**8X3**	1	4	400	92.59
3965-582	**8X4**	1	6	400	93.58
3965-585	**8X6**	1	4	400	95.77

Stub Saddle (continued)

IPS O.D.x Socket Schedule 80

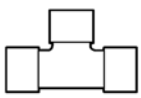
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3965-621	**10X2**	1	6	400	84.71
3965-623	**10X3**	1	6	409	80.75
3965-624	**10X4**	1	4	400	86.26
3965-626	**10X6**	1	4	400	100.29
3965-628	**10X8**	1	4	400	160.74
3965-661	**12X2**	1	2	400	100.06
3965-663	**12X3**	1	2	400	101.13
3965-664	**12X4**	1	2	400	101.51
3965-666	**12X6**	1	2	400	117.73
3965-668	**12X8**	1	2	400	185.25
3965-670	**12X10**	1	2	400	271.75
3965-691	**14X2**	1	4	400	123.25
3965-693	**14X3**	1	0	400	124.40
3965-694	**14X4**	1	5	400	124.98
3965-696	**14X6**	1	2	400	142.27
3965-700	**14X10**	1	0	400	279.33
3965-702	**14X12**	1	0	400	308.41
3965-751	**16X2**	1	5	400	129.77
3965-753	**16X3**	1	4	400	130.89
3965-754	**16X4**	1	3	400	131.63
3965-756	**16X6**	1	2	400	150.03
3965-758	**16X8**	1	3	400	223.75
3965-760	**16X10**	1	3	400	284.92
3965-762	**16X12**	1	0	400	316.43
3965-764	**16X14**	1	0	400	329.76
3965-781	**18X2**	1	2	400	190.64
3965-783	**18X3**	1	0	400	191.80
3965-784	**18X4**	1	0	400	192.67
3965-786	**18X6**	1	2	400	203.93
3965-788	**18X8**	1	0	400	299.62
3965-790	**18X10**	1	0	400	332.16
3965-792	**18X12**	1	0	400	473.71
3965-794	**18X14**	1	0	400	515.58
3965-796	**18X16**	1	0	400	674.63
3965-811	**20X2**	1	0	400	192.82
3965-813	**20X3**	1	2	400	193.27
3965-814	**20X4**	1	0	400	195.59
3965-816	**20X6**	1	0	400	205.17
3965-818	**20X8**	1	0	400	296.39
3965-820	**20X10**	1	0	400	328.69
3965-822	**20X12**	1	0	400	468.84
3965-824	**20X14**	1	0	400	511.33
3965-826	**20X16**	1	0	400	669.96
3965-828	**20X18**	1	0	400	760.68
3965-901	**24X2**	1	5	400	196.20
3965-903	**24X3**	1	5	400	197.24
3965-904	**24X4**	1	5	400	198.15
3965-906	**24X6**	1	3	400	206.78
3965-908	**24X8**	1	0	400	296.86
3965-910	**24X10**	1	0	400	330.12
3965-912	**24X12**	1	0	409	437.93
3965-914	**24X14**	1	0	400	509.55
3965-916	**24X16**	1	0	400	697.43
3965-918	**24X18**	1	0	400	786.46
3965-920	**24X20**	1	0	400	885.16

TEE (Soc x Soc x Soc)



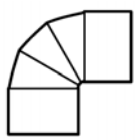
Size	SCH 40 LOW PR Disc Code: 390 Part Number Price Each	SCH 80 LOW PR Disc Code: 400 Part Number Price Each
6	3701-060 **116.54**	3901-060 **202.68**
6X2	3701-528* **100.71**	3901-528 **151.01**
6X3	3701-530* **105.78**	3901-530 **158.12**
6X4	3701-532 **110.64**	3901-532 **164.16**
8	3701-080 **189.84**	3901-080 **321.71**
8X2	3701-578* **118.41**	3901-578 **211.51**
8X3	3701-580* **124.17**	3901-580 **238.31**
8X4	3701-582 **127.55**	3901-582 **243.62**
8X6	3701-585 **138.40**	3901-585 **252.93**
10	3701-100 **369.23**	3901-100 **501.78**
10X2	3701-621* **192.76**	3901-621 **298.43**
10X3	3701-623* **196.33**	3901-623 **325.04**
10X4	3701-624 **201.13**	3901-624 **367.71**
10X6	3701-626 **245.85**	3901-626 **449.32**
10X8	3701-628 **329.59**	3901-628 **470.85**
12	3701-120 **490.71**	3901-120 **691.36**
12X2	3701-661* **257.35**	3901-661 **369.58**
12X3	3701-663* **261.15**	3901-663 **430.71**
12X4	3701-664 **267.72**	3901-664 **489.34**
12X6	3701-666 **310.95**	3901-666 **569.33**
12X8	3701-668 **371.41**	3901-668 **626.84**
12X10	3701-670 **423.23**	3901-670 **635.05**
14	3701-140* **964.59**	3901-140 **1241.67**
14X2	3701-691* **408.13**	3901-691 **654.45**
14X3	3701-693* **451.72**	3901-693 **732.20**
14X4	3701-694* **503.61**	3901-694 **805.84**
14X6	3701-696* **591.03**	3901-696 **945.67**
14X8	3701-698* **704.67**	3901-698 **1133.01**
14X10	3701-700* **801.01**	3901-700 **1191.92**
14X12	3701-702* **947.58**	3901-702 **1203.49**
16	3701-160 **1365.40**	3901-160 **1956.12**
16X2	3701-751 **581.98**	3901-751 **839.04**
16X3	3701-753 **588.36**	3901-753 **928.06**
16X4	3701-754 **624.56**	3901-754 **999.23**
16X6	3701-756 **675.58**	3901-756 **1080.84**
16X8	3701-758 **790.88**	3901-758 **1266.11**
16X10	3701-760 **994.16**	3901-760 **1417.55**

TEE (Soc x Soc x Soc) (continued)



Size	SCH 40 LOW PR Disc Code: 390 Part Number Price Each	SCH 80 LOW PR Disc Code: 400 Part Number Price Each
16X12	3701-762 **1128.88**	3901-762 **1797.08**
16X14	3701-764 **1339.73**	3901-764 **1858.28**
18	3701-180 **1696.84**	3901-180 **2111.91**
18X4	3701-784 **997.40**	3901-784 **1159.69**
18X6	3701-786 **1013.19**	3901-786 **1312.28**
18X8	3701-788 **1054.77**	3901-788 **1361.41**
18X10	3701-790 **1188.84**	3901-790 **1375.72**
18X12	3701-792 **1266.49**	3901-792 **1691.18**
18X14	3701-794 **1358.41**	3901-794 **1944.79**
18X16	3701-796 **1458.03**	3901-796 **1987.24**
20	3701-200 **2259.68**	3901-200 **3039.14**
20X4	3701-814 **1205.44**	3901-814 **1610.09**
20X6	3701-816 **1275.55**	3901-816 **1815.75**
20X8	3701-818 **1347.84**	3901-818 **2229.95**
20X10	3701-820 **1446.47**	3901-820 **2303.86**
20X12	3701-822 **1531.62**	3901-822 **2433.54**
20X14	3701-824 **1652.83**	3901-824 **2646.92**
20X16	3701-826 **1760.01**	3901-826 **2695.20**
20X18	3701-828 **1941.35**	3901-828 **2913.97**
24	3701-240 **2815.19**	3901-240 **3645.26**
24X4	3701-904 **1659.87**	3901-904 **1996.06**
24X6	3701-906 **1744.75**	3901-906 **2251.09**
24X8	3701-908 **1851.04**	3901-908 **2435.12**
24X10	3701-910 **1955.56**	3901-910 **2649.68**
24X12	3701-912 **2060.67**	3901-912 **2788.15**
24X14	3701-914 **2201.79**	3901-914 **3091.48**
24X16	3701-916 **2328.91**	3901-916 **3190.04**
24X18	3701-918 **2530.18**	3901-918 **3345.66**
24X20	3701-920 **2716.49**	3901-920 **3499.60**

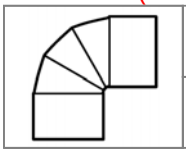
90° ELBOW (Soc x Soc)



Size	SCH 40 LOW PR Disc Code: 390 Part Number Price Each	SCH 80 LOW PR Disc Code: 400 Part Number Price Each
6	3706-060 **115.05**	3906-060 **148.94**
8	3706-080 **159.83**	3906-080 **250.15**
10	3706-100 **252.65**	3906-100 **493.81**
12	3706-120 **388.64**	3906-120 **720.11**
14	3706-140* **520.49**	3906-140 **1059.49**
16	3706-160 **771.87**	3906-160 **1317.69**
18	3706-180 **1147.99**	3906-180 **1696.33**

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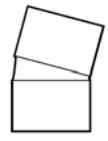
90° ELBOW (Soc x Soc) (continued)

	Size	SCH 40 LOW PR Disc Code: 390 Part Number Price Each	SCH 80 LOW PR Disc Code: 400 Part Number Price Each
	20	3706-200 **1291.21**	3906-200 **2000.03**
	24	3706-240 **1614.71**	3906-240 **2992.62**

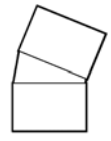
11-1/4° ELBOW (Soc x Soc)

	Size	SCH 40 LOW PR Disc Code: 390 Part Number Price Each	SCH 80 LOW PR Disc Code: 400 Part Number Price Each
	4	3711-040 **41.13**	3911-040 **55.93**
	6	3711-060 **66.07**	3911-060 **104.56**
	8	3711-080 **111.69**	3911-080 **171.15**
	10	3711-100 **168.54**	3911-100 **303.33**
	12	3711-120 **266.62**	3911-120 **443.33**
	14	3711-140 **419.17**	3911-140 **678.69**
	16	3711-160 **571.40**	3911-160 **907.22**
	18	3711-180 **639.49**	3911-180 **1171.17**
	20	3711-200 **848.25**	3911-200 **1501.41**
	24	3711-240 **1516.51**	3911-240 **1718.56**

15° ELBOW (Soc x Soc)

	Size	SCH 40 LOW PR Disc Code: 390 Part Number Price Each	SCH 80 LOW PR Disc Code: 400 Part Number Price Each
	4	3718-040 **41.13**	3918-040 **55.93**
	6	3718-060 **66.07**	3918-060 **104.56**
	8	3718-080 **111.69**	3918-080 **171.15**
	10	3718-100 **168.54**	3918-100 **303.33**
	12	3718-120 **266.62**	3918-120 **443.33**
	14	3718-140 **419.17**	3918-140 **678.69**
	16	3718-160 **571.40**	3918-160 **907.22**
	18	3718-180 **639.49**	3918-180 **1171.17**
	20	3718-200 **848.25**	3918-200 **1501.41**
	24	3718-240 **1516.51**	3918-240 **1718.56**

22-1/2° ELBOW (Soc x Soc)

	Size	SCH 40 LOW PR Disc Code: 390 Part Number Price Each	SCH 80 LOW PR Disc Code: 400 Part Number Price Each
	4	3716-040 **41.13**	3916-040 **55.93**
	6	3716-060 **66.07**	3916-060 **104.56**
	8	3716-080 **111.69**	3916-080 **171.15**
	10	3716-100* **168.54**	3916-100 **303.33**
	12	3716-120* **266.62**	3916-120 **443.33**
	14	3716-140* **419.17**	3916-140 **678.69**
	16	3716-160 **571.40**	3916-160 **907.22**
	18	3716-180 **686.21**	3916-180 **1171.17**
	20	3716-200 **848.25**	3916-200 **1501.41**
	24	3716-240 **1516.51**	3916-240 **1718.56**

22-1/2° STREET ELL (Spig x Soc)

	Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
	6	3742-060 **72.67**	3942-060 **114.98**
	8	3742-080 **122.85**	3942-080 **188.25**
	10	3742-100* **185.38**	3942-100 **333.67**
	12	3742-120* **293.27**	3942-120 **487.67**
	14	3742-140* **461.07**	3942-140 **746.57**
	16	3742-160 **453.78**	3942-160 **997.94**
	18	3742-180 **754.83**	3942-180 **1286.63**
	20	3742-200 **1149.99**	3942-200 **1767.57**
	24	3742-240 **1784.12**	3942-240 **2022.27**

30° ELBOW (Soc x Soc)

	Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
	4	3715-040 **41.13**	3915-040 **55.93**
	6	3715-060 **66.07**	3915-060 **104.56**
	8	3715-080 **111.69**	3915-080 **171.15**
	10	3715-100 **168.54**	3915-100 **303.33**
	12	3715-120 **266.62**	3915-120 **443.33**
	14	3715-140 **419.17**	3915-140 **678.69**
	16	3715-160 **571.40**	3915-160 **907.22**
	18	3715-180 **686.21**	3915-180 **1171.17**
	20	3715-200 **848.25**	3915-200 **1501.41**
	24	3715-240 **1516.51**	3915-240 **1718.56**

45° ELBOW (Soc x Soc)

	Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
	6	3717-060 **106.79**	3917-060 **175.23**
	8	3717-080 **127.87**	3917-080 **188.29**
	10	3717-100 **210.32**	3917-100 **344.93**
	12	3717-120 **295.38**	3917-120 **493.09**
	14	3717-140* **512.16**	3917-140 **708.63**
	16	3717-160 **632.38**	3917-160 **917.65**
	18	3717-180 **729.78**	3917-180 **1241.33**
	20	3717-200 **996.44**	3917-200 **1559.17**
	24	3717-240 **1324.03**	3917-240 **1835.55**

60° ELBOW (Soc x Soc)

	Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
	6	3724-060* **127.62**	3924-060 **186.16**
	8	3724-080* **182.08**	3924-080 **312.74**
	10	3724-100* **305.13**	3924-100 **586.19**
	12	3724-120* **399.78**	3924-120 **862.77**
	14	3724-140* **732.80**	3924-140 **1253.71**
	16	3724-160 **890.94**	3924-160 **1523.31**
	18	3724-180 **1144.59**	3924-180 **1696.33**

60° ELBOW (Soc x Soc) (continued)

Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
20	3724-200 **1221.01**	3924-200 **2000.03**
24	3724-240 **1573.16**	3924-240 **2136.66**

90° STREET ELL (Spig x Soc)

Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
4	---	3909-040 **140.14**
6	3709-060* **122.13**	3909-060 **166.07**
8	3709-080* **168.00**	3909-080 **273.49**
10	3709-100* **280.72**	3909-100 **542.07**
12	3709-120* **409.11**	3909-120 **796.41**
14	3709-140* **565.74**	3909-140 **1163.83**
16	3709-160 **879.91**	3909-160 **1445.39**
18	3709-180 **1272.57**	3909-180 **1861.40**
20	3709-200 **1434.48**	3909-200 **2196.24**
24	3709-240 **1793.78**	3909-240 **2346.36**

45° STREET ELL (Spig x Soc)

Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
4	3727-040 **100.47**	3927-040 **122.94**
6	3727-060 **106.79**	3927-060 **175.23**
8	3727-080 **127.87**	3927-080 **188.29**
10	3727-100* **210.32**	3927-100 **344.93**
12	3727-120* **295.38**	3927-120 **493.09**
14	3727-140* **512.16**	3927-140 **708.63**
16	3727-160 **632.38**	3927-160 **917.65**
18	3727-180 **729.78**	3927-180 **1241.33**
20	3727-200 **996.44**	3927-200 **1559.17**
24	3727-240 **1324.03**	3927-240 **1835.55**

COUPLING (Soc x Soc)

Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
8	3729-080 **72.92**	3929-080 **161.42**
10	3729-100 **89.66**	3929-100 **175.80**
12	3729-120 **131.99**	3929-120 **202.64**
14	3729-140 **214.33**	3929-140 **405.21**
16	3729-160 **239.05**	3929-160 **481.75**
18	3729-180 **407.66**	3929-180 **949.59**
20	3729-200 **711.17**	3929-200 **1170.80**
24	3729-240 **987.67**	3929-240 **2019.72**

REPAIR COUPLING (Gasket x Gasket)

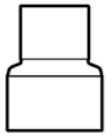
Size	SCH 40 LOW PR Disc Code: 390 Part Number Price Each	SCH 80 LOW PR Disc Code: 400 Part Number Price Each
4	3728-040 **70.67**	3928-040 **82.57**
6	3728-060 **98.31**	3928-060 **116.36**
8	3728-080 **154.75**	3928-080 **196.84**
10	3728-100 **204.17**	3928-100 **275.43**
12	3728-120 **256.14**	3928-120 **350.02**
14	3728-140 **444.46**	3928-140 **775.04**
16	3728-160 **654.84**	3928-160 **1162.79**
18	3728-180 **856.07**	3928-180 **1511.54**
20	3728-200 **1329.37**	3928-200 **1813.86**
24	3728-240 **1802.95**	3928-240 **2446.61**

REDUCER COUPLING (Soc x Soc)

Size	SCH 40 DWV Disc Code: 390 Part Number Price Each	SCH 80 DWV Disc Code: 400 Part Number Price Each
6X2	3729-528* **106.04**	3929-528 **183.86**
6X3	3729-530* **104.38**	3929-530 **135.82**
6X4	3729-532 **37.87**	3929-532 **89.36**
8X2	3729-578 **178.37**	3929-578 **248.39**
8X3	3729-580 **165.13**	3929-580 **217.09**
8X4	3729-582* **93.87**	3929-582 **171.56**
8X6	3729-585* **80.68**	3929-585 **157.88**
10X4	3729-624* **211.83**	3929-624 **403.03**
10X6	3729-626* **197.41**	3929-626 **321.58**
10X8	3729-628* **138.17**	3929-628 **171.88**
12X4	3729-664* **398.29**	3929-664 **579.08**
12X6	3729-666* **302.00**	3929-666 **477.46**
12X8	3729-668* **265.79**	3929-668 **414.33**
12X10	3729-670* **201.13**	3929-670 **254.49**
14X4	3729-694* **640.96**	3929-694 **783.55**
14X6	3729-696* **620.52**	3929-696 **699.88**
14X8	3729-698* **449.17**	3929-698 **688.42**
14X10	3729-700* **379.36**	3929-700 **581.19**
14X12	3729-702* **336.89**	3929-702 **371.54**
16X4	3729-754 **686.02**	3929-754 **1151.38**
16X6	3729-756 **631.89**	3929-756 **1079.43**
16X8	3729-758 **574.99**	3929-758 **1019.47**
16X10	3729-760 **513.52**	3929-760 **708.78**
16X12	3729-762 **466.20**	3929-762 **651.57**
16X14	3729-764 **404.32**	3929-764 **549.29**
18X6	3729-786 **1141.97**	3929-786 **1664.12**

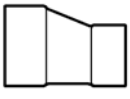
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REDUCER COUPLING (Soc x Soc) (continued)



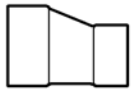
Size	SCH 40 LOW PR Disc Code: 390 Part Number Price Each	SCH 80 LOW PR Disc Code: 400 Part Number Price Each
18X8	3729-788 **968.57**	3929-788 **1539.96**
18X10	3729-790 **903.76**	3929-790 **1415.22**
18X12	3729-792 **846.17**	3929-792 **1182.77**
18X14	3729-794 **780.37**	3929-794 **1145.33**
18X16	3729-796 **582.94**	3929-796 **978.99**
20X6	3729-816 **1430.35**	3929-816 **2340.06**
20X8	3729-818 **1385.24**	3929-818 **2312.98**
20X10	3729-820 **1214.44**	3929-820 **2295.79**
20X12	3729-822 **1197.80**	3929-822 **2153.01**
20X14	3729-824 **1183.01**	3929-824 **2135.89**
20X16	3729-826 **1116.02**	3929-826 **1710.54**
20X18	3729-828 **985.94**	3929-828 **1179.55**
24X6	3729-906 **2876.69**	3929-906 **3956.64**
24X8	3729-908 **2794.27**	3929-908 **3923.63**
24X10	3729-910 **2310.33**	3929-910 **3910.22**
24X12	3729-912 **2234.16**	3929-912 **3847.04**
24X14	3729-914 **2118.48**	3929-914 **3834.16**
24X16	3729-916 **1945.19**	3929-916 **3686.85**
24X18	3729-918 **1722.43**	3929-918 **2810.95**
24X20	3729-920 **1294.84**	3929-920 **2520.93**

ECCENTRIC REDUCER COUPLING (Soc x Soc)



Size	SCH 40 LOW PR Disc Code: 390 Part Number Price Each	SCH 80 LOW PR Disc Code: 400 Part Number Price Each
3X2	3729-338E **33.63**	3929-338E **46.85**
4X2	3729-420E[2] **45.67**	3929-420E[2] **119.53**
4X3	3729-422E **42.21**	3929-422E **55.31**
6X2	3729-528E[3*] **103.09**	3929-528E[3] **155.61**
6X3	3729-530E[2*] **94.96**	3929-530E[2] **151.18**
6X4	3729-532E[2] **47.48**	3929-532E **115.31**
8X3	3729-580E[3*] **195.86**	3929-580E[3] **219.72**
8X4	3729-582E[2*] **97.80**	3929-582E[2] **199.43**
8X6	3729-585E* **79.06**	3929-585E **153.36**
10X4	3729-624E[2*] **223.63**	3929-624E[3] **337.48**
10X6	3729-626E* **205.62**	3929-626E[2] **286.43**
10X8	3729-628E* **193.86**	3929-628E **264.67**
12X4	3729-664E[3*] **417.24**	3929-664E[4] **516.08**
12X6	3729-666E[2*] **342.84**	3929-666E[3] **424.73**
12X8	3729-668E[2*] **227.35**	3929-668E[2] **366.94**
12X10	3729-670E* **197.12**	3929-670E **234.55**

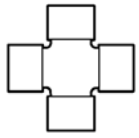
ECCENTRIC REDUCER COUPLING (Soc x Soc) (continued)



Size	SCH 40 LOW PR Disc Code: 390 Part Number Price Each	SCH 80 LOW PR Disc Code: 400 Part Number Price Each
14X6	3729-696E[3] **696.46**	3929-696E[4] **840.68**
14X8	3729-698E[3] **570.52**	3929-698E[3] **752.04**
14X10	3729-700E[2] **517.91**	3929-700E[2] **544.46**
14X12	3729-702E **316.62**	3929-702E **500.72**
16X6	3729-756E[3] **727.75**	3929-756E[5] **1553.20**
16X8	3729-758E[3] **717.55**	3929-758E[3] **1422.29**
16X10	3729-760E[2] **530.60**	3929-760E[3] **1034.67**
16X12	3729-762E **504.89**	3929-762E[2] **918.62**
16X14	3729-764E **448.63**	3929-764E **711.53**
18X6	3729-786E[4] **1034.39**	3929-786E[6] **2144.06**
18X8	3729-788E[4] **1019.07**	3929-788E[5] **2052.44**
18X10	3729-790E[3] **946.11**	3929-790E[4] **1917.95**
18X12	3729-792E[2] **853.85**	3929-792E[3] **1711.92**
18X14	3729-794E[2] **754.93**	3929-794E[2] **1411.37**
18X16	3729-796E **608.98**	3929-796E **1377.17**

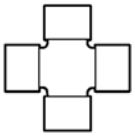
2=Two-Step Design, 3=Three-Step Design, 4=Four-Step Design, 5=Five-Step Design, 6=Six−Step Design

CROSS (Soc x Soc x Soc x Soc)



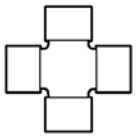
Size		
4X2	---	3920-420 **128.75**
4X3	---	3920-422 **141.68**
6	3720-060 **149.72**	3920-060 **349.19**
6X2	3720-528 **112.39**	3920-528 **180.92**
6X3	3720-530 **133.09**	3920-530 **203.92**
6X4	3720-532 **146.74**	3920-532 **251.77**
8	3720-080 **302.39**	3920-080 **420.56**
8X2	3720-578 **194.14**	3920-578 **228.28**
8X3	3720-580 **210.04**	3920-580 **242.52**
8X4	3720-582 **230.75**	3920-582 **260.17**
8X6	3720-585 **290.34**	3920-585 **337.18**
10	3720-100 **492.23**	3920-100 **899.75**
10X2	3720-621 **206.18**	3920-621 **413.19**
10X3	3720-623 **237.47**	3920-623 **478.12**
10X4	3720-624 **272.42**	3920-624 **490.23**
10X6	3720-626 **312.40**	3920-626 **599.02**
10X8	3720-628 **438.59**	3920-628 **790.47**
12	3720-120 **648.92**	3920-120 **1267.88**
12X2	3720-661 **272.48**	3920-661 **559.38**
12X3	3720-663 **305.82**	3920-663 **625.27**

CROSS (Soc x Soc x Soc x Soc) (continued)



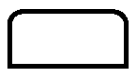
Size	SCH 40 LOW PR Disc Code: 390 Part Number Price Each	SCH 80 LOW PR Disc Code: 400 Part Number Price Each
12X4	3720-664 **323.31**	3920-664 **652.46**
12X6	3720-666 **395.19**	3920-666 **757.61**
12X8	3720-668 **480.24**	3920-668 **905.02**
12X10	3720-670 **557.41**	3920-670 **1031.31**
14	3720-140 **1077.99**	3920-140 **2254.40**
14X2	3720-691 **531.85**	3920-691 **849.16**
14X3	3720-693 **592.18**	3920-693 **935.49**
14X4	3720-694 **657.46**	3920-694 **1045.88**
14X6	3720-696 **739.54**	3920-696 **1173.82**
14X8	3720-698 **852.00**	3920-698 **1350.13**
14X10	3720-700 **968.07**	3920-700 **1616.67**
14X12	3720-702 **1024.18**	3920-702 **1894.16**
16	3720-160 **1574.71**	3920-160 **2858.03**
16X2	3720-751 **729.81**	3920-751 **1151.72**
16X3	3720-753 **802.09**	3920-753 **1258.22**
16X4	3720-754 **832.74**	3920-754 **1332.33**
16X6	3720-756 **900.67**	3920-756 **1441.11**
16X8	3720-758 **1055.08**	3920-758 **1688.09**
16X10	3720-760 **1256.81**	3920-760 **1943.99**
16X12	3720-762 **1444.37**	3920-762 **2309.34**
16X14	3720-764 **1516.61**	3920-764 **2723.43**
18	3720-180 **2230.98**	3920-180 **3528.26**
18X4	3720-784 **902.92**	3920-784 **1681.48**
18X6	3720-786 **1273.02**	3920-786 **1921.92**
18X8	3720-788 **1442.29**	3920-788 **2292.78**
18X10	3720-790 **1559.93**	3920-790 **2598.43**
18X12	3720-792 **1658.54**	3920-792 **2882.65**
18X14	3720-794 **1747.72**	3920-794 **3080.84**
18X16	3720-796 **2028.41**	3920-796 **3346.52**
20	3720-200 **3795.47**	3920-200 **5956.54**
20X4	3720-814 **1594.17**	3920-814 **2209.73**
20X6	3720-816 **1655.49**	3920-816 **2390.37**
20X8	3720-818 **2056.62**	3920-818 **2601.24**
20X10	3720-820 **2349.43**	3920-820 **3053.78**
20X12	3720-822 **2451.60**	3920-822 **3380.00**
20X14	3720-824 **2666.73**	3920-824 **3651.53**
20X16	3720-826 **2999.00**	3920-826 **4060.64**

CROSS (Soc x Soc x Soc x Soc) (continued)



Size	SCH 40 LOW PR Disc Code: 390 Part Number Price Each	SCH 80 LOW PR Disc Code: 400 Part Number Price Each
20X18	3720-828 **3244.81**	3920-828 **4843.02**
24	3720-240 **4998.78**	3920-240 **7220.62**
24X4	3720-904 **2037.68**	3920-904 **2439.46**
24X6	3720-906 **2419.31**	3920-906 **2781.83**
24X8	3720-908 **2575.44**	3920-908 **3630.64**
24X10	3720-910 **2753.22**	3920-910 **3940.81**
24X12	3720-912 **3032.13**	3920-912 **4520.83**
24X14	3720-914 **3118.65**	3920-914 **5306.63**
24X16	3720-916 **3456.43**	3920-916 **5626.53**
24X18	3720-918 **3860.25**	3920-918 **5909.71**
24X20	3720-920 **4674.09**	3920-920 **6293.38**

CAP (Soc)



Size	SCH 40 LOW PR Disc Code: 390 Part Number Price Each	SCH 80 LOW PR Disc Code: 400 Part Number Price Each
10	3747-100* **116.99**	3947-100 **228.44**
12	3747-120* **147.74**	3947-120 **395.49**
14	3747-140* **251.21**	3947-140 **448.54**
16	3747-160 **321.58**	3947-160 **592.00**
18	3747-180 **355.83**	3947-180 **777.78**
20	3747-200 **626.78**	3947-200 **898.79**
24	3747-240 **926.49**	3947-240 **1042.91**

SPIGOT PLUG (Spigot)



Size	SCH 40 LOW PR Disc Code: 390 Part Number Price Each	SCH 80 LOW PR Disc Code: 400 Part Number Price Each
6	3749-060 **45.22**	3949-060 **136.77**
8	3749-080 **115.51**	3949-080 **230.84**
10	3749-100 **131.73**	3949-100 **291.85**
12	3749-120 **188.81**	3949-120 **464.69**
14	3749-140 **320.34**	---
16	3749-160 **390.34**	3949-160 **675.96**

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

TECHNICAL INFORMATION

MATERIALS

THERMOPLASTICS

UPVC — All PVC referenced in this publication is unplasticized PVC, commonly referred to as UPVC.
PVC — Poly Vinyl Chloride
PVC is one of the most specified thermoplastics for piping system components, including valves, fittings, flanges and many specialty products. PVC has excellent chemical and corrosion resistance to a broad range of fluids including water, deionized water, most mineral acids, bases, salts and paraffinic hydrocarbon solutions. PVC is not recommended for use with chlorinated or aromatic hydrocarbons, esters or polar solvents such as ketones. Spears® PVC materials conform to ASTM Cell Classification 12454-B (formerly designated as Type I, Grade 1). The maximum recommended service temperature of PVC products is 60°C (140°F).
CPVC — Chlorinated Poly Vinyl Chloride
Chlorinated PVC is used for higher temperature applications than PVC, especially for handling hot corrosive liquids. With similar chemical and corrosion resistance to PVC, increased chlorine content gives CPVC superior thermal resistance. CPVC is not recommended for use with chlorinated or aromatic hydrocarbons, esters, or polar solvents such as ketones. Spears® CPVC materials conform to ASTM Cell Classification 23447-B (formerly designated as Type IV, Grade 1). The maximum recommended service temperature of CPVC products is 93°C (200°F).

ELASTOMERS

EPR (EPDM) Ethylene propylene rubber
Used in O-ring seals, EPR is recommended for water, chlorinated water, dilute acids and alkalines, alcohols, and has excellent resistance to ozone. EPR is not recommended for petroleum oils, di-ester lubricants, strong acids, or strong alkalines. The maximum recommended service temperature of EPR is 149°C (300°F).
FKM — Fluorocarbon elastomer
Used in O-ring seals, FKM exhibits a very broad range of chemical resistance, including petroleum oils, di-ester based lubricants, silicate fluids and greases, halogenated hydrocarbons and mineral acids. FKM is not recommended for ketones, amines, anhydrous ammonia, hot hydrofluoric or chlorosulfonic acids or automotive brake fluids. The maximum recommended service temperature of FKM is 204°C (400°F).
NITRILE (Buna-N) — Nitrile elastomer
Used in O-ring seals, nitrile elastomers are recommended for petroleum oils and fluids, silicone oils and greases, Di-ester based lubricants, ethylene glycol based fluids and cold water. Nitrile is not recommended for phosphate ester hydraulic fluids, halogenated hydrocarbons, strong acids, ketone, ozone or automotive brake fluids. The maximum recommended service temperature of nitrile is 135°C (275°F).

IMPORTANT

SPECIFICATION STANDARDS ORIGIN

Not all metric fitting sizes are the same. Today's global markets have varying standards, norms and interpretations of metric sizing. Identification of the standards origin for which fittings are being specified is essential in assuring that the proper fitting is obtained for each application.

METRIC SIZE DIAMETERS: ACTUAL (O.D.) vs. NOMINAL (I.D.)

Pipe and fitting sizes are specified according to a diameter. It is important to know if a specification of size is an actual O.D. (d), or a nominal diameter (DN) which is based on pipe I.D.
Where applicable, Spears® metric socket fittings in this price schedule have size columns to indicate both actual "d" and nominal "DN". It is always best to identify the actual pipe O.D. being used in order to select the proper fitting.

THREADS

Spears® metric thread fittings use BSP (British Standard Pipe) threads designated in inch-sizes, which also conform to ISO 7/1 metric threads. ASTM Iron Pipe Size (IPS) threads use NPT (National Pipe Thread) threads which are also designated as inch size, conforming to ASTM F 1498. BSP threads are not compatible with NPT threads.

SPEARS® METRIC FITTINGS

PN16 PVC AND CPVC METRIC FITTINGS (PG 190/192)

Injection Molded.

Size Range:	20mm through 63mm socket, actual "d" 1/2" through 2" threaded
Sockets:	ISO 727
Threads - BSP:	ISO 7/1
Laying Lengths:	ISO 264
Pressure Rating:	PN16 = 16 BAR at 23°C (232 psi at 73°F)

PN10 (CLASS 10/12) PVC METRIC SOCKET FITTINGS (PG 190)

Injection Molded.

Size Range:	160mm and 225mm socket, actual "d"73°F)
Sockets:	ISO 727 diameters (ASTM D 2467 socket length)
Pressure Rating:	160mm: PN12 = 12 BAR at 23°C (174 psi at 73°F) 225mm: PN10 = 10 BAR at 23°C (145 psi at 73°F)

PVC ASTM SCHEDULE 40 SOCKET X BSP ADAPTER FITTINGS (WHITE & GRAY) (PG 195/6)

Injection molded.

Size Range:	3/4" through 3" socket x threaded, nominal
Sockets:	Iron Pipe Size (IPS) to ASTM D 2466
Threads - BSP:	ISO 7/1
Pressure Rating:	Designed for use with corresponding size and pressure of ASTM D 1785 Schedule 40 pipe with 50% derating of threaded system.

PVC TRANSITION UNIONS (PG 197)

Injection molded; specially designed for transitions between ASTM IPS (Iron Pipe Size) systems and either ISO (International Standards Organization) metric, or JIS (Japanese Industrial Standards) metric systems.

Size Range:	ASTM IPS (inch):	1/2" through 4", nominal
	— connect to —	
	ISO Metric (mm):	20mm through 110mm socket, actual "d" 1/2" through 4" BSP threaded
	— or to —	
	JIS Metric (mm):	16mm through 100mm socket, nominal "DN"
Sockets:	ASTM IPS (inch):	ASTM D 2467
	ISO Metric (mm)	ISO 727 diameters (ASTM D 2467 socket length)
	JIS Metric (mm):	JIS K6741 diameters (ASTM D 2467 socket length)
Threads:	NPT:	ASTM F 1498
	BSP:	ISO 7/1
Pressure Rating:	16.2 BAR at 23°C (235 psi at 73°F)	

PVC & CPVC METRIC VALVES

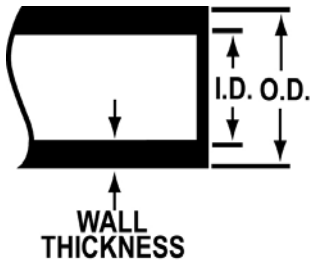
TRUE UNION BALL VALVES & BALL CHECK VALVES (PG 238/239 & 228/229)

Size Range:	20mm through 110mm socket, actual "d" 1/2" through 2" BSP threaded	
Sockets:	ISO 727 diameters (ASTM D 2467 socket length)	
Threads - BSP:	ISO 7/1	
Pressure Rating:	20mm - 62mm	16.2 BAR at 23°C (235 psi at 73°F)
	75mm - 110mm	10.3 BAR at 23°C (150 psi at 73°F)

GATE VALVES (PG 208/209)

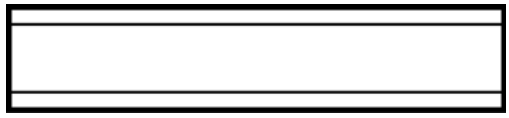
Size Range:	20mm through 63mm socket, actual "d" 1/2" through 2" BSP threaded
Sockets:	ISO 727 diameters (ASTM 2467 socket length)
Threads - BSP:	ISO 7/1
Pressure Rating:	13.8 BAR at 23°C (200 psi at 73°F)

SCHEDULE 40 & SCHEDULE 80 PIPE DIMENSIONS
ASTM STANDARD D 1785



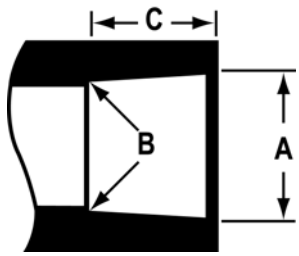
Nominal Pipe Size (inch)	Mean Outside Diameter (inch)	O.D. Tolerance (inch)	Minimum Wall Thickness (inch)	
			Schedule 40	Schedule 80
1/2	0.840	± 0.004	0.109	0.147
3/4	1.050	± 0.004	0.113	0.154
1	1.315	± 0.005	0.133	0.179
1-1/4	1.660	± 0.005	0.140	0.191
1-1/2	1.900	± 0.006	0.145	0.200
2	2.375	± 0.006	0.154	0.218
2-1/2	2.875	± 0.007	0.203	0.276
3	3.500	± 0.008	0.216	0.300
4	4.500	± 0.009	0.237	0.337
6	6.625	± 0.011	0.280	0.420
8	8.625	± 0.015	0.322	0.500
10	10.750	± 0.015	0.365	0.593
12	12.750	± 0.015	0.406	0.687

ASTM PIPE PRESSURE RATINGS



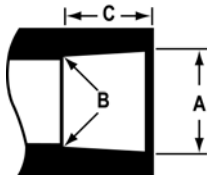
Inch	mm O.D.	Schedule 40		Schedule 80	
		psi	BAR	psi	BAR
1/2	21.34	600	41.3	850	58.6
3/4	26.67	480	33.1	690	47.5
1	33.40	450	31.0	630	43.4
1-1/4	42.16	370	25.5	520	35.8
1-1/2	48.26	330	22.7	470	32.4
2	60.32	280	19.3	400	27.5
2-1/2	73.02	300	20.6	420	28.9
3	88.90	260	17.9	370	25.5
4	114.30	220	15.1	320	22.0
6	168.28	180	12.4	280	19.3
8	219.08	160	11.0	250	17.2
10	273.05	140	9.7	230	15.8
12	323.85	130	8.9	230	15.8

SCHEDULE 40 & SCHEDULE 80 BASIC SOCKET DIMENSIONS
ASTM STANDARDS D 2466 & D 2467



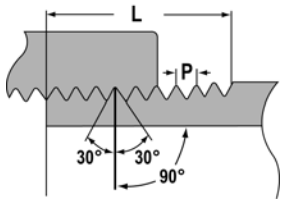
Nominal Size (inch)	Diameter			Schedule 40 Socket Length Minimum C	Schedule 80 Socket Length Minimum C
	Entrance A	Bottom B	Tolerance (inch)		
1/2	0.848	0.836	± 0.004	0.688	0.875
3/4	1.058	1.046	± 0.004	0.719	1.000
1	1.325	1.310	± 0.005	0.875	1.125
1-1/4	1.670	1.655	± 0.005	0.938	1.250
1-1/2	1.912	1.894	± 0.006	1.094	1.375
2	2.387	2.369	± 0.006	1.156	1.500
2-1/2	2.889	2.868	± 0.007	1.750	1.750
3	3.516	3.492	± 0.008	1.875	1.875
4	4.518	4.491	± 0.009	2.000	2.250
6	6.647	6.614	± 0.011	3.000	3.000
8	8.655	8.610	± 0.015	4.000	4.000
10	10.780	10.735	± 0.015	5.000	5.000
12	12.780	12.735	± 0.015	6.000	6.000

PVC METRIC FABRICATED FITTINGS BASIC SOCKET DIMENSIONS



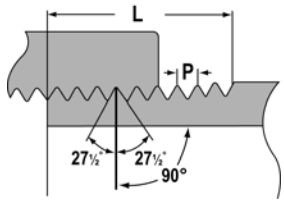
Size	Socket Entrance A		Tolerance ±		Socket Botttom B		Tolerance ±		C Socket Depth (Minimum)	
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
110mm	4.346	110.39	0.015	0.38	4.316	109.63	0.015	0.38	2.500	63.50
125mm	4.934	125.32	0.016	0.41	4.930	125.22	0.016	0.41	2.750	69.85
160mm	6.319	160.50	0.020	0.51	6.270	159.26	0.020	0.51	3.500	88.90
200mm	7.900	200.66	0.026	0.66	7.848	199.34	0.026	0.66	4.250	107.95
225mm	8.870	225.30	0.029	0.74	8.829	224.26	0.029	0.74	4.750	120.65
250mm	9.875	250.83	0.032	0.81	9.811	249.20	0.032	0.81	5.250	133.35
280mm	11.059	280.90	0.035	0.89	10.992	279.20	0.035	0.89	5.750	146.05
315mm	12.441	316.00	0.039	0.99	12.363	314.02	0.039	0.99	6.500	165.10

AMERICAN NATIONAL STANDARD TAPER PIPE THREADS (NPT)
ANSI STANDARD B1.20.1
ASTM STANDARDS D 2464, F 437, F 1498



Nominal Size (inch)	Threads per Inch	Effective Thread Length L inches	Pitch of Thread P inches
1/2	14	0.5337	0.07143
3/4	14	0.5457	0.07143
1	11-1/2	0.6828	0.08696
1-1/4	11-1/2	0.7068	0.08696
1-1/2	11-1/2	0.7235	0.08696
2	11-1/2	0.7565	0.08696
2-1/2	8	1.1375	0.12500
3	8	1.2000	0.12500
4	8	1.3000	0.12500

BSP ISO 7/1
PARALLEL THREADS



Nominal Size (inch)	Threads per Inch	Effective Thread Length L mm	Pitch of Thread P mm
1/2	14	13.152	1.8143
3/4	14	14.514	1.8143
1	11	16.714	2.3091
1-1/4	11	19.050	2.3091
1-1/2	11	19.050	2.3091
2	11	23.378	2.3091
2-1/2	11	26.698	2.3091
3	11	29.873	2.3091
4	11	35.791	2.3091

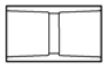
STANDARDS COMPARISON

JIS K6741 mm		DIN 8062 mm		ASTM D 1785			NPT — ANSI B1.20.1 Tapered Thread		BSP — ISO 7/1 Parallel Thread	
				Nominal	Actual O.D.					
Nominal	Actual O.D.	Nominal	Actual O.D.	inches	inches	mm	Designation	Threads per inch	Designation	Threads per 25.4mm
16	22	15	20	1/2	.840	21.34	1/2	14	1/2	14
20	26	20	25	3/4	1.050	26.67	3/4	14	3/4	14
25	32	25	32	1	1.315	33.40	1	11-1/2	1	11
30	38	32	40	1-1/4	1.660	42.16	1-1/4	11-1/2	1-1/4	11
40	48	40	50	1-1/2	1.900	48.26	1-1/2	11-1/2	1-1/2	11
50	60	50	63	2	2.375	60.32	2	11-1/2	2	11
75	89	80	90	3	3.500	88.90	3	8	3	11
100	114	100	110	4	4.500	114.30	4	8	4	11

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PN16 PVC Metric Fittings

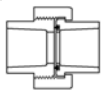
PVC TRANSITION COUPLING
JIS Socket (mm) x ASTM Socket (in)



PN 16 - 232 psi Pressure Rating at 23°C (73°F)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8229-016	**16 DN X 1/2**	25	150	197	5.98
8229-020	**20 DN X 3/4**	25	150	197	8.09
8229-025	**25 DN X 1**	20	160	197	8.32
8229-030	**30 DN X1-1/4**	20	0	197	12.67
8229-040	**40 DN X 1-1/2**	10	0	197	13.66
8229-050	**50 DN X 2**	10	0	197	14.67

PVC UNION FKM
Socket



PN 16 - 232 psi Pressure Rating at 23°C (73°F)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
657-020	**20 d**	10	60	190	12.26
657-025	**25 d**	10	60	190	15.58
657-032	**32 d**	10	40	190	17.77

PVC UNION FKM (continued)
Socket

PN 16 - 232 psi Pressure Rating at 23°C (73°F)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
657-040	**40 d**	5	20	190	35.31
657-050	**50 d**	5	0	190	39.99
657-063	**63 d**	5	0	190	54.21

PVC UNION EPDM
Socket

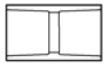


PN 16 - 232 psi Pressure Rating at 23°C (73°F)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
697-020	**20 d**	10	60	190	12.08
697-025	**25 d**	10	60	190	15.38
697-032	**32 d**	10	40	190	17.60
697-040	**40 d**	5	20	190	34.89
697-050	**50 d**	5	0	190	39.48
697-063	**63 d**	5	0	190	53.57

PN16 CPVC Metric Fittings

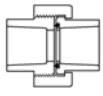
CPVC TRANSITION COUPLING
JIS Socket (mm) x ASTM Socket (in)



PN 16 - 232 psi Pressure Rating at 23°C (73°F)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8229-016C	**16 DN X1/2**	25	150	197	6.38
8229-020C	**20 DN X 3/4**	25	150	197	8.92
8229-025C	**25 DN X 1**	20	160	197	12.01
8229-030C	**30 DN X 1-1/4**	20	0	197	17.99
8229-040C	**40 DN X 1-1/2**	10	0	197	22.64
8229-050C	**50 DN X 2**	10	0	197	26.32

CPVC UNION FKM
Socket



PN 16 - 232 psi Pressure Rating at 23°C (73°F)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
657-020C	**20 d**	10	60	192	27.38
657-025C	**25 d**	10	60	192	28.60
657-032C	**32 d**	10	40	192	34.33
657-040C	**40 d**	5	20	192	69.46
657-050C	**50 d**	5	0	192	70.73
657-063C	**63 d**	5	0	192	117.24

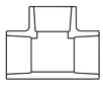
CPVC UNION EPDM
Socket



PN 16 - 232 psi Pressure Rating at 23°C (73°F)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
697-020C	**20 d**	10	60	192	27.29
697-025C	**25 d**	10	40	192	28.26
697-032C	**32 d**	10	40	192	33.86
697-040C	**40 d**	5	20	192	68.57
697-050C	**50 d**	5	0	192	69.87
697-063C	**63 d**	5	0	192	115.80

PVC TEE
Socket



PN 10

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
6201-060	**160 d**	4	0	190	225.66
6201-080	**225 d**	2	0	190	523.37
6201-160040	**160 d X 4**	2	0	190	225.66
601-280	**280 d**	1	0	191	1729.11

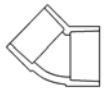
PVC 90° ELL
Socket



PN 10

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
6206-060	**160 d**	4	0	190	134.19
6206-080	**225 d**	2	0	190	369.86
606-280	**280 d**	1	0	191	1655.26

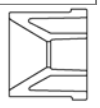
PVC 45° ELL
Socket



PN 10

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
6217-060	**160 d**	5	0	190	161.26
6217-080	**225 d**	2	0	190	349.63
617-280	**280 d**	2	0	191	921.33

PVC REDUCER BUSHING
Spigot x Socket



PN 10

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
637-225160	**225 X 160 d**	3	0	190	216.89

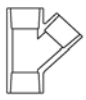
PVC CAP
Socket



PN 10

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
6247-060	**160 d**	4	0	190	261.68

CPVC WYE
Socket



PN 10

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
6275-160110C	**160 d X 110 d**	5	0	192	635.33

PVC FLANGE One Piece*
ASTM Socket x Multi-bolt Pattern Ring



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
M851-100	**10**	2	0	081	189.75
M851-120	**12**	2	0	081	326.80

Hubs fit 10" and 12" ASTM IPS pipe. Rings are manufactured to accept bolt patterns in size 10" and 12" in ANSI Class 150, B.S. 4504 PN10, B.S. 4504 PN16, Table E & JIS 10K for size 10", Table D & E for size 12" Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

CPVC FLANGE One Piece*
ASTM Socket x Multi-bolt Pattern Ring



150 psi Maximum Internal Presure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
M851-100C	**10**	2	0	091	518.75
M851-120C	**12**	2	0	091	799.50

Hubs fit 10" and 12" ASTM IPS pipe. Rings are manufactured to accept bolt patterns in size 10" and 12" in ANSI Class 150, B.S. 4504 PN10, B.S. 4504 PN16, B.S. 10 Table E for size 10". Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

PVC FLANGE* Van Stone Style
ASTM Socket x Multi-bolt Pattern Ring



150 psi

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
M854-020	**2**	10	0	080	30.14
M854-060	**6**	5	0	080	102.36
M854-080	**8**	2	0	080	166.68

* Hubs fit 2", 6" and 8" ASTM IPS pipe. Rings are manufactured to accept bolt patterns in size 2", 6" and 8" in ANSI Class 150, B.S. 4504 PN10 B.S. 4504 PN16 (except 8"), B.S. 10 Table D and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

PVC FLANGE* Van Stone Style
Spigot x Multi-bolt Pattern Ring



150 psi

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
M856-020	**2**	10	0	080	30.37
M856-060	**6**	4	0	080	103.20
M856-080	**8**	2	0	080	167.94

* Spigots fit 2", 6" and 8" ASTM IPS fitting socket. Rings are manufactured to accept bolt patterns in size 2", 6" and 8" in ANSI Class 150, B.S. 4504 PN10 B.S. 4504 PN16 (except 8"), B.S. 10 Table D and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

PVC FLANGE* Van Stone Style
ASTM Socket x Table D&E Drilling



150 psi

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
854-030DE	**3"/80 nom.**	10	0	080	51.44
854-040DE	**4"/110 nom.**	5	0	080	65.07

* Hubs fit 3"or 4" ASTM IPS Pipe. Rings are manufactured to BS 10 Table D & Table E bolt patterns.

PVC FLANGE* Van Stone Style
ASTM Spigot x Table D&E Drilling



150 psi

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
856-030DE	**3"/80 nom.**	10	0	080	51.85
856-040DE	**4"/110 nom.**	10	0	080	65.61

* Spigots fit 3" or 4" ASTM IPS fitting sockets. Rings are manufactured to BS 10 Table D & Table E bolt patterns.

PVC FLANGE* Van Stone Style
ASTM Socket x DIN PN 10/16 Drilling



150 psi

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
854-030DIN	**3"/80 nom.**	10	0	080	51.44
854-040DIN	**4"/110 nom.**	5	0	080	65.07

* Hubs fit 3" or 4" ASTM IPS Pipe. Rings are manufactured to DIN 8063-4 PN 10 and PN 16 bolt patterns.

CPVC FLANGE* Van Stone Style
ASTM Socket x DIN PN 10/16 Drilling



150 psi Maximum Internal Presure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
854-030CDIN	**3**	10	0	090	107.56
854-040CDIN	**4**	5	0	090	145.25

* Hubs fit 3" or 4" ASTM IPS Pipe. Rings are manufactured to DIN 8063-4 PN 10 and PN 16 bolt patterns.

PVC FLANGE* Van Stone Style
ASTM Spigot x DIN PN 10/16 Drilling



150 psi

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
856-030DIN	**3"/80 nom.**	10	0	080	51.85
856-040DIN	**4"/110 nom.**	5	0	080	65.61

* Spigots fit 3" or 4" ASTM IPS fitting sockets. Rings are manufactured to DIN 8063-4 PN 10 and PN 16 bolt patterns.

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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Class 10/12 PVC & CPVC Metric Fittings & Class 150 Flanges

PVC FLANGE* Van Stone Style
Metric Socket x Multi Pattern Ring



150 psi

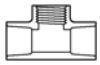
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
6254-160	**160 d**	5	0	190	102.36
6254-200	**200 d**	2	0	190	166.68
6254-225	**225 d**	2	0	190	166.68
6254-280	**280 d**	2	0	191	215.79

PVC FLANGE* Van Stone Style (continued)
Metric Socket x Multi Pattern Ring

* Hubs are manufactured to fit 160mm - 225mm and 280 mm O.D. Pipe. Rings are manufactured to accept bolt patterns for ANSI Class 150, B.S. 4504 PN10, B.S. 4504 PN16 (except 225mm), B.S. 10 Table D (except 280mm) and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

PVC ASTM Schedule 40 Socket x BSP Adapter Fittings (White & Gray)

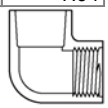
PVC WHITE TEE
ASTM Socket x FBSP



SCH 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
302-007	**3/4**	50	0	195	1.64
302-010	**1**	50	0	195	3.04
302-131	**1X3/4**	50	0	195	3.04
302-211	**1-1/2X1**	25	0	195	6.31
302-249	**2X1**	10	0	195	7.94

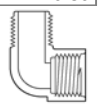
PVC WHITE 90° ELL
ASTM Socket x FBSP



SCH 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
307-007	**3/4**	50	0	195	.92
307-010	**1**	50	0	195	1.72
307-131	**1X3/4**	50	0	195	2.64
307-211	**1-1/2X1**	25	0	195	6.39

HDPE BLACK 90° STREET ELL
MBSP X FBSP



N.P.R.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
M312-010	**1**	50	0	195	3.69

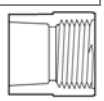
PVC WHITE RISER EXTENSION
MBSP X FBSP



SCH 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
334-007	**3/4**	50	400	195	1.98
334-010	**1**	50	0	195	2.47

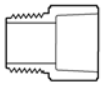
PVC WHITE FEMALE ADAPTER
ASTM Socket x FBSP



SCH 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
335-010	**1**	50	0	195	1.06
335-012	**1-1/4**	25	0	195	1.64
335-015	**1-1/2**	25	0	195	1.88
335-020	**2**	10	0	195	2.53

PVC WHITE MALE ADAPTER
MBSP x ASTM Socket



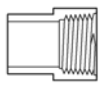
SCH 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
336-005	**1/2**	50	300	195	.58
336-007	**3/4**	50	400	195	.64
336-010	**1**	50	300	195	1.16
336-012	**1-1/4**	25	200	195	1.41
336-015	**1-1/2**	25	0	195	1.88

PVC WHITE MALE ADAPTER (continued)
MBSP x ASTM Socket

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
336-020	**2**	25	0	195	2.47
336-030	**3**	10	0	195	10.67
336-131	**1X3/4**	50	400	195	3.54

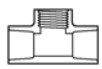
PVC WHITE FEMALE ADAPTER
ASTM Spigot x FBSP



SCH 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
378-010	**1**	50	0	195	1.62
378-015	**1-1/2**	20	0	195	2.62
378-020	**2**	20	0	195	3.85

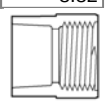
PVC GRAY TEE
Socket



SCH 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
302-010G	**1**	50	0	196	3.40
302-012G	**1-1/4**	25	0	196	5.40
302-211G	**1-1/2X1**	25	0	196	6.99
302-249G	**2X1**	10	0	196	8.82

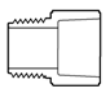
PVC GRAY FEMALE ADAPTER
ASTM Socket x FBSP



SCH 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
335-010G	**1**	50	0	196	1.19
335-012G	**1-1/4**	25	0	196	1.81
335-015G	**1-1/2**	25	0	196	2.12
335-020G	**2**	10	0	196	2.83
335-025G	**2-1/2**	5	0	196	7.13

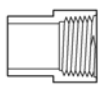
PVC GRAY MALE ADAPTER
MBSP x ASTM Socket



SCH 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
336-010G	**1**	50	300	196	1.27
336-012G	**1-1/4**	25	200	196	1.54
336-015G	**1-1/2**	25	0	196	2.12
336-020G	**2**	25	0	196	2.74
336-025G	**2-1/2**	5	0	196	8.09
336-030G	**3**	10	0	196	11.87
336-040G	**4**	5	0	196	15.11

PVC GRAY FEMALE ADAPTER
ASTM Spigot x FBSP

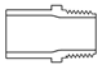


Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
378-010G	**1**	50	0	196	1.71
378-015G	**1-1/2**	25	0	196	2.92
378-020G	**2**	20	0	196	4.28

PVC ASTM Schedule 40 Socket x BSP Adapter Fittings (White & Gray)

PVC GRAY TAKE-OFF ADAPTER

Spigot x MBSP

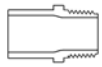


SCH 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
361-005G	**1/2**	50	300	196	1.02
361-007G	**3/4**	50	400	196	1.16
361-010G	**1**	50	0	196	2.00
361-012G	**1-1/4**	25	100	196	2.47
361-015G	**1-1/2**	25	0	196	3.31
361-020G	**2**	25	0	196	4.07

PVC GRAY REDUCING TAKE–OFF ADAPTER

Spigot/Socket x MBSP



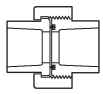
SCH 40

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
361-168G	**1-1/4X1X1**	25	100	196	2.47
361-212G	**1-1/2X1-1/4X1-1/4**	25	0	196	3.31
361-251G	**2X1-1/2X1-1/2**	25	0	196	4.07

PVC Transition Unions

PVC Transition Union

DIN (mm) Soc x ASTM (in.) Soc with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8657-020	**20 d X 1/2**	10	60	197	11.01
8657-025	**25 d X 3/4**	10	40	197	14.02
8657-032	**32 d X1**	10	40	197	16.00
8657-040	**40 d X 1-1/4**	10	0	197	31.78
8657-050	**50 d X 1-1/2**	10	0	197	35.99
8657-063	**63 d X 2**	5	0	197	48.81
8657-090	**90 d X 3**	5	0	197	90.85
8657-110	**110 d X 4**	4	0	197	126.54

PVC Transition Union

DIN (mm) Soc x ASTM (in.) Fipt with FKM O-ring Seal

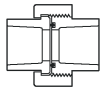


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8658-020	**20 d X 1/2**	10	60	197	13.45
8658-025	**25 d X 3/4**	20	80	197	18.80
8658-032	**32 d X1**	15	90	197	25.01
8658-040	**40 d X 1-1/4**	10	0	197	47.76
8658-050	**50 d X 1-1/2**	10	0	197	59.12
8658-063	**63 d X 2**	5	0	197	90.96
8658-090	**90 d X 3**	5	0	197	214.72
8658-110	**110 d X 4**	4	0	197	246.77

PVC Transition Union

DIN (mm) Soc x ASTM (in.) Soc with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8697-020	**20 d X1/2**	20	240	197	10.87
8697-025	**25 d X 3/4**	10	60	197	13.85
8697-032	**32d X 1**	15	90	197	15.84
8697-040	**40 d X 1-1/4**	10	0	197	31.40
8697-050	**50 d X 1-1/2**	10	0	197	35.55
8697-063	**63 d X 2**	5	0	197	48.21
8697-090	**90 d X 3**	5	0	197	89.72
8697-110	**110 d X 4**	4	0	197	124.08

PVC Transition Union

DIN (mm) Soc x ASTM (in.) Fipt with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8698-020	**20 d X 1/2**	20	160	197	13.26
8698-025	**25 d X 3/4**	20	80	197	18.56
8698-032	**32 d X 1**	15	90	197	24.69
8698-040	**40 d X 1-1/4**	10	0	197	46.94

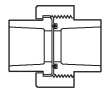
PVC Transition Union (continued)

DIN (mm) Soc x ASTM (in.) Fipt with EPDM O-ring Seal

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8698-050	**50 d X 1-1/2**	10	0	197	58.38
8698-063	**63 d X 2**	5	0	197	89.84
8698-090	**90 d X 3**	5	0	197	212.03
8698-110	**110 d X 4**	4	0	197	243.45

PVC Transition Union

JIS (mm) Soc x ASTM (in.) Soc with FKM O-ring Seal

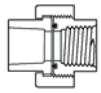


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8257-016	**16 DN X 1/2**	20	160	197	11.01
8257-020	**20 DN X 3/4**	10	40	197	14.02
8257-025	**25 DN X1**	15	90	197	16.00
8257-030	**30 DN X 1-1/4**	10	0	197	31.78
8257-040	**40 DN X 1-1/2**	10	0	197	35.99
8257-050	**50 DN X 2**	5	0	197	48.81
8257-075	**75 DN X 3**	5	0	197	90.85
8257-100	**100 DN X 4**	4	0	197	126.54

PVC Transition Union

JIS (mm) Soc x ASTM (in.) Fipt with FKM O-ring Seal

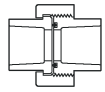


235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8258-016	**16 DN X 1/2**	20	160	197	13.45
8258-020	**20 DN X 3/4**	20	80	197	18.80
8258-025	**25 DN X 1**	15	90	197	25.01
8258-030	**30 DN X 1-1/4**	10	0	197	47.76
8258-040	**40 DN X 1-1/2**	10	0	197	59.12
8258-050	**50 DN X 2**	5	0	197	90.96
8258-075	**75 DN X 3**	5	0	197	214.72
8258-100	**100 DN X 4**	4	0	197	246.77

PVC Transition Union

JIS (mm) Soc x ASTM (in.) Soc with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8297-016	**16 DN X 1/2**	20	160	197	10.87
8297-020	**20 DN X 3/4**	20	80	197	13.85
8297-025	**25 DN X 1**	15	90	197	15.84
8297-030	**30 DN X 1-1/4**	10	0	197	31.40
8297-040	**40 DN X 1-1/2**	10	0	197	35.55
8297-050	**50 DN X 2**	5	0	197	48.21
8297-075	**75 DN X 3**	5	0	197	89.72
8297-100	**100 DN X 4**	4	0	197	124.08

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Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Transition Unions

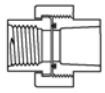
PVC Transition Union
JIS (mm) Soc x ASTM (in.) Fipt with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8298-016	**16 DN X 1/2**	20	160	197	13.26
8298-020	**20 DN X 3/4**	20	80	197	18.56
8298-025	**25 DN X 1**	15	90	197	24.69
8298-030	**30 DN X 1-1/4**	10	0	197	46.94
8298-040	**40 DN X 1-1/2**	10	0	197	58.38
8298-050	**50 DN X 2**	5	0	197	89.84
8298-075	**75 DN X 3**	5	0	197	212.03
8298-100	**100 DN X 4**	4	0	197	243.45

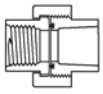
PVC Transition Union
BSP Thread (in.) x ASTM (in.) Soc with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8399-005	**1/2**	10	60	197	13.26
8399-007	**3/4**	20	80	197	18.56
8399-010	**1**	15	90	197	24.69
8399-012	**1-1/4**	10	0	197	47.17
8399-015	**1-1/2**	10	0	197	58.38
8399-020	**2**	5	0	197	89.84
8399-030	**3**	5	0	197	212.03
8399-040	**4**	4	0	197	243.45

PVC Transition Union
BSP Thread (in.) x ASTM (in.) Soc with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8359-005	**1/2**	20	160	197	13.45
8359-007	**3/4**	20	80	197	18.80
8359-010	**1**	15	90	197	25.01
8359-012	**1-1/4**	10	0	197	47.76
8359-015	**1-1/2**	10	0	197	59.12
8359-020	**2**	5	0	197	90.96
8359-030	**3**	5	0	197	214.72
8359-040	**4**	4	0	197	246.77

PVC Transition Union
BSP Thread (in.) x ASTM (in.) Fipt with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8398-005	**1/2**	10	60	197	12.63
8398-007	**3/4**	10	60	197	17.68
8398-010	**1**	10	40	197	23.54
8398-012	**1-1/4**	5	20	197	44.92
8398-015	**1-1/2**	5	0	197	55.60
8398-020	**2**	5	0	197	89.33
8398-030	**3**	5	0	197	217.04
8398-040	**4**	4	0	197	253.84

PVC Transition Union
BSP Thread (in.) x ASTM (in.) Fipt with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
8358-005	**1/2**	20	160	197	12.82
8358-007	**3/4**	20	80	197	17.91
8358-010	**1**	15	90	197	23.84
8358-012	**1-1/4**	10	0	197	45.48
8358-015	**1-1/2**	10	0	197	56.31
8358-020	**2**	5	0	197	86.64
8358-030	**3**	5	0	197	219.76
8358-040	**4**	4	0	197	258.26

True Union Ball Valves (Regular Style)



Pressure Rating @ 73°F (23°C), Water
2-1/2" - 4" PN 10

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Pressure Deratings Apply

Rated for Vacuum Service

PTFE Seats

PVC True Union Ball Valve (Regular Style)
DIN SOC EPDM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
2324-025	**75MM**	1	0	238	323.80
2324-030	**90MM**	1	0	238	426.91
2324-040	**110MM**	1	0	238	721.29

PVC True Union Ball Valve (Regular Style)
DIN SOC FKM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
2334-025	**75MM**	1	0	238	438.75
2334-030	**90MM**	1	0	238	474.35
2334-040	**110MM**	1	0	238	801.42

True Union Ball Valves (Regular Style)

PVC True Union Ball Valve (Regular Style)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded EPDM					
2325-025	**2-1/2**	1	0	238	323.80
2325-030	**3**	1	0	238	426.91
2325-040	**4**	1	0	238	721.29

PVC True Union Ball Valve (Regular Style)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded FKM					
2335-025	**2-1/2**	1	0	238	438.75
2335-030	**3**	1	0	238	474.35
2335-040	**4**	1	0	238	801.42

CPVC True Union Ball Valve (Regular Style)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC EPDM					
2324-025C	**75MM**	1	0	239	542.01
2324-030C	**90MM**	1	0	239	633.75
2324-040C	**110MM**	1	0	239	1148.37

CPVC True Union Ball Valve (Regular Style)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC FKM					
2334-025C	**75MM**	1	0	239	602.21
2334-030C	**90MM**	1	0	239	704.19
2334-040C	**110MM**	1	0	239	1275.97

CPVC True Union Ball Valve (Regular Style)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded EPDM					
2325-025C	**2-1/2**	1	0	239	542.15
2325-030C	**3**	1	0	239	633.75
2325-040C	**4**	1	0	239	1148.37

CPVC True Union Ball Valve (Regular Style)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded FKM					
2335-025C	**2-1/2**	1	0	239	602.21
2335-030C	**3**	1	0	239	704.19
2335-040C	**4**	1	0	239	1275.97

PVC & CPVC True Union 2000 Industrial Ball Valves



Pressure Rating @ 73°F (23°C), Water
1/2" - 2" PN 16

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Pressure Deratings Apply
Rated for Vacuum Service
PTFE Seats
Locking Handle

PVC True Union 2000 Industrial Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC EPDM					
1824-005	**20 d**	1	18	238	49.69
1824-007	**25 d**	1	18	238	58.80
1824-010	**32 d**	1	12	238	70.02
1824-012	**40 d**	1	8	238	96.86
1824-015	**50 d**	1	8	238	116.67
1824-020	**63 d**	1	4	238	153.96

PVC True Union 2000 Industrial Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC FKM					
1834-005	**20 d**	1	18	238	55.27
1834-007	**25 d**	1	18	238	65.41
1834-010	**32 d**	1	12	238	77.99
1834-012	**40 d**	1	8	238	123.64
1834-015	**50 d**	1	8	238	129.52
1834-020	**63 d**	1	4	238	169.54

PVC True Union 2000 Industrial Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded EPDM					
1825-005	**1/2**	1	18	238	49.69
1825-007	**3/4**	1	18	238	58.80

PVC True Union 2000 Industrial Ball Valves (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded EPDM					
1825-010	**1**	1	12	238	70.02
1825-012	**1-1/4**	1	8	238	96.86
1825-015	**1-1/2**	1	8	238	116.67
1825-020	**2**	1	4	238	153.96

PVC True Union 2000 Industrial Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded FKM					
1835-005	**1/2**	1	18	238	55.27
1835-007	**3/4**	1	18	238	65.41
1835-010	**1**	1	12	238	77.99
1835-012	**1-1/4**	1	8	238	123.64
1835-015	**1-1/2**	1	8	238	129.52
1835-020	**2**	1	4	238	169.54

PVC True Union 2000 Industrial Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC EPDM					
1828-005	**16 DN**	1	18	238	49.69
1828-007	**20 DN**	1	18	238	58.80
1828-010	**25 DN**	1	12	238	70.02
1828-012	**30 DN**	1	8	238	96.86
1828-015	**40 DN**	1	8	238	116.67

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Spears® Manufacturing Company
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PVC True Union 2000 Industrial Ball Valves (continued)

JIS SOC EPDM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
1828-020	**50 DN**	1	4	238	153.96

PVC True Union 2000 Industrial Ball Valves

JIS SOC FKM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
1838-005	**16 DN**	1	18	238	55.27
1838-007	**20 DN**	1	18	238	65.41
1838-010	**25 DN**	1	12	238	77.99
1838-012	**30 DN**	1	8	238	123.64
1838-015	**40 DN**	1	8	238	129.52
1838-020	**50 DN**	1	4	238	169.54

CPVC True Union 2000 Industrial Ball Valves

DIN SOC EPDM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
1824-005C	**20 d**	1	18	239	65.63
1824-007C	**25 d**	1	18	239	82.65
1824-010C	**32 d**	1	12	239	98.40
1824-012C	**40 d**	1	8	239	156.43
1824-015C	**50 d**	1	8	239	165.21
1824-020C	**63 d**	1	4	239	220.95

CPVC True Union 2000 Industrial Ball Valves

DIN SOC FKM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
1834-005C	**20 d**	1	18	239	72.93
1834-007C	**25 d**	1	18	239	91.86
1834-010C	**32 d**	1	12	239	109.33
1834-012C	**40 d**	1	8	239	173.86
1834-015C	**50 d**	1	8	239	183.57
1834-020C	**63 d**	1	4	239	254.00

CPVC True Union 2000 Industrial Ball Valves

BSP Threaded EPDM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
1825-005C	**1/2**	1	18	239	65.63
1825-007C	**3/4**	1	18	239	82.65
1825-010C	**1**	1	12	239	98.40
1825-012C	**1-1/4**	1	8	239	156.43
1825-015C	**1-1/2**	1	8	239	165.21
1825-020C	**2**	1	4	239	220.95

CPVC True Union 2000 Industrial Ball Valves

BSP Threaded FKM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
1835-005C	**1/2**	1	18	239	72.93
1835-007C	**3/4**	1	18	239	91.86
1835-010C	**1**	1	12	239	109.33
1835-012C	**1-1/4**	1	8	239	173.86
1835-015C	**1-1/2**	1	8	239	183.57
1835-020C	**2**	1	4	239	254.00

CPVC True Union 2000 Industrial Ball Valves

JIS SOC EPDM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
1828-005C	**16 DN**	1	18	239	65.63
1828-007C	**20 DN**	1	18	239	82.65

CPVC True Union 2000 Industrial Ball Valves (continued)

JIS SOC EPDM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
1828-010C	**25 DN**	1	12	239	98.40
1828-012C	**30 DN**	1	8	239	156.43
1828-015C	**40 DN**	1	8	239	165.21
1828-020C	**50 DN**	1	4	239	220.95

CPVC True Union 2000 Industrial Ball Valves

JIS SOC FKM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
1838-005C	**16 DN**	1	18	239	72.93
1838-007C	**20 DN**	1	18	239	91.86
1838-010C	**25 DN**	1	12	239	109.02
1838-012C	**30 DN**	1	8	239	173.86
1838-015C	**40 DN**	1	8	239	183.57
1838-020C	**50 DN**	1	4	239	254.00

PVC & CPVC True Union 2000 Standard Ball Valves



Pressure Rating @ 73°F (23°C), Water
1/2" - 2" PN 16

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Pressure Deratings Apply
PE Seats

PVC True Union 2000 Standard Ball Valves

DIN SOC
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3624-005	**20 d**	1	18	238	39.77
3624-007	**25 d**	1	18	238	47.03
3624-010	**32 d**	1	18	238	56.02
3624-012	**40 d**	1	12	238	77.48
3624-015	**50 d**	1	8	238	93.35
3624-020	**63 d**	1	8	238	123.18

PVC True Union 2000 Standard Ball Valves

DIN SOC
FKM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3634-005	**20 d**	1	18	238	44.23
3634-007	**25 d**	1	18	238	52.32
3634-010	**32 d**	1	18	238	62.40
3634-012	**40 d**	1	12	238	98.91
3634-015	**50 d**	1	8	238	103.62
3634-020	**63 d**	1	8	238	135.62

PVC True Union 2000 Standard Ball Valves

BSP Threaded
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3625-005	**1/2**	1	18	238	39.77
3625-007	**3/4**	1	18	238	47.03
3625-010	**1**	1	18	238	56.02
3625-012	**1-1/4**	1	12	238	77.48
3625-015	**1-1/2**	1	8	238	93.35
3625-020	**2**	1	8	238	123.18

PVC True Union 2000 Standard Ball Valves

BSP Threaded
FKM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3635-005	**1/2**	1	18	238	44.23
3635-007	**3/4**	1	18	238	52.32
3635-010	**1**	1	18	238	62.40
3635-015	**1-1/2**	1	8	238	103.62
3635-012	**1-1/4**	1	12	238	98.91
3635-020	**2**	1	8	238	135.62

PVC True Union 2000 Standard Ball Valves

JIS SOC
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3628-005	**16 DN**	1	18	238	39.77
3628-007	**20 DN**	1	18	238	47.03
3628-010	**25 DN**	1	18	238	56.02
3628-012	**30 DN**	1	12	238	77.48
3628-015	**40 DN**	1	8	238	93.35
3628-020	**50 DN**	1	8	238	123.18

PVC True Union 2000 Standard Ball Valves

JIS SOC
FKM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3638-005	**16 DN**	1	18	238	44.23
3638-007	**20 DN**	1	18	238	52.32
3638-010	**25 DN**	1	18	238	62.40
3638-012	**30 DN**	1	12	238	98.91
3638-015	**40 DN**	1	8	238	103.62
3638-020	**50 DN**	1	8	238	135.62

CPVC True Union 2000 Standard Ball Valves

DIN SOC
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3624-005C	**20 d**	1	18	239	52.48
3624-007C	**25 d**	1	18	239	66.13
3624-010C	**32 d**	1	18	239	78.73
3624-012C	**40 d**	1	12	239	125.16
3624-015C	**50 d**	1	8	239	132.16
3624-020C	**63 d**	1	8	239	176.78

CPVC True Union 2000 Standard Ball Valves

DIN SOC
FKM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3634-005C	**20 d**	1	18	239	58.36
3634-007C	**25 d**	1	18	239	73.49
3634-010C	**32 d**	1	18	239	87.47
3634-012C	**40 d**	1	12	239	139.11
3634-015C	**50 d**	1	8	239	146.85
3634-020C	**63 d**	1	8	239	203.21

CPVC True Union 2000 Standard Ball Valves

BSP Threaded
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3625-005C	**1/2**	1	18	239	52.48
3625-007C	**3/4**	1	18	239	66.13
3625-010C	**1**	1	18	239	78.41
3625-012C	**1-1/4**	1	12	239	125.16
3625-015C	**1-1/2**	1	8	239	132.16
3625-020C	**2**	1	8	239	176.78

CPVC True Union 2000 Standard Ball Valves

BSP Threaded
FKM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3635-005C	**1/2**	1	18	239	58.36
3635-007C	**3/4**	1	18	239	73.49
3635-010C	**1**	1	18	239	87.47
3635-012C	**1-1/4**	1	12	239	139.11
3635-015C	**1-1/2**	1	8	239	146.85
3635-020C	**2**	1	8	239	203.21

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PVC & CPVC True Union 2000 Standard Ball Valves

CPVC True Union 2000 Standard Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC EPDM					
3628-005C	**16 DN**	1	18	239	52.48
3628-007C	**20 DN**	1	18	239	66.13
3638-010C	**25 DN**	1	18	239	87.47
3628-012C	**30 DN**	1	12	239	125.16
3628-015C	**40 DN**	1	8	239	132.16
3628-020C	**50 DN**	1	8	239	176.78

CPVC True Union 2000 Standard Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC FKM					
3638-005C	**16 DN**	1	18	239	58.36
3638-007C	**20 DN**	1	18	239	73.49
3638-010C	**25 DN**	1	18	239	87.47
3638-012C	**30 DN**	1	12	239	139.11
3638-015C	**40 DN**	1	8	239	146.85
3638-020C	**50 DN**	1	8	239	203.21

PVC & CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves



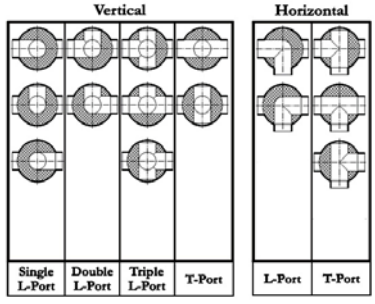
Pressure Rating @ 73°F (23°C), Water
1/2" - 2" PN 16

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Pressure Deratings Apply

Vertical 3-Way or Horizontal Diverter No Branch Shut-off)

All Standard Carton Quantities are one
All Valves assembled with Silicone-Free, Water Soluble Lubricant
Contact Spears® for Pricing on Additional Specialty Valves Available



Ball port options viewed from top of valve

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with L1 Port EPDM					
5024L1-005	**20 d**	1	12	238	102.54
5024L1-007	**25 d**	1	8	238	122.29
5024L1-010	**32 d**	1	8	238	148.27
5024L1-012	**40 d**	1	8	238	171.86
5024L1-015	**50 d**	1	8	238	200.95
5024L1-020	**63 d**	1	0	238	246.51

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with L1 Port FKM					
5034L1-005	**20 d**	1	12	238	111.22
5034L1-007	**25 d**	1	8	238	131.63
5034L1-010	**32 d**	1	8	238	163.35
5034L1-012	**40 d**	1	8	238	193.32
5034L1-015	**50 d**	1	8	238	220.00
5034L1-020	**63 d**	1	0	238	287.39

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded with L1 Port EPDM					
5025L1-005	**1/2**	1	12	238	102.54
5025L1-007	**3/4**	1	8	238	122.29
5025L1-010	**1**	1	8	238	148.27
5025L1-012	**1-1/4**	1	8	238	171.86

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded with L1 Port EPDM					
5025L1-015	**1-1/2**	1	8	238	200.95
5025L1-020	**2**	1	0	238	246.51

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded with L1 Port FKM					
5035L1-005	**1/2**	1	12	238	111.22
5035L1-007	**3/4**	1	8	238	131.63
5035L1-010	**1**	1	8	238	163.35
5035L1-012	**1-1/4**	1	8	238	193.32
5035L1-015	**1-1/2**	1	8	238	220.00
5035L1-020	**2**	1	0	238	287.39

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC with L1 Port EPDM					
5028L1-005	**16 DN**	1	12	238	102.54
5028L1-007	**20 DN**	1	8	238	122.29
5028L1-010	**25 DN**	1	8	238	148.27
5028L1-012	**30 DN**	1	8	238	171.86
5028L1-015	**40 DN**	1	8	238	200.95
5028L1-020	**50 DN**	1	0	238	246.51

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC with L1 Port					
FKM					
5038L1-005	**16 DN**	1	12	238	111.22
5038L1-007	**20 DN**	1	8	238	131.63
5038L1-010	**25 DN**	1	8	238	163.35
5038L1-012	**32 DN**	1	8	238	193.32
5038L1-015	**40 DN**	1	8	238	220.00
5038L1-020	**50 DN**	1	0	238	287.39

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC with T1 Port					
EPDM					
5028T1-005	**16 DN**	1	12	238	102.54
5028T1-007	**20 DN**	1	8	238	122.29
5028T1-010	**25 DN**	1	8	238	148.27
5028T1-012	**30 DN**	1	8	238	171.86
5028T1-015	**40 DN**	1	8	238	200.95
5028T1-020	**50 DN**	1	0	238	246.51

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with T1 Port					
EPDM					
5024T1-005	**20 d**	1	12	238	102.54
5024T1-007	**25 d**	1	8	238	122.29
5024T1-010	**32 d**	1	8	238	148.27
5024T1-012	**40 d**	1	8	238	171.86
5024T1-015	**50 d**	1	8	238	200.95
5024T1-020	**63 d**	1	0	238	246.51

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC with T1 Port					
FKM					
5038T1-005	**16 DN**	1	12	238	111.22
5038T1-007	**20 DN**	1	8	238	131.63
5038T1-010	**25 DN**	1	8	238	163.35
5038T1-012	**32 DN**	1	8	238	193.32
5038T1-015	**40 DN**	1	8	238	220.00
5038T1-020	**50 DN**	1	0	238	287.39

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with T1 Port					
FKM					
5034T1-005	**20 d**	1	12	238	111.22
5034T1-007	**25 d**	1	8	238	131.63
5034T1-010	**32 d**	1	8	238	163.35
5034T1-012	**40 d**	1	8	238	193.32
5034T1-015	**50 d**	1	8	238	220.00
5034T1-020	**63 d**	1	0	238	287.39

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with L1 Port					
EPDM					
5024L1-005C	**20 d**	1	12	239	157.82
5024L1-007C	**25 d**	1	8	239	188.12
5024L1-010C	**32 d**	1	8	239	228.12
5024L1-012C	**40 d**	1	8	239	264.35
5024L1-015C	**50 d**	1	8	239	309.22
5024L1-020C	**63 d**	1	0	239	379.35

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded with T1 Port					
EPDM					
5025T1-005	**1/2**	1	12	238	102.54
5025T1-007	**3/4**	1	8	238	122.29
5025T1-010	**1**	1	8	238	148.27
5025T1-012	**1-1/4**	1	8	238	171.86
5025T1-015	**1-1/2**	1	8	238	200.95
5025T1-020	**2**	1	0	238	246.51

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with L1 Port					
FKM					
5034L1-005C	**20 d**	1	12	239	170.98
5034L1-007C	**25 d**	1	8	239	202.49
5034L1-010C	**32 d**	1	8	239	251.35
5034L1-012C	**40 d**	1	8	239	296.38
5034L1-015C	**50 d**	1	8	239	338.44
5034L1-020C	**63 d**	1	0	239	442.12

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded with T1 Port					
FKM					
5035T1-005	**1/2**	1	12	238	111.22
5035T1-007	**3/4**	1	8	238	131.63
5035T1-010	**1**	1	8	238	163.35
5035T1-012	**1-1/4**	1	8	238	193.32
5035T1-015	**1-1/2**	1	8	238	220.00
5035T1-020	**2**	1	0	238	287.39

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded with L1 Port					
EPDM					
5025L1-005C	**1/2**	1	12	239	157.82
5025L1-007C	**3/4**	1	8	239	188.12
5025L1-010C	**1**	1	8	239	228.12
5025L1-012C	**1-1/4**	1	8	239	264.35
5025L1-015C	**1-1/2**	1	8	239	309.22
5025L1-020C	**2**	1	0	239	379.35

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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded with L1 Port					
FKM					
5035L1-005C	**1/2**	1	12	239	170.98
5035L1-007C	**3/4**	1	8	239	202.49
5035L1-010C	**1**	1	8	239	251.35
5035L1-012C	**1-1/4**	1	8	239	306.06
5035L1-015C	**1-1/2**	1	8	239	338.44
5035L1-020C	**2**	1	0	239	442.12

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC with L1 Port					
EPDM					
5028L1-005C	**16 DN**	1	12	239	157.82
5028L1-007C	**20 DN**	1	8	239	188.12
5028L1-010C	**25 DN**	1	8	239	228.12
5028L1-012C	**30 DN**	1	8	239	264.35
5028L1-015C	**40 DN**	1	8	239	309.22
5028L1-020C	**50 DN**	1	0	239	379.35

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC with L1 Port					
FKM					
5038L1-005C	**16 DN**	1	12	239	170.98
5038L1-007C	**20 DN**	1	8	239	202.49
5038L1-010C	**25 DN**	1	8	239	251.35
5038L1-012C	**32 DN**	1	8	239	296.38
5038L1-015C	**40 DN**	1	8	239	338.44
5038L1-020C	**50 DN**	1	0	239	442.12

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with T1 Port					
EPDM					
5024T1-005C	**20 d**	1	12	239	157.82
5024T1-007C	**25 d**	1	8	239	188.12
5024T1-010C	**32 d**	1	8	239	228.12
5024T1-012C	**40 d**	1	8	239	264.35
5024T1-015C	**50 d**	1	8	239	309.22
5024T1-020C	**63 d**	1	0	239	379.35

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with T1 Port					
FKM					
5034T1-005C	**20 d**	1	12	239	170.98
5034T1-007C	**25 d**	1	8	239	202.49
5034T1-010C	**32 d**	1	8	239	251.35
5034T1-012C	**40 d**	1	8	239	296.38
5034T1-015C	**50 d**	1	8	239	338.44
5034T1-020C	**63 d**	1	0	239	442.12

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded with T1 Port					
EPDM					
5025T1-005C	**1/2**	1	12	239	157.82
5025T1-007C	**3/4**	1	8	239	188.12
5025T1-010C	**1**	1	8	239	228.12
5025T1-012C	**1-1/4**	1	8	239	264.35
5025T1-015C	**1-1/2**	1	8	239	309.22
5025T1-020C	**2**	1	0	239	379.35

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded with T1 Port					
FKM					
5035T1-005C	**1/2**	1	12	239	170.98
5035T1-007C	**3/4**	1	8	239	202.49
5035T1-010C	**1**	1	8	239	251.35
5035T1-012C	**1-1/4**	1	8	239	296.38
5035T1-015C	**1-1/2**	1	8	239	338.44
5035T1-020C	**2**	1	0	239	442.12

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC with T1 Port					
EPDM					
5028T1-005C	**16 DN**	1	720	239	157.82
5028T1-007C	**20 DN**	1	8	239	188.12
5028T1-010C	**25 DN**	1	8	239	228.12
5028T1-012C	**30 DN**	1	8	239	264.35
5028T1-015C	**40 DN**	1	8	239	309.22
5028T1-020C	**50 DN**	1	0	239	379.35

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC with T1 Port					
FKM					
5038T1-005C	**16 DN**	1	12	239	170.98
5038T1-007C	**20 DN**	1	8	239	202.49
5038T1-010C	**25 DN**	1	8	239	251.35
5038T1-012C	**32 DN**	1	8	239	296.38
5038T1-015C	**40 DN**	1	8	239	338.44
5038T1-020C	**50 DN**	1	0	239	442.12

PVC & CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves



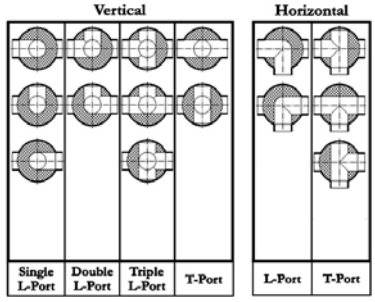
Pressure Rating @ 73°F (23°C), Water
1/2" - 2" PN 16

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Pressure Deratings Apply

Vertical 3-Way or Horizontal Diverter (No Branch Shut-off)

All Standard Carton Quantities are one
All Valves assembled with Silicone-Free, Water Soluble Lubricant
Contact Spears® for Pricing on Additional Specialty Valves Available



Ball port options viewed from top of valve

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with L1 Port					
EPDM					
4724L1-005	**20 d**	1	12	238	102.03
4724L1-007	**25 d**	1	8	238	119.68
4724L1-010	**32 d**	1	8	238	145.49
4724L1-012	**40 d**	1	8	238	175.99
4724L1-015	**50 d**	1	8	238	203.52
4724L1-020	**63 d**	1	4	238	249.61

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC with L1 port					
EPDM					
4728L1-005	**16 DN**	1	12	238	102.03
4728L1-007	**20 DN**	1	8	238	119.68
4728L1-010	**25 DN**	1	8	238	145.49
4728L1-012	**32 DN**	1	8	238	175.99
4728L1-015	**40 DN**	1	8	238	203.52
4728L1-020	**50 DN**	1	4	238	249.61

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with L1 port					
FKM					
4734L1-005	**20 d**	1	12	238	110.51
4734L1-007	**25 d**	1	8	238	130.43
4734L1-010	**32 d**	1	8	238	161.98
4734L1-012	**40 d**	1	8	238	207.36
4734L1-015	**50 d**	1	8	238	223.11
4734L1-020	**63 d**	1	4	238	289.81

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC with L1 Port					
FKM					
4738L1-005	**16 DN**	1	12	238	110.51
4738L1-007	**20 DN**	1	8	238	130.43
4738L1-010	**25 DN**	1	8	238	161.98
4738L1-012	**30 DN**	1	8	238	207.36
4738L1-015	**40 DN**	1	8	238	223.11
4738L1-020	**50 DN**	1	4	238	289.81

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded with L1 Port					
EPDM					
4725L1-005	**1/2**	1	12	238	102.03
4725L1-007	**3/4**	1	8	238	119.68
4725L1-010	**1**	1	8	238	145.49
4725L1-012	**1-1/4**	1	8	238	175.99
4725L1-015	**1-1/2**	1	8	238	203.52
4725L1-020	**2**	1	4	238	249.61

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with L2 Port					
EPDM					
4724L2-005	**20 d**	1	12	238	203.20
4724L2-007	**25 d**	1	8	238	220.86
4724L2-010	**32 d**	1	8	238	246.69
4724L2-012	**40 d**	1	8	238	277.17
4724L2-015	**50 d**	1	8	238	304.71
4724L2-020	**63 d**	1	4	238	350.76

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded with L1 Port					
FKM					
4735L1-005	**1/2**	1	12	238	110.51
4735L1-007	**3/4**	1	8	238	130.43
4735L1-010	**1**	1	8	238	161.98
4735L1-012	**1-1/4**	1	8	238	207.36
4735L1-015	**1-1/2**	1	8	238	223.11
4735L1-020	**2**	1	4	238	289.81

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with L2 Port					
FKM					
4734L2-005	**20 d**	1	12	238	211.68
4734L2-007	**25 d**	1	8	238	231.60
4734L2-010	**32 d**	1	8	238	263.12
4734L2-012	**40 d**	1	8	238	308.53
4734L2-015	**50 d**	1	8	238	324.26
4734L2-020	**63 d**	1	4	238	390.98

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PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

BSP Threaded with L2 Port
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4725L2-005	**1/2**	1	12	238	203.20
4725L2-007	**3/4**	1	8	238	220.86
4725L2-010	**1**	1	8	238	246.69
4725L2-012	**1-1/4**	1	8	238	277.17
4725L2-015	**1-1/2**	1	8	238	304.71
4725L2-020	**2**	1	4	238	350.76

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

BSP Threaded with L2 Port
FKM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4735L2-005	**1/2**	1	720	238	211.68
4735L2-007	**3/4**	1	8	238	231.60
4735L2-010	**1**	1	8	238	263.12
4735L2-012	**1-1/4**	1	8	238	308.53
4735L2-015	**1-1/2**	1	8	238	324.26
4735L2-020	**2**	1	4	238	390.98

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

JIS SOC with L2 Port
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4728L2-005	**16 DN**	1	12	238	203.20
4728L2-007	**20 DN**	1	8	238	220.86
4728L2-010	**25 DN**	1	8	238	246.69
4728L2-012	**30 DN**	1	8	238	277.17
4728L2-015	**40 DN**	1	8	238	304.71
4728L2-020	**50 DN**	1	4	238	350.76

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

JIS SOC with L2 Port
FKM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4738L2-005	**16 DN**	1	12	238	211.68
4738L2-007	**20 DN**	1	8	238	231.60
4738L2-010	**25 DN**	1	8	238	263.12
4738L2-012	**30 DN**	1	8	238	308.53
4738L2-015	**40 DN**	1	8	238	324.26
4738L2-020	**50 DN**	1	4	238	390.98

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

DIN SOC with L3 Port
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4724L3-005	**20 d**	1	12	238	203.20
4724L3-007	**25 d**	1	8	238	220.86
4724L3-010	**32 d**	1	8	238	246.69
4724L3-012	**40 d**	1	8	238	277.17
4724L3-015	**50 d**	1	8	238	304.71
4724L3-020	**63 d**	1	4	238	350.76

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

DIN SOC with L3 Port
FKM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4734L3-005	**20 d**	1	12	238	211.68
4734L3-007	**25 d**	1	8	238	231.60
4734L3-010	**32 d**	1	8	238	263.12
4734L3-012	**40 d**	1	8	238	308.53
4734L3-015	**50 d**	1	8	238	324.26
4734L3-020	**63 d**	1	4	238	390.98

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

BSP Threaded with L3 Port
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4725L3-005	**1/2**	1	12	238	203.20
4725L3-007	**3/4**	1	8	238	220.86
4725L3-010	**1**	1	8	238	246.69
4725L3-012	**1-1/4**	1	8	238	277.17
4725L3-015	**1-1/2**	1	8	238	304.71
4725L3-020	**2**	1	4	238	350.76

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

BSP Threaded with L3 Port
FKM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4735L3-005	**1/2**	1	12	238	211.68
4735L3-007	**3/4**	1	8	238	231.60
4735L3-010	**1**	1	8	238	263.12
4735L3-012	**1-1/4**	1	8	238	308.53
4735L3-015	**1-1/2**	1	8	238	324.26
4735L3-020	**2**	1	4	238	390.98

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

JIS SOC with L3 Port
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4728L3-005	**16 DN**	1	12	238	203.20
4728L3-007	**20 DN**	1	8	238	220.86
4728L3-010	**25 DN**	1	8	238	246.69
4728L3-012	**30 DN**	1	8	238	277.17
4728L3-015	**40 DN**	1	8	238	304.71
4728L3-020	**50 DN**	1	4	238	350.76

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

JIS SOC with L3 Port
FKM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4738L3-005	**16 DN**	1	12	238	211.68
4738L3-007	**20 DN**	1	8	238	231.60
4738L3-010	**25 DN**	1	8	238	263.12
4738L3-012	**30 DN**	1	8	238	308.53
4738L3-015	**40 DN**	1	8	238	324.26
4738L3-020	**50 DN**	1	4	238	390.98

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with T1 Port					
EPDM					
4724T1-005	**20 d**	1	12	238	102.03
4724T1-007	**25 d**	1	8	238	119.68
4724T1-010	**32 d**	1	8	238	145.49
4724T1-012	**40 d**	1	8	238	175.99
4724T1-015	**50 d**	1	8	238	203.52
4724T1-020	**63 d**	1	4	238	249.61

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with T1 Port					
FKM					
4734T1-005	**20 d**	1	12	238	110.51
4734T1-007	**25 d**	1	8	238	130.43
4734T1-010	**32 d**	1	8	238	161.98
4734T1-012	**40 d**	1	8	238	207.36
4734T1-015	**50 d**	1	8	238	223.83
4734T1-020	**63 d**	1	4	238	289.81

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded with T1 Port					
EPDM					
4725T1-005	**1/2**	1	12	238	102.03
4725T1-007	**3/4**	1	8	238	119.68
4725T1-010	**1**	1	8	238	145.49
4725T1-012	**1-1/4**	1	8	238	175.99
4725T1-015	**1-1/2**	1	8	238	203.52
4725T1-020	**2**	1	4	238	249.61

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded with T1 Port					
FKM					
4735T1-005	**1/2**	1	12	238	110.51
4735T1-007	**3/4**	1	8	238	130.43
4735T1-010	**1**	1	8	238	161.98
4735T1-012	**1-1/4**	1	8	238	207.36
4735T1-015	**1-1/2**	1	8	238	223.11
4735T1-020	**2**	1	4	238	289.81

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC with T1 Port					
EPDM					
4728T1-005	**16 DN**	1	12	238	102.03
4728T1-007	**20 DN**	1	8	238	119.68
4728T1-010	**25 DN**	1	8	238	145.49
4728T1-012	**30 DN**	1	8	238	175.99
4728T1-015	**40 DN**	1	8	238	203.52
4728T1-020	**50 DN**	1	4	238	249.61

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC with T1 Port					
FKM					
4738T1-005	**16 DN**	1	12	238	110.51
4738T1-007	**20 DN**	1	8	238	130.43
4738T1-010	**25 DN**	1	8	238	161.98
4738T1-012	**30 DN**	1	8	238	207.36
4738T1-015	**40 DN**	1	8	238	223.11
4738T1-020	**50 DN**	1	4	238	289.81

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with L1 Port					
EPDM					
4724L1-005C	**20 d**	1	12	239	156.94
4724L1-007C	**25 d**	1	8	239	184.15
4724L1-010C	**32 d**	1	8	239	223.81
4724L1-012C	**40 d**	1	8	239	270.75
4724L1-015C	**50 d**	1	8	239	313.00
4724L1-020C	**63 d**	1	4	239	384.04

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with L1 Port					
FKM					
4734L1-005C	**20 d**	1	12	239	169.93
4734L1-007C	**25 d**	1	8	239	200.60
4734L1-010C	**32 d**	1	8	239	249.27
4734L1-012C	**40 d**	1	8	239	319.07
4734L1-015C	**50 d**	1	8	239	343.15
4734L1-020C	**63 d**	1	4	239	445.86

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded with L1 Port					
EPDM					
4725L1-005C	**1/2**	1	12	239	156.94
4725L1-007C	**3/4**	1	8	239	184.15
4724L1-010C	**32 d**	1	8	239	223.81
4725L1-012C	**1-1/4**	1	8	239	270.75
4725L1-015C	**1-1/2**	1	8	239	313.00
4725L1-020C	**2**	1	4	239	384.04

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded with L1 Port					
FKM					
4735L1-005C	**1/2**	1	12	239	169.93
4735L1-007C	**3/4**	1	8	239	200.60
4735L1-010C	**1**	1	8	239	249.27
4735L1-012C	**1-1/4**	1	8	239	319.07
4735L1-015C	**1-1/2**	1	8	239	343.15
4735L1-020C	**2**	1	4	239	445.86

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC with L1 Port EPDM					
4728L1-005C	**16 DN**	1	12	239	156.94
4728L1-007C	**20 DN**	1	8	239	184.15
4728L1-010C	**25 DN**	1	8	239	223.81
4728L1-012C	**32 DN**	1	8	239	270.75
4728L1-015C	**40 DN**	1	8	239	313.00
4728L1-020C	**50 DN**	1	4	239	384.04

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded with L2 Port FKM					
4735L2-005C	**1/2**	1	12	239	325.66
4735L2-007C	**3/4**	1	8	239	356.32
4735L2-010C	**1**	1	8	239	404.81
4735L2-012C	**1-1/4**	1	8	239	474.62
4735L2-015C	**1-1/2**	1	8	239	498.89
4735L2-020C	**2**	1	4	239	601.44

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC with L1 Port FKM					
4738L1-005C	**16 DN**	1	12	239	169.93
4738L1-007C	**20 DN**	1	8	239	200.60
4738L1-010C	**25 DN**	1	8	239	249.27
4738L1-012C	**30 DN**	1	8	239	319.07
4738L1-015C	**40 DN**	1	8	239	343.15
4738L1-020C	**50 DN**	1	4	239	445.86

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC with L2 Port EPDM					
4728L2-005C	**16 DN**	1	12	239	312.67
4728L2-007C	**20 DN**	1	8	239	339.86
4728L2-010C	**25 DN**	1	8	239	379.52
4728L2-012C	**30 DN**	1	8	239	426.29
4728L2-015C	**40 DN**	1	8	239	468.76
4728L2-020C	**50 DN**	1	4	239	539.61

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with L2 Port EPDM					
4724L2-005C	**20 d**	1	12	239	312.67
4724L2-007C	**25 d**	1	8	239	339.86
4724L2-010C	**32 d**	1	8	239	379.52
4724L2-012C	**40 d**	1	8	239	426.29
4724L2-015C	**50 d**	1	8	239	468.76
4724L2-020C	**63 d**	1	4	239	539.61

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC with L2 Port FKM					
4738L2-005C	**16 DN**	1	12	239	325.66
4738L2-007C	**20 DN**	1	8	239	356.32
4738L2-010C	**25 DN**	1	8	239	404.81
4738L2-012C	**30 DN**	1	8	239	474.62
4738L2-015C	**40 DN**	1	8	239	498.89
4738L2-020C	**50 DN**	1	4	239	601.44

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with L2 Port FKM					
4734L2-005C	**20 d**	1	12	239	325.66
4734L2-007C	**25 d**	1	8	239	356.32
4734L2-010C	**32 d**	1	8	239	404.81
4734L2-012C	**40 d**	1	8	239	474.64
4734L2-015C	**50 d**	1	8	239	498.89
4734L2-020C	**63 d**	1	4	239	601.44

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with L3 Port EPDM					
4724L3-005C	**20 d**	1	12	239	312.67
4724L3-007C	**25 d**	1	8	239	339.86
4724L3-010C	**32 d**	1	8	239	379.52
4724L3-012C	**40 d**	1	8	239	426.29
4724L3-015C	**50 d**	1	8	239	468.76
4724L3-020C	**63 d**	1	4	239	539.61

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded with L2 Port EPDM					
4725L2-005C	**1/2**	1	12	239	312.67
4725L2-007C	**3/4**	1	8	239	339.86
4725L2-010C	**1**	1	8	239	379.52
4725L2-012C	**1-1/4**	1	8	239	426.29
4725L2-015C	**1-1/2**	1	8	239	468.76
4725L2-020C	**2**	1	4	239	539.61

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC with L3 Port FKM					
4734L3-005C	**20 d**	1	12	239	325.66
4734L3-007C	**25 d**	1	8	239	356.32
4734L3-010C	**32 d**	1	8	239	404.81
4734L3-012C	**40 d**	1	8	239	474.62
4734L3-015C	**50 d**	1	8	239	498.89
4734L3-020C	**63 d**	1	4	239	601.44

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

BSP Threaded with L3 Port
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4725L3-005C	1/2	1	12	239	312.67
4725L3-007C	3/4	1	8	239	339.86
4725L3-010C	1	1	8	239	379.52
4725L3-012C	1-1/4	1	8	239	426.29
4725L3-015C	1-1/2	1	8	239	468.76
4725L3-020C	2	1	4	239	539.61

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

BSP Threaded with L3 Port
FKM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4735L3-005C	1/2	1	12	239	325.66
4735L3-007C	3/4	1	8	239	356.32
4735L3-010C	1	1	8	239	404.81
4735L3-012C	1-1/4	1	8	239	474.62
4735L3-015C	1-1/2	1	8	239	498.89
4735L3-020C	2	1	4	239	601.44

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

JIS SOC with L1 Port
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4728L3-005C	16 DN	1	12	239	312.60
4728L3-007C	20 DN	1	8	239	339.86
4728L3-010C	25 DN	1	8	239	379.52
4728L3-012C	30 DN	1	8	239	426.29
4728L3-015C	40 DN	1	8	239	468.76
4728L3-020C	50 DN	1	4	239	539.61

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

JIS SOC with L3 Port
FKM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4738L3-005C	16 DN	1	12	239	325.66
4738L3-007C	20 DN	1	8	239	356.32
4738L3-010C	25 DN	1	8	239	404.81
4738L3-012C	30 DN	1	8	239	474.62
4738L3-015C	40 DN	1	8	239	498.89
4738L3-020C	50 DN	1	4	239	601.44

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

DIN SOC with T1 Port
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4724T1-005C	20 d	1	12	239	156.94
4724T1-007C	25 d	1	8	239	184.15
4724T1-010C	32 d	1	8	239	219.19
4724T1-012C	40 d	1	8	239	270.75
4724T1-015C	50 d	1	8	239	313.00
4724T1-020C	63 d	1	4	239	384.04

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

DIN SOC with T1 Port
FKM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4734T1-005C	20 d	1	12	239	169.93
4734T1-007C	25 d	1	8	239	216.71
4734T1-010C	32 d	1	8	239	249.27
4734T1-012C	40 d	1	8	239	319.07
4734T1-015C	50 d	1	8	239	343.15
4734T1-020C	63 d	1	4	239	445.86

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

BSP Threaded with T1 Port
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4725T1-005C	1/2	1	12	239	156.94
4725T1-007C	3/4	1	8	239	184.15
4725T1-010C	1	1	8	239	223.81
4725T1-012C	1-1/4	1	8	239	270.75
4725T1-015C	1-1/2	1	8	239	313.00
4725T1-020C	2	1	4	239	384.04

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

BSP Threaded with T1 Port
FKM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4735T1-005C	1/2	1	12	239	169.93
4735T1-007C	3/4	1	8	239	200.60
4735T1-010C	1	1	8	239	249.27
4735T1-012C	1-1/4	1	8	239	314.48
4735T1-015C	1-1/2	1	8	239	343.15
4735T1-020C	2	1	4	239	445.86

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

JIS SOC with T1 Port
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4728T1-005C	16 DN	1	12	239	156.94
4728T1-007C	20 DN	1	8	239	184.15
4728T1-010C	25 DN	1	8	239	223.81
4728T1-012C	30 DN	1	8	239	270.75
4728T1-015C	40 DN	1	8	239	313.00
4728T1-020C	50 DN	1	4	239	384.04

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

JIS SOC with T1 Port
FKM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4738T1-005C	16 DN	1	12	239	169.93
4738T1-007C	20 DN	1	8	239	200.60
4738T1-010C	25 DN	1	8	239	249.27
4738T1-012C	30 DN	1	8	239	319.07
4738T1-015C	40 DN	1	8	239	343.15
4738T1-020C	50 DN	1	4	239	445.86

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC & CPVC True Union 2000 Industrial Ball Check Valves



Pressure Rating @ 73°F (23°C), Water
1/2" - 2" PN 16

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Pressure Deratings Apply

Rated for Vacuum Service

All Valves assembled with Silicone-Free, Water Soluble Lubricant

Contact Spears® for Pricing on Additional Specialty Valves Available

PVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC EPDM					
4524-005	**20 d**	1	18	228	56.36
4524-007	**25 d**	1	18	228	67.20
4524-010	**32 d**	1	18	228	79.93
4524-012	**40 d**	1	12	228	116.72
4524-015	**50 d**	1	8	228	134.05
4524-020	**63 d**	1	8	228	183.02

PVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC FKM					
4534-005	**20 d**	1	18	228	63.52
4534-007	**25 d**	1	18	228	70.93
4534-010	**32 d**	1	18	228	89.09
4534-012	**40 d**	1	12	228	131.00
4534-015	**50 d**	1	8	228	148.78
4534-020	**63 d**	1	8	228	203.51

PVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded EPDM					
4525-005	**1/2**	1	18	228	56.36
4525-007	**3/4**	1	18	228	67.20
4525-010	**1**	1	18	228	79.93
4525-012	**1-1/4**	1	12	228	116.72
4525-015	**1-1/2**	1	8	228	134.05
4525-020	**2**	1	8	228	183.02

PVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded FKM					
4535-005	**1/2**	1	18	228	63.52
4535-007	**3/4**	1	18	228	70.93
4535-010	**1**	1	18	228	89.09
4535-012	**1-1/4**	1	12	228	131.00
4535-015	**1-1/2**	1	8	228	148.78
4535-020	**2**	1	8	228	203.51

PVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC EPDM					
4528-005	**16 DN**	1	18	228	56.36
4528-007	**20 DN**	1	18	228	67.20

PVC True Union 2000 Ball Check Valves (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC EPDM					
4528-010	**25 DN**	1	18	228	79.93
4528-012	**30 DN**	1	12	228	116.72
4528-015	**40 DN**	1	8	228	134.05
4528-020	**50 DN**	1	8	228	183.02

PVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC FKM					
4538-005	**16 DN**	1	18	228	63.52
4538-007	**20 DN**	1	18	228	70.93
4538-010	**25 DN**	1	18	228	89.09
4538-012	**30 DN**	1	12	228	131.00
4538-015	**40 DN**	1	8	228	148.78
4538-020	**50 DN**	1	8	228	203.51

CPVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC EPDM					
4524-005C	**20 d**	1	18	229	83.31
4524-007C	**25 d**	1	18	229	99.71
4524-010C	**32 d**	1	18	229	117.65
4524-012C	**40 d**	1	12	229	202.63
4524-015C	**50 d**	1	8	229	202.63
4524-020C	**63 d**	1	8	229	270.65

CPVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC FKM					
4534-005C	**20 d**	1	18	229	92.74
4534-007C	**25 d**	1	18	229	110.81
4534-010C	**32 d**	1	18	229	130.71
4534-012C	**40 d**	1	12	229	224.94
4534-015C	**50 d**	1	8	229	224.94
4534-020C	**63 d**	1	8	229	301.56

CPVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded EPDM					
4525-005C	**1/2**	1	18	229	83.31
4525-007C	**3/4**	1	18	229	99.71
4525-010C	**1**	1	18	229	117.65
4525-012C	**1-1/4**	1	12	229	202.63

PVC & CPVC True Union 2000 Industrial Ball Check Valves

CPVC True Union 2000 Ball Check Valves (continued)

BSP Threaded EPDM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4525-015C	**1-1/2**	1	8	229	202.63
4525-020C	**2**	1	8	229	270.65

CPVC True Union 2000 Ball Check Valves

BSP Threaded
FKM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4535-005C	**1/2**	1	18	229	92.74
4535-007C	**3/4**	1	18	229	110.81
4535-010C	**1**	1	18	229	130.71
4535-012C	**1-1/4**	1	12	229	224.94
4535-015C	**1-1/2**	1	8	229	224.94
4535-020C	**2**	1	8	229	301.56

CPVC True Union 2000 Ball Check Valves

JIS SOC
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4528-005C	**16 DN**	1	18	229	83.31
4528-007C	**20 DN**	1	18	229	99.71
4528-010C	**25 DN**	1	18	229	117.65
4528-012C	**30 DN**	1	12	229	202.63
4528-015C	**40 DN**	1	8	229	202.63
4528-020C	**50 DN**	1	8	229	270.65

CPVC True Union 2000 Ball Check Valves

JIS SOC
FKM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4538-005C	**16 DN**	1	18	229	92.74
4538-007C	**20 DN**	1	18	229	110.81
4538-010C	**25 DN**	1	18	229	130.71
4538-012C	**30 DN**	1	12	229	224.94
4538-015C	**40 DN**	1	8	229	224.94
4538-020C	**50 DN**	1	8	229	301.56

PVC & CPVC Gate Valves



Pressure Rating @ 73°F (23°C), Water
1/2" - 2" PN 16

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Pressure Deratings Apply

All Valves assembled with Silicone-Free, Water Soluble Lubricant

PVC Gate Valves

DIN SOC Buna-N

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
2014-005	**20 d**	12	0	208	24.19
2014-007	**25 d**	12	0	208	29.58
2014-010	**32 d**	12	0	208	35.06
2014-012	**40 d**	6	0	208	48.48
2014-015	**50 d**	6	0	208	61.86
2014-020	**63 d**	6	0	208	79.45

PVC Gate Valves

DIN SOC EPDM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
2024-005	**20 d**	12	0	208	26.55
2024-007	**25 d**	12	0	208	32.56
2024-010	**32 d**	12	0	208	38.61
2024-012	**40 d**	6	0	208	53.35
2024-015	**50 d**	6	0	208	68.73
2024-020	**63 d**	6	0	208	87.47

PVC Gate Valves

DIN SOC FKM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
2034-005	**20 d**	12	0	208	29.24
2034-007	**25 d**	12	0	208	34.27
2034-010	**32 d**	12	0	208	42.51

PVC Gate Valves (continued)

DIN SOC FKM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
2034-012	**40 d**	6	0	208	58.65
2034-015	**50 d**	6	0	208	74.84
2034-020	**63 d**	6	0	208	96.16

PVC Gate Valves

BSP Threaded Buna-N

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
2015-005	**1/2**	12	0	208	24.19
2015-007	**3/4**	12	0	208	29.58
2015-010	**1**	12	0	208	35.06
2015-012	**1-1/4**	6	0	208	48.48
2015-015	**1-1/2**	6	0	208	61.86
2015-020	**2**	6	0	208	79.45

PVC Gate Valves

BSP Threaded EPDM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
2025-005	**1/2**	12	0	208	26.55
2025-007	**3/4**	12	0	208	32.56
2025-010	**1**	12	0	208	38.61
2025-012	**1-1/4**	6	0	208	53.35
2025-015	**1-1/2**	6	0	208	68.73
2025-020	**2**	6	0	208	87.47

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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Gate Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded FKM					
2035-005	**1/2**	12	0	208	29.24
2035-007	**3/4**	12	0	208	34.27
2035-010	**1**	12	0	208	42.51
2035-012	**1-1/4**	6	0	208	58.65
2035-015	**1-1/2**	6	0	208	74.84
2035-020	**2**	6	0	208	96.16

CPVC Gate Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC EPDM					
2024-005C	**20 d**	12	0	209	78.63
2024-007C	**25 d**	12	0	209	85.04
2024-010C	**32 d**	12	0	209	93.25
2024-012C	**40 d**	6	0	209	163.79
2024-015C	**50 d**	6	0	209	179.51
2024-020C	**63 d**	6	0	209	207.06

CPVC Gate Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DIN SOC FKM					
2034-005C	**20 d**	12	0	209	86.54
2034-007C	**25 d**	12	0	209	93.56
2034-010C	**32 d**	12	0	209	102.54
2034-012C	**40 d**	6	0	209	180.17
2034-015C	**50 d**	6	0	209	197.47
2034-020C	**63 d**	6	0	209	227.77

CPVC Gate Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded EPDM					
2025-005C	**1/2**	12	0	209	78.63
2025-007C	**3/4**	12	0	209	85.04
2025-010C	**1**	12	0	209	93.25
2025-012C	**1-1/4**	6	0	209	163.79
2025-015C	**1-1/2**	6	0	209	179.51
2025-020C	**2**	6	0	209	207.06

CPVC Gate Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
BSP Threaded FKM					
2035-005C	**1/2**	12	0	209	86.54
2035-007C	**3/4**	12	0	209	93.56
2035-010C	**1**	12	0	209	102.54
2035-012C	**1-1/4**	6	0	209	180.17
2035-015C	**1-1/2**	6	0	209	197.47
2035-020C	**2**	6	0	209	227.77

PVC & CPVC Diaphragm Valves



Pressure Rating @ 73°F (23°C), Water
1/2" - 2" PN 16

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Pressure Deratings Apply

No Lubricants in Media Contact Area

PVC Diaphragm Valves

DIN SOC
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
2724-005	**20 d**	1	12	274	138.17
2724-007	**25 d**	1	8	274	156.82
2724-010	**32 d**	1	8	274	193.27
2724-012	**40 d**	1	4	274	289.32
2724-015	**50 d**	1	4	274	304.11
2724-020	**63 d**	1	0	274	359.78

PVC Diaphragm Valves

DIN SOC
FKM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
2734-005	**20 d**	1	12	274	153.52
2734-007	**25 d**	1	8	274	174.26
2734-010	**32 d**	1	8	274	212.38
2734-012	**40 d**	1	4	274	344.00
2734-015	**50 d**	1	4	274	351.93
2734-020	**63 d**	1	0	274	426.36

PVC Diaphragm Valves

BSP Threaded
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
2725-005	**1/2**	1	12	274	138.17
2725-007	**3/4**	1	8	274	156.82
2725-010	**1**	1	8	274	180.39
2725-012	**1-1/4**	1	4	274	289.32
2725-015	**1-1/2**	1	4	274	304.11
2725-020	**2**	1	0	274	359.78

PVC Diaphragm Valves

BSP Threaded
FKM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
2735-005	**1/2**	1	12	274	153.52
2735-007	**3/4**	1	8	274	174.26
2735-010	**1**	1	8	274	212.38
2735-012	**1-1/4**	1	4	274	344.00
2735-015	**1-1/2**	1	4	274	351.93
2735-020	**2**	1	0	274	426.36

PVC Diaphragm Valves

JIS SOC
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
2728-005	**16 DN**	1	12	274	138.17
2728-007	**20 DN**	1	8	274	156.82
2728-010	**25 DN**	1	8	274	193.27
2728-012	**32 DN**	1	4	274	289.32
2728-015	**40 DN**	1	4	274	304.11
2728-020	**50 DN**	1	0	274	359.78

PVC Diaphragm Valves

JIS SOC
FKM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
2738-005	**16 DN**	1	12	274	153.52
2738-007	**20 DN**	1	8	274	174.26
2738-010	**25 DN**	1	8	274	212.38
2738-012	**32 DN**	1	4	274	344.00
2738-015	**40 DN**	1	4	274	351.93
2738-020	**50 DN**	1	0	274	426.36

CPVC Diaphragm Valves

DIN SOC
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
2724-005C	**20 d**	1	12	276	244.62
2724-007C	**25 d**	1	8	276	272.25
2724-010C	**32 d**	1	8	276	314.22
2724-012C	**40 d**	1	4	276	471.96
2724-015C	**50 d**	1	4	276	485.93
2724-020C	**63 d**	1	0	276	517.58

CPVC Diaphragm Valves

DIN SOC
FKM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
2734-005C	**20 d**	1	12	276	313.51
2734-007C	**25 d**	1	8	276	334.25
2734-010C	**32 d**	1	8	276	406.44
2734-012C	**40 d**	1	4	276	561.55
2734-015C	**50 d**	1	4	276	568.38
2734-020C	**63 d**	1	0	276	648.78

CPVC Diaphragm Valves

BSP Threaded
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
2725-005C	**1/2**	1	12	276	244.62
2725-007C	**3/4**	1	8	276	272.25
2725-010C	**1**	1	8	276	314.22
2725-012C	**1-1/4**	1	4	276	471.96
2725-015C	**1-1/2**	1	4	276	485.93
2725-020C	**2**	1	0	276	517.58

CPVC Diaphragm Valves

BSP Threaded
FKM

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
2735-005C	**1/2**	1	12	276	313.51
2735-007C	**3/4**	1	8	276	334.25
2735-010C	**1**	1	8	276	406.44
2735-012C	**1-1/4**	1	4	276	561.55
2735-015C	**1-1/2**	1	4	276	568.38
2735-020C	**2**	1	0	276	648.78

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PVC & CPVC Diaphragm Valves

CPVC Diaphragm Valves

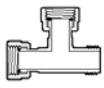
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC EPDM					
2728-005C	**16 DN**	1	12	276	244.62
2728-007C	**20 DN**	1	8	276	272.25
2728-010C	**25 DN**	1	8	276	314.22
2728-012C	**32 DN**	1	4	276	471.96
2728-015C	**40 DN**	1	4	276	485.93
2728-020C	**50 DN**	1	0	276	517.58

CPVC Diaphragm Valves

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
JIS SOC FKM					
2738-005C	**16 DN**	1	12	276	313.51
2738-007C	**20 DN**	1	8	276	334.25
2738-010C	**25 DN**	1	8	276	406.44
2738-012C	**32 DN**	1	4	276	561.55
2738-015C	**40 DN**	1	4	276	568.46
2738-020C	**50 DN**	1	0	276	648.78

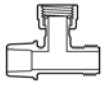
PVC Irrigation Manifold Systems

Manifold Tee
Swivel x MBSP x Swivel with O-ring Seal



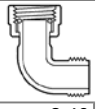
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MA0101-010BT	**1**	25	0	019	9.91

PVC Manifold Tee
Soc (Spig) x MBSP x Swivel with O–ring Seal For Solvent Cement Connection



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MA0109-010BT	**1**	25	0	019	8.81

Manifold 90° Street Ell
MBSP x Swivel with O-ring Seal



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MA0602-010BT	**1**	25	0	019	8.46

Manifold 90° Ell
Swivel x Swivel with O-ring Seal



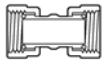
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MA0603-010	**1**	20	0	019	9.34

Manifold Cross
Swivel x MBSP x Swivel x Swivel with O-ring Seal



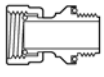
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MA2004-010BT	**1**	25	0	019	13.15

Manifold Coupling
Swivel x Swivel with O-ring Seal



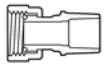
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MA2903-010	**1**	25	200	019	7.01

Manifold Coupling
Swivel x MBSP with O-ring Seal



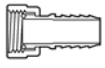
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MA2907-010BT	**1**	25	200	019	5.12

PVC Manifold Coupling
Swivel x Soc (Spig) with O-ring Seal For Solvent Cement Connection



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MA2908-010	**1 (1-1/4)**	25	0	019	5.12

Manifold Insert Coupling
Swivel x Barbed Insert with O-ring Seal



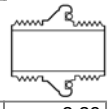
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MA3505-010	**1**	25	200	019	5.43

Manifold Cap
with O-ring Seal



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MA4800-010	**1**	50	600	019	2.14

Manifold Nipple
MBSP x MBSP with O-ring Seal



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MA8306-010BT	**1**	25	200	019	2.29

Manifold Replacement O–ring
For All 1" Cap/Swivel Connectors & For 3/4" Nipple End



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MA-214	**1 & 3/4**	50	500	901	.49

Manifold Replacement O-ring
For 1" Nipple & For 1" Nippled Coupling End



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MA-218	**1**	50	500	901	.53

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

CPVC Schedule 40 Plain End



10' Lengths, Price Per Foot

List Price Per Foot

PD-400-001C-10	**1/8**	10	0	745	3.38
PD-400-002C-10	**1/4**	250	0	745	4.23
PD-400-003C-10	**3/8**	250	0	745	5.97
PD-400-005C-10	**1/2**	10	0	745	1.78
PD-400-007C-10	**3/4**	10	0	745	2.37
PD-400-010C-10	**1**	10	0	745	3.46
PD-400-012C-10	**1-1/4**	10	0	745	4.68
PD-400-015C-10	**1-1/2**	10	0	745	5.61
PD-400-020C-10	**2**	10	0	745	7.52
PD-400-025C-10	**2-1/2**	10	0	745	11.88
PD-400-030C-10	**3**	10	0	745	15.52
PD-400-040C-10	**4**	10	0	745	22.11
PD-400-060C-10	**6**	10	0	745	40.80
PD-400-080C-10	**8**	10	0	745	66.44
PD-400-100C-10	**10**	10	0	745	113.62
PD-400-120C-10	**12**	10	0	745	150.09
PD-400-140C-10	**14**	10	0	945	343.30
PD-400-160C-10	**16**	10	0	945	448.15
PD-400-180C-10	**18**	10	0	945	584.66
PD-400-200C-10	**20**	10	0	945	686.11
PD-400-240C-10	**24**	10	0	945	955.60

20' Lengths, Price Per Foot

List Price Per Foot

PD-400-001C	**1/8**	20	0	745	3.38
PD-400-002C	**1/4**	500	0	745	4.23
PD-400-003C	**3/8**	500	0	745	5.97
PD-400-005C	**1/2**	20	0	745	1.78
PD-400-007C	**3/4**	20	0	745	2.37
PD-400-010C	**1**	20	0	745	3.46
PD-400-012C	**1-1/4**	20	0	745	4.68
PD-400-015C	**1-1/2**	20	0	745	5.61
PD-400-020C	**2**	20	0	745	7.52
PD-400-025C	**2-1/2**	20	0	745	11.88
PD-400-030C	**3**	20	0	745	15.52
PD-400-040C	**4**	20	0	745	22.11
PD-400-050C	**5**	20	0	745	33.69
PD-400-060C	**6**	20	0	745	40.80
PD-400-080C	**8**	20	0	745	66.44
PD-400-100C	**10**	20	0	745	113.62
PD-400-120C	**12**	20	0	745	150.09
PD-400-140C	**14**	20	0	945	361.37
PD-400-160C	**16**	20	0	945	471.74
PD-400-180C	**18**	20	0	945	615.43
PD-400-200C	**20**	20	0	945	722.22
PD-400-240C	**24**	20	0	945	1005.89

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.
- See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

CPVC Schedule 40 Plain End (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

20' Lengths, Price Per Foot

ASTM D-1784 ASTM F-441		Schedule 40 CPVC Plain End Pipe				
Size	Max Work Pressure	Avg OD	Min Wall	10' Length Skid Quantity FT/Pieces	20' Length Skid Quantity FT/Pieces	Weight Per FT
1/8"	910	0.405	0.068	2850/285	5700/285	.056
1/4"	790	0.540	0.088	2850/285	5700/285	.096
3/8"	620	0.675	0.091	2850/285	5700/285	.128
1/2"	600	0.840	0.109	2430/243	4860/243	.185
3/4"	480	1.050	0.113	1540/154	3080/154	.246
1"	450	1.315	0.133	2520/252	5040/252	.362
1-1/4"	370	1.660	0.140	1230/123	2460/123	.489
1-1/2"	330	1.900	0.145	1720/172	3440/172	.585
2"	280	2.375	0.154	1230/123	2460/123	.783
2-1/2"	300	2.875	0.203	540/54	1080/54	1.237
3"	260	3.500	0.216	460/46	920/46	1.619
4"	220	4.500	0.237	340/34	680/34	2.306
6"	180	6.625	0.280	170/17	340/17	4.603
8"	160	8.625	0.322	90/9	180/9	6.136
10"	140	10.750	0.365	110/11	220/11	8.886
12"	130	12.750	0.406	80/8	160/8	11.751

CPVC Schedule 80 Plain End



10' Lengths, Price Per Foot

List Price Per Foot

PD-800-001C-10	**1/8**	250	0	745	4.19
PD-800-002C-10	**1/4**	250	0	745	4.83
PD-800-003C-10	**3/8**	250	0	745	6.58
PD-800-005C-10	**1/2**	10	0	745	2.08
PD-800-007C-10	**3/4**	10	0	745	2.83
PD-800-010C-10	**1**	10	0	745	4.17
PD-800-012C-10	**1-1/4**	10	0	745	5.74
PD-800-015C-10	**1-1/2**	10	0	745	6.97
PD-800-020C-10	**2**	10	0	745	9.65
PD-800-025C-10	**2-1/2**	10	0	745	14.72
PD-800-030C-10	**3**	10	0	745	19.73
PD-800-040C-10	**4**	10	0	745	28.84
PD-800-060C-10	**6**	10	0	745	56.13
PD-800-080C-10	**8**	10	0	745	93.08
PD-800-100C-10	**10**	10	0	745	168.81
PD-800-120C-10	**12**	10	0	745	232.06
PD-800-140C-10	**14**	10	0	945	564.37
PD-800-160C-10	**16**	10	0	945	725.80
PD-800-180C-10	**18**	10	0	945	913.81
PD-800-200C-10	**20**	10	0	945	1151.01
PD-800-240C-10	**24**	10	0	945	1633.08

20' Lengths, Price Per Foot

List Price Per Foot

PD-800-001C	**1/8**	500	0	745	4.19
PD-800-002C	**1/4**	500	0	745	4.83
PD-800-003C	**3/8**	500	0	745	6.58
PD-800-005C	**1/2**	20	0	745	2.08
PD-800-007C	**3/4**	20	0	745	2.83
PD-800-010C	**1**	20	0	745	4.17
PD-800-012C	**1-1/4**	20	0	745	5.74
PD-800-015C	**1-1/2**	20	0	745	6.97
PD-800-020C	**2**	20	0	745	9.65
PD-800-025C	**2-1/2**	20	0	745	14.72
PD-800-030C	**3**	20	0	745	19.73
PD-800-040C	**4**	20	0	745	28.84
PD-800-050C	**5**	20	0	745	39.64
PD-800-060C	**6**	20	0	745	56.13
PD-800-080C	**8**	20	0	745	93.08
PD-800-100C	**10**	20	0	745	168.81
PD-800-120C	**12**	20	0	745	232.06
PD-800-140C	**14**	20	0	945	564.37
PD-800-160C	**16**	20	0	945	725.80

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC Schedule 80 Plain End (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
20' Lengths, Price Per Foot					
PD-800-180C	**18**	20	0	945	913.81
PD-800-200C	**20**	20	0	945	1151.01
PD-800-240C	**24**	20	0	945	1633.08

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.
- See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

ASTM D-1784 ASTM F-441		Schedule 80 CPVC Plain End Pipe				
Size	Max Work Pressure	Avg OD	Min Wall	10' Length Skid Quantity FT/Pieces	20' Length Skid Quantity FT/Pieces	Weight Per FT
1/8"	1230	0.405	0.095	2850/285	5700/285	.069
1/4"	1130	0.540	0.119	2850/285	5700/285	.117
3/8"	920	0.675	0.126	2850/285	5700/285	.162
1/2"	850	0.840	0.147	2430/243	4860/243	.231
3/4"	690	1.050	0.154	1540/154	3080/154	.314
1"	630	1.315	0.179	2520/252	5040/252	.462
1-1/4"	520	1.660	0.191	1230/123	2460/123	.636
1-1/2"	470	1.900	0.200	1720/172	3440/172	.773
2"	400	2.375	0.218	1230/123	2460/123	1.071
2-1/2"	420	2.875	0.276	540/54	1080/54	1.631
3"	370	3.500	0.300	460/46	920/46	2.187
4"	320	4.500	0.337	340/34	680/34	3.198
6"	280	6.625	0.432	170/17	340/17	6.106
8"	250	8.625	0.500	90/9	180/9	9.322
10"	230	10.750	0.593	110/11	220/11	14.095
12"	230	12.750	0.687	80/8	160/8	19.392

CPVC CTS Pipe - SDR 11

10' Lengths, Price Per Foot



List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CTS-005	**1/2**	500	0	034	.92
CTS-007	**3/4**	250	0	034	1.65
CTS-010	**1**	150	0	034	3.39
CTS-012	**1-1/4**	100	0	034	5.03
CTS-015	**1-1/2**	100	0	034	6.67
CTS-020	**2**	50	0	034	11.29

- Pipe sold in bag quantities only - no broken bags
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.
- See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

CPVC CTS PIPE WEIGHTS:
CTS-005 Weight per Foot .090 lbs; per Bag Weight 45 lbs.
CTS-007 Weight per Foot .149l bs; per Bag Weight 37.25 lbs.
CTS-010 Weight per Foot .239 lbs; per Bag Weight 35.85 lbs.
CTS-012 Weight per Foot .353 lbs; per Bag Weight 35.3 lbs.
CTS-015 Weight per Foot .489 lbs; per Bag Weight 48.9 lbs.
CTS-020 Weight per Foot .810 lbs; per Bag Weight 40.5 lbs.

CPVC CTS Pipe - SDR 11

20' Lengths, Price Per Foot



List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CTS-005-20	**1/2**	1000	0	034	.92
CTS-007-20	**3/4**	500	0	034	1.65
CTS-010-20	**1**	300	0	034	3.39
CTS-012-20	**1-1/4**	200	0	034	5.03
CTS-015-20	**1-1/2**	200	0	034	6.67
CTS-020-20	**2**	100	0	034	11.29

- Pipe sold in bag quantities only - no broken bags
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.
- See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

CPVC CTS PIPE WEIGHTS:
CTS-005 Weight per Foot .090 lbs; per Bag Weight 90 lbs.
CTS-007 Weight per Foot .149 lbs; per Bag Weight 74.5l bs.
CTS-010 Weight per Foot .239 lbs; per Bag Weight 71.7 lbs.
CTS-012 Weight per Foot .353 lbs; per Bag Weight 70.6 lbs.
CTS-015 Weight per Foot .489 lbs; per Bag Weight 97.8 lbs.
CTS-020 Weight per Foot .830 lbs; per Bag Weight 83 lbs.

CPVC CTS Coiled Pipe - SDR 11

100 ft. Coil, Price Per Foot



List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CTS-005-100	**1/2**	100	0	034	1.08
CTS-007-100	**3/4**	100	0	034	1.96
CTS-010-100	**1**	100	0	034	3.86

CPVC CTS Coiled Pipe - SDR 11 (continued)

100 ft. Coil, Price Per Foot

- Pipe sold in coil quantities only - no broken coils
- No return on Coiled Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.
- See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

CPVC CTS COILED PIPE WEIGHTS:
CTS-005-100 Weight per Foot .090 lbs; per Coil Weight 9 lbs.
CTS-007-100 Weight per Foot .149 lbs; per Coil Weight 14.9 lbs.
CTS-010-100 Weight per Foot .239 lbs; per Coil Weight 23.9 lbs.

WARNING:
Banded coils will expand when opened. Excercize caution to avoid injury during banding removal.

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Schedule 80 Plain End

10' Lengths, Price Per Foot



List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PD-800-001-10	1/8	250	0	744	1.97
PD-800-002-10	1/4	250	0	744	2.94
PD-800-003-10	3/8	250	0	744	4.08
PD-800-005-10	1/2	10	0	744	1.23
PD-800-007-10	3/4	10	0	744	1.66
PD-800-010-10	1	10	0	744	2.44
PD-800-012-10	1-1/4	10	0	744	3.37
PD-800-015-10	1-1/2	10	0	744	3.82
PD-800-020-10	2	10	0	744	5.29
PD-800-025-10	2-1/2	10	0	744	8.92
PD-800-030-10	3	10	0	744	10.82
PD-800-040-10	4	10	0	744	15.83
PD-800-060-10	6	10	0	744	30.23
PD-800-080-10	8	10	0	744	45.85
PD-800-100-10	10	10	0	744	68.03
PD-800-120-10	12	10	0	744	93.53
PD-800-140-10	14	10	0	947	128.21
PD-800-160-10	16	10	0	947	145.75
PD-800-180-10	18	10	0	947	214.48
PD-800-200-10	20	10	0	947	270.21
PD-800-240-10	24	10	0	947	339.02

20' Lengths, Price Per Foot

List Price Per Foot

PD-800-001	1/8	500	0	744	1.97
PD-800-002	1/4	500	0	744	2.94
PD-800-003	3/8	500	0	744	4.08
PD-800-005	1/2	20	0	744	1.23
PD-800-007	3/4	20	0	744	1.66
PD-800-010	1	20	0	744	2.44
PD-800-012	1-1/4	20	0	744	3.37
PD-800-015	1-1/2	20	0	744	3.82
PD-800-020	2	20	0	744	5.29
PD-800-025	2-1/2	20	0	744	8.92
PD-800-030	3	20	0	744	10.82
PD-800-040	4	20	0	744	15.83
PD-800-050	5	20	0	744	21.73
PD-800-060	6	20	0	744	30.23
PD-800-080	8	20	0	744	45.85
PD-800-100	10	20	0	744	68.03
PD-800-120	12	20	0	744	93.53
PD-800-140	14	20	0	947	128.21
PD-800-160	16	20	0	947	145.75
PD-800-180	18	20	0	947	214.48
PD-800-200	20	20	0	947	270.21
PD-800-240	24	20	0	947	339.02

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.
- See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

PVC Schedule 80 Plain End (continued)

20' Lengths, Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

ASTM D-1784 ASTM D-1785		Schedule 80 PVC Plain End Pipe				
Size	Max Work Pressure	Avg OD	Min Wall	10' Length Skid Quantity FT/Pieces	20' Length Skid Quantity FT/Pieces	Weight Per FT
1/8"	1230	0.405	0.095	2850/285	5700/285	0.063
1/4"	1130	0.540	0.119	2850/285	5700/285	0.105
3/8"	920	0.675	0.126	2850/285	5700/285	0.146
1/2"	850	0.840	0.147	2430/243	4860/243	0.213
3/4"	690	1.050	0.154	1540/154	3080/154	0.289
1"	630	1.315	0.179	2520/252	5040/252	0.124
1-1/4"	520	1.660	0.191	1230/123	2460/123	0.586
1-1/2"	470	1.900	0.200	1720/172	3440/172	0.717
2"	400	2.375	0.218	1230/123	2460/123	0.984
2-1/2"	420	2.875	0.276	540/54	1080/54	1.500
3"	370	3.500	0.300	460/46	920/46	2.010
4"	320	4.500	0.337	340/34	680/34	2.938
6"	280	6.625	0.432	170/17	340/17	5.610
8"	250	8.625	0.500	90/9	180/9	8.522
10"	230	10.750	0.593	110/11	220/11	12.635
12"	230	12.750	0.687	80/8	160/8	17.384

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Schedule 40 Pipe Plain End

20' Lengths, Price Per Foot



List Price Per Foot

PD-400-005	**1/2**	20	0	947	1.12
PD-400-007	**3/4**	20	0	947	1.37
PD-400-010	**1**	20	0	947	2.18
PD-400-012	**1-1/4**	20	0	947	2.90
PD-400-015	**1-1/2**	20	0	947	3.29
PD-400-020	**2**	20	0	947	4.52
PD-400-025	**2-1/2**	20	0	947	7.62
PD-400-030	**3**	20	0	947	8.90
PD-400-040	**4**	20	0	947	12.46
PD-400-050	**5**	20	0	947	20.45
PD-400-060	**6**	20	0	947	22.53
PD-400-080	**8**	20	0	947	39.95
PD-400-100	**10**	20	0	947	54.37
PD-400-120	**12**	20	0	947	78.75
PD-400-140	**14**	20	0	947	99.58
PD-400-160	**16**	20	0	947	105.07

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Schedule 40 Clear Pipe

PVC Clear Schedule 40 Pipe

10' Lengths, Price Per Foot



List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PL-002	**1/4**	190	0	742	1.02
PL-003	**3/8**	100	0	742	1.38
PL-005	**1/2**	420	0	742	2.06
PL-007	**3/4**	360	0	742	2.77
PL-010	**1**	360	0	742	4.09
PL-012	**1-1/4**	360	0	742	5.55
PL-015	**1-1/2**	160	0	742	6.64
PL-020	**2**	180	0	742	8.95

PVC Clear Schedule 40 Pipe (continued)

10' Lengths, Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PL-025	**2-1/2**	40	0	742	14.14
PL-030	**3**	80	0	742	18.46
PL-040	**4**	40	0	742	27.80
PL-060	**6**	10	0	038	50.82
PL-080	**8**	10	0	038	76.21
PL-100	**10**	10	0	038	122.68
PL-120	**12**	10	0	038	162.05

Schedule 80 Clear Pipe

PVC Clear Schedule 80 Pipe

10' Lengths, Price Per Foot



List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PD-800-002L-10	**1/4**	1000	0	742	1.29
PD-800-003L-10	**3/8**	100	0	742	1.79
PD-800-005L-10	**1/2**	420	0	742	2.62
PD-800-007L-10	**3/4**	360	0	742	3.54
PD-800-010L-10	**1**	360	0	742	5.21
PD-800-012L-10	**1-1/4**	360	0	742	7.18
PD-800-015L-10	**1-1/2**	160	0	742	8.73
PD-800-020L-10	**2**	180	0	742	12.07
PD-800-025L-10	**2-1/2**	40	0	742	18.40
PD-800-030L-10	**3**	80	0	742	24.67
PD-800-040L-10	**4**	40	0	742	36.06
PD-800-060L-10	**6**	10	0	742	68.88

Clear Ultra Violet Resistant (UVR) PVC Pipe

Designed to Promote Algae Growth in Bioreactor, Biofuel, Bioremediation, Research and Aquaculture Applications

Spears® Clear UV Resistant (UVR) PVC piping is suitable for use where exposure to sunlight is desired. The modified clear PVC material allows light in but blocks the harmful wavelengths that damage the plastic pipe. This specialty pipe can be joined with Spears® PVC Clear solvent cements and primers using standard solvent cement welding practices.

Produced in both Thin Walled UVR pipe down to 0.091" and Schedule 40 UVR pipe to allow rapid growth of algae and provide pressure ratings needed for circulation. Use Spears® PVC Clear Solvent Cements and Primers for joining.

UV Resistant Clear Pipe Dimensions & Pressure Ratings

Thin Walled UVR Pipe

Pipe Size	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.	Max. W.P. PSI*
2"	2.375	2.173	0.091	0.456	80
3"	3.500	3.210	0.135	0.966	80
4"	4.500	4.134	0.172	1.569	80
6"	6.625	6.251	0.172	2.391	70
8"	8.625	8.251	0.172	3.134	53
10"	10.750	10.376	0.172	3.923	43
12"	12.750	12.376	0.172	4.666	36

De-rating Factors @ Elevated Temperature	
Operating Temp °F	De-rating Factor
73	1.00
80	0.88
90	0.75
100	0.62
110	0.51
120	0.40
130	0.31
140	0.22

Schedule 40 UVR Pipe

Pipe Size	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.	Max. W.P. PSI*
1/2"	0.840	0.602	0.109	0.170	300
3/4"	1.050	0.804	0.113	0.226	240
1"	1.315	1.029	0.133	0.333	220
1-1/4"	1.660	1.360	0.140	0.450	180
1-1/2"	1.900	1.590	0.145	0.537	170
2	2.375	2.047	0.154	0.720	140
2-1/2"	2.875	2.445	0.203	1.136	150
3	3.500	3.042	0.216	1.488	130
3-1/2"	4.000	3.521	0.226	1.789	120
4"	4.500	3.998	0.237	2.118	110
6"	6.625	6.031	0.280	3.733	90

Maximum Service Temperature = 140 °F

The temperature de-rating factors shown in table at left can be multiplied by the pressure ratings listed for each pipe size to determine the maximum pressure rating of the pipe at the specified elevated Operating temperatures.

* Pressure Rating @ 73 °F

Thin Walled Clear UVR PVC Pipe

10' Lengths, Price Per Foot



List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PL091-020UVR-10	**2**	10	0	038	4.75
PL135-030UVR-10	**3**	10	0	038	10.06
PL172-040UVR-10	**4**	40	0	038	17.38
PL172-060UVR-10	**6**	10	0	038	27.45
PL172-080UVR-10	**8**	10	0	038	35.96
PL172-100UVR-10	**10**	10	0	038	51.04
PL172-120UVR-10	**12**	10	0	038	60.71

See application information above
Custom lengths available, contact Spears®

Schedule 40 Clear UVR PVC Pipe

10' Lengths, Price Per Foot



List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PL400-005UVR-10	**1/2**	90	0	038	1.73
PL400-007UVR-10	**3/4**	360	0	038	2.32
PL400-010UVR-10	**1**	90	0	038	2.44
PL400-012UVR-10	**1-1/4**	360	0	038	4.66
PL400-015UVR-10	**1-1/2**	50	0	038	5.58
PL400-020UVR-10	**2**	180	0	038	7.51
PL400-025UVR-10	**2-1/2**	40	0	038	11.86
PL400-030UVR-10	**3**	10	0	038	15.50
PL400-035UVR-10	**3-1/2**	10	0	038	19.69

Schedule 40 Clear UVR PVC Pipe (continued)

10' Lengths, Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PL400-040UVR-10	**4**	40	0	038	23.33
PL400-060UVR-10	**6**	10	0	038	42.66

See application information above
Custom lengths available, contact Spears®

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Spears® Low-Extractable Schedule 80 Pipe

15' Lengths, Price Per Foot



List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
LXT-005	**1/2**	300	0	064	4.81
LXT-007	**3/4**	255	0	064	6.52
LXT-010	**1**	150	0	064	9.60
LXT-012	**1-1/4**	120	0	064	13.28
LXT-015	**1-1/2**	105	0	064	16.07
LXT-020	**2**	75	0	064	22.29
LXT-030	**3**	45	0	064	45.47
LXT-040	**4**	30	0	064	66.47
LXT-060	**6**	15	0	064	154.11

See Spears® Low-Extractable Schedule 80 Pipe Chart for additional information.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

LabWaste™ CPVC Pipe

10' Lengths, Price Per Foot



List Price Per Foot, may be cut to desired length

LW-015	**1-1/2**	10	0	161	7.26
LW-020	**2**	10	0	161	9.82
LW-030	**3**	10	0	161	17.76
LW-040	**4**	10	0	161	25.21
LW-060	**6**	10	0	161	45.51
LW-080	**8**	10	0	157	87.92
LW-100	**10**	10	0	157	142.35
LW-120	**12**	10	0	157	188.06
LW-140	**14**	10	0	158	229.34
LW-160	**16**	10	0	158	299.31
20' length available upon request					

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Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

FlameGuard® CPVC Fire Sprinkler Pipe



SDR 13.5 10' Lengths, Price Per Foot

List Price Per Foot

CP-007-10	**3/4**	260	0	071	1.82
CP-010-10	**1**	170	0	071	2.81
CP-012-10	**1-1/4**	90	0	071	4.40
CP-015-10	**1-1/2**	70	0	071	6.08
CP-020-10	**2**	50	0	071	9.09
CP-025-10	**2-1/2**	40	0	071	13.87
CP-030-10	**3**	30	0	071	21.08

FlameGuard® CPVC Fire Sprinkler Pipe



SDR 13.5, 15' Lengths, Price Per Foot

List Price Per Foot

CP-007	**3/4**	390	0	071	1.82
CP-010	**1**	255	0	071	2.81
CP-012	**1-1/4**	135	0	071	4.40
CP-015	**1-1/2**	105	0	071	6.08
CP-020	**2**	75	0	071	9.09
CP-025	**2-1/2**	60	0	071	13.87
CP-030	**3**	45	0	071	21.08

PVC & CPVC Round Seamless Duct

10 ft.PVC Duct - Plain End

Price Per Foot



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PD-430-060-10	**6**	10	0	748	13.00
PD-430-080-10	**8**	10	0	748	16.37
PD-430-100-10	**10**	10	0	748	20.51
PD-430-120-10	**12**	10	0	748	24.39
PD-430-140-10	**14**	10	0	948	88.12
PD-430-160-10	**16**	10	0	948	100.68
PD-430-180-10	**18**	10	0	948	148.98
PD-430-200-10	**20**	10	0	948	187.03
PD-430-240-10	**24**	10	0	948	237.45

• Pipe sold in individual lengths or lift quantities. No cut lengths.
• No return on Pipe
• Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and

20 ft. PVC Duct - Plain End

Price Per Foot



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PD-430-060	**6**	20	0	748	13.00
PD-430-080	**8**	20	0	748	16.37
PD-430-100	**10**	20	0	748	20.51
PD-430-120	**12**	20	0	748	24.39
PD-430-140	**14**	20	0	948	88.12
PD-430-160	**16**	20	0	948	100.68
PD-430-180	**18**	20	0	948	148.98
PD-430-200	**20**	20	0	948	187.03
PD-430-240	**24**	20	0	948	237.45

• Pipe sold in individual lengths or lift quantities. No cut lengths.
• No return on Pipe
• Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and

10 ft.CPVC Duct - Plain End

Price Per Foot



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PD-430-060C-10	**6**	10	0	749	26.09
PD-430-080C-10	**8**	10	0	749	34.22
PD-430-100C-10	**10**	10	0	749	42.83
PD-430-120C-10	**12**	10	0	749	50.93
PD-430-140C-10	**14**	10	0	949	329.74
PD-430-160C-10	**16**	10	0	949	399.11

• Pipe sold in individual lengths or lift quantities. No cut lengths.
• No return on Pipe
• Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and

20 ft.CPVC Duct - Plain End

Price Per Foot



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PD-430-060C	**6**	20	0	749	26.09
PD-430-080C	**8**	20	0	749	34.22
PD-430-100C	**10**	20	0	749	42.83
PD-430-120C	**12**	20	0	749	50.93
PD-430-140C	**14**	20	0	949	329.74
PD-430-160C	**16**	20	0	949	399.11
PD-430-180C	**18**	20	0	949	458.73
PD-430-200C	**20**	20	0	949	628.86
PD-430-240C	**24**	20	0	949	742.95

• Pipe sold in individual lengths or lift quantities. No cut lengths.
• No return on Pipe
• Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and

PVC & CPVC Cold Rolled Fabricated Duct

4' PVC Cold Rolled Duct - Plain End

Price Per Foot



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PD-430-260	**26X4**	4	0	434	434.63
PD-430-280	**28X4**	4	0	434	517.75
PD-430-300	**30X4**	4	0	434	635.16
PD-430-320	**32X4**	4	0	434	684.18
PD-430-360	**36X4**	4	0	434	774.33
PD-430-380	**38X4**	4	0	434	840.62
PD-430-400	**40X4**	4	0	434	861.79
PD-430-420	**42X4**	4	0	434	1457.89
PD-430-460	**46X4**	4	0	434	1070.85
PD-430-480	**48X4**	4	0	434	1150.28

• Pipe sold in individual lengths or lift quantities. No cut lengths.
• No return on Pipe
• Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and

4' CPVC Cold Rolled Duct - Plain End

Price Per Foot



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PD-430-260C	**26X4**	4	0	435	1299.24
PD-430-280C	**28X4**	4	0	435	1495.12
PD-430-300C	**30X4**	4	0	435	1659.65

4' CPVC Cold Rolled Duct - Plain End (continued)

Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PD-430-320C	**32X4**	4	0	435	1713.17
PD-430-360C	**36X4**	4	0	435	1831.13
PD-430-380C	**38X4**	4	0	435	2026.00
PD-430-400C	**40X4**	4	0	435	2122.95
PD-430-420C	**42X4**	4	0	435	2226.37
PD-430-460C	**46X4**	4	0	435	2504.78
PD-430-480C	**48X4**	4	0	435	2886.56

• Pipe sold in individual lengths or lift quantities. No cut lengths.
• No return on Pipe
• Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Blue 75™ Thread Sealant

Formulated, Designed & Tested for Plastic Piping Products

While many thread sealants and pipe joint compounds claim to be suitable for use with plastics, several have been found to produce stress cracking due to chemical incompatibility. Improper application of TFE tape sealants can result in over-stressed threaded connections and potential joint failures. Research has proven Spears® BLUE 75™ thread sealant to be the superior choice for reliable joint make-up of all Spears® thermoplastic piping products.

- Non-Hardening, Lubricating Anti-Seize Formulation
- Safe, Non-Toxic, Lead & Silicone Free
- Non-Corrosive, Non-Conductive
- Convenient Packaging Availability
- Specially Designed for Spears® Threaded Fittings & Valves
- Suitable for Use in Connecting other Metallic Fittings or Valves to PVC or CPVC Fittings or Valves
- NSF® Certified for use with potable water

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
Blue 75™ Thread Sealant					
SB75-005	**1/4 Pint**	24	0	895	10.46
SB75-010	**1/2 Pint**	24	0	895	16.66
SB75-020	**Pint**	12	0	895	26.94
SB75-030	**Quart**	12	0	895	48.41

Professional grade solvent cements developed for contractors' essential needs in joining PVC, CPVC and ABS pipe and fittings.

- NSF® Certified & Listed for use in piping applications such as potable water, turf, irrigation, pool & spa, industrial, plumbing, DWV, and/or sewer, plus special applications including fire protection, chemical waste, and ultra-pure water.
- Meets ASTM Standards for solvent cements and primers used for plastic pipe installation.
- Environmentally friendly. LEED® Compliant (Leadership in Energy and Environmental Design). Credit can be gained through the use of Spears® Low VOC products. This program, developed by the US Green Building Council, uses SCAQMD Rule 1168 as a benchmark to qualify one credit toward LEED® certification for green building.

PVC Low VOC Cements

Low VOC PVC Cements

Regular, Medium, heavy and extra heavy bodied cements are specifically formulated for PVC pipe in virtually every schedule and in sizes with interference fit to 30" diameter.

- Low VOC emissions comply with *SCAQMD Rule 1168/316A*
- 3-Year Shelf Life

PVC-00 CLEAR: Regular bodied, fast setting PVC cement for all classes and schedules (except Schedule 80) with interference fit through 4". Excellent for plumbing, DWV, irrigation, electrical conduit, pool & spa and PVC foam core pipe. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-00 Clear Regular Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC00C-005	**1/4 Pint**	24	0	705	6.55
PVC00C-010	**1/2 Pint**	24	0	705	9.52
PVC00C-020	**Pint**	12	0	705	14.67
PVC00C-030	**Quart**	12	0	705	24.75
PVC00C-040	**Gallon**	6	0	705	80.35

PVC-02 CLEAR: Regular bodied, fast setting PVC cement for all classes and schedules (except Schedule 80) with interference fit through 4" diameter. Goes on clear, dries clearest and is slightly thicker than PVC-00. Excellent for plumbing, DWV, irrigation, electrical conduit, pool & spa and PVC foam core pipe. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-02 Clear Regular Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC02C-005	**1/4 Pint**	24	0	705	7.27
PVC02C-010	**1/2 Pint**	24	0	705	10.58
PVC02C-020	**Pint**	12	0	705	16.29
PVC02C-030	**Quart**	12	0	705	27.49
PVC02C-040	**Gallon**	6	0	705	89.19

PVC-05 CLEAR: Medium bodied, fast setting, PVC cement for all classes and schedules with interference fit through 6" diameter and Schedule 80 through 4" diameter in industrial, plumbing, DWV, irrigation, electrical conduit, pool & spa and PVC foam core pipe. Can be used without primer on non-pressure systems if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-05 Clear Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC05C-005	**1/4 Pint**	24	0	705	7.39
PVC05C-010	**1/2 Pint**	24	0	705	10.69
PVC05C-020	**Pint**	12	0	705	18.76
PVC05C-030	**Quart**	12	0	705	29.84
PVC05C-040	**Gallon**	6	0	705	101.68

PVC-21 BLUE: Medium bodied, fast setting, high strength PVC cement. It is suitable for use on rigid PVC with interference fit Schedule 40 thru 6" and Schedule 80 thru 4". Can be used without primer on PVC Schedule 40 and SDR pressure water piping systems through 4" if local code permits. Do not use PVC-21 without primer in any other application, schedule, or size such as Schedule 80 industrial applications. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-21 Blue Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC21B-005	**1/4 Pint**	24	0	705	7.89
PVC21B-010	**1/2 Pint**	24	0	705	12.99
PVC21B-020	**Pint**	12	0	705	22.23
PVC21B-030	**Quart**	12	0	705	37.35
PVC21B-040	**Gallon**	6	0	705	128.39

PVC-25 AQUA BLUE WET-N-DRY: (will fade to CLEAR in sunlight) Medium bodied, very fast setting PVC cement for all classes and schedules with interference fit through 6" diameter and Schedule 80 through 4" diameter. Formulated for wet conditions and quick pressurization. Designed for irrigation, plumbing, and pool & spa applications. Can be used without primer on non-pressure systems if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-25 Aqua Blue Wet-N-Dry Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC25B-005	**1/4 Pint**	24	0	705	7.89
PVC25B-010	**1/2 Pint**	24	0	705	12.82
PVC25B-020	**Pint**	12	0	705	21.83
PVC25B-030	**Quart**	12	0	705	36.56
PVC25B-040	**Gallon**	6	0	705	126.09

PVC-26 BLUE POOL-PRO™: (will fade to CLEAR in sunlight) Medium bodied, very fast setting PVC cement for all classes and schedules with interference fit through 6" diameter and Schedule 80 through 4" diameter. Specially formulated for pool maintenance and repair - wet or quick pressurization conditions. Can be used without primer on non-pressure systems if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-26 Blue POOL-PRO™ Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC26B-005	**1/4 Pint**	24	0	705	7.89
PVC26B-010	**1/2 Pint**	24	0	705	12.82
PVC26B-020	**Pint**	12	0	705	21.83
PVC26B-030	**Quart**	12	0	705	36.56
PVC26B-040	**Gallon**	6	0	705	126.09

PVC-27 CLEAR COLD-N-HOT: Medium bodied, very fast setting, PVC cement for all classes and schedules with interference fit through 6" diameter, Schedule 80 through 4" diameter. Formulated for -15°F to 110°F (-26°C to 43°C) weather conditions. Designed for industrial, plumbing, irrigation, pool & spa, electrical conduit and PVC foam core pipe. Can be used without primer on non-pressure systems if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-27 Clear Cold-N-Hot Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC27C-020	**Pint**	12	0	705	22.79
PVC27C-030	**Quart**	12	0	705	38.36
PVC27C-040	**Gallon**	6	0	705	133.09

PVC-50 HOT BLUE: Medium bodied, very fast setting, high strength PVC cement. Can be used on PVC with interference fit for Schedule 40 thru 6" and Schedule 80 thru 4". Hot Blue premium all-weather formulation is excellent for use in challenging conditions including wet, damp or cold temperatures in irrigation, plumbing DWV, pool & spa, and non-pressure applications. PVC-50 may be used without primer on Schedule 40 pipe and fittings if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-50 HOT BLUE Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC50B-005	**1/4 Pint**	24	0	705	7.12
PVC50B-010	**1/2 Pint**	24	0	705	11.71
PVC50B-020	**Pint**	12	0	705	20.04
PVC50B-030	**Quart**	12	0	705	33.65
PVC50B-040	**Gallon**	6	0	705	115.67

PVC-95 CLEAR/BLUE Flexible: Medium bodied, fast setting PVC cement specially formulated for use on flex-to-flex and flex-to-rigid PVC connections with interference fit through 6" and Schedule 80 through 3". Maintains high-strength, flexible joints. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.



PVC-95 Clear Medium Body Flexible PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC95C-005	**1/4 Pint**	24	0	705	8.96
PVC95C-010	**1/2 Pint**	24	0	705	13.33
PVC95C-020	**Pint**	12	0	705	22.79
PVC95C-030	**Quart**	12	0	705	38.46
PVC95C-040	**Gallon**	6	0	705	133.09



PVC-95 Blue Medium Body Flexible PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC95B-030	**Quart**	12	0	705	38.36
PVC95B-040	**Gallon**	6	0	705	133.09

PVC-11 GRAY: Heavy bodied, medium setting PVC cement for all classes and schedules with interference fit through 12" diameter. Medium set allows more working time in warm weather and has good gap filling properties. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code, CSA B137.3, B181.2.



PVC-11 Gray Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC11G-010	**1/2 Pint**	24	0	706	17.47
PVC11G-020	**Pint**	12	0	706	23.29
PVC11G-030	**Quart**	12	0	706	39.19
PVC11G-040	**Gallon**	6	0	706	132.53

PVC-17 CLEAR/GRAY: Heavy bodied, medium setting PVC cement for all classes and schedules with interference fit through 12" diameter (non-pressure applications only up to 18"). Medium set allows more working time in warm weather and has good gap filling properties. Designed for plumbing, industrial, pool, irrigation and electrical piping systems. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P.Code (Clear/Gray); CSA B137.3, B181.2 (Gray only).



PVC-17 Gray Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC17G-010	**1/2 Pint**	24	0	706	13.11
PVC17G-020	**Pint**	12	0	706	23.01
PVC17G-030	**Quart**	12	0	706	38.85
PVC17G-040	**Gallon**	6	0	706	130.91



PVC-17 Clear Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC17C-010	**1/2 Pint**	24	0	706	13.11
PVC17C-020	**Pint**	12	0	706	23.01
PVC17C-030	**Quart**	12	0	706	38.85
PVC17C-040	**Gallon**	6	0	706	130.91

PVC-19 WHITE/GRAY: Extra heavy bodied, slow setting PVC cement for all classes and schedules with interference fit through 30" diameter. Designed for large size piping systems requiring high gap filling properties such as industrial piping and fitting fabrication in pressure and non-pressure applications. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code, CSA (Gray Only) B137.3, B181.2.



PVC-19 White Extra-Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC19W-020	**Pint**	12	0	706	35.20
PVC19W-030	**Quart**	12	0	706	46.92
PVC19W-040	**Gallon**	4	0	706	154.71
PVC19W-040-F*	**Gallon**	6	0	706	154.71
PVC19W-050	**5 Gallon**	1	0	706	668.81

* PVC-19 Cement in 1-Gallon size is offered in both round Paint Type can or rectangular F-Type can which has part number ending in "-F"



PVC-19 Gray Extra-Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC19G-020	**Pint**	12	0	706	35.20
PVC19G-030	**Quart**	12	0	706	46.92
PVC19G-040	**Gallon**	4	0	706	154.71

PVC-19 Gray Extra-Heavy Body PVC Cement (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PVC19G-040-F*	**Gallon**	6	0	706	154.71
PVC19G-050	**5 Gallon**	1	0	706	668.81

* PVC-19 Cement in 1-Gallon size is offered in both round Paint Type can or rectangular F-Type can which has part number ending in "-F"

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Heavy bodied cements are specifically formulated for CPVC plastic pipe and fittings including a variety of One-Step (no primer required) CPVC specialty cements. These products are ideal for use in hot/cold water plumbing systems, water treatment and chemical plants, as well as industrial piping systems.

- Low VOC emissions comply with *SCAQMD Rule 1168/316A*
- 2-Year Shelf Life

CPVC-24 GRAY/ORANGE: Heavy bodied, medium setting CPVC cement for all classes and schedules with interference fit through 24" diameter. High-strength, chemical-resistant solvent cement for use with CPVC piping systems carrying acids, bases, salts, and sodium hypochlorite. Ideal for use in waste water plants. Recommended for use on PVC industrial piping systems for chemical applications; best choice for both PVC and CPVC fume & air duct systems. Listings: ASTM F493, NSF®-PW, DWV, SW, U.P. Code.



The Most Chemically Resistant Cement Available for Both PVC & CPVC Applications

CPVC-24 Gray Heavy Body CPVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CPVC24G-005	**1/4 Pint**	24	0	707	9.01
CPVC24G-010	**1/2 Pint**	24	0	707	14.34
CPVC24G-020	**Pint**	12	0	707	26.09
CPVC24G-030	**Quart**	12	0	707	46.08
CPVC24G-040	**Gallon**	6	0	707	159.13



CPVC-24 Orange Heavy Body CPVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CPVC24O-005	**1/4 Pint**	24	0	707	9.01
CPVC24O-010	**1/2 Pint**	24	0	707	14.34
CPVC24O-020	**Pint**	12	0	707	26.09
CPVC24O-030	**Quart**	12	0	707	46.08
CPVC24O-040	**Gallon**	6	0	707	159.13

CTS-5 EverTUFF® YELLOW: Medium bodied, fast setting cement for copper tube size pipe and fittings with interference fit through 2" diameter. ONE STEP CEMENT - formulated for use without primer if local code permits. Listings: ASTM F493/D2846, NSF®-PW, DWV, SW, U.P. Code, CSA B137.6, B181.2.



Approved for All Copper Tube Size (CTS) Hot & Cold Water Distribution Systems, Including Spears® EverTUFF® and FlowGuard Gold®

CTS-5 EverTUFF® One-Step CTS CPVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CTS5-005	**1/4 Pint**	24	0	701	9.01
CTS5-010	**1/2 Pint**	24	0	701	14.34
CTS5-020	**Pint**	12	0	701	23.23

CTS-5 EverTUFF® One-Step CTS CPVC Cement (continued)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CTS5-030	**Quart**	12	0	701	40.42
CTS5-040	**Gallon**	6	0	701	138.29

FS-5 RED: One-Step (no primer required) CPVC cement specifically formulated and approved for use with Spears® FlameGuard® and other approved CPVC Fire Sprinkler Products with interference fit through 3". See publication FG-3, FlameGuard® Installation Instructions for additional application details. Listings: ASTM F493, NSF®-PW, DWV, SW, U.P. Code, UL®, FM® Approved.



FS-5 FlameGuard® One-Step CPVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FS5-020	**Pint**	12	0	703	28.25
FS5-030	**Quart**	12	0	703	51.83

LW-5 MUSTARD: One-Step (no primer required) CPVC cement specifically formulated and approved for use with Spears® **LabWaste**™ CPVC Corrosive Waste Drainage System Products with interference fit through 24". See Publication LW-4, Technical Information, for application details. Listings: ASTM F493, NSF®-CW, PW, DWV, SW, U.P. Code, ICC-ES PMG.



The Only Chemically Resistant Cement Approved for Spears® **LabWaste**™

LW-5 LabWaste™ One-Step CPVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
LW5-020	**Pint**	12	0	704	45.51
LW5-030	**Quart**	12	0	704	60.67
LW5-040	**Gallon**	6	0	704	246.82
LW5-050	**5 Gallon**	1	0	704	1234.15

ABS cements are specially formulated for rigid ABS pipe and fittings in all classes, schedules and fittings having interference type sockets. These medium-bodied, fast setting cements are used for all classes and schedules with interference fit through 8" diameter in ABS drain, waste and vent systems (DWV), and sewer applications. Do not use primer on ABS pipe and fittings.

- Low VOC emissions comply with *SCAQMD Rule 1168/316A*
- 3-Year Shelf Life

ABS-73 BLACK: Medium bodied, fast setting, high strength ABS solvent cement for all classes and schedules of pipe and fittings with interference fit through 8" diameter. Listings: ASTM D2235, NSF®-DWV, SW, U.P. Code.



ABS-73 Black Medium Body ABS Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ABS73B-005	**1/4 Pint**	24	0	708	7.27
ABS73B-010	**1/2 Pint**	24	0	708	9.80
ABS73B-020	**Pint**	12	0	708	16.35
ABS73B-030	**Quart**	12	0	708	26.77
ABS73B-040	**Gallon**	6	0	708	89.76

ABS-71 YELLOW/MILKY: Medium bodied, fast setting, high strength ABS solvent cement for all classes and schedules of pipe and fittings with interference fit through 8" diameter. Listings: ASTM D2235, NSF®-DWV, SW, U.P. Code, CSA (Yellow Only) B181.1.



ABS-71 Yellow Medium Body ABS Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ABS71Y-005	**1/4 Pint**	24	0	708	8.64
ABS71Y-010	**1/2 Pint**	24	0	708	10.33
ABS71Y-020	**Pint**	12	0	708	18.14
ABS71Y-030	**Quart**	12	0	708	30.91
ABS71Y-040	**Gallon**	6	0	708	105.15



ABS-71 Milky Medium Body ABS Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
ABS71M-005	**1/4 Pint**	24	0	708	8.64
ABS71M-010	**1/2 Pint**	24	0	708	10.33
ABS71M-020	**Pint**	24	0	708	18.14
ABS71M-030	**Quart**	24	0	708	30.91
ABS71M-040	**Gallon**	24	0	708	105.15

Designed for joining PVC, ABS, CPVC and Styrene pipe and fittings, involving both similar materials and transition joints between dissimilar plastic materials.

- Low VOC emissions comply with *SCAQMD Rule 1168/316A*
- 3-Year Shelf Life

ABS TO PVC-94 ABS-PVC GREEN: Medium bodied, fast setting transition cement for all classes and schedules with interference fit through 6" diameter (not for Schedule 80). Specifically designed for use on ABS to PVC transition joints in non-pressure systems. Suitable for sewer and DWV applications. Listings: ASTM D3138, NSF®-DWV, SW, U.P. Code.



ABS TO PVC-94 Green Medium Body ABS to PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
TRAN94G-005	**1/4 Pint**	24	0	708	8.96
TRAN94G-010	**1/2 Pint**	24	0	708	13.11
TRAN94G-020	**Pint**	12	0	708	21.34
TRAN94G-030	**Quart**	12	0	708	36.73
TRAN94G-040	**Gallon**	6	0	708	120.66

MP-90 MULTI-PURPOSE CLEAR: Medium bodied, fast setting, multi-purpose cement for all classes and schedules with interference fit through 6" diameter, Schedule 80 through 4" diameter. High-strength cement for PVC and CPVC pressure and on ABS and styrene low-pressure systems.



MP-90 Clear Multi-Purpose Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MP90C-005	**1/4 Pint**	24	0	708	8.45
MP90C-010	**1/2 Pint**	24	0	708	12.38
MP90C-020	**Pint**	12	0	708	20.77
MP90C-030	**Quart**	12	0	708	34.66

LX-5 Clear: One-Step (no primer required) PVC cement specifically formulated for use with Spears® Low Extractable PVC piping, with interference fit through 6". Unlike conventional PVC solvent cements, LX-5 contains fewer contaminants and cures quickly to reduce potential for TOC contamination. See publication LX-4, Low-Extractable Ultra Pure Water Systems, for application details.

- 3-Year Shelf Life



LX-5 Low Extractable One-Step PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
LX5C-020	**Pint**	12	0	702	33.96
LX5C-030	**Quart**	12	0	702	54.77
Due to the H-gh-Purity requirement for Low Extractable Cement, LX-5 cannot be produced in a Low VOC formulation					

Primers are used for the surface preparation of plastic pipe and fittings, which is necessary for the proper solvent welding of these materials. Cleaner aids in pre-cleaning to remove oil and grease.

- All Spears® Primers and Cleaners are low VOC products, which are environmentally friendly with lower emissions and reduced odor, surpassing the most stringent regulations and comply with *SCAQMD Rule 1168/316A*.
- Spears® Primers are certified for use with potable water by NSF® International.
- 3-Year Shelf Life

PRIMER-68 PURPLE/CLEAR: Essential for proper softening and preparation of PVC and CPVC pipe and fitting surfaces. Choose from Clear or Purple color which provides positive identification that a primer was used (check local code requirements). Listings: ASTM F656, NSF®-PW, DWV, SW, U.P. Code (Purple Only).



PRIMER-68 Clear Primer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PRIM68C-005	**1/4 Pint**	24	0	709	7.27
PRIM68C-010	**1/2 Pint**	24	0	709	9.85
PRIM68C-020	**Pint**	12	0	709	18.25
PRIM68C-030	**Quart**	12	0	709	30.46
PRIM68C-040	**Gallon**	6	0	709	91.82



PRIMER-68 Purple Primer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PRIM68P-005	**1/4 Pint**	24	0	709	7.27
PRIM68P-010	**1/2 Pint**	24	0	709	9.85
PRIM68P-020	**Pint**	12	0	709	18.25
PRIM68P-030	**Quart**	12	0	709	30.46
PRIM68P-040	**Gallon**	6	0	709	91.82

PRIMER-70 INDUSTRIAL GRADE PURPLE/CLEAR: Premium, industrial strength primer essential for proper softening and preparation of PVC and CPVC pipe and fitting surfaces. Specially recommended for use on Schedule 80 (150 psi and higher) and large size pipe. Excellent for cold weather applications. Listings: ASTM F656, NSF®-PW, DWV, SW, U.P. Code (Purple Only).



PRIMER-70 Clear Industrial Strength Primer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PRIM70C-005	**1/4 Pint**	24	0	709	7.89
PRIM70C-010	**1/2 Pint**	24	0	709	10.75
PRIM70C-020	**Pint**	12	0	709	21.51
PRIM70C-030	**Quart**	12	0	709	34.83
PRIM70C-040	**Gallon**	6	0	709	114.44



PRIMER-70 Purple Industrial Strength Primer

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
PRIM70P-005	**1/4 Pint**	24	0	709	7.89
PRIM70P-010	**1/2 Pint**	24	0	709	10.75
PRIM70P-020	**Pint**	12	0	709	21.51
PRIM70P-030	**Quart**	12	0	709	34.83
PRIM70P-040	**Gallon**	6	0	709	114.44

CLEANER-65 CLEAR CLEANER: Water-thin cleaner recommended for use before priming of pipe and fittings to remove dirt, oil and grease from the bonding surfaces of PVC, CPVC, ABS and Styrene.



CLEANER-65 Clear Cleaner

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CLEAN65-005	**1/4 Pint**	24	0	709	5.82
CLEAN65-010	**1/2 Pint**	24	0	709	8.67
CLEAN65-020	**Pint**	12	0	709	15.06
CLEAN65-030	**Quart**	12	0	709	22.12
CLEAN65-040	**Gallon**	6	0	709	70.83

Can-Mate Kit

Includes Plastic Carrier Strap and two (2) Can-Mate 150 adjustable Daubers. Provides convenient carrying of ½ pint, pint or quart cans of cement and primer.



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CM-KIT	**2 @1-1/4"**	24	0	710	13.78

Can-Mate Daubers

Adjustable Plastic Applicator with Telescoping Stem for use with Standard 1/2 Pint, Pint and Quart Cans.



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
See application footnote below					
CM-50	**1/2"**	50	0	710	5.26
CM-75	**3/4"**	50	0	710	5.26
CM-150	**1-1/4"**	50	0	710	5.26

1/2" Diameter for pipe sizes up to 1"

3/4" Diameter for pipe size to 1-1/2"

1-1/4" Diameter for pipe size 1-1/2" to 3"

Cap Daubers

Fits 1-3/4" Neck Cans. Size by Dauber Diameter and Can Fitment.



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
See application footnotes below					
DQP-50	**1/2" for 1/4 Pint**	50	400	710	1.45
DQP-75	**3/4" for 1/4 Pint**	50	0	710	1.45
DHP-38	**3/8" for 1/2 Pint**	50	400	710	1.23
DHP-50	**1/2" for 1/2 Pint**	50	400	710	1.23
DHP-75	**3/4" for 1/2 Pint**	50	0	710	1.31
DP-62	**5/8" for Pint**	50	0	710	1.45
DP-75	**3/4" for Pint**	50	0	710	1.31
DP-125	**1-1/4" for Pint**	50	0	710	1.58
DQ-62	**3/4" for Quart**	50	0	710	1.45
DQ-75	**3/4" for Quart**	50	0	710	1.23
DQ-125	**1-1/4" for Quart**	50	0	710	1.58

3/8" Diameter for pipe sizes to 3/4"
1/2" Diameter for pipe sizes to 1";
5/8" Diameter for pipe sizes to 1-1/4"
3/4" Diameter for pipe size to 1-1/2"
1-1/4" Diameter for pipe size 1-1/2" to 3"

Small-Cap Swab

Fits 1-3/4" Neck Quart Cans (MT-651). 4" length for pipe size 3" to 8".



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
5020	**4" Length**	24	0	710	14.89

Large-Cap Swab

Fits 2-7/8" Neck Gallon Can (MT-648). For pipe size 6" & larger.



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4020	**4" Length**	24	0	710	21.96

Swab with Heavy Handle

For pipe size 6" & larger



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4520	**4" length**	12	0	710	18.59

Small-Cap Roller

Fits 1-3/4" Neck Quart Cans (MT-651). Replaceable cover. For pipe size 3" to 6".



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
6020	**4" length**	24	0	710	14.93

Can Roller

Fits Paint Type Quart Can (MT-653). For use with pipe sizes 3" to 6".



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3020	**3" length**	20	0	710	16.03

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Large-Cap Roller

Fits 2-7/8" Neck Gallon Can (MT-648). Roller for pipe size 6" & larger.



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
7020	**7" length**	20	0	710	19.97

Roller with Heavy Handle

Replaceable Cover. For pipe size 6" & larger.



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
5520	**4" length**	12	0	710	15.17
6520	**6" length**	12	0	710	18.59

Roller Replacement Covers

Fits Rollers with Heavy Handles #5520, #6020 & #6520. Sold as Pack of 2, full pack only.



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
5520-1	Fits 5520 & 6020 Roller	1	75	710	13.53
6520-1	**Fits 6520 Roller**	1	50	710	14.89

Cap Brushes

For Pint and Quart Cans



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
KD-110	**4-1/2" Length**	25	0	710	9.59
KD-112	**5-1/2" length**	25	0	710	9.59

Acid Brush

Small Utility Brush



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
AB-1	**1/2"**	144	0	710	.51

Standard Empty Cans

1-3/4" Neck



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MT-656	**1/4 Pint**	24	0	710	3.92
MT-655	**1/2 Pint**	24	0	710	4.41
MT-654*	**Pint**	12	0	710	5.50
MT-651*	**Quart**	12	0	710	7.14
MT-647	**Gallon**	6	0	710	16.88

Large Mouth Empty Cans

2-7/8" Neck



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MT-648	**Gallon**	6	0	710	18.72

Easy Pour Spout

Fits 1/4 Pint, 1/2 Pint, Pint, Quart, & Gallon Can 1-3/4" Neck



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
EPS-1	**N/A**	1200	0	710	5.65

Paint Type Empty Cans



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MT-652	**Pint**	12	0	710	7.40
MT-653**	**Quart**	12	0	710	8.36
MT-650	**Gallon**	4	0	710	17.69

Deburring Tool

Cone Type for PVC, CPVC, ABS, PE & PB pipe from 1/2" through 2"



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DEB-2	**1/2 to 2 Pipe**	1	6	710	97.71

Spears® Solvent Cement & Primer Selection Guide

Please refer to the selection guide below in selecting the right Spears® products for your application.

Type	Body	Product	Color	Relative Set	Capacity	Features
PVC	Regular	PVC-00	Clear	Fast	Schedule 40 - 4"	
		PVC-02	Clear	Fast	Schedule 40 - 4"	Dries Clearest, slightly thicker than PVC-00
	Medium	PVC-05	Clear	Fast	All Classes & Schedules - 6" Schedule 80 - 4"	***Industrial Duty*** Primerless Capability[1]
		PVC-21	Blue	Fast	Schedule 40 - 6" Schedule 80 - 4"	Primerless Capability[1]
	Heavy	PVC-11	Gray	Medium	All Classes & Schedules - 12"	***Industrial Duty***
		PVC-17	Clear/ Gray	Medium	All Classes & Schedules - 12" Non-pressure - 18"	***Industrial Duty***
	Extra Heavy	PVC-19	White/ Gray	Slow	All Classes & Schedules Requiring High Gap Filling - 30"	***Industrial Duty***
	Specialty Cements	PVC-25	Aqua Blue	Very Fast	All Classes & Schedules - 6" Schedule 80 - 4"	Wet-N-Dry Formulation Primerless Capability[1]
		PVC-26	Blue	Very Fast	All Classes & Schedules - 6" Schedule 80 - 4"	POOL-PRO™ Formulation for Pool & Spa Primerless Capability[1]
		PVC-27	Clear	Very Fast	All Classes & Schedules - 6" Schedule 80 - 4"	Cold-N-Hot Formulation -15°F to 110°F Primerless Capability[1]
		PVC-50	Blue	Very Fast	Schedule 40 - 6" Schedule 80 - 4"	HOT PVC Formulation Primerless Capability[1]
		PVC-95	Clear/ Blue	Fast	All Classes & Schedules - 6" Schedule 80 - 3"	Flexible PVC for Flex-Flex, Flex-Rigid Joints
		LX-5	Clear	Fast	Low Extractable PVC Systems - 6"	One Step[2] Low Extractable, High Purity Cement
CPVC	Heavy	CPVC-24	Gray/ Orange	Medium	All Classes & Schedules PVC or CPVC - All Sizes	**Most Versatile, Chemically Resistant Cement for both CPVC & PVC Systems - including Duct -** ***Industrial Duty***
	Specialty Cements	LW-5	Mustard	Medium	LabWaste™ CPVC Drainage Systems - 24"	One Step[2] Cement -Only **LabWaste™** System Chemically Approved Cement
		FS-5	Red	Fast	CPVC Fire Sprinkler Systems - 3"	One-Step[2] Cement for all CPVC Fire Sprinkler Systems - FlameGuard® & BlazeMaster®
		CTS-5	Yellow	Fast	CTS CPVC Systems - 2"	One-Step[2] Cement for all CTS CPVC Systems - EverTUFF® & FlowGuard Gold®
ABS	Medium	ABS-71	Yellow/ Milky	Fast	All ABS Classes & Schedules - 8"	
		ABS-73	Black	Fast	All ABS Classes & Schedules - 8"	
Transition & Multipurpose	Medium	ABS TO PVC-94	Green	Fast	All Classes & Schedules - 6" (Except Schedule 80)	For ABS-to-PVC Transition Joints
		MULTIPUPOSE-90	Clear	Fast	All Classes & Schedules - 6" Schedule 80 - 4"	For PVC and CPVC pressure ABS and Styrene low-pressure systems
Primers & Cleaners		Primer-70	Purple/ Clear		All Classes & Schedules PVC & CPVC - 30"	***Industrial Duty***
		Primer-68	Purple/ Clear		All Classes & Schedules PVC & CPVC - 30"	
		Cleaner-65	Clear		All Classes & Schedules -All Sizes	For PVC, CPVC, ABS or Styrene

Notes

1= Primerless Capability indicates a cement can be used without primer in certain applications if local code permits. See specific cement information for further restrictions.
2 = One Step designates a cement specifically designed for use without primer. CTS One Step acceptability depends on local code requirements.
CTS = Copper Tube Size, ASTM D2846 Hot and Cold Water Distribution Systems.

Solvent Cemented Joints - Initial Set Schedule, Cure Schedule and Cement Usage Table

The following are basic guidelines and may require adjustment according to application or installation conditions. Certain specialty cements, such as FlameGuard® FS-5, may have different instructions for specific application conditions. Consult appropriate installation instructions for details.

INITIAL SET SCHEDULE: The Initial set schedule is the necessary waiting period before handling newly assembled joints. After initial set, the joint will withstand the stress of a normal installation. In damp or humid weather allow 50% more set time.

AVERAGE INITIAL SET SCHEDULE FOR SPEARS® PVC/CPVC SOLVENT CEMENTS

Temperature Range	Pipe Sizes 1/2" to 1-1/4"	Pipe Sizes 1-1/2" to 2"	Pipe Sizes 2-1/2" to 8"	Pipe Sizes 10" to 15"	Pipe Sizes 15"+
60° - 100°F/16° - 38°C	2 minutes	5 minutes	30 minutes	2 hours	4 hours
40° - 60°F/5° - 16°C	5 minutes	10 minutes	2 hours	8 hours	16 hours
0° - 40°F/-18° - 5°C	10 minutes	15 minutes	12 hours	24 hours	48 hours

JOINT CURE SCHEDULE: The Joint cure schedule is the necessary waiting period before pressurizing newly assembled joints. Follow the schedule carefully. In damp or humid weather or chemical applications, allow a minimum of 50% more cure time.

AVERAGE JOINT CURE SCHEDULE FOR SPEARS® PVC/CPVC SOLVENT CEMENTS

Relative Humidity 60% or Less	Cure Time Pipe Sizes 1/2" to 1-1/4"		Cure Time Pipe Sizes 1-1/2" to 2"		Cure Time Pipe Sizes 2-1/2" to 8"		Cure Time Pipe Sizes 10" to 15"	Cure Time Pipe Sizes 15"+
Temperature range during assembly and cure periods	Up to 160 psi	Above 160 to 370 psi	Up to 160 psi	Above 160 to 315 psi	Up to 160 psi	Above 160 to 315 psi	Up to 100 psi	Up to 100 psi
60° - 100°F/16° - 38°C	15 min	6 hrs	30 min	12 hrs	1-1/2 hrs	24 hrs	48 hrs	72 hrs
40° - 60°F/5° - 16°C	20 min	12 hrs	45 min	24 hrs	4 hrs	48 hrs	96 hrs	6 days
0° - 40°F/-18° - 5°C	30 min	48 hrs	1 hr	96 hrs	72 hrs	8 days	8 days	14 days

AVERAGE NUMBER OF JOINTS PER QUART OF SPEARS® CEMENT

Pipe Diameter	1/2"	3/4"	1"	1-1/2"	2"	3"	4"	6"	8"	10"	12"	15"	18"
Number of Joints	300	200	125	90	60	40	30	10	5	2-3	1-2	3/4	1/2

NOMINAL INCH AND CORRESPONDING NOMINAL MILLIMETER PIPE SIZES

in.	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	6"	8"	10"	12"	14"	18"	24"	30"
mm	20	25	32	40	50	63	75	90	110	160	200	250	315	355	450	600	800

SPEARS® APPLICATOR SELECTION GUIDE

For proper solvent cement welding of pipe and fittings, the cement applicator must be no less than half the size of the pipe

DAUBERS	Pipe Diameters							
	1/4"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	3"
3/8" Dauber	*	*	*					
1/2" Dauber			*	*				
5/8" Dauber				*	*			
3/4" Dauber					*	*		
1-1/4" Dauber							*	*

ROLLERS & SWABS	SIZE	FOR PIPE DIAMETERS
3020	3" Roller	3" - 6"
6020	4" Roller	3" - 8"
7020	7" Roller	6" +
5520	4" Roller	6" +
6520	6" Roller	6" +
4020	4" Swab	6" +
5020	4" Swab	3" - 8"
4520	4" Swab	6" +

PRODUCT SHELF LIFE

Spears® Products	Shelf Life	Spears® Products	Shelf Life
Primers / Cleaners	3 years	CPVC Solvent Cement	2 years
PVC Solvent Cement	3 years	ABS Solvent Cement	3 years

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

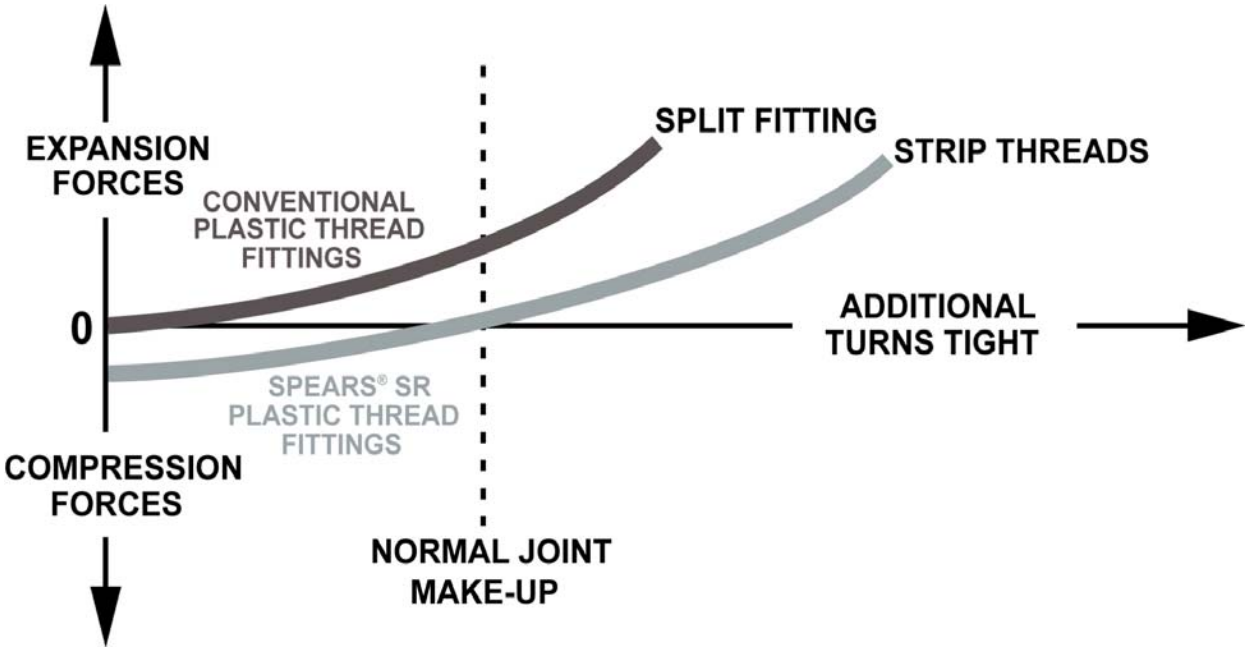
SPEARS® Patented SR Design Sprinkler Head Adapters



SPEARS® Patented Special Reinforced (SR) plastic female thread design is one of the most significant advancements in the use of CPVC Fire Sprinkler System threaded fittings. Not just an added ring, this unique precompression design compensates for expansion forces generated from tapered pipe thread joint make-up. Radial stress is no longer a problem in normal installations and easily managed in severe over-tightening situations.

Contains and Compensates for Radial Stress...

Radial stress, generated by tightening of tapered pipe threads, exerts tremendous expansion force on female plastic thread fittings. When subjected to over-tightening - even accidentally - these forces can literally split the fitting. Spears® patented SR Adapter design not only alleviates this problem by containing expansion forces with its special reinforced collar, but additionally compensates for expansion stress through thermoplastic material compression. Stresses are equalized at normal joint make-up. The following graph illustrates this effect in a comparison of conventional plastic female thread fittings with Spears® SR adapters when taken to failure.



Another Quality SPEARS® Product Designed for Performance, Customer Satisfaction and Service.

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

FlameGuard® CPVC Fire Sprinkler Pipe



SDR 13.5 10' Lengths, Price Per Foot

List Price Per Foot

CP-007-10	**3/4**	260	0	071	1.82
CP-010-10	**1**	170	0	071	2.81
CP-012-10	**1-1/4**	90	0	071	4.40
CP-015-10	**1-1/2**	70	0	071	6.08
CP-020-10	**2**	50	0	071	9.09
CP-025-10	**2-1/2**	40	0	071	13.87
CP-030-10	**3**	30	0	071	21.08

FlameGuard® CPVC Fire Sprinkler Pipe



SDR 13.5, 15' Lengths, Price Per Foot

List Price Per Foot

CP-007	**3/4**	390	0	071	1.82
CP-010	**1**	255	0	071	2.81
CP-012	**1-1/4**	135	0	071	4.40
CP-015	**1-1/2**	105	0	071	6.08
CP-020	**2**	75	0	071	9.09
CP-025	**2-1/2**	60	0	071	13.87
CP-030	**3**	45	0	071	21.08

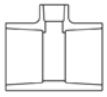
Tee



Socket x Socket x Socket

4201-007	**3/4**	20	220	070	3.73
4201-010	**1**	15	120	070	7.56
4201-012	**1-1/4**	10	0	070	11.29
4201-015	**1-1/2**	10	0	070	16.61
4201-020	**2**	10	0	070	24.52
4201-025	**2-1/2**	10	0	070	39.95
4201-030	**3**	5	0	070	62.60

Reducing Tee



Socket x Socket x Socket

4201-102	**3/4X1**	20	0	070	6.38
4201-125	**1X3/4X3/4**	15	150	070	6.38
4201-126	**1X3/4X1**	15	0	070	6.38
4201-131	**1X3/4**	20	0	070	6.38
4201-157	**1-1/4X1X3/4**	15	0	070	11.78
4201-158	**1-1/4X1X1**	15	0	070	11.78
4201-159	**1-1/4X1X1-1/4**	15	0	070	11.78
4201-167	**1-1/4X3/4**	15	0	070	11.78
4201-168	**1-1/4X1**	15	0	070	11.78
4201-169	**1-1/4X1-1/2**	10	0	070	14.22
4201-201	**1-1/2X1-1/4X3/4**	10	0	070	14.22
4201-202	**1-1/2X1-1/4X1**	10	0	070	14.22
4201-210	**1-1/2X3/4**	15	0	070	14.22
4201-211	**1-1/2X1**	10	0	070	14.22
4201-212	**1-1/2X1-1/4**	10	0	070	14.22
4201-213	**1-1/2X2**	10	0	070	22.57
4201-248	**2X3/4**	10	0	070	22.57
4201-249	**2X1**	10	0	070	22.57
4201-250	**2X1-1/4**	10	0	070	22.57
4201-251	**2X1-1/2**	10	0	070	22.57
4201-289	**2-1/2X1**	10	0	070	31.03
4201-290	**2-1/2X1-1/4**	10	0	070	31.03
4201-291	**2-1/2X1-1/2**	10	0	070	31.03
4201-292[1]	**2-1/2X2**	10	0	070	31.03
4201-335	**3X1**	5	0	070	35.81
4201-336[1]	**3X1-1/4**	5	0	070	35.81
4201-337[1]	**3X1-1/2**	5	0	070	35.81
4201-338	**3X2**	5	0	070	35.81

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

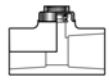
Reducing Tee (continued)

Socket x Socket x Socket

4201-339	**3X2-1/2**	6	0	070	35.81

[1]Outlet sized with Bushing

TorqueSafe™ Sprinkler Head Tee - Gasket Sealed Brass Thread Insert Style

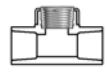


Socket x Socket x Gasket FIPT With Elastomer Seal - Use NO Thread Sealant

4202-101 G	**3/4X1/2**	50	0	076	13.83
4202-124 G	**1X3/4X1/2**	50	0	076	14.93
4202-130 G	**1X1/2**	50	0	076	14.93
4202-166 G	**1-1/4X1/2**	15	0	076	24.89
4202-209 G	**1-1/2X1/2**	10	0	076	32.79
4202-247 G	**2X1/2**	10	0	076	46.24

FIPT With Elastomer Seal - Use NO Thread Sealant. Not intended to convey or dispense water for human consumption through drinking or cooking

Sprinkler Head Tee - Brass Thread Insert Style

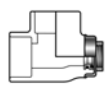


Socket x Socket x FIPT

4202-101	**3/4X1/2**	50	0	076	13.83
4202-124	**1X3/4X1/2**	50	0	076	14.93
4202-130	**1X1/2**	50	0	076	14.93
4202-010	**1**	10	40	076	38.39
4202-156	**1-1/4X1X1/2**	15	0	076	24.89
4202-166	**1-1/4X1/2**	15	0	076	24.89
4202-199	**1-1/2X1-1/4X1/2**	10	0	076	32.79
4202-209	**1-1/2X1/2**	10	0	076	32.79
4202-237	**2X1-1/2X1/2**	10	0	076	46.24
4202-247	**2X1/2**	10	0	076	46.24

Not intended to convey or dispense water for human consumption through drinking or cooking

TorqueSafe™ Sprinkler Head Tee - Gasket Sealed Brass Thread Insert Style



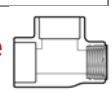
Socket x Gasket FIPT x Socket With Elastomer Seal - Use NO Thread Sealant

4203-122 G	**1X1/2X1**	50	0	076	24.52

FIPT With Elastomer Seal - Use NO Thread Sealant

Not intended to convey or dispense water for human consumption through drinking or cooking

Sprinkler Head Tee - Brass Thread Insert Style

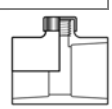


Socket x FIPT x Socket

4203-122	**1X1/2X1**	50	0	076	24.52

Not intended to convey or dispense water for human consumption through drinking or cooking

Sprinkler Head Tee - Special Reinforced Plastic Thread Style

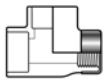


Socket x Socket x SR FIPT - Stainless Steel Collar

4202-010SR	**1**	15	0	076	20.40
4202-101SR	**3/4X1/2**	50	0	076	7.36
4202-124SR	**1X3/4X1/2**	50	0	076	7.95
4202-130SR	**1X1/2**	50	0	076	7.95
4202-156SR	**1-1/4X1X1/2**	15	0	076	13.25
4202-166SR	**1-1/4X1/2**	15	0	076	13.25
4202-168SR	**1-1/4X1**	15	0	076	28.48
4202-199SR	**1-1/2X1-1/4X1/2**	10	0	076	17.44
4202-209SR	**1-1/2X1/2**	25	0	076	17.44
4202-211SR	**1-1/2X1-1/2X1**	10	0	076	17.44
4202-237SR	**2X1-1/2X1/2**	10	0	076	24.61
4202-247SR	**2X1/2**	10	0	076	24.61
4202-287SR	**2-1/2X1/2**	10	0	076	33.73

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Sprinkler Head Tee - Special Reinforced Plastic Thread Style



Socket x SR FIPT x Socket - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4203-122SR	**1X1/2X1**	50	0	076	8.54

Street Tee



Spigot x Socket x Socket

4244-007	**3/4**	15	105	070	6.65
4244-010	**1**	15	0	070	8.87
4244-012	**1-1/4**	10	0	070	16.12
4244-015	**1-1/2**	10	0	070	19.51
4244-020	**2**	10	0	070	28.84

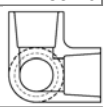
90° Ell



Socket x Socket

4206-007	**3/4**	30	300	070	2.75
4206-010	**1**	20	200	070	6.11
4206-012	**1-1/4**	10	100	070	7.80
4206-015	**1-1/2**	10	0	070	10.89
4206-020	**2**	25	0	070	13.47
4206-025	**2-1/2**	5	0	070	26.00
4206-030	**3**	5	0	070	35.46

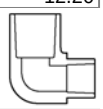
Side Outlet Ell



Socket x Socket x Socket

4213-007	**3/4**	50	0	070	8.95
4213-010	**1**	25	0	070	12.20

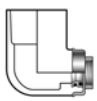
90° Reducing Ell



Socket x Socket

4206-131	**1X3/4**	20	240	070	5.41

TorqueSafe™ 90° Sprinkler Head Elbow - Gasket Sealed Brass Thread Insert Style

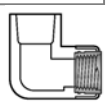


Socket x Gasket FIPT With Elastomer Seal - Use NO Thread Sealant

4207-101 G	**3/4X1/2**	20	120	076	9.14
4207-130 G	**1X1/2**	15	90	076	12.84
4207-166 G	**1-1/4X1/2**	10	60	076	17.88

FIPT With Elastomer Seal - Use NO Thread Sealant. Not intended to convey or dispense water for human consumption through drinking or cooking

Sprinkler Head 90° Ell - Brass Thread Insert Style



Socket x FIPT

4207-101	**3/4X1/2**	20	120	076	9.14
4207-130	**1X1/2**	15	90	076	12.84
4207-131	**1X3/4**	25	0	076	15.54
4207-166	**1-1/4X1/2**	10	60	076	17.88

Not intended to convey or dispense water for human consumption through drinking or cooking

Sprinkler Head 90° Ell - Special Reinforced Plastic Thread Style



Socket x SR FIPT - Stainless Steel Collar

4207-101SR	**3/4X1/2**	20	180	076	4.85
4207-130SR	**1X1/2**	10	150	076	6.84
4207-131SR	**1X3/4**	50	0	076	8.27
4207-166SR	**1-1/4X1/2**	25	0	076	8.69

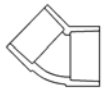
90° Street Ell



Spigot x Socket

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4209-007	**3/4**	50	0	070	5.97
4209-010	**1**	50	0	070	8.82
4209-012	**1-1/4**	25	0	070	14.51
4209-015	**1-1/2**	10	0	070	17.67
4209-020	**2**	25	0	070	26.02

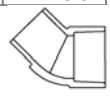
45° Ell



Socket x Socket

4217-007	**3/4**	20	360	070	3.73
4217-010	**1**	15	240	070	4.43
4217-012	**1-1/4**	10	120	070	6.49
4217-015	**1-1/2**	10	0	070	8.93
4217-020	**2**	10	0	070	11.23
4217-025	**2-1/2**	5	0	070	20.01
4217-030	**3**	5	0	070	28.94

45° Street Ell



Spigot x Socket

4227-010	**1**	50	0	070	4.43
4227-012	**1-1/4**	25	0	070	6.49
4227-015	**1-1/2**	25	0	070	8.03
4227-020	**2**	20	0	070	11.23

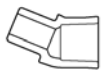
22-1/2° Ell



Socket

4216-007	**3/4**	20	360	070	4.46
4216-010	**1**	20	240	070	5.76
4216-012	**1-1/4**	20	0	070	7.79
4216-015	**1-1/2**	20	0	070	10.71
4216-020	**2**	20	0	070	13.25
4216-025	**2-1/2**	5	0	070	27.22
4216-030	**3**	5	0	070	34.51

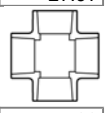
22-1/2° Street Ell



Spigot x Socket

4242-007	**3/4**	50	0	070	4.68
4242-010	**1**	50	0	070	6.03
4242-012	**1-1/4**	20	0	070	8.20
4242-015	**1-1/2**	25	0	070	11.25
4242-020	**2**	20	0	070	13.93
4242-025	**2-1/2**	5	0	070	19.53
4242-030	**3**	5	0	070	27.97

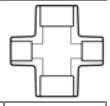
Cross



Socket x Socket x Socket x Socket

4220-007	**3/4**	20	0	070	5.88
4220-010	**1**	15	0	070	7.35
4220-012	**1-1/4**	10	0	070	10.24
4220-015	**1-1/2**	10	0	070	13.98
4220-020	**2**	8	0	070	22.77
4220-025	**2-1/2**	5	0	070	50.04
4220-030	**3**	5	0	070	73.39

Reducing Cross



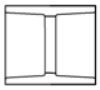
Socket x Socket x Socket x Socket

4220-131	**1X3/4**	20	0	070	7.94

Reducing Cross (continued)
Socket x Socket x Socket x Socket

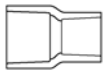
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4220-167	**1-1/4X3/4**	25	0	070	12.26
4220-210	**1-1/2X3/4**	15	0	070	17.11
4220-289	**2-1/2X1**	15	0	070	31.65

Coupling
Socket x Socket



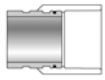
4229-007	**3/4**	25	500	070	2.68
4229-010	**1**	25	250	070	3.43
4229-012	**1-1/4**	10	160	070	5.15
4229-015	**1-1/2**	10	100	070	7.35
4229-020	**2**	20	0	070	9.91
4229-025	**2-1/2**	10	0	070	15.09
4229-030	**3**	5	0	070	19.63

Reducer Coupling
Socket x Socket



4229-131	**1X3/4**	15	270	070	3.43
4229-167	**1-1/4X3/4**	25	0	070	5.33
4229-168	**1-1/4X1**	10	140	070	5.15
4229-210	**1-1/2X3/4**	25	0	070	7.94
4229-211	**1-1/2X1**	10	70	070	7.72
4229-212	**1-1/2X1-1/4**	10	120	070	7.35
4229-248	**2X3/4**	10	80	070	10.35
4229-249	**2X1**	10	60	070	10.35
4229-250	**2X1-1/4**	10	60	070	10.09
4229-251	**2X1-1/2**	10	100	070	9.91
4229-291	**2-1/2X1-1/2**	10	0	070	15.25
4229-292	**2-1/2X2**	10	0	070	15.63
4229-339	**3X2-1/2**	5	0	070	46.42

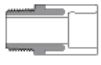
Grooved Coupling Adapter
Groove x Socket



4233-012	**1-1/4**	10	40	076	103.14
4233-015	**1-1/2**	10	40	076	109.31
4233-020	**2**	8	32	076	126.60
4233-025	**2-1/2**	5	0	076	162.39
4233-030	**3**	5	0	076	180.53

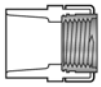
Not intended to convey or dispense water for human consumption through drinking or cooking

Male Adapter
MIPT x Socket



4236-007	**3/4**	40	160	076	41.02
4236-010	**1**	10	60	076	62.72
4236-012	**1-1/4**	10	60	076	75.00
4236-015	**1-1/2**	10	40	076	136.12
4236-020	**2**	8	32	076	181.14

Female Adapter - Brass Thread Insert Style
Socket x FIPT

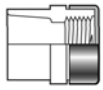


4235-007	**3/4**	15	90	076	18.23
4235-010	**1**	15	90	076	31.99
4235-012	**1-1/4**	15	60	076	52.15
4235-015	**1-1/2**	10	40	076	69.57
4235-020	**2**	8	32	076	87.19

Not intended to convey or dispense water for human consumption through drinking or cooking

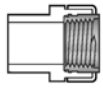
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each

Female Adapter - Special Reinforced Plastic Thread Style
Socket x SR FIPT - Stainless Steel Collar



4235-007SR	**3/4**	25	300	076	8.65
4235-010SR	**1**	25	200	076	15.21
4235-012SR	**1-1/4**	10	60	076	24.76

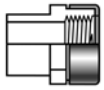
Spigot Female Adapter - Brass Thread Insert Style
Spigot x FIPT



4278-007	**3/4**	25	150	076	17.05
4278-010	**1**	15	90	076	30.37

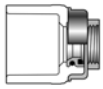
Not intended to convey or dispense water for human consumption through drinking or cooking

Spigot Female Adapter - Special Reinforced Plastic Thread Style
Spigot x SR FIPT - Stainless Steel Collar



4278-007SR	**3/4**	25	300	076	9.08
4278-010SR	**1**	50	0	076	16.17

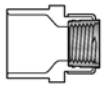
TorqueSafe™ Female Sprinkler Head Adapter - Gasket Sealed Brass Thread Insert Style
Socket x Gasket FIPT



4235-101 G	**3/4X1/2**	50	0	076	9.96
4235-130GS	**1X1/2**	50	0	076	10.63
4235-131 G	**1X3/4**	50	0	076	16.80

FIPT With Elastomer Seal - Use NO Thread Sealant. Not intended to convey or dispense water for human consumption through drinking or cooking

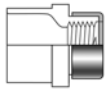
Female Sprinkler Head Adapter - Brass Thread Insert Style
Socket x FIPT



4235-101	**3/4X1/2**	50	0	076	9.96
4235-130	**1X1/2**	50	0	076	10.63
4235-131	**1X3/4**	50	0	076	16.80

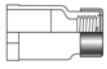
Not intended to convey or dispense water for human consumption through drinking or cooking

Female Sprinkler Head Adapter - Special Reinforced Plastic Thread Style
Socket x SR FIPT - Stainless Steel Collar



4235-101SR	**3/4X1/2**	50	200	076	5.28
4235-130SR	**1X1/2**	50	0	076	5.65
4235-131SR	**1X3/4**	50	0	076	8.95

Female Sprinkler Head Adapter - Special Reinforced Plastic Thread Style with Socket Body Wrench Flats
Socket x SR FIPT - Stainless Steel Collar



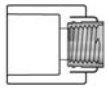
W4235-101SR	**3/4X1/2**	50	0	076	6.03
W4235-130SR	**1X1/2**	50	0	076	6.45

Female Sprinkler Head Adapter - Special Reinforced Plastic Thread with Metal Thread Start
Socket x SR FIPT - Zinc Collar



Z4235-101SR	**3/4X1/2**	50	200	076	5.28

Female Sprinkler Head Adapter - Brass Thread Insert Style with Long Body
Socket x FIPT

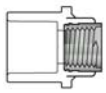


L4235-130	**1X1/2**	50	0	076	15.07

Not intended to convey or dispense water for human consumption through drinking or cooking

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

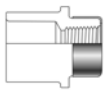
Female Sprinkler Head Adapter - Brass Thread Insert Style with Positioning Ring



Socket x FIPT

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
R4235-101	3/4X1/2	50	0	076	9.96
Not intended to convey or dispense water for human consumption through drinking or cooking					

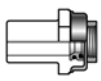
Female Sprinkler Head Adapter - Special Reinforced Plastic Thread Style with Positioning Ring



Socket x SR FIPT - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
R4235-101SR	3/4X1/2	25	300	076	5.97

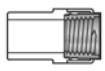
TorqueSafe™ Female Spigot Sprinkler Head Adapters - Gasket Sealed Brass Thread Insert Style



Spigot x Gasket FIPT x Socket With Elastomer Seal - Use NO Thread Sealant

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4238-101 G	3/4X1/2	50	200	076	9.96
4238-130 G	1X1/2	50	0	076	10.63
FIPT With Elastomer Seal - Use NO Thread Sealant. Not intended to convey or dispense water for human consumption through drinking or cooking					

Spigot Female Sprinkler Head Adapters - Brass Thread Insert Style



Spigot x FIPT

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4238-101	3/4X1/2	50	0	076	9.96
4238-130	1X1/2	50	0	076	10.63
Not intended to convey or dispense water for human consumption through drinking or cooking					

TorqueSafe™ Bushing - Gasket Sealed Brass Thread Insert Style



Spigot x Gasket FIPT With Elastomer Seal - Use NO Thread Sealant

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4238-130BR G	1X1/2	50	300	076	13.76
FIPT With Elastomer Seal - Use NO Thread Sealant. Not intended to convey or dispense water for human consumption through drinking or cooking					

Replacement Gaskets for all TorqueSafe™ Gasket Seaked Head Adapters

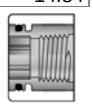


Pack of 25 EPDM Gaskets

For Use in 1/2" or 3/4" Gasket Sealed Threads

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
RGSK-005	1/2	50	4000	299	10.62
RGSK-007	3/4	50	4000	299	14.84

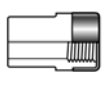
Bushing - with Brass Thread Insert



Spigot x FIPT

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4238-130BR	1X1/2	50	300	076	13.76
Not intended to convey or dispense water for human consumption through drinking or cooking					

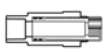
Spigot Female Sprinkler Head Adapters - Special Reinforced Plastic Threaded Style



Spigot x SR FIPT - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4238-101SR	3/4X1/2	50	400	076	5.28
4238-130SR	1X1/2	50	0	076	5.72

Adjustable Sprinkler Head Adapters - Special Reinforced Plastic Thread Style



Socket x SR FIPT - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
42001SR	3/4X1/2	12	0	076	13.49
42011SR	1X1/2	12	0	076	13.49

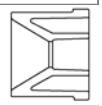
Adjustable Sprinkler Head Adapters - Special Reinforced Plastic Thread Style



Spigot x SR FIPT - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
42004SR	3/4X1/2	12	0	076	13.49
42014SR	1X1/2	12	0	076	13.49

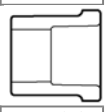
Reducer Bushing - Flush Style



Spigot x Socket

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4237-131	1X3/4	50	700	070	2.08
4237-167	1-1/4X3/4	25	200	070	3.27
4237-168	1-1/4X1	25	350	070	3.27
4237-210	1-1/2X3/4	25	125	070	3.68
4237-211	1-1/2X1	25	150	070	3.68
4237-212	1-1/2X1-1/4	25	300	070	3.68
4237-248	2X3/4	10	160	070	5.40
4237-249	2X1	10	160	070	5.40
4237-250	2X1-1/4	10	160	070	5.40
4237-251	2X1-1/2	10	160	070	5.40
4237-290	2-1/2X1-1/4	10	40	070	9.34
4237-291	2-1/2X1-1/2	10	0	070	9.34
4237-292	2-1/2X2	15	0	070	9.34
4237-338	3X2	10	0	070	13.98
4237-339	3X2-1/2	10	0	070	13.98

Transition Bushing



IPS Spigot x CTS Socket

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4240-101	3/4X1/2	50	300	035	9.21
4240-130	1X1/2	50	300	035	11.76

Cap



Socket

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4247-007	3/4	25	400	070	1.62
4247-010	1	25	450	070	2.34
4247-012	1-1/4	10	60	070	3.68
4247-015	1-1/2	10	160	070	5.11
4247-020	2	10	60	070	7.78
4247-025	2-1/2	5	40	070	11.04
4247-030	3	5	0	070	18.06

Test Plug - O-ring Sealed



MIPT – For Pressure Testing Only. NOT for use with TorqueSafe™ or Z4235 Series Adapters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FTP-005	1/2	50	400	079	1.78
DO NOT use with Tape or Paste thread sealants					

Test Plug Replacement O-ring



Buna-N, For O-ring Sealed Test Plug Only

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
B-116	116	100	0	901	.12
For Use With FTP-005 Test Plug					

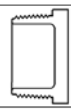
Test Plug for TorqueSafe™ Gasket Sealed Head Adapters



MIPT – For Pressure Testing Only. Use ONLY with Gasket Sealed Head Adapters

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FTP-005GS	1/2	50	400	079	1.78

Test Plug - White PVC



MIPT - For Pressure Testing Only

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4250-005	1/2	50	400	070	1.76
Requires use of a thread sealant					

FlameGuard® CPVC Fire Sprinkler Piping Products

Flange
Socket - 4 Bolt Holes - 175 lb.



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4251-007	**3/4**	25	0	070	5.79
4251-010	**1**	15	0	070	7.69
4251-012	**1-1/4**	15	0	070	9.91
4251-015	**1-1/2**	15	0	070	11.48
4251-020	**2**	10	0	070	17.55
4251-025	**2-1/2**	10	0	070	29.69

Flange - Van Stone Style
Socket - 4 Bolt Holes - 175 lb.



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4254-030	**3**	10	0	070	36.49

Blind Flange
4 Bolt Holes - 175 lb.



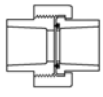
Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4253-007	**3/4**	25	0	070	5.79
4253-010	**1**	15	0	070	8.23
4253-012	**1-1/4**	15	0	070	10.52
4253-015	**1-1/2**	15	0	070	11.82
4253-020	**2**	10	0	070	19.35
4253-025	**2-1/2**	10	0	070	31.11
4253-030	**3**	10	0	070	34.17

Flange - Van Stone Style
Spigot - 4 Bolt Holes - 175 lb.



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4256-007	**3/4**	25	0	070	5.97
4256-010	**1**	15	0	070	8.42
4256-012	**1-1/4**	15	0	070	10.77
4256-015	**1-1/2**	15	0	070	12.09
4256-020	**2**	10	0	070	19.72
4256-025	**2-1/2**	10	0	070	31.54
4256-030	**3**	10	0	070	36.80

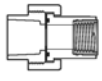
Union
Socket x Socket



175 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4257-007	**3/4**	10	80	070	7.46
4257-010	**1**	10	40	070	13.53
4257-012	**1-1/4**	5	20	070	17.71
4257-015	**1-1/2**	5	0	070	20.99
4257-020	**2**	5	0	070	34.49

Transition Union - Metal Thread Insert Style
Socket x FIPT



175 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
4259-010BR	**1**	10	0	076	47.01
4259-012BR	**1-1/4**	5	20	076	68.93
4259-015BR	**1-1/2**	5	0	076	97.95
4259-020BR	**2**	5	0	076	144.44

Not intended to convey or dispense water for human consumption through drinking or cooking

Short Repair Couplings
Spigot x Socket



175 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
SH118-07CO	**3/4**	30	0	025	13.56
SH118-10CO	**1**	35	0	025	21.98

Blue 75™ Thread Sealant



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
SB75-005	**1/4 Pint**	24	0	895	10.46
SB75-010	**1/2 Pint**	24	0	895	16.66
SB75-020	**Pint**	12	0	895	26.94
SB75-030	**Quart**	12	0	895	48.41

FS5 One-Step Cement



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
FS5-020	**Pint**	12	0	703	28.25
FS5-030	**Quart**	12	0	703	51.83

Empty Cans
With Cap/Lid order Daubers separately



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
MT-654*	**Pint**	12	0	710	5.50
MT-651*	**Quart**	12	0	710	7.14
MT-653**	**Quart**	12	0	710	8.36

* 1-3/4 Screw Neck
**TT Paint Type

Brush



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
KD-110	**4-1/2" Length**	25	0	710	9.59
KD-112	**5-1/2" length**	25	0	710	9.59

1" Brush w/1-3/4" Screw Cap, for pipe size 3/4" - 2"

Roller



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3020	**3" length**	20	0	710	16.03

Fits Paint Type Quart Can (MT-653). For use with pipe sizes 3"

Dauber



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DP-75	**3/4" for Pint**	50	0	710	1.31
DP-125	**1-1/4" for Pint**	50	0	710	1.58
DQ-125	**1-1/4" for Quart**	50	0	710	1.58

* 3/4" Diameter fits Pint Cans, for pipe size 3/4"
** 1-1/2" Diameter fits Pint Cans, for pipe size 1-1/2"
***1-1/2" Diameter fits Quart Cans, for pipe size 1-1/2"

Can-Mate Dauber



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
CM-75	**3/4"**	50	0	710	5.26
CM-150	**1-1/4"**	50	0	710	5.26

3/4" Diameter fits Pint or Quart Cans, for pipe sizes 3/4" - 1-1/4"
1-1/4" Diameter fits Pint or Quart Cans, for pipe sizes 1-1/2" - 3"

Deburring Tool
Cone Type for pipe 3/4" - 2"



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
DEB-2	**1/2 to 2 Pipe**	1	6	710	97.71

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Spears® Sprinkler Head Adapter Removal Kit

Occasionally a Sprinkler Head Adapter may need to be removed for relocation, extension or repair. Kit includes Cutter, Deburring Tool and Wrench. Cutter provides easy cutting of pipe from the inside (using a power drill) to remove adapters without disturbing ceiling or side wall. Deburring Tool allows removal of burrs in cut pipe. Wrench is designed to hold Spears® TorqueSafe™ Head Adapter brass insert from rotating to aid in sprinkler head removal from adapter, if required.

Complete Kit
Inside Pipe Cutter, Deburring Tool and Wrench



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
SHRK-005	**3/4" & 1" Pipe**	24	0	299	537.82

Deburring Tool Only



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GSB-005	**3/4" & 1" Pipe**	25	0	299	364.63

Inside Pipe Cutter Only



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GSC-005	**3/4" & 1" Pipe**	80	0	299	316.05

Wrench Only



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
GSW-005	**For 1/2" Outlet**	50	0	299	131.16

CPVC Riser Drain Valves For NFPA 13D Installations Only

FlameGuard® CPVC Drain & Check Valves For NFPA 13D Applications Only

Application: FlameGuard® CPVC Orange Check Valves and PVC/CPVC True Union Drain Valves are for use in configuring CPVC Fire Sprinkler System connection to water supply (riser/drain assembly) in NFPA 13D installations only. These valves are not UL Listed and NOT for use in any other locations within the fire sprinkler system.

True Union Industrial Drain Valve With Locking Handle
Socket x Socket



CPVC Gray Valve with, CPVC Orange End Connector

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
1822-007CFG	**3/4**	1	18	004	82.65
1822-010CFG	**1**	1	12	004	98.40
1822-012CFG	**1-1/4**	1	8	004	156.43
1822-015CFG	**1-1/2**	1	8	004	165.21
1822-020CFG	**2**	1	4	004	220.95

Not UL Listed

True Union Standard Drain Valves PVC Valve with CPVC End Connector
Socket x Socket



PVC Gray Valve with CPVC Orange End Connector

Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
3622-007FG	**3/4**	1	18	004	47.03
3622-010FG	**1**	1	12	004	56.02

Not UL Listed

CPVC Check Valves
Socket x Socket



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S1520-10CO	**1**	20	0	004	32.12
S1520-12CO	**1-1/4**	12	0	004	35.89
S1520-15CO	**1-1/2**	12	0	004	40.36

Not UL Listed

CPVC Special Reinforced Thread Inlet Check Valves
SR Fipt x Socket



Part Number	Size	Std Pk	Mstr Ctn	Disc Code	Price Each
S1520-10FSRSCO	**1**	20	0	004	34.78
S1520-12FSRSCO	**1-1/4**	12	0	004	40.16
S1520-15FSRSCO	**1-1/2**	12	0	004	47.64

Not UL Listed

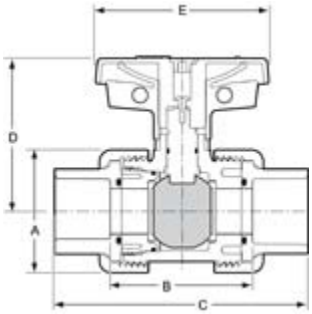
General Installation Information: Socket end connections should be installed using Spears® FS-5 One-Step Cement for use with Spears® CPVC Fire Sprinkler Products. Threaded connections should be made using Spears® **BLUE 75™** Thread Sealant tested for compatibility with CPVC materials. PVC True Union Drain Valves are to be installed with system connection to Valve CPVC End Connector. Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down.

FlameGuard® CPVC Drain & Check Valves For NFPA 13D Applications Only

Specifications

True Union Industrial Drain Valve:

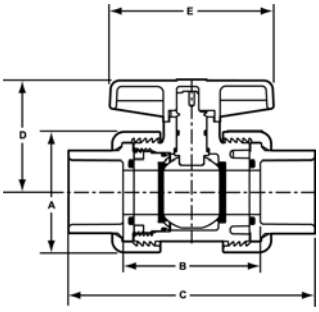
Nominal Size Range	3/4", 1", 1-1/4", 1-1/2", 2",
Type	1/4-Turn Ball Valve, True Union Style with Locking Handle
Material	CPVC Gray w/CPVC Orange End Connector
Seats	PTFE
Seals	EPDM
Handle	Polypropylene, Red
End Connections	Socket x Socket



Socket x Socket Part Number	Nominal Size	Dimension Reference (inches, ± 1/16)				
		A	B	C	D	E
1822-007CFG	3/4	2-1/4	2-3/4	4-3/4	2-7/8	3-3/8
1822-010CFG	1	2-1/2	2-7/8	5-1/8	3-1/8	3-7/16
1822-012CFG	1-1/4	3-1/16	3-1/4	5-3/4	3-5/8	3-7/8
1822-015CFG	1-1/2	3-1/2	3-1/2	6-1/4	4	4-3/16
1822-020CFG	2	4-1/4	4-3/4	7-3/4	4-1/2	5-1/8

True Union Standard Drain Valve:

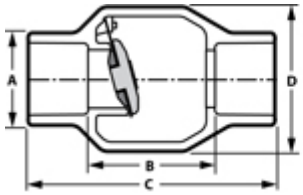
Nominal Size Range	3/4", 1"
Type	1/4-Turn Ball Valve, True Union Style
Material	PVC w/CPVC Orange End Connector
Seats	PTFE/HDPE
Seals	EPDM
Handle	Polypropylene, Red
End Connections	Socket x Socket

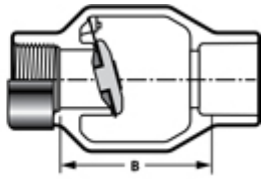


Socket x Socket Part Number	Nominal Size	Dimension Reference (inches, ± 1/16)				
		A	B	C	D	E
3622-007FG	3/4	2-1/4	2-3/4	4-3/4	2	3
3622-010FG	1	2-1/2	2-7/8	5-1/8	2-5/16	3-7/16

Check Valve:

Nominal Size Range	1", 1-1/4", 1-1/2"
Type	Swing Check, Maintenance-free Sealed Unit
Material	CPVC, Orange
Seat	EPDM
End Connections	Socket x Socket Special Reinforced (SR) Female Plastic Thread Inlet x Socket





Socket x Socket Part Number	SR Thread x Socket Part Number	Nominal Size	Dimension Reference (inches, ± 1/16)					C_V (GPM)
			A	B		C	D	
				Socket	SR Thread			
S1520-10CO	S1520-10FSRSCO	1	1-11/16	2-5/16	2-15/16	4-9/16	2-5/8	33
S1520-12CO	S1520-12FSRSCO	1-1/4	2-1/16	2-15/16	3-5/8	5-1/2	3-3/8	42
S1520-15CO	S1520-15FSRSCO	1-1/2	2-7/16	3	3-11/16	5-5/8	3-3/8	89

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AAV-015 548
AAV-015C 581
AB-1 730
ABS71M-005 725
ABS71M-010 725
ABS71M-020 725
ABS71M-030 725
ABS71M-040 725
ABS71Y-005 725
ABS71Y-010 725
ABS71Y-020 725
ABS71Y-030 725
ABS71Y-040 725
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ABS73B-010 725
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ABS73B-040 725
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4317-200	602	4320-794C	606	4329-762C	607	4347-120BC	607	435-040SRTC	86	436-007B	43
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4317-240	602	4320-796C	606	4329-764C	607	4347-140	604	435-050G	40	436-007L	45
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458-012G	41	464-101	22	466E-580	25	467-247SR	26	467S-335SR	26	468-420	28
458-015	20	464-130	22	466E-582	25	467-248SR	26	467S-336SR	26	468-421	28
458-015G	41	464-131	22	466E-585	25	467-249SR	26	467S-337SR	26	468-422	28
458-020	20	464-210	22	466E-624	25	467-250SR	26	467S-338SR	26	468-523	28
458-020G	41	464-288	21	466E-626	25	467-251SR	26	467S-415SR	26	468-524	28
458-025	20	464-337	21	466E-664	25	467-291SR	26	467S-416SR	26	468-525	28
458-030	20	464-419	21	466E-666	25	467-333SR	26	467S-417SR	26	468-526	28
458-040	20	464-486	21	466S-247	25	467-334SR	26	467S-418SR	26	468-527	28
458-060	20	464-527	21	466S-248	25	467-335SR	26	467S-419SR	26	468-528	28
459-002SR	21, 353	464-532	21	466S-249	25	467-336SR	26	467S-420SR	26	468-529	28
459-003SR	21, 353	464-577	21	466S-250	25	467-337SR	26	467S-421SR	26	468-530	28
459-005SR	21, 353	464-582	21	466S-251	25	467-338SR	26	467S-422SR	26	468-532	28
459-007SR	21, 353	464-624	21	466S-291	25	467-415SR	26	467S-523SR	26	468-573	28
459-010BR	21, 353	466-247	24	466S-333	25	467-416SR	26	467S-524SR	26	468-574	28
459-010SR	21, 353	466-248	24	466S-334	25	467-417SR	26	467S-525SR	26	468-575	28
459-012BR	21, 353	466-249	24	466S-335	25	467-418SR	26	467S-526SR	26	468-576	28
459-012SR	21, 353	466-250	24	466S-336	25	467-419SR	26	467S-527SR	26	468-577	28
459-015BR	21, 353	466-251	24	466S-337	25	467-420SR	26	467S-528SR	26	468-578	28
459-015SR	21, 353	466-291	24	466S-338	25	467-421SR	26	467S-529SR	26	468-579	28
459-020BR	21, 353	466-333	24	466S-415	25	467-422SR	26	467S-530SR	26	468-580	28
459-020SR	21, 353	466-334	24	466S-416	25	467-523SR	26	467S-532SR	26	468-582	28
459-030SR	21, 353	466-335	24	466S-417	25	467-524SR	26	467S-573SR	26	468-585	28
459-040SR	21, 353	466-336	24	466S-418	25	467-525SR	26	467S-574SR	26	468-624	28
459-060SR	21, 353	466-337	24	466S-419	25	467-526SR	26	467S-575SR	26	468-626	28
460-005	17, 160	466-338	24	466S-420	25	467-527SR	26	467S-576SR	26	468-664	28
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460-007	17, 160	466-416	24	466S-422	25	467-529SR	26	467S-578SR	27	468E-247	28
460-007G	160	466-417	24	466S-523	25	467-530SR	26	467S-579SR	27	468E-248	28
460-007N	18, 160	466-418	24	466S-524	25	467-532SR	26	467S-580SR	27	468E-249	28
460-010	17, 160	466-419	24	466S-525	25	467-573SR	26	467S-582SR	27	468E-250	28
460-010G	160	466-420	24	466S-526	25	467-574SR	26	467S-585SR	27	468E-251	28
460-012	18, 160	466-421	24	466S-527	25	467-575SR	26	467S-624SR	27	468E-291	28
460-012G	160	466-422	24	466S-528	25	467-576SR	26	467S-626SR	27	468E-333	28
460-012N	18, 160	466-523	24	466S-529	25	467-577SR	26	467S-664SR	27	468E-334	28
460-015	18, 160	466-524	24	466S-530	25	467-578SR	26	467S-666SR	27	468E-335	28
460-015G	160	466-525	24	466S-532	25	467-579SR	26	467SE-247SR	27, 626	468E-336	28
460-020	18, 160	466-526	24	466S-573	25	467-580SR	26	467SE-248SR	27, 626	468E-337	28
460-020G	160	466-527	24	466S-574	25	467-582SR	26	467SE-249SR	27	468E-338	28
460-030	18, 160	466-528	24	466S-575	25	467-585SR	26	467SE-250SR	27	468E-415	28
460-030G	160	466-529	25	466S-576	25	467-624SR	26	467SE-251SR	27	468E-416	28
460-040	18, 160	466-530	25	466S-577	25	467-626SR	26	467SE-291SR	27	468E-417	28
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460-131N	18, 160	466-573	25	466S-579	25	467-666SR	26	467SE-334SR	27, 626	468E-419	28
460-132N	18, 160	466-574	25	466S-580	25	467E-247SR	27	467SE-335SR	27	468E-420	28
460A-015	160	466-575	25	466S-582	25	467E-248SR	27	467SE-336SR	27	468E-421	28
461-005	17	466-576	25	466S-585	25	467E-249SR	27	467SE-337SR	27	468E-422	28
461-007	17	466-577	25	466S-620	25	467E-250SR	27	467SE-338SR	27	468E-523	28
461-010	17	466-578	25	466S-624	25	467E-251SR	27	467SE-415SR	27, 626	468E-524	28
461-012	17	466-579	25	466S-626	25	467E-291SR	27	467SE-416SR	27, 626	468E-525	28
461-015	17	466-580	25	466S-664	25	467E-333SR	27	467SE-417SR	27	468E-526	28
461-020	17	466-582	25	466S-666	25	467E-334SR	27	467SE-418SR	27	468E-527	28
461-131	17	466-585	25	466SE-247	25	467E-335SR	27	467SE-419SR	27	468E-528	28
463-005	21	466-620	25	466SE-248	25	467E-336SR	27	467SE-420SR	27	468E-529	28
463-007	21	466-624	25	466SE-249	25	467E-337SR	27	467SE-421SR	27	468E-530	28
463-010	21	466-626	25	466SE-250	25	467E-338SR	27	467SE-422SR	27	468E-532	28
463-012	21	466-660	25	466SE-251	26	467E-415SR	27	467SE-523SR	27, 626	468E-573	28
463-015	22	466-664	25	466SE-291	26	467E-416SR	27	467SE-524SR	27, 626	468E-574	28
463-020	22	466-666	25	466SE-333	26	467E-417SR	27	467SE-525SR	27	468E-575	28
463-101	22	466E-247	25	466SE-334	26	467E-418SR	27	467SE-526SR	27	468E-576	28
463-130	22	466E-248	25	466SE-335	26	467E-419SR	27	467SE-527SR	27	468E-577	28
463-288	21	466E-249	25	466SE-336	26	467E-420SR	27	467SE-528SR	27	468E-578	28
463-333	21	466E-250	25	466SE-337	26	467E-421SR	27	467SE-529SR	27	468E-579	28
463-335	21	466E-251	25	466SE-338	26	467E-422SR	27	467SE-530SR	27	468E-580	28
463-336	21	466E-291	25	466SE-415	26	467E-523SR	27	467SE-532SR	27	468E-582	28
463-337	21	466E-333	25	466SE-416	26	467E-524SR	27	467SE-573SR	27, 626	468E-585	28
463-338	21	466E-334	25	466SE-417	26	467E-525SR	27	467SE-574SR	27, 626	468E-624	28
463-415	21	466E-335	25	466SE-418	26	467E-526SR	27	467SE-575SR	27	468E-626	28
463-416	21	466E-336	25	466SE-419	26	467E-527SR	27	467SE-576SR	27	468E-664	28
463-417	21	466E-337	25	466SE-420	26	467E-528SR	27	467SE-577SR	27	468E-666	28
463-418	21	466E-338	25	466SE-421	26	467E-529SR	27	467SE-578SR	27	468S-247	28
463-419	21	466E-415	25	466SE-422	26	467E-530SR	27	467SE-579SR	27	468S-248	28
463-420	21	466E-416	25	466SE-523	26	467E-532SR	27	467SE-580SR	27	468S-249	28
463-485	21	466E-417	25	466SE-524	26	467E-573SR	27	467SE-582SR	27	468S-250	28
463-486	21	466E-418	25	466SE-525	26	467E-574SR	27	467SE-585SR	27	468S-251	28
463-523	21	466E-419	25	466SE-526	26	467E-575SR	27	467SE-624SR	27	468S-291	28
463-525	21	466E-420	25	466SE-527	26	467E-576SR	27	467SE-626SR	27	468S-333	28
463-526	21	466E-421	25	466SE-528	26	467E-577SR	27	467SE-666SR	27	468S-334	28
463-527	21	466E-422	25	466SE-529	26	467E-578SR	27	468-247	27	468S-335	28
463-528	21	466E-523	25	466SE-530	26	467E-579SR	27	468-248	27	468S-336	28
463-530	21	466E-524	25	466SE-532	26	467E-580SR	27	468-249	27	468S-337	28
463-532	21	466E-525	25	466SE-573	26	467E-582SR	27	468-250	27	468S-338	28
463-573	21	466E-526	25	466SE-574	26	467E-585SR	27	468-251	27	468S-415	28
463-575	21	466E-527	25	466SE-575	26	467E-624SR	27	468-291	27	468S-416	28
463-576	21	466E-528	25	466SE-576	26	467E-626SR	27	468-333	27	468S-417	28
463-577	21	466E-529	25	466SE-577	26	467E-664SR	27	468-334	27	468S-418	28
463-578	21	466E-530	25	466SE-578	26	467E-666SR	27	468-335	27	468S-419	28
463-580	21	466E-532	25	466SE-579	26	467S-247SR	26	468-336	27	468S-420	28
463-582	21	466E-573	25	466SE-580	26	467S-248SR	26	468-337	27	468S-421	28
463-624	21	466E-574	25	466SE-582	26	467S-249SR	26	468-338	27	468S-422	28
464-005	22	466E-575	25	466SE-585	26	467S-250SR	26	468-415	27	468S-523	28
464-007	22	466E-576	25	466SE-624	26	467S-251SR	26	468-416	27	468S-524	28
464-010	22	466E-577	25	466SE-626	26	467S-291SR	26	468-417	28	468S-525	28
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Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

869S-337CSR	300	869SV-417CSR	299	869V-421CSR	299	872-010	217	875-249C	283	875-758CF	284
869S-337SR	211	869SV-417SR	210	869V-421SR	210	872-010C	305	875-250	192	875-758F	192
869S-338CSR	300	869SV-418CSR	299	869V-422CSR	299	872-012	217	875-250C	283	875-760CF	284
869S-338SR	211	869SV-418SR	210	869V-422SR	210	872-012C	305	875-251	192	875-760F	192
869S-415CSR	300	869SV-419CSR	299	869V-523CSR	299	872-015	217	875-251C	283	875-762CF	284
869S-415SR	211	869SV-419SR	210	869V-523SR	210	872-015C	305	875-292	192	875-762F	192
869S-416CSR	300	869SV-420CSR	299	869V-524CSR	299	872-020	217	875-335	192	875-764CF	284
869S-416SR	211	869SV-420SR	210	869V-524SR	210	872-020C	305	875-335C	283	875-764F	192
869S-417CSR	300	869SV-421CSR	299	869V-525CSR	299	872-030	217	875-336	192	875-784CF	284
869S-417SR	211	869SV-421SR	210	869V-525SR	210	872-030C	305	875-336C	283	875-784F	192
869S-418CSR	300	869SV-422CSR	300	869V-526CSR	299	872-040	217	875-337	192	875-786CF	284
869S-418SR	211	869SV-422SR	211	869V-526SR	210	872-040C	305	875-337C	283	875-786F	192
869S-419CSR	300	869SV-523CSR	300	869V-527CSR	299	872E-005	217	875-338	192	875-788CF	284
869S-419SR	211	869SV-523SR	211	869V-527SR	210	872E-007	217	875-338C	283	875-788F	192
869S-420CSR	300	869SV-524CSR	300	869V-528CSR	299	872E-010	217	875-339	192	875-790CF	284
869S-420SR	211	869SV-524SR	211	869V-528SR	210	872E-012	217	875-339C	283	875-790F	192
869S-421CSR	300	869SV-525CSR	300	869V-529CSR	299	872E-015	217	875-420	192	875-792CF	284
869S-421SR	211	869SV-525SR	211	869V-529SR	210	872E-020	217	875-420C	283	875-792F	192
869S-422CSR	300	869SV-526CSR	300	869V-530CSR	299	872E-030	217	875-420F	192	875-794CF	284
869S-422SR	211	869SV-526SR	211	869V-530SR	210	872E-040	217	875-421	192	875-794F	192
869S-523CSR	300	869SV-527CSR	300	869V-532CSR	299	8721-005	79, 398	875-421F	192	875-796CF	284
869S-523SR	211	869SV-527SR	211	869V-532SR	210	8721-007	79, 398	875-422	192	875-796F	192
869S-524CSR	300	869SV-528CSR	300	869V-573CSR	299	8721-010	79, 398	875-422C	283	875-814F	192
869S-524SR	211	869SV-528SR	211	869V-573SR	210	8721-012	79, 398	875-525	192	875-816F	192
869S-525CSR	300	869SV-529CSR	300	869V-574CSR	299	8721-015	79, 398	875-528	192	875-818F	192
869S-525SR	211	869SV-529SR	211	869V-574SR	210	8721-020	79, 398	875-528C	283	875-820F	192
869S-526CSR	300	869SV-530CSR	300	869V-575CSR	299	8722-005	79, 398	875-528CF	283	875-822F	192
869S-526SR	211	869SV-530SR	211	869V-575SR	210	8722-007	79, 398	875-528F	192	875-824F	192
869S-527CSR	300	869SV-532CSR	300	869V-576CSR	299	8722-010	79, 398	875-530	192	875-826F	192
869S-527SR	211	869SV-532SR	211	869V-576SR	210	8722-012	79, 398	875-530C	283	875-828F	192
869S-528CSR	300	869SV-573CSR	300	869V-577CSR	299	8722-015	79, 398	875-530CF	283	875-904F	192
869S-528SR	211	869SV-573SR	211	869V-577SR	210	8722-020	79, 398	875-530F	192	875-906F	192
869S-529CSR	300	869SV-574CSR	300	869V-578CSR	299	875-005	191	875-532	192	875-908F	192
869S-529SR	211	869SV-574SR	211	869V-578SR	210	875-005C	283	875-532C	283	875-910F	192
869S-530CSR	300	869SV-575CSR	300	869V-579CSR	299	875-007	191	875-578	192	875-912F	192
869S-530SR	211	869SV-575SR	211	869V-579SR	210	875-007C	283	875-578C	283	875-914F	192
869S-532CSR	300	869SV-576CSR	300	869V-580CSR	299	875-010	191	875-578CF	283	875-916F	192
869S-532SR	211	869SV-576SR	211	869V-580SR	210	875-010C	283	875-578F	192	875-918F	192
869S-573CSR	300	869SV-577CSR	300	869V-582CSR	299	875-012	191	875-579CF	283	875-920F	192
869S-573SR	211	869SV-577SR	211	869V-582SR	210	875-012C	283	875-579F	192	876-020CF	284
869S-574CSR	300	869SV-578CSR	300	869V-585CSR	299	875-015	191	875-580	192	876-020F	192
869S-574SR	211	869SV-578SR	211	869V-585SR	210	875-015C	283	875-580C	283	876-030CF	284
869S-575CSR	300	869SV-579CSR	300	869V-624CSR	299	875-020	191	875-580CF	283	876-030F	192
869S-575SR	211	869SV-579SR	211	869V-624SR	210	875-020C	283	875-580F	192	876-040CF	284
869S-576CSR	300	869SV-580CSR	300	869V-626CSR	299	875-025	191	875-582	192	876-040F	192
869S-576SR	211	869SV-580SR	211	869V-626SR	210	875-025C	283	875-582C	283	876-060CF	284
869S-577CSR	300	869SV-582CSR	300	869V-664CSR	299	875-030	191	875-582CF	283	876-060F	192
869S-577SR	211	869SV-582SR	211	869V-664SR	210	875-030C	283	875-582F	192	876-080CF	284
869S-578CSR	300	869SV-585CSR	300	869V-666CSR	299	875-040	191	875-585	192	876-080F	192
869S-578SR	211	869SV-585SR	211	869V-666SR	210	875-040C	283	875-585C	283	876-100CF	284
869S-579CSR	300	869SV-624CSR	300	8697-020	203, 691	875-050F	191	875-585CF	283	876-100F	192
869S-579SR	211	869SV-624SR	211	8697-025	203, 691	875-060	191	875-585F	192	876-120CF	284
869S-580CSR	300	869SV-626CSR	300	8697-032	203, 691	875-060C	283	875-621CF	283	876-120F	192
869S-580SR	211	869SV-626SR	211	8697-040	203, 691	875-080	191	875-621F	192	876-338	192
869S-582CSR	300	869SV-664CSR	300	8697-050	203, 691	875-080C	283	875-622F	192	876-338C	284
869S-582SR	211	869SV-664SR	211	8697-063	203, 691	875-080CF	283	875-623CF	283	876-420CF	284
869S-585CSR	300	869SV-666CSR	300	8697-090	203, 691	875-080F	191	875-623F	192	876-420F	192
869S-585SR	211	869SV-666SR	211	8697-110	203, 691	875-100CF	283	875-624CF	283	876-421CF	284
869S-624CSR	300	869V-247CSR	299	8698-020	203, 691	875-100F	191	875-624F	192	876-421F	192
869S-624SR	211	869V-247SR	210	8698-025	203, 691	875-101	192	875-625F	192	876-422CF	284
869S-626CSR	300	869V-248CSR	299	8698-032	203, 691	875-101C	283	875-626	192	876-422F	193
869S-626SR	211	869V-248SR	210	8698-040	203, 691	875-120CF	283	875-626C	283	876-528CF	284
869S-664CSR	300	869V-249CSR	299	8698-050	203, 691	875-120F	191	875-626CF	283	876-528F	193
869S-664SR	211	869V-249SR	210	8698-063	203, 691	875-130	192	875-626F	192	876-529CF	284
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893-110C	176	894-090C	177	895-080P	170	897-020C	292	91121H850-012	492	91152A101-007	490
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893-110P	169	894-090P	169	895-090C	177	897-025C	292	91121H850-020	492	91152A101-012	490
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893-120C	176	894-100C	177	895-090P	170	897-030C	292	91121J100-007	498	91152A101-020	490
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893-120P	169	894-100P	169	895-100C	177	897-040C	292	91121J100-012	498	91152H100-007	502
893-130	169	894-110	169	895-100CP	177	898-002	201	91121J100-015	498	91152H100-010	502
893-130C	176	894-110C	177	895-100P	170	898-002C	291	91121J100-020	498	91152H100-012	502
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893-130P	169	894-110P	169	895-110C	177	898-003C	291	91121J850-007	492	91152H100-020	502
893-140	169	894-120	169	895-110CP	177	898-005	202	91121J850-010	492	91152H850-005	496
893-140C	176	894-120C	177	895-110P	170	898-005C	292	91121J850-012	492	91152H850-007	496
893-140CP	176	894-120CP	177	895-120	170	898-007	202	91121J850-015	492	91152H850-010	496
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893-150C	176	894-130C	177	895-120P	170	898-010C	292	91121K850-007	492	91152H850-020	496
893-150CP	176	894-130CP	177	895-130	170	898-012	202	91121K850-010	492	91152J100-005	502
893-150P	169	894-130P	169	895-130C	177	898-012C	292	91121K850-012	492	91152J100-007	502
893-160	169	894-140	169	895-130CP	177	898-015	202	91121K850-015	492	91152J100-010	502
893-160C	177	894-140C	177	895-130P	170	898-015C	292	91121K850-020	492	91152J100-012	502
893-160CP	177	894-140CP	177	895-140	170	898-020	202	91122A101-005	489	91152J100-015	502
893-160P	169	894-140P	169	895-140C	177	898-020C	292	91122A101-007	489	91152J100-020	502
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893-240C	177	894-200C	177	895-190P	170	899-007SR	202, 356	91122J100-020	500, 501	91231H100-012	498
893-240CP	177	894-200CP	177	895-200	170	899-010	202	91122J850-005	494, 495	91231H100-015	499
893-240P	169	894-200P	170	895-200C	177	899-010BR	202, 358	91122J850-007	494, 495	91231H100-020	499
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893-300CP	177	894-220CP	177	895-220	170	899-010CSR	293, 361	91122J850-015	494, 495	91231H850-010	492
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893-360	169	894-240	170	895-220CP	177	899-012	202	91122K850-005	494, 495	91231H850-015	492
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Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

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Convenient "Tab Locator" page lets you quickly thumb to each category matching shaded tabs in the outer margin of each page.

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PLASTIC PIPE, FITTINGS, VALVES & SOLVENT CEMENTS

Valves for All Applications

Ball Valves & 3-Way Ball Valves - PVC & CPVC
True Union 2000 - 1/2" - 8" • Compact 1/2" - 6" (PVC & CPVC) • Single Entry 1/2" - 4" (PVC Gray & White) • Utility 1/2" - 6" (PVC Gray, White & CPVC) • CWV Ball Valves 1/2" - 2" (PVC White) • Swing Check Ball Valves 1-1/2" - 2" (PVC White)

Lab Valve Ball Valves - PVC & CPVC
With Tubing Adapter Kits 1/4" • General Purpose Valves 1/4" - 3/8"

PVC, CPVC & Polypropylene Industrial Swing Check Valves
Fully Serviceable • Quick Response • Flanged End Connection 3/4" - 8"

PVC Utility Swing Check & Spring Check Valves
White/Clear • Regular 1/2" - 8" • True Union Socket/Thread & Compression End 1/2" - 4"

PVC In-line Adjustable Spring Check Valves
Male-Female • Female-Male • Female-Female Thread 1/2" - 1"

PVC & CPVC Diaphragm Check Valves
Self-Closing Design • Socket & Thread Style

PVC & CPVC Butterfly Check Valves
Wafer • Flanged • Thread • Spigot • Grooved Style 2" - 24"

PVC & CPVC Y-Pattern & Y-Check Valves
Socket • SR Thread • True Union Socket/Thread • Flanged 1/2" - 4"

Ball Check Valves - PVC & CPVC
True Union 1/2" - 8"

Diaphragm Valves - PVC, CPVC & Polypropylene
True Union Socket/Thread & SR Thread Style 1/2" - 2" • Spigot Style 1/2" - 2" • Flanged Style 1/2" - 8"

PVC & CPVC Gate & Plug Gate Valves
Socket/Thread 1/2" - 4" • Flanged 1/2" - 6"

PVC & CPVC Globe Valves
Flanged 2-1/2" - 6"

Butterfly Valves - PVC, CPVC & Polypropylene
PVC & CPVC 1-1/2" - 14" • Polypropylene 1-1/2" - 60"

High Purity Butterfly Valves - PTFE Lined
Patented Non-Elastomer Contact Disc & Liner Seal • Gear Operated 2" - 6"

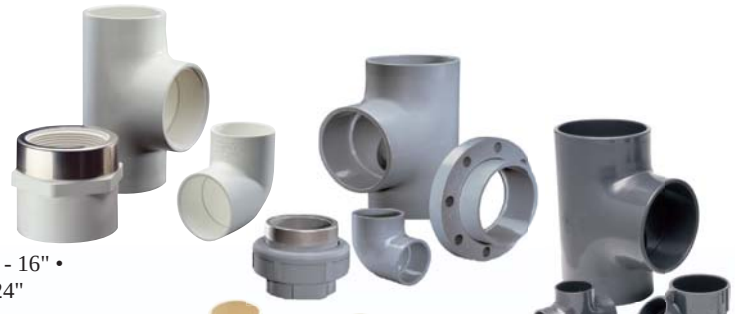
Factory Actuated Valves
True Union Ball Valves 1/2" - 6" • Diaphragm Valves 1/2" - 8" • Butterfly Valves 1-1/2" - 60" • Electric • Pneumatic • Unitized Pneumatic Actuated Diaphragm Valves 1/2" - 2"



Widest Variety of Pressure Fittings & Specialty Products in the Industry

PVC Schedule 40 Fittings
White • Clear • Black •
Injection Molded 1/4" - 12" •
Unions 1/4" - 6" •
Fabricated Fittings through 24"

PVC Schedule 80 Fittings
Injection Molded Fittings 1/4" - 12" •
Unions 1/4" - 6" • Molded Flanges 1/2" - 16" •
Fabricated Fittings & Flanges through 24"

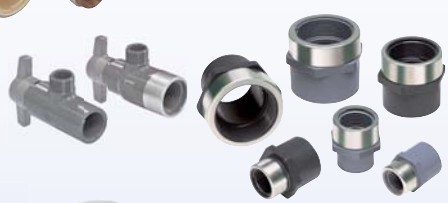


Schedule 80 Polypropylene Fittings
Special Reinforced (SR)
Plastic Thread Design
Sizes 1/2" - 2"



CPVC Schedule 80 Fittings
Injection Molded Fittings 1/4" - 12" •
Unions 1/4" - 6" • Molded Flanges 1/2" - 12" •
Fabricated Fittings & Flanges through 16"

CPVC CTS (Copper Tube Size) Pipe, Fittings & Valves
Injection Molded Fittings 1/2" - 2" • Patented SR Female
Adapters 1/2" - 1" • Socket Style Valves 1/2" - 2" • CTS Pipe 1/2" - 2"



PVC & CPVC Special Reinforced (SR) Fittings & Adapters
Patented Reinforcement Design Eliminates Split Threads •
Schedule 40 • Schedule 80 • CTS • Fire Sprinkler Adapters •
Selected Fittings • Female Adapters • Unions 1/2" - 6"



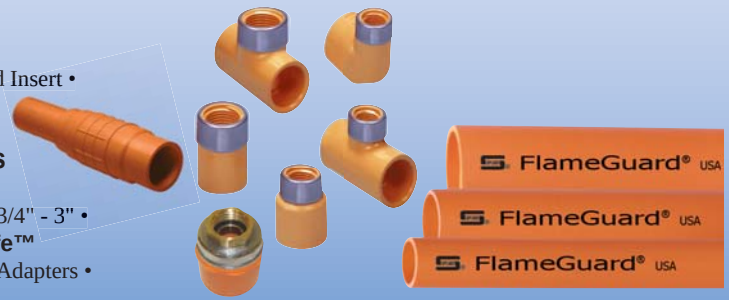
PVC & CPVC Clamp-On Saddles
Injection Molded 2-piece Saddle With Bolt Hardware •
Piloted O-ring Seal • Patented SR Threads • Single or Double
Outlet Configurations • For Pipe Sizes 2" - 12" • Socket/Thread
Outlets 1/2" - 6" • Mechanical Clamp-On Transition Saddles

PVC & CPVC Tank Adapters
Strong Buttress Thread Adapter Nut 1/2" - 8" •
PVC Schedule 40 Tank Adapters •
Neoprene • EPDM • FKM Gasket



Insert Fittings
PVC Multi Configurations 1/2" - 8" •
PVC Twist Lock Couplings 1/2" - 1" •
PVC & PP No-Clamp 3/8" Spiral Barbed Insert •
Couplings • Tees • 90° Elbows

CPVC Fire Sprinkler Pipe & Fittings & Repair Couplings
Multiple Fitting Configurations & Pipe 3/4" - 3" •
UL, FM & LPC Approved • **TorqueSafe™**
Gasket Sealed Head Adapter • SR Head Adapters •
Grooved Couplings • Unions • Flanges



PVC EverTUFF TURF Swing Joints & Fittings
Multiple Configurations • Multiple Outlets 1", 1-1/4", 1-1/2" • Spigot • MIPT • FIPT • SR FIPT • Male Acme Thread • Buttress Thread Internal Connections • 315 PSI Rating • Tees, Elbow, Couplings & Adapter 1" - 4"



PVC & CPVC Threaded Pipe Nipples
Schedule 80 • Lengths to 48" • Pipe Sizes 1/8" - 12"

PVC Irrigation Specialties
Irrigation Filters • Hose Filters • Hose Fittings • Sprinkler Sleds • Dri-Splice Waterproof Connectors • Manifold Fittings



PVC Schedule 40 Water Well Fittings
Caps • Couplings • Adapters 4-1/2" - 5"

PVC & CPVC Fabricated Duct Fittings
Vent Caps • Dampers • Fittings through 24"



PVC & CPVC Fabricated Fittings & Manifolds
Multiple Standard Configurations • Specialty Fittings sizes 36" through 48"• Low Head • PIP • Class • DWV • Low Pressure Schedule 40 & 80 • Risers • Flanges • Adapters • Gasketed Fittings



PVC White & Gray Compression Couplings
Buna-N, EPDM Gaskets • Sizes 1/2" - 6"

PVC & CPVC Repair Couplings
EPDM or FKM Seals • Sizes 1/2" - 6"

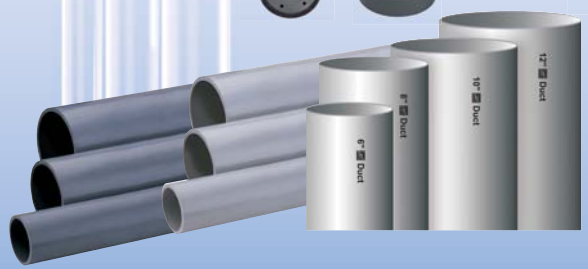
PVC Molded DWV Fittings
ASTM D 2665 • 1-1/2" - 12"

PVC Backwater Valves
With Optional Extensions • Socket 2" - 6"



PVC Clear & Clear UVR Pipe
Multi Sizes, Schedule 40 • Plus Thin Walled Clear UVR Pipe

PVC & CPVC Industrial Pipe & Duct
CPVC Schedule 40 & Schedule 80 Pipe • PVC Schedule 80 Pipe • PVC & CPVC Fume & Air Duct • Sizes through 12"



PVC Schedule 40 Pipe
Sizes through 1/2" - 16"

Complete Systems for Industry







LabWaste™ CPVC Corrosive Waste Drainage System
Solvent Cement Welded System •
Pipe - Cement - Fittings •
Sizes 1-1/2" - 12"

Low Extractable High Purity PVC System Pipe, Valves & Fittings Specialty Line
Sizes 1/2" - 6" Solvent Cement Weld System

Complete Double Containment Systems in Virtually Any Size
Constructed with Spears® Quality Fittings

Expansion Joints Compensate For Thermal Expansion & Contraction
O-ring sealed, telescoping, design 1/2" -14"

Hot-Tap Saddles For Branch Line Connections Under Pressure
2" - 6" Saddles with 3/4" -1-1/2" Outlets

PVC & CPVC Y-Strainers
Gray or Clear • Multiple Screen Options •
Socket, SR Thread, Union •
Sizes 1/2" - 4"

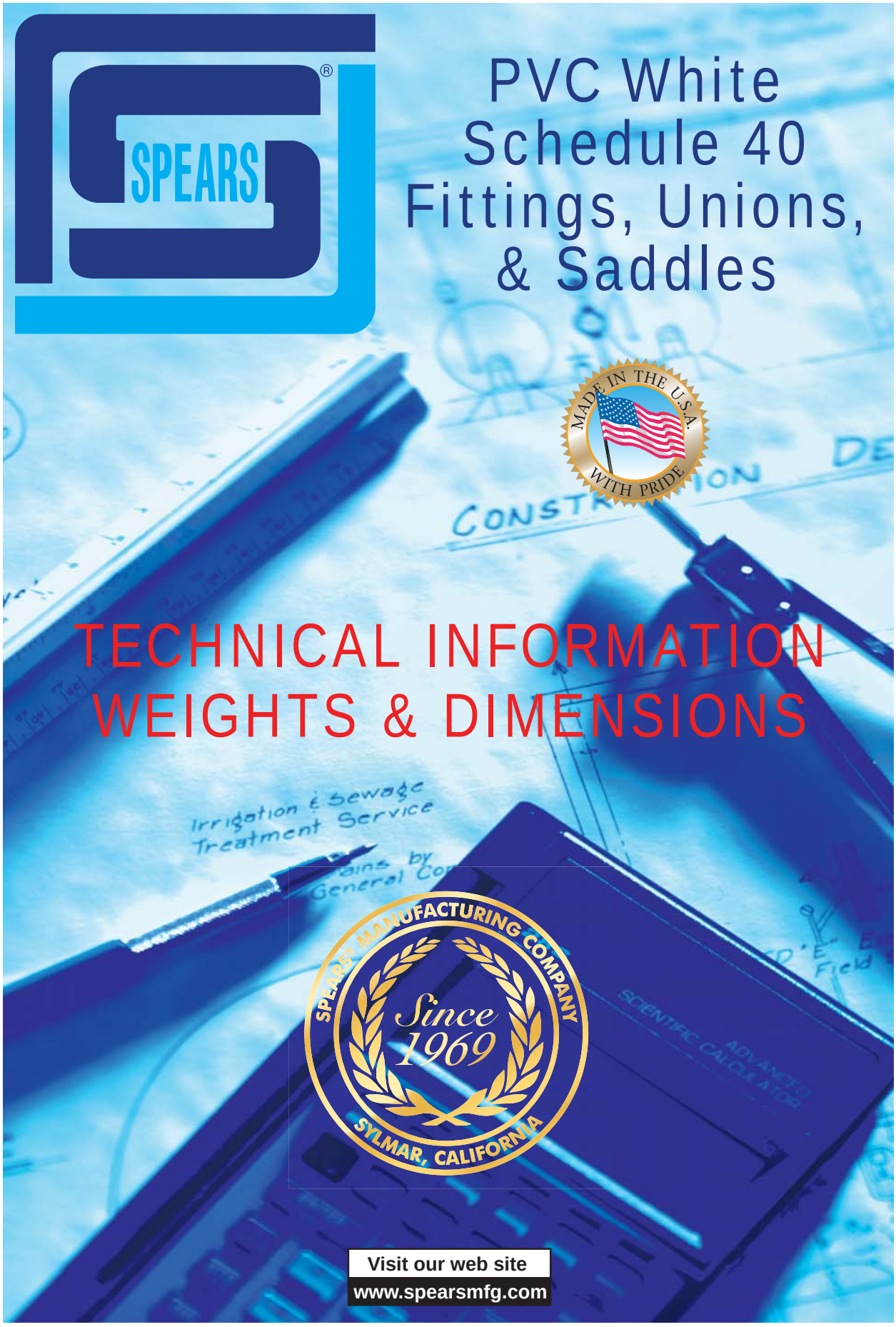
PVC & CPVC Basket Strainers
Full Flow Design 2" - 12"
Single & Duplex

PVC & CPVC Tee-Style Filters
50 & 100 GPM • 2-1/2"/3" x 2-1/2"/3" Inlet/Outlet

Assorted Process Monitoring Fittings
Gauge Guards • Needle Valves • Gauge Saddles •
Gauge & Probe Tees Featuring Special
Reinforced (SR) Thread Connections

Low VOC Solvent Cements & Primer
PVC, CPVC, ABS, ABS-TO-PVC, Multipurpose,
Specialty Cements, Primers & Accessories • Sizes
1/4 Pt, 1/2 Pt, Pint, Quarts, Gallons, 5-Gallon




SPEARS
PVC White
Schedule 40
Fittings, Unions,
& Saddles
MADE IN THE U.S.A.
WITH PRIDE
TECHNICAL INFORMATION
WEIGHTS & DIMENSIONS
SPEARS® MANUFACTURING COMPANY
Since
1969
SYLMAR, CALIFORNIA
Visit our web site
www.spearsmfg.com

Performance Engineered & Tested



SPEARS® Schedule 40 PVC fitting designs combine years of proven experience with computer generated stress analysis to yield the optimum physical structure and performance for each fitting. Material reinforcement is uniformly placed in stress concentration areas for substantially improved pressure handling capability. Resulting products are subjected to numerous verification tests to assure the very best PVC fittings available.

Full 1/4" Through 12" Availability

Spears® comprehensive line of PVC fittings offers a variety of injection molded configurations in Schedule 40 sizes 1/4" through 12" conforming to ASTM D 2466.

Exceptional Chemical & Corrosion Resistance

Unlike metal, PVC fittings never rust, scale, or pit, and will provide many years of maintenance-free service and extended system life.

High Temperature Ratings

PVC thermoplastic can handle fluids at service temperatures up to 140°F (60°C), allowing a wide range of process applications, including corrosive fluids.

Lower Installation Costs

Substantially lower material costs than steel alloys or lined steel, combined with lighter weight and ease of installation, can reduce installation costs by as much as 60% over conventional metal systems.

Higher Flow Capacity

Smooth interior walls result in lower pressure loss and higher volume than conventional metal fittings.

Additional Fabricated Configurations through 36"

Extra large, hard-to-find, and custom configurations are fabricated from NSF® Certified pipe. Fittings are engineered and tested to provide full pressure handling capabilities according to Spears® specifications.

PVC Valves

SPEARS® PVC Valve products are available for total system compatibility and uniformity.

Advanced Design Specialty Fittings

Spears® wide range of innovative, improved products include numerous metal-to-plastic transition fittings and unions with Spears® patented special reinforced (SR) plastic threads.

1/2" Through 16" Industrial Pipe Availability

Spears® premium quality Industrial CPVC pipe is offered in Schedule 40 White sizes 1/2" through 16".

Sample Engineering Specifications

All PVC Schedule 40 fittings shall be produced by Spears® Manufacturing Company from PVC Type I cell classification 12454, conforming to ASTM D 1784. All injection molded PVC Schedule 40 fittings shall be Certified for potable water service by NSF International and manufactured in strict compliance to ASTM D 2466. All fabricated fittings shall be produced in accordance with Spears® General Specifications for Fabricated Fittings.

The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

General Information

Recommendations For Installers And Users

Plastic piping systems should be **ENGINEERED, INSTALLED** and **OPERATED** in accordance with **ESTABLISHED DESIGN AND ENGINEERING STANDARDS AND PROCEDURES** for plastic piping systems. Suitability for the intended service application should be determined by the installer and/or user prior to installation of a plastic piping system. **PRIOR TO ASSEMBLY, all piping system components should be inspected for damage or irregularities. Mating components should be checked to assure that tolerances and engagements are compatible. Do not use any components that appear irregular or do not fit properly. Contact the appropriate manufacturer of the component product in question to determine usability. Consult all applicable codes and regulations for compliance prior to installation.**

Solvent Weld Connections — Use quality solvent cements and primers formulated for the intended service application, pipe size and type of joint. While the pipe and fitting materials may be compatible with the intended medium, the solvent cement may not be. Consult the manufacturers for suitability of use. Read and follow the cement and primer manufacturers' applications and cure time instructions thoroughly. Be sure to use the correct size applicator.

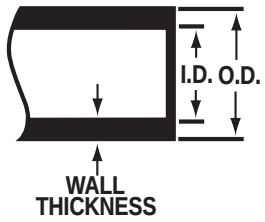
Threaded Connections — Use a quality grade thread sealant. **WARNING: SOME PIPE JOINT COMPOUNDS OR PTFE PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING TO PLASTIC.** Spears® Manufacturing Company recommends the use of Spears® **BLUE 75™** Thread Sealant which has been tested for compatibility with Spears® products. Please follow the sealant manufacturers' application / installation instructions. Choice of an appropriate thread sealant other than those listed above is at the discretion of the installer. 1 to 2 turns beyond **FINGER TIGHT** is generally all that is required to make a sound plastic threaded connection. Unnecessary **OVERTIGHTENING** will cause **DAMAGE TO BOTH PIPE AND FITTING.**

"Lead Free" low lead certification – unless otherwise specified, all Spears® Schedule 40 fittings specified here-in are certified by NSF International to ANSI/NSF® Standard 61, Annex G and is in compliance with California's Health & Safety Code Section 116825 (commonly known as AB1953) and Vermont Act 193. Weighted average lead content <=0.25%.



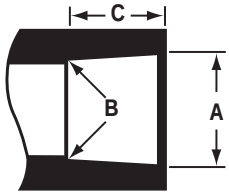
ASTM STANDARD DIMENSIONS

SCHEDULE 40 PIPE DIMENSIONS ASTM D 1785



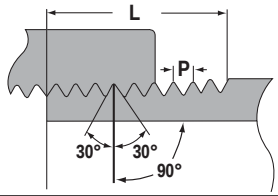
Nominal Pipe Size In.	Mean Outside Diameter In.	O. D. Tolerance In.	Minimum Wall Thickness In.
1/8	.405	± .004	.068
1/4	.540	± .004	.088
3/8	.675	± .004	.091
1/2	.840	± .004	.109
3/4	1.050	± .004	.113
1	1.315	± .005	.133
1-1/4	1.660	± .005	.140
1-1/2	1.900	± .006	.145
2	2.375	± .006	.154
2-1/2	2.875	± .007	.203
3	3.500	± .008	.216
4	4.500	± .009	.237
5	5.563	± .010	.258
6	6.625	± .011	.280
8	8.625	± .015	.322
10	10.750	± .015	.365
12	12.750	± .015	.408

SCHEDULE 40 SOCKET DIMENSIONS ASTM D 2466



Nominal Size In.	Diameter			Socket Length Minimum C
	Entrance A	Bottom B	Tolerance A	
1/8	.417	.401	± .004	.500
1/4	.552	.536	± .004	.500
3/8	.687	.671	± .004	.594
1/2	.848	.836	± .004	.688
3/4	1.058	1.046	± .004	.719
1	1.325	1.310	± .005	.875
1-1/4	1.670	1.655	± .005	.938
1-1/2	1.912	1.894	± .006	1.094
2	2.387	2.369	± .006	1.156
2-1/2	2.889	2.868	± .007	1.750
3	3.516	3.492	± .008	1.875
4	4.518	4.491	± .009	2.000
5	5.583	5.553	± .010	3.000
6	6.647	6.614	± .011	3.000
8	8.655	8.610	± .015	4.000
10	10.780	10.735	± .015	5.000
12	12.780	12.735	± .015	6.000

AMERICAN NATIONAL STANDARD TAPER PIPE THREADS (NPT) ANSI B1.20.1,ASTM F 1498



Nominal Size In.	Threads Per Inch.	Effective Thread Length L	Pitch Of Thread P
1/8	27	.2639	.03704
1/4	18	.4018	.05556
3/8	18	.4078	.05556
1/2	14	.5337	.07143
3/4	14	.5457	.07143
1	11-1/2	.6828	.08696
1-1/4	11-1/2	.7068	.08696
1-1/2	11-1/2	.7235	.08696
2	11-1/2	.7565	.08696
2-1/2	8	1.1375	.12500
3	8	1.2000	.12500
4	8	1.3000	.12500
5	8	1.4063	.12500
6	8	1.5125	.12500
8	8	1.7125	.12500

Molded Schedule 40 products are manufactured to ASTM D 2466 for use with pipe manufactured to ASTM D 1785. Certain products carry reduced pressure handling capability and have maximum internal pressure ratings at 73°F noted.

Fabricated Schedule 40 pressure fittings (part numbers ending with **"F"**) are manufactured to Spears® specifications for use with pipe manufactured to ASTM D 1785. See publication FAB-7, General Specifications for Standard Fabricated Fittings for additional information.

All specified Schedule 40 products are manufactured from materials certified by NSF® for use in potable water service.

Injection Molded Dimension References:

G = (LAYING LENGTH) intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses; ± 1/32 inch.
H = Intersection of center lines to face of fitting; 90° elbows tees, crosses; ± 1/32 inch.
J = Intersection of center lines to bottom of socket/thread; 45° elbows; ± 1/32 inch

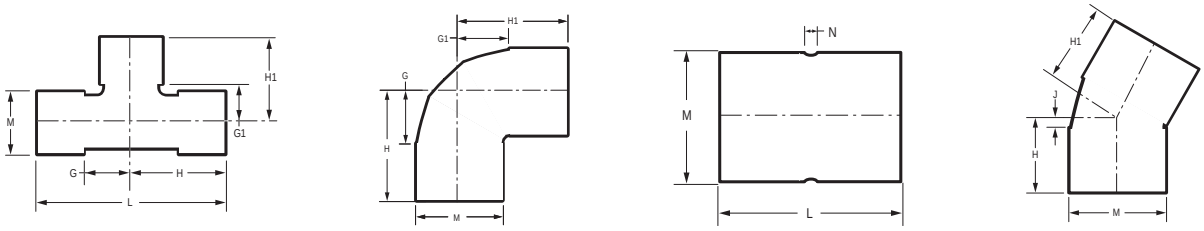
L = Overall length of fittings; ± 1/16 inch.
M = Outside diameter of socket/thread hub; ± 1/16 inch.
N = Socket bottom to socket bottom; couplings; ± 1/16 inch.
W = Height of cap; ± 1/16 inch.

Fabricated Dimension References:

G = (LAYING LENGTH) intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses; ± 1/4 inch; 14" & larger ± 1/2 inch.
H = Intersection of center lines to face of fitting; 90° elbows, tees, crosses; ± 1/4 inch.; wyes ± 1/2 inch; 14" & larger ± 1/2 inch.
J = Intersection of center lines to bottom of socket/thread; 45° elbows; ± 1/4 inch; 14" & larger ± 1/2 inch.

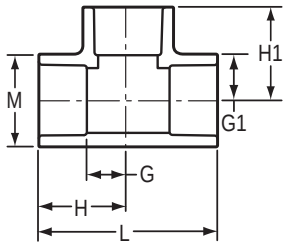
L = Overall length of fittings; ± 1/2 inch.; wyes ± 1 inch; 14" & larger ± 1 inch.
M = Outside diameter of socket/thread hub; ± 1/4 inch.
N = Socket bottom to socket bottom; couplings; ± 1/2 inch.
W = Height of cap; ± 1/4 inch.

Typical Fabricated Dimension References



TEE

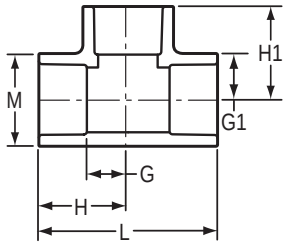
Socket x Socket x Socket



Part Number	Size	G	G1	H	H1	L	M	Approx. Wt. (Lbs.)
401-003	3/8	3/8	3/8	1-1/8	1-1/8	2-1/4	31/32	.04
401-005	1/2	1/2	1/2	1-1/4	1-1/4	2-1/2	1-3/32	.06
401-007	3/4	9/16	9/16	1-9/16	1-9/16	3-1/8	1-5/16	.10
401-010	1	11/16	11/16	1-3/4	1-3/4	3-1/2	1-5/8	.16
401-012	1-1/4	7/8	7/8	2-1/8	2-1/8	4-1/4	2	.25
401-015	1-1/2	1-3/32	1-3/32	2-11/32	2-11/32	4-11/16	2-1/4	.36
401-020	2	1-3/8	1-3/8	2-3/4	2-3/4	5-1/2	2-3/4	.51
401-025	2-1/2	1-21/32	1-21/32	3-13/32	3-13/32	6-13/16	3-11/32	1.03

TEE (continued)

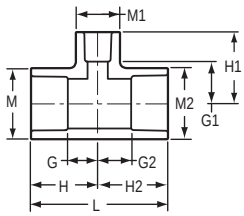
Socket x Socket x Socket



Part Number	Size	G	G1	H	H1	L	M	Approx. Wt. (Lbs.)
401-030	3	1-15/16	1-15/16	3-27/32	3-27/32	7-11/16	4	1.43
401-040	4	2-13/32	2-13/32	4-7/16	4-7/16	8-7/8	5-1/32	2.22
401-050	5	3	3	6	6	12	6-5/32	4.59
401-060	6	3-5/8	3-5/8	6-21/32	6-21/32	13-5/16	7-9/32	6.00
401-080	8	4-1/2	4-1/2	8-17/32	8-17/32	17-1/16	9-3/8	11.81
401-100	10	5-13/16	5-13/16	10-27/32	10-27/32	21-11/16	11-21/32	24.25
401-100F	10	9-7/8	9-3/8	15-1/8	14-5/8	30-1/4	11-1/2	36.21
401-120	12	6-27/32	6-27/32	12-27/32	12-27/32	25-11/16	13-3/4	37.94
401-120F	12	10-3/4	10-3/16	17	16-7/16	34	13-9/16	56.32
401-140F	14	11-3/8	11	18-3/8	18	36-3/4	14-7/8	75.11
401-160F	16	15	12-7/8	23	20-7/8	46	17	111.00
401-180F	18	15-7/8	13-3/8	24-7/8	22-3/8	49-3/4	19-1/8	151.26
401-200F	20	18-1/4	15-1/2	28-1/4	25-1/2	56-1/2	21-3/16	206.74
401-240F	24	21-1/8	17-1/2	33-1/8	29-1/2	66-1/4	25-3/8	337.03

REDUCING TEE

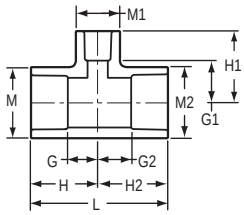
Socket x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
401-053	3/8x3/8x1/2	17/32	21/32	17/32	2-1/32	1-3/4	2-1/32	4-1/16	7/8	1-3/32	7/8	.08
401-074	1/2x1/2x3/4	9/16	9/16	9/16	1-5/16	1-9/16	1-5/16	2-5/8	1-1/16	1-9/32	1-1/16	.07
401-075	1/2x1/2x1	25/32	17/32	25/32	1-17/32	1-11/16	1-17/32	3-1/16	1-1/16	1-5/8	1-1/16	.11
401-094	3/4x1/2x1/2	17/32	21/32	17/32	1-17/32	1-13/32	1-9/32	2-13/16	1-5/16	1-3/32	1-3/32	.08
401-095	3/4x1/2x3/4	13/16	11/16	5/8	1-13/16	1-15/32	1-3/8	3-3/16	1-5/16	1-5/16	1-1/16	.10
401-101	3/4x3/4x1/2	17/32	5/8	17/32	1-7/16	1-3/8	1-7/16	2-29/32	1-5/16	1-1/8	1-5/16	.08
D401-101	3/4x3/4x1/2	9/16	19/32	17/32	1-17/32	1-27/32	1-17/32	3-1/16	1-5/16	1-3/32	1-5/16	.11
401-102	3/4x3/4x1	23/32	5/8	23/32	1-21/32	1-21/32	1-21/32	3-5/16	1-5/16	1-5/8	1-5/16	.11
401-122	1x1/2x1	23/32	23/32	27/32	1-25/32	1-25/32	1-19/32	3-7/16	1-5/8	1-5/8	1-3/32	.14

REDUCING TEE (continued)

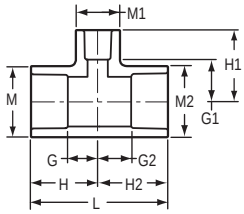
Socket x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
401-124	1x3/4x1/2	5/8	23/32	19/32	1-21/32	1-15/32	1-1/2	3-5/32	1-5/8	1-3/32	1-5/16	.12
401-125	1x3/4x3/4	21/32	25/32	5/8	1-25/32	1-25/32	1-5/8	3-7/16	1-19/32	1-5/16	1-5/16	.14
401-126	1x3/4x1	3/4	13/16	13/16	1-29/32	1-15/16	1-13/16	3-3/4	1-5/8	1-5/8	1-5/16	.17
401-130	1x1x1/2	9/16	13/16	9/16	1-5/8	1-9/16	1-5/8	3-3/16	1-5/8	1-1/16	1-5/8	.13
D401-130	1x1x1/2	11/16	25/32	11/16	1-23/32	2-1/32	1-23/32	3-15/32	1-5/8	1-1/8	1-5/8	.15
401-131	1x1x3/4	19/32	3/4	19/32	1-5/8	1-21/32	1-5/8	3-9/32	1-5/8	1-5/16	1-5/8	.14
401-132	1x1x1-1/4	31/32	27/32	31/32	2-3/32	2-3/32	2-3/32	4-3/16	1-5/8	1-31/32	1-5/8	.22
401-133	1x1x1-1/2	1-1/8	13/16	1-1/8	2-1/4	2-1/8	2-1/4	4-1/2	1-5/8	2-9/32	1-5/8	.24
401-134	1x1x2	1-7/16	27/32	1-7/16	2-1/2	2-1/4	2-1/2	5	1-5/8	2-3/4	1-5/8	.31
401-156	1-1/4x1x1/2	11/16	1	11/16	1-15/16	1-3/4	1-23/32	3-21/32	2	1-1/8	1-5/8	.19
401-157	1-1/4x1x3/4	25/32	1-1/16	25/32	2-1/32	2	1-27/32	3-7/8	2	1-11/32	1-5/8	.22
401-158	1-1/4x1x1	31/32	1-1/16	7/8	2-5/32	2-3/32	1-29/32	4-1/16	2	1-11/16	1-5/8	.24
401-166	1-1/4x1-1/4x1/2	17/32	29/32	17/32	1-25/32	1-21/32	1-25/32	3-9/16	1-31/32	1-3/32	1-31/32	.18
D401-166	1-1/4x1-1/4x1/2	23/32	31/32	23/32	1-31/32	2-3/16	1-31/32	3-29/32	2	1-1/8	2	.22
401-167	1-1/4x1-1/4x3/4	21/32	31/32	21/32	1-29/32	1-31/32	1-29/32	3-13/16	2	1-11/32	2	.22
401-168	1-1/4x1-1/4x1	13/16	31/32	13/16	1-15/16	2-1/32	1-15/16	3-27/32	2	1-5/8	2	.22
401-169	1-1/4x1-1/4x1-1/2	1-3/32	1	1-3/32	2-11/32	2-5/16	2-11/32	4-11/16	1-31/32	2-7/32	1-31/32	.30
401-170	1-1/4x1-1/4x2	1-11/32	1	1-11/32	2-19/32	2-3/8	2-19/32	5-3/16	2	2-3/4	2	.38
401-199	1-1/2x1-1/4x1/2	11/16	1-1/8	11/16	2	1-7/8	1-15/16	3-15/16	2-1/4	1-1/8	2	.24
401-201	1-1/2x1-1/4x3/4	21/32	1-5/32	21/32	1-15/16	2-3/16	1-15/16	3-7/8	2-1/4	1-11/32	2	.26
401-202	1-1/2x1-1/4x1	13/16	1-3/16	13/16	2-1/8	2-9/32	2-1/16	4-3/16	2-1/4	1-5/8	2	.30
401-209	1-1/2x1-1/2x1/2	17/32	1-1/32	17/32	1-27/32	1-25/32	1-27/32	3-11/16	2-3/16	1-1/16	2-3/16	.21
D401-209	1-1/2x1-1/2x1/2	17/32	1-1/16	17/32	1-27/32	2-5/16	1-27/32	3-11/16	2-7/32	1-1/16	2-7/32	.23
401-210	1-1/2x1-1/2x3/4	21/32	1-3/32	21/32	1-31/32	2-3/32	1-31/32	3-29/32	2-7/32	1-5/16	2-7/32	.24
401-211	1-1/2x1-1/2x1	25/32	27/32	25/32	2-3/32	1-31/32	2-3/32	4-3/16	2-7/32	1-5/8	2-7/32	.28
401-212	1-1/2x1-1/2x1-1/4	1	1-3/16	1	2-9/32	2-7/16	2-9/32	4-19/32	2-1/4	2	2-1/4	.31
401-213	1-1/2x1-1/2x2	1-5/16	1-3/16	1-5/16	2-5/8	2-9/16	2-5/8	5-7/32	2-1/4	2-3/4	2-1/4	.39
401-214	1-1/2x1-1/2x2-1/2	1-21/32	1-3/16	1-21/32	2-31/32	2-15/16	2-31/32	5-15/16	2-1/4	3-11/32	2-1/4	.58
401-233	2x1x2	1-1/4	1-1/4	1-7/32	2-19/32	2-19/32	2-11/32	5	2-3/4	2-3/4	1-5/8	.40
401-238	2x1-1/2x3/4	21/32	1-13/32	21/32	2-1/32	2-13/32	1-31/32	4	2-23/32	1-5/16	2-1/4	.31
401-239	2x1-1/2x1	13/16	1-1/2	13/16	2-1/8	2-5/8	2-1/8	4-9/32	2-3/4	1-5/8	2-1/4	.38
401-241	2x1-1/2x1-1/2	1	1-9/32	1-1/32	2-3/8	2-9/16	2-5/16	4-11/16	2-23/32	2-7/32	2-7/32	.37
401-247	2x2x1/2	17/32	1-11/32	17/32	1-29/32	2-3/32	1-29/32	3-27/32	2-23/32	1-3/32	2-23/32	.30
D401-247	2x2x1/2	9/16	1-7/32	9/16	1-15/16	2-1/2	1-15/16	3-7/8	2-23/32	1-1/16	2-23/32	.31

REDUCING TEE (continued)

Socket x Socket x Socket

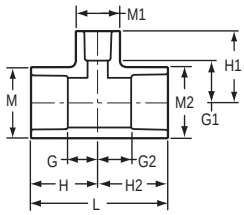


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
401-248	2x2x3/4	21/32	1-1/2	21/32	2-1/32	2-1/16	2-1/32	4-1/16	2-3/4	1-11/32	2-3/4	.32
401-249	2x2x1	13/16	1-3/8	13/16	2-3/16	2-1/2	2-3/16	4-3/8	2-23/32	1-5/8	2-23/32	.36
401-250	2x2x1-1/4	1	1-3/8	1	2-3/8	2-5/8	2-3/8	4-23/32	2-23/32	1-31/32	2-23/32	.39
401-251	2x2x1-1/2	1-1/16	1-5/16	1-1/16	2-3/8	2-9/16	2-3/8	4-3/4	2-23/32	2-1/4	2-23/32	.42
401-253[1]	2x2x3	2-7/8	1-13/16	2-7/8	4-1/4	3-13/16	4-1/4	8-1/2	4	4	3-15/16	2.64
401-254[1]	2x2x4	3-13/32	2-3/8	3-13/32	4-25/32	4-3/8	4-25/32	9-9/16	5-1/16	5-1/16	5-1/16	3.89
401-287	2-1/2x2-1/2x1/2	25/32	1-15/32	25/32	2-17/32	2-7/32	2-17/32	5-1/16	3-5/16	1-1/16	3-5/16	.56
401-288	2-1/2x2-1/2x3/4	7/8	1-9/16	7/8	2-5/8	2-1/2	2-5/8	5-9/32	3-5/16	1-5/16	3-5/16	.60
401-289	2-1/2x2-1/2x1	13/16	1-17/32	13/16	2-13/16	2-21/32	2-13/16	5-5/8	3-5/16	1-5/8	3-5/16	.67
401-290	2-1/2x2-1/2x1-1/4	1-7/32	1-21/32	1-7/32	2-31/32	2-29/32	2-31/32	5-31/32	3-11/32	2-1/32	3-11/32	.77
401-291	2-1/2x2-1/2x1-1/2	1-3/16	1-5/8	1-3/16	2-31/32	2-15/16	2-31/32	5-15/16	3-11/32	2-1/4	3-11/32	.76
401-292	2-1/2x2-1/2x2	1-13/32	1-21/32	1-13/32	3-3/16	3-1/32	3-3/16	6-3/8	3-5/16	2-3/4	3-5/16	.78
401-293[1]	2-1/2x2-1/2x3	2-1/4	1-31/32	2-1/4	4-1/4	3-13/16	4-1/4	8-15/32	4	4	4	2.37
401-294[1]	2-1/2x2-1/2x4	2-3/4	2-3/8	2-3/4	4-3/4	4-3/8	4-3/4	9-1/2	5-1/16	5	5-1/16	4.03
401-333	3x3x1/2	11/16	1-13/16	11/16	2-9/16	2-17/32	2-9/16	5-1/32	3-31/32	1-3/32	3-31/32	.76
401-334	3x3x3/4	3/4	2	3/4	2-21/32	3	2-21/32	5-9/32	4	1-11/32	4	.84
401-335	3x3x1	29/32	1-25/32	29/32	2-51/64	2-29/32	2-51/64	5-19/32	3-31/32	1-19/32	3-31/32	.85
401-336	3x3x1-1/4	1-7/32	1-31/32	1-7/32	2-31/32	3-7/32	2-31/32	5-15/16	4	2	4	.92
401-337	3x3x1-1/2	1-7/32	1-13/16	1-7/32	3-3/32	3-1/8	3-3/32	6-3/16	4-1/16	2-7/32	4-1/16	1.00
401-338	3x3x2	1-7/16	1-13/16	1-7/16	3-11/32	3-3/16	3-11/32	6-11/16	3-31/32	2-23/32	3-31/32	1.05
401-339	3x3x2-1/2	1-3/4	1-31/32	1-3/4	3-5/8	3-11/16	3-5/8	7-1/4	4-3/16	3-17/32	4-3/16	1.91
401-342	3x3x4	2-1/2	2-1/16	2-1/2	4-1/2	4-1/16	4-1/2	9	3-31/32	5	3-31/32	1.87
401-344[1]	3x3x6	5-1/2	4	5-1/2	7-1/2	7	7-1/2	15	7-1/4	7-1/4	7-1/4	11.75
401-416	4x4x3/4	25/32	2-9/32	25/32	2-13/16	3-9/32	2-13/16	5-5/8	5-3/32	1-5/16	5-3/32	1.24
401-417	4x4x1	13/16	2-9/16	13/16	2-13/16	3-5/8	2-13/16	5-19/32	5-1/32	1-19/32	5-1/32	1.19
401-418	4x4x1-1/4	1-1/16	2-9/32	1-1/16	3-3/32	3-17/32	3-3/32	6-3/16	5	1-31/32	5	1.33
401-419	4x4x1-1/2	1-3/16	2-17/32	1-3/16	3-3/16	3-27/32	3-3/16	6-13/32	5-1/16	2-1/4	5-1/16	1.40
401-420	4x4x2	1-13/32	2-3/4	1-13/32	3-7/16	4-5/32	3-7/16	6-7/8	5-1/32	2-3/4	5-1/32	1.49
401-421[1]	4x4x2-1/2	1-31/32	3-3/32	2-1/32	4-3/32	4-27/32	4-3/32	8-5/32	5-5/32	4-1/16	5-5/32	2.67
401-422	4x4x3	2-1/32	2-5/8	2-1/32	4-3/32	4-1/2	4-3/32	8-5/32	5-5/32	4-1/16	5-5/32	2.31
401-426[1]	4x4x6	5-1/2	3-1/2	5-1/2	7-1/2	7	7-1/2	14-15/16	6-7/8	7-1/2	6-7/8	10.38
401-428[1]	4x4x8	6-3/4	4-1/2	6-3/4	8-3/4	8-1/2	8-3/4	17-1/2	9-1/4	9-5/8	9-5/8	18.30
401-486	5x5x2	1-11/32	3-1/32	1-11/32	4-23/64	4-13/32	4-23/64	8-23/32	6-1/8	2-23/32	6-1/8	2.39
401-487[1]	5x5x2-1/2	2	3-5/8	2	5-1/32	5-3/8	5-1/32	10-1/16	6-5/32	4-1/32	6-5/32	3.63
401-488	5x5x3	2	3-3/16	2	5-1/32	5-1/16	5-1/32	10-1/16	6-5/32	4-1/32	6-5/32	3.23
401-490	5x5x4	2-1/2	3-5/32	2-1/2	5-9/16	5-3/16	5-9/16	11-1/8	6-5/32	5-1/32	6-5/32	3.61
401-526[1]	6x6x1-1/4	1-3/8	4-1/16	1-3/8	4-27/32	5-5/16	4-27/32	9-11/16	7-1/4	2-3/4	7-1/4	3.61

[1] Outlet sized with bushing

REDUCING TEE (continued)

Socket x Socket x Socket

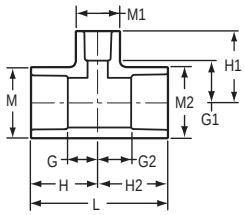


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
401-527[1]	6x6x1-1/2	1-3/8	3-7/8	1-3/8	4-27/32	5-3/16	4-27/32	9-11/16	7-1/4	2-11/16	7-1/4	3.60
401-528	6x6x2	1-13/32	3-5/8	1-13/32	4-13/32	4-31/32	4-13/32	8-27/32	7-1/4	2-3/4	7-1/4	3.28
401-529[1]	6x6x2-1/2	1-31/32	4-1/8	1-31/32	4-31/32	5-7/8	4-31/32	9-15/16	7-1/4	4-1/32	7-1/4	4.28
401-530	6x6x3	1-31/32	3-5/8	1-31/32	4-31/32	5-1/2	4-31/32	10	7-1/4	4	7-1/4	3.90
401-532	6x6x4	2-3/32	3-5/8	2-3/32	5-9/16	5-5/8	5-9/16	11-1/8	7-7/32	5	7-7/32	4.35
401-533[1]	6x6x5	3-1/2	4-1/2	3-1/2	7	7-1/2	7	14	7-3/16	7-3/16	7-3/8	8.46
401-535[1]	6x6x8	5-3/8	5-1/2	5-3/8	8-7/8	9-1/2	8-7/8	17-3/4	9-1/2	9-3/4	9-1/2	19.21
401-537[1]	6x6x10	8	5-13/16	8	11-3/8	10-13/16	11-3/8	22-3/4	11-1/2	11-9/16	11-1/2	38.30
401-578[1]	8x8x2	2	5-7/8	2	6	7	6	12	9-1/4	4	9-1/4	11.71
401-579[1]	8x8x2-1/2	2	5-5/16	2	6	7-5/16	6	12	9-5/16	4	9-5/16	6.62
401-580	8x8x3	1-31/32	4-3/4	1-31/32	6-1/32	6-3/4	6-1/32	12-1/16	9-11/32	4	9-11/32	6.44
401-582	8x8x4	2-17/32	4-11/16	2-17/32	6-17/32	6-11/16	6-17/32	13-1/16	9-9/32	4-31/32	9-9/32	7.02
401-583[1]	8x8x5	3-21/32	5-1/4	3-21/32	7-21/32	8-1/4	7-21/32	15-5/16	9-5/16	7-1/4	9-5/16	10.60
401-585	8x8x6	3-5/8	4-3/4	3-5/8	7-21/32	7-25/32	7-21/32	15-11/32	9-11/32	7-1/4	9-11/32	8.90
401-589[1]	8x8x10	6-23/32	5-11/16	6-23/32	11-7/32	10-1/2	11-7/32	22-7/16	11-9/16	11-9/16	11-9/16	34.76
401-621F	10x10x2	4-7/8	7-1/4	4-7/8	10-1/8	9	10-1/8	20-1/4	11-1/2	2-11/16	11-1/2	19.60
401-622F	10x10x2-1/2	5-5/8	7-3/4	5-5/8	10-7/8	9-3/4	10-7/8	21-3/4	11-1/2	3-1/4	11-1/2	20.26
401-623[1]	10x10x3	3-13/16	7	3-13/16	9-3/8	9	9-3/8	18-3/4	12	7-1/2	12	25.54
401-624[1]	10x10x4	3-27/32	7-3/8	3-27/32	9-11/32	9-3/8	9-11/32	18-11/16	12	7-1/2	12	25.63
401-626F	10x10x6	6-7/8	8-3/8	6-7/8	12-1/8	11-5/8	12-1/8	24-1/4	11-1/2	7-3/16	11-1/2	26.48
401-628[1]	10x10x8	5-3/4	7-3/16	5-3/4	10-7/8	11-1/4	10-7/8	21-11/16	11-11/16	11-11/16	11-1/2	29.85
401-661F	12x12x2	5-1/4	8-1/4	5-1/4	11-1/2	10	11-1/2	23	13-9/16	2-11/16	13-1/2	25.00
401-662F	12x12x2-1/2	5-3/4	8-3/4	5-3/4	12	10-3/4	12	24	13-9/16	3-1/4	13-9/16	28.61
401-663F	12x12x3	5-3/4	9	5-3/4	12	11-1/4	12	24	13-9/16	3-15/16	13-9/16	31.41
401-664F	12x12x4	7	9-5/16	7	13-1/4	11-9/16	13-1/4	26-1/2	13-9/16	5	13-9/16	32.40
401-666[1]	12x12x6	4-7/8	8-5/16	4-7/8	11-7/16	11-3/4	11-7/16	22-13/16	14-1/4	9-3/4	14-1/4	44.02
401-668	12x12x8	4-27/32	7-1/8	4-27/32	11-13/32	11-1/8	11-13/32	22-13/16	14-1/4	9-3/4	14-1/4	40.00
401-670	12x12x10	6-13/16	7-3/8	6-13/16	12-13/16	13-1/4	12-13/16	25-5/8	13-3/4	13-3/4	13-3/4	50.00
401-670F	12x12x10	10-1/4	10-3/8	10-1/4	16-1/2	15-5/8	16-1/2	33	13-9/16	11-1/2	13-9/16	50.00
401-676F	12x12x16	18-1/2	12-3/4	18-1/2	30-1/4	20-3/4	30-1/4	60-1/2	14-1/8	17	14-1/8	144.87
401-678F	12x12x18	14-1/4	13	17-7/8	23-1/4	22	23-7/8	47-3/4	19-1/8	19-1/8	19-1/8	252.00
401-691F	14x14x2	5-7/8	8-13/16	5-7/8	12-7/8	10-9/16	12-7/8	25-3/4	14-7/8	2-11/16	14-7/8	35.53
401-693F	14x14x3	6-1/2	9-9/16	6-1/2	13-1/2	11-13/16	13-1/2	27	14-7/8	3-15/16	14-7/8	38.35
401-694F	14x14x4	7-3/8	9-7/8	7-3/8	14-3/8	12-1/8	14-3/8	28-3/4	14-7/8	5	14-7/8	38.58
401-696F	14x14x6	7-7/8	9-15/16	7-7/8	14-7/8	13-3/16	14-7/8	29-3/4	14-7/8	7-3/16	14-7/8	45.70
401-698F	14x14x8	8-7/8	9-7/8	8-7/8	15-7/8	14-1/8	15-7/8	31-3/4	14-7/8	9-1/4	14-7/8	51.99

[1] Outlet sized with bushing

REDUCING TEE (continued)

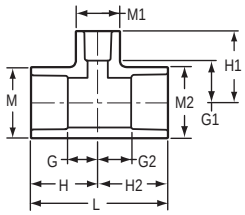
Socket x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
401-700F	14x14x10	10-3/8	10-15/16	10-3/8	17-3/8	16-3/16	17-3/8	34-3/4	14-7/8	11-1/2	14-7/8	61.56
401-702F	14x14x12	11-3/8	10-3/4	11-3/8	18-3/8	17	18-3/8	36-3/4	14-7/8	13-9/16	14-7/8	62.78
401-751F	16x16x2	6-3/8	9-3/4	6-3/8	14-3/8	11-1/2	14-3/8	28-3/4	17	2-11/16	17	51.76
401-753F	16x16x3	6-1/2	10-1/2	6-1/2	14-1/2	12-3/4	14-1/2	29	17	3-15/16	17	57.67
401-754F	16x16x4	8	10-13/16	8	16	13-1/16	16	32	17	5	17	58.90
401-756F	16x16x6	9	10-7/8	9	17	14-1/8	17	34	17	7-3/16	17	66.52
401-758F	16x16x8	10	10-13/16	10	18	15-1/16	18	36	17	9-1/4	17	73.17
401-760F	16x16x10	11	11-7/8	11	19	17-1/8	19	38	17	11-1/2	17	73.88
401-762F	16x16x12	12	11-11/6	12	20	17-15/16	20	40	17	13-9/16	17	85.48
401-764F	16x16x14	13	11-15/16	13	21	18-15/16	21	42	17	14-7/8	17	95.95
401-781F	18x18x2	6-1/4	10-11/16	6-1/4	15-1/4	12-7/16	15-1/4	30-1/2	19-1/8	2-11/16	19-1/8	65.63
401-783F	18x18x3	7-1/4	11-7/16	7-1/4	16-1/4	13-11/16	16-1/4	32-1/2	19-1/8	3-15/16	19-1/8	---
401-784F	18x18x4	7-3/4	11-3/4	7-3/4	16-3/4	14	16-3/4	33-1/2	19-1/8	5	19-1/8	82.00
401-786F	18x18x6	8-3/4	11-13/16	8-3/4	17-3/4	15-1/16	17-3/4	35-1/2	19-1/8	7-3/16	19-1/8	88.04
401-788F	18x18x8	9-3/4	11-3/4	9-3/4	18-3/4	16	18-3/4	37-1/2	19-1/8	9-1/4	19-1/8	107.00
401-790F	18x18x10	10-3/4	12-13/16	10-3/4	19-3/4	18-1/16	19-3/4	39-1/2	19-1/8	11-1/2	19-1/8	105.41
401-792F	18x18x12	11-3/4	12-5/8	11-3/4	20-3/4	18-7/8	20-3/4	41-1/2	19-1/8	13-9/16	19-1/8	113.48
401-794F	18x18x14	12-7/8	12-7/8	12-7/8	21-7/8	19-7/8	21-7/8	43-3/4	19-1/8	14-7/8	19-1/8	116.67
401-796F	18x18x16	13-7/8	13-13/16	13-7/8	22-7/8	21-13/16	22-7/8	45-3/4	19-1/8	17	19-1/8	134.41
401-811F	20x20x2	6-3/4	12-7/16	6-3/4	16-3/4	14-3/16	16-3/4	33-1/2	21-3/16	21-11/16	21-3/16	81.39
401-813F	20x20x3	7-1/4	12-7/16	7-1/4	17-1/4	14-11/16	17-1/4	34-1/2	21-3/16	3-15/16	21-3/16	91.14
401-814F	20x20x4	8-1/4	12-3/4	8-1/4	18-1/4	15	18-1/4	36-1/2	21-3/16	5	21-3/16	72.10
401-816F	20x20x6	9-1/4	12-13/16	9-1/4	19-1/4	16-1/16	19-1/4	38-1/2	21-3/16	7-3/16	21-3/16	106.19
401-818F	20x20x8	10-1/4	12-3/4	10-1/4	20-1/4	17	20-1/4	40-1/2	21-3/16	9-1/4	21-3/16	115.35
401-820F	20x20x10	11-1/4	13-13/16	11-1/4	21-1/4	19-1/16	21-1/4	42-1/2	21-3/16	11-1/2	21-3/16	125.44
401-822F	20x20x12	12-1/4	13-5/8	12-1/4	22-1/4	19-7/8	22-1/4	44-1/2	21-3/16	13-9/16	21-3/16	129.36
401-824F	20x20x14	13-1/4	13-7/8	13-1/4	23-1/4	20-7/8	23-1/4	46-1/2	21-3/16	14-7/8	21-3/16	123.55
401-826F	20x20x16	14-1/4	14-13/16	14-1/4	24-1/4	22-13/16	24-1/4	48-1/2	21-3/16	17	21-3/16	154.48
401-828F	20x20x18	15-1/4	14-3/8	15-1/4	25-1/4	23-3/8	25-1/4	50-1/2	21-3/16	19-1/8	21-3/16	176.98
401-901F	24x24x2	8-1/8	14-5/16	8-1/8	20-1/8	16-1/16	20-1/8	40-1/4	25-3/8	2-11/16	25-3/8	156.00
401-903F	24x24x3	8-5/8	14-5/16	8-5/8	20-5/8	16-9/16	20-5/8	41-1/4	25-3/8	3-15/16	25-3/8	161.00
401-904F	24x24x4	9-1/8	14-5/8	9-1/8	21-1/8	16-7/8	21-1/8	42-1/4	25-3/8	5	25-3/8	148.46
401-906F	24x24x6	10-1/8	14-11/16	10-1/8	22-1/8	17-15/16	22-1/8	44-1/4	25-3/8	7-3/16	25-3/8	159.56
401-908F	24x24x8	11-1/8	14-5/8	11-1/8	23-1/8	18-7/8	23-1/8	46-1/4	25-3/8	9-1/4	25-3/8	171.52
401-910F	24x24x10	12-1/8	15-11/16	12-1/8	24-1/8	20-15/16	24-1/8	48-1/4	25-3/8	11-1/2	25-3/8	213.94
401-912F	24x24x12	13-1/8	15-1/2	13-1/8	25-1/8	21-3/4	25-1/8	50-1/4	25-3/8	13-9/16	25-3/8	199.98

REDUCING TEE (continued)

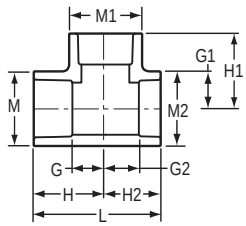
Socket x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
401-914F	24x24x14	13-3/4	15-3/4	13-3/4	25-3/4	22-3/4	25-3/4	51-1/2	25-3/8	14-7/8	25-3/8	232.53
401-916F	24x24x16	14-3/4	16-11/16	14-3/4	26-3/4	24-11/16	26-3/4	53-1/2	25-3/8	17	25-3/8	224.32
401-918F	24x24x18	15-3/4	16-1/4	15-3/4	27-3/4	25-1/4	27-3/4	55-1/2	25-3/8	19-1/8	25-3/8	237.92
401-920F	24x24x20	16-3/4	17-3/8	16-3/4	28-3/4	27-3/8	28-3/4	57-1/2	25-3/8	21-3/16	25-3/8	244.92

REDUCING SHORT SOCKET TEE

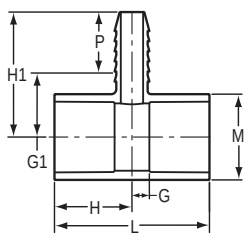
Socket x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
S401-249	2x2x1	11/16	2-7/32	11/16	2-3/32	1-1/4	1-11/32	3-7/16	2-23/32	1-5/8	2-23/32	.28
S401-251	2x2x1-1/2	1	1-1/4	31/32	2-3/8	2-3/8	1-5/8	4	2-23/32	2-7/32	2-23/32	.34

TRANSITION TEE

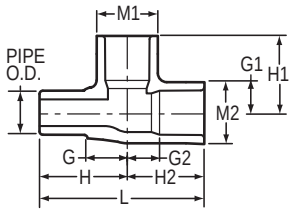
Socket x Socket x Insert



Part Number	Size	G	G1	H	H1	L	M	P	Approx. Wt. (Lbs.)
1102-007	3/4	13/32	3/4	1-13/32	2-1/4	2-13/16	1-5/16	1-1/2	.09
1102-130	1x1x1/2	3/16	13/16	1-7/16	2-5/16	2-7/8	1-19/32	1-1/2	.11
1102-248	2x2x3/4	1/2	1-7/16	1-27/32	2-15/16	3-11/16	2-23/32	1-1/2	.27
1102-250	2x2x1-1/4	11/16	1-15/32	2-1/16	2-31/32	4-1/8	2-3/4	1-1/2	.34

STREET TEE

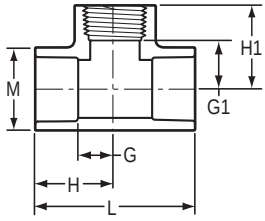
Spigot x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M1	M2	Approx. Wt. (Lbs.)
444-005	1/2	23/32	23/32	1/2	1-19/32	1-21/32	1-19/32	3-5/32	1-3/16	1-3/16	.10
444-007	3/4	13/16	27/32	7/8	1-13/16	1-7/8	1-13/16	3-5/8	1-13/32	1-13/32	.15
444-010	1	1	1-31/32	1-31/32	2-1/8	2	2-1/8	4-7/32	1-3/4	1-3/4	.25
444-012	1-1/4	1-1/4	1-5/32	1-1/8	2-7/16	2-5/16	2-7/16	4-27/32	2-3/32	2-3/32	.39
444-015	1-1/2	1-13/16	1-1/8	1-1/8	2-7/8	2-9/16	2-9/16	5-3/8	2-11/32	2-11/32	.51
444-020	2	1-19/32	1-11/16	1-19/32	3-3/32	3-3/16	3-3/32	6-5/32	2-7/8	2-7/8	.78

TEE

Socket x Socket x Fipt

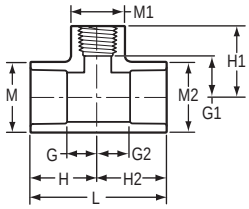


Part Number	Size	G	G1	H	H1	L	M	Approx. Wt. (Lbs.)
402-003	3/8	7/16	1/2	1-11/16	1-1/16	3-3/8	29/32	.06
402-005	1/2	1/2	1/2	1-1/4	1-7/32	2-1/2	1-3/32	.07
402-007	3/4	21/32	23/32	1-21/32	1-7/16	3-9/32	1-5/16	.11
402-010	1	13/16	7/8	1-15/16	1-7/8	3-7/8	1-5/8	.17
402-012	1-1/4	29/32	1-1/8	2-5/32	2-1/16	4-5/16	2	.30
402-015	1-1/2	1-1/32	1-1/32	2-11/32	2-1/16	4-21/32	2-1/4	.36
402-020	2	1-5/16	1-15/32	2-5/8	2-13/32	5-7/32	2-3/4	.50
402-025	2-1/2	1-1/2	1-11/16	3-1/4	2-31/32	6-1/2	3-3/8	.96
402-030	3	1-13/16	2-1/32	3-11/16	3-3/8	7-11/32	4	1.38
402-040	4	2-5/16	2-15/32	4-11/32	3-15/16	8-21/32	5-1/16	2.22

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Progressive Products from Spears® Innovation and Technology

REDUCING TEE

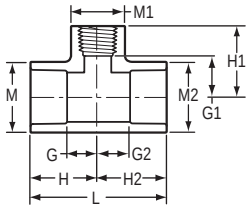
Socket x Socket x Fipt



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
402-071	1/2x1/2x1/8	9/32	17/32	9/32	1-1/32	1	1-1/32	2-1/16	1-3/32	9/16	1-3/32	.04
402-072	1/2x1/2x1/4	3/8	9/16	3/8	1-1/8	1-1/8	1-1/8	2-1/4	1-1/16	13/16	1-1/16	.05
402-074	1/2x1/2x3/4	21/32	1/2	21/32	1-13/32	1-5/16	1-13/32	2-13/16	1-1/16	1-11/32	1-3/32	.08
402-094	3/4x1/2x1/2	1/2	11/16	9/16	1-1/2	1-7/16	1-5/16	2-13/16	1-9/32	1-1/16	1-3/32	.10
402-095	3/4x1/2x3/4	13/16	21/32	5/8	1-13/16	1-7/16	1-3/8	3-3/16	1-5/16	1-5/16	1-3/32	.11
402-097	3/4x3/4x1/8	9/32	5/8	9/32	1-7/32	1-3/32	1-7/32	2-7/16	1-5/16	9/16	1-5/16	.06
402-101	3/4x3/4x1/2	17/32	3/4	17/32	1-17/32	1-7/16	1-17/32	3-1/16	1-5/16	1-3/32	1-5/16	.09
402-124	1x3/4x1/2	17/32	13/16	17/32	1-21/32	1-9/16	1-17/32	3-3/16	1-5/8	1-1/16	1-5/16	.13
402-125	1x3/4x3/4	9/16	23/32	11/16	1-11/16	1-17/32	1-11/16	3-3/8	1-19/32	1-9/32	1-9/32	.13
402-130	1x1x1/2	1/2	7/8	1/2	1-5/8	1-1/2	1-5/8	3-1/4	1-5/8	1-1/8	1-5/8	.14
402-131	1x1x3/4	21/32	13/16	21/32	1-25/32	1-17/32	1-25/32	3-9/16	1-5/8	1-5/16	1-5/8	.15
402-156	1-1/4x1x1/2	19/32	1-9/32	19/32	1-25/32	1-25/32	1-3/4	3-17/32	2	1-1/8	1-5/8	.19
402-157	1-1/4x1x3/4	13/16	1-1/32	3/4	1-13/16	1-23/32	1-3/4	3-9/16	2	1-5/16	1-5/8	.18
402-158	1-1/4x1x1	13/16	1-5/32	13/16	2-1/16	2-1/8	1-15/16	4	1-31/32	1-21/32	1-5/8	.26
402-166	1-1/4x1-1/4x1/2	23/32	15/16	23/32	1-31/32	1-21/32	1-31/32	3-15/16	1-31/32	1-3/32	1-31/32	.21
402-167	1-1/4x1-1/4x3/4	13/16	1-1/16	13/16	2-1/16	1-3/4	2-1/16	4-1/8	2	1-5/16	2	.19
402-168	1-1/4x1-1/4x1	21/32	1-1/32	21/32	1-7/8	1-27/32	1-7/8	3-25/32	1-31/32	1-5/8	1-31/32	.22
402-199	1-1/2x1-1/4x1/2	19/32	1-9/32	19/32	1-27/32	1-29/32	27/32	3-23/32	2-1/4	1-1/8	2	.24
402-201	1-1/2x1-1/4x3/4	11/16	1-5/32	5/8	1-31/32	2-5/32	1-29/32	3-7/8	2-1/4	1-5/16	2	.26
402-202	1-1/2x1-1/4x1	13/16	1-1/8	3/4	2-1/8	2-1/4	2-1/16	4-3/16	2-1/4	1-5/8	2	.30
402-209	1-1/2x1-1/2x1/2	7/16	1-3/16	7-16	1-3/4	1-7/8	1-3/4	3-1/2	2-7/32	1-3/32	2-7/32	.20
402-210	1-1/2x1-1/2x3/4	21/32	1-3/32	21/32	1-31/32	1-27/32	1-31/32	3-29/32	2-1/4	1-5/16	2-1/4	.24
402-211	1-1/2x1-1/2x1	25/32	1-1/16	25/32	2-3/32	1-15/16	2-3/32	4-3/16	2-1/4	1-5/8	2-1/4	.27
402-212	1-1/2x1-1/2x1-1/4	1	1-3/32	1	2-9/32	2-1/32	2-9/32	4-19/32	2-1/4	2	2-1/4	.32
402-238	2x1-1/2x3/4	11/16	1-13/32	5/8	2-1/32	2-13/32	1-31/32	4	2-3/4	1-5/16	2-1/4	.32
402-239	2x1-1/2x1	13/16	1-13/32	3/4	2-3/16	2-17/32	2-1/8	4-5/16	2-3/4	1-5/8	2-1/4	.38
402-247	2x2x1/2	21/32	1-3/8	21/32	2-1/32	2-1/8	2-1/32	4-1/16	2-3/4	1-1/16	2-3/4	.33
402-248	2x2x3/4	21/32	1-11/32	21/32	2-1/32	2-3/32	2-1/32	4-1/32	2-3/4	1-11/32	2-3/4	.33
402-249	2x2x1	13/16	1-13/32	13/16	2-3/16	2-1/4	2-3/16	4-3/8	2-23/32	1-5/8	2-23/32	.35
402-250	2x2x1-1/4	1	1-3/8	1	2-3/8	2-5/16	2-3/8	4-3/4	2-23/32	1-31/32	2-23/32	.40
402-251	2x2x1-1/2	1-1/16	1-1/4	1-1/16	2-5/16	2-3/16	2-5/16	4-19/32	2-3/4	2-1/4	2-3/4	.41
402-287	2-1/2x2-1/2x1/2	1/2	1-11/16	1/2	2-1/4	2-3/8	2-1/4	4-1/2	3-3/8	1-3/16	3-3/8	.55
402-288	2-1/2x2-1/2x3/4	13/16	1-11/16	13/16	2-9/16	2-7/16	2-9/16	5-1/8	3-3/8	1-3/8	3-3/8	.64
402-289	2-1/2x2-1/2x1	1	1-23/32	1	2-3/4	2-5/8	2-3/4	5-1/2	3-11/32	1-11/16	3-11/32	.73
402-290	2-1/2x2-1/2x1-1/4	1-1/32	1-25/32	1-1/32	2-25/32	2-21/32	2-25/32	5-9/16	3-11/32	2-1/32	3-11/32	.75
402-291	2-1/2x2-1/2x1-1/2	1-1/16	1-25/32	1-1/16	2-13/16	2-3/4	2-13/16	5-5/8	3-3/8	2-13/32	3-3/8	.77
402-292	2-1/2X2-1/2X2	1-1/2	1-27/32	1-1/2	3-1/4	2-27/32	3-1/4	6-17/32	3-11/32	3	3-11/32	.98
402-333	3x3x1/2	19/32	2-1/16	19/32	2-15/32	2-25/32	2-15/32	4-15/16	3-31/32	1-3/16	3-31/32	.77

REDUCING TEE (continued)

Socket x Socket x Fipt

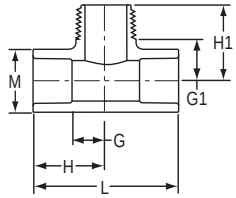


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
402-334	3x3x3/4	13/16	2-1/32	13/16	2-23/32	2-25/32	2-23/32	5-13/32	4	1-3/8	4	.83
402-335	3x3x1	31/32	2-1/32	31/32	2-7/8	2-15/16	2-7/8	5-23/32	4-1/32	1-11/16	4-1/32	.92
402-336	3x3x1-1/4	1	2-1/32	1	2-31/32	3-1/32	2-31/32	5-31/32	4	2	4	.95
402-337	3x3x1-1/2	1-7/32	2-1/8	1-7/32	3-3/32	3-1/16	3-3/32	6-3/16	4	2-13/32	4	1.05
402-338	3x3x2	1-1/2	2-1/8	1-1/2	3-3/8	3-1/8	3-3/8	6-25/32	4	3	4	1.22
402-417	4x4x1	27/32	2-5/8	27/32	2-7/8	3-1/2	2-7/8	5-3/4	5-1/32	1-11/16	5-1/32	1.26
402-419	4x4x1-1/2	1-1/8	2-1/2	1-1/8	3-1/8	3-1/2	3-1/8	6-1/4	5	2-1/4	5	1.33
402-420	4x4x2	1-3/8	2-3/4	1-3/8	3-13/32	3-3/4	3-13/32	6-25/32	5-1/32	3	5-1/32	1.67
402-422	4x4x3	2	2-1/2	2	4-1/32	3-29/32	4-1/32	8-1/16	5-1/16	4-9/32	5-1/16	2.18
402-490	5x5x4	2-1/2	3-1/8	2-1/2	5-17/32	4-29/32	5-17/32	11-1/16	6-3/32	5-1/32	6-3/32	3.69
402-525[1]	6x6x1	1-3/8	4-11/32	1-3/8	4-27/32	5-11/32	4-27/32	9-11/16	7-7/32	2-23/32	7-7/32	3.66
402-528	6x6x2	1-3/8	3-19/32	1-3/8	4-27/32	4-23/32	4-27/32	9-23/32	7-1/4	2-25/32	7-1/4	3.58
402-530	6x6x3	2	3-19/32	2	5-15/32	5-7/32	5-15/32	10-15/16	7-1/4	4-1/32	7-1/4	4.22
402-532	6x6x4	2-1/2	3-5/8	2-1/2	6	5-11/32	6	12	7-7/32	5-1/16	7-7/32	4.73
402-578[1]	8x8x2	2	6-1/8	2	6	7-1/8	6	12	9-5/16	3-15/16	9-5/16	6.81
402-580[1]	8x8x3	2-9/16	5-23/32	1-31/32	6-9/16	7-5/16	6-9/16	13-1/8	9-5/16	5	9-5/16	7.69
402-582[1]	8x8x4	2-1/2	4-15/16	2-1/2	6-31/32	6-21/32	6-31/32	13-15/16	9-5/16	5	9-5/16	11.20
402-621F	10x10x2	5-1/4	6-11/16	5-1/4	10-1/2	7-3/4	10-1/2	21	11-9/16	2-13/16	11-9/16	17.51
402-622F	10x10x2-1/2	5-1/2	8-1/2	5-1/2	10-3/4	10-1/4	10-3/4	21-1/2	11-9/16	3-5/16	11-9/16	14.80
402-624F	10x10x4	6-3/8	7	6-3/8	11-5/8	8-3/4	11-5/8	23-1/4	11-1/2	5-1/16	11-1/2	22.95
402-661F	12x12x2	5-3/4	7-13/16	5-3/4	12	8-7/8	12	24	13-5/8	2-13/16	13-5/8	26.92
402-663F	12x12x3	6-1/4	9	6-1/4	12-1/2	10-5/8	12-1/2	25	13-5/8	4	13-5/8	29.30
402-664F	12x12x4	6-7/8	8-1/4	6-7/8	13-1/8	10	13-1/8	26-1/4	13-9/16	5-1/16	13-9/16	31.48

[1] Outlet sized with bushing

TEE

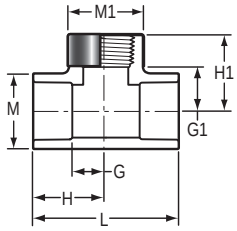
Socket x Socket x Mipt



Part Number	Size	G	G1	H	H1	L	M	Approx Wt. (Lbs.)
402B-010	1	5/8	1-1/16	1-3/4	2	3-7/16	1-5/8	.15

SPECIAL REINFORCED TEE

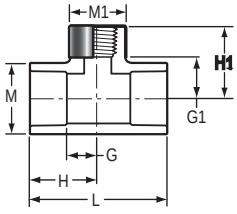
Socket x Socket x SR Fipt



Part Number	Size	G	G1	H	H1	L	M	M1	Approx Wt. (Lbs.)
402-005SR	1/2	19/32	15/32	1-15/32	1-11/32	2-15/16	1-5/32	13/16	.13
402-012SR	1-1/4	29/32	1-1/8	2-5/32	2-1/16	4-5/16	1-31/32	2-1/16	.31

SPECIAL REINFORCED REDUCING TEE

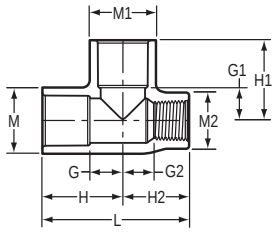
Socket x Socket x SR Fipt



Part Number	Size	G	G1	H	H1	L	M	M1	Approx Wt. (Lbs.)
402-072SR	1/2x1/2x1/4	15/32	11/16	1-5/16	1-7/32	2-5/8	1-5/32	13/16	.09
402-098SR	3/4x3/4x1/4	7/16	13/16	1-7/16	1-11/32	2-7/8	1-3/8	13/16	.12
402-101SR	3/4x3/4x1/2	25/32	1/2	1-5/8	1-7/16	3-1/4	1-3/8	1-3/16	.15
402-166SR	1-1/4x1-1/4x1/2	7/16	1-1/8	1-11/16	1-7/8	3-3/8	2-3/32	1-3/16	.27
402-168SR	1-1/4x1-1/4x1	27/32	1-1/32	2-3/32	1-29/32	4-7/32	2-3/32	1-23/32	.35
402-212SR	1-1/2x1-1/2x1-1/4	1-1/32	1-5/32	2-7/16	2-3/32	4-27/32	2-3/8	2-1/16	.49
402-287SR	2-1/2x2-1/2x1/2	1/2	1-11/16	2-1/4	2-3/8	4-1/4	3-3/8	1-3/16	.55
402-288SR	2-1/2x2-1/2x3/4	13/16	1-23/32	2-9/16	2-7/16	5-1/8	3-3/8	1-3/8	.66
402-289SR	2-1/2x2-1/2x1	1	1-23/32	2-3/4	2-5/8	5-1/2	3-11/32	1-11/16	.75
402-290SR	2-1/2x2-1/2x1-1/4	1-1/32	1-25/32	2-25/32	2-21/32	5-9/16	3-11/32	2-1/32	.77
402-291SR	2-1/2x2-1/2x1-1/2	1-1/16	1-25/32	2-13/16	2-3/4	5-5/8	3-3/8	2-7/16	.80
402-292SR	2-1/2x2-1/2x2	1-1/2	1-27/32	3-1/4	2-27/32	6-17/32	3-11/32	3	1.02
402-333SR	3x3x1/2	19/32	2-1/16	2-15/32	2-25/32	4-15/16	3-31/32	1-3/16	.78
402-334SR	3x3x3/4	13/16	2-1/32	2-23/32	2-25/32	5-13/32	4	1-3/8	.84
402-335SR	3x3x1	31/32	2	2-7/8	2-29/32	5-23/32	4-1/32	1-23/32	.94
402-336SR	3x3x1-1/4	1-1/32	2-3/32	2-29/32	3-3/32	5-13/16	4	2-1/16	1.00
402-337SR	3x3x1-1/2	1-7/32	2-1/8	3-3/32	3-3/32	6-9/32	3-31/32	2-7/16	1.06
402-338SR	3x3x2	1-1/2	2-1/16	3-13/32	3-1/16	6-7/8	4	3	1.20
402-417SR	4x4x1	27/32	2-5/8	27/32	3-17/32	5-3/4	5-1/32	1-23/32	1.28
402-419SR	4x4x1-1/2	1-1/8	2-25/32	3-1/8	3-3/4	6-9/32	5-1/32	2-7/16	1.52
402-420SR	4x4x2	1-3/8	2-25/32	3-13/32	3-25/32	6-25/32	5-1/32	3-1/32	1.71
402-422SR	4x4x3	2	2-1/2	4-1/32	3-15/16	8-1/16	5-1/16	4-9/32	2.19

REDUCING TEE

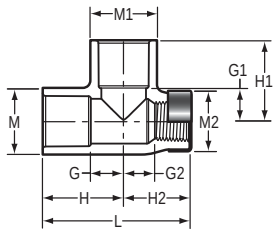
Socket x Fipt x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
403-095	3/4x1/2x3/4	11/16	11/16	11/16	1-11/16	1-11/16	1-3/8	3-3/32	1-13/32	1-13/32	1-3/16	.15

SPECIAL REINFORCED REDUCING TEE

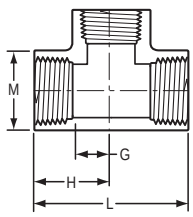
Socket x SR Fipt x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
403-095SR	3/4x1/2x3/4	11/16	11/16	11/16	1-11/16	1-11/16	1-13/32	3-1/8	1-13/32	1-13/32	1-7/32	.16

TEE

Fipt x Fipt x Fipt



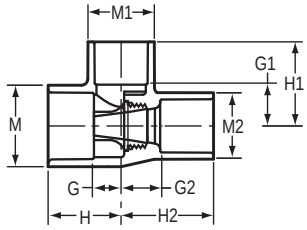
Part Number	Size	G	H	L	M	Approx. Wt. (Lbs.)
405-005	1/2	17/32	1-1/4	2-1/2	1-3/32	.08
405-007	3/4	19/32	1-3/8	2-3/4	1-9/32	.10
405-010	1	11/16	1-19/32	3-3/16	1-23/32	.19
405-012	1-1/4	15/16	1-15/16	3-7/8	2-7/32	.48
405-015	1-1/2	1	2	4-1/32	2-7/32	.34
405-020	2	1-1/4	2-5/16	4-19/32	2-23/32	.56
405-025[1]	2-1/2	2-13/16	4-11/32	8-11/16	4-1/32	2..89

[1] Outlet sized with bushing

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Progressive Products from Spears® Innovation and Technology

VENTURIED TEE

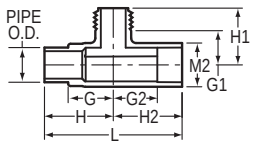
1" Socket x 3/4" Socket (1" Spigot) x 3/4" Socket (1" Spigot)



Part Number	Size	G	G1	G2	H	H1	H2	M	M1	M2	Approx. Wt. (Lbs.)
473-825	1x3/4x3/4	19/32	27/32	3/4	1-1/2	1-11/16	1-25/32	1-5/8	1-5/16	1-5/16	.15

MANIFOLD TEE

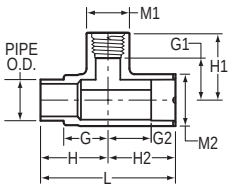
Spigot x Socket x Mipt



Part Number	Size	G	G1	G2	H	H1	H2	L	M2	Approx. Wt. (Lbs.)
476-010	1	1-23/32	1-11/32	1-11/16	2-5/8	2-5/32	2-5/8	5-1/4	1-21/32	.24

MANIFOLD TEE

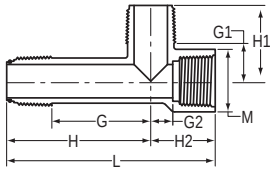
Spigot x Socket x Fipt



Part Number	Size	G	G1	G2	H	H1	H2	L	M1	M2	Approx. Wt. (Lbs.)
477-010	1	1-23/32	1-1/4	1-11/16	2-5/8	2-5/32	2-5/8	5-1/4	1-21/32	1-21/32	.27

O-RING SEALED MANIFOLD TEE

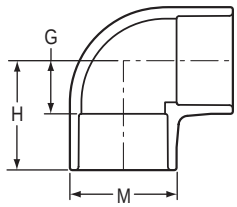
O-ring Sealed Mipt x Fipt x Mipt



Part Number	Size	G	G1	G2	H	H1	H2	L	M	Approx. Wt. (Lbs.)
451A-010	1	2-19/32	31/32	3/4	3-13/16	1-31/32	1-11/16	5-1/2	1-21/32	.19

90° ELBOW

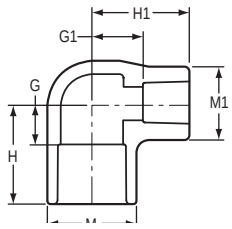
Socket x Socket



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
406-003	3/8	3/8	1-1/8	7/8	.03
406-005	1/2	1/2	1-1/4	1-1/8	.05
406-007	3/4	9/16	1-1/2	1-11/32	.07
406-010	1	11/16	1-13/16	1-5/8	.12
406-012	1-1/4	31/32	2-5/32	2	.20
406-015	1-1/2	1-1/16	2-11/32	2-1/4	.25
406-020	2	1-15/16	2-11/16	2-3/4	.37
406-025	2-1/2	1-1/2	3-1/4	3-11/32	.73
406-030	3	1-27/32	3-23/32	4	1.03
406-040	4	2-13/32	4-13/32	5-1/32	1.73
406-045F	4-1/2	8-5/8	6-1/8	5-7/16	3.13
406-050	5	3-1/16	6-1/8	6-5/32	3.58
406-060	6	3-17/32	6-9/16	7-9/32	4.52
406-080	8	4-7/16	8-15/32	9-11/32	8.70
406-100	10	5-13/16	10-27/32	11-19/32	15.75
406-100F	10	9-1/2	14-3/4	11-1/2	17.40
406-120	12	7-1/16	13-9/16	14-1/4	27.98
406-120F	12	10-1/2	16-3/4	13-9/16	25.94
406-140F	14	12-1/4	19-1/4	14-7/8	47.26
406-160F	16	14-1/8	22-1/8	17	69.70
406-180F	18	17-1/4	26-1/4	19-1/8	104.20
406-200F	20	18-3/4	28-3/4	21-3/16	131.93
406-240F	24	22-1/4	34-1/4	25-3/8	216.00

REDUCING 90° ELBOW

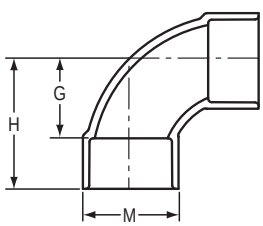
Socket x Socket



Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
406-053	3/8x1/2	7/16	15/32	1-11/16	1-15/16	1-1/8	29/32	.06
406-101	3/4x1/2	1/2	19/32	1-1/2	1-11/32	1-5/16	1-3/32	.06
D406-101	3/4x1/2	1/2	11/16	1-1/2	1-15/16	1-5/16	1-1/8	.08
406-130	1x1/2	9/16	1-1/16	1-11/16	1-13/16	1-5/8	1-1/8	.08
D406-130	1x1/2	9/16	19/32	1-11/16	1-27/32	1-5/8	1-3/32	.13
406-131	1x3/4	21/32	23/32	1-25/32	1-23/32	1-19/32	1-5/16	.12
406-166	1-1/4x1/2	9/16	1	1-13/16	1-3/4	2	1-3/32	.11
D406-166	1-1/4x1/2	9/16	1	1-25/32	2-1/4	2	1-3/32	.14
406-167	1-1/4x3/4	23/32	1	1-31/32	1-15/16	2	1-5/16	.13
406-168	1-1/4x1	11/16	7/8	1-15/16	2	2	1-21/32	.16
406-209	1-1/2x1/2	17/32	1-1/8	1-27/32	1-7/8	2-7/32	1-3/32	.16
406-211	1-1/2x1	11/16	1-3/32	2-1/8	2-5/32	2-1/4	1-5/8	.20
406-212	1-1/2x1-1/4	31/32	1-3/32	2-9/32	2-11/32	2-7/32	1-31/32	.24
406-249	2x1	27/32	1-11/32	2-7/32	2-15/32	2-23/32	1-19/32	.26
406-250	2x1-1/4	1-1/32	1-7/16	2-13/32	2-21/32	2-23/32	1-31/32	.31
406-251	2x1-1/2	1-1/8	1-5/16	2-15/32	2-9/16	2-3/4	2-1/4	.32
406-251N	2x1-1/2(2)	1-1/16	1-21/32	2-7/16	2-15/16	2-3/4	2-3/8	.43
406-292	2-1/2x2	1-1/4	1-1/2	3	2-7/8	3-11/32	2-23/32	.56
406-292N	2-1/2x2(2-1/2)	1-1/4	2-9/32	3	3-3/16	3-5/16	2-7/8	.71

90° SWEEP ELBOW

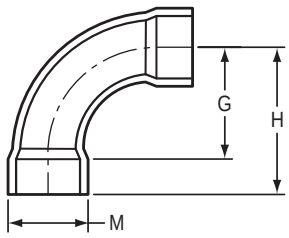
Socket x Socket



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
406-005S	1/2	27/32	1-23/32	1-3/16	.08
406-007S	3/4	1-1/32	2-1/32	1-13/32	.12
406-010S	1	1-5/16	2-7/16	1-23/32	.20
406-012S	1-1/4	1-9/16	2-13/16	2-3/32	.30
406-015S	1-1/2	1-3/4	3-5/32	2-11/32	.36
406-020S	2	2-5/16	3-13/16	2-7/8	.68
406-025S	2-1/2	3-3/16	4-31/32	3-11/32	.88
406-030S	3	3-1/32	4-15/16	4	1.25

LONG SWEEP ELBOW

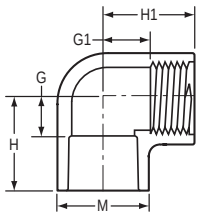
Socket x Socket



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
406-025LSF	2-1/2	5-7/16	7-7/16	3-1/4	1.26
406-030LSF	3	6-3/8	8-5/8	3-15/16	1.87
406-040LSF	4	8-3/8	10-5/8	5	2.69
406-060LSF	6	13	16-1/4	7-3/16	6.92
406-080LSF	8	22-7/16	26-11/16	9-1/4	19.43

90° ELBOW

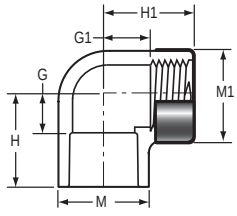
Socket x Fipt



Part Number	Size	G	G1	H	H1	M	Approx. Wt. (Lbs.)
407-005	1/2	1/2	1/2	1-1/4	1-1/4	1-3/32	.06
407-007	3/4	9/16	9/16	1-9/16	1-9/32	1-5/16	.08
407-010	1	11/16	21/32	1-13/16	1-9/16	1-5/8	.14
407-012	1-1/4	7/8	1-5/32	2-1/8	2-1/32	2-1/16	.26
407-015	1-1/2	1	1-1/16	2-5/16	2	2-1/4	.25
407-020	2	1-3/16	1-9/32	2-11/32	2-11/32	2-11/32	.47
407-025	2-1/2	1-1/2	1-1/2	3-1/2	3-1/16	3-5/16	.94
407-030	3	1-13/16	1-31/32	3-11/16	3-21/32	4	1.14
407-040	4	2-5/16	2-15/32	4-5/16	3-15/16	5-1/16	1.85

SPECIAL REINFORCED 90° ELBOW

Socket x SR Fipt

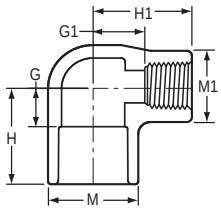


Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
407-005SR	1/2	1/2	9/16	1-1/4	1-9/32	1-3/32	1-7/32	.07
407-007SR	3/4	9/16	21/32	1-13/32	1-13/32	1-3/8	1-13/32	.11
407-010SR	1	19/32	13/16	1-23/32	1-23/32	1-11/16	1-23/32	.20
407-012SR	1-1/4	7/8	1-5/32	2-1/8	2-1/32	2-1/16	2-1/16	.28

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Progressive Products from Spears® Innovation and Technology

REDUCING 90° ELBOW

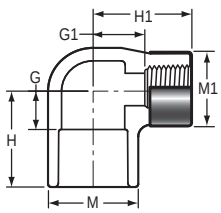
Socket x Fipt



Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
407-053	3/8x1/2	17/32	17/32	1-9/32	1-9/32	7/8	1-3/32	.04
407-074	1/2x3/4	21/32	9/16	1-13/32	1-11/32	1-5/16	1-3/32	.07
407-101	3/4x1/2	9/16	5/8	1-1/2	1-3/8	1-5/16	1-3/32	.07
407-130	1x1/2	7/16	11/16	1-9/16	1-7/16	1-5/8	1-3/32	.10
407-131	1x3/4	11/16	7/8	1-13/16	1-5/8	1-5/8	1-5/16	.11
407-168	1-1/4x1	1	1-1/32	2-1/4	2	2	1-5/8	.19
407-211	1-1/2x1	13/16	1-1/8	2-3/32	2	2-1/4	1-5/8	.21
407-212	1-1/2x1-1/4	15/16	1-1/4	2-1/4	2-7/32	2-3/16	1-15/16	.24
407-249	2x1	13/16	1-9/16	2-5/16	2-3/8	2-3/4	1-11/16	.31
407-250	2x1-1/4	1	1-1/4	2-3/8	2-7/32	2-3/4	2	.31
407-251	2x1-1/2	1-1/8	1-9/16	2-1/2	2-1/2	2-23/32	2-13/32	.42

SPECIAL REINFORCED REDUCING 90° ELBOW

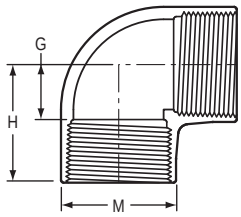
Socket x SR Fipt



Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
407-249SR	2x1	1-3/16	1-9/16	2-5/16	2-3/8	2-3/4	1-1/16	.33
407-251SR	2x1-1/2	1-1/8	1-19/32	2-1/2	2-17/32	2-23/32	2-7/16	.45

90° ELBOW

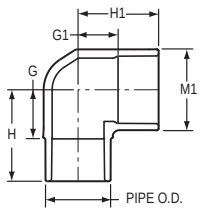
Fipt x Fipt



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
408-005	1/2	1/2	1-7/32	1-3/32	.06
408-007	3/4	1/2	1-1/4	1-5/16	.09
408-010	1	5/8	1-17/32	1-5/8	.16
408-012	1-1/4	1	2	1-31/32	.26
408-015	1-1/2	1	2	1-15/16	.34
408-020	2	1-5/16	2-11/32	2-3/4	.50

90° STREET ELBOW

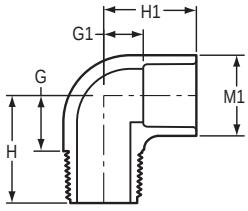
Spigot x Socket



Part Number	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
409-005	1/2	11/16	13/32	1-7/16	1-5/32	1-5/32	.05
409-007	3/4	27/32	17/32	1-27/32	1-17/32	1-11/32	.08
409-010	1	1	23/32	2-1/8	1-13/16	1-5/8	.12
409-012	1-1/4	1-3/16	13/16	2-15/32	2-1/16	1-31/32	.19
409-015	1-1/2	1-11/32	1-1/16	2-5/8	2-3/8	2-1/4	.25
409-020	2	1-19/32	1-1/4	2-31/32	2-5/8	2-23/32	.35
409-025	2-1/2	1-15/32	1-17/32	3-23/32	3-3/8	3-11/32	.76
409-030	3	2-9/32	1-13/16	4-5/32	3-11/16	4	1.09
409-040	4	2-29/32	2-5/16	4-15/16	4-11/32	5-1/16	1.86
409-050	5	4-1/2	3	7-3/4	6	6-1/8	4.36
409-060	6	5-1/4	3-1/2	8-7/8	6-15/16	7-1/2	5.95
409-080	8	6-3/8	4-15/32	10-9/16	8-1/2	9-5/16	10.37
409-080F	8	7-1/2	7-1/2	11-3/4	11-3/4	9-1/4	10.02
409-100F	10	8-1/4	5-3/4	13-1/2	13-3/4	11-1/2	18.20
409-140F	14	12-1/4	12-1/4	19-1/4	19-1/4	14-7/8	39.38
409-160F	16	18-5/8	14-1/8	27-5/8	22-1/8	17	75.48
409-180F	18	21-3/4	17-1/4	31-3/4	26-1/4	19-1/8	115.96
409-200F	20	25-3/4	18-3/4	34-3/4	28-3/4	21-3/16	151.63

90° STREET ELBOW

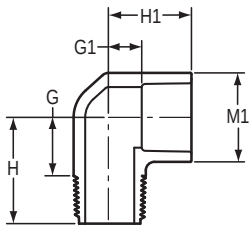
Mipt x Socket



Part Number	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
410-005	1/2	21/32	3/8	1-11/32	1-5/32	1-3/32	.04
410-007	3/4	27/32	15/32	1-17/32	1-15/32	1-5/16	.08
410-010	1	1-1/32	11/16	1-29/32	1-13/16	1-5/8	.13
410-012	1-1/4	1-9/32	25/32	2-7/32	2	1-31/32	.18
410-015	1-1/2	1-13/32	1	2-13/32	2-5/16	2-7/32	.40
410-020	2	1-5/8	1-11/32	2-9/16	2-23/32	2-23/32	.41
410-030	3	2-11/16	1-27/32	3-31/32	3-23/32	4	1.22

REDUCING 90° STREET ELBOW

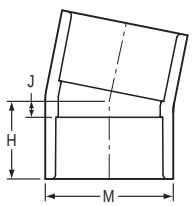
Mipt x Socket



Part Number	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
410-101	3/4x1/2	23/32	13/32	1-7/16	1-1/4	1-3/32	.06
410-102	3/4x1	3/4	1/2	1-3/4	1-11/32	1-5/8	.09

11-1/4° ELBOW

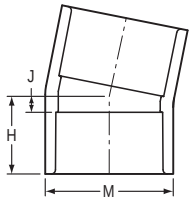
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
411-005F	1/2	1-5/16	5/16	1-1/16	.05
411-007F	3/4	1-5/16	5/16	1-1/4	.07
411-010F	1	1-9/16	5/16	1-9/16	.10
411-012F	1-1/4	2	1/2	1-5/16	.21
411-015	1-1/2	1-19/32	7/32	2-3/8	.24

11-1/4° ELBOW (continued)

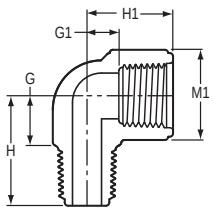
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
411-015F	1-1/2	2	1/2	2-3/16	.21
411-020	2	1-3/4	1/4	2-13/16	.33
411-025F	2-1/2	2-11/16	11/16	3-1/4	.57
411-030	3	1-7/8	5/16	4-1/8	.88
411-040	4	2-21/32	13/32	5-1/4	1.51
411-045F	4-1/2	3-1/4	3/4	5-7/16	1.32
411-050F	5	3-13/16	13/16	6-1/16	2.18
411-060F	6	4-1/4	1	7-3/16	2.75
411-080F	8	5-5/16	1-1/16	9-1/4	5.29
411-100F	10	6-27/32	1-15/32	11-1/2	9.42
411-120F	12	7-31/32	1-23/32	13-5/8	14.08
411-140F	14	8-3/4	1-3/4	14-7/8	18.71
411-160F	16	10-1/4	2-1/4	17	28.40
411-180F	18	12	3-1/8	19-1/8	45.02
411-200F	20	13-3/8	3-3/8	21-3/16	57.11
411-240F	24	15-1/8	4-1/8	25-1/2	90.42

90° STREET ELBOW

Mipt x Fipt

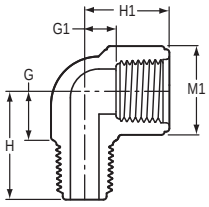


Part Number		Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)	
PVC	HDPE							PVC	HDPE
412-005	M412-005	1/2	23/32	11/32	1-13/32	1-1/16	1-1/8	.05	.04
412-007	M412-007	3/4	13/16	7/16	1-17/32	1-3/16	1-11/32	.07	.04
412-010	M412-010	1	15/16	9/16	1-25/32	1-7/16	1-5/8	.13	.08
412-012	M412-012	1-1/4	1-7/32	7/8	2-7/32	1-7/8	1-31/32	.19	.15
412-015	M412-015	1-1/2	1-11/32	1-1/8	2-11/32	2-1/8	2-9/32	.24	.20
412-020	N/A	2	1-19/32	1-1/4	2-3/4	2-5/16	2-23/32	.39	---
412-030	N/A	3	2-25/32	1-7/8	4-15/32	3	4-3/4	1.50	---

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90° STREET ELBOW (Short Pattern)

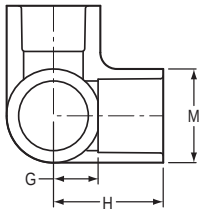
Mipt x Fipt



Part Number - HDPE	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
MS412-005	1/2	21/32	5/16	1-3/16	31/32	1-1/16	.02
MS412-007	3/4	3/4	7/16	1-5/16	1-3/32	1-9/32	.03
MS412-010	1	7/8	9/16	1-9/16	1-3/8	1-9/16	.06
MS412-101	3/4x1/2	21/32	1/2	1-7/32	1-1/8	1	.03

SIDE OUTLET ELBOW

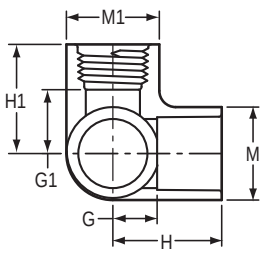
Socket x Socket x Socket



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
413-005	1/2	1/2	1-1/4	1-3/32	.06
413-007	3/4	9/16	1-9/16	1-5/16	.10
413-010	1	3/16	1-7/8	1-5/8	.17
413-015	1-1/2	1-1/16	2-5/16	2-1/4	.31
413-020	2	1-5/16	2-5/8	2-3/4	.47

SIDE OUTLET ELBOW

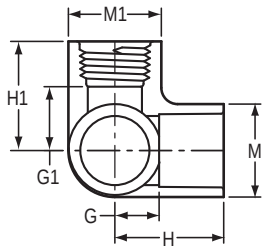
Socket x Socket x Fipt



Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
414-005	1/2	1/2	1/2	1-1/4	1-1/4	1-3/32	1-3/32	.07
414-007	3/4	9/16	5/8	1-9/16	1-7/16	1-9/32	1-9/32	.10

SIDE OUTLET ELBOW (continued)

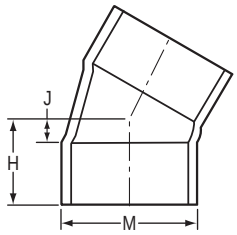
Socket x Socket x Fipt



Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
414-101	3/4x3/4x1/2	9/16	21/32	1-9/16	1-13/32	1-5/16	1-1/16	.09
414-130	1x1x1/2	11/16	3/4	1-13/16	1-9/16	1-5/8	1-1/16	.14

30° ELBOW

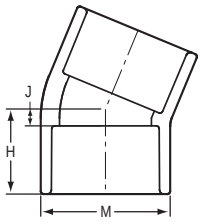
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
415-005F	1/2	1-3/8	3/8	1-1/16	0.04
415-007F	3/4	1-7/16	7/16	1-1/4	0.07
415-010F	1	1-3/4	1/2	1-9/16	0.12
415-012F	1-1/4	2-1/8	5/8	1-15/16	0.17
415-015F	1-1/2	2-3/16	11/16	2-3/16	0.19
415-020F	2	2-1/2	3/4	2-11/16	0.34
415-025F	2-1/2	2-15/16	15/16	3-1/4	0.62
415-030F	3	3-5/16	1-1/16	3-15/16	0.93
415-040F	4	3-7/16	1-3/16	5	1.39
415-045F	4-1/2	3-3/4	1-1/4	5-7/16	1.48
415-050F	5	4-5/16	1-5/16	6-1/16	2.27
415-060F	6	4-7/8	1-5/8	7-3/16	3.25
415-080F	8	6-1/8	1-7/8	9-1/4	5.40
415-100F	10	7-1/4	2	11-1/2	10.67
415-120F	12	9-5/16	2-9/16	13-1/2	16.56
415-140F	14	9-3/4	2-3/4	14-7/8	20.68
415-160F	16	11-7/8	3-7/8	17	32.27
415-180F	18	13-1/2	4-1/2	19-1/8	48.74
415-200F	20	15-1/4	5-1/4	21-1/4	63.01
415-240F	24	17	6	25-1/2	104.12

22-1/2° ELBOW

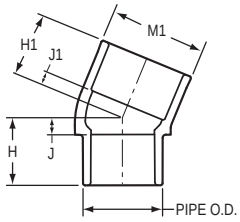
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
416-005	1/2	1-1/16	3/16	1-5/32	.06
416-007	3/4	1-3/16	3/16	1-7/16	.09
416-010	1	1-3/8	9/32	1-23/32	.13
416-012	1-1/4	1-1/2	11/32	2-3/32	.21
416-015	1-1/2	1-11/32	11/32	2-11/32	.26
416-020	2	1-23/32	3/8	2-25/32	.24
416-025	2-1/2	2-1/4	1/2	3-1/2	.69
416-025F	2-1/2	2-13/16	13/16	3-1/4	.63
416-030	3	2-13/32	9/16	4-5/32	.83
416-040	4	2-27/32	19/32	5-3/16	1.69
416-045F	4-1/2	3-9/16	1-1/16	5-7/16	1.59
416-050F	5	4-1/8	1-1/8	6-1/16	2.27
416-060	6	4-9/16	1-9/32	7-3/16	4.39
416-060F	6	4-5/8	1-3/8	7-3/16	3.25
416-080	8	5-7/8	1-3/4	9-3/4	8.38
416-080F	8	5-13/16	1-9/16	9-1/4	5.73
416-100F	10	7-7/16	2-3/16	11-1/2	10.04
416-120F	12	8-1/2	2-1/4	13-9/16	15.74
416-140F	14	9-1/2	2-1/2	15	19.69
416-160F	16	11-1/4	3-1/4	17	30.98
416-180F	18	13-1/2	4-1/2	19-3/16	45.38
416-200F	20	14-1/2	4-1/2	21-3/16	59.07
416-240F	24	16-1/8	5-1/8	25-1/2	98.64

22-1/2° STREET ELBOW

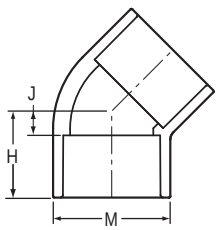
Spigot x Socket



Part Number	Size	H	H1	J	J1	M1	Approx. Wt. (Lbs.)
442-005	1/2	1-1/16	1	1/4	1/4	1-5/32	.05
442-010	1	1-15/32	1-3/8	11/32	9/32	1-11/16	.13
442-012	1-1/4	1-1/2	1-3/8	3/16	1-11/16	2-1/16	.20
442-015	1-1/2	1-21/32	1-7/8	9/32	1/2	2-3/8	.26
442-020	2	2	1-29/32	15/32	13/32	2-7/8	.40
442-025F	2-1/2	4-9/16	1-13/16	13/16	3/16	3-1/4	.81
442-030	3	2-1/2	2-5/16	21/32	7/16	4-5/32	.95
442-040	4	4-3/8	2-7/8	1-7/8	5/8	5-1/4	2.14
442-060	6	5-11/16	3-15/16	2-3/8	7/8	7-5/8	5.87
442-080	8	7-3/8	5-1/8	3-1/8	1-1/8	9-3/4	11.34

45° ELBOW

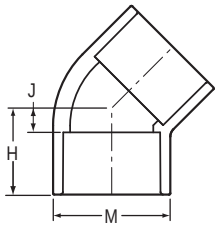
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
417-005	1/2	1	1/4	1-3/32	.04
417-007	3/4	1-3/8	7/16	1-5/16	.07
417-010	1	1-1/2	15/32	1-21/32	.11
417-012	1-1/4	1-19/32	3/8	1-31/32	.15
417-015	1-1/2	1-29/32	19/32	2-1/4	.22
417-020	2	2-1/16	11/16	2-3/4	.31
417-025	2-1/2	2-7/16	11/16	3-3/8	.57
417-030	3	2-27/32	27/32	4	.84
417-040	4	3-3/32	1-3/32	5-1/32	1.22
417-045F	4-1/2	4-3/16	1-11/16	5-7/16	1.59
417-050	5	4-3/8	1-3/8	6-5/32	2.47
417-060	6	4-3/4	1-23/32	7-9/32	3.61
417-080	8	6	2	9-3/8	6.58
417-100	10	8-1/8	3-1/8	11-1/2	20.72

45° ELBOW (continued)

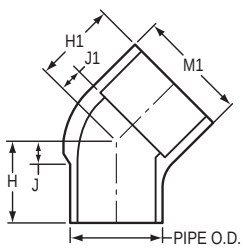
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
417-120	12	9-19/32	3-3/32	14-5/16	34.15
417-120F	12	9-19/32	3-11/32	13-9/16	17.39
417-140F	14	10-7/8	3-7/8	14-7/8	24.61
417-160F	16	12-1/2	4-1/2	17	34.85
417-180F	18	14-7/8	5-7/8	19-1/8	52.10
417-200F	20	16-1/2	6-1/2	21-3/16	68.92
417-240F	24	19-7/8	7-7/8	25-1/2	112.34

45° STREET ELBOW

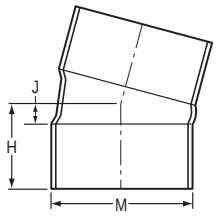
Spigot x Socket



Part Number	Size	H	H1	J	J1	M1	Approx. Wt. (Lbs.)
427-005	1/2	1-9/32	1-9/32	11/32	13/32	1-3/16	.06
427-007	3/4	1-1/2	1-17/32	7/16	17/32	1-13/32	.09
427-010	1	1-19/32	1-21/32	13/32	17/32	1-23/32	.10
427-012	1-1/4	1-25/32	1-29/32	1/2	21/32	2-3/32	.22
427-015	1-1/2	2-1/32	2-3/32	19/32	23/32	2-11/32	.19
427-020	2	2	2	5/8	15/32	2-23/32	.30
427-025	2-1/2	2-5/8	2-5/8	3/4	7/8	3-11/32	.59
427-030	3	2-31/32	3-1/32	1	1-7/32	4-5/32	1.19
427-040	4	3-21/32	3-13/16	1-9/32	1-9/16	5-3/16	2.07
427-050	5	6-1/8	4-3/8	2-7/8	1-3/8	6-1/16	3.49
427-060	6	5-1/4	6-1/4	1-3/4	3	7-5/8	6.16
427-080	8	6-5/8	5-31/32	2-19/32	1-3/4	9-3/4	10.60

15° ELBOW

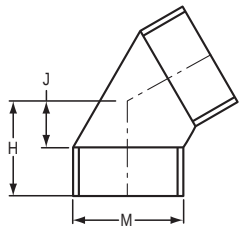
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
418-005F	1/2	1-5/16	5/16	1-1/16	.05
418-007F	3/4	1-5/16	5/16	1-1/4	.07
418-010F	1	1-5/8	3/8	1-9/16	.11
418-012F	1-1/4	2	1/2	1-15/16	.14
418-015F	1-1/2	2	1/2	2-3/16	.20
418-020F	2	2-5/16	9/16	2-11/16	.34
418-025F	2-1/2	2-3/4	3/4	3-1/4	.57
418-030F	3	3	3/4	3-15/16	.82
418-040F	4	3	13/16	5	1.39
418-045F	4-1/2	3-3/8	7/8	5-7/16	1.36
418-050F	5	3-7/8	7/8	6-1/16	1.88
418-060F	6	4-3/8	1-1/8	7-3/16	2.95
418-080F	8	5-1/2	1-1/4	9-1/4	5.29
418-100F	10	6-31/32	1-19/32	11-1/2	9.42
418-120F	12	8-1/4	2	13-9/16	14.91
418-140F	14	9-1/8	2-1/8	15	19.69
418-160F	16	10-5/8	2-5/8	17	29.69
418-180F	18	12-1/4	3-1/4	19-1/8	43.70
418-200F	20	13-5/8	3-5/8	21-1/4	57.11
418-240F	24	14-7/8	3-7/8	25-1/2	90.42

60° ELBOW

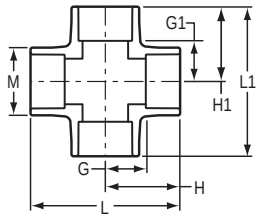
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
424-005F	1/2	1-5/8	5/8	1-1/16	.13
424-007F	3/4	1-11/16	11/16	1-1/4	.07
424-010F	1	2	3/4	1-9/16	.17
424-012F	1-1/4	2-1/2	1	1-15/16	.38
424-015F	1-1/2	2-9/16	1-1/16	2-3/16	.27
424-020F	2	2-15/16	1-3/16	2-11/16	.59
424-025F	2-1/2	3-1/2	1-1/2	3-1/4	1.38
424-030F	3	3-5/8	1-3/8	3-15/16	1.70
424-040F	4	4-1/4	2	5	1.52
424-045F	4-1/2	4-5/8	2-1/8	5-7/16	2.96
424-050F	5	5-5/16	2-5/16	6-1/16	2.42
424-060F	6	6-1/16	2-13/16	7-3/16	6.20
424-080F	8	7-5/8	3-3/8	9-1/4	11.89
424-100F	10	9-1/4	4	11-1/2	20.09
424-120F	12	11	4-3/4	13-9/16	31.47
424-140F	14	17-1/2	10-1/2	15	42.32
424-160F	16	20-1/4	12-1/4	17	36.39
424-180F	18	22-7/8	13-7/8	19-3/16	94.11
424-200F	20	26-1/4	16-1/4	21-1/4	122.09
424-240F	24	31	20	25-1/2	199.58

CROSS

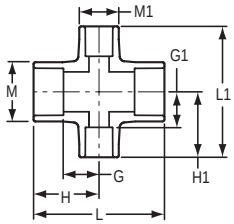
Socket x Socket x Socket x Socket



Part Number	Size	G	G1	H	H1	L	L1	M	Approx. Wt. (Lbs.)
420-005	1/2	17/32	17/32	1-9/32	1-9/32	2-17/32	2-17/32	1-3/32	.07
420-007	3/4	9/16	9/16	1-9/16	1-9/16	3-1/8	3-1/8	1-5/16	.12
420-010	1	13/16	13/16	1-15/16	1-15/16	3-7/8	3-7/8	1-5/8	.25
420-012	1-1/4	1-3/32	1-3/32	2-11/32	2-11/32	4-23/32	4-23/32	2-1/16	.43
420-015	1-1/2	1-1/4	1-1/4	2-19/32	2-19/32	5-5/32	5-5/32	2-5/16	.54
420-020	2	1-17/32	1-17/32	2-29/32	2-29/32	5-27/32	5-27/32	2-13/16	.78
420-025	2-1/2	1-21/32	1-21/32	3-21/32	3-21/32	7-11/32	7-11/32	3-3/8	1.61
420-030	3	2-1/16	2-1/16	3-15/16	3-15/16	7-29/32	7-29/32	4-1/32	1.74
420-040	4	2-1/2	2-1/2	4-1/2	4-1/2	9-1/32	9-1/32	5-1/32	3.22
420-050F	5	6	6	9	9	18	18	6-1/16	13.68
420-060F	6	6-3/16	6-3/16	9-7/16	9-7/16	18-7/8	18-7/8	7-3/16	12.36
420-080F	8	8-9/16	8-9/16	12-13/16	12-13/16	25-5/8	25-5/8	9-1/4	26.10
420-100F	10	9-7/8	9-3/8	15-1/8	14-5/8	30-1/4	29-1/4	11-1/2	43.81
420-120F	12	10-3/4	10-3/16	17	16-7/16	34	32-7/8	13-9/16	66.22
420-140F	14	11-1/4	11	18-3/8	18	36-3/4	36	14-7/8	84.87
420-160F	16	15	12-7/8	23	20-7/8	46	41-3/4	17	128.99
420-180F	18	15-7/8	13-3/8	24-7/8	22-3/8	49-3/4	44-3/4	19-1/8	176.46
420-200F	20	18-1/4	15-1/2	28-1/4	25-1/2	56-1/2	51	21-3/16	153.70
420-240F	24	21-1/8	17-1/2	33-1/8	29-1/2	66-1/4	59	25-3/8	253.36

REDUCING CROSS

Socket x Socket x Socket x Socket



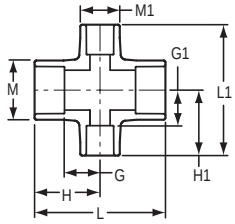
Part Number	Size	G	G1	H	H1	L	L1	M	M1	Approx. Wt. (Lbs.)
420-101[1]	3/4x3/4x1/2x1/2	1-7/16	1-1/16	1-9/16	1-13/16	3-1/8	3-5/8	1-5/16	1-5/16	.17
420-131	1x1x3/4x3/4	23/32	5/8	1-5/8	1-5/8	3-1/4	3-1/4	1-7/8	1-17/32	.30
420-167[1]	1-1/4x1-1/4x3/4x3/4	1-1/8	1-21/32	2-11/32	2-21/32	4-11/16	5-5/16	2-1/32	2-1/32	.71
420-168[1]	1-1/4x1-1/4x1x1	1-3/32	1-9/16	2-11/32	2-5/8	4-23/32	5-7/32	2-1/16	2-1/16	.56
420-248	2x2x3/4x3/4	11/16	1-7/16	2-7/32	2-7/16	4-13/32	4-7/8	2-29/32	1-13/32	.55
420-249	2x2x1x1	13/16	1-3/8	2-3/16	2-1/2	4-3/8	5	2-3/4	1-5/8	.39
420-250[1]	2x2x1-1/4x1-1/4	1-9/16	2-1/16	2-15/16	3-15/16	5-27/32	6-5/8	2-13/16	2-13/16	1.34
420-251[1]	2x2x1-1/2x1-1/2	1-17/32	1-25/32	2-29/32	3-1/8	5-13/16	6-1/4	2-25/32	2-25/32	1.18
420-288[1]	2-1/2x2-1/2x3/4x3/4	1-21/32	3-3/32	3-21/32	4-3/32	7-11/32	8-7/32	3-3/8	3-3/8	2.33
420-289	2-1/2x2-1/2x1x1	7/8	1-23/32	2-11/16	2-7/8	5-11/32	5-3/4	3-1/2	1-3/4	.97
420-335[1]	3x3x1x1	1-15/16	3-1/4	3-15/16	4-3/8	7-7/8	8-3/4	4	4	3.12
420-336[1]	3x3x1-1/4x1-1/4	2	3-1/8	3-15/16	4-3/8	7-7/8	8-3/4	4	4	3.11
420-337[1]	3x3x1-1/2x1-1/2	1-31/32	3-1/16	3-31/32	4-3/8	7-15/16	8-23/32	4-1/32	4-1/32	3.14
420-338[1]	3x3x2x2	2-1/16	2-5/8	3-31/32	4-9/32	7-29/32	8-9/16	4-1/32	4-1/32	2.72
420-339[1]	3x3x2-1/2x2-1/2	1-15/16	2-11/32	3-15/16	4-11/32	7-7/8	8-11/16	4	4	2.97
420-420[1]	4x4x2x2	2-1/2	3-17/32	4-1/2	4-29/32	9-1/32	9-13/16	5-1/32	5-1/4	4.99
420-420F	4x4x2x2	4-1/2	4-1/4	6-3/4	6	13-1/2	12	5-1/16	2-11/16	3.37
420-421[1]	4x4x2-1/2x2-1/2	2-1/2	2-15/16	4-1/2	4-15/16	9	9-7/8	5	5	5.08
420-422[1]	4x4x3x3	2-1/2	2-15/16	4-1/2	4-15/16	9	9-7/8	5	5	4.90
420-528F	6x6x2x2	5-1/8	5-5/16	8-3/8	7-1/16	16-3/4	14-1/8	7-3/16	2-11/16	7.71
420-529F	6x6x2-1/2x2-1/2	5-3/8	5-13/16	8-5/8	7-13/16	17-1/4	15-5/8	7-3/16	3-1/4	9.21
420-530F	6x6x3x3	5-7/8	6-1/16	9-1/8	8-5/16	18-1/4	16-5/8	7-3/16	3-15/16	9.21
420-532F	6x6x4x4	6-1/2	6-3/8	9-3/4	8-5/8	19-1/2	17-1/4	7-3/16	5	10.35
420-578F	8x8x2x2	5-5/16	6-1/4	9-9/16	8	19-1/8	16	9-1/4	2-11/16	11.23
420-580F	8x8x3x3	5-11/16	7	9-15/16	9-1/4	19-7/8	18-1/2	9-1/4	3-15/16	14.45
420-582F	8x8x4x4	6-5/16	7-5/16	10-9/16	9-9/16	21-1/8	19-1/8	9-1/4	5	16.52
420-585F	8x8x6x6	7-5/16	7-3/8	11-9/16	10-5/8	23-1/8	21-1/4	9-1/4	7-3/16	20.11
420-621F	10x10x2x2	4-7/8	7-1/4	10-1/8	9	20-1/4	18	11-1/2	2-11/16	16.08
420-622F	10x10x2-1/2	5-5/8	7-3/4	10-7/8	9-3/4	21-3/4	19-1/2	11-1/2	3-1/4	20.48
420-623F	10x10x3x3	5-3/8	8	10-5/8	10-1/4	21-1/4	20-1/2	11-1/2	3-15/16	22.78
420-624F	10x10x4x4	5-7/8	8-5/16	11-1/8	10-9/16	22-1/4	21-1/8	11-1/2	5	22.73
420-626F	10x10x6x6	6-7/8	8-3/8	12-1/8	11-5/8	24-1/4	23-1/4	11-1/2	7-3/16	30.13
420-628F	10x10x8x8	8-1/2	8-5/16	13-3/4	12-9/16	27-1/2	25-1/8	11-1/2	9-1/4	35.40
420-661F	12x12x2x2	5-1/4	8-1/4	11-1/2	10	23	20	13-9/16	2-11/16	29.47
420-662F	12x12x2-1/2x2-1/2	5-3/4	8-3/4	12	10-3/4	24	21-1/2	13-9/16	3-1/4	29.06

[1] Outlet sized with bushing

REDUCING CROSS

Socket x Socket x Socket x Socket

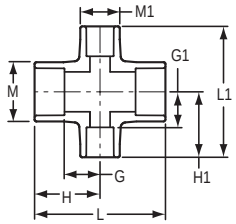
(continued)



Part Number	Size	G	G1	H	H1	L	L1	M	M1	Approx. Wt. (Lbs.)
420-663F	12x12x3x3	5-3/4	9	12	11-1/4	24	22-1/2	13-9/16	3-15/16	34.47
420-664F	12x12x4x4	7	9-5/16	13-1/4	11-9/16	26-1/2	23-1/8	13-9/16	5	33.96
420-666F	12x12x6x6	8	9-3/8	14-1/4	12-5/8	28-1/2	25-1/4	13-9/16	7-3/16	39.69
420-668F	12x12x8x8	8-3/4	9-5/16	15	13-9/16	30	27-1/8	13-9/16	9-1/4	45.81
420-670F	12x12x10x10	10-1/4	10-3/8	16-1/2	15-5/8	33	31-1/4	13-9/16	11-1/2	53.90
420-691F	14x14x2x2	5-7/8	8-13/16	12-7/8	10-9/16	25-3/4	21-1/8	14-7/8	2-11/16	34.95
420-693F	14x14x3x3	6-1/2	9-9/16	13-1/2	11-13/16	27	23-5/8	14-7/8	3-15/16	38.68
420-694F	14x14x4x4	7-3/8	9-7/8	14-3/8	12-1/8	28-3/4	24-1/4	14-7/8	5	40.35
420-696F	14x14x6x6	7-7/8	9-15/16	14-7/8	13-3/16	29-3/4	26-3/8	14-7/8	7-3/16	46.98
420-698F	14x14x8x8	8-7/8	9-7/8	15-7/8	14-1/8	31-3/4	28-1/4	14-7/8	9-1/4	44.67
420-700F	14x14x10x10	10-3/8	10-15/16	17-3/8	16-3/16	34-3/4	32-3/8	14-7/8	11-1/2	44.43
420-702F	14x14x12x12	11-3/8	10-3/4	18-3/8	17	36-3/4	34	14-7/8	13-9/16	66.57
420-751F	16x16x2x2	6-3/8	9-3/4	14-3/8	11-1/2	28-3/4	23	17	2-11/16	50.82
420-753F	16x16x3x3	6-1/2	10-1/2	14-1/2	12-3/4	29	25-1/2	17	3-15/16	56.76
420-754F	16x16x4x4	8	10-13/16	16	13-1/16	32	26-1/8	17	5	62.49
420-756F	16x16x6x6	9	10-7/8	17	14-1/8	34	28-1/4	17	7-3/16	66.61
420-758F	16x16x8x8	10	10-13/16	18	15-1/16	36	30-1/8	17	9-1/4	77.97
420-760F	16x16x10x10	11	11-7/8	19	17-1/8	38	34-1/4	17	11-1/2	86.09
420-762F	16x16x12x12	12	11-11/16	20	17-15/16	40	35-7/8	17	13-9/16	91.41
420-764F	16x16x14x14	13	11-15/16	21	18-15/16	42	37-7/8	17	14-7/8	109.43
420-781F	18x18x2x2	6-1/4	10-11/16	15-1/4	12-7/16	30-1/2	24-7/8	19-1/8	2-11/16	66.00
420-783F	18x18x3x3	7-1/4	11-7/16	16-1/4	13-11/16	32-1/2	27-3/8	19-1/8	3-15/16	73.00
420-784F	18x18x4x4	7-3/4	11-3/4	16-3/4	14	33-1/2	28	19-1/8	5	76.00
420-786F	18x18x6x6	8-3/4	11-13/16	17-3/4	15-1/16	35-1/2	30-1/8	19-1/8	7-3/16	84.00
420-788F	18x18x8x8	9-3/4	11-3/4	18-3/4	16	37-1/2	32	19-1/8	9-1/4	93.50
420-790F	18x18x10x10	10-3/4	12-13/16	19-3/4	18-1/16	39-1/2	36-1/8	19-1/8	11-1/2	---
420-792F	18x18x12x12	11-3/4	12-5/8	20-3/4	18-7/8	41-1/2	37-3/4	19-1/8	13-9/16	111.65
420-794F	18x18x14x14	12-7/8	12-7/8	21-7/8	19-7/8	43-3/4	39-3/4	19-1/8	14-7/8	129.34
420-796F	18x18x16x16	13-7/8	13-13/16	22-7/8	21-13/16	45-3/4	43-5/8	19-1/8	17	145.80
420-811F	20x20x2x2	6-3/4	12-7/16	16-3/4	14-3/16	33-1/2	28-3/8	21-3/16	2-11/16	83.00
420-813F	20x20x3x3	7-1/4	12-7/16	17-1/4	14-11/16	34-1/2	29-3/8	21-3/16	3-15/16	92.00
420-814F	20x20x4x4	8-1/4	12-3/4	18-1/4	15	36-1/2	30	21-3/16	5	95.82
420-816F	20x20x6x6	19-1/4	12-13/16	19-1/4	16-1/16	38-1/2	32-1/8	21-3/16	7-3/16	105.00

REDUCING CROSS (continued)

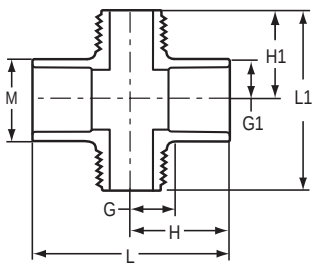
Socket x Socket x Socket x Socket



Part Number	Size	G	G1	H	H1	L	L1	M	M1	Approx. Wt. (Lbs.)
420-818F	20x20x8x8	10-1/4	12-3/4	20-1/4	17	40-1/2	34	21-3/16	9-1/4	115.00
420-820F	20x20x10x10	11-1/4	13-13/16	21-1/4	19-1/16	42-1/2	38-1/8	21-3/16	11-1/2	126.30
420-822F	20x20x12x12	12-1/4	13-5/8	22-1/4	19-7/8	44-1/2	39-3/4	21-3/16	13-9/16	140.46
420-824F	20x20x14x14	13-1/4	13-7/8	23-1/4	20-7/8	46-1/2	41-3/4	21-3/16	14-7/8	140.77
420-826F	20x20x16x16	14-1/4	14-13/16	24-1/4	22-13/16	48-1/2	45-5/8	21-3/16	17	165.34
420-828F	20x20x18x18	15-1/4	14-3/8	25-1/4	23-3/8	50-1/2	46-3/4	21-3/16	19-1/8	193.92
420-901F	24x24x2x2	8-1/8	14-5/16	20-1/8	16-1/16	40-1/4	32-1/8	25-3/8	2-11/16	156.00
420-903F	24x24x3x3	8-5/8	14-5/6	20-5/8	16-9/16	41-1/4	33-1/8	25-3/8	3-15/16	162.00
420-904F	24x24x4x4	9-1/8	14-5/8	21-1/8	16-7/8	42-1/4	33-3/4	25-3/8	5	167.00
420-906F	24x24x6x6	10-1/8	14-11/16	22-1/8	17-15/16	44-1/4	35-7/8	25-3/8	7-3/16	179.90
420-908F	24x24x8x8	11-1/8	14-5/8	23-1/8	18-7/8	46-1/4	37-3/4	25-3/8	9-1/4	193.00
420-910F	24x24x10x10	12-1/8	15-11/16	24-1/8	20-15/16	48-1/4	41-7/8	25-3/8	11-1/2	190.14
420-912F	24x24x12x12	13-1/8	15-1/2	25-1/8	21-3/4	50-1/4	43-1/2	25-3/8	13-9/16	205.85
420-914F	24x24x14x14	13-3/4	15-3/4	25-3/4	22-3/4	51-1/2	45-1/2	25-3/8	14-7/8	103.61
420-916F	24x24x16x16	14-3/4	16-11/16	26-3/4	24-11/16	53-1/2	49-3/8	25-3/8	17	243.82
420-918F	24x24x18x18	15-3/4	16-1/4	27-3/4	25-1/4	55-1/2	50-1/2	25-3/8	19-1/8	268.14
420-920F	24x24x20x20	16-3/4	17-3/8	28-3/4	27-3/8	57-1/2	54-3/4	25-3/8	21-3/16	292.79

CROSS

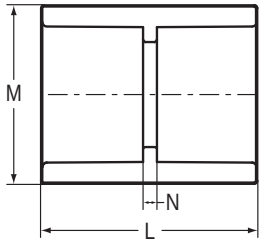
Socket x Mipt x Socket x Mipt



Part Number	Size	G	G1	H	H1	L	L1	M	Approx. Wt. (Lbs.)
421A-010	1x1x1x1	5/8	1	1-5/8	1-7/8	3-13/32	3-3/4	1-5/8	.18

COUPLING

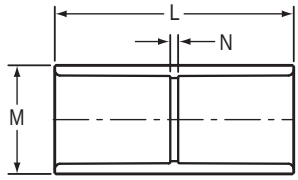
Socket x Socket



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
429-003	3/8	2-5/8	7/8	1/8	.03
429-005	1/2	1-19/32	1-3/32	3/32	.03
429-005N	1/2	1-5/8	1-1/16	1/8	.02
429-007	3/4	2-3/32	1-5/16	3/32	.05
429-007N	3/4	2-3/32	1-5/16	3/32	.05
429-010	1	2-1/8	1-19/32	1/8	.07
429-010N	1	2-11/32	1-21/32	3/32	.10
429-012	1-1/4	2-11/32	1-31/32	3/32	.11
429-015	1-1/2	2-5/8	2-7/32	1/16	.13
429-020	2	2-7/8	2-3/4	3/32	.21
429-025	2-1/2	3-3/4	3-5/16	3/16	.41
429-030	3	3-31/32	4	3/16	.57
429-040	4	4-1/4	5-1/32	3/16	.85
429-045F	4-1/2	6-7/8	5-7/16	1-7/8	1.43
429-050	5	6-3/16	6-1/8	3/16	1.67
429-060	6	6-5/16	7-1/4	1/4	2.11
429-080	8	8-11/32	9-11/32	1/4	4.22
429-100	10	10-3/8	11-9/16	15/32	7.24
429-100F	10	12-3/8	11-1/2	1-7/8	8.16
429-120	12	12-3/8	13-21/32	3/8	11.68
429-120F	12	14-3/4	13-9/16	2-1/4	13.25
429-140	14	14-13/32	15-5/8	7/16	27.27
429-140F	14	16-1/4	14-7/8	2-1/4	18.22
429-160F	16	18-5/8	17	2-5/8	23.23
429-180F	18	21-3/4	19-1/8	3-3/4	38.65
429-200F	20	24	21-3/16	4	48.63
429-240F	24	29-1/4	25-3/8	5-1/4	82.20

DEEP SOCKET COUPLING

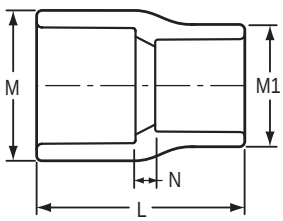
Socket x Socket



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
479-005N	1/2	2-1/2	1-1/16	3/16	.04
479-007	3/4	2-7/8	1-5/16	3/32	.07
479-010	1	3-5/8	1-5/8	3/32	.13
479-015	1-1/2	4-5/8	2-1/4	1/8	.24
479-020	2	5-3/32	2-3/4	3/32	.36
479-025	2-1/2	7-1/2	3-5/16	1/4	.79
479-030	3	8	4	1/4	1.06
479-040	4	8-3/16	5	5/16	1.53
479-045F	4-1/2	9-1/2	5-7/16	1-1/2	1.92
479-060F	6	12	7-3/16	1-1/2	3.72

REDUCER COUPLING

Socket x Socket

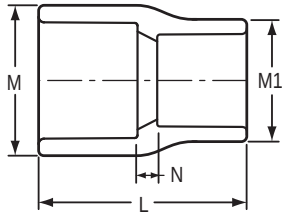


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
429-101	3/4x1/2	1-25/32	1-5/16	1-3/32	1/8	.04
429-130	1x1/2	2-7/32	1-5/8	1-3/32	13/32	.07
429-131	1x3/4	2-1/8	1-5/8	1-5/16	1/8	.07
429-166	1-1/4x1/2	2-9/16	2-3/32	1-5/32	7/16	.13
429-167	1-1/4x3/4	2-19/32	2-3/32	1-5/8	11/32	.17
429-168	1-1/4x1	2-11/16	2-1/8	1-3/4	5/16	.17
429-210	1-1/2x3/4	2-13/16	2-11/32	1-13/32	7/16	.19
429-211	1-1/2x1	2-23/32	2-7/32	1-5/8	3/8	.13
429-212	1-1/2x1-1/4	2-13/16	2-13/32	2-1/8	5/32	.22
429-247	2x1/2	3-3/32	2-7/8	1-5/32	11/16	.30
429-248	2x3/4	3-7/32	2-7/8	1-13/32	23/32	.30
429-249	2x1	3-1/2	2-13/16	2-5/16	3/4	.41
429-250	2x1-1/4	3-1/16	2-23/32	1-31/32	17/32	.20
429-251	2x1-1/2	2-13/16	2-27/32	2-1/4	1/8	.19
429-291	2-1/2x1-1/2	3-3/4	3-1/2	2-3/8	19/32	.52
429-292	2-1/2x2	3-5/8	3-15/32	2-7/8	7/16	.48
429-335[1]	3x1	4-3/16	4-5/32	2-7/8	1-1/4	.91
429-337[1]	3x1-1/2	4-3/16	4-5/32	2-29/32	1	.87

[1] Outlet sized with bushing

REDUCER COUPLING (continued)

Socket x Socket

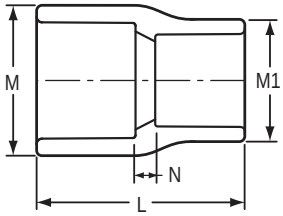


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
429-338	3x2	4	4-3/16	2-7/8	21/32	.73
429-339[1]	3x2-1/2	4-5/16	4	4	21/32	.95
429-340F	3x2-1/2	5-5/8	3-7/8	3-1/4	1-3/8	.68
429-416[1]	4x3/4	5-7/32	5-1/32	2-25/32	2-3/16	1.04
429-417	4x1	5-1/4	5-1/32	2-25/32	2-5/32	1.04
429-420	4x2	5	5-1/32	2-23/32	1-9/16	.83
429-421	4x2-1/2	5	5-1/4	4-1/8	3/4	1.63
429-422	4x3	4-5/8	5-1/4	4-5/32	15/32	1.25
429-422F	4x3	6-1/2	4-15/16	3-15/16	2	1.04
429-460F	4-1/2x4	6-11/16	5-7/16	5	1-15/16	1.39
429-488F	5x3	8	6-1/16	5-1/4	3-1/8	2.29
429-490F	5x4	7-11/16	6-1/16	5	2-7/16	1.60
429-491F	5x4-1/2	7-7/16	6-1/16	5-7/16	1-15/16	1.59
429-528F	6x2	9-1/4	7-1/8	5-1/16	4-5/8	2.75
429-530F	6x3	9-3/16	7-1/8	5-1/4	4-1/16	2.89
429-532	6x4	6-15/32	7-1/4	5-1/32	1-11/32	2.05
429-532F	6x4	8-7/8	7-1/8	5	3-3/8	1.80
429-533F	6x5	8-5/8	7-1/8	6-1/16	2-3/8	2.50
429-534F	6x4-1/2	8-11/16	7-1/8	5-7/16	2-15/16	2.05
429-578F	8x2	14-7/8	9-3/16	5	9-1/4	5.75
429-580F	8x3	14-13/16	9-3/16	5	8-11/16	5.71
429-582	8x4	8-7/16	9-11/32	5-1/16	2-11/32	4.02
429-582F	8x4	14-1/2	9-3/16	5	8	5.11
429-583F	8x5	14-1/4	9-3/16	6-1/16	7	5.07
429-585	8x6	8-13/32	9-11/32	7-9/32	1-11/32	4.07
429-585F	8x6	11	9-3/16	7-3/16	3-1/2	4.63
429-621F	10x2	17-5/8	11-3/8	5	11	8.15
429-623F	10x3	17-9/16	11-3/8	5	10-7/16	7.97
429-624	10x4	10-7/16	11-17/32	5-1/16	3-11/32	7.40
429-624F	10x4	17-1/4	11-3/8	5	9-3/4	7.18
429-625F	10x5	17	11-3/8	6-1/16	8-3/4	7.31
429-626	10x6	10-7/16	11-9/16	7-9/32	2-1/4	7.11
429-626F	10x6	13-7/8	11-3/8	7-1/4	5-3/8	6.61
429-628	10x8	10-7/16	11-5/8	9-3/8	1-3/8	7.07
429-628F	10x8	13-1/4	11-9/16	9-7/16	3-3/4	8.95
429-661F	12x2	24-3/8	13-9/16	5	16-3/4	19.16
429-663F	12x3	24-5/16	13-9/16	5	16-3/16	14.92
429-664F	12x4	24	13-9/16	5	15-1/2	15.20
429-665F	12x5	23-3/4	13-9/16	6-1/16	14-1/2	21.03

[1] Outlet sized with bushing

REDUCER COUPLING (continued)

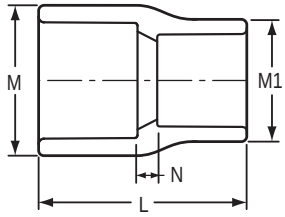
Socket x Socket



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
429-666	12x6	12-13/32	13-21/32	7-9/32	3-9/32	10.73
429-666F	12x6	20-1/2	13-9/16	7-1/4	11	14.23
429-668	12x8	12-13/32	13-21/32	9-3/8	2-1/4	10.58
429-668F	12x8	15-3/4	13-9/16	9-7/16	5-1/4	12.31
429-670	12x10	12-3/8	13-21/32	11-19/32	1-9/32	10.84
429-670F	12x10	15-1/8	13-9/16	11-9/16	3-5/8	13.16
429-693F	14x3	26-3/16	14-13/16	5	17-5/16	39.67
429-694F	14x4	25-7/8	14-13/16	5	16-5/8	17.51
429-696F	14x6	22-3/8	14-13/16	7-1/4	12-1/8	20.57
429-698F	14x8	21-13/16	14-3/4	9-1/4	10-9/16	18.37
429-700F	14x10	17	14-13/16	11-9/16	4-3/4	15.36
429-702F	14x12	16-1/2	15	13-3/4	3-1/4	19.59
429-751F	16x2	32-7/8	17	5	23-1/2	33.96
429-754F	16x4	32-1/2	17	5	22-1/4	29.74
429-756F	16x6	29	17	7-3/16	17-3/4	33.53
429-758F	16x8	24-3/4	17	9-7/16	12-1/2	33.90
429-760F	16x10	24	17	11-9/16	10-3/4	35.66
429-762F	16x12	18-7/8	17	13-3/4	4-5/8	22.40
429-764F	16x14	18-1/2	16-7/8	14-7/8	3-1/2	21.66
429-786F	18x6	38	19	7-3/16	25-3/4	60.39
429-788F	18x8	33-3/4	19	9-7/16	20-1/2	43.61
429-790F	18x10	33	19	11-9/16	18-3/4	46.43
429-792F	18x12	27-7/8	19	13-5/8	12-5/8	44.78
429-794F	18x14	27-1/2	19	14-7/8	11-1/2	43.23
429-796F	18x16	21-5/8	19	17	4-5/8	30.98
429-814F	20x4	50-1/2	21-1/8	5	38-1/4	---
429-816F	20x6	47	21-1/8	7-3/16	33-3/4	74.45
429-818F	20x8	42-3/4	21-1/8	9-7/16	28-1/2	97.93
429-820F	20x10	42	21-1/8	11-9/16	26-3/4	82.76
429-822F	20x12	36-7/8	21-1/8	13-3/4	20-5/8	74.24
429-824F	20x14	36-1/2	21-3/8	14-7/8	19-1/2	71.00
429-826F	20x16	30-5/8	21-1/8	17	12-5/8	58.53
429-828F	20x18	23-1/4	21-1/8	19-1/8	4-1/4	45.38
429-906F	24x6	59-1/4	25-3/16	7-3/16	44	120.00
429-908F	24x8	55	25-3/16	9-7/16	38-3/4	124.96
429-910F	24x10	54-1/4	25-3/16	11-9/16	37	126.88
429-912F	24x12	49-1/8	25-3/16	13-3/4	30-7/8	120.00
429-914F	24x14	48-3/4	25-3/16	14-7/8	29-3/4	111.51
429-916F	24x16	42-7/8	25-3/16	17	22-7/8	107.16

REDUCER COUPLING (continued)

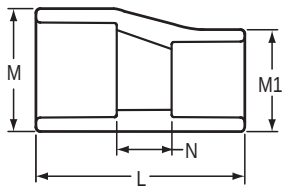
Socket x Socket



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
429-918F	24x18	35-1/2	25-3/16	19-1/8	14-1/2	84.69
429-920F	24x20	28-3/4	25-3/16	21-3/16	6-3/4	61.04

ECCENTRIC REDUCER COUPLING

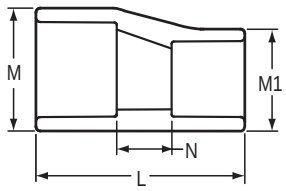
Socket x Socket



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
429-168FE	1-1/4x1	4-7/8	1-15/16	1-9/16	2-1/8	.28
429-212FE	1-1/2x1-1/4	4-5/8	2-3/16	1-15/16	1-5/8	.24
429-250FE	2x1-1/4	5-3/4	2-5/8	1-15/16	2-1/2	.26
429-251FE	2x1-1/2	5-1/2	2-11/16	2-3/16	2-1/4	.29
429-290FE	2-1/2x1-1/4	9-5/8	3-3/16	1-15/16	6-1/8	.81
429-291FE	2-1/2x1-1/2	9-3/8	3-3/16	2-3/16	5-7/8	.79
429-292FE	2-1/2x2	6-3/8	3-3/16	2-11/16	2-5/8	.44
429-336FE	3x1-1/4	11-1/8	3-13/16	1-15/16	7-3/8	.85
429-337FE	3x1-1/2	10-7/8	3-13/16	2-3/16	7-1/8	.77
429-338E	3x2	5-7/8	4-5/32	2-7/8	2-15/32	1.01
429-338FE	3x2	7-15/16	3-13/16	2-11/16	3-15/16	.63
429-339FE	3x2-1/2	6-3/4	3-7/8	3-1/4	2-1/2	.79
429-418FE	4x1-1/4	16-1/8	4-15/16	1-15/16	12-3/8	1.96
429-419FE	4x1-1/2	15-7/8	4-15/16	2-3/16	12-1/8	1.72
429-420E	4x2	7-15/32	5	2-23/32	4-1/16	1.24
429-420FE	4x2	12-13/16	4-15/16	2-11/16	8-13/16	1.65
429-421FE	4x2-1/2	11-3/4	4-15/16	3-1/4	7-1/2	1.78
429-422FE	4x3	8-5/8	4-15/16	3-15/16	4-1/8	1.28
429-490FE	5x4	9-7/16	6-1/16	5	4-3/16	5.95
429-527FE	6x1-1/2	23-9/16	7-1/8	2-3/16	18-13/16	6.23
429-528FE	6x2	15-7/8	7-1/8	2-11/16	11-1/4	4.41

ECCENTRIC REDUCER COUPLING (continued)

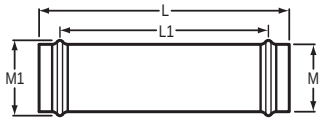
Socket x Socket



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
429-529FE	6x2-1/2	19-7/16	7-1/8	3-1/4	14-3/16	3.77
429-530FE	6x3	16-5/16	7-1/8	3-15/16	10-13/16	3.92
429-532E	6x4	8-31/32	7-9/32	5-1/32	3-15/16	2.90
429-532FE	6x4	11-1/8	7-1/8	5	5-5/8	2.27
429-533FE	6x5	10-5/8	7-1/8	6-1/16	4-3/8	2.84
429-578FE	8x2	27-1/8	9-3/16	2-11/16	21-1/2	8.22
429-580FE	8x3	25-5/16	9-3/16	3-15/16	18-13/16	7.20
429-582FE	8x4	19-5/8	9-3/16	5	13-3/8	8.22
429-583FE	8x5	15-5/8	9-3/16	6-1/16	12-3/8	6.81
429-585FE	8x6	14-3/8	9-3/16	7-3/16	6-7/8	5.53
429-624FE	10x4	22-3/8	11-3/8	5	15-1/8	12.85
429-625FE	10x5	22-3/8	11-3/8	6-1/16	14-1/8	10.65
429-626FE	10x6	17-1/8	11-3/8	7-1/4	8-5/8	7.49
429-628FE	10x8	16-5/16	11-3/8	9-1/4	6-13/16	9.69
429-664FE	12x4	32-3/8	13-1/2	5	24-1/8	20.84
429-665FE	12x5	32-3/8	13-1/2	6-1/16	23-1/8	20.37
429-666FE	12x6	27-1/8	13-1/2	7-1/4	17-5/8	16.81
429-668FE	12x8	26-5/16	13-1/2	9-1/4	15-3/16	23.88
429-670FE	12x10	18-3/8	13-1/2	11-1/2	6-7/8	15.07
429-696FE	14x6	31-3/8	15	7-1/4	21-1/8	26.82
429-698FE	14x8	30-9/16	15	9-1/4	19-5/16	26.76
429-700FE	14x10	22-3/4	15	11-3/4	10-1/2	23.23
429-702FE	14x12	19	15	13-3/4	5-3/4	25.66
429-756FE	16x6	43-5/8	17	7-1/4	32-3/8	49.49
429-758FE	16x8	42-13/16	17	9-1/4	30-9/16	47.87
429-760FE	16x10	34-7/8	17	11-1/2	21-5/8	39.76
429-762FE	16x12	26-1/2	17	13-3/4	12-1/4	34.02
429-764FE	16x14	19	16-7/8	14-7/8	6-3/4	24.61
429-786FE	18x6	56	19	7-1/4	43-3/4	71.11
429-788FE	18x8	55-3/16	19	9-1/4	41-15/16	70.93
429-790FE	18x10	47-1/4	19	11-1/2	33	65.32
429-792FE	18x12	38-7/8	19	13-3/4	23-5/8	62.16
429-794FE	18x14	34-1/8	19	14-7/8	18-1/8	54.24
429-796FE	18x16	25	19	17	8	38.72

FABRICATED REPAIR COUPLING

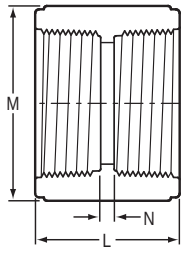
Gasket x Gasket



Part Number	Size	L	L1	M	M1	Approx. Wt. (Lbs.)
428-020F	2	9-1/8	6	2-11/16	3-1/16	.72
428-030F	3	15-1/2	11-3/4	3-15/16	4-9/16	1.99
428-040F	4	19-1/2	15	5-5/8	5-3/4	4.18
428-060F	6	23-1/2	19-3/4	7-3/8	7-3/4	8.33
428-080F	8	26-1/8	21-1/4	9-3/8	10-1/8	14.01
428-100F	10	27-1/4	22-3/8	11-5/8	12-3/8	20.95
428-120F	12	28-3/8	22-3/8	13-3/4	14-11/16	28.49
428-140F	14	18-3/8	12	14-7/8	16-1/4	24.45
428-160F	16	21	14-3/4	17	18-1/2	36.03

COUPLING

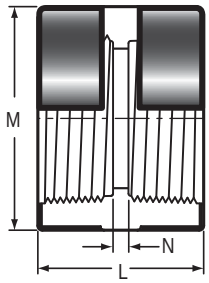
Fipt x Fipt



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
430-005	1/2	1-9/16	1-1/8	7/32	.04
430-007	3/4	1-9/16	1-11/32	3/32	.05
430-010	1	2-1/16	1-11/16	3/32	.09
430-012	1-1/4	2-3/16	2-9/32	3/16	.21

SPECIAL REINFORCED COUPLING

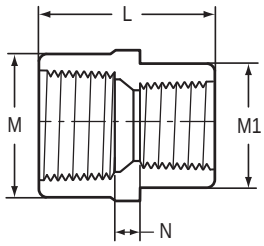
SR Fipt x SR Fipt



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
430-005SR	1/2	1-9/16	1-3/16	1/16	.07
430-007SR	3/4	1-29/32	1-3/8	3/32	.08
430-010SR	1	1-15/16	1-23/32	1/16	.13
430-012SR	1-1/4	2-1/16	2-1/16	3/16	.19
430-015SR	1-1/2	2-3/16	2-7/16	1/4	.29
430-020SR	2	2-1/4	3	1/4	.42

REDUCER COUPLING

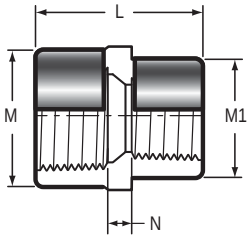
Fipt x Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
430-101	3/4x1/2	1-11/16	1-3/8	1-3/16	1/4	.06

SPECIAL REINFORCED REDUCER COUPLING

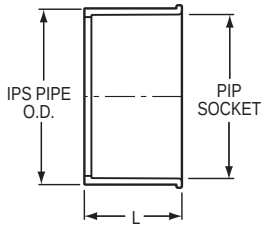
SR Fipt x SR Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
430-101SR	3/4x1/2	1-3/4	1-3/8	1-7/32	1/4	.08

IPS TO PIP ADAPTER

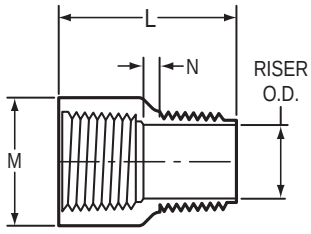
Spigot x Socket



Part Number	Size	L	Approx. Wt. (Lbs.)
431-060	6	3-9/16	.91
431-080	8	4-21/32	1.43
431-100F	10	5-5/8	2.71
431-120F	12	6-3/4	3.61

RISER EXTENSION

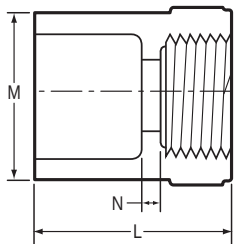
Fipt x Mipt



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
434-005	1/2	1-1/2	1-1/8	1/8	.03
434-007	3/4	1-17/32	1-5/16	5/32	.04
434-010	1	1-29/32	1-5/8	3/16	.07

FEMALE ADAPTER

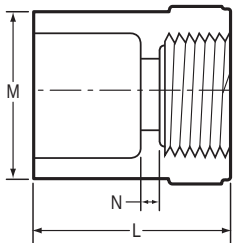
Socket x Fipt



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
435-003	3/8	1-7/16	1	3/32	.03
435-005	1/2	1-19/32	1-3/32	3/32	.04
D435-005	1/2	2-1/8	1-1/8	1/8	.04
435-007	3/4	1-27/32	1-5/16	3/32	.05

FEMALE ADAPTER (continued)

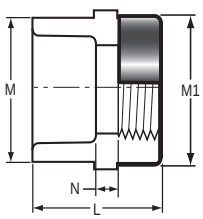
Socket x Fipt



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
D435-007	3/4	2-7/32	1-5/16	3/32	.06
435-010	1	2	1-21/32	3/32	.08
435-012	1-1/4	2-9/32	1-31/32	1/16	.11
435-015	1-1/2	2-5/16	2-7/32	3/32	.14
435-020	2	2-1/2	2-3/4	1/8	.19
435-025	2-1/2	3-1/4	3-5/16	3/16	.41
435-030	3	3-1/2	4	1/4	.56
435-040	4	3-23/32	5-1/32	3/16	.82
435-050	5	5-1/16	6-5/16	3/16	1.47
435-060	6	5-3/4	7-3/16	5/16	2.07
435-080	8	6-15/16	9-3/8	1/4	3.88
435-100F	10	10-1/4	11-15/16	3	10.88
435-120F	12	11-1/8	14-1/8	2-5/8	16.56

SPECIAL REINFORCED FEMALE ADAPTER

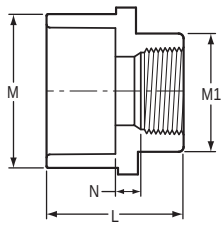
Socket x SR Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
435-002SR	1/4	1-5/16	13/16	13/16	5/32	.03
435-003SR	3/8	1-7/16	15/16	15/16	1/16	.04
435-005SR	1/2	1-3/4	1-3/16	1-3/16	3/16	.06
435-007SR	3/4	1-7/8	1-13/32	1-3/8	3/32	.08
435-010SR	1	2-1/8	1-3/4	1-3/4	1/8	.13
435-012SR	1-1/4	2-5/16	2-3/32	2-3/32	1/8	.19
435-015SR	1-1/2	2-7/16	2-7/16	2-7/16	1/8	.27
435-020SR	2	2-11/16	3	3	1/4	.43
435-025SR	2-1/2	3-1/4	3-9/16	3-9/16	1/4	.68
435-030SR	3	3-1/2	4-9/32	4-5/16	5/16	.95
435-040SR	4	3-15/16	5-7/32	5-7/32	3/16	1.37

REDUCING FEMALE ADAPTER

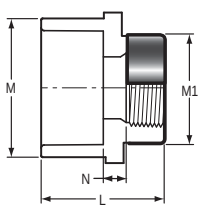
Socket x Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
435-072	1/2x1/4	1-19/32	1-3/32	13/16	1/4	.03
435-073	1/2x3/8	1-17/32	1-3/32	15/16	3/16	.03
435-074	1/2x3/4	1-19/32	1-3/32	1-5/16	3/16	.05
435-098	3/4x1/4	1-15/16	1-13/32	27/32	13/32	.06
435-101	3/4x1/2	1-13/16	1-5/16	1-1/8	3/32	.05
435-102	3/4x1	1-15/16	1-5/8	1-5/16	3/32	.07
435-130	1x1/2	1-27/32	1-5/8	1-1/8	3/32	.07
435-131	1x3/4	2-1/8	1-5/8	1-5/16	3/8	.07
435-133	1x1-1/2	2-3/8	1-5/8	2-7/32	1/4	.13
435-168	1-1/4x1	2-1/2	1-31/32	1-5/8	11/32	.12
435-247	2x1/2	2-25/32	2-23/32	1-3/16	21/32	.19
435-460F	4-1/2x4	8-1/4	5-5/8	5	3-7/8	1.92
435-578F	8x2	14-7/8	8-5/8	5-1/16	9-5/8	5.75
435-582F	8x4	15-3/16	9-1/4	5	9-7/16	5.99
435-628F	8x10	11	11-3/4	9-1/4	4-1/16	6.60

SPECIAL REINFORCED REDUCING FEMALE ADAPTER

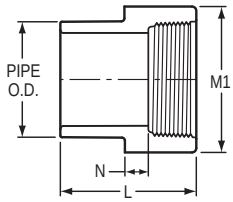
Socket x SR Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
435-072SR	1/2x1/4	1-5/8	1-3/32	27/32	1/4	.04
435-073SR	1/2x3/8	1-17/32	1-3/32	31/32	3/16	.04
435-074SR	1/2x1/4	1-3/4	1-3/16	1-3/8	1/8	.07
435-098SR	3/4x1/4	1-15/16	1-13/32	27/32	13/32	---
435-101SR	3/4x1/2	1-7/8	1-3/8	1-3/16	1/4	.07
435-102SR	3/4x1	2-1/16	1-13/32	1-23/32	1/4	.12
435-130SR	1x1/2	2	1-11/16	1-3/16	5/32	.10
435-131SR	1x3/4	2-1/16	1-3/4	1-3/8	7/32	.12
435-247SR	2x1/2	2-13/16	2-23/32	1-3/16	21/32	.20

SPIGOT FEMALE ADAPTER

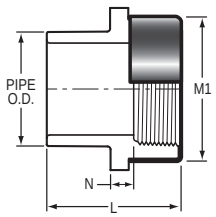
Spigot x Fipt



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
478-005	1/2	1-19/32	1-3/32	3/16	.03
478-007	3/4	1-15/16	1-3/8	5/32	.06
478-010	1	2-7/16	1-23/32	5/32	.10
478-012	1-1/4	2-9/16	2-1/16	9/32	.14
478-015	1-1/2	2-5/8	2-5/16	7/32	.17
478-020	2	2-3/4	2-27/32	3/16	.27
478-030	3	3-7/8	4	9/32	.57
478-040	4	4	5	3/8	.83

SPECIAL REINFORCED SPIGOT FEMALE ADAPTER

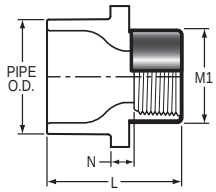
Spigot x SR Fipt



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
478-005SR	1/2	1-3/4	1-3/16	5/32	.05
478-007SR	3/4	1-15/16	1-3/8	11/32	.07
478-010SR	1	2-1/4	1-23/32	5/16	.12
478-012SR	1-1/4	2-7/16	2-1/16	3/8	.18
478-015SR	1-1/2	2-5/8	2-13/32	13/32	.25
478-020SR	2	2-13/16	3	3/8	.39
478-030SR	3	3-13/16	4-1/4	15/32	.91
478-040SR	4	4-3/8	5-7/32	9/16	1.44

SPECIAL REINFORCED SPIGOT REDUCING FEMALE ADAPTER

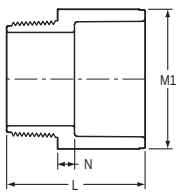
Spigot x SR Fipt



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
478-072SR	1/2x1/4	1-3/8	27/32	3/16	.03
478-098SR	3/4x1/4	2-1/16	27/32	1/2	.05
478-128SR	1x1/4	2-3/8	27/32	11/16	.08

MALE ADAPTER

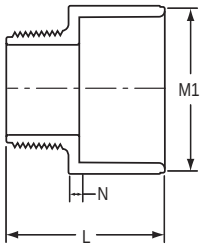
Mipt x Socket



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
436-003	3/8	1-3/8	7/8	7/32	.02
436-005	1/2	1-17/32	1-1/8	5/32	.03
436-007	3/4	1-23/32	1-5/16	5/32	.04
436-010	1	2-1/16	1-5/8	7/32	.07
436-012	1-1/4	2-7/16	1-31/32	3/16	.11
436-015	1-1/2	2-17/32	2-1/4	3/16	.15
436-020	2	2-21/32	2-3/4	7/32	.20
436-025	2-1/2	3-13/16	3-13/32	9/32	.43
436-030	3	3-29/32	4-3/32	9/32	.57
436-040	4	4-1/32	5-1/8	9/32	.82
436-050	5	5-5/32	6-1/4	5/16	1.42
436-060	6	5-11/16	7-9/32	11/16	2.36
436-080	8	6-15/16	9-3/8	13/32	4.04
436-100F	10	10-3/8	11-15/16	3-3/16	11.17
436-120F	12	11-1/8	14-1/8	2-3/4	16.44

REDUCING MALE ADAPTER

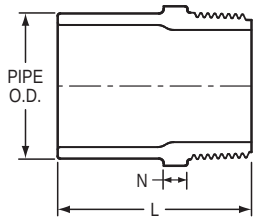
Mipt x Socket



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
436-053	3/8x1/2	1-11/16	1-3/16	1/4	.04
436-073	1/2x3/8	1-17/32	15/16	1/8	.02
436-074	1/2x3/4	1-25/32	1-5/16	5/32	.04
436-075	1/2x1	2-9/32	1-5/8	17/32	.07
436-101	3/4x1/2	1-17/32	1-1/8	3/32	.03
436-102	3/4x1	1-15/16	1-21/32	3/16	.07
436-131	1x3/4	1-29/32	1-3/16	3/16	.05
436-132	1x1-1/4	2-1/4	1-31/32	7/32	.10
436-133	1x1-1/2	2-3/8	2-1/4	1/4	.12
436-168	1-1/4x1	2-1/4	1-5/8	3/16	.09
436-169	1-1/4x1-1/2	2-17/32	2-7/32	3/16	.14
436-212	1-1/2x1-1/4	2-15/32	2	7/32	.12
436-213	1-1/2x2	2-5/8	2-3/4	15/32	.22
436-251	2x1-1/2	2-9/16	2-7/32	3/16	.18
436-252	2x2-1/2	3-3/32	3-5/16	1/4	.36
436-253	2x3	3-13/16	4	1	.52
436-294	2-1/2x3	4-3/32	4-1/32	5/8	.57
436-296	2-1/2x4	3-29/32	5-3/16	5/16	.80
436-342	3x4	4-5/8	5-1/16	7/8	.97
436-537F	6x10	15-1/2	11-3/8	7-15/16	8.50

MALE ADAPTER

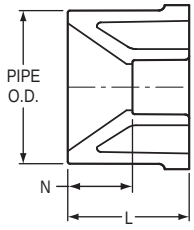
Spigot x Mipt



Part Number	Size	L	N	Approx. Wt. (Lbs.)
461-005	1/2	1-11/16	11/32	.03
461-007	3/4	2	13/32	.04
461-010	1	2-1/4	11/32	.06
461-131	1x3/4	1-15/16	1/4	.06
461-012	1-1/4	2-9/32	9/32	.09
461-015	1-1/2	2-7/16	5/16	.12
461-020	2	2-9/16	3/8	.17

REDUCER BUSHING (Flush Style)

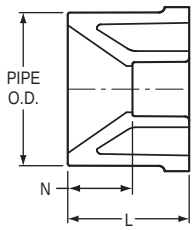
Spigot x Socket



Part Number	Size	L	N	Approx. Wt. (Lbs.)
437-052	3/8x1/4	31/32	5/16	.01
437-072	1/2x1/4	1-3/32	13/32	.02
437-073	1/2x3/8	7/8	3/8	.02
437-101	3/4x1/2	1-1/16	9/32	.02
437-130	1x1/2	1-1/4	15/32	.05
437-131	1x3/4	1-1/4	5/16	.03
437-166	1-1/4x1/2	1-13/32	21/32	.08
437-167	1-1/4x3/4	1-1/2	19/32	.09
437-168	1-1/4x1	1-1/2	7/16	.06
437-209	1-1/2x1/2	1-15/32	23/32	.11
437-210	1-1/2x3/4	1-7/16	7/16	.12
437-211	1-1/2x1	1-17/32	1/2	.12
437-212	1-1/2x1-1/4	1-17/32	9/32	.06
437-247	2x1/2	1-5/8	7/8	.17
437-248	2x3/4	1-9/16	9/16	.16
437-249	2x1	1-9/16	17/32	.17
437-250	2x1-1/4	1-19/32	11/32	.18
437-251	2x1-1/2	1-9/16	1/4	.13
437-287	2-1/2x1/2	2-5/16	1-1/2	.32

REDUCER BUSHING (Flush Style) (continued)

Spigot x Socket

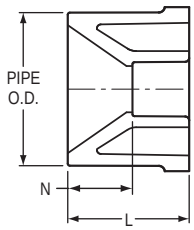


Part Number	Size	L	N	Approx. Wt. (Lbs.)
437-288	2-1/2x3/4	2-3/8	1-3/8	.33
437-289	2-1/2x1	2-1/32	29/32	.37
437-290	2-1/2x1-1/4	2-3/16	1-1/8	.37
437-291	2-1/2x1-1/2	2-5/32	1-3/16	.34
437-292	2-1/2x2	2-1/16	11/16	.23
437-333[1]	3x1/2	2-13/32	1-5/8	.53
437-334	3x3/4	2-5/16	1-5/16	.49
437-335	3x1	2-7/32	1-1/4	.48
437-336	3x1-1/4	2-9/32	1-1/32	.49
437-337	3x1-1/2	2-9/32	31/32	.48
437-338	3x2	2-7/32	9/16	.47
437-339	3x2-1/2	2-7/32	7/16	.37
437-417[1]	4x1	2-19/32	1-9/16	1.03
437-418[1]	4x1-1/4	2-19/32	1-7/16	1.04
437-419[1]	4x1-1/2	2-19/32	1-1/4	.99
437-420	4x2	2-13/32	1-1/32	.86
437-421	4x2-1/2	2-5/16	9/16	.75
437-422	4x3	2-11/32	15/32	.78
437-486	5x2	3-13/32	2-1/32	1.54
437-488	5x3	3-7/16	1-15/32	1.40
437-490	5x4	2-31/32	23/32	1.31
437-528	6x2	3-17/32	2-5/32	2.15
437-530	6x3	3-17/32	1-5/8	2.21
437-532	6x4	3-9/16	1-1/2	2.12
437-534	6x5	3-17/32	7/8	1.93
437-578[1]	8x2	5	3-5/8	4.92
437-580	8x3	5-1/4	3-1/4	4.92
437-582	8x4	4-17/32	2-1/2	3.96
437-583[1]	8x5	4-3/4	1-3/4	5.61
437-585	8x6	4-13/32	1-3/8	4.04
437-621[1]	10x2	6	4	9.88
437-623[1]	10x3	6	3-17/32	9.32
437-624	10x4	6	3-3/4	9.57
437-626	10x6	5-1/2	2-3/8	5.77
437-628	10x8	5-5/16	1-5/16	6.88
437-666[1]	12x6	6-11/16	3-3/4	13.96
437-666F	12x6	6-7/16	3-3/8	18.74

[1]Outlet sized with bushing

REDUCER BUSHING (Flush Style) (continued)

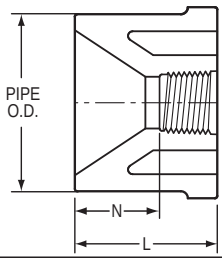
Spigot x Socket



Part Number	Size	L	N	Approx. Wt. (Lbs.)
437-668	12x8	6-1/2	2-7/16	9.60
437-670	12x10	6-1/2	1-1/2	12.67
437-670F	12x10	6	1	11.32
437-696F	14x6	7-11/16	4-11/16	23.05
437-698F	14x8	7-5/16	3-5/16	19.00
437-700F	14x10	7-1/2	2-1/2	22.00
437-702F	14x12	7	1	9.18
437-756F	16x6	8-11/16	5-11/16	42.60
437-758F	16x8	8-5/16	4-5/16	37.86
437-760F	16x10	8-1/2	3-1/2	40.97
437-762F	16x12	8	2	27.95
437-764F	16x14	8	1	18.68
437-786F	18x6	9-11/16	6-11/16	66.03
437-788F	18x8	9-5/16	5-5/16	59.63
437-790F	18x10	9-1/2	4-1/2	64.56
437-792F	18x12	9	3	52.44
437-794F	18x14	9	2	43.08
437-796F	18x16	9	1	20.03
437-816F	20x6	10-11/16	7-11/16	122.62
437-818F	20x8	10-5/16	6-5/16	112.44
437-820F	20x10	10-1/2	5-1/2	95.06
437-822F	20x12	10	4	82.84
437-824F	20x14	10	3	73.74
437-826F	20x16	10	2	54.05
437-828F	20x18	10	1	30.35
437-906F	24x6	12-11/16	9-11/16	208.00
437-908F	24x8	12-5/16	8-5/16	172.22
437-910F	24x10	12-1/2	7-1/2	177.27
437-912F	24x12	12	6	164.19
437-914F	24x14	12	5	153.83
437-916F	24x16	12	4	136.15
437-918F	24x18	13	3	109.14
437-920F	24x20	12	2	80.40

REDUCER BUSHING (Flush Style)

Spigot x Fipt

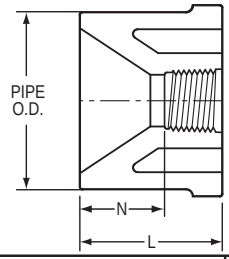


Part Number	Size	L	N	Approx. Wt. (Lbs.)
438-052	3/8x1/4	31/32	3/8	.01
438-071	1/2x1/8	1	9/16	.02
438-072	1/2x1/4	1-1/32	7/16	.02
438-073	1/2x3/8	1	7/16	02
438-098	3/4x1/4	1-7/32	5/8	.04
438-101	3/4x1/2	1-1/4	1/2	.03
438-127	1x1/8	1-3/8	13/16	.06
438-128	1x1/4	1-13/32	25/32	.07
438-129	1x3/8	1-13/32	19/32	.07
438-130	1x1/2	1-3/8	21/32	.05
438-131	1x3/4	1-1/16	3/8	.04
438-166	1-1/4x1/2	1-15/32	23/32	.10
438-167	1-1/4x3/4	1-15/32	23/32	.09
438-168	1-1/4x1	1-7/16	1/2	.07
438-206	1-1/2x1/8	1-11/16	1-1/4	.14
438-207	1-1/2x1/4	1-19/32	15/16	.11
438-209	1-1/2x1/2	1-11/16	1	.16
438-210	1-1/2x3/4	1-9/16	27/32	.13
438-211	1-1/2x1	1-23/32	13/16	.15
438-212	1-1/2x1-1/4	1-9/16	11/16	.07
438-245	2x1/4	1-3/4	1-5/32	.18
438-247	2x1/2	1-29/32	1-5/32	.26
438-248	2x3/4	1-7/8	1-5/32	.26
438-249	2x1	1-7/8	1	.26
438-250	2x1-1/4	1-5/8	13/16	.18
438-251	2x1-1/2	1-19/32	5/8	.14
438-287	2-1/2x1/2	2-3/8	1-5/8	.41
438-288	2-1/2x3/4	2-3/8	1-9/16	.44
438-289	2-1/2x1	2-5/32	1-1/4	.33
438-290	2-1/2x1-1/4	2-3/8	1-3/8	.43
438-291	2-1/2x1-1/2	2-3/8	1-3/8	.33
438-292	2-1/2x2	2-1/16	1-1/16	.26
438-334	3x3/4	2-9/32	1-9/16	.58
438-335	3x1	2-1/4	1-11/32	.58
438-336	3x1-1/4	2-1/4	1-5/16	.62
438-337	3x1-1/2	2-1/4	1-1/4	.58
438-338	3x2	2-3/16	1-7/32	.56
438-339	3x2-1/2	2-3/8	3/4	.46

REDUCER BUSHING (Flush Style)

Spigot x Fipt

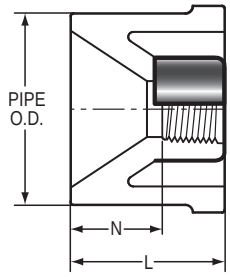
(continued)



Part Number	Size	L	N	Approx. Wt. (Lbs.)
438-420	4x2	2-13/32	1-13/32	.79
438-421	4x2-1/2	2-21/32	1-3/32	1.09
438-422	4x3	2-13/32	1	.77
438-488	5x3	3-7/16	1-13/16	1.57
438-490	5x4	2-15/16	1-11/32	1.19
438-528	6x2	3-17/32	2-17/32	2.92
438-530	6x3	3-17/32	2-1/8	2.31
438-532	6x4	3-17/32	2-1/32	2.54
438-534	6x5	3-31/32	2-3/16	1.91

SPECIAL REINFORCED REDUCER BUSHING (Flush Style)

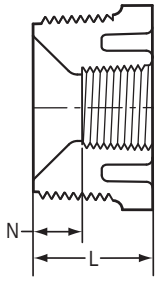
Spigot x SR Fipt



Part Number	Size	L	N	Approx. Wt. (Lbs.)
438-128SR	1x1/4	1-13/32	25/32	.07
438-207SR	1-1/2x1/4	1-19/32	15/16	.13
438-209SR	1-1/2x1/2	1-11/16	15/16	.17
438-210SR	1-1/2x3/4	1-9/16	7/8	.13
438-247SR	2x1/2	1-29/32	1-5/32	.26
438-248SR	2x3/4	1-7/8	1-1/8	.26
438-249SR	2x1	1-29/32	31/32	.27
438-334SR	3x3/4	2-1/4	1-1/2	.58
438-335SR	3x1	2-1/4	1-11/32	.59
438-336SR	3x1-1/4	2-1/4	1-5/16	.59
438-337SR	3x1-1/2	2-1/4	1-3/8	.68
438-420SR	4x2	2-13/32	1-13/32	.85
438-528SR	6x2	3-5/16	2-9/32	2.63
438-530SR	6x3	3-9/32	1-7/8	2.70
438-532SR	6x4	3-1/2	2-1/32	2.60

REDUCER (T.T.) BUSHING (Flush Style)

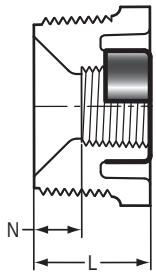
Mipt x Fipt



Part Number	Size	L	N	Approx. Wt. (Lbs.)
439-052	3/8x1/4	13/16	1/4	.01
439-071	1/2x1/8	27/32	13/32	.02
439-072	1/2x1/4	29/32	3/8	.02
439-073	1/2x3/8	15/16	3/8	.01
439-098	3/4x1/4	1-1/32	15/32	.03
439-099	3/4x3/8	1-1/32	7/16	.03
439-101	3/4x1/2	15/16	3/16	.02
439-128	1x1/4	1-1/8	17/32	.05
439-130	1x1/2	1-1/16	5/16	.04
439-131	1x3/4	1-1/8	13/32	.03
439-166	1-1/4x1/2	1-5/16	9/16	.09
439-167	1-1/4x3/4	1-9/32	9/16	.08
439-168	1-1/4x1	1-3/16	9/32	.06
439-209	1-1/2x1/2	1-11/32	19/32	.11
439-210	1-1/2x3/4	1-11/32	19/32	.11
439-211	1-1/2x1	1-11/32	7/16	.10
439-212	1-1/2x1-1/4	1-11/32	13/32	.06
439-247	2x1/2	1-3/8	21/32	.16
439-248	2x3/4	1-3/8	5/8	.16
439-249	2x1	1-3/8	15/32	.17
439-250	2x1-1/4	1-3/8	7/16	.16
439-251	2x1-1/2	1-3/8	13/32	.12
439-292	2-1/2x2	1-29/32	7/8	.22
439-337	3x1-1/2	1-15/16	29/32	.50
439-338	3x2	1-15/16	15/16	.45
439-339	3x2-1/2	1-15/16	5/8	.37
439-420	4x2	2-1/8	1-1/8	.83
439-422	4x3	2-1/8	1/2	.72

SPECIAL REINFORCED REDUCER (T.T.) BUSHING (Flush Style)

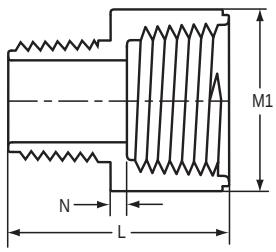
Mipt x SR Fipt



Part Number	Size	L	N	Approx. Wt. (Lbs.)
439-209SR	1-1/2x1/2	1-11/32	19/32	.13
439-210SR	1-1/2x3/4	1-11/32	19/32	.12
439-247SR	2x1/2	1-3/8	21/32	.18
439-248SR	2x3/4	1-3/8	5/8	.18
439-249SR	2x1	1-3/8	15/32	.19
439-420SR	4x2	2-1/8	1-1/8	.88

IPT ADAPTER

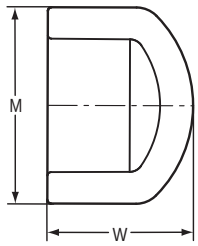
Mipt x Fipt



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
446-003	3/8	1-13/32	29/32	5/32	.02
446-012	1-1/4	2-3/16	2	5/32	.11
446-053	3/8x1/2	1-1/2	1-1/16	3/16	.03
446-074	1/2x3/4	1-17/32	1-5/16	5/32	.04

CAP

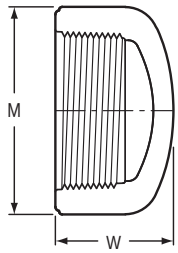
Socket



Part Number	Size	M	W	Approx. Wt. (Lbs.)
447-003	3/8	7/8	1	.01
447-005	1/2	1-3/32	1-1/16	.02
447-007	3/4	1-5/16	1-5/16	.04
447-010	1	1-9/16	1-9/16	.06
447-012	1-1/4	1-31/32	1-3/4	.09
447-015	1-1/2	2-1/4	1-29/32	.12
447-020	2	2-23/32	2-1/32	.17
447-025	2-1/2	3-5/16	2-9/16	.33
447-030	3	4	2-29/32	.49
447-040	4	5-1/16	3-1/8	.79
447-045F	4-1/2	5-7/16	3-5/8	.31
447-050	5	6-1/8	4-13/32	1.43
447-060	6	7-1/4	5	2.34
447-080	8	9-9/16	6-3/8	4.26
447-100F	10	11-13/16	5-1/4	5.22
447-120F	12	13-7/8	6-7/8	8.22
447-140F	14	15	7-3/8	8.75
447-160F	16	17-1/16	9	12.15
447-180F	18	19-1/8	9	17.58
447-200F	20	21-3/16	12-1/4	26.48
447-240F	24	25-5/16	14-1/8	40.26

CAP

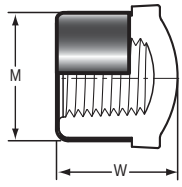
Fipt



Part Number	Size	M	W	Approx. Wt. (Lbs.)
448-003	3/8	15/16	25/32	.01
448-005	1/2	1-1/8	1-1/32	.02
448-007	3/4	1-11/32	1-1/16	.03
448-010	1	1-5/8	1-5/16	.06
448-012	1-1/4	2-1/16	1-1/2	.09
448-015	1-1/2	2-1/4	1-9/16	.11
448-020	2	2-3/4	1-23/32	.16
448-025	2-1/2	3-9/32	2-5/16	.35
448-030	3	4	2-13/32	.49
448-040	4	5-5/32	2-25/32	.76
448-050	5	6-11/32	3-3/32	1.39
448-060	6	7-5/16	3-5/32	1.59
448-080F	8	9-3/8	4-3/8	3.83
448-100F	10	11-5/8	5-3/4	7.44
448-120F	12	13-13/16	6-3/16	37.94

SPECIAL REINFORCED CAP

SR Fipt

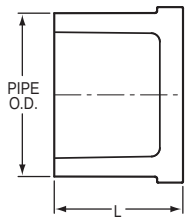


Part Number	Size	M	W	Approx. Wt. (Lbs.)
448-012SR	1-1/4	2-1/16	1-3/8	.09

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Progressive Products from Spears® Innovation and Technology

PLUG

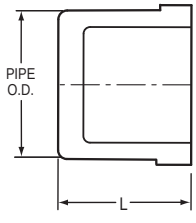
Spigot



Part Number	Size	L	Approx. Wt. (Lbs.)
449-003	3/8	31/32	.01
449-005	1/2	7/8	.02
449-007	3/4	1-1/8	.02
449-010	1	1-3/8	.05
449-012	1-1/4	1-17/32	.09
449-015	1-1/2	1-5/8	.11
449-020	2	1-3/4	.17
449-025	2-1/2	2-3/8	.35
449-030	3	2-3/32	.39
449-040	4	2-5/8	.76
449-060	6	3-1/2	1.74
449-060F	6	9-1/2	4.53
449-080F	8	10-15/16	8.55
449-100F	10	11-1/4	11.98
449-120F	12	13-7/8	18.15
449-140F	14	15-3/8	19.10
449-160F	16	17-1/2	32.07
449-180F	18	19	42.58
449-200F	20	23-1/4	63.91
449-240F	24	27-1/8	105.13

COUNTER SUNK PLUG

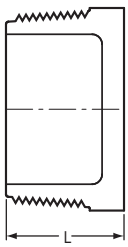
Spigot



Part Number	Size	L	Approx. Wt. (Lbs.)
449-007CS	3/4	1-1/4	.03
449-010CS	1	1-5/32	.04

PLUG

Mipt

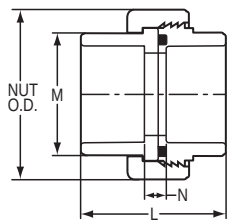


Part Number	Size	L	Approx. Wt. (Lbs.)
450-003	3/8	25/32	.01
450-005	1/2	13/16	.02
450-007	3/4	7/8	.02
450-010	1	1-7/32	.06
450-012	1-1/4	1-9/32	.07
450-015	1-1/2	1-11/32	.10
450-020	2	1-3/8	.15
450-025	2-1/2	1-31/32	.27
450-030	3	1-7/8	.39
450-040	4	2-1/8	.77
450-060	6	2-1/16	1.71
450-080F	8	9	8.33
450-100F	10	8-1/2	12.68
450-120F	12	10-7/8	19.62

UNION

Socket x Socket w/O-ring Seal

Pressure Rating 150 psi @ 73°F

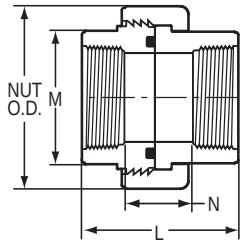


Part Number w/O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
BUNA-N	EPDM						
457-005	497-005	1/2	1-27/32	1-3/32	11/32	1-23/32	.08
457-007	497-007	3/4	2-3/16	1-5/16	11/32	1-31/32	.12
457-010	497-010	1	2-7/16	1-5/8	11/32	2-3/8	.18
457-012	497-012	1-1/4	2-29/32	1-31/32	13/32	2-11/16	.24
457-015	497-015	1-1/2	3-1/32	2-1/4	3/8	3-3/32	.32
457-020	497-020	2	3-9/32	2-23/32	17/32	3-5/8	.54
457-025	497-025	2-1/2	4-1/16	3-11/32	9/16	4-3/8	.85
457-030	497-030	3	4-11/32	4	11/16	5-3/32	1.26
457-040	497-040	4	4-5/8	5-1/32	19/32	6-3/16	1.78
457-060	497-060	6	6-7/8	7-9/32	13/16	8-7/8	5.22

UNION

Fipt x Fipt w/O-ring Seal

Pressure Rating 150 psi @ 73°F

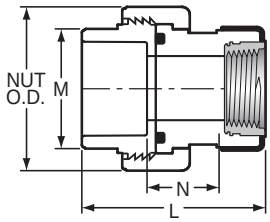


Part Number		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
w/O-ring Seal							
BUNA-N	EPDM						
458-005	498-005	1/2	1-25/32	1-3/32	5/16	1-23/32	.09
458-007	498-007	3/4	1-25/32	1-5/16	11/32	1-31/32	.12
458-010	498-010	1	2-1/8	1-5/8	11/32	2-3/8	.19
458-012	498-012	1-1/4	2-1/4	1-31/32	13/32	2-11/16	.24
458-015	498-015	1-1/2	2-9/32	2-1/4	3/8	3-3/32	.31
458-020	498-020	2	2-1/2	2-23/32	1/2	3-5/8	.47
458-025	498-025	2-1/2	3-5/32	3-11/32	9/16	4-3/8	.86
458-030	498-030	3	3-13/32	4	5/8	5-3/32	1.26
458-040	498-040	4	3-9/16	5-1/32	5/8	6-3/16	1.74
458-060	498-060	6	4-27/32	7-1/4	1-1/2	8-7/8	4.83

TRANSITION UNION

Socket x Fipt w/Metal Thread Insert and O-ring Seal

Pressure Rating 235 psi @ 73°F



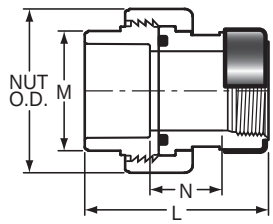
Part Number		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
w/O-ring Seal							
BUNA-N	EPDM						
459-010BR	499-010BR	1	2-13/16	1-7/8	1-1/32	2-7/8	.52
459-012BR	499-012BR	1-1/4	3-9/32	2-7/32	1-1/16	3-5/16	.68
459-015BR	499-015BR	1-1/2	3-1/2	2-9/16	1-3/32	3-17/32	.89
459-020BR	499-020BR	2	3-5/8	2-7/8	1-1/4	4-5/16	1.59

Not intended to convey or dispense water for human consumption through drinking or cooking

SPECIAL REINFORCED UNION

Socket x SR Fipt w/O-ring Seal

Pressure Rating 235 psi @ 73°F

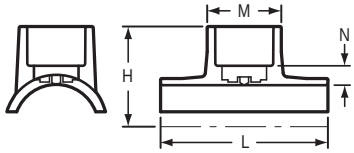


Part Number		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
w/O-ring Seal							
BUNA-N	EPDM						
459-002SR	499-002SR	1/4	2-1/8	7/8	29/32	1-11/16	.10
459-003SR	499-003SR	3/8	2-5/16	1	1	1-13/16	.06
459-005SR	499-005SR	1/2	2-9/32	1-9/32	21/32	1-31/32	.17
459-007SR	499-007SR	3/4	2-19/32	1-17/32	27/32	2-1/2	.28
459-010SR	499-010SR	1	2-15/16	1-11/16	7/8	2-7/8	.42
459-012SR	499-012SR	1-1/4	3-7/32	2-1/16	31/32	3-5/16	.55
459-015SR	499-015SR	1-1/2	3-7/16	2-9/16	1-1/16	3-9/16	.68
459-020SR	499-020SR	2	4-1/8	3	1-9/16	4-5/32	1.11
459-030SR	499-030SR	3	5-9/32	4-5/16	1-31/32	5-13/16	2.55
459-040SR	499-040SR	4	5-15/16	5-1/4	2-1/8	5-3/4	4.04

SADDLE

(IPS O.D. x Socket)

Non-Pressure Rated. Contact Spears® Technical Services for additional information

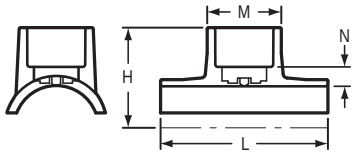


Part Number	Size	H	L	M	N	Approx. Wt. (Lbs.)
463-288	2-1/2x3/4	2-9/16	5-5/16	1-11/32	1/16	.24
463-333[1]	3x1/2	3-19/32	6-11/32	2-3/8	1-5/16	.65
463-335[1]	3x1	3-5/8	6-11/32	2-3/8	7/8	.67
463-336	3x1-1/4	3-21/32	6-5/16	2-3/8	21/32	.59

SADDLE (continued)

(IPS O.D. x Socket)

Non-Pressure Rated. Contact Spears® Technical Services for additional information



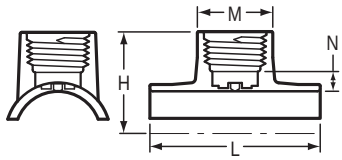
Part Number	Size	H	L	M	N	Approx. Wt. (Lbs.)
463-337	3x1-1/2	3-5/16	6-3/8	2-3/8	5/16	.52
463-338	3x2	5	6-5/16	2-3/4	1-7/8	.71
463-415	4x1/2	4-1/8	6-5/16	2-3/8	1-1/8	.65
463-417	4x1	4-7/32	6-5/16	2-3/8	13/16	.67
463-418	4x1-1/4	4-3/16	6-1/4	2-3/8	11/16	.60
463-419	4x1-1/2	3-3/4	6-1/4	2-13/32	1/4	.57
463-420	4x2	5-1/2	6-1/4	2-3/4	1-13/16	.73
463-485	5x1-1/2	5-3/8	7-1/8	2-25/32	1-5/32	1.05
463-486	5x2	5	7-1/8	2-3/4	9/32	.89
463-523[1]	6x1/2	4-5/16	6-15/32	2-3/8	1-1/4	.84
463-525	6x1	5-11/32	6-3/8	2-7/8	7/8	.86
463-526	6x1-1/4	5-3/8	6-5/16	2-3/8	3/4	.80
463-527	6x1-1/2	4-15/16	6-5/16	2-13/32	5/16	.69
463-528	6x2	6-9/16	6-5/16	2-3/4	1-7/8	.92
463-530[1]	6x3	5-15/16	11-15/16	5-1/16	5/8	2.79
463-532	6x4	5-1/2	11-15/16	5	1/4	1.95
463-573[1]	8x1/2	6-9/16	6-11/32	2-3/8	1-1/2	.93
463-575[1]	8x1	3-3/8	6-11/32	2-3/8	1-7/32	.95
463-576[1]	8x1-1/4	3-21/32	6-11/32	2-3/8	1	.84
463-577	8x1-1/2	6-7/32	6-5/16	2-3/8	19/32	.83
463-578	8x2	7-11/16	6-5/16	2-3/4	2	.96
463-580[1]	8x3	6	11-7/8	5	3/4	2.96
463-582	8x4	5-9/16	11-15/16	5-1/32	7/32	2.11
463-624	10x4	7-5/8	11-7/8	5	5/16	2.19

[1]Outlet sized with bushing

SADDLE

(IPS O.D. x Fipt)

Non-Pressure Rated. Contact Spears®
Technical Services for additional information

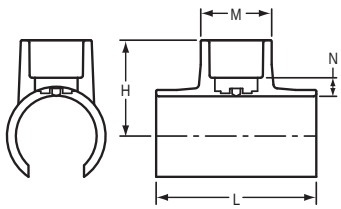


Part Number	Size	H	L	M	N	Approx. Wt. (Lbs.)
464-071	1/2x1/8	1	2-1/8	9/16	1/8	.03
464-097	3/4x1/8	1-1/8	2-1/8	9/16	5/32	.04
464-288	2-1/2x3/4	2-9/16	5-9/32	1-11/32	5/16	.24
464-337	3x1-1/2	3-9/32	6-5/16	2-3/8	13/32	.53
464-419	4x1-1/2	3-3/4	6-1/4	2-3/8	7/16	.56
464-486	5x2	4-15/16	7-1/16	2-3/4	1-3/32	1.00
464-527	6x1-1/2	4-15/16	6-5/16	2-3/8	3/8	.70
464-532	6x4	5-9/32	11-15/16	5	9/32	1.92
464-577	8x1-1/2	6-7/32	6-5/16	2-3/8	19/32	.79
464-582	8x4	6-1/4	11-7/8	5	1/4	2.16
464-624	10x4	7-5/16	11-7/8	5	1/4	2.04

SNAP-ON SADDLE

(IPS O.D. x Socket)

Non-Pressure Rated. Contact Spears®
Technical Services for additional information



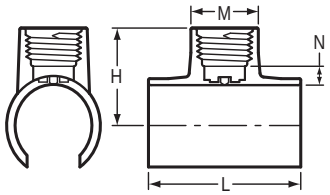
Part Number	Size	H	L	M	N	Approx. Wt. (Lbs.)
463-005	1/2x1/2	1-11/32	2-1/2	1-3/32	5/32	.05
463-007	3/4x3/4	1-3/4	3-1/8	1-5/16	7/32	.08
463-010	1x1	1-29/32	3-5/8	1-5/8	1/8	.14
463-012	1-1/4x1-1/4	2-1/4	4-1/4	2	11/32	.20
463-015	1-1/2x1-1/2	2-13/32	4-7/16	2-7/32	3/16	.25
463-020	2x2	2-23/32	5-1/4	2-11/16	7/32	.40
463-101	3/4x1/2	1-11/32	2-3/4	1-3/32	7/32	.06
463-130	1x1/2	1-13/32	3-1/2	1-3/32	1-3/16	.09

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SNAP-ON SADDLE

(IPS O.D. x Fipt)

Non-Pressure Rated. Contact Spears® Technical Services for additional information.

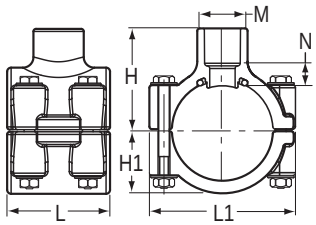


Part Number	Size	H	L	M	N	Approx. Wt. (Lbs.)
464-005	1/2x1/2	1-3/8	2-1/2	1-1/16	3/16	.05
464-007	3/4x3/4	1-3/4	3-5/32	1-5/16	13/32	.09
464-010	1x1	1-15/16	3-5/8	1-5/8	1/4	.15
464-001	3/4x1/2	1-7/16	2-3/8	1-3/32	3/16	.06
464-030	1x1/2	1-19/32	3-1/2	1-1/16	5/32	.08
464-031	1x3/4	1-7/16	3	1-1/4	3/16	.09
464-210	1-1/2x3/4	1-15/16	3-17/32	1-5/16	5/32	.15

CLAMP-ON SADDLE x SOCKET SINGLE OUTLET

Dimensions Also Applicable to
466**S**-XXX 466**E**-XXX 466**SE**-XXX

Pressure Rating
2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F

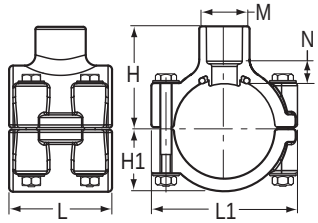


Part Number	Size	H	H1	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
466-247	2x1/2	2-3/8	1-1/2	2-7/16	3-7/16	1-3/16	5/16	3/4	8	.60
466-248	2x3/4	2-1/2	1-1/2	2-7/16	3-7/16	1-3/8	5/16	7/8	8	.61
466-249	2x1	2-5/8	1-1/2	2-7/16	3-7/16	1-11/16	5/16	1-1/8	8	.63
466-250	2x1-1/4	2-3/4	1-1/2	2-7/16	3-7/16	2-1/16	5/16	1-1/2	8	.71
466-251	2x1-1/2	2-15/16	1-1/2	2-7/16	3-7/16	2-3/8	3/8	1-1/2	8	.71
466-291	2-1/2x1-1/2	3-3/16	1-11/16	4-1/16	4	2-3/8	3/8	1-3/4	8	1.02
466-333	3x1/2	3-5/16	2-1/16	3	4-5/8	1-3/8	13/16	7/8	8	.88
466-334	3x3/4	3-1/16	2-1/16	3	4-5/8	1-3/8	9/32	7/8	8	.86

CLAMP-ON SADDLE x SOCKET SINGLE OUTLET (continued)

Dimensions Also Applicable to
466**S**-XXX 466**E**-XXX 466**SE**-XXX

Pressure Rating
2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number	Size	H	H1	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
466-335	3x1	3-3/16	2-1/16	3	4-5/8	1-11/16	5/16	1-1/8	8	.87
466-336	3x1-1/4	4-1/32	2-1/16	4-3/32	4-5/8	3	1-1/32	2-1/4	8	1.47
466-337	3x1-1/2	4-1/32	2-1/16	4-3/32	4-5/8	3	29/32	2-1/4	8	1.41
466-338	3x2	3-5/8	2-1/16	4-3/32	4-5/8	3	3/8	2-1/4	8	1.25
466-415	4x1/2	4-3/32	2-5/8	3	5-9/16	2-3/8	31/32	1-1/8	8	1.31
466-416	4x3/4	4-3/32	2-5/8	3	5-9/16	2-3/8	27/32	1-1/8	8	1.28
466-417	4x1	3-13/16	2-5/8	3	5-5/8	1-11/16	7/16	1-1/8	8	1.24
466-418	4x1-1/4	4-13/32	2-5/8	4-3/32	5-5/8	2-3/8	29/32	1-3/4	8	1.70
466-419	4x1-1/2	4-1/8	2-5/8	4-3/32	5-9/16	2-3/8	1/2	1-3/4	8	1.63
466-420	4x2	4-3/16	2-5/8	4-1/8	5-5/8	3	7/16	2-1/4	8	1.70
466-421	4x2-1/2	5	2-5/8	5-7/16	5-23/32	4-9/32	3/4	3	8	2.82
466-422	4x3	4-5/8	2-19/32	5-7/16	5-11/16	4-1/4	1/2	3	8	2.41
466-523	6x1/2	5-13/32	3-7/8	3	7-3/4	1-11/16	1-7/32	1-1/8	10	2.35
466-524	6x3/4	5-7/16	3-7/8	3	7-3/4	1-11/16	1-1/8	1-1/8	10	2.33
466-525	6x1	5-1/8	3-7/8	3	7-15/16	1-11/16	11/16	1-1/8	10	2.29
466-526	6x1-1/4	5-15/16	3-7/8	4-1/8	7-3/4	3	1-3/8	2-1/4	10	3.26
466-527[1]	6x1-1/2	5-23/32	3-7/8	4-1/8	7-31/32	3	1-1/32	2-1/4	10	3.20
466-528	6x2	5-1/2	3-7/8	4-1/8	7-3/4	3	11/16	2-1/4	10	3.04
466-529	6x2-1/2	6-7/16	3-7/8	6	7-15/16	4-1/4	1-1/8	3	10	4.75
466-530	6x3	5-15/16	3-7/8	6	7-15/16	4-1/4	25/32	3	10	4.33
466-532	6x4	6	3-29/32	6	7-15/16	5-3/16	5/8	4	10	5.12
466-573	8x1/2	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-3/16	4	10	9.35
466-574	8x3/4	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-3/4	4	10	9.36
466-575	8x1	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-5/8	4	10	9.37
466-576	8x1-1/4	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-1/2	4	10	9.39
466-577	8x1-1/2	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-3/8	4	10	9.32

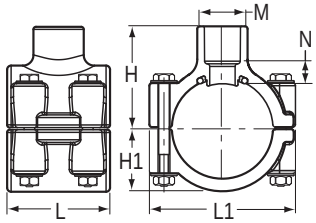
[1] Outlet sized with bushing

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Progressive Products from Spears® Innovation and Technology

CLAMP-ON SADDLE x SOCKET SINGLE OUTLET (continued)

Dimensions Also Applicable to
466**S**-XXX 466**E**-XXX 466**SE**-XXX

Pressure Rating
2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number	Size	H	H1	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
466-578	8x2	7-11/16	4-7/8	8-1/2	10-1/8	5-1/4	1-7/8	4	10	9.17
466-579	8x2-1/2	8-1/8	4-7/8	8-1/2	10-1/8	5-1/4	1-11/16	4	10	9.24
466-580	8x3	7-11/16	4-7/8	8-1/2	10-1/8	5-1/4	1-7/16	4	10	9.15
466-582	8x4	7-5/16	4-7/8	8-1/2	10-1/8	5-1/4	11/16	4	10	8.35
466-585	8x6	8-3/32	4-7/8	8-1/2	10-1/8	7-5/8	11/16	6	10	9.47
466-620[1]	10x1-1/2	8-7/8	6-1/8	8-1/2	11-7/8	5-1/4	3-1/4	4	10	12.78
466-624	10x4	8-15/32	6-1/32	8-1/2	12-5/16	5-1/4	13/16	4	10	11.79
466-626	10x6	9-1/8	6	8-7/16	12	7-5/8	1-1/8	6	10	12.86
466-664	12x4	9-9/16	7-5/32	8-1/2	14-5/16	5-1/4	7/8	4	10	15.48
466-666	12x6	10-3/8	7-5/32	8-1/2	14-5/16	7-5/8	7/8	6	10	16.30

[1]Outlet sized with bushing

1) Clamp-On Saddle Standard Hardware: Zinc Bolts w/BUNA-N O-ring Seal
   e.g.) Part Number 466-247 = 2x1/2 PVC Clamp On Saddle, Socket, BUNA-N O-ring, Zinc Bolts.

2) Clamp-On Saddles w/Stainless Steel (SS) Bolts,Add The Letter **"S"** Before The Dash.
   e.g.) Part Number 466**S**-247 = 2x1/2 PVC Clamp On Saddle, Socket, BUNA-N O-ring, Stainless Steel Bolts.

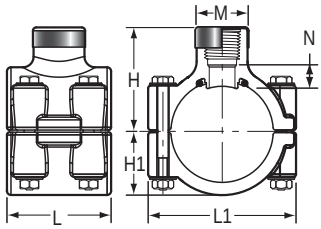
3) Clamp-On Saddles Standard Hardware: Zinc Bolts w/EPDM O-ring Seal, Add The Letter **"E"** Before The Dash.
   e.g.) Part Number 466**E**-247 = 2x1/2 PVC Clamp-On Saddle, Socket, EPDM O-ring, Zinc Bolts.

4) Clamp-On Saddles w/Stainless Steel Bolts & EPDM O-ring Seal, Add The Letter **"SE"** Before The Dash.
   e.g.) Part Number 466**SE**-247 = 2x1/2 PVC Clamp On Saddle, Socket EPDM O-ring, Stainless Steel Bolts.

CLAMP-ON SADDLE x SR FIPT SINGLE OUTLET

Dimensions Also Applicable to
467**S**-XXXSR 467**E**-XXXSR 467**SE**-XXXSR

Pressure Rating
2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



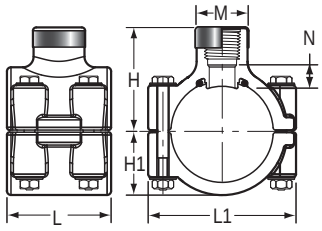
Part Number	Size	H	H1	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
467-247SR	2x1/2	2-3/8	1-1/2	2-7/16	3-7/16	1-3/16	5/16	3/4	8	.62
467-248SR	2x3/4	2-1/2	1-1/2	2-7/16	3-7/16	1-3/8	5/8	7/8	8	.63
467-249SR	2x1	2-5/8	1-1/2	2-7/16	3-7/16	1-11/16	9/16	1-1/8	8	.65
467-250SR	2x1-1/4	2-3/4	1-1/2	2-7/16	3-7/16	2-1/16	11/16	1-1/2	8	.57
467-251SR	2x1-1/2	2-15/16	1-1/2	2-7/16	3-7/16	2-3/8	3/4	1-1/2	8	.76
467-291SR	2-1/2x1-1/2	3-3/16	1-11/16	4-1/16	4	2-3/8	13/16	1-3/4	8	1.09
467-333SR	3x1/2	3-5/16	2-1/16	3	4-5/8	1-3/8	15/16	7/8	8	.89
467-334SR	3x3/4	3-1/16	2-1/16	3	4-5/8	1-3/8	9/16	7/8	8	.88
467-335SR	3x1	3-3/16	2-1/16	3	4-5/8	1-11/16	9/16	1-1/8	8	.90
467-336SR	3x1-1/4	4-1/32	2-1/16	4-3/32	4-5/8	3	1-5/16	2-1/4	8	1.52
467-337SR	3x1-1/2	4-1/32	2-1/16	4-3/32	4-5/8	3	2-11/16	2-1/4	8	1.48
467-338SR	3X2	3-5/8	2-1/16	4-3/32	4-5/8	3	7/8	2-1/4	8	1.34
467-415SR	4x1/2	4-3/32	2-5/8	3	5-9/16	2-3/8	1-1/8	1-1/8	8	1.32
467-416SR	4x3/4	4-3/32	2-5/8	3	5-9/16	2-3/8	1-1/8	1-1/8	8	1.31
467-417SR	4x1	3-13/16	2-5/8	3	5-5/8	1-11/16	11/16	1-1/8	8	1.28
467-418SR	4x1-1/4	4-13/32	2-5/8	4-3/32	5-5/8	2-3/8	1-7/32	1-3/4	8	1.75
467-419SR	4x1-1/2	4-1/8	2-5/8	4-3/32	5-9/16	2-3/8	15/16	1-3/4	8	1.70
467-420SR	4x2	4-3/16	2-5/8	4-1/8	5-5/8	3	15/16	2-1/4	8	1.80
467-421SR	4x2-1/2	5	2-5/8	5-7/16	5-23/32	4-9/32	1-7/32	3	8	2.92
467-422SR	4x3	4-5/8	2-19/32	5-7/16	5-11/16	4-1/4	31/32	3	8	2.59
467-523SR	6x1/2	5-13/32	3-7/8	3	7-3/4	1-11/16	1-3/8	1-1/8	10	2.37
467-524SR	6x3/4	5-7/16	3-7/8	3	7-3/4	1-11/16	1-3/8	1-1/8	10	2.35
467-525SR	6x1	5-1/8	3-7/8	3	7-15/16	1-11/16	15/16	1-1/8	10	2.32
467-526SR	6x1-1/4	5-15/16	3-7/8	4-1/8	7-3/4	3	1-11/16	2-1/4	10	3.32
467-527SR	6x1-1/2	5-15/16	3-7/8	4-1/8	7-3/4	3	1-3/4	2-1/4	10	3.27
467-528SR	6x2	5-1/2	3-7/8	4-1/8	7-3/4	3	1-7/32	2-1/4	10	3.14
467-529SR	6x2-1/2	6-7/16	3-7/8	6	7-15/16	4-1/4	1-9/16	3	10	4.85
467-530SR	6x3	5-15/16	3-7/8	6	7-15/16	4-1/4	1-1/4	3	10	4.50

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Progressive Products from Spears® Innovation and Technology

CLAMP-ON SADDLE x SR FIPT SINGLE OUTLET (continued)

Dimensions Also Applicable to
467**S**-XXXSR 467**E**-XXXSR 467**SE**-XXXSR

Pressure Rating
2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number	Size	H	H1	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
467-532SR	6x4	6	3-29/32	6	7-15/16	5-3/16	1-3/8	4	10	5.48
467-573SR	8x1/2	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	3	4	10	9.42
467-574SR	8x3/4	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	3	4	10	9.43
467-575SR	8x1	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-13/16	4	10	9.43
467-576SR	8x1-1/4	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-3/4	4	10	9.56
467-577SR	8x1-1/2	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-3/4	4	10	9.39
467-578SR	8x2	7-11/16	4-7/8	8-1/2	10-1/8	5-1/4	2-3/8	4	10	9.21
467-579SR	8x2-1/2	8-1/8	4-7/8	8-1/2	10-1/8	5-1/4	2-1/2	4	10	9.15
467-580SR	8x3	7-11/16	4-7/8	8-1/2	10-1/8	5-1/4	1-15/16	4	10	10.06
467-582SR	8x4	7-5/16	4-7/8	8-1/2	10-1/8	5-1/4	1-1/2	4	10	8.51
467-585SR	8x6	8-3/32	4-7/8	8-1/2	10-1/8	7-5/8	2-3/32	6	10	10.20
467-624SR	10x4	8-15/32	6-1/32	8-1/2	12-5/16	5-1/4	2-3/16	4	10	12.09
467-626SR	10x6	9-9/32	6-1/32	8-1/2	12-5/16	7-5/8	3-3/16	6	10	13.45
467-664SR	12x4	9-9/16	7-5/32	8-1/2	14-5/16	5-1/4	1-5/8	4	10	15.69
467-666SR	12x6	10-3/8	7-5/32	8-1/2	14-5/16	7-5/8	2-1/4	6	10	16.92

1) Clamp-On Saddle Standard Hardware: Zinc Bolts w/BUNA-N O-ring Seal
e.g.) Part Number 467-247SR = 2x1/2 PVC Clamp On Saddle, Socket, BUNA-N O-ring, Zinc Bolts.

2) Clamp-On Saddles w/Stainless Steel (SS) Bolts,Add The Letter **"S"** Before The Dash.
e.g.) Part Number 467**S**-247SR = 2x1/2 PVC Clamp On Saddle, Socket, BUNA-N O-ring, Stainless Steel Bolts.

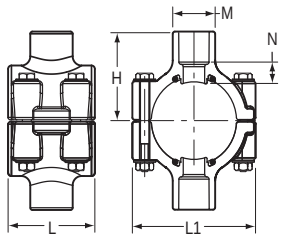
3) Clamp-On Saddles Standard Hardware: Zinc Bolts w/EPDM O-ring Seal, Add The Letter **"E"** Before The Dash.
e.g.) Part Number 467**E**-247SR = 2x1/2 PVC Clamp-On Saddle, Socket, EPDM O-ring, Zinc Bolts.

4) Clamp-On Saddles w/Stainless Steel Bolts & EPDM O-ring Seal, Add The Letter **"SE"** Before The Dash.
e.g.) Part Number 467**SE**-247SR = 2x1/2 PVC Clamp On Saddle, Socket EPDM O-ring, Stainless Steel Bolts.

CLAMP-ON SADDLE x SOCKET DOUBLE OUTLET

Dimensions Also Applicable to
468**S**-Xxx 468**E**-Xxx 468**SE**-Xxx

Pressure Rating
2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



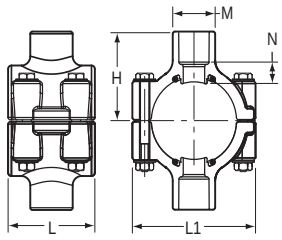
Part Number	Size	H	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
468-247	2x1/2	2-3/8	2-7/16	3-7/16	1-3/16	5/16	3/4	8	.63
468-248	2x3/4	2-1/2	2-7/16	3-7/16	1-3/8	5/16	7/8	8	.65
468-249	2x1	2-5/8	2-7/16	3-7/16	1-11/16	5/16	1-1/8	8	.68
468-250	2x1-1/4	2-3/4	2-7/16	3-7/16	2-1/16	5/16	1-1/2	8	.73
468-251	2x1-1/2	2-15/16	2-7/16	3-7/16	2-3/8	3/8	1-1/2	8	.85
468-291	2-1/2x1-1/2	3-3/16	4-1/16	4	2-3/8	3/8	1-3/4	8	1.15
468-333	3x1/2	3-5/16	3	4-5/8	1-3/8	13/16	7/8	8	.93
468-334	3x3/4	3-1/16	3	4-5/8	1-3/8	9/32	7/8	8	.89
468-335	3x1	3-3/16	3	4-5/8	1-11/16	5/16	1-1/8	8	.91
468-336	3x1-1/4	4-1/32	4-3/32	4-5/8	3	1-1/32	2-1/4	8	1.93
468-337	3x1-1/2	4-1/32	4-3/32	4-5/8	3	29/32	2-1/4	8	1.80
468-338	3x2	3-5/8	4-3/32	4-5/8	3	3/8	2-1/4	8	1.48
468-415	4x1/2	4-3/32	3	5-9/16	2-3/8	31/32	1-1/8	8	1.43
468-416	4x3/4	4-3/32	3	5-9/16	2-3/8	27/32	1-1/8	8	1.37
468-417	4x1	3-13/16	3	5-5/8	1-11/16	7/16	1-1/8	8	1.30
468-418	4x1-1/4	4-13/32	4-3/32	5-5/8	2-3/8	29/32	1-3/4	8	1.91
468-419	4x1-1/2	4-1/8	4-3/32	5-9/16	2-3/8	1/2	1-3/4	8	1.76
468-420	4x2	4-3/16	4-1/8	5-5/8	3	7/16	2-1/4	8	1.91
468-421	4x2-1/2	5	5-7/16	5-23/32	4-9/32	3/4	3	8	3.77
468-422	4x3	4-5/8	5-7/16	5-11/16	4-1/4	1/2	3	8	2.95
468-523	6x1/2	5-13/32	3	7-3/4	1-11/16	1-7/32	1-1/8	10	2.48
468-524	6x3/4	5-7/16	3	7-3/4	1-11/16	1-1/8	1-1/8	10	2.44
468-525	6x1	5-1/8	3	7-15/16	1-11/16	11/16	1-1/8	10	2.35
468-526	6x1-1/4	5-15/16	4-1/8	7-3/4	3	1-3/8	2-1/4	10	3.70
468-527	6x1-1/2	5-15/16	4-1/8	7-3/4	3	1-1/4	2-1/4	10	3.57
468-528	6x2	5-1/2	4-1/8	7-3/4	3	11/16	2-1/4	10	3.26
468-529	6x2-1/2	6-7/16	6	7-15/16	4-1/4	1-1/8	3	10	5.61
468-530	6x3	5-15/16	6	7-15/16	4-1/4	25/32	3	10	4.78

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Progressive Products from Spears® Innovation and Technology

CLAMP-ON SADDLE x SOCKET DOUBLE OUTLET (continued)

Dimensions Also Applicable to
468**S**-Xxx 468**E**-Xxx 468**SE**-Xxx

Pressure Rating
2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number	Size	H	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
468-532	6x4	6	6	7-15/16	5-3/16	5/8	4	10	5.63
468-573	8x1/2	8-3/32	8-1/2	10-1/8	5-1/4	2-3/16	4	10	11.07
468-574	8x3/4	8-3/32	8-1/2	10-1/8	5-1/4	2-3/4	4	10	11.04
468-575	8x1	8-3/32	8-1/2	10-1/8	5-1/4	2-5/8	4	10	11.06
468-576	8x1-1/4	8-3/32	8-1/2	10-1/8	5-1/4	2-1/2	4	10	11.08
468-577	8x1-1/2	8-3/32	8-1/2	10-1/8	5-1/4	2-3/8	4	10	10.96
468-578	8x2	7-11/16	8-1/2	10-1/8	5-1/4	1-7/8	4	10	10.64
468-579	8x2-1/2	8-1/8	8-1/2	10-1/8	5-1/4	1-11/16	4	10	10.78
468-580	8x3	7-11/16	8-1/2	10-1/8	5-1/4	1-7/16	4	10	10.62
468-582	8x4	7-5/16	8-1/2	10-1/8	5-1/4	11/16	4	10	9.02
468-585	8x6	8-3/32	8-1/2	10-1/8	7-5/8	11/16	6	10	11.25
468-624	10x4	8-15/32	8-1/2	12-5/16	5-1/4	13/16	4	10	12.37
468-626	10x6	9-9/32	8-1/2	12-5/16	7-5/8	13/16	6	10	14.51
468-664	12x4	9-9/16	8-1/2	14-5/16	5-1/4	7/8	4	10	16.06
468-666	12x6	10-3/8	8-1/2	14-5/16	7-5/8	7/8	6	10	17.70

1) Clamp-On Saddle Standard Hardware: Zinc Bolts w/BUNA-N O-ring Seal
e.g.) Part Number 468-247 = 2x1/2 PVC Clamp On Saddle, Socket, BUNA-N O-ring, Zinc Bolts.

2) Clamp-On Saddles w/Stainless Steel (SS) Bolts,Add The Letter **"S"** Before The Dash.
e.g.) Part Number 468**S**-247 = 2x1/2 PVC Clamp On Saddle, Socket, BUNA-N O-ring, Stainless Steel Bolts.

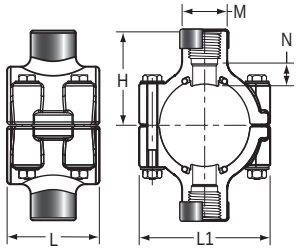
3) Clamp-On Saddles Standard Hardware: Zinc Bolts w/EPDM O-ring Seal, Add The Letter **"E"** Before The Dash.
e.g.) Part Number 468**E**-247 = 2x1/2 PVC Clamp-On Saddle, Socket, EPDM O-ring, Zinc Bolts.

4) Clamp-On Saddles w/Stainless Steel Bolts & EPDM O-ring Seal, Add The Letter **"SE"** Before The Dash.
e.g.) Part Number 468**SE**-247 = 2x1/2 PVC Clamp On Saddle, Socket EPDM O-ring, Stainless Steel Bolt

CLAMP-ON SADDLE x SR FIPT DOUBLE OUTLET

Dimensions Also Applicable to
469**S**-XXXSR 469**E**-XXXSR 469**SE**-XXXSR

Pressure Rating
2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



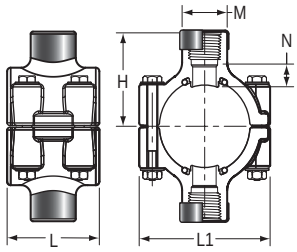
Part Number	Size	H	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
469-247SR	2x1/2	2-3/8	2-7/16	3-7/16	1-3/16	5/16	3/4	8	.66
469-248SR	2x3/4	2-1/2	2-7/16	3-7/16	1-3/8	5/16	7/8	8	.67
469-249SR	2x1	2-5/8	2-7/16	3-7/16	1-11/16	5/16	1-1/8	8	.73
469-250SR	2x1-1/4	2-3/4	2-7/16	3-7/16	2-1/16	5/16	1-1/2	8	.79
469-251SR	2x1-1/2	2-15/16	2-7/16	3-7/16	2-3/8	3/8	1-1/2	8	.93
469-291SR	2-1/2x1-1/2	3-3/16	4-1/16	4	2-3/8	3/8	1-3/4	8	1.30
469-333SR	3x1/2	3-5/16	3	4-5/8	1-3/8	13/16	7/8	8	.96
469-334SR	3x3/4	3-1/16	3	4-5/8	1-3/8	9/32	7/8	8	.93
469-335SR	3x1	3-3/16	3	4-5/8	1-11/16	5/16	1-1/8	8	.98
469-336SR	3x1-1/4	4-1/32	4-3/32	4-5/8	3	1-1/32	2-1/4	8	2.04
469-337SR	3x1-1/2	4-1/32	4-3/32	4-5/8	3	2-11/16	2-1/4	8	1.94
469-338SR	3x2	3-5/8	4-3/32	4-5/8	3	3/8	2-1/4	8	1.67
469-415SR	4x1/2	4-3/32	3	5-9/16	2-3/8	31/32	1-1/8	8	1.46
469-416SR	4x3/4	4-3/32	3	5-9/16	2-3/8	27/32	1-1/8	8	1.44
469-417SR	4x1	3-13/16	3	5-5/8	1-11/16	7/16	1-1/8	8	1.37
469-418SR	4x1-1/4	4-13/32	4-3/32	5-5/8	2-3/8	29/32	1-3/4	8	2.00
469-419SR	4x1-1/2	4-1/8	4-3/32	5-9/16	2-3/8	1/2	1-3/4	8	1.89
469-420SR	4x2	4-3/16	4-1/8	5-5/8	3	7/16	2-1/4	8	2.10
469-421SR	4x2-1/2	5	5-7/16	5-23/32	4-9/32	3/4	3	8	3.98
469-422SR	4x3	4-5/8	5-7/16	5-11/16	4-1/4	1/2	3	8	3.31
469-523SR	6x1/2	5-13/32	3	7-3/4	1-11/16	1-7/32	1-1/8	10	2.51
469-524SR	6x3/4	5-7/16	3	7-3/4	1-11/16	1-1/8	1-1/8	10	2.48
469-525SR	6x1	5-1/8	3	7-15/16	1-11/16	11/16	1-1/8	10	2.42
469-526SR	6x1-1/4	5-15/16	4-1/8	7-3/4	3	1-3/8	2-1/4	10	3.81
469-527SR	6x1-1/2	5-15/16	4-1/8	7-3/4	3	1-1/4	2-1/4	10	3.71
469-528SR	6x2	5-1/2	4-1/8	7-3/4	3	11/16	2-1/4	10	3.45
469-529SR	6x2-1/2	6-7/16	6	7-15/16	4-1/4	1-1/8	3	10	5.82
469-530SR	6x3	5-15/16	6	7-15/16	4-1/4	25/32	3	10	5.12

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Progressive Products from Spears® Innovation and Technology

CLAMP-ON SADDLE x SR FIPT DOUBLE OUTLET (continued)

Dimensions Also Applicable to
469**S**-XXXSR 469**E**-XXXSR 469**SE**-XXXSR

Pressure Rating
2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number	Size	H	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
469-532SR	6x4	6	6	7-15/16	5-3/16	5/8	4	10	10
469-573SR	8x1/2	8-3/32	8-1/2	10-1/8	5-1/4	2-3/16	4	10	10
469-574SR	8x3/4	8-3/32	8-1/2	10-1/8	5-1/4	2-3/4	4	10	10
469-575SR	8x1	8-3/32	8-1/2	10-1/8	5-1/4	2-5/8	4	10	10
469-576SR	8x1-1/4	8-3/32	8-1/2	10-1/8	5-1/4	2-1/2	4	10	10
469-577SR	8x1-1/2	8-3/32	8-1/2	10-1/8	5-1/4	2-3/8	4	10	10
469-578SR	8x2	7-11/16	8-1/2	10-1/8	5-1/4	1-7/8	4	10	10
469-579SR	8x2-1/2	8-1/8	8-1/2	10-1/8	5-1/4	1-11/16	4	10	10
469-580SR	8x3	7-11/16	8-1/2	10-1/8	5-1/4	1-7/16	4	10	10
469-582SR	8x4	7-5/16	8-1/2	10-1/8	5-1/4	11/16	4	10	10
469-585SR	8x6	8-3/32	8-1/2	10-1/8	7-5/8	11/16	6	10	10
469-624SR	10x4	8-15/32	8-1/2	12-5/16	5-1/4	13/16	4	10	10
469-626SR	10x6	9-9/32	8-1/2	12-5/16	7-5/8	13/16	6	10	10
469-664SR	12x4	9-9/16	8-1/2	14-5/16	5-1/4	7/8	4	10	10
469-666SR	12x6	10-3/8	8-1/2	14-5/16	7-5/8	7/8	6	10	10

1) Clamp-On Saddle Standard Hardware: Zinc Bolts w/BUNA-N O-ring Seal
e.g.) Part Number 469-247SR = 2x1/2 PVC Clamp On Saddle, Socket, BUNA-N O-ring, Zinc Bolts.

2) Clamp-On Saddles w/Stainless Steel (SS) Bolts,Add The Letter **"S"** Before The Dash.
e.g.) Part Number 469**S**-247SR = 2x1/2 PVC Clamp On Saddle, Socket, BUNA-N O-ring, Stainless Steel Bolts.

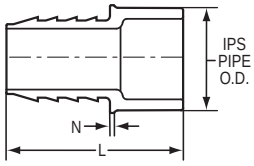
3) Clamp-On Saddles Standard Hardware: Zinc Bolts w/EPDM O-ring Seal, Add The Letter **"E"** Before The Dash.
e.g.) Part Number 469**E**-247SR = 2x1/2 PVC Clamp-On Saddle, Socket, EPDM O-ring, Zinc Bolts.

4) Clamp-On Saddles w/Stainless Steel Bolts & EPDM O-ring Seal, Add The Letter **"SE"** Before The Dash.
e.g.) Part Number 469**SE**-247SR = 2x1/2 PVC Clamp On Saddle, Socket EPDM O-ring, Stainless Steel Bolt

INSERT ADAPTER (PVC White)

Insert x I.P.S. Spigot Adapter

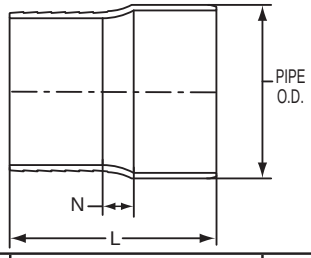
ASTM D 2609



Part Number	Size	L	N	Approx. Wt. (Lbs.)
460-005	1/2	2-7/16	7/32	.03
460-007	3/4	2-23/32	7/32	.04
460-010	1	2-9/16	1/16	.07
460-012	1-1/4	3-1/32	1/4	.11
460-015	1-1/2	3-5/16	5/16	.12
460-020	2	3-1/2	3/8	.19
460-030	3	4-11/16	7/16	.58
460-040	4	5-11/32	5/16	.73

INSERT ADAPTER (PVC White)

Insert x I.P.S. Spigot



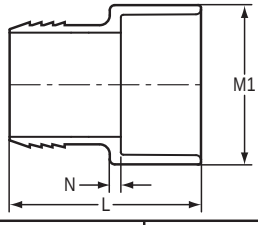
Part Number	Size	L	N	Approx. Wt. (Lbs.)
1432-060	6	7-27/32	1	1.69
1432-080*	8	9-7/8	5/8	5.23

***Fabricated**

INSERT ADAPTER

Insert x Socket

ASTM D 2609

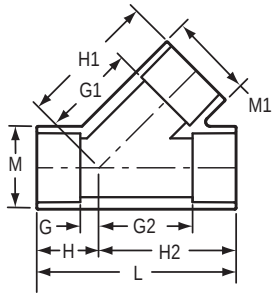


Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
474-005	1/2	2-3/8	1-1/16	1/8	.03
474-007	3/4	2-7/16	1-5/16	5/32	.05
474-010	1	2-5/8	1-5/8	1/8	.07
474-012	1-1/4	2-11/16	2	3/16	.10
474-015	1-1/2	3-1/16	2-1/4	3/16	.14
474-020	2	3	2-11/16	3/16	.17
474-030	3	4-3/4	4	5/16	.51
474-040	4	5-5/8	5	3/8	.81

WYE

Socket x Socket x Socket

Pressure Rating
1/2" -2" 235 psi @ 73°F
2-1/2" -6" 150 psi @ 73°F
8" & Up 100 psi @ 73°F



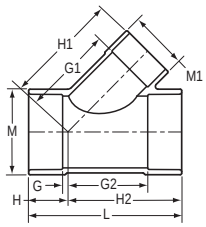
Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
475-005	1/2	1/4	1-3/16	1-3/16	1-1/8	2-1/16	2-1/16	3-3/16	1-5/32	1-5/32	.12
475-007	3/4	5/16	1-3/8	1-3/8	1-5/16	2-3/8	2-3/8	3-23/32	1-3/8	1-3/8	.18
475-010	1	7/16	1-7/8	1-7/8	1-13/32	2-29/32	2-29/32	4-13/32	1-5/8	1-5/8	.23
475-012	1-1/4	3/8	2-1/4	2-1/4	1-5/8	3-1/2	3-1/2	5-1/8	2-1/16	2-1/16	.50
475-015	1-1/2	9/16	2-19/32	2-19/32	1-7/8	3-29/32	3-29/32	5-25/32	2-7/32	2-7/32	.47
475-020	2	19/32	3-5/16	3-5/16	1-31/32	4-11/16	4-11/16	6-5/8	2-23/32	2-23/32	.70
475-025[1]	2-1/2	11/16	4-5/32	4-5/32	2-7/16	5-29/32	5-27/32	8-9/32	3-11/32	3-11/32	1.40
475-030	3	7/8	4-7/8	4-25/32	2-3/4	6-3/4	6-21/32	9-13/32	4	4	2.03
475-040	4	1-1/4	5-7/8	5-7/8	3-9/32	7-29/32	7-7/8	11-5/16	5-1/32	5-1/32	3.35
475-050F	5	3-3/4	9-3/8	9-3/8	6-3/4	12-3/8	12-3/8	19-1/8	6-1/16	6-1/16	13.26
475-060	6	1-5/32	8-25/32	8-3/16	4-3/16	11-25/32	11-3/16	15-3/8	7-9/16	7-9/16	12.01
475-080	8	1-15/16	11-11/32	11-11/32	5-31/32	15-11/32	15-11/32	21-5/16	9-3/4	9-3/4	25.44
475-080F	8	5-5/8	14-5/16	14-5/16	9-7/8	18-9/16	18-9/16	28-7/16	9-1/4	9-1/4	25.46
475-100	10	2-1/2	16-7/8	13-31/32	7-1/2	22-1/8	18-31/32	26-15/32	11-9/16	11-9/16	26.92
475-100F	10	6-9/16	17-1/4	17-1/4	11-13/16	22-1/2	22-1/2	34-5/16	11-1/2	11-1/2	45.11
475-120	12	2-11/16	16-1/8	16-7/32	8-3/4	22-7/32	22-9/32	31-1/32	13-21/32	13-21/32	41.85
475-120F	12	7-5/16	20-1/16	20-1/16	13-9/16	26-5/16	26-5/16	39-7/8	13-9/16	13-9/16	63.02
475-140F	14	7-3/16	21-3/16	21-3/16	14-3/16	28-3/16	28-3/16	42-3/8	14-7/8	14-7/8	90.24
475-160F	16	8-3/4	24-3/4	24-3/4	16-3/4	32-3/4	32-3/4	49-1/2	17	17	93.06
475-180F	18	9-7/16	27-7/16	27-7/16	18-7/16	36-7/16	36-7/16	54-7/8	19-1/8	19-1/8	151.20
475-200F	20	11-7/16	30-5/16	30-5/16	21-7/16	40-5/16	40-5/16	61-3/4	21-3/16	21-3/16	191.78
475-240F	24	11	35	35	23	47	47	70	25-3/8	25-3/8	420.00

[1] Outlet sized with bushing

REDUCING WYE

Socket x Socket x Socket

Pressure Rating
1/2" -2" 235 psi @ 73°F
2-1/2" -6" 150 psi @ 73°F
8" & Up 100 psi @ 73°F



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
475-101[1]	3/4x3/4x1/2	5/16	2-5/32	1-3/8	1-5/16	2-15/16	2-3/8	3-11/16	1-3/8	1-3/8	.21
475-131[1]	1x1x3/4	11/32	2	1-3/4	1-15/32	3-9/32	2-7/8	4-11/32	1-23/32	1-23/32	.36
475-167[1]	1-1/4x1-1/4x3/4	3/8	2-3/4	2-1/4	1-5/8	3-3/4	3-1/2	5-1/8	2-1/16	2-1/16	.63
475-168[1]	1-1/4x1-1/4x1	3/8	2-5/8	2-1/4	1-5/8	3-3/4	3-1/2	5-1/8	2-1/16	2-1/16	.58
475-210[1]	1-1/2x1-1/2x3/4	1/2	3-1/2	2-9/16	1-7/8	4-1/2	3-15/16	5-13/16	2-11/32	2-11/32	.82
475-211[1]	1-1/2x1-1/2x1	1/2	3	2-9/16	1-7/8	4-5/32	3-15/16	5-13/16	2-11/32	2-11/32	.84
475-212[1]	1-1/2x1-1/2x1-1/4	1/2	3-1/4	2-9/16	1-7/8	4-1/2	3-15/16	5-13/16	2-11/32	2-11/32	.77
475-248[1]	2x2x3/4	5/8	4-1/4	3-1/4	2-1/8	5-1/8	4-3/4	6-7/8	2-7/8	2-7/8	1.41
475-249[1]	2x2x1	15/32	4-3/32	3-11/32	2	5-1/8	4-7/8	6-7/8	2-7/8	2-7/8	1.38
475-251[1]	2x2x1-1/2	19/32	3-7/16	3-7/32	2-1/8	4-7/8	4-3/4	6-7/8	2-7/8	2-7/8	1.35
475-292[1]	2-1/2x2-1/2x2	1	5-9/16	4-1/2	3	6-15/16	6-1/2	9-9/16	4-3/16	4-3/16	4.00
475-335[1]	3x3x1	11/16	5-7/8	4-7/32	2-9/16	6-15/16	6-1/8	8-23/32	4-3/16	4-3/16	3.14
475-336[1]	3x3x1-1/4	7/8	5-3/4	4-1/8	2-3/4	7	6	8-3/4	4-3/16	4-3/16	3.06
475-337[1]	3x3x1-1/2	1-1/16	5-19/32	4-19/32	2-15/16	6-29/32	6-15/32	9-13/32	4	4	2.53
475-338[1]	3x3x2	3/4	5-9/16	4-1/4	2-5/8	6-15/16	6-1/8	8-3/4	4-3/16	4-3/16	3.19
475-339[1]	3x3x2-1/2	7/8	4-1/8	4-21/32	2-3/4	6-3/4	6	8-3/4	4-3/16	4-3/16	2.59
475-420	4x4x2	-1/8	4-13/16	4-5/16	1-7/8	6-3/16	6-5/16	8-3/16	5-1/32	2-23/32	1.98
475-422	4x4x3	5/8	5-5/16	5-1/8	2-5/8	7-7/32	7-1/8	9-3/4	5-1/32	4	2.66
475-528[1]	6x6x2	1/16	8-5/8	6-5/8	3	10	6-11/16	12-11/16	7-9/16	4-3/4	9.30
475-530[1]	6x6x3	1/32	8-1/4	6-21/32	3-1/32	10-1/4	9-21/32	12-11/16	7-9/16	5-7/16	9.29
475-532	6x6x4	31/32	6-9/16	5-11/16	3-15/16	8-27/32	8-23/32	21-21/32	7-9/16	5-7/16	8.61
475-532F	6x6x4	2-9/16	10-9/16	9-3/16	5-13/16	12-3/16	12-7/16	18-1/4	7-3/16	5	6.71
475-578F	8x8x2	9/16	9-3/4	9-3/16	4-13/16	11-1/2	13-7/16	18-1/4	9-1/4	2-11/16	12.62
475-580F	8x8x3	1-5/16	10-7/8	9-15/16	5-9/16	13-1/8	14-3/16	19-3/4	9-1/4	3-15/16	14.36
475-582	8x8x4	11/16	9-1/8	8-3/16	3-5/16	11-3/8	12-3/16	15-1/2	9-23/32	5-1/4	14.32
475-582F	8x8x4	2-1/16	11-7/8	10-11/16	6-5/16	14-1/8	14-15/16	21-1/4	9-1/4	5	16.32
475-585F	8x8x6	3-1/2	12-13/16	12-1/8	7-3/4	16-1/16	16-3/8	24-1/8	9-1/4	7-3/16	19.47
475-621F	10x10x2	1/2	11-3/16	10-1/4	4-3/4	12-15/16	15-1/2	20-1/4	11-1/2	2-11/16	17.95
475-623F	10x10x3	1/2	12-5/16	11-1/4	5-3/4	14-9/16	16-1/2	22-1/4	11-1/2	3-15/16	18.96
475-624F	10x10x4	1-7/16	13-5/16	12-3/16	6-11/16	15-9/16	17-7/16	24-1/8	11-1/2	5	22.97
475-626	10x10x6	-9/32	12-27/32	11-1/32	4-23/32	15-7/8	16-1/32	20-3/4	12-1/32	7-19/32	28.18

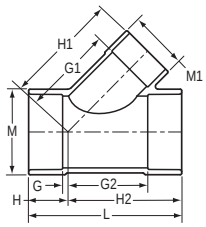
[1] Outlet sized with bushing

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Progressive Products from Spears® Innovation and Technology

REDUCING WYE (continued)

Socket x Socket x Socket

Pressure Rating
1/2" -2" 235 psi @ 73°F
2-1/2" -6" 150 psi @ 73°F
8" & Up 100 psi @ 73°F

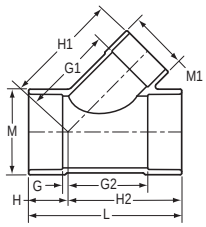


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
475-626F	10x10x6	3-1/2	14-1/4	14-1/4	8-3/4	17-1/2	19-1/2	28-1/4	11-1/2	7-3/16	21.45
475-628	10x10x8	1-7/32	12-3/4	12-1/4	6-7/32	16-25/32	17-9/32	23-1/2	12-1/32	9-23/32	35.50
475-628F	10x10x8	5-1/8	15-11/16	15-7/8	10-3/8	19-15/16	21-1/8	31-1/2	11-1/2	9-1/4	28.02
475-661F	12x12x2	1-1/8	12-9/16	11-5/8	5-1/8	14-5/16	17-7/8	23	13-9/16	2-11/16	40.46
475-663F	12x12x3	3/8	13-11/16	12-3/8	5-7/8	15-15/16	18-5/8	24-1/2	13-9/16	3-15/16	28.74
475-664F	12x12x4	3/8	14-11/16	13-1/8	6-5/8	16-15/16	19-3/8	26	13-9/16	5	23.93
475-666F	12x12x6	2-3/8	15-5/8	15-1/8	8-5/8	18-7/8	21-3/8	30	13-9/16	7-3/16	28.92
475-668F	12x12x8	3-7/8	17-1/16	16-5/8	10-1/8	21-5/16	22-7/8	33	13-9/16	9-1/4	45.53
475-670F	12x12x10	5-3/8	18-1/8	18-1/8	11-5/8	23-3/8	24-3/8	36	13-9/16	11-1/2	40.69
475-691F	14x14x2	2	13-7/16	12	5	15-3/16	19	24	14-7/8	2-11/16	29.36
475-693F	14x14x3	3/4	14-9/16	13-1/4	6-1/4	16-13/16	20-1/4	26-1/2	14-7/8	3-15/16	33.06
475-694F	14x14x4	0	15-9/16	14	7	17-13/16	21	28	14-7/8	5	37.45
475-696F	14x14x6	1-1/2	16-1/2	15-1/2	8-1/2	19-3/4	22-1/2	31	14-7/8	7-3/16	48.96
475-698F	14x14x8	3	17-15/16	17	10	22-3/16	24	34	14-7/8	9-1/8	48.96
475-700F	14x14x10	4-1/2	19	18-1/2	11-1/2	24-1/4	25-1/2	37	14-7/8	11-1/2	60.73
475-702F	14x14x12	7	20-15/16	21	14	27-3/16	28	42	14-7/8	13-9/16	69.34
475-751F	16x16x2	2	14-3/4	14	6	16-1/2	22	28	17	2-11/16	37.81
475-753F	16x16x3	1-1/8	15-7/8	14-7/8	6-7/8	18-1/8	22-7/8	29-3/4	17	3-15/16	40.93
475-754F	16x16x4	1/2	16-7/8	15-1/2	7-1/2	19-1/8	23-1/2	31	17	5	50.95
475-756F	16x16x6	1-7/8	17-13/16	17-7/8	9-7/8	21-1/16	25-7/8	35-3/4	17	7-3/16	60.24
475-758F	16x16x8	2-1/2	19-1/4	18-1/2	10-1/2	23-1/2	26-1/2	37	17	9-1/4	70.40
475-760F	16x16x10	4	20-5/16	20	12	25-9/16	28	40	17	11-1/2	73.02
475-762F	16x16x12	5-1/2	22-1/4	21-1/2	13-1/2	28-1/2	29-1/2	43	17	13-9/16	90.59
475-764F	16x16x14	6-3/8	22-1/2	22-3/8	14-3/8	29-1/2	30-3/8	44-3/4	17	14-7/8	100.41
475-786F	18x18x6	7/8	19-1/8	18-7/8	9-7/8	22-3/8	27-7/8	37-3/4	19-1/8	7-3/16	81.78
475-788F	18x18x8	2-3/8	20-9/16	20-3/8	11-3/8	24-13/16	29-3/8	40-3/4	19-1/8	9-1/4	101.85
475-790F	18x18x10	3-3/8	21-5/8	21-3/8	12-3/8	26-7/8	30-3/8	42-3/4	19-1/8	11-1/2	83.99
475-792F	18x18x12	4-7/8	23-9/16	22-7/8	13-7/8	29-13/16	31-7/8	45-3/4	19-1/8	13-9/16	92.98
475-794F	18x18x14	5-3/8	23-13/16	23-3/8	14-3/8	30-13/16	32-3/8	46-3/4	19-1/8	14-7/8	116.88
475-796F	18x18x16	7-7/8	26-1/16	25-7/8	16-7/8	34-1/16	34-7/8	51-3/4	19-1/8	17	121.63
475-816F	20x20x6	1/8	20-1/2	19-7/8	9-7/8	23-3/4	29-7/8	39-3/4	21-3/16	7-3/16	101.52
475-818F	20x20x8	1-3/8	21-15/16	21-3/8	11-3/8	26-3/16	31-3/8	42-3/4	21-3/16	9-1/4	109.36
475-820F	20x20x10	2-3/8	23	22-3/8	12-3/8	28-1/4	32-3/8	44-3/4	21-3/16	11-1/2	120.53
475-822F	20x20x12	4-3/8	24-15/16	24-3/8	14-3/8	31-3/16	34-3/8	48-3/4	21-3/16	13-9/16	135.66
475-824F	20x20x14	4-7/8	25-3/16	24-7/8	14-7/8	32-3/16	34-7/8	49-3/4	21-3/16	14-7/8	129.00

REDUCING WYE (continued)

Socket x Socket x Socket

Pressure Rating
1/2" -2" 235 psi @ 73°F
2-1/2" -6" 150 psi @ 73°F
8" & Up 100 psi @ 73°F

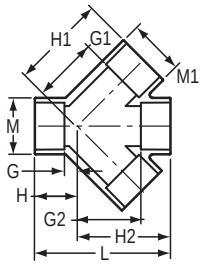


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
475-826F	20x20x16	6-3/8	27-7/16	26-3/8	16-3/8	35-7/16	36-3/8	52-3/4	21-3/16	17	161.54
475-828F	20x20x18	7-7/8	28-13/16	27-7/8	17-7/8	37-13/16	37-7/8	55-3/4	21-3/16	19-1/8	158.46
475-906F	24x24x6	1-1/4	23-3/16	22-3/4	10-3/4	26-7/16	34-3/4	45-1/2	25-3/8	7-3/16	135.24
475-908F	24x24x8	1/4	24-5/8	24-1/4	12-1/4	28-7/8	36-1/4	48-1/2	25-3/8	9-1/4	145.74
475-910F	24x24x10	1-3/8	25-11/16	25-3/8	13-3/8	30-15/16	37-3/8	50-3/4	25-3/8	11-1/2	176.10
475-912F	24x24x12	3-1/4	27-5/8	27-1/4	15-1/4	33-7/8	39-1/4	54-1/2	25-3/8	13-9/16	153.58
475-914F	24x24x14	4	27-7/8	28	16	34-7/8	40	56	25-3/8	14-7/8	184.50
475-916F	24x24x16	6-3/8	30-1/8	30-3/8	18-3/8	38-1/8	42-3/8	60-3/4	25-3/8	17	185.70
475-918F	24x24x18	7-7/8	31-1/2	31-7/8	19-7/8	40-1/2	43-7/8	63-3/4	25-3/8	19-1/8	185.70
475-920F	24x24x20	9-1/8	33	33-1/8	21-1/8	43	45-1/8	66-1/4	25-3/8	21-3/16	232.49

DOUBLE WYE

Socket x Socket x Socket x Socket

Pressure Rating
150 psi @ 73°F



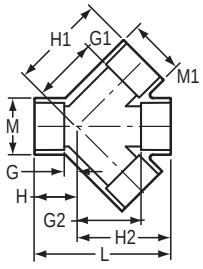
Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
476-020F	2	3-5/16	5-11/16	5-11/16	4-11/16	7-1/16	7-1/16	11-3/4	2-3/4	2-3/4	1.25
476-030F	3	4-7/8	8-3/8	8-3/8	6-3/4	10-1/14	10-1/4	17	4	4	5.42
476-040F	4	4-5/8	9-1/8	9-1/8	6-7/8	11-3/8	11-3/8	18-5/16	5	5	10.09
476-060F	6	4-7/8	11-1/2	11-1/2	8-1/8	14-3/4	14-3/4	22-7/8	7-3/16	7-3/16	20.91
476-080F	8	5-5/8	14-5/16	14-5/16	9-7/8	18-9/16	18-9/16	28-7/16	9-1/4	9-1/4	25.02
476-100F	10	6-9/16	17-1/4	17-1/4	11-13/16	22-1/2	22-1/2	34-5/16	11-1/2	11-1/2	37.91
476-120F	12	7-5/16	20-1/16	20-1/16	13-9/16	26-5/16	26-5/16	39-7/8	13-9/16	13-9/16	63.02
476-140F	14	7-3/16	21-3/16	21-3/16	14-3/16	28-3/16	28-3/16	42-3/8	14-7/8	14-7/8	96.09

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Progressive Products from Spears® Innovation and Technology

REDUCING DOUBLE WYE

Socket x Socket x Socket x Socket

Pressure Rating
150 psi @ 73°F

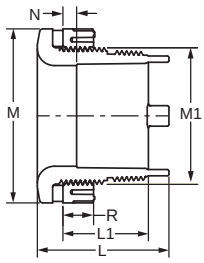


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
476-338	3x2	7/32	4-1/4	4-1/32	2-3/32	5-3/4	5-29/32	8	4-3/16	2-7/8	2.27
476-528F	6x2	7/8	8-7/16	7-1/2	4-1/8	10-3/16	10-3/4	14-7/8	7-3/16	2-11/16	5.87
476-530F	6x3	1-13/16	9-9/16	8-7/16	5-1/16	11-13/16	11-11/16	16-3/4	7-3/16	3-15/16	10.29
476-532F	6x4	2-9/16	10-9/16	9-3/16	5-13/16	12-13/16	12-7/16	18-1/4	7-3/16	5	9.52
476-578F	8x2	9/16	9-3/4	9-3/16	4-13/16	11-1/2	13-7/16	18-1/4	9-1/4	2-11/16	12.49
476-580F	8x3	1-5/16	10-7/8	9-15/16	5-9/16	13-1/8	14-3/16	19-3/4	9-1/4	3-15/16	15.79
476-582F	8x4	2-1/16	11-7/8	10-11/16	6-5/16	14-1/8	14-15/16	21-1/4	9-1/4	5	12.73
476-585F	8x6	3-1/2	12-13/16	12-1/8	7-3/4	16-1/16	16-3/8	24-1/8	9-1/4	7-3/16	24.52
476-621F	10x2	1/2	11-3/16	10-1/4	4-3/4	12-15/16	15-1/2	20-1/4	11-1/2	2-11/16	13.93
476-623F	10x3	1/2	12-5/16	11-1/4	5-3/4	14-9/16	16-1/2	22-1/4	11-1/2	3-15/16	16.31
476-624F	10x4	1-7/16	13-5/16	12-3/16	6-11/16	15-9/16	17-7/16	24-1/8	11-1/2	5	18.71
476-626F	10x6	3-1/2	14-1/4	14-1/4	8-3/4	17-1/2	19-1/2	28-1/4	11-1/2	7-3/16	24.65
476-628F	10x8	5-1/8	15-11/16	15-7/8	10-3/8	19-15/16	21-1/8	31-1/2	11-1/2	9-1/4	31.59
476-661F	12x2	1-1/8	12-9/16	11-5/8	5-1/8	14-5/16	17-7/8	23	13-9/16	2-11/16	32.18
476-663F	12x3	3/8	13-11/16	12-3/8	5-7/8	15-15/16	18-5/8	24-1/2	13-9/16	3-15/16	35.93
476-664F	12x4	3/8	14-11/16	13-1/8	6-5/8	16-15/16	19-3/8	26	13-9/16	5	25.49
476-666F	12x6	2-3/8	15-5/8	15-1/8	8-5/8	18-7/8	21-3/8	30	13-9/16	7-3/16	42.56
476-668F	12x8	3-7/8	17-1/16	16-5/8	10-1/8	21-5/16	22-7/8	33	13-9/16	9-1/4	37.86
476-670F	12x10	5-3/8	18-1/8	18-1/8	11-5/8	23-3/8	24-3/8	36	13-9/16	11-1/2	67.89
476-756F	16x6	1-7/8	17-13/16	17-7/8	9-7/8	21-1/16	25-7/8	35-3/4	17	7-3/16	64.27
476-786F	18x6	7/8	19-1/8	18-7/8	9-7/8	22-3/8	27-7/8	37-3/4	19-1/8	7-3/16	91.45

TANK ADAPTER WITH EPDM GASKET

Socket (Male Pipe Thread)

Pressure Rating
150 psi @ 73°F



Part Number	Size	L	L1	M	M1	N	R	Outlet	
								Socket	Thread MIPT
4170E-005	1/2	2-5/16	1-1/2	2-3/16	1-7/16	3/4	9/16	1/2	1
4170E-007	3/4	2-3/8	1-1/2	2-1/2	1-13/16	9/16	9/16	3/4	1-1/4
4170E-010	1	2-3/8	1-1/2	2-3/4	2-1/16	1/2	9/16	1	1-1/2
4170E--012	1-1/4	2-3/8	1-9/16	3-3/16	2-1/2	5/16	9/16	1-1/4	2
4170E--015	1-1/2	2-3/8	1-9/16	3-3/16	2-1/2	1/4	9/16	1-1/2	2
4170E--020	2	3-1/4	2-3/8	3-13/16	3-1/16	1	5/8	2	2-1/2
4170E--025	2-1/2	3-1/2	2-9/16	4-1/2	3-11/16	13/16	5/8	2-1/2	3

Tank Adapter Hole Size Requirements

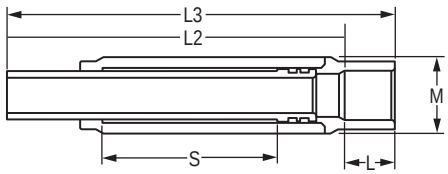
Tank Adapter Size	Recommended Minimum Hole Size	Minimum Inside Curvature Radius (inches)	Maximum Tank Wall Thickness (inches)
1/2	1-1/2	5.50	.44
3/4	1-7/8	7.50	.44
1	2-1/8	9.00	.44
1-1/4	2-1/2	12.00	.44
1-1/2	2-1/2	12.00	.44
2	3-1/8	17.50	.75
2-1/2	3-3/4	24.50	.88

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Progressive Products from Spears® Innovation and Technology

Repair Couplings

Spigot x Socket
EPDM O-ring

Pressure Rating
1/2" -2" 235 psi @ 73°F
2-1/2" -4" 200 psi @ 73°F
6" & Up 150 psi @ 73°F



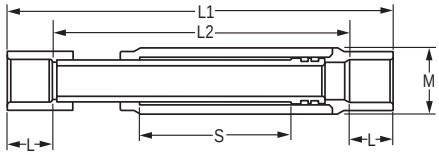
Part Number	Size	L	L2	L3	S	M	Approx. Wt. (Lbs.)
S118-05	1/2	7/8	5-7/8	6-3/4	3	1-7/16	.25
S118-07	3/4	1	7-3/8	8-1/4	4	1-3/4	.42
S118-10	1	1-1/8	7-7/8	8-7/8	4	2-1/16	.62
S118-12	1-1/4	1-1/4	8-3/8	9-5/8	4	2-7/16	.87
S118-15	1-1/2	1-3/8	8-5/8	9-7/8	4	2-11/16	1.03
S118-20	2	1-1/2	9-1/4	10-5/8	4	3-3/16	1.50
S118-25	2-1/2	1-3/4	12-3/8	13-7/8	6	3-15/16	3.48
S118-30	3	1-7/8	12-3/8	14-1/8	6	4-9/16	4.32
S118-40	4	2-1/4	13-1/4	15-1/4	6	5-11/16	6.40
S118-60	6	3	16	18-3/4	6	8-3/8	14.53

INSTALLATION NOTE: For expansion joint applications, install with unit 1/2 extended. System must be supported and blocked against thrusts and movement under pressure. May be installed with flow in either direction

Repair Couplings

Socket x Socket
EPDM O-ring

Pressure Rating
1/2" -2" 235 psi @ 73°F
2-1/2" -4" 200 psi @ 73°F
6" & Up 150 psi @ 73°F



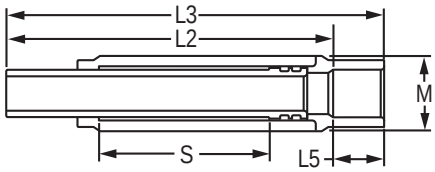
Part Number	Size	L	L1	L2	S	M	Approx. Wt. (Lbs.)
S119-05	1/2	7/8	7-5/8	5-7/8	3	1-7/16	.28
S119-07	3/4	1	9-3/8	7-3/8	4	1-3/4	.47
S119-10	1	1-1/8	10-1/8	7-7/8	4	2-1/16	.70
S119-12	1-1/4	1-1/4	10-7/8	8-3/8	4	2-7/16	.98
S119-15	1-1/2	1-3/8	11-3/8	8-5/8	4	2-11/16	1.17
S119-20	2	1-1/2	12-1/4	9-1/4	4	3-3/16	1.72
S119-25	2-1/2	1-3/4	15-7/8	12-3/8	6	3-15/16	3.87
S119-30	3	1-7/8	16-1/8	12-3/8	6	4-9/16	4.86
S119-40	4	2-1/4	17-3/4	13-1/4	6	5-11/16	7.27
S119-60	6	3	22	16	6	8-3/8	17.17

INSTALLATION NOTE: For expansion joint applications, install with unit 1/2 extended. System must be supported and blocked against thrusts and movement under pressure. May be installed with flow in either direction

Short Repair Couplings

Spigot x Socket
EPDM O-ring

Pressure Rating
235 psi @ 73°F



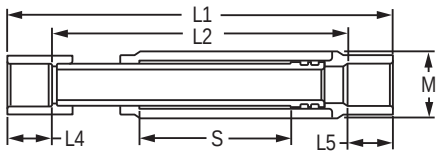
Part Number	Size	L2	L3	L5	S	M	Approx. Wt. (Lbs.)
SH118-05	1/2	4-5/16	4-15/16	3/4	2	1-7/16	.19
SH118-07	3/4	4-3/4	5-7/16	13/16	2-1/4	1-3/4	.31
SH118-10	1	4-3/4	5-9/16	15/16	2-3/16	2-1/16	.39
SH118-12	1-1/4	5-11/16	6-5/8	1	2-1/2	2-7/16	.61
SH118-15	1-1/2	5-13/16	6-3/4	1-1/8	2-13/16	2-11/16	.76
SH118-20	2	7-3/8	8-5/16	1-3/16	3-1/8	3-1/4	1.17

INSTALLATION NOTE: For expansion joint applications, install with unit 1/2 extended. System must be supported and blocked against thrusts and movement under pressure. May be installed with flow in either direction.

Short Repair Couplings

Socket x Socket
EPDM O-ring

Pressure Rating
235 psi @ 73°F



Part Number	Size	L1	L2	L4	L5	S	M	Approx. Wt. (Lbs.)
SH119-05	1/2	5-7/8	4-5/16	7/8	3/4	2	1-7/16	.23
SH119-07	3/4	6-9/16	4-3/4	1	13/16	2-1/4	1-3/4	.36
SH119-10	1	6-13/16	4-3/4	1-1/8	15/16	2-3/16	2-1/16	.47
SH119-12	1-1/4	7-15/16	5-11/16	1-1/4	1	2-1/2	2-7/16	.73
SH119-15	1-1/2	8-1/4	5-13/16	1-3/8	1-1/8	2-13/16	2-11/16	.91
SH119-20	2	10-1/16	7-3/8	1-1/2	1-3/16	3-1/8	3-1/4	1.39

INSTALLATION NOTE: For expansion joint applications, install with unit 1/2 extended. System must be supported and blocked against thrusts and movement under pressure. May be installed with flow in either direction.


SPEARS
EverTUFF®
TURF™
FITTINGS
MADE IN THE U.S.A.
WITH PRIDE
TECHNICAL INFORMATION
WEIGHTS & DIMENSIONS
SPEARS® MANUFACTURING COMPANY
Since 1969
SYLMAR, CALIFORNIA
Visit our web site
www.spearsmfg.com



Spears® **EverTUFF® TURF™** Fittings are specifically engineered to meet the demanding system requirements of today's golf course and sports turf irrigation applications. This patented design provides greater surge resistance than Schedule 80 fittings for the most reliable turf fittings on the market. Produced in a distinct Blue color injection molded from specially balanced PVC materials or optional CPVC Gray, these performance fittings are Class 315 rated (315 psi) and available in IPS sizes 1" through 4".

Design Tested

EverTUFF® TURF™ Fittings have been computer engineered through Finite Element Analysis (FEA) studies for optimum material placement, strength and performance. Spears® Research & Development testing has shown the resulting design to best handle proper solvent cementing and correctly applied cyclic conditions of modern sports turf irrigation systems.

Full Class 315 Pressure Rating

Unlike the varying pressure ratings assigned to PVC Schedule piping, the **EverTUFF® TURF™** Class 315 designation maintains a uniform 315 psi pressure rating for all fittings sizes.

Full Selection of Basic Configurations

EverTUFF® TURF™ Fittings are produced in the basic configurations including Tees, Reducing Tees, 90° and 90° Sweep Elbows, 45° Elbows, Couplings, Reducer Bushings, Male Adapters and Special Reinforced (SR) Female Adapters – in sizes 1" through 4", plus Mechanical Clamp-on Transition Saddles sizes 4", 6" and 8".

Optional CPVC for Higher Temperatures

Where heat and excess temperature can be a major concern, **EverTUFF® TURF™** Fittings are available in higher temperature CPVC gray material.

NSF® Certified

EverTUFF® TURF™ Fittings are NSF® Certified for use in potable water systems and are naturally lead-free.

The Performance Difference – Patented Design

Spears® EverTUFF® TURF™ Fittings form a class of their own by merging different design parameters for conventional fittings with special PVC material selection to collectively produce a unique, highly surge resistant line of fittings that has been awarded a U.S. Patent.

EverTUFF® TURF™ Proven 2X Stronger Than Competitor Special "surge" Fittings

Independent 3rd party high-stress failure testing was conducted by the Center for Irrigation Technology (CIT) at California State University, Fresno. **Identical test is designed to force fittings to failure demonstrated that Spears® EverTUFF® TURF™ Fittings are over 2X stronger than competitor's special "surge" fittings.**

Product Test	Average Cycles To Failure
Competitor Special "surge" Tees	6,107.6
Spears® EverTUFF® TURF™ Tees	14,234.4

Performance that is a direct result of Spears® engineering and unparalleled processing capability!

Lifetime Warranty*

We are so confident in this fitting that it carries a Lifetime Warranty!

Selection Guide for Choosing PVC or High Temperature CPVC Materials

Heat can play a significant part in performance of any piping system. As with all thermoplastic products, pressure rating reduction is required as temperatures increase. This can apply to primary and secondary heat sources, such as basic ambient temperature and absorbed temperature from solar exposure or solar heated water supply sources. The following table shows applicable Class 315 (315 psi) pressure de-rating as temperatures elevate.

PVC & CPVC Class 315 Pressure Ratings at Elevated Temperatures, PSI												
Application Temperature	**73°F (23°C)**	**90°F (32°C)**	**100°F (38°C)**	**110°F (43°C)**	**120°F (49°C)**	**130°F (54°C)**	**140°F (60°C)**	**150°F (66°C)**	**160°F (71°C)**	**170°F (77°C)**	**180°F (82°C)**	**200°F (99°C)**
PVC	315	236	195	161	126	98	69	--	--	--	--	--
CPVC	315	287	258	227	205	180	158	132	126	91	79	62

Maximum Service Temperature: PVC = 140°F; CPVC = 200°F

*See Spears® Limited Lifetime Warranty for additional warranty details.

The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

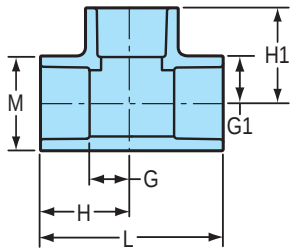
General Information

Plastic piping systems should be engineered, installed, operated and maintained in accordance with accepted standards and procedures for plastic piping systems. It is absolutely necessary that all design, installation, operation and maintenance personnel be trained in proper handling, installation requirements and precautions for installation and use of plastic piping systems before starting.

"Lead Free" low lead certification – unless otherwise specified, all Spears® EverTUFF® TURF fittings specified here-in are certified by NSF International to ANSI/NSF® Standard 61, Annex G and is in compliance with California's Health & Safety Code Section 116825 (commonly known as AB1953) and Vermont Act 193. Weighted average lead content <=0.25%.

PVC & CPVC TEE

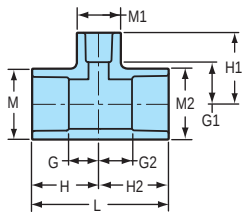
Socket x Socket x Socket



Part Number		Size	G	G1	H	H1	L	M
PVC	CPVC							
401-010T	401-010TC	1	13/16	13/16	1-31/32	1-31/32	3-15/16	1-11/16
401-012T	401-012TC	1-1/4	1	1	2-9/32	2-9/32	4-17/32	2-1/32
401-015T	401-015TC	1-1/2	1-1/8	1-1/8	2-17/32	2-17/32	5-1/32	2-9/32
401-020T	401-020TC	2	1-3/8	1-3/8	2-7/8	2-7/8	5-25/32	2-25/32
401-025T	401-025TC	2-1/2	1-11/16	1-11/16	3-7/16	3-7/16	6-7/8	3-3/8
401-030T	401-030TC	3	2-1/32	2-1/32	3-29/32	3-29/32	7-13/16	4-1/16
401-040T	401-040TC	4	2-19/32	2-19/32	4-7/8	4-7/8	9-25/32	5-7/32

PVC & CPVC REDUCING TEE

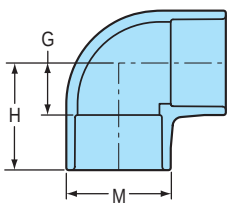
Socket x Socket x Socket



Part Number		Size	G	G1	G2	H	H1	H2	L	M	M1	M2
PVC	CPVC											
401-168T	401-168TC	1-1/4x1-1/4x1	13/16	1	13/16	2-3/32	2-5/32	2-3/32	4-5/32	2-1/32	1-11/16	2-1/32
401-212T	401-212TC	1-1/2x1-1/2x1-1/4	1	1-1/8	1	2-13/32	2-3/8	2-13/32	4-25/32	2-9/32	2-1/32	2-9/32
401-251T	401-251TC	2x2x1-1/2	1-3/8	1-3/8	1-3/8	2-21/32	2-3/4	2-21/32	5-5/16	2-25/32	2-5/16	2-25/32
401-292T	401-292TC	2-1/2x2-1/2x2	1-3/8	1-11/16	1-3/8	3-1/8	3-3/16	3-1/8	6-9/32	3-11/32	2-25/32	3-13/32
401-338T	401-338TC	3x3x2	1-3/8	2-1/32	1-3/8	3-1/4	3-17/32	3-1/4	6-17/32	4-1/16	2-25/32	4-1/16
401-422T	401-422TC	4x4x3	2-1/32	2-19/32	2-1/32	4-9/32	4-15/32	4-9/32	8-9/16	5-7/32	4-3/32	5-7/32

PVC & CPVC 90° ELBOW

Socket x Socket

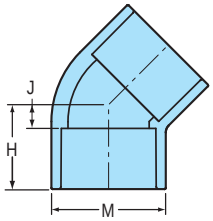


Part Number		Size	G	H	M
PVC	CPVC				
406-010T	406-010TC	1	29/32	2-1/32	1-21/32
406-012T	406-012TC	1-1/4	1-1/32	2-9/32	2-1/32
406-015T	406-015TC	1-1/2	1-5/32	2-17/32	2-9/32
406-020T	406-020TC	2	1-3/8	2-7/8	2-25/32
406-025T	406-025TC	2-1/2	1-23/32	3-15/32	3-3/8
406-030T	406-030TC	3	2	3-7/8	4-1/16
406-040T	406-040TC	4	2-11/16	4-15/16	5-7/32

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PVC & CPVC 45° ELBOW

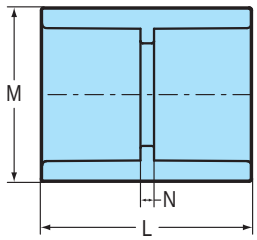
Socket x Socket



Part Number		Size	H	J	M
PVC	CPVC				
417-010T	417-010TC	1	1-5/8	15/32	1-11/16
417-012T	417-012TC	1-1/4	1-13/16	9/16	2-1/32
417-015T	417-015TC	1-1/2	1-31/32	19/32	2-9/32
417-020T	417-020TC	2	2-7/32	23/32	2-25/32
417-025T	417-025TC	2-1/2	2-5/8	7/8	3-3/8
417-030T	417-030TC	3	2-7/8	1	4-1/16
417-040T	417-040TC	4	3-9/16	1-5/16	5-7/32

PVC & CPVC COUPLING

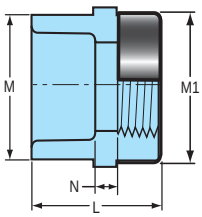
Socket x Socket



Part Number		Size	L	M	N
PVC	CPVC				
429-010T	429-010TC	1	2-11/32	1-21/32	3/32
429-012T	429-012TC	1-1/4	2-19/32	2-1/32	3/32
429-015T	429-015TC	1-1/2	2-7/8	2-9/32	3/32
429-020T	429-020TC	2	3-1/8	2-25/32	3/32
429-025T	429-025TC	2-1/2	3-11/16	3-3/8	3/16
429-030T	429-030TC	3	3-31/32	4-1/16	3/16
429-040T	429-040TC	4	4-25/32	5-1/4	1/4

PVC & CPVC SPECIAL REINFORCED FEMALE ADAPTER

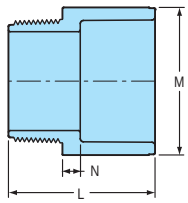
Socket x SR Fipt



Part Number		Size	L	M	M1	N
PVC	CPVC					
435-010SRT	435-010SRTC	1	2-5/32	1-3/16	1-25/32	3/32
435-012SRT	435-012SRTC	1-1/4	2-5/16	2-3/32	2-1/16	3/32
435-015SRT	435-015SRTC	1-1/2	2-7/16	2-13/32	2-7/16	3/16
435-020SRT	435-020SRTC	2	2-11/16	3	3-1/32	9/32
435-025SRT	435-025SRTC	2-1/2	3-9/32	3-9/16	3-19/32	7/32
435-030SRT	435-030SRTC	3	3-1/2	4-1/4	4-9/32	3/16
435-040SRT	435-040SRTC	4	3-31/32	5-7/32	5-7/32	7/32

PVC & CPVC MALE ADAPTER

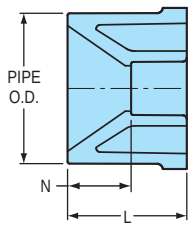
Mipt x Socket



Part Number		Size	L	M	N
PVC	CPVC				
436-010T	436-010TC	1	1-1/8	1-11/16	7/32
436-012T	436-012TC	1-1/4	2-1/2	2-1/16	7/32
436-015T	436-015TC	1-1/2	2-5/8	2-5/16	7/32
436-020T	436-020TC	2	2-25/32	2-25/32	7/32
436-025T	436-025TC	2-1/2	3-19/32	3-3/8	9/32
436-030T	436-030TC	3	3-13/16	4-3/32	5/32
436-040T	436-040TC	4	4-13/32	5-1/4	13/32

PVC & CPVC REDUCER BUSHING (Flush Style)

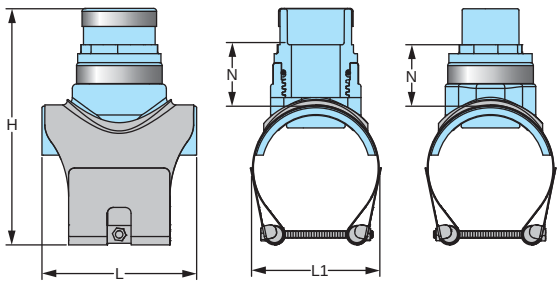
Spigot x Socket



Part Number		Size	L	N
PVC	CPVC			
437-292	437-292C	2-1/2x2	2-1/16	17/32
437-338	437-338C	3x2	2-7/32	9/16
437-422	437-422C	4x3	2-19/32	11/16

MECHANICAL CLAMP-ON TRANSITION SADDLES

Pipe O.D. x Socket or Spigot
For Polyethylene (or any IPS pipe, metal or plastic) - To - PVC Transitions



Part Number	Size	H	L	L1	N	
					Socket	Spigot
865-419	4X1-1/2	9-3/4	6-1/2	5-1/8	2-9/16	---
865-420	4X2	9-3/4	6-1/2	5-1/8	2-9/16	---
865S-420	4X2 SPIGOT	9-3/4	6-1/2	5-1/8	---	2-9/16
865-527	6X1-1/2	11-3/4	7	7-3/8	2-1/2	---
865-528	6X2	11-3/4	7	7-3/8	2-1/2	---
865S-528	6X2 SPIGOT	11-3/4	7	7-3/8	---	2-1/2
865-577	8X1-1/2	14	7	9-1/2	2-5/8	---
865-578	8X2	14	7	9-1/2	2-5/8	---
865S-578	8X2 SPIGOT	14	7	9-1/2	---	2-5/8


SPEARS
PVC & PP
INSERT FITTINGS
FOR USE WITH POLYETHYLENE PIPE
MADE IN THE U.S.A.
WITH PRIDE
TECHNICAL INFORMATION
WEIGHTS & DIMENSIONS
SPEARS® MANUFACTURING COMPANY
Since 1969
SYLMAR, CALIFORNIA
Visit our web site
www.spearsmfg.com

The PVC Barbed-Insert Fitting of Choice



Engineered to provide positive grip and ease of installation. High quality and reliability have made Spears® insert fittings the preferred choice for irrigation and O.E.M. applications. A wide variety of PVC insert configurations and adapters are available for use with polyethylene pipe sizes 1/2" through 4", plus 6" & 8" Couplings and Adapters for lay-flat type irrigation hose. Special 3/8" barbed configurations in PVC and PP allow clamp-free connection to 1/2" I.D. polyethylene irrigation hose.

Superior Choice for Use with Polyethylene Pipe

Spears® PVC Insert Fittings are designed for use with either ASTM D 2104 Schedule 40 or D 2239 SIDR pressure rated polyethylene pipe. Chemical and corrosion resistant, rigid PVC barbed inserts provide excellent grip with polyethylene materials.

Conform to ASTM D 2609

Spears® Insert Fittings are manufactured from high quality PVC materials to meet or exceed the applicable requirements of ASTM D 2609, Standard Specification for Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe.

Full Assortment of Configurations and Adapters

Spears® broad line of gray PVC Insert Fittings includes popular configurations of elbows, tees, couplings and crosses. Numerous male and female NPT threaded adapters, elbows and tees plus white PVC Schedule 40 solvent-cement socket and spigot adapters allow easy connection of insert fittings to supply or distribution systems.

Twist Lock Insert Adapter with Built-in Clamping

Special Insert Fittings design uses built-in lock ring for easy connection without clamps to Polyethylene (PE) Plastic Pipe used with standard Insert Fittings.

Clamp-Free Spiral Barb Irrigation Hose Insert Adapters

Specially designed nominal 3/8" barb configurations allow connection of pipe Insert Fittings to conventional 1/2" polyethylene irrigation hose. Special spiral barb allows “twist-on” connection of hose without need for clamping in open end irrigation applications.

NSF® Certified for Use with Potable Water

Spears® Insert Fittings are tested and Certified by the NSF International for use in potable water systems.

The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

Installation Information

RECOMMENDATIONS FOR INSTALLERS AND USERS:

Plastic piping systems should be **ENGINEERED, INSTALLED**, and **OPERATED** in accordance with **ESTABLISHED DESIGN AND ENGINEERING STANDARDS AND PROCEDURES** for plastic piping systems. Suitability for the intended service application should be determined by the installer and/or user prior to installation of a plastic piping system. **PRIOR TO ASSEMBLY**, **all piping system components should be inspected for damage or irregularities. Mating components should be checked to assure that tolerances and engagements are compatible. Do not use any components that appear irregular or do not fit properly. Contact the appropriate manufacturer of the component product in question to determine usability. Consult all applicable codes and regulations for compliance prior to installation.**

SOLVENT WELD CONNECTIONS — Use quality solvent cements and primers formulated for the intended service application, pipe size and type of joint. While the pipe and fitting materials may be compatible with the intended medium, the solvent cement may not be. Consult the manufacturer for suitability of use. Read and follow the cement and primer manufacturers' applications and cure time instructions thoroughly. Be sure to use the correct size applicator.

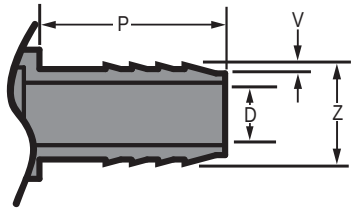
THREADED CONNECTIONS — Use a quality grade thread sealant. **WARNING: SOME PIPE JOINT COMPOUNDS OR PTFE PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING TO PLASTIC.** Spears® Manufacturing Company recommends the use of Spears® **BLUE 75™ Thread Sealant** which has been tested for compatibility with Spears® products. Please follow the sealant manufacturers' application/ installation instructions. Choice of an appropriate thread sealant other than those listed above is at the discretion of the installer. 1 to 2 turns beyond **FINGER TIGHT** is generally all that is required to make a sound plastic threaded connection. Unnecessary **OVER TIGHTENING** will cause **DAMAGE TO BOTH PIPE AND FITTING.**

INSERT FITTING INSTALLATION – Pipe is cut to length with handsaw or knife. When installing flexible lines, (a) snake line one foot or more per 100 lineal feet, (b) cold water should be run through lines prior to backfilling to permit pipe to contract, (c) care should be taken to prevent large and sharp-edged rocks from being in position to crush pipe. Insert fittings are used to join lengths of flexible pipe. Stainless steel clamps are first slipped over ends of pipe, fitting is inserted and steel clamps are tightened securely over barbs on fittings. **DO NOT** use oil or detergent on any fittings. Use plain water or soapy water as lubricant on fitting. For attachment to previously installed metallic systems or threaded fixtures, the insert adapter is utilized. Apply thread sealant to the threaded end of adapter and tighten into female connection. Steel clamp is then slipped over pipe end and pipe slipped over serrated end of insert adapter. Steel clamp is then positioned over serrations on insert adapter and securely tightened with a screwdriver.

TWIST LOCK INSERT INSTALLATION – Twist Lock Fittings with built in lock ring are installed the same as regular Insert Fittings, but do not require steel clamps. Check that lock ring component is fully threaded onto fitting. Slip pipe over serrated end of insert adapter . Twist lock ring back over pipe and barb to seal

SPIRAL BARB FITTING INSTALLATION – Spiral Barb fittings are designed for use with 1/2" (.490) polyethylene irrigation hose and do not require steel clamps. Install with a twisting motion to fully engage barbs.

"Lead Free" low lead certification – unless otherwise specified, all Spears® PVC & PP Insert Fittings specified here-in are certified by NSF International to ANSI/NSF® Standard 61, Annex G and is in compliance with California's Health & Safety Code Section 116825 (commonly known as AB1953) and Vermont Act 193. Weighted average lead content <=0.25%.



Dimensions of Insert Ends ASTM D 2609

Nominal Size in.	Insert Length "P" min.	Barb O.D. "Z" max.	Barb O.D. "Z" min.	Barb Depth "V" min.	Inside Diameter "D" min.
1/2	1-1/4	.665	.635	.015	.406
3/4	1-1/4	.865	.835	.015	.562
1	1-1/4	1.095	1.065	.020	.750
1-1/4	1-1/4	1.425	1.395	.025	.995
1-1/2	1-1/2	1.665	1.630	.030	1.125
2	1-1/2	2.125	2.085	.030	1.656
2-1/2	2	2.520	2.487	.030	2.062
3	2-1/8	3.125	3.086	.030	2.600
4	3	4.090	4.044	.030	3.525

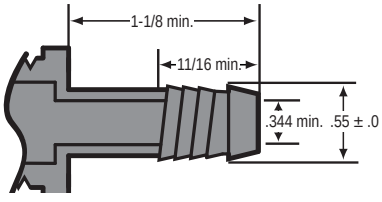
Dimensions of Polyethylene Pipe ASTM D 2104 and D 2239

Nominal Size in.	Average I.D. in.	Tolerance in.
1/2	.622	+.010 - .010
3/4	.824	+.010 - .015
1	1.049	+.010 - .020
1-1/4	1.380	+.010 - .020
1-1/2	1.610	+.015 - .020
2	2.067	+.015 - .020
2-1/2	2.469	+.015 - .025
3	3.068	+.015 - .030
4	4.026	+.015 - .035

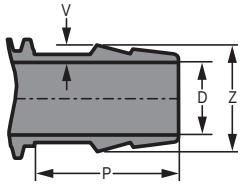
Insert Fittings Dimensions

G = (LAYING LENGTH) Intersection of center lines to insert bottom or thread bottom; 90° elbows, tees & crosses; ± 1/32 inch.
H = Intersection of center lines to end of insert or face of fitting; 90° elbows, tees & crosses; ± 1/32 inch.
L = Overall length of fittings; ± 1/16 inch.
N = (LAYING LENGTH) Insert bottom to insert bottom or thread bottom; couplings & straight adapters; ± 1/16 inch.

Dimensions of Spiral Barb Ends



Dimensions of Twist Lock Coupling



Nominal Size in.	Insert Length "P" min.	Barb O.D. "Z" max.	Barb Depth "V" min.	Inside Diameter "D" min.
1/2	.90	.675	.055	.460
3/4	.90	.875	.055	.600
1	.96	1.105	.055	.775

STANDARDS & SPECIFICATIONS

• ASTM D 2609
Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe.

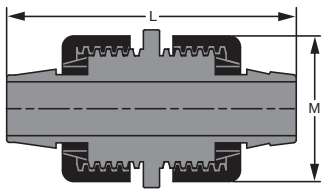
National Sanitation Foundation (NSF®)
Standard 14 Plastic Fittings for Potable Water.

• Material
Spears® Insert Fittings are produced from PVC Type 1, Minimum Cell Classification 12454. CPVC Minimum Cell Classification 23447.

It is the users responsibility to determine the suitability for the intended service application.

PVC TWIST LOCK COUPLING

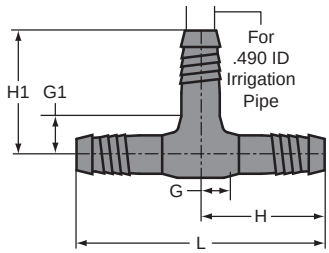
Loc Insert x Loc Insert



Part Number	Size	L	M	Approx. Wt. (Lbs.)
1429TL-005	1/2	3-3/16	1-1/16	.05
1429TL-007	3/4	3-3/16	1-5/16	.08
1429TL-010	1	3-3/16	1-5/8	.11

PVC SPIRAL BARB TEE

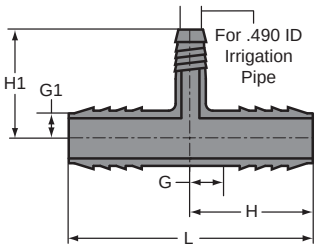
3/8" Spiral Barb x 3/8" Spiral Barb x 3/8" Spiral Barb



Part Number	Size	G	G1	H	H1	L	Approx. Wt. (Lbs.)
1401-003	3/8	9/16	19/32	1-25/32	1-13/16	3-9/16	.04

PVC SPIRAL BARB TEE

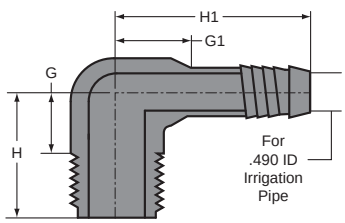
Insert x Insert x 3/8" Spiral Barb



Part Number	Size	G	G1	H	H1	L	Approx. Wt. (Lbs.)
1401-099	3/4x3/8	17/32	9/16	2-1/32	1-27/32	4-1/32	.05
1401-129	1x3/8	11/16	7/16	2-3/16	1-31/32	4-1/8	.08

PP SPIRAL BARB 90° ELBOW

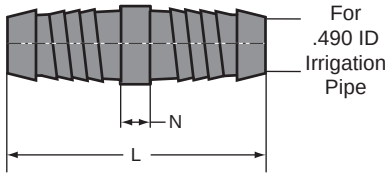
Mipt x 3/8" Spiral Barb



Part Number	Size	G	G1	H	H1	Approx. Wt. (Lbs.)
1413-073	1/2x3/8	7/16	5/8	1-1/8	1-13/16	.02
1413-099	3/4x3/8	1/2	23/32	1-3/16	1-29/32	.03

PVC SPIRAL BARB COUPLING

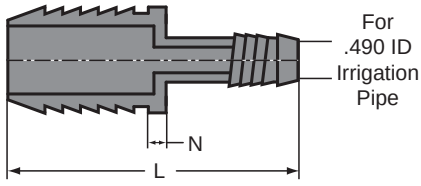
Spiral Barb x Spiral Barb



Part Number	Size	L	N	Approx. Wt. (Lbs.)
1429-003	3/8	2-7/8	5/16	.02

PVC SPIRAL BARB COUPLING

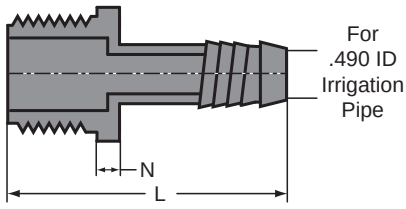
Insert x 3/8" Spiral Barb



Part Number	Size	L	N	Approx. Wt. (Lbs.)
1429-099	3/4x3/8	3	1/16	.02
1429-129	1x3/8	3-3/32	3/16	.04

PP SPIRAL BARB MALE ADAPTER

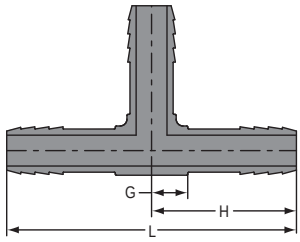
Mipt x 3/8" Spiral Barb



Part Number	Size	L	N	Approx. Wt. (Lbs.)
1436-073	1/2x3/8	2-11/32	1/4	.02
1436-099	3/4x3/8	2-11/32	1/4	.02

PVC TEE

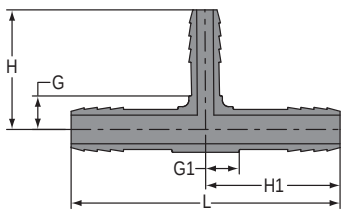
Insert x Insert x Insert



Part Number	Size	G	H	L	Approx. Wt. (Lbs.)
1401-005	1/2	7/16	1-15/16	3-13/16	.05
1401-007	3/4	17/32	2-1/32	4-1/16	.06
1401-010	1	11/16	2-3/16	4-15/32	.10
1401-012	1-1/4	31/32	2-15/32	4-15/16	.16
1401-015	1-1/2	15/16	2-11/16	5-3/8	.22
1401-020	2	1-9/32	3-11/32	6-11/16	.43

PVC REDUCING TEE

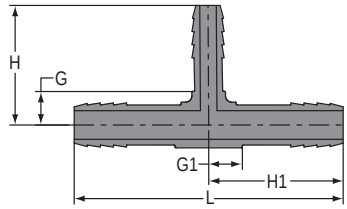
Insert x Insert x Insert



Part Number	Size	G	G1	H	H1	L	Approx. Wt. (Lbs.)
1401-074	1/2x1/2x3/4	21/32	9/16	2-5/32	2-1/16	4-5/16	.05
1401-094	3/4x1/2x1/2	9/16	9/16	2-1/16	2-1/16	4-7/16	.06
1401-101	3/4x3/4x1/2	17/32	17/32	2-1/32	2-1/32	4-1/16	.06
1401-102	3/4x3/4x1	23/32	3/4	2-7/32	2-1/4	4-1/2	.08
1401-124	1x3/4x1/2	9/16	9/16	2-1/16	2-1/16	4-5/32	.07
1401-125	1x3/4x3/4	21/32	9/16	2-1/8	2-1/32	4-3/32	.07
1401-130	1x1x1/2	5/8	13/32	2-1/8	1-29/32	3-27/32	.07
1401-131	1x1x3/4	21/32	9/16	2-5/32	2-1/32	4-3/32	.08
1401-132	1x1x1-1/4	21/32	13/16	2-5/16	2-5/16	4-21/32	.12
1401-156	1-1/4x1x1/2	9/16	21/32	2-1/16	2-5/32	4-7/16	.10
1401-157	1-1/4x1x3/4	21/32	21/32	2-5/32	2-5/32	4-3/8	.11
1401-158	1-1/4x1x1	3/4	23/32	2-1/4	2-7/32	4-1/2	.14
1401-166	1-1/4x1-1/4x1/2	9/16	23/32	2-1/16	2-7/32	4-1/8	.09
1401-167	1-1/4x1-1/4x3/4	27/32	29/32	2-11/32	2-13/32	4-11/16	.13
1401-168	1-1/4x1-1/4x1	11/16	11/16	2-7/32	2-3/16	4-13/32	.13
1401-169	1-1/4x1-1/4x1-1/2	13/16	31/32	2-9/16	2-7/16	4-29/32	.18
1401-201	1-1/2x1-1/4x3/4	21/32	1-1/16	2-13/32	2-9/16	4-9/16	.15

PVC REDUCING TEE (continued)

Insert x Insert x Insert

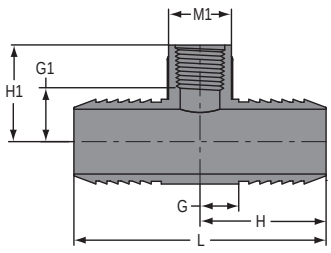


Part Number	Size	G	G1	H	H1	L	Approx. Wt. (Lbs.)
1401-202	1-1/2x1-1/4x1	3/4	1-3/32	2-1/2	2-19/32	4-3/4	.16
1401-203	1-1/2x1-1/4x1-1/4	15/16	1-1/16	2-11/16	2-9/16	5-1/8	.18
1401-209	1-1/2x1-1/2x1/2	11/16	9/16	2-5/16	2-5/16	4-5/8	.14
1401-210	1-1/2x1-1/2x3/4	21/32	1-1/16	2-13/32	2-9/16	4-13/16	.17
1401-211	1-1/2x1-1/2x1	1-1/16	3/4	2-9/16	2-1/2	5	.18
1401-212	1-1/2x1-1/2x1-1/4	15/16	1-1/16	2-11/16	2-9/16	5-3/8	.20
1401-241	2x1-1/2x1-1/2	1-1/16	1-1/2	2-13/16	3	5-5/8	.27
1401-247	2x2x1/2	1/2	1-5/16	2-1/4	2-7/8	4-9/16	.20
1401-248	2x2x3/4	21/32	1-11/32	2-13/32	2-25/32	4-25/32	.21
1401-249	2x2x1	3/4	1-9/32	2-1/2	2-25/32	5	.22
1401-250	2x2x1-1/4	15/16	1-9/32	2-11/16	2-25/32	5-3/8	.25
1401-251	2x2x1-1/2	1-1/16	13/16	2-13/16	3	5-5/8	.28
1401-338*	3x3x2	3-5/8	3-3/4	5-3/8	6-1/32	12-1/16	2.44

*Assembled

PVC TEE

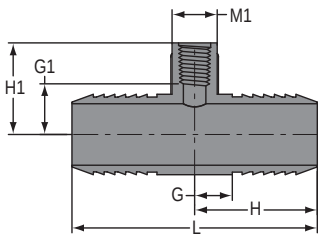
Insert x Insert x Fipt



Part Number	Size	G	G1	H	H1	L	M1	Approx. Wt. (Lbs.)
1402-005	1/2	17/32	5/16	2-1/32	1-1/32	4-1/16	1	.05
1402-007	3/4	21/32	13/32	2-5/32	1-1/8	4-5/16	1-1/4	.07
1402-010	1	13/16	17/32	2-5/16	1-7/16	4-19/32	1-19/32	.13
1402-012	1-1/4	1-1/8	11/16	2-5/8	1-11/16	5-1/4	2	.21
1402-015	1-1/2	1-1/4	27/32	3	1-27/32	6	2-1/4	.28
1402-020	2	1-3/8	1-1/16	3-1/8	2-1/8	6-1/4	2-3/4	.42

PVC REDUCING TEE

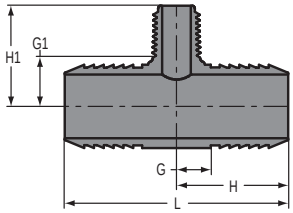
Insert x Insert x Fipt



Part Number	Size	G	G1	H	H1	L	M1	Approx. Wt. (Lbs.)
1402-094	3/4x1/2x1/2	5/8	13/32	2-1/8	1-5/32	4-5/16	1-3/32	.07
1402-101	3/4x3/4x1/2	3/4	7/16	2-3/16	1-1/4	4-1/8	1-1/16	.06
1402-124	1x3/4x1/2	23/32	17/32	2-7/32	1-9/32	4-7/16	1-3/32	.10
1402-125	1x3/4x3/4	27/32	15/32	2-11/32	1-9/32	4-11/16	1-5/16	.12
1402-130	1x1x1/2	17/32	1/2	2-1/32	1-7/32	4-1/16	1	.08
1402-131	1x1x3/4	21/32	1/2	2-5/32	1-1/4	4-9/32	1-7/32	.09
1402-156	1-1/4x1x1/2	11/16	11/16	2-3/16	1-7/16	4-3/8	1-1/16	.14
1402-157	1-1/4x1x3/4	25/32	21/32	2-9/32	1-15/32	4-17/32	1-5/16	.16
1402-166	1-1/4x1-1/4x1/2	21/32	21/32	2-5/32	1-7/16	4-5/16	1-1/8	.14
1402-167	1-1/4x1-1/4x3/4	25/32	21/32	2-9/32	1-15/32	4-9/16	1-13/32	.15
1402-168	1-1/4x1-1/4x1	15/16	3/4	2-7/16	1-5/8	4-7/8	1-5/8	.17
1402-199	1-1/2x1-1/4x1/2	21/32	3/4	2-9/32	1-1/2	4-9/16	1-3/16	.17
1402-201	1-1/2x1-1/4x3/4	13/16	11/16	2-9/16	1-1/2	4-13/16	1-5/16	.19
1402-202	1-1/2x1-1/4x1	1	25/32	2-3/4	1-25/32	5-3/32	1-5/8	.22
1402-209	1-1/2x1-1/2x1/2	21/32	25/32	2-13/32	1-17/32	4-13/16	1-3/16	.17
1402-210	1-1/2x1-1/2x3/4	13/16	25/32	2-9/16	1-9/16	5-1/8	1-3/8	.19
1402-211	1-1/2x1-1/2x1	15/16	25/32	2-11/16	1-3/4	5-3/8	1-21/32	.22
1402-212	1-1/2x1-1/2x1-1/4	29/32	5/8	2-21/32	1-5/8	5-23/32	2	.26
1402-247	2x2x1/2	13/16	1-3/16	2-5/16	2-1/16	4-7/8	1-1/16	.24
1402-248	2x2x3/4	11/16	1	2-7/16	1-7/8	5-1/16	1-5/16	.26
1402-249	2x2x1	15/16	31/32	2-11/16	2	5-11/32	1-23/32	.30
1402-251	2x2x1-1/2	1-1/4	31/32	3	2	6	2-1/4	.38

PVC TEE

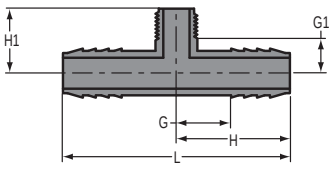
Insert x Insert x Mipt



Part Number	Size	G	G1	H	H1	L	Approx. Wt. (Lbs.)
1403-005	1/2	9/16	21/32	2-1/16	1-9/32	4-1/8	.04
1403-007	3/4	5/8	13/16	2-5/32	1-7/16	4-5/16	.06
1403-010	1	11/16	11/16	2-3/16	1-5/8	4-3/8	.10
1403-012	1-1/4	15/16	1-1/16	2-7/16	2-1/16	4-7/8	.17
1403-015	1-1/2	1	1-3/16	2-13/16	2-3/16	5-5/8	.22
1403-020	2	1-5/16	1-7/16	3-1/16	2-15/32	6-3/32	.32

PVC REDUCING TEE

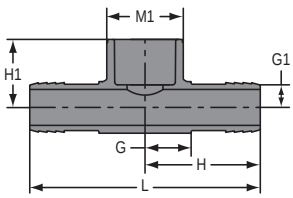
Insert x Insert x Mipt



Part Number	Size	G	G1	H	H1	L	Approx. Wt. (Lbs.)
1403-130	1x1x1/2	11/16	23/32	2-3/16	1-3/8	4-3/8	.08
1403-131	1x1x3/4	11/16	11/16	2-3/16	1-13/32	4-3/8	.09

PVC TEE

Insert x Insert x Socket

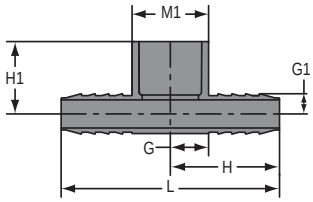


Part Number	Size	G	G1	H	H1	L	M1	Approx. Wt. (Lbs.)
1404-010	1	1	15/32	2-1/2	1-15/32	5	1-5/8	.15

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PVC REDUCING TEE

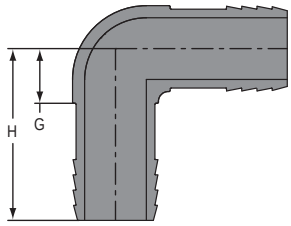
Insert x Insert x Socket



Part Number	Size	G	G1	H	H1	L	M1	Approx. Wt. (Lbs.)
1404-102	3/4x3/4x1	27/32	11/32	2-11/32	1-15/32	4-21/32	1-5/8	.09

PVC 90° ELBOW

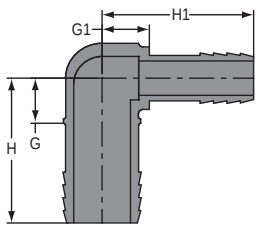
Insert x Insert



Part Number	Size	G	H	Approx. Wt. (Lbs.)
1406-005	1/2	7/16	1-15/16	.03
1406-007	3/4	17/32	2-1/32	.04
1406-010	1	11/16	2-3/16	.07
1406-012	1-1/4	7/8	2-7/16	.12
1406-015	1-1/2	1	2-3/4	.17
1406-020	2	1-3/16	2-15/16	.23
1406-025	2-1/2	1-9/16	3-3/4	.43

PVC 90° REDUCING ELBOW

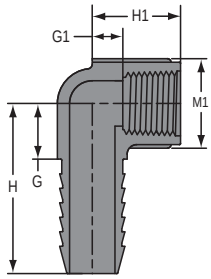
Insert x Insert



Part Number	Size	G	G1	H	H1	Approx. Wt. (Lbs.)
1406-101	3/4x1/2	21/32	9/16	2-5/32	2-1/16	.04
1406-131	1x3/4	3/4	5/8	2-1/4	2-1/8	.06
1406-168	1-1/4x1	23/32	21/32	2-1/4	2-1/4	.10
1406-212	1-1/2x1-1/4	15/16	3/4	2-11/16	2-9/32	.14
1406-251	2x1-1/2	1-1/4	31/32	3	2-23/32	.22

PVC 90° ELBOW

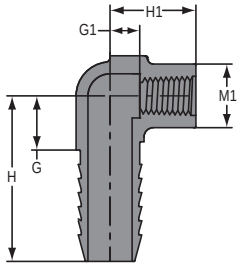
Insert x Fipt



Part Number	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
1407-005	1/2	11/16	5/16	2-1/8	1	1-1/16	.04
1407-007	3/4	27/32	13/32	2-1/4	1-3/32	1-9/32	.06
1407-010	1	15/16	3/8	2-3/8	1-3/8	1-19/32	.11
1407-012	1-1/4	1-3/32	3/4	2-19/32	1-3/4	2	.18
1407-015	1-1/2	1-7/32	13/16	2-31/32	1-7/8	2-3/8	.24
1407-020	2	1-15/32	1-1/16	3-7/32	2-1/8	2-27/32	.35

PVC 90° REDUCING ELBOW

Insert x Fipt

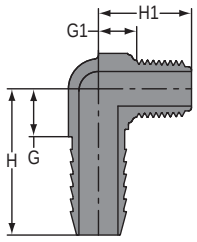


Part Number	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
1407-074	1/2x3/4	13/16	3/8	2-5/16	1-1/8	1-11/32	.06
1407-101	3/4x1/2	23/32	15/32	2-7/32	1-5/32	1-3/32	.06
1407-130	1x1/2	11/16	17/32	2-3/16	1-1/4	1-1/8	.07
1407-131	1x3/4	27/32	9/16	2-11/32	1-5/16	1-5/16	.09
1407-166	1-1/4x1/2	21/32	3/4	2-5/32	1-3/8	1-3/32	.10
1407-167	1-1/4x3/4	25/32	3/4	2-9/32	1-1/2	1-5/16	.11
1407-168	1-1/4x1	15/16	11/16	2-7/16	1-21/32	1-11/16	.14
1407-211	1-1/2x1	29/32	3/4	2-21/32	1-3/4	1-11/16	.18
1407-212	1-1/2x1-1/4	1-1/8	13/16	2-7/8	1-13/16	2	.20
1407-251	2x1-1/2	1-7/32	1	2-31/32	2-1/32	2-5/16	.29

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PVC 90° ELBOW

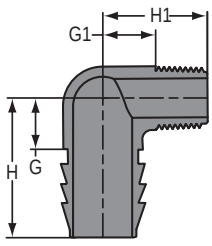
Insert x Mipt



Part Number	Size	G	G1	H	H1	Approx. Wt. (Lbs.)
1413-005	1/2	1/2	5/8	2	1-1/4	.03
1413-007	3/4	17/32	21/32	2	1-9/32	.04
1413-010	1	11/16	23/32	2-3/16	1-19/32	.07
1413-012	1-1/4	27/32	31/32	2-11/32	1-27/32	.12
1413-015	1-1/2	15/16	1-3/32	2-23/32	2-1/8	.17
1413-020	2	1-1/4	1-3/8	3	2-7/16	.24

PVC 90° REDUCING ELBOW

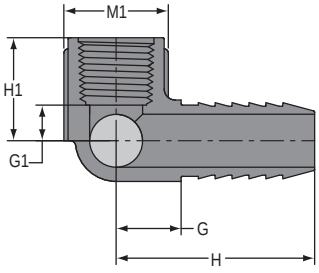
Insert x Mipt



Part Number	Size	G	G1	H	H1	Approx. Wt. (Lbs.)
1413-055	3/8x3/4	7/16	3/4	1-1/4	1-1/2	.03
1413-101	3/4x1/2	1/2	1/2	2-1/16	1-7/32	.04
1413-130	1x1/2	23/32	3/4	2-3/16	1-11/32	.06
1413-131	1x3/4	11/16	23/32	2-5/32	1-13/32	.06

PVC SIDE OUTLET ELBOW

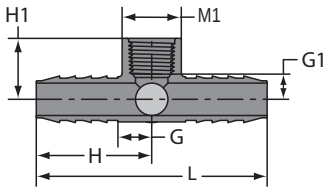
Insert x Insert x Fipt



Part Number	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
1414-101	3/4x3/4x1/2	5/8	13/32	2-1/8	1-1/8	1-3/32	.07
1414-130	1x1x1/2	11/16	9/16	2-3/16	1-1/4	1-5/16	.10
1414-131	1x3/4	15/16	15/32	2-9/32	1-3/16	1-5/16	.11

PVC SIDE OUTLET TEE

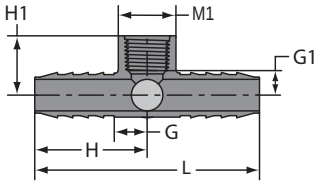
Insert x Insert x Insert x Fipt



Part Number	Size	G	G1	H	H1	L	M1	Approx. Wt. (Lbs.)
1416-007	3/4x3/4	23/32	27/32	2-7/32	1-1/8	4-7/16	1-3/32	.08

PVC REDUCING SIDE OUTLET TEE

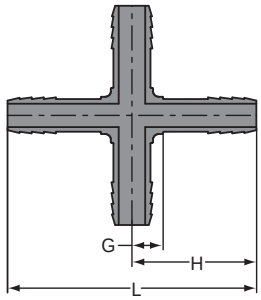
Insert x Insert x Insert x Fipt



Part Number	Size	G	G1	H	H1	L	M1	Approx. Wt. (Lbs.)
1416-101	3/4x1/2	5/8	23/32	2-1/8	2-7/32	4-1/4	1-3/32	.08
1416-130	1x1/2	1/2	1/2	1-1/4	1-1/4	2-1/2	1-5/16	.11
1416-131	1x3/4	23/32	27/32	2-7/32	2-11/32	4-7/16	1-5/16	.12

PVC CROSS

Insert

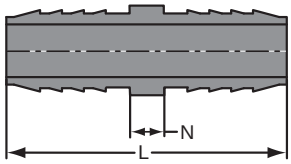


Part Number	Size	G	H	L	Approx. Wt. (Lbs.)
1420-005	1/2	13/32	1-29/32	3-13/16	.05
1420-007	3/4	1/2	2-7/16	4-27/32	.09
1420-010	1	11/16	2-3/16	4-3/8	.12

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PVC COUPLING

Insert x Insert

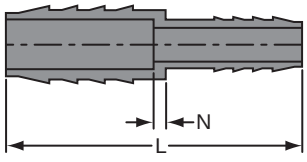


Part Number	Size	L	N	Approx. Wt. (Lbs.)
1429-005	1/2	3-1/8	1/8	.02
1429-007	3/4	3-1/16	1/16	.03
1429-010	1	3-3/16	3/16	.05
1429-012	1-1/4	3-3/16	3/16	.08
1429-015	1-1/2	3-19/32	3/32	.11
1429-020	2	3-17/32	1/16	.13
1429-025	2-1/2	4-19/32	7/32	.23
1429-030	3	4-13/16	5/16	.34
1429-040	4	6-13/32	3/8	.62
1429-060	6	7-27/32	13/32	1.65
1429-080*	8	9-7/8	3/16	3.55

*Fabricated PVC White

PVC REDUCER COUPLING

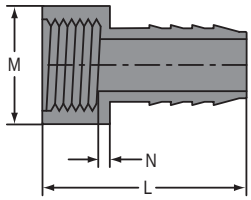
Insert x Insert



Part Number	Size	L	N	Approx. Wt. (Lbs.)
1429-101	3/4x1/2	3-1/8	1/8	.03
1429-130	1x1/2	3-1/8	1/8	.04
1429-131	1x3/4	3-3/16	3/16	.04
1429-1315	1x7/8	3-1/4	1/4	.05
1429-167	1-1/4x3/4	3-1/8	1/8	.06
1429-168	1-1/4x1	3-1/16	1/16	.06
1429-210	1-1/2x3/4	3-3/8	1/8	.09
1429-211	1-1/2x1	3-3/8	1/8	.09
1429-212	1-1/2x1-1/4	3-3/8	1/8	.09
1429-249	2x1	3-3/8	1/8	.12
1429-250	2x1-1/4	3-3/8	1/8	.13
1429-251	2x1-1/2	3-5/8	1/8	.14
1429-291	2-1/2x1-1/2	4	1/8	.17
1429-422	4x3	5-9/16	5/16	.50
1429-532	6x4	8-15/32	2-3/16	1.52

PVC & CPVC FEMALE ADAPTER

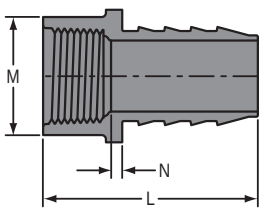
Fipt x Insert



Part Number		Size	L	M	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
1435-005	1435-005C	1/2	2-13/32	1-3/16	3/16	.04	.04
1435-007	1435-007C	3/4	2-7/16	1-13/32	1/4	.05	.05
1435-010	1435-010C	1	2-9/16	1-21/32	3/16	.08	.08
1435-012	1435-012C	1-1/4	2-11/16	2-1/8	5/32	.11	.12
1435-015	1435-015C	1-1/2	3-1/16	2-5/16	3/16	.15	.17
1435-020	1435-020C	2	3	2-13/16	3/16	.19	.22

PVC REDUCING FEMALE ADAPTER

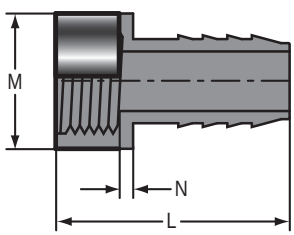
Fipt x Insert



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
1435-074	1/2x3/4	2-3/8	1-1/8	5/32	.04
1435-101	3/4x1/2	2-3/8	1-11/32	5/32	.04
1435-102	3/4x1	2-3/8	1-5/16	5/32	.05

PVC SPECIAL REINFORCED FEMALE ADAPTER

SR Fipt x Insert

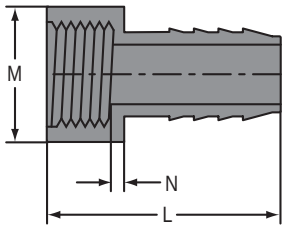


Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
1435-005SR	1/2	2-7/16	1-3/32	9/32	.03
1435-007SR	3/4	2-7/16	1-13/32	1/4	.05
1435-010SR	1	2-5/8	1-23/32	1/4	.08

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PVC FEMALE HOSE ADAPTER

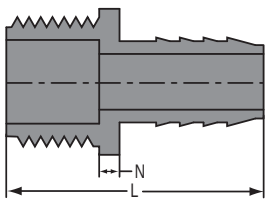
Female Hose Thread x Insert



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
1435-007FHT	3/4	2-7/16	1-13/32	7/16	.05

PVC & CPVC MALE ADAPTER

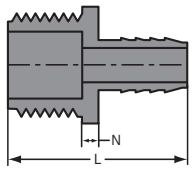
Mipt x Insert



Part Number		Size	L	N	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
1436-002	---	1/4	1-19/32	5/32	.01	---
1436-005	1436-005C	1/2	2-13/32	1/4	.02	.03
1436-007	1436-007C	3/4	2-7/16	1/4	.04	.05
1436-010	1436-010C	1	2-5/8	1/4	.06	.07
1436-012	1436-012C	1-1/4	2-9/16	3/16	.04	.06
1436-015	1436-015C	1-1/2	2-31/32	5/16	.12	.14
1436-020	1436-020C	2	2-13/16	1/8	.16	.18
1436-025	---	2-1/2	4-3/16	7/16	.33	---
1436-030	1436-030C	3	4-9/32	13/32	.47	.48
1436-040	1436-040C	4	5-1/4	3/8	.76	.84

PVC & CPVC REDUCING MALE ADAPTER

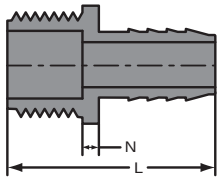
Mipt x Insert



Part Number		Size	L	N	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
1436-074	1436-074C	1/2x3/4	2-5/16	1/8	.03	.03
1436-075	---	1/2x1	2-5/8	7/16	.05	---
1436-101	1436-101C	3/4x1/2	2-5/16	1/8	.03	.04
1436-102	---	3/4x1	2-9/16	1/4	.04	---
1436-131	---	1x3/4	2-9/16	3/16	.06	---
1436-132	---	1x1-1/4	2-5/8	1/4	.07	---
1436-133	---	1x1-1/2	3-1/16	5/16	.11	---
1436-167	---	1-1/4x3/4	2-25/32	9/32	.08	---
1436-168	---	1-1/4x1	2-25/32	9/32	.09	---
1436-169	---	1-1/4x1-1/2	3-1/16	5/16	.11	---
1436-211	---	1-1/2x1	2-13/16	5/16	.11	---
1436-212	1436-212C	1-1/2x1-1/4	2-27/32	11/32	.12	.13
1436-213	---	1-1/2x2	3-3/32	5/16	.14	---
1436-251	---	2x1-1/2	3-7/32	13/32	.18	---

PVC HOSE ADAPTER

Male Hose Thread x Insert

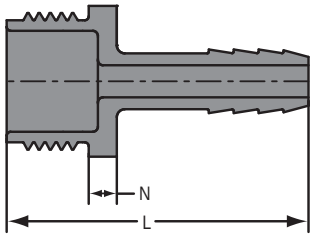


Part Number	Size	L	N	Approx. Wt. (Lbs.)
1436-007MHT	3/4	2-3/8	7/32	.03

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PVC REDUCING HOSE ADAPTER

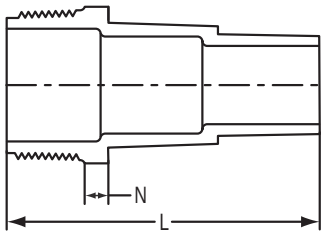
Male Hose Thread x Insert



Part Number	Size	L	N	Approx. Wt. (Lbs.)
1436-101MHT	3/4x1/2	2-3/8	7/32	.03
1436-102MHT	3/4x1	2-3/8	7/32	.04

PVC POOL ADAPTER (PVC White)

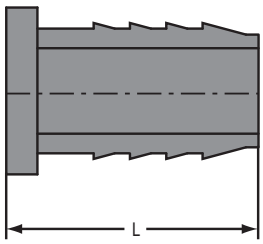
Mipt x Hose ID



Part Number	Size	L	N	Approx. Wt. (Lbs.)
1436-204	1-1/2x1-1/2x1-1/4	4	1/8	.09

PVC PLUG

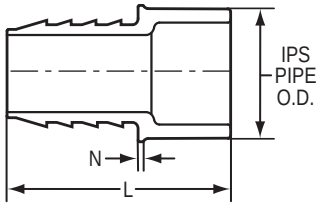
Insert



Part Number	Size	L	Approx. Wt. (Lbs.)
1449-005	1/2	1-5/8	.01
1449-007	3/4	1-19/32	.02
1449-010	1	1-11/16	.03
1449-012	1-1/4	1-5/8	.05
1449-015	1-1/2	1-7/8	.07
1449-020	2	1-7/8	.10

SPIGOT ADAPTER (PVC WHITE)

Insert x I.P.S. Spigot

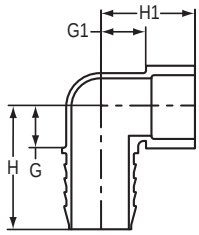


Part Number	Size	L	N	Approx. Wt. (Lbs.)
460-005	1/2	2-7/16	7/32	.03
460-007	3/4	2-23/32	7/32	.04
460-010	1	2-9/16	1/16	.07
460-012	1-1/4	3-1/32	1/4	.11
460-012N	1-1/4	3	9/32	.11
460-015	1-1/2	3-5/16	5/16	.14
460-020	2	3-1/2	3/8	.19
460-030	3	4-11/16	7/16	.58
460-040	4	5-11/32	5/16	.73

N = Nested

INSERT ADAPTER 90° ELBOW (PVC WHITE)

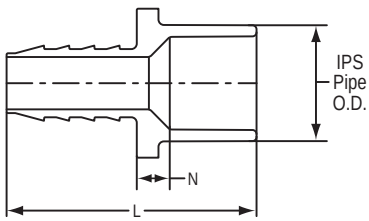
Insert x Spigot



Part Number	Size	G	G1	H	H1	Approx. Wt. (Lbs.)
460A-015	1-1/2	1	1	2-5/32	2-3/16	.18

REDUCING SPIGOT ADAPTER (PVC WHITE)

Insert x Spigot (Socket)



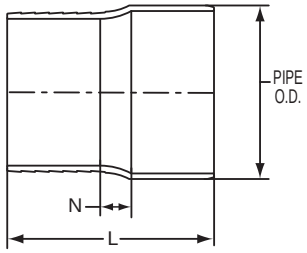
Part Number	Size	L	N	Approx. Wt. (Lbs.)
460-131N	3/4x1x3/4	2-7/8	5/8	.07
460-132N	1x1-1/4x1	3	5/16	.10

N = Nested

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SPIGOT ADAPTER (PVC WHITE)

Insert x Spigot

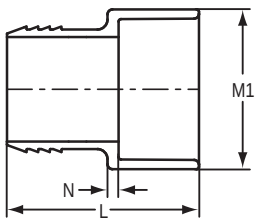


Part Number	Size	L	N	Approx. Wt. (Lbs.)
1432-060	6	7-27/32	1	1.69
1432-080*	8	9-7/8	5/8	5.23

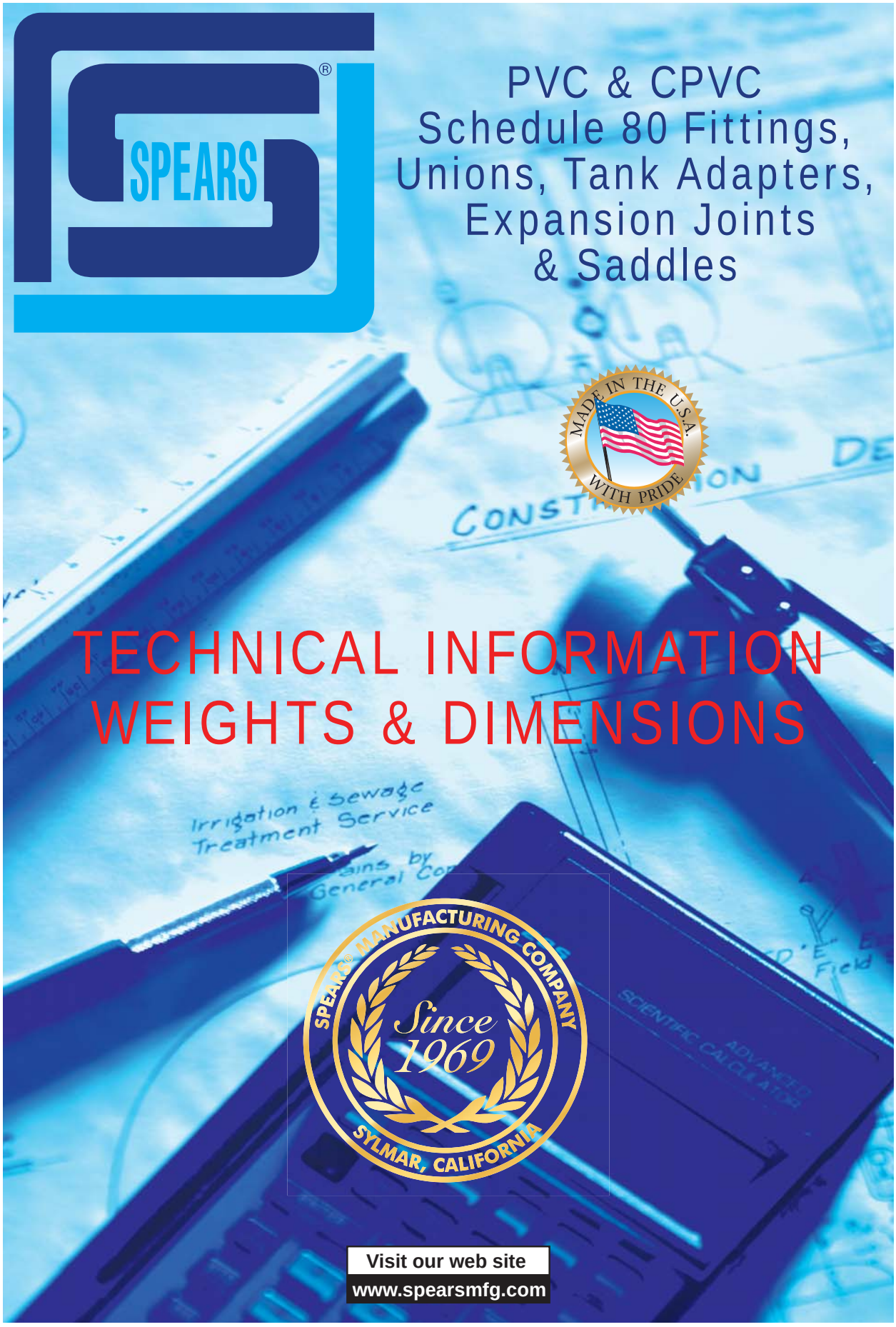
*Fabricated

SOCKET ADAPTER (PVC WHITE)

Insert x Socket



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
474-005	1/2	2-3/8	1-1/16	1/8	.03
474-007	3/4	2-7/16	1-5/16	5/32	.05
474-010	1	2-5/8	1-5/8	1/8	.07
474-012	1-1/4	2-11/16	2	3/16	.10
474-015	1-1/2	3-1/16	2-1/4	3/16	.14
474-020	2	3	2-11/16	3/16	.17
474-030	3	4-3/4	4	5/16	.51
474-040	4	5-5/8	5	3/8	.81


SPEARS
PVC & CPVC
Schedule 80 Fittings,
Unions, Tank Adapters,
Expansion Joints
& Saddles
MADE IN THE U.S.A.
WITH PRIDE
TECHNICAL INFORMATION
WEIGHTS & DIMENSIONS
SPEARS® MANUFACTURING COMPANY
Since 1969
SYLMAR, CALIFORNIA
Visit our web site
www.spearsmfg.com

PVC Performance Engineered & Tested



SPEARS® Schedule 80 PVC product designs combine years of proven experience with computer generated stress analysis to yield the optimum physical structure and performance for each fitting. Material reinforcement is uniformly placed in stress concentration areas for substantially improved pressure handling capability. Resulting products are subjected to numerous verification tests to assure obtaining the very best PVC fittings available.

1/4" Through 12" Availability

Spears® comprehensive line of PVC injection molded fittings and extruded pipe offers a variety of configurations in sizes 1/4" through 12". Schedule 80 fittings are manufactured to ASTM D 2467 and pipe is produced to ASTM D 1785. Spears® exclusive CL150 Flanges are produced in sizes 1/2" - 18" with ANSI B16.5 bolt patterns, plus numerous Unions, Saddles, Transition and Specialty fittings in a variety of sizes.

Exceptional Chemical & Corrosion Resistance

Unlike metal, PVC fittings and pipe never rust, scale, or pit, and will provide many years of maintenance-free service and extended system life.

High Temperature Ratings

PVC thermoplastic can handle fluids at service temperatures up to 140°F (60°C), allowing a wide range of process applications, including corrosive fluids.

Lower Installation Costs

Substantially lower material costs than steel alloys or lined steel, combined with lighter weight and ease of installation, can reduce installation costs by as much as 60% over conventional metal systems.

Higher Flow Capacity

Smooth interior walls result in lower pressure loss and higher volume than conventional metal fittings.

Additional Fabricated Configurations through 36"

Extra large, hard-to-find, and custom configurations are fabricated from NSF® Certified pipe. Fittings are engineered and tested to provide full pressure handling capabilities according to Spears® specifications.

Advanced Design Specialty Fittings

Spears® wide range of innovative, improved products include numerous metal-to-plastic transition fittings and unions with Spears® patented special reinforced (SR) plastic threads.

PVC Valves

SPEARS® PVC Valve products are available for total system compatibility and uniformity.

1/8" Through 24" Industrial Pipe Availability

Spears® premium quality Industrial CPVC pipe is offered in Schedule 80 sizes 1/8" through 24". Schedule 40 CPVC pipe is also available.

PVC Sample Engineering Specifications

All PVC Schedule 80 pipe and fittings shall be produced by Spears® Manufacturing Company from PVC Type I, cell classification 12454, conforming to ASTM Standard D 1784. All PVC injection molded Schedule 80 fittings and extruded pipe shall be Certified for potable water service by NSF International. All Schedule 80 fittings shall be manufactured in strict compliance to ASTM D 2467 and Schedule 80 pipe shall be manufactured in strict compliance to ASTM D 1785. All fabricated fittings shall be produced in accordance with Spears® General Specifications for Fabricated Fittings. All PVC flanges shall be designed and manufactured to meet CL150 bolt pattern per ANSI Standard B16.5 and rated for a maximum internal pressure of 150 psi, non-shock at 73°F.

CPVC Performance Engineered and Tested



SPEARS® Schedule 80 CPVC pipe and fitting designs combine years of proven experience with computer generated stress analysis to yield the optimum physical structure and performance for each fitting. Material reinforcement is uniformly placed in stress concentration areas for substantially improved pressure handling capability. Resulting products are subjected to numerous verification tests to assure the very best CPVC piping products available.

1/4" Through 24" Availability

Spears® comprehensive line of CPVC fittings offers a variety of configurations in Schedule 80 sizes 1/4" through 24".

Exceptional Chemical & Corrosion Resistance

Unlike metal, CPVC fittings never rust, scale or pit, and will provide many years of maintenance-free service and extended system life.

Higher Temperature Ratings

High Temperature CPVC Thermoplastics can handle fluids at service temperatures up to 200°F, allowing a wide range of process applications, including hot corrosive liquids.

Higher Flow Capacity

Smooth interior walls result in lower pressure loss and higher volume than conventional metal fittings.

Lower Installation Costs

Substantially lower material costs than steel alloys or lined steel, combined with lighter weight and ease of installation, can reduce installation costs by as much as 60% over conventional metal systems.

SPEARS® Schedule 80 14" Through 24" Fittings & Flanges

Schedule 80 CPVC 14" through 24" fittings are a special engineered product by Spears® Manufacturing Company, where no applicable ASTM specifications exist. Available in a variety of injection molded and fabricated configurations including Flanges, Couplings, Elbows, Bushings and Tees, plus custom fabrication to virtually any configuration.

1/8" Through 24" Industrial Pipe Availability

Spears® premium quality Industrial CPVC pipe is offered in Schedule 80 sizes 1/8" through 24". Schedule 40 CPVC pipe is also available.

American Bureau of Shipping (ABS) Type Approval

Spears® Schedule 40 and Schedule 80 CPVC pipe and fittings are ABS Type Approved for marine and offshore applications in nominal pipe sizes through 12". Type Approval details and restrictions are specified in ABS Certificate # 10-HS539421-1-PDA available on the ABS website at www.eagle.org.

CPVC Sample Engineering Specifications

All CPVC Schedule 80 fittings shall be produced by Spears® Manufacturing Company from CPVC materials, cell classification 23447 conforming to ASTM Standard D 1784. All injection molded fittings through 12" shall be manufactured in compliance to ASTM F 439 and all pipe through 16" shall be manufactured in compliance to ASTM F 441. Pipe and fittings shall be Certified by NSF International for use with potable water service. All 14" through 24" and fabricated fittings shall be produced in accordance with Spears® Specifications. All CPVC flanges shall be designed and manufactured to meet CL150 bolt pattern per ANSI Standard B16.5.

The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

General Information

Recommendations For Installers And Users

Plastic piping systems should be **ENGINEERED, INSTALLED** and **OPERATED** in accordance with **ESTABLISHED DESIGN AND ENGINEERING STANDARDS AND PROCEDURES** for plastic piping systems. Suitability for the intended service application should be determined by the installer and/or user prior to installation of a plastic piping system. **PRIOR TO ASSEMBLY, all piping system components should be inspected for damage or irregularities. Mating components should be checked to assure that tolerances and engagements are compatible. Do not use any components that appear irregular or do not fit properly. Contact the appropriate manufacturer of the component product in question to determine usability. Consult all applicable codes and regulations for compliance prior to installation.**

Solvent Weld Connections — Use quality solvent cements and primers formulated for the intended service application, pipe size and type of joint. While the pipe and fitting materials may be compatible with the intended medium, the solvent cement may not be. Consult the manufacturers for suitability of use. Read and follow the cement and primer manufacturers' applications and cure time instructions thoroughly. Be sure to use the correct size applicator.

Threaded Connections — Use a quality grade thread sealant. **WARNING: SOME PIPE JOINT COMPOUNDS OR PTFE PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING TO PLASTIC.** Spears® Manufacturing company recommends the use of Spears® **BLUE 75™** Thread Sealant which has been tested for compatibility with Spears® products. Please follow the sealant manufacturers' application/installation instructions. Choice of an appropriate thread sealant other than those listed above is at the discretion of the installer. 1 to 2 turns beyond **FINGER TIGHT** is generally all that is required to make a sound plastic threaded connection. Unnecessary **OVERTIGHTENING** will cause **DAMAGE TO BOTH PIPE AND FITTING.**

Standards and Specifications

Molded Schedule 80 PVC products are manufactured to ASTM D 2467 for use with pipe manufactured to ASTM D 1785. Molded Schedule 80 CPVC products are manufactured to ASTM F 439 for use with pipe manufactured to ASTM F 441. Certain products carry reduced pressure handling capability and have maximum internal pressure ratings at 73°F noted.

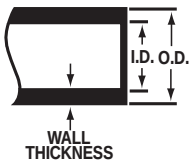
Fabricated Schedule 80 PVC pressure fittings (part numbers ending with **"F"**) are manufactured to Spears® specifications for use with pipe manufactured to ASTM D 1785. Schedule 80 CPVC fabricated fittings for use with pipe manufactured to ASTM F 441. See publication FAB-7, General Specifications for Standard Fabricated Fittings for additional information.

All specified Schedule 80 PVC and CPVC products are manufactured from materials certified by NSF® for use in potable water service.

"Lead Free" low lead certification – unless otherwise specified, all Spears® Schedule 80 fittings specified here-in are certified by NSF International to ANSI/NSF® Standard 61, Annex G and is in compliance with California's Health & Safety Code Section 116825 (commonly known as AB1953) and Vermont Act 193. Weighted average lead content <=0.25%. Spears® PVC and CPVC Pipe, Fittings and Valves have always been lead-free and Certified by NSF International for use in potable water systems. Spears® offers a wide range of lead-free specialty fittings and transition adapters for plumbing applications. However, certain brass threaded adapter fittings for applications that are not intended to convey water for human consumption through drinking or cooking are still produced and available.

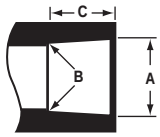
ASTM STANDARD DIMENSIONS

SCHEDULE 80 PIPE DIMENSIONS ASTM D 1785



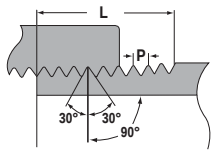
Nominal Pipe Size In.	Mean Outside Diameter In.	O. D. Tolerance In.	Minimum Wall Thickness In.
1/8	0.405	± 0.004	0.095
1/4	0.540	± 0.004	0.119
3/8	0.675	± 0.004	0.126
1/2	0.840	± 0.004	0.147
3/4	1.050	± 0.004	0.154
1	1.315	± 0.005	0.179
1-1/4	1.660	± 0.005	0.191
1-1/2	1.900	± 0.006	0.200
2	2.375	± 0.006	0.218
2-1/2	2.875	± 0.007	0.276
3	3.500	± 0.008	0.300
4	4.500	± 0.009	0.337
5	5.563	± 0.010	0.375
6	6.625	± 0.011	0.432
8	8.625	± 0.015	0.500
10	10.750	± 0.015	0.593
12	12.750	± 0.015	0.687

SCHEDULE 80 SOCKET DIMENSIONS ASTM D 2467



Nominal Size In.	Diameter			Socket Length Minimum C
	Entrance A	Bottom B	Tolerance A	
1/8	0.417	0.401	± 0.004	0.500
1/4	0.552	0.536	± 0.004	0.625
3/8	0.687	0.671	± 0.004	0.750
1/2	0.848	0.836	± 0.004	0.875
3/4	1.058	1.046	± 0.004	1.000
1	1.325	1.310	± 0.005	1.125
1-1/4	1.670	1.655	± 0.005	1.250
1-1/2	1.912	1.894	± 0.006	1.375
2	2.387	2.369	± 0.006	1.500
2-1/2	2.889	2.868	± 0.007	1.750
3	3.516	3.492	± 0.008	1.875
4	4.518	4.491	± 0.009	2.250
5	5.583	5.553	± 0.010	2.625
6	6.647	6.614	± 0.011	3.000
8	8.655	8.610	± 0.015	4.000
10	10.780	10.735	± 0.015	5.000
12	12.780	12.735	± 0.015	6.000

AMERICAN NATIONAL STANDARD TAPER PIPE THREADS (NPT) ANSI B1 .20.1 ASTM F 1498



Nominal Size In.	Threads Per Inch	Effective Thread Length L	Pitch Of Thread P
1/8	27	0.2639	0.03704
1/4	18	0.4018	0.05556
3/8	18	0.4078	0.05556
1/2	14	0.5337	0.07143
3/4	14	0.5457	0.07143
1	11-1/2	0.6828	0.08696
1-1/4	11-1/2	0.7068	0.08696
1-1/2	11-1/2	0.7235	0.08696
2	11-1/2	0.7565	0.08696
2-1/2	8	1.1375	0.12500
3	8	1.2000	0.12500
4	8	1.3000	0.12500
5	8	1.4063	0.12500
6	8	1.5125	0.12500
8	8	1.7125	0.12500

STANDARD COMPARISONS

SPEARS® IPS-to-Metric transition unions are listed by nominal size. The chart below compares nominal and actual* pipe O.D. for each size according to the designated standard.

JIS K6741 (mm)		DIN 8062 (mm)		ASTM D1785 (in.)		NPT—ANSI B1.20.1** Tapered Thread		BSP—BS21,DIN 2999,ISO 7/1 Thread	
Nominal	Actual*	O.D.	Actual*	Nominal	Actual*	Designation	Threads/in.	Designation	Threads/25.4mm
16	22	15	20	1/2	.840	1/2	14	1/2	14
20	26	20	25	3/4	1.050	3/4	14	3/4	14
25	32	25	32	1	1.315	1	11.5	1	11
30	38	38	40	1-1/4	1.660	1-1/4	11.5	1-1/4	11
40	48	40	50	1-1/2	1.900	1-1/2	11.5	1-1/2	11
50	60	50	63	2	2.375	2	11.5	2	11
75	89	80	90	3	3.500	3	8	3	11
100	114	100	110	4	4.500	4	8	4	11

*Specified dimension, certain tolerances apply

**NPT and BSP have different thread angles and not compatible.

PVC & CPVC SCHEDULE 80 FITTINGS, UNIONS, TANK ADAPTERS, EXPANSION JOINTS & SADDLES

Injection Molded Dimensions Referencesces:

G = (LAYING LENGTH) intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses; ± 1/32 inch.
H = Intersection of center lines to face of fitting; 90° elbow tees, crosses; ± 1/32 inch.
J = Intersection of center lines to bottom of socket/thread; 45° elbows; ± 1/32 inch

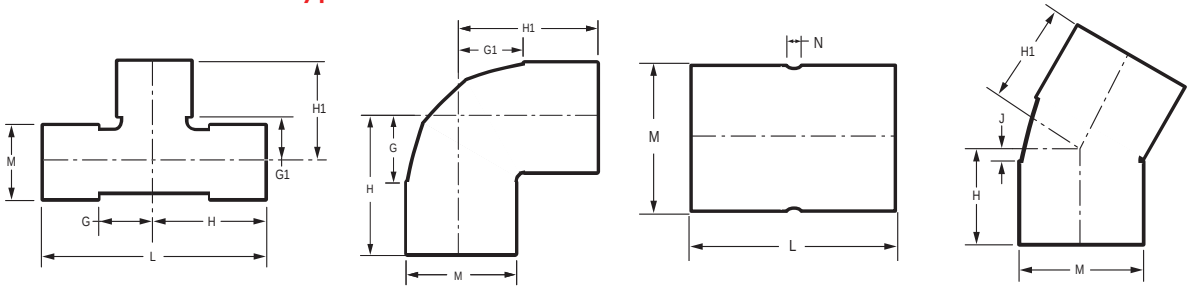
L = Overall length of fittings; ± 1/16 inch.
H = Outside diameter of socket/thread hub; ± 1/16 inch.
N = Socket bottom to socket bottom; couplings; ± 1/16 inch
W = Height of cap; ± 1/16 inch.

Fabricated Dimension References:

G = (LAYING LENGTH) intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses ± 1/4 inch; 14" & larger ± 1/2 inch.
H = Intersection of center lines to face of fitting; 90° elbows ± 1/4 inch, 14" & larger ± 3/4 inch; wyes ± 1/2 inch; tees, crosses ± 1/4 inch; 14" & larger ± 1/2 inch.
J = Intersection of center lines to bottom of socket/thread; 45° elbows; ± 1/4 inch; 14" & larger ± 1/2 inch.

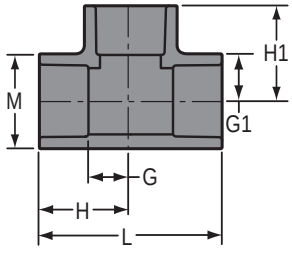
L = Overall length of fittings; ± 1/2 inch; 14" & larger ± 1 inch; wyes ± 1 inch.
M = Outside diameter of socket/thread hub; ± 1/4 inch.
N = Socket bottom to socket bottom; couplings; ± 1/2
W = Height of cap; ± 1/4 inch.

Typical Fabricated Dimension References



TEE

Socket x Socket x Socket

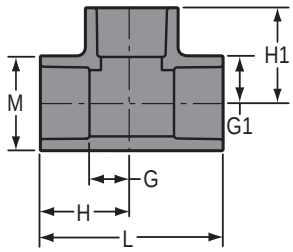


Part Number		Size	G	G1	H	H1	L	M	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
801-002	801-002C	1/4	5/16	5/16	31/32	31/32	1-15/16	27/32	.04	.04
801-003	801-003C	3/8	15/32	15/32	1-1/4	1-1/4	2-1/2	31/32	.06	.06
801-005	801-005C	1/2	17/32	17/32	1-15/32	1-15/32	2-15/16	1-3/16	.11	.11
801-007	801-007C	3/4	21/32	21/32	1-11/16	1-11/16	3-13/32	1-13/32	.16	.18
801-010	---	1	7/8	7/8	2	2	4	1-3/4	.27	---
---	801-010C	1	27/32	27/32	2	2	3-31/32	1-23/32	---	.29
801-012	801-012C	1-1/4	1-1/32	1-1/32	2-9/32	2-9/32	4-19/32	2-3/32	.39	.40
801-015	801-015C	1-1/2	1-3/16	1-3/16	2-9/32	2-9/32	5-1/8	2-3/8	.52	.57
801-020	801-020C	2	1-11/32	1-11/32	2-15/16	2-15/16	5-27/32	2-7/8	.80	.85
801-025	---	2-1/2	1-3/4	1-3/4	3-1/2	3-1/2	7-1/32	3-15/32	1.46	---
---	801-025C	2-1/2	1-23/32	1-23/32	3-1/2	3-1/2	7	3-15/32	---	1.62
801-030	801-030C	3	2-1/16	2-1/16	3-31/32	3-31/32	7-15/16	4-5/32	2.16	2.53
801-040	801-040C	4	2-1/2	2-1/2	4-3/4	4-3/4	9-1/2	5-1/4	3.52	3.72

TEE

Socket x Socket x Socket

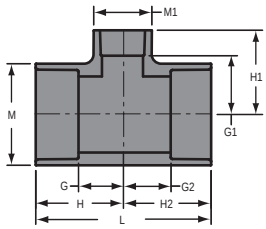
(continued)



Part Number		Size	G	G1	H	H1	L	M	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
801-050	801-050C	5	3-1/8	3-1/8	5-25/32	5-25/32	11-5/8	6-13/32	6.03	6.47
801-050F	801-050CF	5	5-1/2	5-1/2	8-1/2	8-1/2	17	6-5/16	13.26	18.38
801-060	---	6	3-25/32	3-25/32	6-13/16	6-13/16	13-5/8	7-5/8	10.78	---
---	801-060C	6	4-1/32	4-1/32	7-3/32	7-3/32	14-5/32	7-19/32	---	12.19
801-080	801-080C	8	4-13/16	4-13/16	8-7/8	8-7/8	17-3/4	9-23/32	21.21	21.53
801-080F	801-080CF	8	7-5/8	7-5/8	11-7/8	11-7/8	23-3/4	9-5/8	22.84	30.91
801-100	801-100C	10	5-3/4	5-3/4	10-13/16	10-13/16	21-5/8	11-19/32	37.89	40.50
801-100F	801-100CF	10	9	9	14-1/4	14-1/4	28-1/2	11-15/16	39.82	51.41
801-120	801-120C	12	6-15/16	6-15/16	12-15/16	12-15/16	25-7/8	14-1/4	54.45	62.00
801-120F	801-120CF	12	11-1/4	11-1/4	17-1/2	17-1/2	35	14-1/8	67.13	83.37
801-140	801-140C	14	7-1/32	7-1/32	14-7/32	14-1/32	28-7/16	15-21/32	63.61	70.48
801-140F	801-140CF	14	12-1/4	12-1/4	19-1/4	19-1/4	38-1/2	15-1/2	103.37	108.34
801-160F	801-160CF	16	13	13	21	21	42	17-11/16	144.87	144.86
801-180F	801-180CF	18	13-3/4	13-3/4	22-3/4	22-3/4	45-1/2	19-7/8	182.75	198.00
801-200F	801-200CF	20	16-3/8	16-3/8	26-3/8	26-3/8	52-3/4	22-1/16	284.24	249.75
801-240F	801-240CF	24	20-1/4	20-1/4	32-1/4	32-1/4	64-1/2	26-7/16	335.00	460.00

REDUCING TEE

Socket x Socket x Socket



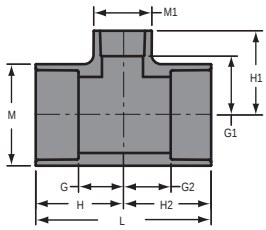
Part Number		Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
801-101	801-101C	3/4x3/4x1/2	19/32	23/32	19/32	1-19/32	1-19/32	1-19/32	3-3/16	1-13/32	1-3/16	.14	.15
801-130	801-130C	1x1x1/2	19/32	7/8	19/32	1-23/32	1-3/4	1-23/32	3-7/16	1-3/4	1-3/16	.20	.21
801-131	801-131C	1x1x3/4	11/16	27/32	11/16	1-27/32	1-27/32	1-27/32	3-21/32	1-3/4	1-13/32	.23	.24
801-157	---	1-1/4x1x3/4	11/16	1-1/16	5/8	1-15/16	2-1/16	1-7/8	3-13/16	2-1/8	1-7/16	.30	---
801-158	801-158C	1-1/4x1x1	13/32	15/16	13/32	2-1/8	1-31/32	1-15/16	4	2-1/16	1-11/16	.33	.34
801-159	801-159C	1-1/4x1x1-1/4	15/16	1-1/32	7/8	2-3/16	2-5/32	2-1/8	4-5/16	2-1/16	2-1/16	.39	.41
801-166[1]	801-166C[1]	1-1/4x1-1/4x1/2	7/8	1-13/32	7/8	2-3/32	2-3/8	2-3/32	4-7/32	2-1/8	1-3/4	.42	.43
801-167	801-167C	1-1/4x1-1/4x3/4	5/8	31/32	5/8	1-15/16	1-31/32	1-15/16	3-7/8	2-1/8	1-13/32	.28	.30
801-168	801-168C	1-1/4x1-1/4x1	27/32	1-1/32	27/32	2-3/32	2-5/32	2-3/32	4-7/32	2-3/32	1-3/4	.34	.36

[1] Outlet sized with bushing

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Progressive Products from Spears® Innovation and Technology

REDUCING TEE (continued)

Socket x Socket x Socket

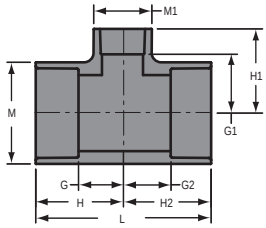


Part Number		Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
801-202	801-202C	1-1/2x1-1/4x1	7/8	1-7/32	7/8	2-1/4	2-11/32	2-1/4	4-1/2	2-7/16	1-13/16	.40	.42
801-209	801-209C	1-1/2x1-1/2x1/2	9/16	1-1/16	9/16	1-31/32	1-15/16	1-31/32	3-15/16	2-3/8	1-3/16	.32	.36
801-210	801-210C	1-1/2x1-1/2x3/4	11/16	1-1/32	11/16	2-1/16	2-1/32	2-1/16	4-5/32	2-11/32	1-13/32	.37	.39
801-211	801-211C	1-1/2x1-1/2x1	27/32	1-5/32	27/32	2-15/32	2-5/16	2-15/32	4-15/16	2-11/32	1-3/4	.42	.43
801-212	801-212C	1-1/2x1-1/2x1-1/4	1-3/16	1-3/16	1-3/16	2-9/16	2-7/16	2-9/16	5-1/8	2-3/8	2-1/8	.54	.57
801-247	801-247C	2x2x1/2	9/16	1-13/32	9/16	2-3/32	2-9/32	2-3/32	4-3/16	2-7/8	1-5/32	.44	.46
801-248	801-248C	2x2x3/4	11/16	1-7/16	11/16	2-3/16	2-7/16	2-3/16	4-3/8	2-27/32	1-13/32	.50	.52
801-249	801-249C	2x2x1	27/32	1-7/16	27/32	2-3/8	2-9/16	2-3/8	4-3/4	2-7/8	1-3/4	.58	.59
801-250	801-250C	2x2x1-1/4	31/32	1-11/32	31/32	2-17/32	2-19/32	2-17/32	5-3/32	2-7/8	2-1/8	.60	.64
801-251	801-251C	2x2x1-1/2	1-5/32	1-13/32	1-5/32	2-11/16	2-13/16	2-11/16	5-3/8	2-15/16	2-15/32	.77	.80
801-254[1]	801-254C[1]	2x2x4	3-11/16	2-15/32	3-11/16	5-3/16	4-23/32	5-3/16	10-11/32	5-1/4	5-1/4	5.61	5.54
801-287	801-287C	2-1/2x2-1/2x1/2	19/32	1-19/32	19/32	2-3/8	2-15/32	2-3/8	4-23/32	3-1/2	1-3/16	.78	.78
801-288	801-288C	2-1/2x2-1/2x3/4	21/32	1-1/2	21/32	2-7/16	2-17/32	2-7/16	4-27/32	3-17/32	1-13/32	.83	.83
801-289	801-289C	2-1/2x2-1/2x1	27/32	1-23/32	27/32	2-5/8	2-27/32	2-5/8	5-1/4	3-17/32	1-23/32	.99	1.02
801-290	801-290C	2-1/2x2-1/2x1-1/4	1-3/32	1-3/4	1-3/32	2-27/32	3	2-27/32	5-5/8	3-9/16	2-5/32	1.11	1.16
801-291	801-291C	2-1/2x2-1/2x1-1/2	1-3/16	1-3/4	1-3/16	2-31/32	3-1/8	2-31/32	5-15/16	3-7/8	2-13/32	1.21	1.24
801-292	801-292C	2-1/2x2-1/2x2	1-13/32	1-5/8	1-13/32	3-3/16	3-1/8	3-3/16	6-11/32	3-1/2	2-7/8	1.27	1.35
801-333[1]	801-333C[1]	3x3x1/2	1-7/16	2-7/8	1-7/16	3-5/16	3-3/4	3-5/16	6-5/8	4-3/16	2-7/8	1.94	2.07
801-334[1]	801-334C[1]	3x3x3/4	1-7/16	2-11/16	1-7/16	3-5/16	3-11/16	3-5/16	6-5/8	4-3/16	2-7/8	1.92	2.05
801-335	801-335C	3x3x1	7/8	1-15/16	7/8	2-3/4	3-1/16	2-3/4	5-15/32	4-3/16	1-23/32	1.21	1.27
801-336[1]	801-336C[1]	3x3x1-1/4	1-5/8	1-15/16	1-5/8	3-5/16	3-5/8	3-5/16	6-5/8	4-3/16	2-7/8	1.89	1.97
801-337	801-337C	3x3x1-1/2	1-5/32	2-1/16	1-5/32	3-1/16	3-7/16	3-1/16	6-3/32	4-3/16	2-3/8	1.44	1.45
801-338	801-338C	3x3x2	1-7/16	1-13/16	1-7/16	3-5/16	3-5/16	3-5/16	6-5/8	4-7/32	2-7/8	1.65	1.69
801-339	801-339C	3x3x2-1/2	1-3/4	1-31/32	1-3/4	3-5/8	3-11/16	3-5/8	7-1/4	4-3/16	3-17/32	1.88	2.11
801-415[1]	801-415C[1]	4x4x1/2	1-7/16	3-17/32	1-7/16	3-11/16	4-13/32	3-11/16	7-11/32	5-1/4	2-7/8	2.62	2.72
801-417[1]	801-417C[1]	4x4x1	1-15/32	3-9/32	1-15/32	3-11/16	4-3/8	3-11/16	7-3/8	5-7/32	2-7/8	2.55	2.87
801-418[1]	801-418C[1]	4x4x1-1/4	1-1/8	2-31/32	1-1/8	3-13/32	4-7/32	3-13/32	6-25/32	5-1/4	2-3/8	2.18	2.63
801-419	801-419C	4x4x1-1/2	1-1/8	2-9/16	1-1/8	3-3/8	3-15/16	3-3/8	6-3/4	5-1/4	2-3/8	2.09	2.17
801-420	801-420C	4x4x2	1-7/16	2-1/2	1-7/16	3-11/16	4	3-11/16	7-3/8	5-1/4	2-7/8	2.35	2.42
801-421[1]	801-421C[1]	4x4x2-1/2	2-1/16	2-11/16	2-1/16	4-5/16	4-3/4	4-5/16	8-5/8	5-1/4	4-1/8	3.48	3.68
801-422	801-422C	4x4x3	2-1/8	2-23/32	2-1/8	4-3/8	4-19/32	4-3/8	8-25/32	5-1/4	4-3/16	3.11	3.17
801-482F	---	5x5x1-1/4	4	4-11/16	4	7	6-3/16	7	14	6-5/16	2-1/16	5.99	---
801-484[1]	---	5x5x1-1/2	3-5/32	5-17/32	3-5/32	5-13/16	6-29/32	5-13/16	11-5/8	6-13/32	6-13/32	8.86	---
801-484F	---	5x5x1-1/2	4-1/8	5	4-1/8	7-1/8	6-1/2	7-1/8	14-1/4	6-5/16	2-5/16	9.10	---
801-486[1]	801-486C[1]	5x5x2	3-5/32	5-3/32	3-5/32	5-13/16	6-19/32	5-13/16	11-19/32	6-13/32	6-13/32	8.39	8.85
801-486F	801-486CF	5x5x2	4-5/16	4-3/4	4-5/16	7-5/16	6-1/2	7-5/16	14-5/8	6-5/16	2-13/16	6.87	10.83
801-487[1]	---	5x5x2-1/2	3-5/32	4-23/32	3-5/32	5-13/16	6-15/32	5-13/16	11-5/8	6-13/32	6-13/32	8.28	---
801-488[1]	801-488C[1]	5x5x3	3-5/32	4-5/8	3-5/32	5-13/16	6-1/2	5-13/16	11-19/32	6-13/32	6-13/32	8.21	8.61
801-490[1]	801-490C[1]	5x5x4	3-5/32	3-29/32	3-5/32	5-13/16	6-5/32	5-13/16	11-5/8	6-13/32	6-13/32	7.40	7.75

[1] Outlet sized with bushing

REDUCING TEE (continued)

Socket x Socket x Socket



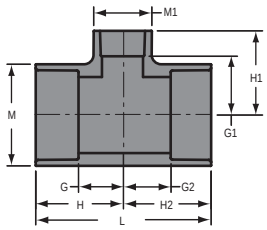
Part Number		Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
801-523[1]	---	6x6x1/2	1-7/16	4-13/16	1-7/16	4-7/16	5-11/16	4-7/16	8-7/8	7-19/32	2-7/8	.54	---
801-524[1]	801-524C[1]	6x6x3/4	1	4	1	3-7/8	5	3-7/8	7-3/4	7-9/16	1-3/4	4.39	4.48
801-525	801-525C	6x6x1	27/32	3-23/32	27/32	3-7/8	4-27/32	3-7/8	7-3/4	7-9/16	1-3/4	4.34	4.43
801-526[1]	801-526C[1]	6x6x1-1/4	1-7/16	4-3/16	1-7/16	4-7/16	5-15/32	4-7/16	8-7/8	7-19/32	2-7/8	5.23	5.46
801-527[1]	801-527C	6x6x1-1/2	1-7/16	4-3/32	1-7/16	4-7/16	5-1/2	4-7/16	8-7/8	7-19/32	2-7/8	5.25	7.16
801-528	801-528C	6x6x2	1-7/16	3-23/32	1-7/16	4-7/16	5-1/4	4-7/16	8-7/8	7-19/32	2-7/8	5.11	5.29
801-529[1]	801-529C[1]	6x6x2-1/2	2-1/16	3-13/16	2-1/16	5-1/16	5-7/8	5-1/16	10-1/8	7-9/16	4-1/4	6.80	8.99
801-530	---	6x6x3	2-1/16	3-3/4	2-1/16	5-3/32	5-5/8	5-3/32	10-3/16	7-19/32	4-1/4	6.48	---
---	801-530C	6x6x3	2-1/16	3-3/4	2-1/16	5-3/32	5-5/8	5-3/32	10-3/16	7-19/32	4-1/4	---	6.71
801-530F	801-530CF	6x6x3	4-3/4	5-3/4	4-3/4	8	8	8	16	7-1/2	4-1/8	12.33	11.74
801-532	---	6x6x4	2-11/16	3-23/32	2-11/16	5-11/16	5-31/32	5-11/16	11-13/32	7-19/32	5-1/4	7.69	---
---	801-532C	6x6x4	2-11/16	3-13/16	2-11/16	5-11/16	6-3/32	5-11/16	11-3/8	7-19/32	5-1/4	---	8.21
801-533F	801-533CF	6x6x5	5-3/4	6-1/2	5-3/4	9	9-1/2	9	18	7-1/2	6-5/16	10.35	11.90
801-575[1]	801-575C[1]	8x8x1	3-25/32	7-25/32	3-25/32	7-25/32	8-13/16	7-25/32	15-9/16	9-5/8	7-1/2	17.85	18.76
801-578[1]	801-578C[1]	8x8x2	3-13/16	6-5/8	3-13/16	7-13/16	8-1/8	7-13/16	15-5/8	9-11/16	7-9/16	17.56	18.19
801-578F	801-578CF	8x8x2	4-11/16	6-1/8	4-11/16	8-15/16	7-7/8	8-15/16	17-7/8	9-5/8	2-13/16	12.89	14.76
801-579F	801-579CF	8x8x2-1/2	4-7/8	6-15/16	4-7/8	9-1/8	8-5/16	9-1/8	18-1/4	9-5/8	3-7/16	17.97	14.85
801-580[1]	801-580C[1]	8x8x3	3-23/32	6-1/2	3-23/32	7-3/4	8-3/8	7-3/4	15-1/2	9-11/16	7-1/2	17.03	18.44
801-580F	801-580CF	8x8x3	5-3/16	6-11/16	5-3/16	9-7/16	8-15/16	9-7/16	18-7/8	9-5/8	4-1/8	17.42	20.04
801-582	801-582C	8x8x4	2-5/8	4-27/32	2-5/8	6-5/8	7-3/32	6-5/8	13-1/4	9-3/4	5-1/4	11.56	11.60
801-582F	801-582CF	8x8x4	5-3/4	7-11/16	5-3/4	10	9-15/16	10	20	9-5/8	5-3/16	15.77	17.51
801-585	---	8x8x6	3-27/32	4-13/16	3-27/32	7-29/32	7-27/32	7-29/32	15-27/32	9-23/32	7-9/16	15.52	---
---	801-585C	8x8x6	3-7/8	4-15/16	3-7/8	7-29/32	7-31/32	7-29/32	15-25/32	9-11/16	7-17/32	---	16.17
801-621F	801-621CF	10x10x2	4-3/8	7-1/8	4-3/8	9-5/8	8-7/8	9-5/8	19-1/4	11-15/16	2-1316	21.56	27.33
801-622F	801-622CF	10x10x2-1/2	5-1/4	7-5/16	5-1/4	10-1/2	9-5/16	10-1/2	21	11-15/16	3-7/16	20.44	22.50
801-623[1]	801-623C[1]	10x10x3	3-25/32	7-17/32	3-25/32	9-3/8	9-3/8	9-3/8	18-25/32	12-1/16	7-9/16	26.67	28.69
801-623F	801-623CF	10x10x3	4-7/8	7-11/16	4-7/8	10-1/8	9-15/16	10-1/8	20-1/4	11-15/16	4-1/8	20.67	24.27
801-624	801-624C	10x10x4	3-7/8	7-3/16	3-7/8	9-3/8	9-1/2	9-3/8	18-3/4	12-1/16	7-9/16	26.36	28.54
801-624F	801-624CF	10x10x4	5-3/8	8-11/16	5-3/8	10-5/8	10-15/16	10-5/8	21-1/4	11-15/16	5-3/16	23.04	26.65
801-626	801-626C	10x10x6	3-7/8	5-27/32	3-7/8	9-3/8	8-27/32	9-3/8	18-3/4	12-1/16	7-9/16	23.50	25.50
801-626F	801-626CF	10x10x6	5-7/8	9-1/16	5-7/8	11-1/8	12-5/16	11-1/8	22-1/4	11-15/16	7-1/2	34.74	29.89
801-628[1]	801-628C[1]	10x10x8	5-15/16	7-3/4	5-15/16	11-7/16	11-3/4	11-7/16	22-7/8	12-1/16	12-1/16	43.06	48.52
801-628F	801-628CF	10x10x8	8-1/4	9-15/16	8-1/4	13-1/2	14-3/16	13-1/2	27	11-15/16	9-5/8	34.59	38.11
801-661F	801-661CF	12x12x2	4-3/4	8	4-3/4	11	9-3/4	11	22	14-1/8	2-13/16	29.04	36.76
801-662F	---	12x12x2-1/2	5-7/16	8-3/16	5-7/16	11-11/16	10-3/16	11-11/16	23-3/8	14-1/8	3-7/16	37.84	---
801-663F	801-663CF	12x12x3	5-1/4	8-9/16	5-1/4	11-1/2	10-13/16	11-1/2	23	14-1/8	4-1/8	32.26	34.63
801-664[1]	801-664C[1]	12x12x4	4-11/32	10-1/8	4-11/32	10-15/16	12-3/8	10-15/16	21-7/8	14-1/4	9-23/32	32.86	38.17
801-664F	801-664CF	12x12x4	5-3/4	9-9/16	5-3/4	12	11-13/16	12	24	14-1/8	5-3/16	32.86	38.17
801-665F	---	12x12x5	7-1/8	9-5/16	7-1/8	13-3/8	12-5/16	13-3/8	26-3/4	14-1/8	6-5/16	47.29	---
801-666F	801-666CF	12x12x6	7-1/4	9-15/16	7-1/4	13-1/4	13-3/16	13-1/4	26-1/2	14-1/8	7-1/2	45.37	55.70
801-668	801-668C	12x12x8	4-27/32	7-1/2	4-27/32	11-13/32	11-1/8	11-13/32	22-13/16	14-1/4	9-23/32	40.00	42.00
801-668F	801-668CF	12x12x8	8	10-13/16	8	14-1/4	15-1/16	14-1/4	28-1/2	14-1/8	9-5/8	57.91	66.12
801-670F	801-670CF	12x12x10	9-5/8	10-13/16	9-5/8	15-7/8	16-1/16	15-7/8	31-3/4	14-1/8	11-15/16	67.18	70.97
801-691F	801-691CF	14x14x2	5-3/16	8-9/16	5-3/16	12-3/16	10-5/16	12-3/16	24-3/8	15-1/2	2-13/16	38.66	44.73

[1] Outlet sized with bushing

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REDUCING TEE (continued)

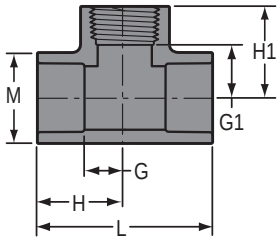
Socket x Socket x Socket



Part Number		Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
801-692F	801-692CF	14x14x2-1/2	5-7/16	8-3/4	5-7/16	12-7/16	10-3/4	12-7/16	24-7/8	15-1/2	3-7/16	44.34	45.01
801-693F	801-693CF	14x14x3	5-3/4	9-1/8	5-3/4	12-3/4	11-3/8	12-3/4	25-1/2	15-1/2	4-1/8	40.35	56.80
801-694F	801-694CF	14x14x4	6-1/2	10-1/8	6-1/2	13-1/2	12-3/8	13-1/2	27	15-1/2	5-3/16	41.85	50.00
801-696F	801-696CF	14x14x6	8-1/4	10-1/2	8-1/4	15-1/4	13-3/4	15-1/4	30-1/2	15-1/2	7-1/2	63.15	63.15
801-698F	801-698CF	14x14x8	9-1/4	11-3/8	9-1/4	16-1/4	15-5/8	16-1/4	32-1/2	15-1/2	9-5/8	74.74	68.17
801-700F	801-700CF	14x14x10	10-1/8	11-3/8	10-1/8	17-1/8	16-5/8	17-1/8	34-1/4	15-1/2	11-15/16	79.05	89.80
801-702F	801-702CF	14x14x12	11	11-3/8	11	18	17-5/8	18	36	15-1/2	14-1/8	93.81	93.81
801-751F	801-751CF	16x16x2	5-7/8	9-1/2	5-7/8	13-7/8	11-1/4	13-7/8	27-3/4	17-11/16	2-13/16	62.38	71.71
801-752F	801-752CF	16x16x2-1/2	6	9-11/16	6	14	11-11/16	14	28	17-11/16	3-7/16	55.65	64.80
801-753F	801-753CF	16x16x3	6-5/16	10-1/16	6-5/16	14-5/16	12-5/16	14-5/16	28-5/8	17-11/16	4-1/8	56.70	67.39
801-754F	801-754CF	16x16x4	6-1/8	11-1/16	6-1/8	14-1/8	13-5/16	14-1/8	28-1/4	17-11/16	5-3/16	60.66	70.21
801-756F	801-756CF	16x16x6	8-5/8	11-7/16	8-5/8	16-5/8	14-11/16	16-5/8	33-1/4	17-11/16	7-1/2	85.07	90.09
801-758F	801-758CF	16x16x8	9-5/8	12-5/16	9-5/8	17-5/8	16-9/16	17-5/8	35-1/4	17-11/16	9-5/8	94.91	98.00
801-760F	801-760CF	16x16x10	10-5/8	12-5/16	10-5/8	18-5/8	17-9/16	18-5/8	37-1/4	17-11/16	11-15/16	103.85	119.71
801-762F	801-762CF	16x16x12	11-5/8	12-5/16	11-5/8	19-5/8	18-9/16	19-5/8	39-1/4	17-11/16	14-1/8	116.70	116.70
801-764F	801-764CF	16x16x14	12-3/4	12-11/16	12-3/4	20-3/4	19-11/16	20-3/4	41-1/2	17-11/16	15-1/2	129.51	129.51
801-784F	801-784CF	18x18x4	6-7/8	11-15/16	6-7/8	15-7/8	14-3/16	15-7/8	31-3/4	19-7/8	5-3/16	91.52	99.22
801-786F	801-786CF	18x18x6	8-1/2	12-5/16	8-1/2	17-1/2	15-9/16	17-1/2	35	19-7/8	7-1/2	115.09	117.69
801-788F	801-788CF	18x18x8	9-1/2	13-3/16	9-1/2	18-1/2	17-7/16	18-1/2	37	19-7/8	9-5/8	118.85	127.49
801-790F	801-790CF	18x18x10	10-1/2	13-3/16	10-1/2	19-1/2	18-7/16	19-1/2	39	19-7/8	11-15/16	128.48	138.59
801-792F	801-792CF	18x18x12	11-1/2	13-3/16	11-1/2	20-1/2	19-7/16	20-1/2	41	19-7/8	14-1/8	151.17	150.34
801-794F	801-794CF	18x18x14	12-3/4	13-9/16	12-3/4	21-3/4	20-9/16	21-3/4	43-1/2	19-11/16	15-1/2	151.23	165.78
801-796F	801-796CF	18x18x16	13-1/2	14-3/16	13-1/2	22-1/2	22-3/16	22-1/2	45	19-11/16	17-11/16	140.86	172.46
801-814F	801-814CF	20x20x4	7-11/16	12-7/8	7-11/16	17-11/16	15-1/8	17-11/16	35-3/8	22-1/16	5-3/16	114.37	116.55
801-816F	801-816CF	20x20x6	8-7/8	13-1/4	8-7/8	18-7/8	16-1/2	18-7/8	37-3/4	22-1/16	7-1/2	130.08	147.44
801-818F	801-818CF	20x20x8	9-7/8	14-1/8	9-7/8	19-7/8	18-3/8	19-7/8	39-3/4	22-1/16	9-5/8	137.63	151.48
801-820F	801-820CF	20x20x10	10-7/8	14-1/8	10-7/8	20-7/8	19-3/8	20-7/8	41-3/4	22-1/16	11-15/16	123.96	163.28
801-822F	801-822CF	20x20x12	11-7/8	14-1/8	11-7/8	21-7/8	20-3/8	21-7/8	43-3/4	22-1/16	14-1/8	164.33	176.50
801-824F	801-824CF	20x20x14	12-7/8	14-1/2	12-7/8	22-7/8	21-1/2	22-7/8	45-3/4	22-1/16	15-1/2	176.28	190.95
801-826F	801-826CF	20x20x16	14	15-1/8	14	24	23-1/8	24	48	22-1/16	17-11/16	191.64	210.27
801-828F	801-828CF	20x20x18	15	15	15	25	24	25	50	22-1/16	19-7/8	215.72	226.80
801-904F	801-904CF	24x24x4	9	14-11/16	9	21	16-15/16	21	42	26-7/16	5-3/16	191.09	195.97
801-906F	801-906CF	24x24x6	9-1/4	15-1/16	9-1/4	21-1/4	18-5/16	21-1/4	42-1/2	26-7/16	7-1/2	207.79	202.94
801-908F	801-908CF	24x24x8	10-1/4	15-15/16	10-1/4	22-1/4	20-3/16	22-1/4	44-1/2	26-7/16	9-5/8	215.05	236.29
801-910F	801-910CF	24x24x10	11-1/4	15-15/16	11-1/4	23-1/4	21-3/16	23-1/4	46-1/2	26-7/16	11-15/16	248.46	255.95
801-912F	801-912CF	24x24x12	12-1/4	15-15/16	12-1/4	24-1/4	22-3/16	24-1/4	48-1/2	26-7/16	14-1/8	290.75	295.00
801-914F	801-914CF	24x24x14	13-1/4	16-5/16	13-1/4	25-1/4	23-5/16	25-1/4	50-1/2	26-1/16	15-1/2	279.60	282.42
801-916F	801-916CF	24x24x16	14-3/4	16-15/16	14-3/4	26-3/4	24-15/16	26-3/4	53-1/2	26-7/16	17-11/16	297.80	306.44
801-918F	801-918CF	24x24x18	15-3/4	16-13/16	15-3/4	27-3/4	25-13/16	27-3/4	55-1/2	26-7/16	19-7/8	303.81	246.78
801-920F	801-920CF	24x24x20	16-3/4	18-3/16	16-3/4	28-3/4	28-3/16	28-3/4	57-1/2	26-7/16	22-1/16	341.61	351.60

TEE

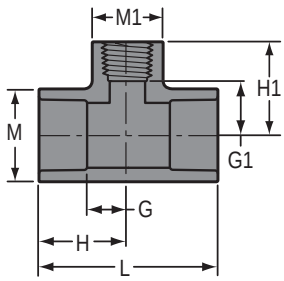
Socket x Socket x Fipt



Part Number		Size	G	G1	H	H1	L	M	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
802-002	802-002C	1/4	5/16	3/8	15/16	15/16	1-29/32	7/8	.05	.05
802-005	802-005C	1/2	19/32	21/32	1-15/32	1-11/32	2-15/16	1-3/16	.14	.12
802-007	802-007C	3/4	5/8	5/8	1-19/32	1-13/32	3-3/16	1-13/32	.14	.15
802-010	802-010C	1	11/16	3/4	1-13/16	1-5/8	3-13/16	1-13/16	.23	.24
802-012	802-012C	1-1/4	13/16	1-1/16	2-3/32	1-15/16	4-5/32	2-3/32	.34	.37
802-015	802-015C	1-1/2	29/32	1-1/4	2-11/32	2-5/32	4-11/16	2-3/8	.49	.51
802-020	802-020C	2	1-9/32	1-15/32	2-13/16	2-13/32	5-21/32	2-7/8	.77	.80
802-030	802-030C	3	1-31/32	2-1/8	3-3/4	3-17/32	7-15/32	4-5/16	2.31	2.38
802-040	802-040C	4	2-11/32	2-21/32	4-5/8	4-5/32	9-7/32	5-9/32	3.37	3.44
802-060F	---	6	3-13/16	8-1/4	6-13/16	9-3/4	13-5/8	7-9/16	14.19	---
---	802-060CF	6	4	8-9/16	7-1/16	10	14-1/8	7-9/16	---	15.09
802-080F	802-080CF	8	4-13/16	10-13/16	8-13/16	12-9/16	17-11/16	9-11/16	25.92	27.08

REDUCING TEE

Socket x Socket x Fipt



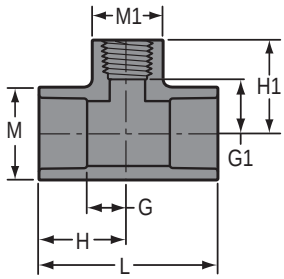
Part Number		Size	G	G1	H	H1	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC									PVC	CPVC
802-101	802-101C	3/4x3/4x1/2	19/32	25/32	1-19/32	1-7/16	3-7/32	1-13/32	1-3/16	.14	.15
802-130	802-130C	1x1x1/2	7/16	29/32	1-9/16	1-5/8	3-1/8	1-23/32	1-7/16	.18	.19
802-131	802-131C	1x1x3/4	21/32	13/16	1-13/16	1-17/32	3-5/8	1-23/32	1-3/8	.21	.22
802-166	802-166C	1-1/4x1-1/4x1/2	7/16	1-3/32	1-11/16	1-27/32	3-13/32	2-3/32	1-3/16	.25	.27
802-167[1]	802-167C[1]	1-1/4x1-1/4x3/4	7/8	1-23/32	2-1/8	2-7/16	4-7/32	2-3/32	1-3/4	.40	.42
802-168	802-168C	1-1/4x1-1/4x1	27/32	1-1/32	2-3/32	1-29/32	4-7/32	2-3/32	1-11/16	.33	.35
802-209[1]	802-209C[1]	1-1/2x1-1/2x1/2	11/16	1-1/2	2-1/16	2-9/32	4-5/32	2-5/16	1-3/8	.39	.42
802-210[1]	802-210C[1]	1-1/2x1-1/2x3/4	7/8	1-27/32	2-1/4	2-19/32	4-1/2	2-3/8	1-11/16	.51	.54
802-211	802-211C	1-1/2x1-1/2x1	27/32	1-9/32	2-1/4	2-3/32	4-15/32	2-3/8	1-11/16	.41	.43
802-212	802-212C	1-1/2x1-1/2x1-1/4	1-1/32	1-5/32	2-7/16	2-3/32	4-27/32	2-3/8	2-1/16	.47	.49
802-247[1]	802-247C[1]	2x2x1/2	1/2	1-1/2	2	2-7/32	4	2-7/8	1-3/16	.45	.46
802-248	802-248C	2x2x3/4	5/8	1-3/8	2-1/8	2-3/32	4-1/4	2-7/8	1-3/8	.47	.49

[1] Outlet sized with bushing

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REDUCING TEE (continued)

Socket x Socket x Fipt

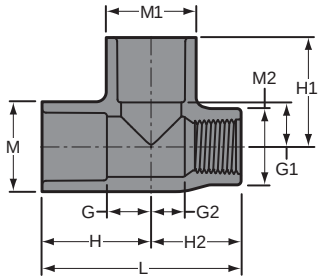


Part Number		Size	G	G1	H	H1	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC									PVC	CPVC
802-249	802-249C[1]	2x2x1	27/32	1-1/2	2-11/32	3-11/32	4-11/16	2-7/8	1-11/16	.54	/57
802-250[1]	802-250C[1]	2x2x1-1/4	1-3/16	2-1/16	2-11/16	3	5-3/8	2-7/8	2-13/32	.86	.90
802-251[1]	802-251C[1]	2x2x1-1/2	1-7/16	2-5/16	2-15/16	3-11/32	5-7/8	2-7/8	2-7/8	1.20	1.21
802-287	802-287C	2-1/2x2-1/2x1/2	9/16	1-25/32	2-5/16	2-15/32	4-19/32	3-1/2	1-3/16	.76	.81
802-288[1]	802-288C[1]	2-1/2x2-1/2x3/4	27/32	2-11/32	2-21/32	3-5/32	5-9/32	3-9/16	1-13/16	1.06	1.12
802-289[1]	802-289C[1]	2-1/2x2-1/2x1	1-3/32	2-11/32	2-27/32	3-1/4	5-11/16	3-1/2	2-1/8	1.19	1.21
802-290[1]	802-290C[1]	2-1/2x2-1/2x1-1/4	1-3/16	2-15/32	2-31/32	3-15/32	5-15/16	3-1/2	2-3/8	1.30	1.34
802-291[1]	802-291C[1]	2-1/2x2-1/2x1-1/2	1-7/16	2-1/2	3-3/16	3-1/2	6-3/8	3-1/2	2-7/8	1.51	1.55
802-292[1]	802-292C[1]	2-1/2x2-1/2x2	1-3/4	3-15/16	3-1/2	2-7/8	7	3-15/32	3-15/32	1.86	2.15
802-333[1]	802-333C[1]	3x3x1/2	7/8	2-11/16	2-3/4	3-7/16	5-1/2	4-1/8	1-23/32	1.27	1.30
802-334[1]	802-334C[1]	3x3x3/4	7/8	2-19/32	2-3/4	3-11/32	5-1/2	4-3/16	1-3/4	1.26	1.33
802-335[1]	802-335C[1]	3x3x1	1-3/16	2-31/32	3-1/16	3-7/8	6-1/8	4-1/8	2-11/32	1.53	1.61
802-337[1]	802-337C[1]	3x3x1-1/2	1-7/16	2-23/32	3-5/16	3-23/32	6-5/8	4-1/4	2-29/32	1.84	1.98
802-338[1]	802-338C[1]	3x3x2	2-3/32	3-11/32	3-31/32	4-3/8	7-15/16	4-5/32	4-5/32	3.03	3.51
802-339[1]	802-339C[1]	3x3x2-1/2	2-3/32	2-3/4	3-31/32	4-5/16	7-15/16	4-1/8	4-1/8	2.90	3.34
802-415[1]	802-415C[1]	4x4x1/2	1-7/16	3-5/8	3-11/16	4-3/8	7-3/8	5-1/4	2-7/8	2.61	2.71
802-416[1]	802-416C[1]	4x4x3/4	1-15/32	3-27/32	3-23/32	4-17/32	7-7/16	5-1/4	2-7/8	2.72	2.86
802-417[1]	802-417C[1]	4x4x1	1-7/16	3-17/32	3-23/32	4-13/32	7-13/32	5-1/4	2-7/8	2.73	2.87
802-419[1]	802-419C[1]	4x4x1-1/2	3-11/16	3-1/2	3-11/16	3-31/32	7-3/8	5-1/4	2-7/8	2.63	2.80
802-420[1]	802-420C[1]	4x4x2	2-1/8	4-1/32	4-3/8	5-1/32	8-25/32	5-1/4	4-3/16	3.77	3.84
802-421[1]	802-421C[1]	4x4x2-1/2	2-1/8	3-15/32	4-3/8	5	8-25/32	5-1/4	4-3/16	3.62	3.71
802-422[1]	802-422C[1]	4x4x3	2-5/8	3-5/8	4-7/8	5-1/4	9-3/4	5-1/4	5-1/4	5.13	5.30
802-525[1]	802-525C[1]	6x6x1	2-1/16	5-3/16	5-3/32	6-1/16	10-5/32	7-19/32	4-1/4	7.11	9.23
802-528F	---	6x6x2	4-5/8	5-1/8	7-7/8	6-9/16	15-3/4	7-1/2	3	11.01	---
802-529[1]	802-529C[1]	6x6x2-1/2	2-1/16	4-21/32	5-3/32	6-3/16	10-5/32	7-19/32	4-1/4	6.97	9.12
802-530[1]	802-530C[1]	6x6x3	2-11/16	4-3/4	5-9/16	6-3/8	11-1/8	7-1/2	5-1/4	13.79	8.33
802-532F	---	6x6x4	5-1/4	6-3/4	8-1/2	8-1/4	17	7-1/2	5-3/16	13.77	---
802-578F	---	8x8x2	4-11/16	6-1/16	8-15/16	7-1/2	17-7/8	9-5/8	3	15.46	---
802-580F	---	8x8x3	5-3/16	7	9-7/16	8-7/16	18-7/8	9-5/8	4-1/8	18.24	---
802-582F	---	8x8x4	5-3/4	7-11/16	10	9-1/8	20	9-5/8	5-3/16	17.71	---
802-621F	---	10x10x2	4-3/8	7-9/16	9-5/8	8-15/16	19-1/4	11-15/16	3	26.78	---
802-623F	---	10x10x3	4-7/8	8-3/16	10-1/8	9-5/8	20-1/4	11-15/16	4-1/8	31.67	---
802-624F	---	10x10x4	5-3/8	8-13/16	10-5/8	10-5/16	21-1/4	11-15/16	5-3/16	32.18	---
802-661F	---	12x12x2	4-3/4	8-7/16	11	9-13/16	22	14-1/8	3	37.80	---
802-663F	---	12x12x3	5-1/4	9-1/4	11-1/2	10-11/16	23	14-1/8	4-1/8	36.19	---
802-664F	---	12x12x4	5-3/4	9-15/16	12	11-7/16	24	14-1/8	5-3/16	47.80	---

[1] Outlet sized with bushing

REDUCING TEE

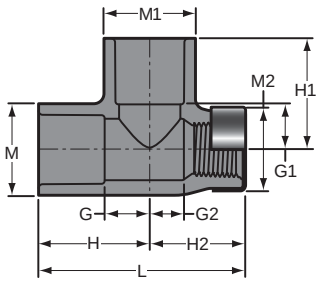
Socket x Fipt x Socket



Part Number		Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)	
PVC	CPVC												PVC	CPVC
803-095	803-095C	3/4x1/2x3/4	11/16	11/16	11/16	1-11/16	1-11/16	1-3/8	3-3/32	1-13/32	1-13/32	1-3/16	.15	.15

SPECIAL REINFORCED REDUCING TEE

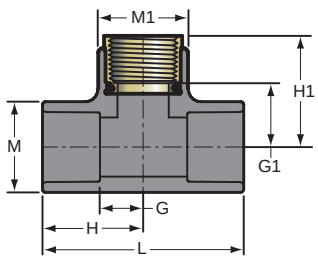
Socket x SR Fipt x Socket



Part Number		Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)	
PVC	CPVC												PVC	CPVC
803-095SR	803-095CSR	3/4x1/2x3/4	11/16	11/16	11/16	1-11/16	1-11/16	1-13/32	3-1/8	1-13/32	1-13/32	1-7/32	.15	.16

TEE

Socket x Socket x Brass Fipt

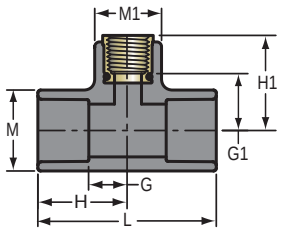


Part Number		Size	G	G1	H	H1	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC									PVC	CPVC
802-005BR	802-005CBR	1/2	7/8	31/32	1-7/16	1-17/32	2-5/8	1-5/32	1-7/32	.16	.16
802-007BR	802-007CBR	3/4	17/32	1-3/32	1-13/32	1-13/16	3-1/32	1-13/32	1-3/8	.25	.38

Not intended to convey or dispense water for human consumption through drinking or cooking

REDUCING TEE

Socket x Socket x Brass Fipt

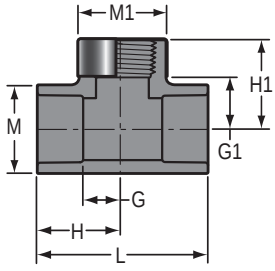


Part Number		Size	G	G1	H	H1	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC									PVC	CPVC
802-072BR	---	1/2x1/2x1/4	7/16	7/8	1-5/16	1-17/32	2-5/8	1-3/16	1-3/16	.22	---
802-101BR	802-101CBR	3/4x3/4x1/2	7/16	1-1/32	1-7/16	1-5/8	2-29/32	1-13/32	1-3/16	.19	.20

Not intended to convey or dispense water for human consumption through drinking or cooking

SPECIAL REINFORCED TEE

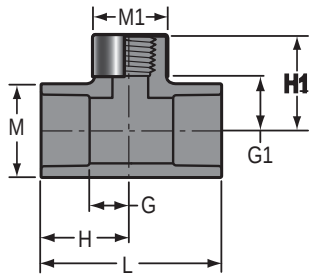
Socket x Socket x SR Fipt



Part Number		Size	G	G1	H	H1	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC									PVC	CPVC
802-005SR	802-005CSR	1/2	5/8	5/8	1-15/32	1-3/8	2-15/16	1-7/32	1-13/32	.13	.15
802-007SR	802-007CSR	3/4	19/32	11/16	1-19/32	1-13/32	3-3/16	1-13/32	1-13/32	.15	.15
802-010SR	802-010CSR	1	21/32	11/16	1-13/16	1-5/8	3-5/8	1-23/32	1-11/16	.25	.28
802-012SR	802-012CSR	1-1/4	13/16	1-1/16	2-3/32	1-15/16	4-3/16	2-3/32	2-1/16	.37	.38
802-015SR	802-015CSR	1-1/2	15/16	1-7/32	2-11/32	2-5/32	4-11/16	2-11/32	2-7/16	.51	.53
802-020SR	802-020CSR	2	1-5/16	1-1/2	2-13/16	2-13/32	5-21/32	2-7/8	3-1/32	.80	.83
802-030SR	802-030CSR	3	1-27/32	2-3/32	3-23/32	3-17/32	7-7/16	4-9/32	4-9/32	2.33	2.44
802-040SR	802-040CSR	4	2-11/32	2-21/32	4-5/8	4-5/32	9-7/32	5-1/4	5-1/4	3.40	3.52

SPECIAL REINFORCED REDUCING TEE

Socket x Socket x SR Fipt

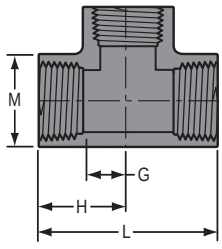


Part Number		Size	G	G1	H	H1	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC									PVC	CPVC
802-072SR	802-072CSR	1/2x1/2x1/4	7/16	11/16	1-5/16	1-7/32	2-5/8	1-5/32	27/32	.09	.09
802-098SR	802-098CSR	3/4x3/4x1/4	7/	13/16	1-7/16	1-5/16	2-7/8	1-3/8	27/32	.12	.12
802-101SR	802-101CSR	3/4x3/4x1/2	19/32	25/32	1-19/32	1-15/32	3-7/32	1-13/32	1-3/16	.15	.15
802-128SR[1]	802-128CSR[1]	1x1x1/4	7/8	2-5/8	2	2-11/16	4	2-3/32	27/32	.43	.38
802-130SR	802-130CSR	1x1x1/2	7/16	29/32	1-9/16	1-5/8	3-1/8	1-23/32	1-3/16	.19	.20
802-131SR	802-131CSR	1x1x3/4	21/32	7/8	1-13/16	1-19/32	3-19/32	1-23/32	1-3/8	.22	.23
802-164SR[1]	802-164CSR[1]	1-1/4x1-1/4x1/4	27/32	2-13/16	2-1/8	3-13/32	4-7/32	2-3/32	27/32	.43	.45
802-166SR	802-166CSR	1-1/4x1-1/4x1/2	7/16	1-1/8	1-11/16	1-27/32	3-13/32	2-3/32	1-3/16	.26	.27
802-168SR	802-168CSR	1-1/4x1-1/4x1	27/32	1-1/32	2-3/32	1-29/32	4-7/32	2-3/32	1-11/16	.35	.36
802-207SR[1]	802-207CSR[1]	1-1/2x1-1/2x1/4	27/32	1-31/32	2-1/4	2-19/32	4-15/32	2-11/32	1-3/4	.49	.57
802-211SR	802-211CSR	1-1/2x1-1/2x1	27/32	1-7/32	2-1/4	2-1/8	4-15/32	2-3/8	1-11/16	.42	.44
802-212SR	802-212CSR	1-1/2x1-1/2x1-1/4	1-1/32	1-5/32	2-7/16	2-3/32	4-27/32	2-3/8	2-1/16	.49	.51
802-247SR	802-247CSR	2x2x1/2	1/2	1-1/2	2	2-1/4	4	2-7/8	1-3/16	.45	.48
802-248SR	802-248CSR	2x2x3/4	19/32	1-13/32	2-1/8	2-1/8	4-1/4	2-7/8	1-3/8	.48	.50
802-287SR	802-287CSR	2-1/2x2-1/2x1/2	9/16	1-3/4	2-5/16	2-1/2	4-19/32	3-1/2	1-7/32	.75	.79
802-331SR[1]	802-331CSR[1]	3x3x1/4	1-13/32	4-1/2	3-5/16	5-1/32	6-9/16	4-3/16	27/32	1.90	3.62
802-413SR[1]	802-413CSR[1]	4x4x1/4	1-7/16	5-3/16	3-11/16	5-25/32	7-3/8	5-1/4	27/32	2.63	2.75

[1] Outlet sized with bushing

TEE

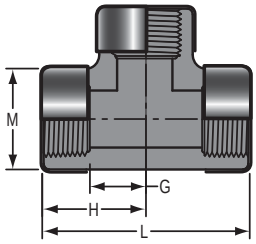
Fipt x Fipt x Fipt



Part Number		Size	G	H	L	M	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
805-002	805-002C	1/4	1/2	1-3/32	2-3/16	27/32	.06	.06
805-003	805-003C	3/8	9/16	1-5/32	2-5/16	15/16	.07	.07
805-005	805-005C	1/2	17/32	1-1/4	2-15/32	1-3/16	.11	.12
805-007	805-007C	3/4	21/32	1-15/32	2-15/16	1-1/2	.19	.20
805-010	---	1	3/4	1-23/32	3-7/16	1-27/32	.34	---
---	805-010C	1	23/32	1-3/4	3-1/2	1-11/16	---	.29
805-012	805-012C	1-1/4	15/16	1-31/32	3-29/32	2-1/4	.47	.50
805-015	805-015C	1-1/2	1-1/8	2-3/16	4-3/8	2-13/32	.60	.62
805-020	805-020C	2	1-5/8	2-5/8	5-1/4	3	1.08	1.15
805-025	805-025C	2-1/2	1-9/16	3-1/8	6-1/4	3-19/32	1.65	1.76
805-030	805-030C	3	1-15/16	3-9/16	7-3/32	4-11/32	2.82	3.01
805-040	805-040C	4	2-15/32	4-7/32	8-7/16	5-3/8	4.28	4.33
805-060F	805-060CF	6	8-1/4	9-3/4	19-1/2	7-3/16	20.11	24.79

SPECIAL REINFORCED TEE

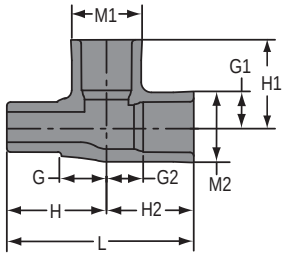
SR Fipt x SR Fipt x SR Fipt



Part Number		Size	G	H	L	M	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
805-002SR	805-002CSR	1/4	17/32	1-1/8	2-1/4	27/32	.08	.07
805-003SR	805-003CSR	3/8	19/32	1-3/16	2-11/32	31/32	.09	.09
805-005SR	805-005CSR	1/2	1/2	1-1/4	2-1/2	1-3/16	.14	.14
805-007SR	805-007CSR	3/4	19/32	1-11/32	2-11/16	1-3/8	.16	.17
805-010SR	805-010CSR	1	7/8	1-25/32	3-9/16	1-11/16	.32	.33
805-015SR	805-015CSR	1-1/2	1-1/4	2-3/16	4-13/32	2-13/32	.66	.70
805-020SR	805-020CSR	2	1-5/8	2-5/8	5-1/4	3	1.17	1.27

STREET TEE

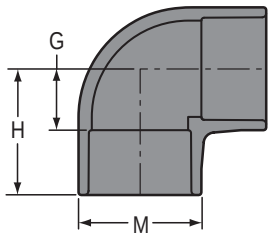
Spigot x Socket x Socket



Part Number		Size	G	G1	G2	H	H1	H2	L	M1	M2	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
844-005	844-005C	1/2	23/32	23/32	1/2	1-19/32	1-21/32	1-19/32	3-5/32	1-3/16	1-3/16	.10	.11
844-007	844-007C	3/4	13/16	27/32	7/8	1-13/16	1-7/8	1-13/16	3-5/8	1-13/32	1-13/32	.15	.16
844-010	844-010C	1	1-3/32	13/16	13/16	2-7/32	2	2	4-7/32	1-3/4	1-3/4	.26	.27
844-012	844-012C	1-1/4	1-1/4	1-5/32	1-1/8	2-7/16	2-5/16	2-7/16	4-7/8	2-3/32	2-3/32	.39	.41
844-015	844-015C	1-1/2	1-13/16	1-1/8	1-1/8	2-7/8	2-9/16	2-9/16	5-11/32	2-11/32	2-11/32	.51	.54
844-020	844-020C	2	1-23/32	1-7/16	1-13/32	3-1/4	2-15/16	2-15/16	6-5/32	2-7/8	2-7/8	.80	.84

90° ELBOW

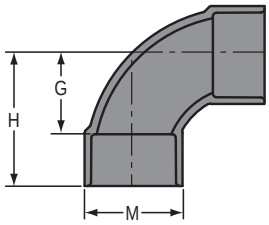
Socket x Socket



Part Number		Size	G	H	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
806-002	806-002C	1/4	11/32	1	13/16	.03	.03
806-003	806-003C	3/8	15/32	1-1/4	31/32	.05	.05
806-005	806-005C	1/2	9/16	1-15/32	1-3/16	.08	.09
806-007	806-007C	3/4	5/8	1-11/16	1-7/16	.12	.12
806-010	806-010C	1	7/8	2	1-3/4	.20	.21
806-012	806-012C	1-1/4	1	2-9/32	1-31/32	.30	.31
806-015	806-015C	1-1/2	1-3/32	2-9/16	2-3/8	.39	.39
806-020	806-020C	2	1-13/32	2-15/16	2-7/8	.60	.62
806-025	806-025C	2-1/2	1-9/16	3-11/32	3-15/32	1.09	1.15
806-030	806-030C	3	2-1/32	3-31/32	4-3/16	1.57	1.67
806-040	806-040C	4	2-5/8	4-7/8	5-7/32	2.78	2.93
806-045F	---	4-1/2	6-1/2	9	5-5/8	4.58	---
806-050	806-050C	5	3	5-3/4	6-3/8	4.42	4.69
806-050F	---	5	5-1/2	8-1/2	6-5/16	6.23	---
---	806-050CF	5	6-9/16	9-9/16	6-5/16	---	7.40
806-060	---	6	3-3/4	6-3/4	7-19/32	7.47	---
---	806-060C	6	3-3/4	6-3/4	7-19/32	---	7.43
806-080	806-080C	8	4-25/32	8-25/32	9-3/4	14.30	15.83
806-080F	---	8	7-7/8	12-1/8	9-5/8	17.47	---
---	806-080CF	8	9-1/4	13-1/2	9-5/8	---	22.53
806-100	806-100C	10	5-25/32	11-11/32	12-1/16	28.19	28.74
806-100F	---	10	10	15-1/4	11-15/16	31.86	---
---	806-100CF	10	11-13/16	17-1/16	11-15/16	---	40.28
806-120	806-120C	12	6-7/8	13-7/16	14-5/16	43.94	47.93
806-120F	---	12	11-1/2	17-3/4	14-1/8	60.28	---
---	806-120CF	12	13-5/8	19-7/8	14-1/8	---	63.96
806-140	806-140C	14	7-1/2	14-1/2	15-11/16	53.05	55.00
806-140F	---	14	13-1/2	20-1/2	15-1/2	82.49	---
---	806-140CF	14	16	23	15-1/2	---	86.72
806-160F	---	16	15-9/16	23-9/16	17-11/16	101.71	---
---	806-160CF	16	18-7/16	26-7/16	17-11/16	---	133.22
806-180F	---	18	17-11/16	26-11/16	19-7/8	167.49	---
---	806-180CF	18	20-7/8	29-7/8	19-7/8	---	175.62
806-200F	---	20	19-13/16	29-13/16	22-1/16	193.41	---
---	806-200CF	20	23-5/16	33-5/16	22-1/16	---	250.00
806-240F	---	24	24	36	26-7/16	403.66	---
---	806-240CF	24	28-1/4	40-1/4	26-7/16	---	---

90° SWEEP ELBOW

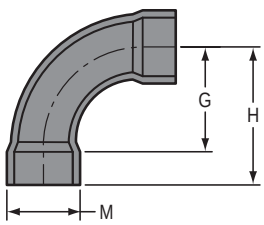
Socket x Socket



Part Number		Size	G	H	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
806-005S	806-005SC	1/2	27/32	1-23/32	1-3/16	.08	.08
806-007S	806-007SC	3/4	1-1/32	2-1/32	1-13/32	.12	.12
806-010S	806-010SC	1	1-5/16	2-7/16	1-23/32	.20	.20
806-012S	806-012SC	1-1/4	1-9/16	2-13/16	2-3/32	.30	.31
806-015S	806-015SC	1-1/2	1-3/4	3-1/8	2-11/32	.39	.40
806-020S	806-020SC	2	2-5/16	3-13/16	2-7/8	.64	.68

90° LONG SWEEP ELBOW

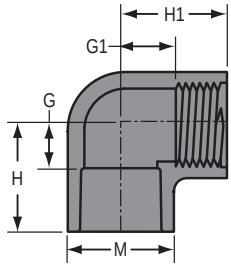
Socket x Socket



Part Number		Size	G	H	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
806-005LSF	806-005LSCF	1/2	1-7/8	2-3/4	1-1/8	.13	.13
806-007LSF	806-007LSCF	3/4	2-7/16	3-7/16	1-7/16	.22	.24
806-010LSF	806-010LSCF	1	2-7/8	4	1-11/16	.33	.37
806-012LSF	806-012LSCF	1-1/4	3-5/8	4-7/8	2-1/16	.50	.56
806-015LSF	806-015LSCF	1-1/2	4-1/8	5-1/2	2-5/16	.60	.68
806-020LSF	806-020LSCF	2	4-3/4	6-5/16	2-13/16	.90	1.07
806-025LSF	806-025LSCF	2-1/2	5-3/4	7-3/4	3-7/16	1.65	1.70
806-030LSF	806-030LSCF	3	7	9	4-1/8	2.36	2.69
806-040LSF	806-040LSCF	4	9	11-1/4	5-3/16	4.76	4.85
806-060LSF	---	6	13	16-1/4	7-1/2	12.84	---
---	806-060LSCF	6	13	16-1/4	7-1/2	---	12.84
806-080LSF	806-080LSCF	8	23-1/2	27-3/4	9-5/8	31.58	33.18

90° ELBOW

Socket x Fipt

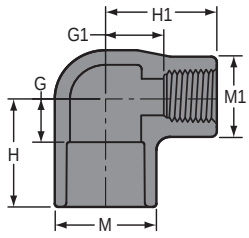


Part Number		Size	G	G1	H	H1	M	Approx. Wt. (Lbs.)	
PVC	CPVC							PVC	CPVC
807-002	807-002C	1/4	5/16	5/16	15/16	15/16	7/8	.03	.03
807-003	807-003C	3/8	1/4	3/8	1-1/32	1-1/32	1-1/32	.05	.05
807-005	807-005C	1/2	15/32	9/16	1-11/32	1-9/32	1-3/16	.08	.11
807-007	807-007C	3/4	5/8	5/8	1-9/16	1-9/16	1-3/8	.09	.11
807-010	807-010C	1	11/16	25/32	1-13/16	1-11/16	1-23/32	.19	.19
807-012	807-012C	1-1/4	23/32	1-1/32	1-31/32	1-31/32	2-1/16	.28	.30
807-015	807-015C	1-1/2	15/16	1-7/32	2-11/32	2-5/32	2-11/32	.39	.46
807-020	807-020C	2	15/16	1-1/32	2-7/16	2	3	.80	.84
807-030	807-030C	3	1-27/32	2-7/32	3-23/32	3-9/16	4-9/32	1.72	2.02
807-040	807-040C	4	2-5/16	2-7/8	4-9/16	4-9/32	5-1/4	2.87	2.95
807-060[1]	---	6	3-3/4	7-1/8	6-3/4	8-7/8	7-9/16	11.48	---

[1] Outlet sized with Female Adapter

90°REDUCING ELBOW

Socket x Fipt



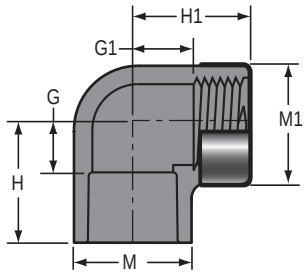
Part Number		Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
807-101	807-101C	3/4x1/2	1/2	25/32	1-17/32	1-17/32	1-13/32	1-3/16	.11	.12
807-130[1]	807-130C[1]	1x1/2	27/32	1-17/32	1-31/32	2-1/4	1-23/32	1-23/32	.26	.27
807-131[1]	807-131C[1]	1x3/4	7/8	1-17/32	2	2-1/4	1-3/4	1-3/4	.25	.26

[1] Outlet sized with Female Adapter

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Progressive Products from Spears® Innovation and Technology

SPECIAL REINFORCED 90° ELBOW

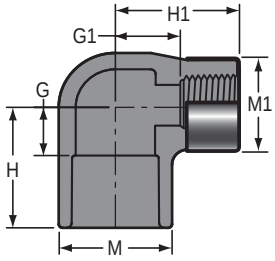
Socket x SR Fipt



Part Number		Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
807-005SR	807-005CSR	1/2	15/32	23/32	1-11/32	1-9/32	1-3/16	1-7/32	.08	.09
807-007SR	807-007CSR	3/4	9/16	21/32	1-9/16	1-13/32	1-3/8	1-3/8	.11	.12
807-010SR	807-010CSR	1	19/32	13/16	1-23/32	1-23/32	1-11/16	1-23/32	.20	.21
807-012SR	807-012CSR	1-1/4	23/32	1-1/32	1-31/32	1-31/32	2-1/16	2-1/16	.30	.31
807-015SR	807-015CSR	1-1/2	31/32	1-5/32	2-3/8	2-1/8	2-11/32	2-7/16	.41	.44
807-020SR	807-020CSR	2	1-7/32	1-1/2	2-15/32	2-7/16	2-31/32	2-31/32	.83	.91
807-030SR	807-030CSR	3	1-13/16	2-7/32	3-23/32	3-9/16	4-9/32	4-9/32	1.98	2.08
807-040SR	807-040CSR	4	2-9/32	2-25/32	4-9/16	4-7/32	5-1/4	5-1/4	2.94	3.02

SPECIAL REINFORCED REDUCING 90° ELBOW

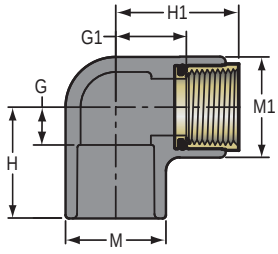
Socket x SR Fipt



Part Number		Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
807-101SR	807-101CSR	3/4x1/2	1/2	13/16	1-17/32	1-17/32	1-13/32	1-3/16	.12	.12
807-130SR	807-130CSR	1x1/2	9/16	1	1-23/32	1-5/8	1-23/32	1-3/16	.13	.14

TRANSITION 90° ELBOW

Socket x Brass Fipt

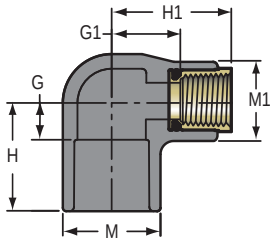


Part Number		Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
807-005BR	807-005CBR	1/2	13/32	31/32	1-9/32	1-17/32	1-5/32	1-3/16	.15	.15
807-007BR	807-007CBR	3/4	1/2	1-5/32	1-1/2	1-25/32	1-3/8	1-13/32	.20	.21

Not intended to convey or dispense water for human consumption through drinking or cooking

TRANSITION REDUCING 90° ELBOW

Socket x Brass Fipt

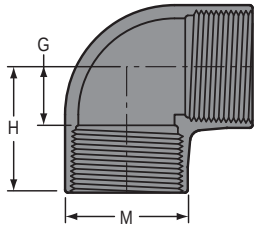


Part Number		Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
807-101BR	807-101CBR	3/4x1/2	1/2	1-1/16	1-1/2	1-5/8	1-13/32	1-3/16	.18	.21

Not intended to convey or dispense water for human consumption through drinking or cooking

90° ELBOW

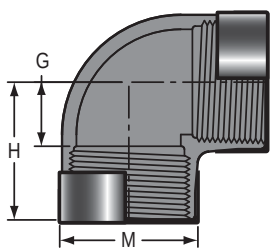
Fipt x Fipt



Part Number		Size	G	H	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
808-002	808-002C	1/4	11/32	15/16	7/8	.04	.04
808-003	808-003C	3/8	9/16	1-5/32	15/16	.05	.06
808-005	808-005C	1/2	1/2	1-7/32	1-9/32	.09	.08
808-007	808-007C	3/4	5/8	1-3/8	1-3/8	.11	.12
808-010	808-010C	1	25/32	1-5/8	1-23/32	.20	.21
808-012	808-012C	1-1/4	15/16	1-7/8	2-1/16	.30	.32
808-015	808-015C	1-1/2	1-5/32	2-3/32	2-7/16	.46	.48
808-020	808-020C	2	1-9/16	2-17/32	3	.86	.90
808-025	808-025C	2-1/2	1-5/8	3-3/16	3-9/16	1.20	1.26
808-030	808-030C	3	1-29/32	3-17/32	4-13/32	2.30	2.37
808-040	808-040C	4	2-13/32	4-5/32	5-7/16	3.22	3.44

SPECIAL REINFORCED 90° ELBOW

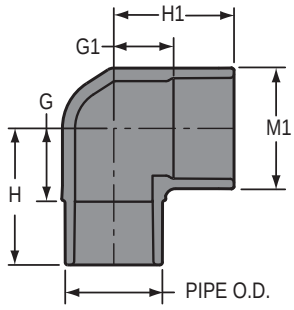
SR Fipt x SR Fipt



Part Number		Size	G	H	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
808-003SR	808-003CSR	3/8	9/16	1-5/32	15/16	.07	.07
808-005SR	808-005CSR	1/2	1/2	1-7/32	1-3/16	.10	.11
808-007SR	808-007CSR	3/4	5/8	1-3/8	1-3/8	.13	.14
808-010SR	808-010CSR	1	25/32	1-11/16	1-23/32	.23	.24
808-012SR	808-012CSR	1-1/4	15/16	1-7/8	2-1/16	.35	.36
808-015SR	808-015CSR	1-1/2	1-1/32	2-1/8	2-7/16	.50	.52
808-020SR	808-020CSR	2	1-19/32	2-1/2	3	.92	1.04

90° STREET ELBOW

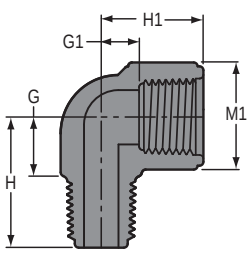
Spigot x Socket



Part Number		Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)	
PVC	CPVC							PVC	CPVC
809-005	809-005C	1/2	13/16	7/16	1-21/32	1-7/16	1-5/32	.07	.08
809-007	809-007C	3/4	29/32	11/16	1-27/32	1-11/16	1-3/8	.11	.12
809-010	809-010C	1	1-1/16	3/4	2-7/32	2	1-23/32	.19	.20
809-012	809-012C	1-1/4	1-9/32	13/16	2-19/32	2-1/4	2-3/32	.29	.31
809-015	809-015C	1-1/2	1-7/16	1-3/16	2-13/16	2-9/16	2-3/8	.40	.43
809-020	809-020C	2	1-3/4	1-7/16	3-1/4	2-31/32	2-7/8	.60	.64
809-025	809-025C	2-1/2	2-1/2	1-5/8	4-1/2	3-3/8	3-7/16	1.31	1.54
809-030	809-030C	3	2-3/8	1-13/16	4-1/4	3-11/16	4-3/16	1.65	1.70
809-040	809-040C	4	3-1/32	2-1/4	5-9/32	4-17/32	5-1/4	2.82	2.92
809-060	---	6	5-1/4	3-7/8	8-1/2	6-7/8	7-9/16	12.00	---
---	809-060C	6	5-1/4	3-11/16	8-7/16	6-3/4	7-9/16	---	10.01
809-080	809-080C	8	6-7/8	5	11-1/8	8-7/8	9-11/16	13.74	17.34
809-100	809-100C	10	8-5/8	5-13/16	14-5/16	11-3/8	12-1/16	37.73	41.05
809-120	809-120C	12	10-1/8	6-7/8	16-7/8	13-3/8	14-1/8	61.75	67.93
809-140F	---	14	13-1/2	13-1/2	20-1/2	20-1/2	15-1/2	82.49	---
---	809-140CF	14	19-1/2	16	27-1/2	23	15-1/2	---	101.86
809-160F	---	16	19-9/16	15-9/16	28-9/16	23-9/16	17-11/16	120.78	---
---	809-160CF	16	22-7/16	18-7/16	31-7/16	26-7/16	17-11/16	---	135.72
809-180F	---	18	22-3/16	17-11/16	32-3/16	26-11/16	19-7/8	140.91	---
---	809-180CF	18	25-3/8	20-7/8	35-3/8	29-7/8	19-7/8	---	217.54
809-200F	---	20	24-13/16	19-13/16	35-13/16	29-13/16	22-1/16	256.44	---
---	809-200CF	20	28-5/16	23-5/16	39-5/16	33-5/16	22-1/16	---	266.40
809-240F	---	24	30	24	43	36	26-7/16	395.00	---
---	809-240CF	24	34-1/4	28-1/4	47-1/4	40-1/4	26-7/16	---	435.00

90° STREET ELBOW

Mipt x Fipt

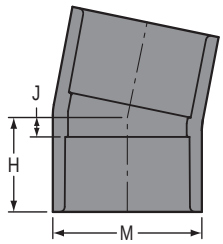


Part Number		Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)	
PVC	CPVC							PVC	CPVC
812-002	812-002C	1/4	17/32	5/16	1-1/32	29/32	13/16	.02	.03
812-005	---	1/2	13/16	17/32	1-19/32	1-9/32	1-3/16	.08	---
812-010	---	1	1-1/32	21/32	1-13/16	1-9/16	1-3/4	.15	---
812-012	---	1-1/4	2-9/16	1	3-9/32	1-31/32	2-7/32	.49	---
812-015[1]	---	1-1/2	2-11/16	1-1/4	3-7/16	2-1/8	2-13/32	.54	---

[1] Outlet sized with Female Adapter

11-1/4° ELBOW

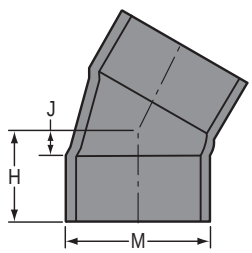
Socket x Socket



Part Number		Size	H	J	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
811-015	811-015C	1-1/2	1-19/32	7/32	2-3/8	.24	.25
811-020	811-020C	2	1-23/32	7/32	2-27/32	.33	.35
811-025F	811-025CF	2-1/2	2-11/16	11/16	3-7/16	.81	.88
811-030	811-030C	3	2-3/16	5/16	4-1/8	.88	.92
811-040	811-040C	4	2-21/32	13/32	5-1/4	1.53	1.58
811-045F	---	4-1/2	3-1/2	1	5-5/8	1.94	---
811-050F	811-050CF	5	3-13/16	13/16	6-5/16	2.88	3.22
811-060F	811-060CF	6	4-1/4	1	7-1/2	4.43	4.69
811-080F	811-080CF	8	5-3/8	1-1/8	9-5/8	8.73	10.52
811-100F	811-100CF	10	6-11/16	1-7/16	11-15/16	15.93	19.02
811-120F	811-120CF	12	7-13/16	1-9/16	14-1/8	24.66	29.25
811-140F	811-140CF	14	9	2	15-1/2	33.00	41.37
811-160F	811-160CF	16	10-3/8	2-3/8	17-11/16	48.74	---
811-180F	811-180CF	18	11-3/4	2-3/4	19-7/8	69.12	83.44
811-200F	811-200CF	20	13-1/8	3-1/8	22-1/16	96.58	99.90
811-240F	811-240CF	24	15-13/16	3-13/16	26-7/16	152.00	196.96

30° ELBOW

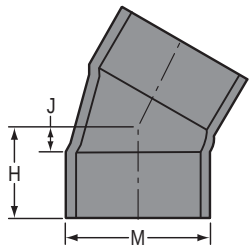
Socket x Socket



Part Number		Size	H	J	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
815-005F	815-005CF	1/2	1-7/16	7/16	1-1/8	.07	.07
815-007F	815-007CF	3/4	1-7/16	7/16	1-3/8	.09	.11
815-010F	815-010CF	1	1-3/4	1/2	1-11/16	.14	.16
815-012F	815-012CF	1-1/4	2-3/16	11/16	2-1/16	.22	.24
815-015F	815-015CF	1-1/2	2-3/16	11/16	2-5/16	.30	.32
815-020F	815-020CF	2	2-5/16	9/16	2-13/16	.46	.54
815-025F	815-025CF	2-1/2	2-1/2	3/4	3-7/16	.81	.93
815-030F	815-030CF	3	3-5/16	1-1/16	4-1/8	1.21	1.44
815-040F	815-040CF	4	3-7/16	1-3/16	5-3/16	2.14	2.27
815-045F	---	4-1/2	4	1-1/2	5-5/8	2.18	---
815-050F	815-050CF	5	4-3/8	1-3/8	6-5/16	3.10	3.22
815-060	815-060C	6	4-13/16	1-7/8	7-9/16	5.59	5.89

30° ELBOW (continued)

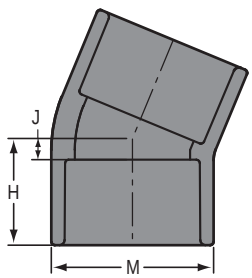
Socket x Socket



Part Number		Size	H	J	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
815-080F	815-080CF	8	6-3/16	1-15/16	9-5/8	10.08	11.08
815-100F	815-100CF	10	7-3/4	2-1/2	11-15/16	17.92	21.26
815-120F	815-120CF	12	9-1/16	2-13/16	14-1/8	27.40	32.33
815-140F	815-140CF	14	10-7/16	3-7/16	15-1/2	37.94	37.18
815-160F	815-160CF	16	11-15/16	3-15/16	17-11/16	55.09	64.23
815-180F	815-180CF	18	13-7/16	4-7/16	19-7/8	77.09	92.38
815-200F	815-200CF	20	15	5	22-1/16	119.89	109.89
815-240F	815-240CF	24	18-1/8	6-1/8	26-7/16	166.30	185.25

22-1/2° ELBOW

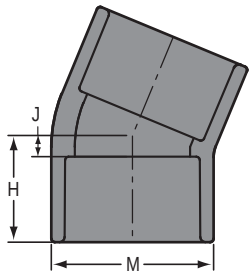
Socket x Socket



Part Number		Size	H	J	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
816-005	816-005C	1/2	1-1/16	3/16	1-5/32	.06	.06
816-007	816-007C	3/4	1-3/16	3/16	1-7/16	.09	.09
816-010	816-010C	1	1-3/8	9/32	1-23/32	.13	.14
816-012	816-012C	1-1/4	1-1/2	5/16	2-3/32	.19	.20
816-015	816-015C	1-1/2	1-21/32	1/4	2-3/8	.26	.26
816-015F	816-015CF	1-1/2	2-1/8	5/8	2-5/16	.26	.28
816-020	816-020C	2	1-7/8	7/16	2-7/8	.38	.44
816-025	816-025C	2-1/2	2-7/32	15/32	3-1/2	.68	.72
816-025F	816-025CF	2-1/2	2-7/8	7/8	3-7/16	.75	.84
816-030	816-030C	3	2-13/32	9/16	4-5/32	.95	1.01
816-040	816-040C	4	2-7/8	5/8	5-1/4	1.64	1.71
816-045F	---	4-1/2	3-13/16	1-5/16	5-5/8	2.09	---
816-050F	816-050CF	5	4-1/8	1-1/8	6-5/16	3.15	3.22

22-1/2° ELBOW (continued)

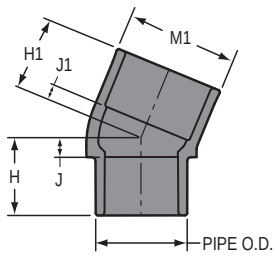
Socket x Socket



Part Number		Size	H	J	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
816-060	816-060C	6	4-9/16	1-3/8	7-7/16	4.33	4.59
816-060F	816-060CF	6	4-5/8	1-3/8	7-1/2	5.02	5.29
816-080	816-080C	8	5-1/16	1-1/32	9-3/4	8.19	8.95
816-080F	816-080CF	8	5-7/8	1-5/8	9-5/8	9.41	9.60
816-100F	816-100CF	10	7-5/16	2-1/16	11-15/16	17.25	18.77
816-120F	816-120CF	12	8-9/16	2-5/16	14-1/8	26.03	30.79
816-140F	816-140CF	14	9-13/16	2-13/16	15-1/2	34.65	40.74
816-160F	816-160CF	16	11-5/16	3-5/16	17-11/16	52.97	57.95
816-180F	816-180CF	18	12-3/4	3-3/4	19-7/8	74.44	86.42
816-200F	816-200CF	20	14-1/4	4-1/4	22-1/16	119.89	103.23
816-240F	816-240CF	24	17-3/16	5-3/16	26-7/16	189.96	---

22-1/2° STREET ELBOW

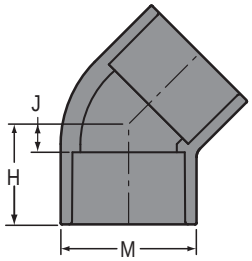
Spigot x Socket



Part Number		Size	H	H1	J	J1	M1	Approx. Wt. (Lbs.)	
PVC	CPVC							PVC	CPVC
842-005	842-005C	1/2	7/8	1	1/8	1/8	1-3/16	.05	.05
842-007	842-007C	3/4	1-1/4	1-5/32	3/16	3/16	1-3/8	.08	.09
842-010	842-010C	1	1-7/16	1-11/32	5/16	7/32	1-23/32	.13	.14
842-012	842-012C	1-1/4	1-9/16	1-9/16	5/16	3/8	2-3/32	.20	.22
842-015	842-015C	1-1/2	1-21/32	1-7/8	9/32	1/2	2-3/8	.26	.29
842-020	842-020C	2	2	1-29/32	15/32	13/32	2-7/8	.40	.43
842-025	842-025C	2-1/2	2-1/8	2-9/32	3/8	17/32	3-1/2	.66	.76
842-030	842-030C	3	2-1/2	2-5/16	21/32	7/16	4-5/32	1.44	1.00
842-040	842-040C	4	2-27/32	3-1/32	9/16	25/32	5-1/4	1.67	2.59
842-060	842-060C	6	5-11/16	3-15/16	2-3/8	7/8	7-5/8	9.46	6.87
842-080	842-080C	8	7-3/8	5-1/8	3-1/8	1-1/8	9-3/4	5.61	12.71

45° ELBOW

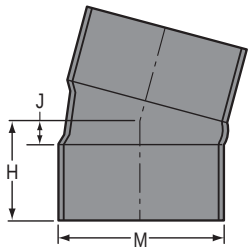
Socket x Socket



Part Number		Size	H	J	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
817-002	817-002C	1/4	13/16	5/32	27/32	.03	.03
817-003	817-003C	3/8	31/32	7/32	1	.04	.04
817-005	817-005C	1/2	1-1/8	1/4	1-3/16	.06	.07
817-007	817-007C	3/4	1-5/16	5/16	1-7/16	.09	.10
817-010	817-010C	1	1-7/16	5/16	1-23/32	.15	.16
817-012	817-012C	1-1/4	1-5/8	3/8	2-1/8	.23	.24
817-015	817-015C	1-1/2	1-13/16	7/16	2-3/8	.30	.32
817-020	817-020C	2	2-1/8	5/8	2-7/8	.45	.47
817-025	817-025C	2-1/2	2-13/32	21/32	3-1/2	.77	.82
817-030	817-030C	3	2-29/32	29/32	4-5/32	1.12	1.16
817-040	817-040C	4	3-5/16	1-1/16	5-1/4	2.00	2.05
817-045F	---	4-1/2	4-1/2	2	5-5/8	2.32	---
817-050	817-050C	5	4	1-11/32	6-3/8	3.19	3.31
817-050F	817-050CF	5	4-7/8	1-7/8	6-5/16	3.86	4.25
817-060	817-060C	6	4-3/4	1-3/4	7-19/32	5.52	5.49
817-080	817-080C	8	6	2	9-3/4	10.09	10.43
817-100	817-100C	10	8-3/16	2-19/32	12-3/16	20.62	21.29
817-100F	817-100CF	10	8-11/16	3-7/16	11-15/16	19.91	23.50
817-120	817-120C	12	9-11/16	3-3/32	14-13/32	34.04	35.49
817-120F	817-120CF	12	10-1/8	3-7/8	14-1/8	31.51	32.40
817-140	817-140C	14	10-1/4	3-1/4	15-5/8	40.00	40.60
817-140F	817-140CF	14	11-9/16	4-9/16	15-1/2	42.89	41.37
817-160F	817-160CF	16	13-5/16	5-5/16	17-11/16	61.45	57.91
817-180F	817-180CF	18	15	6	19-7/8	87.73	88.48
817-200F	817-200CF	20	16-3/4	6-3/4	22-1/16	107.05	123.21
817-240F	817-240CF	24	20-3/16	8-3/16	26-7/16	204.20	---

15° ELBOW

Socket x Socket

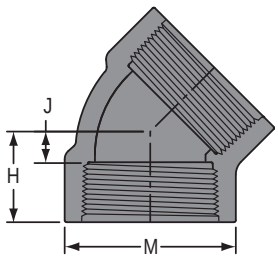


Part Number		Size	H	J	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
818-020F	818-020CF	2	2-5/16	9/16	2-13/16	.42	.54
818-025F	818-025CF	2-1/2	2-3/4	3/4	3-7/16	.79	.69
818-030F	818-030CF	3	3	3/4	4-1/8	1.10	1.44
818-040F	818-040CF	4	3-1/8	7/8	5-3/16	1.90	1.96
818-045F	---	4-1/2	3-5/8	1-1/2	5-5/8	2.00	---
818-050F	818-050CF	5	3-15/16	15/16	6-5/16	2.98	3.22
818-060F	818-060CF	6	4-3/8	1-1/8	7-1/2	4.43	5.38
818-080F	818-080CF	8	4-1/2	1-1/4	9-5/8	8.73	10.52
818-100F	818-100CF	10	6-15/16	1-11/16	11-15/16	15.93	19.02
818-120F	818-120CF	12	8-1/16	1-13/16	14-1/8	24.66	29.25
818-140F	818-140CF	14	9-5/16	2-5/16	15-1/2	34.65	40.75
818-160F	818-160CF	16	10-11/16	2-11/16	17-11/16	50.85	59.47
818-180F	818-180CF	18	12-1/16	3-1/16	19-7/8	71.78	83.44
818-200F	818-200CF	20	13-1/2	3-1/2	22-1/16	119.89	99.90
818-240F	818-240CF	24	16-1/4	4-1/4	26-7/16	170.96	202.28



45° ELBOW

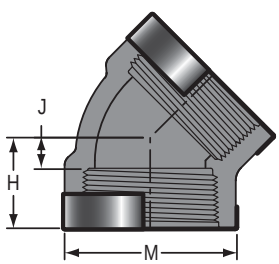
Fipt x Fipt



Part Number		Size	H	J	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
819-002	819-002C	1/4	25/32	3/16	27/32	.03	.03
819-003	819-003C	3/8	13/16	3/16	1	.04	.04
819-005	819-005C	1/2	31/32	5/16	1-3/16	.07	.08
819-007	819-007C	3/4	1-3/32	13/32	1-3/8	.11	.07
819-010	819-010C	1	1-7/32	7/32	1-11/16	.14	.15
819-012	819-012C	1-1/4	1-7/16	7/16	2-3/16	.24	.25
819-015	819-015C	1-1/2	1-1/2	15/32	2-1/2	.31	.33
819-020	819-020C	2	1-23/32	21/32	3	.46	.48
819-025	819-025C	2-1/2	2-17/32	31/32	3-1/2	1.14	1.24
819-030	819-030C	3	2-23/32	1	4-9/32	1.78	1.92
819-040	819-040C	4	3-1/4	1-7/32	5-1/4	2.71	2.79

SPECIAL REINFORCED 45° ELBOW

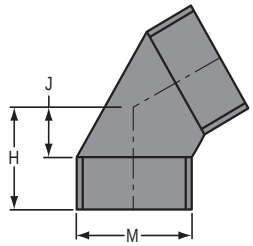
SR Fipt x SR Fipt



Part Number		Size	H	J	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
819-005SR	819-005CSR	1/2	1	5/16	1-3/16	.09	.09
819-007SR	819-007CSR	3/4	1-1/8	13/32	1-3/8	.10	.11
819-010SR	819-010CSR	1	1-1/4	13/32	1-23/32	.17	.18

60° ELBOW

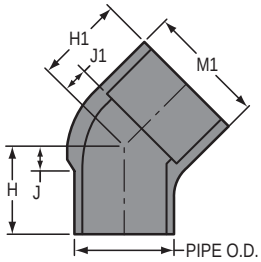
Socket x Socket



Part Number		Size	H	J	M	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
824-005F	824-005CF	1/2	1-5/8	5/8	1-1/8	.13	.14
824-007F	824-007CF	3/4	1-11/16	11/16	1-3/8	.18	.09
824-010F	824-010CF	1	2	3/4	1-11/16	.33	.34
824-012F	824-012CF	1-1/4	2-1/2	1	2-1/16	.68	.69
824-015F	824-015CF	1-1/2	2-5/8	1-1/8	1-3/8	.74	.37
824-020F	824-020CF	2	3	1-1/4	2-13/16	.93	.59
824-025F	824-025CF	2-1/2	3-9/16	1-9/16	3-7/16	.73	.95
824-030F	824-030CF	3	4	1-3/4	4-1/8	2.53	1.34
824-040F	824-040CF	4	4-5/16	2-1/16	5-3/16	4.05	5.10
824-050F	824-050CF	5	5-3/8	2-3/8	6-5/16	7.08	7.39
824-060F	824-060CF	6	6-1/8	2-7/8	7-1/2	9.30	10.87
824-080F	824-080CF	8	7-3/4	3-1/2	9-5/8	18.81	19.49
824-100F	824-100CF	10	9-11/16	4-7/16	11-15/16	33.04	36.34
824-120F	824-120CF	12	11-5/16	5-1/16	14-1/8	31.51	63.05
824-140F	824-140CF	14	12-15/16	5-15/16	15-1/2	42.89	88.90
824-160F	824-160CF	16	14-13/16	6-13/16	17-11/16	108.07	126.09
824-180F	824-180CF	18	16-3/4	7-3/4	19-7/8	95.71	175.82
824-200F	---	20	23-11/16	13-11/16	22-1/16	239.76	---
---	824-200CF	20	26-5/8	16-5/8	22-1/16	---	247.63
824-240F	---	24	28-11/16	16-11/16	26-7/16	348.00	---
---	824-240CF	24	32-1/8	20-1/8	26-7/16	---	362.00

45° STREET ELBOW

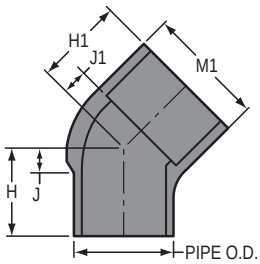
Spigot x Socket



Part Number		Size	H	H1	J	J1	M1	Approx. Wt. (Lbs.)	
PVC	CPVC							PVC	CPVC
827-005	827-005C	1/2	1-9/32	1-5/16	11/32	7/16	1-3/16	.06	.06
827-007	827-007C	3/4	1-1/2	1-1/2	7/16	1/2	1-13/32	.10	.10
827-010	827-010C	1	1-25/32	1-1/2	19/32	3/8	1-3/4	.15	.16
827-012	827-012C	1-1/4	1-25/32	1-29/32	1/2	21/32	1-21/32	.22	.24
827-015	827-015C	1-1/2	2-1/32	2-1/8	19/32	25/32	2-11/32	.30	.32
827-020	827-020C	2	2-5/16	2-11/32	11/16	3/8	2-27/32	.44	.47
827-025	827-025C	2-1/2	3-11/16	2-9/16	1-11/16	13/16	3-1/2	1.09	1.29
827-030	827-030C	3	3-1/4	2-13/16	1-3/16	29/32	4-5/32	1.22	1.25
827-040	827-040C	4	3-13/16	3-13/16	1-9/32	1-9/16	5-1/4	2.15	2.20
827-060	827-060C	6	5-3/32	4-25/32	2-1/16	2-1/16	7-9/32	5.70	5.91
827-080	827-080C	8	6-5/8	5-31/32	2-19/32	1-3/4	9-3/4	10.53	10.51

45° STREET ELBOW (continued)

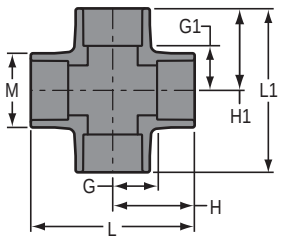
Spigot x Socket



Part Number		Size	H	H1	J	J1	M1	Approx. Wt. (Lbs.)	
PVC	CPVC							PVC	CPVC
827-100	827-100C	10	10-21/32	8-3/16	2-19/32	5-5/16	12-3/16	25.62	26.59
827-120	827-120C	12	13-1/4	9-11/16	6-3/8	3-3/32	14-13/32	45.44	46.00
827-140F	---	14	11-9/16	11-9/16	4-9/16	4-9/16	15-1/2	61.04	---
---	827-140CF	14	16-1/16	11-9/16	8-1/16	4-9/16	15-1/2	---	70.37
827-160F	827-160CF	16	18-5/16	13-5/16	9-5/16	5-5/16	17-11/16	78.40	90.40
827-180F	827-180CF	18	20-1/2	15	10-1/2	6	19-7/8	114.32	131.12
827-200F	827-200CF	20	22-3/4	16-3/4	11-3/4	6-3/4	22-1/16	156.53	153.18
827-240F	827-240CF	24	27-3/16	20-3/16	14-3/16	8-3/16	26-7/16	261.19	---

CROSS

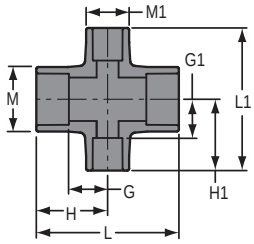
Socket x Socket x Socket x Socket



Part Number		Size	G	G1	H	H1	L	L1	M	Approx. Wt. (Lbs.)	
PVC	CPVC									PVC	CPVC
820-002	820-002C	1/4	13/32	13/32	1-1/32	1-1/32	2-1/16	2-1/16	27/32	.05	.05
820-005	820-005C	1/2	9/16	9/16	1-15/32	1-15/32	2-15/16	2-15/16	1-3/16	.13	.13
820-007	820-007C	3/4	5/8	5/8	1-5/8	1-5/8	3-9/32	3-9/32	1-13/32	.22	.21
820-010	820-010C	1	31/32	31/32	2-3/32	2-3/32	4-7/32	4-7/32	1-23/32	.39	.46
820-012	820-012C	1-1/4	1-3/32	1-3/32	2-3/8	2-3/8	4-3/4	4-3/4	2-1/8	.63	.65
820-015	820-015C	1-1/2	1-7/32	1-7/32	2-5/8	2-5/8	5-7/32	5-7/32	2-3/8	.79	.81
820-020	820-020C	2	1-1/2	1-1/2	3	3	6	6	3	1.34	1.38
820-025	820-025C	2-1/2	1-11/16	1-11/16	3-15/32	3-15/32	6-29/32	6-29/32	3-17/32	2.02	2.11
820-030	820-030C	3	2-3/32	2-3/32	3-31/32	3-31/32	7-15/16	7-15/16	4-11/32	3.30	3.39
820-040	820-040C	4	2-5/8	2-5/8	4-7/8	4-7/8	9-3/4	9-3/4	5-11/32	5.31	5.30
820-050F	820-050CF	5	5-1/2	5-1/2	8-1/2	8-1/2	17	17	6-5/16	14.69	15.06
820-060F	820-060CF	6	6-1/4	6-1/4	9-1/2	9-1/2	19	19	7-1/2	16.19	16.94
820-080F	820-080CF	8	7-5/8	7-5/8	11-7/8	11-7/8	23-3/4	23-3/4	9-5/8	28.22	40.50
820-100F	820-100CF	10	9	9	14-1/4	14-1/4	28-1/2	28-1/2	11-15/16	49.78	67.20
820-120F	820-120CF	12	11-1/4	11-1/4	17-1/2	17-1/2	35	35	14-1/8	80.83	107.80
820-140F	820-140CF	14	12-1/4	12-1/4	19-1/4	19-1/4	38-1/2	38-1/2	15-1/2	108.89	148.16
820-160F	820-160CF	16	13	13	21	21	42	42	17-11/16	156.80	180.80
820-180F	820-180CF	18	13-3/4	13-3/4	22-3/4	22-3/4	45-1/2	45-1/2	19-7/8	215.35	198.00
820-200F	820-200CF	20	16-3/8	16-3/8	26-3/8	26-3/8	52-3/4	52-3/4	22-1/16	300.00	249.75
820-240F	820-240CF	24	20-1/4	20-1/4	32-1/4	32-1/4	64-1/2	64-1/2	26-7/16	527.13	355.98

REDUCING CROSS

Socket x Socket x Socket x Socket

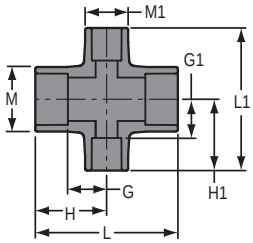


Part Number		Size	G	G1	H	H1	L	L1	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC										PVC	CPVC
820-130[1]	820-130C[1]	1x1x1/2x1/2	1	1-7/16	2-1/8	2-3/8	4-7/32	4-3/4	1-23/32	1-23/32	.56	.59
820-131	820-131C	1x1x1/2x3/4	23/32	5/8	1-5/8	1-5/8	3-1/4	3-1/4	1-7/8	1-1/2	.30	.31
820-166[1]	820-166C[1]	1-1/4x1-1/4x1/2x1/2	1-3/32	1-3/32	2-3/8	2-11/16	4-3/4	5-3/16	3-3/32	3-3/32	.82	.84
820-167	820-167C	1-1/4x1-1/4x3/4x3/4	1-1/16	23/32	2-1/16	1-31/32	4-3/32	3-31/32	2-1/16	1-13/32	.33	.35
820-209[1]	820-209C[1]	1-1/2x1-1/2x1/2x1/2	1-7/32	1-7/32	2-21/32	2-31/32	5-1/4	5-15/16	2-3/8	2-3/8	1.18	1.21
820-210	820-210C	1-1/2x1-1/2x3/4x3/4	11/16	1-5/32	2-3/32	2-3/16	4-3/16	4-11/32	2-3/8	1-13/32	.40	.42
820-211[1]	820-211C[1]	1-1/2x1-1/2x1x1	1-3/4	1-3/4	2-5/8	3	5-5/16	5-7/8	1-3/8	1-3/8	1.12	1.16
820-248	820-248C	2x2x3/4x3/4	11/16	1-7/16	2-7/32	2-7/16	4-13/32	4-7/8	2-29/32	1-13/32	.55	.56
820-249[1]	820-249C[1]	2x2x1x1	1-1/2	2-9/32	3	3-7/16	6	6-27/32	3	3	1.81	1.99
820-251	---	2x2x1-1/2x1-1/2	1-1/2	2	3	3-3/8	6	6-3/4	2-7/8	2-7/8	1.72	---
820-289	820-289C	2-1/2x2-1/2x1x1	7/8	1-23/32	2-11/16	2-7/8	5-11/32	5-3/4	3-1/2	1-3/4	.97	1.00
820-291[1]	820-291C[1]	2-1/2x2-1/2x1-1/2x1-1/2	1-11/16	2-15/32	3-7/16	3-27/32	6-7/8	7-23/32	3-9/16	3-9/16	2.83	2.97
820-336[1]	820-336C[1]	3x3x1-1/4x1-1/4	2-3/32	3-1/8	3-31/32	4-3/8	7-29/32	8-3/4	4-3/16	4-3/16	4.23	4.46
820-338[1]	820-338C[1]	3x3x2x2	2-3/32	2-27/32	3-31/32	4-5/16	7-29/32	8-5/8	4-13/32	4-5/16	4.23	4.46
820-420[1]	820-420C[1]	4x4x2x2	2-5/8	3-13/16	4-7/8	5-11/32	9-3/4	10-21/32	5-11/32	5-7/32	7.33	7.83
820-420F	820-420CF	4x4x2x2	3-7/8	4-1/4	6-1/8	6	12-1/4	12	5-3/16	2-13/16	5.26	5.79
820-422[1]	820-422C[1]	4x4x3x3	2-5/8	3-7/16	4-7/8	5-5/16	9-3/4	10-5/8	5-1/4	5-1/4	6.94	7.21
820-528F	820-528CF	6x6x2x2	4-5/8	5-3/16	7-7/8	6-15/16	15-3/4	13-7/8	7-1/2	2-13/16	7.19	8.70
820-530F	820-530CF	6x6x3x3	4-3/4	5-3/4	8	8	16	16	7-1/2	4-1/8	12.60	10.24
820-532F	820-532CF	6x6x4x4	5-1/4	6-3/4	8-1/2	9	17	18	7-1/2	5-3/16	14.54	15.93
820-533F	820-533CF	6x6x5x5	5-3/4	6-1/2	9	9-1/2	18	19	7-1/2	6-5/16	14.00	14.41
820-578F	820-578CF	8x8x2x2	4-11/16	6-1/8	8-15/16	7-7/8	17-7/8	15-3/4	9-5/8	2-13/16	11.30	15.90
820-580F	820-580CF	8x8x3x3	5-3/16	6-11/16	9-7/16	8-15/16	18-7/8	17-7/8	9-5/8	4-1/8	12.93	13.77
820-582F	820-582CF	8x8x4x4	5-3/4	7-11/16	10	9-15/16	20	19-7/8	9-5/8	5-3/16	21.87	24.71
820-585F	820-585CF	8x8x6x6	6-3/4	8-1/16	11	11-5/16	22	22-5/8	9-5/8	7-1/2	30.04	30.75
820-621F	820-621CF	10x10x2x2	4-3/8	7-1/8	9-5/8	8-7/8	19-1/4	17-11/16	11-15/16	2-13/16	19.45	27.78
820-622F	---	10x10x2-1/2x2-1/2	5-1/4	7-5/16	10-1/2	9-5/16	21	18-5/8	11-15/16	3-7/16	20.00	---
820-623F	820-623CF	10x10x3x3	4-7/8	7-11/16	10-1/8	9-15/16	20-1/4	19-13/16	11-15/16	4-1/8	21.42	30.16
820-624F	820-624CF	10x10x4x4	5-3/8	8-11/16	10-5/8	10-15/16	21-1/4	21-13/16	11-15/16	5-3/16	24.17	28.17
820-626F	820-626CF	10x10x6x6	5-7/8	9-1/16	11-1/8	12-5/16	22-1/4	24-5/8	11-15/16	7-1/2	40.79	38.61
820-628F	820-628CF	10x10x8x8	8-1/4	9-15/16	13-1/2	14-3/16	27	28-3/8	11-15/16	9-5/8	65.94	59.10
820-661F	820-661CF	12x12x2x2	4-3/4	8	11	9-3/4	22	19-1/2	14-1/8	2-13/16	29.32	44.02
820-663F	820-663CF	12x12x3x3	5-1/4	8-9/16	11-1/2	10-13/16	23	21-5/8	14-1/8	4-1/8	33.02	45.28
820-664F	820-664CF	12x12x4x4	5-3/4	9-9/16	12	11-13/16	24	23-5/8	14-1/8	5-3/16	33.78	42.60
820-666F	820-666CF	12x12x6x6	7-1/4	9-15/16	13-1/4	13-3/16	26-1/2	26-3/8	14-1/8	7-1/2	57.20	61.56
820-668F	820-668CF	12x12x8x8	8	10-13/16	14-1/4	15-1/16	28-1/2	30-1/8	14-1/8	9-5/8	66.12	73.35
820-670F	820-670CF	12x12x10x10	9-5/8	10-13/16	15-7/8	16-1/16	31-3/4	32-1/8	14-1/8	11-15/16	105.91	78.03
820-691F	820-691CF	14x14x2x2	5-3/16	8-9/16	12-3/16	10-5/16	24-3/8	20-5/8	15-1/2	2-13/16	38.49	45.02
820-693F	820-693CF	14x14x3x3	5-3/4	9-1/8	12-3/4	11-3/8	25-1/2	22-3/4	15-1/2	4-1/8	49.59	57.57

[1] Outlet sized with bushing

REDUCING CROSS (continued)

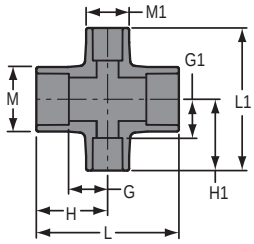
Socket x Socket x Socket x Socket



Part Number		Size	G	G1	H	H1	L	L1	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC										PVC	CPVC
820-694F	820-694CF	14x14x4x4	6-1/2	10-1/8	13-1/2	12-3/8	27	24-3/4	15-1/2	5-3/16	43.51	69.17
820-696F	820-696CF	14x14x6x6	8-1/4	10-1/2	15-1/4	13-3/4	30-1/2	27-1/2	15-1/2	7-1/2	78.72	63.15
820-698F	820-698CF	14x14x8x8	9-1/4	11-3/8	16-1/4	15-5/8	32-1/2	31-1/4	15-1/2	9-5/8	75.53	68.17
820-700F	820-700CF	14x14x10x10	10-1/8	11-3/8	17-1/8	16-5/8	34-1/4	33-1/4	15-1/2	11-15/16	95.66	89.80
820-702F	820-702CF	14x14x12x12	11	11-3/8	18	17-5/8	36	35-1/4	15-1/2	14-1/8	98.88	93.81
820-751F	820-751CF	16x16x2x2	5-7/8	9-1/2	13-7/8	11-1/4	27-3/4	22-1/2	17-11/16	2-13/16	55.64	71.71
820-752F	820-752CF	16x16x2-1/2x2-1/2	6	9-11/16	14	11-11/16	28	23-3/8	17-11/16	3-7/16	56.18	65.37
820-753F	820-753CF	16x16x3x3	6-5/16	10-1/16	14-5/16	12-5/16	28-5/8	24-5/8	17-11/16	4-1/8	58.72	67.39
820-754F	820-754CF	16x16x4x4	6-1/8	11-1/16	14-1/8	13-5/16	28-1/4	26-5/8	17-11/16	5-3/16	61.59	70.21
820-756F	820-756CF	16x16x6x6	8-5/8	11-7/16	16-5/8	14-11/16	33-1/4	29-3/8	17-11/16	7-1/2	93.13	90.09
820-758F	820-758CF	16x16x8x8	9-5/8	12-5/16	17-5/8	16-9/16	35-1/4	33-1/8	17-11/16	9-5/8	91.88	98.69
820-760F	820-760CF	16x16x10x10	10-5/8	12-5/16	18-5/8	17-9/16	37-1/4	35-1/8	17-11/16	11-15/16	104.59	103.85
820-762F	820-762CF	16x16x12x12	11-5/8	12-5/16	19-5/8	18-9/16	39-1/4	37-1/8	17-11/16	14-1/8	141.98	116.70
820-764F	820-764CF	16x16x14x14	12-3/4	12-11/16	20-3/4	19-11/16	41-1/2	39-3/8	17-11/16	15-1/2	129.00	135.00
820-784F	820-784CF	18x18x4x4	6-7/8	11-15/16	15-7/8	14-3/16	31-3/4	28-3/8	19-7/8	5-3/16	92.66	99.22
820-786F	820-786CF	18x18x6x6	8-1/2	12-5/16	17-1/2	15-9/16	35	31-1/8	19-7/8	7-1/2	118.63	122.13
820-788F	820-788CF	18x18x8x8	9-1/2	13-3/16	18-1/2	17-7/16	37	34-7/8	19-7/8	9-5/8	128.81	135.00
820-790F	820-790CF	18x18x10x10	10-1/2	13-3/16	19-1/2	18-7/16	39	36-7/8	19-7/8	11-15/16	130.87	150.90
820-792F	820-792CF	18x18x12x12	11-1/2	13-3/16	20-1/2	19-7/16	41	38-7/8	19-7/8	14-1/8	147.26	169.57
820-794F	820-794CF	18x18x14x14	12-3/4	13-9/16	21-3/4	20-9/16	43-1/2	41-1/8	19-11/16	15-1/2	164.25	165.78
820-796F	820-796CF	18x18x16x16	13-1/2	14-3/16	22-1/2	22-3/16	45	44-3/8	19-11/16	17-11/16	189.00	172.46
820-814F	820-814CF	20x20x4x4	7-11/16	12-7/8	17-11/16	15-1/8	35-3/8	30-1/4	22-1/16	5-3/16	115.50	116.55
820-816F	820-816CF	20x20x6x6	8-7/8	13-1/4	18-7/8	16-1/2	37-3/4	33	22-1/16	7-1/2	133.63	140.98
820-818F	820-818CF	20x20x8x8	9-7/8	14-1/8	19-7/8	18-3/8	39-3/4	36-3/4	22-1/16	9-5/8	153.30	151.48
820-820F	820-820CF	20x20x10x10	10-7/8	14-1/8	20-7/8	19-3/8	41-3/4	38-3/4	22-1/16	11-15/16	168.43	163.28
820-822F	820-822CF	20x20x12x12	11-7/8	14-1/8	21-7/8	20-3/8	43-3/4	40-3/4	22-1/16	14-1/8	186.06	176.50
820-824F	820-824CF	20x20x14x14	12-7/8	14-1/2	22-7/8	21-1/2	45-3/4	43	22-1/16	15-1/2	204.39	190.95
820-826F	820-826CF	20x20x16x16	14	15-1/8	24	23-1/8	48	46-1/4	22-1/16	17-11/16	230.10	210.27
820-828F	820-828CF	20x20x18x18	15	15	25	24	50	48	22-1/16	19-7/8	258.28	226.80
820-904F	820-904CF	24x24x4x4	9	14-11/16	21	16-15/16	42	33-7/8	26-7/16	5-3/16	192.22	195.97
820-906F	820-906CF	24x24x6x6	9-1/4	15-1/16	21-1/4	18-5/16	42-1/2	36-5/8	26-7/16	7-1/2	211.33	202.94
820-908F	820-908CF	24x24x8x8	10-1/4	15-15/16	22-1/4	20-3/16	44-1/2	40-3/8	26-7/16	9-5/8	221.76	236.29
820-910F	820-910CF	24x24x10x10	11-1/4	15-15/16	23-1/4	21-3/16	46-1/2	42-3/8	26-7/16	11-15/16	249.91	255.96
820-912F	820-912CF	24x24x12x12	12-1/4	15-15/16	24-1/4	22-3/16	48-1/2	44-3/8	26-7/16	14-1/8	279.88	280.93

REDUCING CROSS (continued)

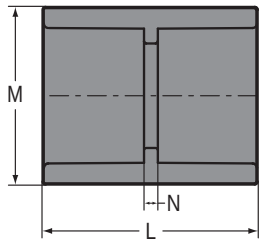
Socket x Socket x Socket x Socket



Part Number		Size	G	G1	H	H1	L	L1	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC										PVC	CPVC
820-914F	820-914CF	24x24x14x14	13-1/4	16-5/16	25-1/4	23-5/16	50-1/2	46-5/8	26-1/16	15-1/2	301.05	282.43
820-916F	820-916CF	24x24x16x16	14-3/4	16-15/16	26-3/4	24-15/16	53-1/2	49-7/8	26-7/16	17-11/16	329.60	306.44
820-918F	820-918CF	24x24x18x18	15-3/4	16-13/16	27-3/4	25-13/16	55-1/2	51-5/8	26-7/16	19-7/8	360.62	246.78
820-920F	820-920CF	24x24x20x20	16-3/4	18-3/16	28-3/4	28-3/16	57-1/2	56-3/8	26-7/16	22-1/16	398.22	351.60

COUPLING

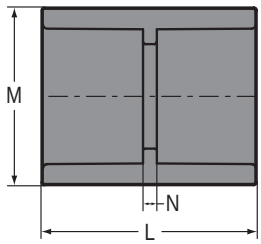
Socket x Socket



Part Number		Size	L	M	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
829-002	829-002C	1/4	1-3/8	27/32	1/16	.02	.02
829-003	829-003C	3/8	1-5/8	1	3/32	.03	.04
829-005	829-005C	1/2	1-7/8	1-3/16	1/8	.05	.07
829-007	829-007C	3/4	2-1/8	1-13/32	1/8	.07	.10
829-010	829-010C	1	2-15/32	1-23/32	3/16	.13	.13
829-012	829-012C	1-1/4	2-23/32	2-7/32	7/32	.22	.23
829-015	829-015C	1-1/2	2-7/8	2-11/32	3/32	.21	.22
829-020	829-020C	2	3-1/8	2-27/32	3/32	.31	.32
829-025	829-025C	2-1/2	3-11/16	3-15/32	1/4	.55	.58
829-030	829-030C	3	3-31/32	4-5/32	3/16	.79	.82
829-040	829-040C	4	4-3/4	5-5/16	1/4	1.34	1.36
829-050	829-050C	5	5-21/32	6-3/8	3/16	2.06	2.21
829-050F	---	5	7-3/8	6-5/16	1-3/8	2.60	---
---	829-050CF	5	8	6-5/16	2	---	2.32
829-060	829-060C	6	6-3/8	7-9/16	1/4	3.39	3.93
829-080	829-080C	8	8-1/4	9-23/32	9/32	6.55	6.95
829-100	829-100C	10	10-9/32	12-1/16	1/4	11.76	12.31
829-100F	829-100CF	10	12-1/2	11-15/16	2	13.94	16.78
829-120	829-120C	12	12-3/8	14-7/32	3/8	19.39	20.05
829-120F	---	12	14-1/4	14-1/8	1-3/4	21.92	---

COUPLING (continued)

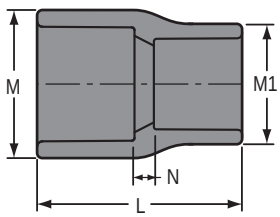
Socket x Socket



Part Number		Size	L	M	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
---	829-120CF	12	15-1/4	14-1/8	2-3/4	---	27.71
829-140	829-140C	14	14-7/16	15-5/8	3/8	29.70	28.11
829-140F	---	14	16-1/4	15-1/2	2-1/4	29.70	---
----	829-140CF	14	16	15-1/2	2	---	33.33
829-160F	829-160CF	16	18-5/8	17-11/16	2-5/8	42.38	42.93
829-180F	829-180CF	18	22	19-7/8	4	63.81	72.89
829-200F	829-200CF	20	23-3/4	22-1/16	3-3/4	86.58	99.56
829-240F	829-240CF	24	29-1/4	26-7/16	5-1/4	147.22	---

REDUCER COUPLING

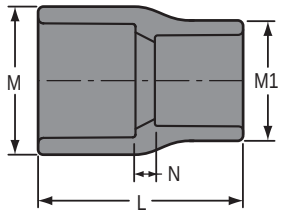
Socket x Socket



Part Number		Size	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
829-101	829-101C	3/4x1/2	2-3/32	1-13/32	1-5/32	7/32	.07	.07
829-130	829-130C	1x1/2	2-3/16	1-23/32	1-13/32	7/32	.11	.12
829-131	829-131C	1x3/4	2-13/32	1-23/32	1-13/32	1/4	.10	.10
829-166	829-166C	1-1/4x1/2	2-9/16	2-3/32	1-5/32	7/16	.13	.15
829-167	829-167C	1-1/4x3/4	2-19/32	2-3/32	1-5/8	11/32	.17	.18
829-168	829-168C	1-1/4x1	2-11/16	2-1/8	1-3/4	5/16	.17	.15
829-209	829-209C	1-1/2x1/2	2-27/32	2-11/32	1-3/16	19/32	.19	.20
829-210	829-210C	1-1/2x3/4	2-7/8	2-3/8	1-13/32	17/32	.21	.19
829-211	829-211C	1-1/2x1	2-7/8	2-11/32	1-15/16	3/8	.26	.25
829-212	829-212C	1-1/2x1-1/4	2-13/16	2-13/32	2-1/8	5/32	.22	.23
829-247	829-247C	2x1/2	3-3/32	2-7/8	1-5/32	11/16	.30	.31
829-248	829-248C	2x3/4	3-7/32	2-7/8	1-13/32	23/32	.30	.32
829-249	829-249C	2x1	3-1/8	2-7/8	1-23/32	17/32	.33	.35
829-250	829-250C	2x1-1/4	3-11/32	2-7/8	2-3/32	19/32	.31	.33
829-251	829-251C	2x1-1/2	3-7/32	2-27/32	2-11/32	1/4	.30	.31
829-290[1]	829-290C[1]	2-1/2x1-1/4	3-29/32	3-1/2	2-3/8	15/16	.57	.59
829-291	829-291C	2-1/2x1-1/2	3-3/4	3-1/2	2-3/8	19/32	.51	.51
829-292	829-292C	2-1/2x2	3-21/32	3-15/32	2-27/32	13/32	.48	.51
829-335	829-335C	3x1	4-7/16	4-1/8	2-7/8	1-7/16	1.00	1.04
829-336[1]	829-336C[1]	3x1-1/4	4-7/32	4-5/32	2-29/32	1-1/16	.94	.97
829-337[1]	829-337C[1]	3x1-1/2	4-13/32	4-5/32	2-7/8	1-3/16	.94	.96

REDUCER COUPLING (continued)

Socket x Socket

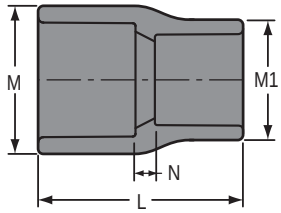


Part Number		Size	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
829-338	829-338C	3x2	4	4-5/32	2-27/32	11/16	.68	.76
829-339	829-339C	3x2-1/2	3-27/32	4-3/16	3-1/2	3/16	1.26	.80
829-339F	829-339CF	3x2-1/2	6	4-1/16	3-7/16	1-3/4	.90	1.01
829-416[1]	829-416C[1]	4x3/4	5-23/32	5-9/32	2-29/32	2-13/32	1.67	1.78
829-417[1]	829-417C[1]	4x1	5-15/16	5-9/32	2-29/32	2-17/32	1.71	1.54
829-419[1]	829-419C[1]	4x1-1/2	5-23/32	5-9/32	2-29/32	2-1/16	1.59	1.68
829-420	829-420C	4x2	5-1/2	5-9/32	2-7/8	1-25/32	1.45	1.50
829-421	829-421C	4x2-1/2	4-9/16	5-3/16	3-1/2	17/32	1.25	1.35
829-422	829-422C	4x3	4-5/8	5-1/4	4-1/8	1/2	1.25	1.33
829-460F	---	4-1/2x4	6-15/16	5-5/8	5-3/16	2-3/16	1.97	---
829-487F	---	5x2-1/2	8-1/8	6-1/4	5-3/16	3-5/8	2.64	---
829-488F	829-488CF	5x3	7-15/16	6-1/4	5-3/16	2-15/16	3.08	3.13
829-490F	829-490CF	5x4	7-3/4	6-1/4	5-3/16	2-1/2	2.09	2.53
829-491F	---	5x4-1/2	8-3/16	6-1/4	5-5/8	2-15/16	3.22	---
829-528[1]	829-528C[1]	6x2	7-1/16	7-1/2	5	2-9/16	4.37	4.42
829-529[1]	829-529C	6x2-1/2	6-31/32	7-19/32	5-9/32	2-3/16	4.30	4.72
829-530[1]	829-530C[1]	6x3	7-1/8	7-9/16	5-9/32	2-1/4	4.07	4.25
829-530F	---	6x3	9-3/16	7-5/16	5-3/16	3-15/16	3.85	---
---	829-530CF	6x3	9-1/4	7-5/16	5-3/16	4-3/16	---	4.22
829-532	829-532C	6x4	6-5/8	7-5/8	5-5/16	1-7/16	3.28	3.45
829-533F	829-533CF	6x5	8-15/16	7-3/8	6-5/16	2-11/16	3.57	3.93
829-534F	---	6x4-1/2	9-5/16	7-5/16	5-5/8	3-9/16	3.22	---
829-579F	---	8x2-1/2	15	9-1/2	5-3/16	8-3/4	8.33	---
829-580F	---	8x3	14-15/16	9-1/2	5-3/16	8-11/16	7.95	---
----	829-580CF	8x3	15	9-1/2	5-3/16	8-7/8	---	8.74
829-582	829-582C	8x4	8-29/32	9-23/32	5-1/4	2-15/32	6.31	6.47
829-582F	829-582CF	8x4	14-5/8	9-1/2	5-3/16	8-1/8	8.17	9.36
829-583F	829-583CF	8x5	14-11/16	9-1/2	6-5/16	7-7/16	7.78	8.30
829-585	829-585C	8x6	8	9-3/4	7-1/2	1	6.16	6.48
829-621F	829-621CF	10x2	21-1/2	11-3/4	5-3/16	14-3/4	16.16	17.05
829-623F	829-623CF	10x3	21-7/16	11-3/4	5-3/16	14-3/16	15.77	17.18
---	829-623CF	10x3	21-1/2	11-3/4	5-3/16	14-7/16	---	20.10
829-624F	829-624CF	10x4	21-1/8	11-3/4	5-3/16	13-5/8	17.13	16.54
829-625F	829-625CF	10x5	21-3/16	11-3/4	6-5/16	12-15/16	16.38	16.94
829-626	829-626C	10x6	10-19/32	12-1/32	7-19/32	2-17/32	11.08	11.43
829-626F	---	10x6	17-1/2	11-3/4	7-1/2	9	14.72	---
---	829-626CF	10x6	17-5/8	11-3/4	7-1/2	9-1/8	---	15.00
829-628	829-628C	10x8	10-5/8	12	9-3/4	1-17/32	11.26	11.44
829-628F	---	10x8	13-1/4	11-3/4	9-5/8	3-3/4	11.42	---
---	829-628CF	10x8	13-3/8	11-3/4	9-5/8	3-7/8	---	12.00
829-664F	829-664CF	12x4	28-3/8	13-15/16	5-3/16	19-7/8	31.70	32.77
829-665F	829-665CF	12x5	28-7/16	13-15/16	6-5/16	19-3/16	27.25	33.24
829-666F	---	12x6	24-3/4	13-15/16	7-1/2	15-1/4	26.96	---
---	829-666CF	12x6	24-7/8	13-15/16	7-1/2	15-3/8	---	25.86
829-668	829-668C	12x8	12-5/8	14-7/32	9-3/4	2-7/16	17.92	19.26
829-668F	---	12x8	20-1/2	13-15/16	9-5/8	10	24.34	---

[1] Outlet sized with bushing

REDUCER COUPLING (continued)

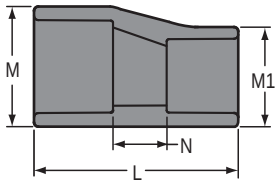
Socket x Socket



Part Number		Size	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
---	829-668CF	12x8	20-5/8	13-15/16	9-5/8	10-1/8	---	24.34
829-670F	829-670CF	12x10	16-3/8	13-15/16	11-15/16	4-7/8	18.92	20.77
829-694F	829-694CF	14x4	30-1/8	15-3/16	5-3/16	20-7/8	31.56	32.89
829-696F	---	14x6	26-1/2	15-3/16	7-1/2	16-1/4	29.65	---
---	829-696CF	14x6	26-5/8	15-3/16	7-1/2	16-3/8	---	47.58
829-698F	---	14x8	22-1/4	15-3/16	9-5/8	11	29.32	---
---	829-698CF	14x8	22-3/8	15-3/16	9-5/8	11-1/8	---	27.69
829-700F	829-700CF	14x10	18-1/8	15-3/16	11-15/16	5-7/8	22.90	26.86
829-702F	829-702CF	14x12	17-3/4	15-3/8	14-1/8	4-1/2	27.40	29.14
829-754F	829-754CF	16x4	38	17-3/8	5-3/16	27-3/4	50.97	50.97
829-756F	---	16x6	34-3/8	17-3/8	7-1/2	23-1/8	61.19	---
---	829-756CF	16x6	34-1/2	17-3/8	7-1/2	23-1/4	---	61.20
829-758F	---	16x8	30-1/8	17-3/8	9-5/8	17-7/8	52.73	---
---	829-758CF	16x8	30-1/4	17-3/8	9-5/8	18	---	54.00
829-760F	829-760CF	16x10	26	17-3/8	11-15/16	12-3/4	43.70	51.35
829-762F	829-762CF	16x12	20-1/4	17-3/8	14-1/8	6	34.25	65.63
829-764F	829-764CF	16x14	21-1/4	17-1/2	15-1/2	5-1/4	42.89	50.00
829-784F	829-784CF	18x4	47-3/8	19-11/16	5-3/16	36-1/8	104.77	107.14
829-786F	---	18x6	43-3/4	19-11/16	7-1/2	31-1/2	91.02	---
---	829-786CF	18x6	43-7/8	19-11/16	7-1/2	31-5/8		105.76
829-788F	---	18x8	39-1/2	19-11/16	9-5/8	26-1/4	86.65	---
---	829-788CF	18x8	39-5/8	19-11/16	9-5/8	26-3/8	---	101.60
829-790F	829-790CF	18x10	35-3/8	19-11/16	11-15/16	21-1/8	91.28	89.54
829-792F	829-792CF	18x12	29-5/8	19-11/16	14-1/8	14-3/8	73.27	76.67
829-794F	829-794CF	18x14	29-5/8	19-11/16	15-1/2	13-5/8	73.72	87.00
829-796F	829-796CF	18x16	23	19-11/16	17-11/16	6	55.09	63.70
829-814F	829-814CF	20x4	58	21-7/8	5-3/16	45-3/4	152.76	159.76
829-816F	---	20x6	54-1/2	21-7/8	7-1/2	41-1/8	136.93	---
---	829-816CF	20X6	54-1/2	21-7/8	7-1/2	41-14	---	158.17
829-818F	---	20x8	50-1/8	21-7/8	9 -5/8	35-7/8	144.26	---
---	829-818CF	20x8	50-1/4	21-7/8	9 -5/8	36	---	154.50
829-820F	829-820CF	20x10	46	21-7/8	11-15/16	30-3/4	139.44	146.56
829-822F	829-822CF	20x12	40-1/4	21-7/8	14- 1/8	24	119.04	137.46
829-824F	829-824CF	20x14	40-1/4	21-7/8	15-1/2	23-1/4	118.17	---
829-826F	829-826CF	20x16	33-5/8	21-7/8	17-11/16	15-5/8	100.87	115.51
829-828F	829-828CF	20x18	25-1/2	21-7/8	19-7/8	6-1/2	79.76	---
829-904F	829-904CF	24x4	71-1/2	26-1/16	5-3/16	57-1/4	231.96	241.69
829-906F	---	24x6	67-7/8	26-1/16	7-1/2	52-5/8	229.16	---
---	829-906CF	24x6	68	26-1/16	7-1/2	52-3/4	---	240.34
829-908F	---	24x8	63-5/8	26-1/16	9-5/8	47-3/8	223.42	---
---	829-908CF	24x8	63-3/4	26-1/16	9-5/8	47-1/2	---	236.18
829-910F	829-910CF	24x10	59-1/2	26-1/16	11-15/16	42-1/4	218.80	270.28
829-912F	829-912CF	24x12	53-3/4	26-1/16	14-1/8	35-1/2	192.82	219.13
829-914F	829-914CF	24x14	53-3/4	26-1/16	15-1/2	34-3/4	225.10	---
829-916F	829-916CF	24x16	47-1/8	26-1/16	17-11/16	27-1/8	171.54	179.54
829-918F	829-918CF	24x18	39	26-1/16	19-7/8	18	147.20	167.74
829-920F	829-920CF	24x20	30-5/8	26-1/16	22-1/16	8-5/8	116.56	139.32

ECCENTRIC REDUCER COUPLING

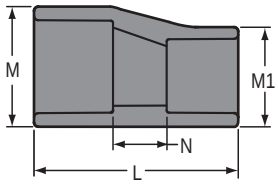
Socket x Socket



Part Number		Size	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
829-101FE	829-101CFE	3/4x1/2	3-3/8	1-3/8	1-1/8	1-5/8	.09	.09
829-130FE	829-130CFE	1x1/2	3-1/2	1-5/8	1-1/8	1-1/2	.12	.11
829-131FE	829-131CFE	1x3/4	4	1-5/8	1-3/8	1-3/4	.13	.15
829-168FE	829-168CFE	1-1/4x1	5-1/8	2	1-11/16	2-3/8	.24	.30
829-209FE	829-209CFE	1-1/2x1/2	7-1/8	2-1/4	1-1/8	4-7/8	.30	.33
829-210FE	829-210CFE	1-1/2x3/4	7-5/8	2-1/4	1-3/8	5-1/8	.33	.34
829-211FE	829-211CFE	1-1/2x1	5-3/8	2-1/4	1-11/16	2-5/8	.33	.35
829-212FE	829-212CFE	1-1/2x1-1/4	5-1/4	2-5/16	2-1/16	2-1/4	.37	.33
829-249FE	829-249CFE	2x1	6-1/8	2-3/4	1-11/16	3-1/8	.39	.37
829-250FE	829-250CFE	2x1-1/4	6-1/8	2-3/4	2-1/16	2-7/8	.37	.46
829-251FE	829-251CFE	2x1-1/2	6	2-3/4	2-5/16	2-3/4	.46	.47
829-289FE	829-289CFE	2-1/2x1	10-5/8	3-5/16	1-11/16	7-3/8	.88	.90
829-290FE	829-290CFE	2-1/2x1-1/4	10-5/8	3-5/16	2-1/16	7-1/8	.91	1.15
829-291FE	829-291CFE	2-1/2x1-1/2	10-1/2	3-5/16	2-5/16	7	.91	1.24
829-292FE	829-292CFE	2-1/2x2	6-7/8	3-5/16	2-13/16	3-1/8	.68	.86
829-335FE	829-335CFE	3x1	11-7/8	3-15/16	1-11/16	8-3/8	1.17	1.58
829-336FE	829-336CFE	3x1-1/4	11-7/8	3-15/16	2-1/16	8-1/8	1.10	1.27
829-337FE	829-337CFE	3x1-1/2	11-3/4	3-15/16	2-5/16	8	1.28	1.41
829-338FE	829-338CFE	3x2	5-7/8	4-5/32	2-7/8	2-15/32	1.01	1.07
829-339FE	829-339CFE	3x2-1/2	7-1/4	4-1/16	3-7/16	3	1.12	1.26
829-417FE	829-417CFE	4x1	17	5-1/8	1-11/16	13-1/2	2.75	3.48
829-418FE	829-418CFE	4x1-1/4	17	5-1/8	2-1/16	13-1/4	2.65	3.00
829-419FE	829-419CFE	4x1-1/2	16-7/8	5-1/8	2-5/16	13-1/8	3.10	2.60
829-420FE	829-420CFE	4x2	13-1/4	5-1/8	2-13/16	9-1/4	2.83	2.47
829-421FE	829-421CFE	4x2-1/2	12-3/8	5-1/8	3-7/16	8-1/8	2.42	2.58
829-422FE	829-422CFE	4x3	8-3/4	5-1/8	4-1/8	4-1/4	1.70	2.04
829-528FE	829-528CFE	6x2	20-7/8	7-5/16	2-13/16	15-7/8	5.86	7.02
829-529FE	829-529CFE	6x2-1/2	20	7-5/16	3-7/16	14-3/4	5.77	7.48
829-530FE	829-530CFE	6x3	16-3/8	7-5/16	4-1/8	10-7/8	6.24	6.16
829-532FE	829-532CFE	6x4	11-1/8	7-5/16	5-3/16	5-5/8	3.39	4.43
829-533FE	829-533CFE	6x5	11-1/4	7-3/8	6-5/16	5	4.32	6.44
829-578FE	829-578CFE	8x2	30-5/8	9-1/2	2-13/16	24-5/8	11.96	17.32
829-580FE	829-580CFE	8x3	26-1/8	9-1/2	4-1/8	19-5/8	11.13	16.42
829-582FE	829-582CFE	8x4	20-7/8	9-1/2	5-3/16	14-3/8	11.54	13.59
829-583FE	829-583CFE	8x5	21	9-1/2	6-5/16	13-3/4	10.77	11.81
829-585FE	829-585CFE	8x6	15-1/4	9-1/2	7-1/2	7-3/4	8.41	9.78
829-624FE	829-624CFE	10x4	32	11-3/4	5-3/16	24-1/2	25.43	29.89
829-625FE	829-625CFE	10x5	32-1/8	11-3/4	6-5/16	23-7/8	22.82	27.68
829-626FE	829-626CFE	10x6	26-3/8	11-3/4	7-1/2	17-7/8	22.31	25.59
829-628FE	829-628CFE	10x8	18-1/16	11-3/4	9-5/8	8-9/16	14.78	17.28
829-664FE	829-664CFE	12x4	43-1/2	13-15/16	5-3/16	35	42.54	56.73

ECCENTRIC REDUCER COUPLING (continued)

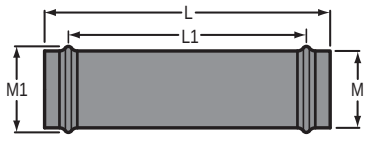
Socket x Socket



Part Number		Size	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
829-665FE	829-665CFE	12x5	43-5/8	13-15/16	6-5/16	34-3/8	41.73	42.50
829-666FE	829-666CFE	12x6	37-7/8	13-15/16	7-1/2	28-3/8	35.33	52.43
829-668FE	829-668CFE	12x8	29-9/16	13-15/16	9-5/8	19-1/16	32.68	34.80
829-670FE	829-670CFE	12x10	20-5/8	13-15/16	11-15/16	9-1/8	24.89	26.06
829-696FE	829-696CFE	14x6	41-3/8	15-3/16	7-1/2	31-1/8	56.76	67.95
829-698FE	829-698CFE	14x8	33-1/16	15-3/16	9-5/8	21-13/16	53.73	39.32
829-700FE	829-700CFE	14x10	24-1/8	15-3/16	11-15/16	11-7/8	51.42	60.41
829-702FE	829-702CFE	14x12	20-1/8	15-3/8	14-1/8	6-7/8	30.11	41.52
829-756FE	829-756CFE	16x6	54-1/4	17-1/2	7-1/2	43	113.09	96.99
829-758FE	829-758CFE	16x8	45-15/16	17-1/2	9-5/8	33-11/16	69.73	91.61
829-760FE	829-760CFE	16x10	37	17-1/2	11-15/16	23-3/4	59.25	85.11
829-762FE	829-762CFE	16x12	33	17-1/2	14-1/8	18-3/4	63.26`	71.78
829-764FE	829-764CFE	16x14	24-5/8	17-1/2	15-1/2	9-5/8	45.99	59.26
829-786FE	829-786CFE	18x6	69-1/4	19-11/16	7-1/2	57	145.31	164.92
829-788FE	829-788CFE	18x8	60-15/16	19-11/16	9-5/8	47-11/16	140.24	152.22
829-790FE	829-790CFE	18x10	52	19-11/16	11-15/16	37-3/4	109.43	148.37
829-792FE	829-792CFE	18x12	48	19-11/16	14-1/8	32-3/4	118.07	132.56
829-794FE	829-794CFE	18x14	39-5/8	19-11/16	15-1/2	23-5/8	97.05	111.06
829-796FE	829-796CFE	18x16	28-5/8	19-11/16	17-11/16	11-5/8	66.94	85.64

FABRICATED REPAIR COUPLING

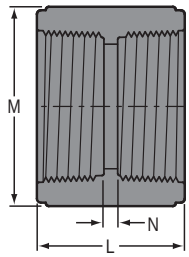
Gasket x Gasket



Part Number		Size	L	L1	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
828-020F	828-020CF	2	9-1/8	11-3/4	4-1/8	4-5/8	.79	.97
828-030F	828-030CF	3	15-1/2	11	4-1/8	4-5/8	3.26	3.39
828-040F	828-040CF	4	19-1/2	15	5-3/16	5-3/4	5.82	6.54
828-060F	828-060CF	6	23	16	7-1/2	8-1/8	12.61	13.41
828-080F	828-080CF	8	26-5/8	19-11/16	9-5/8	10-3/8	21.39	21.45
828-100F	828-100CF	10	29	21	10-3/4	12-1/4	32.98	---
828-120F	828-120CF	12	30	22-1/2	14-1/8	16-1/8	46.66	---
828-140F	828-140CF	14	19	11-1/2	15-1/2	16-3/8	39.40	45.50
828-160F	828-160CF	16	21-5/8	12-3/8	17-11/16	18-3/4	57.20	60.00

COUPLING

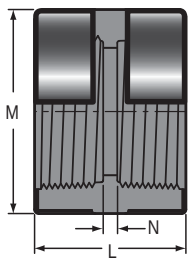
Fipt x Fipt



Part Number		Size	L	M	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
830-002	830-002C	1/4	1-11/32	13/16	5/32	.03	.02
830-003	830-003C	3/8	1-15/32	1	9/32	.04	.04
830-005	830-005C	1/2	1-5/8	1-9/32	1/4	.07	.07
830-007	830-007C	3/4	1-11/16	1-5/8	3/32	.09	.09
830-010	830-010C	1	2-3/32	1-15/16	1/8	.15	.15
830-012	830-012C	1-1/4	2-3/16	2-9/32	3/16	.21	.22
830-015	830-015C	1-1/2	2-1/4	2-17/32	5/16	.29	.30
830-020	830-020C	2	2-7/32	3	7/32	.33	.35
830-025	830-025C	2-1/2	3-5/16	3-9/16	1/8	.68	.71
830-030	830-030C	3	3-15/32	4-3/8	21/32	1.12	1.13
830-040	830-040C	4	3-21/32	5-9/16	3/16	1.52	1.61
830-060F	830-060CF	6	3-3/4	7-3/16	3/4	1.65	1.76
830-080F	830-080CF	8	4-1/2	9-3/8	1-1/16	2.84	3.33

SPECIAL REINFORCED COUPLING

SR Fipt x SR Fipt

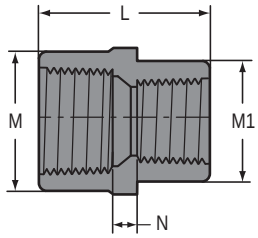


Part Number		Size	L	M	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
830-005SR	830-005CSR	1/2	1-19/32	1-7/32	9/32	.06	.06
830-007SR	830-007CSR	3/4	1-5/8	1-3/8	1/8	.07	.07
830-010SR	830-010CSR	1	1-15/16	1-23/32	1/16	.13	.13
830-012SR	830-012CSR	1-1/4	2-1/16	2-1/16	5/16	.17	.17
830-015SR	830-015CSR	1-1/2	2-5/32	2-7/16	11/32	.27	.25
830-020SR	830-020CSR	2	2-1/4	3-1/32	1/4	.37	.39

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REDUCER COUPLING

Fipt x Fipt

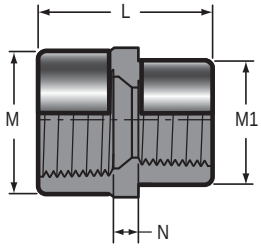


Part Number		Size	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
830-072[1]	830-072C[1]	1/2x1/4	1-31/32	1-5/16	1-5/32	5/8	.07	.08
830-073[1]	830-073C[1]	1/2x3/8	1-29/32	1-7/32	1-7/32	19/32	.06	.08
830-101	830-101C	3/4x1/2	1-23/32	1-3/8	1-7/32	7/32	.07	.08
830-211[1]	---	1-1/2x1	2-7/8	2-11/32	2-11/32	1-1/32	.27	---

[1] Outlet sized with bushing

SPECIAL REINFORCED REDUCER COUPLING

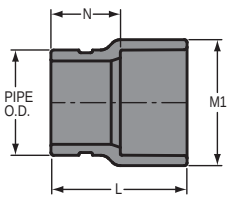
SR Fipt x SR Fipt



Part Number		Size	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
830-101SR	830-101CSR	3/4x1/2	1-23/32	1-3/8	1-7/32	7/32	.08	.09
830-130SR	830-130CSR	1x1/2	2-1/4	1-23/32	1-7/32	21/32	.16	.17
830-131SR	830-131CSR	1x3/4	2-13/32	1-23/32	1-3/8	23/32	.14	.17
830-210SR	830-210CSR	1-1/2x3/4	2-7/8	2-7/16	1-3/8	1-7/32	.28	.29
830-211SR	830-211CSR	1-1/2x1	2-15/16	2-7/16	1-11/16	7/16	.35	.36
830-212SR	830-212CSR	1-1/2x1-1/4	2-7/8	2-1/2	2-3/32	15/16	.33	.34
830-249SR	830-249CSR	2x1	3-3/16	3	1-23/32	1-17/32	.46	.48
830-251SR	830-251CSR	2x1-1/2	3-1/4	3	2-7/16	1-7/16	.43	.52

GROOVED COUPLING ADAPTER

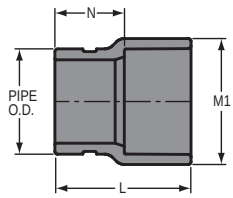
Groove x Socket



Part Number		Size	L	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
833-012	833-012C	1-1/4	2-13/16	2-1/16	1-9/16	.18	.17
833-015	833-015C	1-1/2	2-29/32	2-11/32	1-1/2	.19	.20
833-020	833-020C	2	3-1/16	2-7/8	1-9/16	.29	.30
833-025	833-025C	2-1/2	3-3/8	3-1/2	1-5/8	.49	.52
833-030	833-030C	3	3-9/16	4-3/16	1-11/16	.68	.72

GROOVED COUPLING ADAPTER

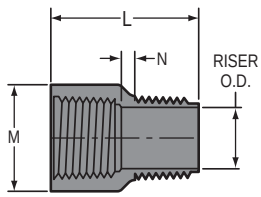
Groove x Socket **(continued)**



Part Number		Size	L	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
833-040	833-040C	4	4-17/32	5-1/4	2-9/32	1.28	1.38
833-050F	833-050CF	5	7	6-5/16	4	2.14	2.35
833-060	833-060C	6	5-5/16	7-9/16	2-5/16	2.78	3.00
833-080F	833-080CF	8	8-3/16	9-5/8	3-15/16	6.19	7.16
833-100F	833-100CF	10	9-7/8	11-15/16	4-5/8	10.62	10.72
833-120F	833-120CF	12	10-7/8	14-1/8	4-5/8	21.92	24.11

RISER EXTENSION

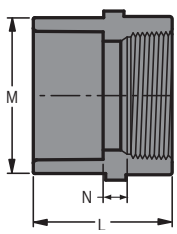
Fipt x Mipt



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
834-007	3/4	2-13/16	1-7/16	1-15/32	.11

FEMALE ADAPTER

Socket x Fipt

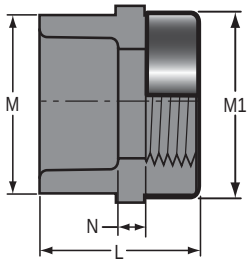


Part Number		Size	L	M	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
835-002	835-002C	1/4	1-11/32	27/32	3/32	.02	.02
835-003	835-003C	3/8	1-15/32	1	3/32	.04	.04
835-005	835-005C	1/2	1-3/4	1-5/32	3/32	.05	.06
835-007	835-007C	3/4	1-27/32	1-13/32	3/32	.07	.08
835-010	835-010C	1	2-1/8	1-23/32	3/32	.11	.14
835-012	835-012C	1-1/4	2-5/16	2-3/32	3/32	.16	.22
835-015	835-015C	1-1/2	2-1/2	2-11/32	3/32	.20	.21
835-020	835-020C	2	3	3-1/32	1/4	.41	.42
835-025	835-025C	2-1/2	3-1/4	3-9/16	7/32	.63	.67
835-030	835-030C	3	3-15/32	4-1/4	3/16	.74	.76
835-040	835-040C	4	3-31/32	5-7/32	1/4	1.19	1.71
835-060	835-060C	6	4-31/32	7-21/32	5/16	3.12	3.22
835-080	835-080C	8	6-5/32	9-23/32	1/4	5.19	5.39
835-080F	835-080CF	8	8-9/16	9-5/8	2-9/16	6.19	6.56
835-100F	835-100CF	10	10-1/4	11-15/16	3	10.88	11.59
835-120F	835-120CF	12	11-1/8	14-1/8	2-5/8	16.56	20.00

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SPECIAL REINFORCED FEMALE ADAPTER

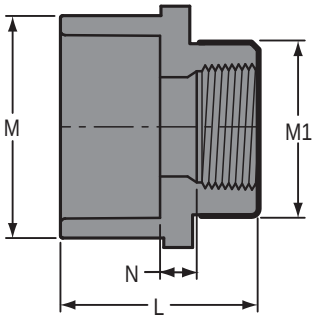
Socket x SR Fipt



Part Number		Size	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
835-002SR	835-002CSR	1/4	1-13/32	27/32	27/32	3/32	.03	.03
835-003SR	835-003CSR	3/8	1-15/32	15/16	31/32	3/32	.04	.04
835-005SR	835-005CSR	1/2	1-3/4	1-5/32	1-3/16	3/16	.06	.07
835-007SR	835-007CSR	3/4	1-7/8	1-13/32	1-3/8	3/32	.08	.09
835-010SR	835-010CSR	1	2-1/8	1-11/16	1-23/32	3/32	.13	.14
835-012SR	835-012CSR	1-1/4	2-5/16	2-3/32	2-1/16	3/32	.18	.20
835-015SR	835-015CSR	1-1/2	2-7/16	2-13/32	2-7/16	7/32	.26	.28
835-020SR	835-020CSR	2	2-23/32	3	3-1/32	1/4	.44	.45
835-025SR	835-025CSR	2-1/2	3-1/4	3-9/16	3-9/16	11/32	.68	.70
835-030SR	835-030CSR	3	3-1/2	4-1/4	4-9/32	7/32	.96	1.01
835-040SR	835-040CSR	4	3-31/32	5-7/32	5-1/4	7/32	1.29	1.35
835-060SR	835-060CSR	6	4-31/32	7-5/8	7-21/32	1/4	3.17	3.25

REDUCING FEMALE ADAPTER

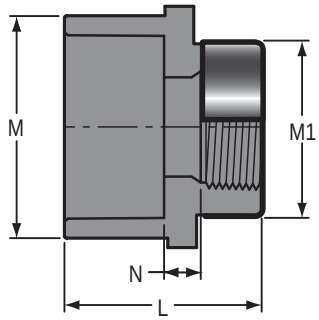
Socket x SR Fipt



Part Number		Size	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
835-098	835-098C	3/4x1/4	1-15/16	1-13/32	27/32	---	.06	.06

SPECIAL REINFORCED REDUCING FEMALE ADAPTER

Socket x SR Fipt

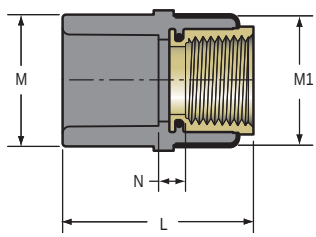


Part Number		Size	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
835-074SR	835-074CSR	1/2x3/4	1-3/4	1-3/16	1-3/8	7/32	.07	.08
835-098SR	835-098CSR	3/4x1/4	1-15/16	1-13/32	27/32	13/32	.06	.07
835-101SR	835-101CSR	3/4x1/2	1-7/8	1-3/8	1-3/16	3/16	.07	.08
835-102SR	835-102CSR	3/4x1	2-1/16	1-7/16	1-11/16	7/32	.12	.13
835-130SR	835-130CSR	1x1/2	2	1-11/16	1-3/16	7/32	.10	.11
835-131SR	835-131CSR	1x3/4	2-3/32	1-3/4	1-3/8	1/4	.12	.13

TRANSITION FEMALE ADAPTER

Socket x Brass Fipt

Dimensions Also Applicable to 835-XXX**SS**

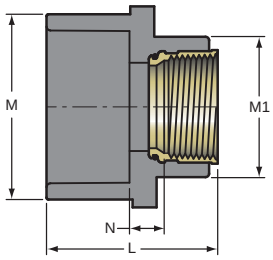


Part Number		Size	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
835-005BR	835-005CBR	1/2	1-25/32	1-5/32	1-7/32	5/8	.11	.12
835-007BR	835-007CBR	3/4	2	1-13/32	1-3/8	3/8	.23	.24
835-010BR	835-010CBR	1	2-7/32	1-3/4	1-11/16	13/32	.25	.31
835-012BR	835-012CBR	1-1/4	2-3/8	2-3/32	2-1/16	3/8	.35	.36
835-015BR	835-015CBR	1-1/2	2-17/32	2-13/32	2-7/16	13/32	.46	.48
835-020BR	835-020CBR	2	2-25/32	2-7/8	3-3/16	7/16	1.03	1.05

Not intended to convey or dispense water for human consumption through drinking or cooking

TRANSITION REDUCING FEMALE ADAPTER

Socket x Brass Fipt

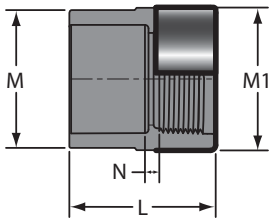


Part Number		Size	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
835-101BR	835-101CBR	3/4x1/2	2-1/32	1-7/16	1-3/16	15/32	.17	.18

Not intended to convey or dispense water for human consumption through drinking or cooking

ENCAPSULATED SPECIAL REINFORCED FEMALE ADAPTER

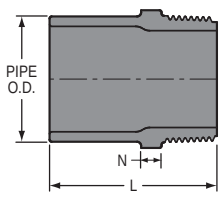
Socket x ESR Fipt



Part Number		Size	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
835-002ESR	835-002CESR	1/4	1-1/2	27/32	29/32	3/32	.04	.05
835-003ESR	835-003CESR	3/8	1-17/32	15/16	1-1/32	3/16	.04	.04
835-005ESR	835-005CESR	1/2	1-7/8	1-3/16	1-9/32	9/32	.08	.07
835-007ESR	835-007CESR	3/4	2	1-13/32	1-15/32	1/8	.10	.11
835-010ESR	835-010CESR	1	2-1/4	1-3/4	1-13/16	1/8	.13	.15
835-012ESR	835-012CESR	1-1/4	2-7/16	2-1/8	2-5/32	3/16	.21	.22
835-015ESR	835-015CESR	1-1/2	2-9/16	2-13/32	2-1/2	1/4	.29	.31
835-020ESR	835-020CESR	2	2-27/32	3	3-3/32	13/32	.46	.49

MALE ADAPTER

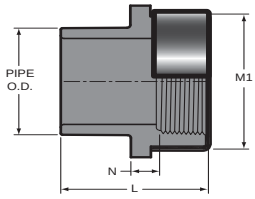
Spigot x Mipt



Part Number		Size	L	N	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
861-005	861-005C	1/2	1-13/16	5/16	.03	.03
861-007	861-007C	3/4	1-31/32	5/16	.05	.05
861-010	861-010C	1	2-3/32	1/4	.07	.08
861-131	861-131C	1x3/4	2	1/4	.07	.07
861-012	861-012C	1-1/4	2-9/32	9/32	.11	.13
861-015	861-015C	1-1/2	2-5/8	11/32	.15	.15
861-020	861-020C	2	2-13/16	13/32	.23	.24

SPECIAL REINFORCED SPIGOT FEMALE ADAPTER

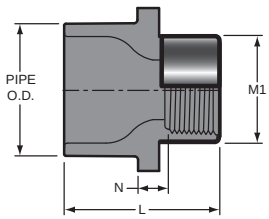
Spigot x SR Fipt



Part Number		Size	L	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
878-005SR	878-005CSR	1/2	1-3/4	1-3/16	5/32	.05	.06
878-007SR	878-007CSR	3/4	1-15/16	1-3/8	3/16	.07	.08
878-010SR	878-010CSR	1	2-1/4	1-11/16	7/32	.13	.13
878-012SR	878-012CSR	1-1/4	2-15/32	2-1/16	1/4	.18	.19
878-015SR	878-015CSR	1-1/2	2-21/32	2-7/16	13/32	.25	.26
878-020SR	878-020CSR	2	2-13/16	3	3/8	.39	.40
878-030SR	878-030CSR	3	3-27/32	4-9/32	17/32	.91	.97
878-040SR	878-040CSR	4	4-3/8	5-1/4	5/8	1.36	1.42

SPECIAL REINFORCED REDUCING SPIGOT FEMALE ADAPTER

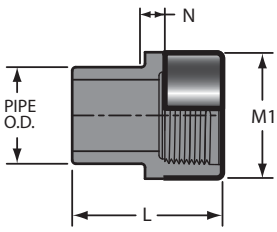
Spigot x SR Fipt



Part Number		Size	L	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
878-072SR	878-072CSR	1/2x1/4	1-13/32	27/32	3/16	.03	.03
878-098SR	878-098CSR	3/4x1/4	1-27/32	27/32	7/32	.05	.06
878-128SR	878-128CSR	1x1/4	2-3/8	27/32	21/32	.08	.09

ENCAPSULATED SPECIAL REINFORCED SPIGOT FEMALE ADAPTER

Spigot x ESR Fipt

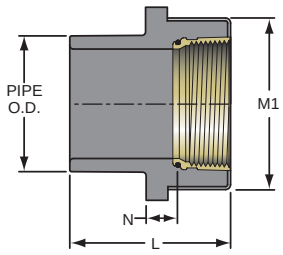


Part Number		Size	L	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
878-005ESR	878-005CESR	1/2	1-7/8	1-9/32	3/16	.06	.07
878-007ESR	878-007CESR	3/4	2-1/16	1-15/32	3/8	.09	.09
878-010ESR	878-010CESR	1	2-3/8	1-25/32	11/32	.14	.15
878-012ESR	878-012CESR	1-1/4	2-19/32	2-5/32	5/16	.20	.20
878-015ESR	878-015CESR	1-1/2	2-3/4	2-1/2	13/32	.27	.29
878-020ESR	878-020CESR	2	2-15/16	3-3/32	5/16	.41	.44

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Progressive Products from Spears® Innovation and Technology

TRANSITION FEMALE ADAPTER

Spigot x Brass Fipt

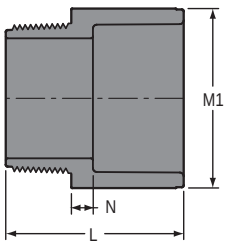


Part Number		Size	L	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
878-005BR	---	1/2	1-15/16	1-3/16	17/32	.11	---
878-007BR	---	3/4	2-5/32	1-3/8	17/32	.14	
878-010BR	878-010CBR	1	2-9/32	1-23/32	13/32	.22	.23

Not intended to convey or dispense water for human consumption through drinking or cooking

MALE ADAPTER

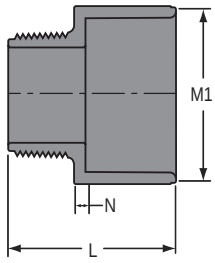
Mipt x Socket



Part Number		Size	L	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
836-005	836-005C	1/2	1-23/32	1-5/32	3/16	.04	.05
836-007	836-007C	3/4	1-27/32	1-7/16	7/32	.06	.06
836-010	836-010C	1	2-5/32	1-23/32	7/32	.10	.10
836-012	836-012C	1-1/4	2-1/4	2-1/8	1/32	.15	.16
836-015	836-015C	1-1/2	2-11/16	2-3/8	9/32	.19	.20
836-020	836-020C	2	2-7/8	2-7/8	5/16	.28	.31
836-025	836-025C	2-1/2	3-21/32	3-17/32	11/32	.52	.54
836-030	836-030C	3	3-7/8	4-1/4	3/8	.74	.78
836-040	836-040C	4	4-13/32	5-5/16	13/32	1.15	1.18
836-050F	836-050CF	5	6	6-5/16	1-5/8	2.07	2.22
836-060	836-060C	6	5-7/16	7-1/2	13/16	2.79	3.07
836-080F	836-080CF	8	8-3/16	9-5/8	2-3/16	6.00	5.95
836-100F	836-100CF	10	10-3/8	11-15/16	3-3/16	10.95	10.95
836-120F	836-120CF	12	11-1/8	14-1/8	2-3/4	16.44	19.99

REDUCING MALE ADAPTER

Mipt x Socket

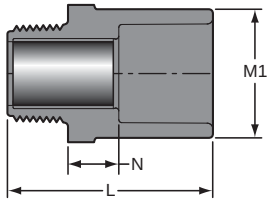


Part Number		Size	L	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
836-053	---	3/8x1/2	1-11/16	1-3/16	1/4	.04	---
836-102	836-102C	3/4x1	2-9/32	1-3/4	17/32	.10	.10
836-131	836-131C	1x3/4	2-1/16	1-13/32	1/4	.07	.07
836-251[1]	---	2x1-1/2	3-3/32	2-29/32	19/32	.43	---

[1] Outlet sized with bushing

REINFORCED MALE ADAPTER

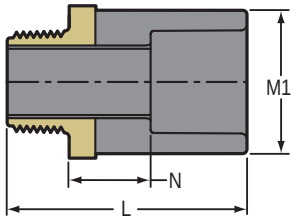
Rmipt x Socket



Part Number		Size	L	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
836-005R	836-005CR	1/2	2-3/32	1-5/32	9/16	.05	.06
836-007R	836-007CR	3/4	2-1/4	1-3/8	9/16	.08	.09
836-010R	836-010CR	1	2-21/32	1-23/32	11/16	.15	.15

TRANSITION MALE ADAPTER

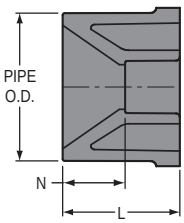
Brass Mipt x Socket



Part Number		Size	L	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
836-005BR	836-005CBR	1/2	2-13/32	1-9/32	27/32	.19	.20
836-007BR	836-007CBR	3/4	2-17/32	1-13/32	13/16	.26	.26
836-010BR	836-010CBR	1	2-15/16	1-23/32	29/32	.43	.43
836-012BR	836-012CBR	1-1/4	3-1/8	2-3/32	31/32	.66	.66
836-015BR	836-015CBR	1-1/2	3-9/32	2-11/32	1	.79	.80
836-020BR	836-020CBR	2	3-7/16	2-27/32	31/32	.99	1.01

REDUCER BUSHING
Flush Style

Spigot x Socket



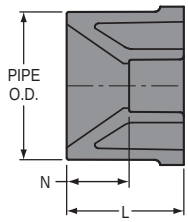
Part Number		Size	L	N	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
837-052	837-052C	3/8x1/4	31/32	5/16	.01	.01
837-072	837-072C	1/2x1/4	1-3/32	13/32	.02	.02
837-073	837-073C	1/2x3/8	1-1/8	11/32	.01	.02
837-101	837-101C	3/4x1/2	1-7/32	11/32	.02	.03
837-129[1]	837-129C[1]	1x3/8	1-5/8	27/32	.09	.10
837-130	837-130C	1x1/2	1-11/32	11/32	.06	.07
837-131	837-131C	1x3/4	1-11/32	5/16	.04	.04
837-166	837-166C	1-1/4x1/2	1-1/2	5/8	.12	.12
837-167	837-167C	1-1/4x3/4	1-1/2	1/2	.10	.10
837-168	837-168C	1-1/4x1	1-19/32	15/32	.06	.09
837-209	837-209C	1-1/2x1/2	1-23/32	13/16	.15	.15
837-210	837-210C	1-1/2x3/4	1-5/8	5/8	.16	.16
837-211	837-211C	1-1/2x1	1-9/16	13/32	.13	.13
837-212	837-212C	1-1/2x1-1/4	1-9/16	9/32	.07	.07
837-247	---	2x1/2	1-25/32	7/8	.24	---
---	837-247C	2x1/2	1-29/32	1	---	.30
837-248	837-248C	2x3/4	1-29/32	21/32	.26	.23
837-249	837-249C	2x1	1-25/32	5/8	.24	.25

[1] Outlet sized with bushing

REDUCER BUSHING
Flush Style

(continued)

Spigot x Socket

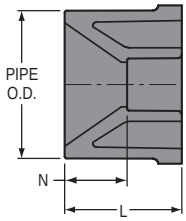


Part Number		Size	L	N	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
837-250	837-250C	2x1-1/4	1-11/16	7/16	.20	.23
837-251	837-251C	2x1-1/2	1-3/4	11/32	.15	.16
837-287[1]	---	2-1/2X1/2	2-1/2	1-1/2	.54	---
837-288[1]	---	2-1/2x3/4	2-17/32	1-15/32	.55	---
837-289	837-289C	2-1/2x1	2-1/32	29/32	.37	.39
837-290	837-290C	2-1/2x1-1/4	2-5/32	13/32	.43	.41
837-291	837-291C	2-1/2x1-1/2	2-5/32	3/4	.37	.40
837-292	837-292C	2-1/2x2	2-1/16	17/32	.23	.30
837-334[1]	837-334C[1]	3x3/4	2-9/16	1-17/32	.69	.74
837-335	837-335C	3x1	2-9/32	1-1/8	.69	.70
837-336	837-336C	3x1-1/4	2-1/4	1	.63	.70
837-337	837-337C	3x1-1/2	2-9/32	7/8	.59	.67
837-338	837-338C	3x2	2-7/32	23/32	.47	.64
837-339	837-339C	3x2-1/2	2-5/16	1/4	.37	.43
837-415[1]	---	4x1/2	3-1/16	2-5/32	1.31	---
837-416[1]	837-416C[1]	4x3/4	2-27/32	1-27/32	1.25	1.37
837-417[1]	---	4x1	3-1/16	1-1/8	1.31	---
837-418[1]	837-418C[1]	4x1-1/4	3-9/16	1-11/16	1.33	1.38
837-419[1]	---	4x1-1/2	2-27/32	1-7/16	1.17	---
837-420	837-420C	4x2	2-21/32	1-1/8	1.01	1.13
837-421	---	4x2-1/2	2-17/32	25/32	1.00	---
837-422	837-422C	4x3	2-9/16	11/16	.84	.86
837-490	837-490C	5x4	2-31/32	23/32	1.29	---
837-490F	837-490CF	5x4	3	3/4	1.41	1.50
837-524[1]	---	6x3/4	4-1/2	3-1/2	3.45	---
837-525[1]	837-525C[1]	6x1	3-31/32	2-13/16	3.13	3.28
837-526[1]	---	6x1-1/4	3-25/32	2-17/32	3.07	---
837-527[1]	837-527C[1]	6x1-1/2	3-3/4	2-11/32	3.01	3.02
837-528	837-528C	6x2	3-17/32	2-1/32	2.83	3.00
837-529[1]	837-529C[1]	6x2-1/2	3-29/32	2-5/32	3.29	3.45
837-530	837-530C	6x3	3-17/32	2-1/8	2.84	3.05
837-532	837-532C	6x4	3-9/16	1-1/4	2.71	2.95
837-533F	837-533CF	6x5	3	3/8	1.76	1.94
837-534	---	6x5	3-1/2	7/8	1.93	---
837-578[1]	837-578C[1]	8x2	4-15/16	3-3/8	8.64	8.99
837-580[1]	837-580C[1]	8x3	5-1/8	3-1/4	8.68	8.81

[1] Outlet sized with bushing

REDUCER BUSHING (continued)
Flush Style

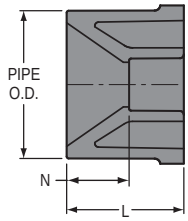
Spigot x Socket



Part Number		Size	L	N	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
837-582	837-582C	8x4	4-1/2	2-1/4	5.53	9.01
837-585	837-585C	8x6	4-3/8	1-3/8	5.05	5.15
837-624[1]	837-624C[1]	10x4	6	3-3/4	10.56	11.36
837-626	837-626C	10x6	5-13/32	1-11/32	5.79	8.41
837-628	837-628C	10x8	5-13/32	1-11/32	5.79	9.69
837-666	---	12x6	7	4	15.51	---
837-666F	837-666CF	12x6	6-7/16	3-3/8	15.31	19.45
837-668	837-668C	12x8	6-7/8	2-7/16	10.13	10.82
837-670	---	12x10	6-7/16	1-13/32	12.49	---
837-670F	837-670CF	12x10	6	1	11.04	11.78
837-696F	837-696CF	14x6	7-3/4	4-3/4	27.16	37.74
837-698F	837-698CF	14x8	7-1/2	3-7/16	32.31	32.02
837-700F	---	14x10	7-7/16	2-7/16	22.30	---
---	837-700CF	14x10	7	2	---	22.64
837-702F	837-702CF	14x12	7	1	9.36	9.40
837-756F	837-756CF	16x6	8-3/4	5-3/4	44.23	67.03
837-758F	837-758CF	16x8	8-1/2	4-7/16	46.90	61.33
837-760F	---	16x10	8-7/16	3-7/16	39.12	---
---	837-760CF	16x10	8	3	---	44.88
837-762F	837-762CF	16x12	8	2	28.08	27.95
837-764F	837-764CF	16x14	8	1	18.37	20.00
837-788F	837-788CF	18x8	9-1/2	5-7/16	70.33	---
837-790F	837-790CF	18x10	9	4	65.60	97.24
837-792F	837-792CF	18x12	9	3	51.82	84.92
837-794F	837-794CF	18x14	9	2	40.70	56.27
837-796F	837-796CF	18x16	9	1	32.00	34.00
837-818F	---	20x8	10-1/2	6-7/16	125.96	---
837-820F	---	20x10	10-7/16	5-7/16	94.18	---
837-822F	---	20x12	10	4	83.14	---
837-824F	---	20x14	10	3	73.74	---
837-826F	---	20x16	10	2	55.07	---
837-828F	---	20x18	10	1	30.35	---
837-910F	---	24x10	12-7/16	7-7/16	173.68	---
837-912F	---	24x12	12	6	159.41	---
837-914F	---	24x14	12	5	80.35	---

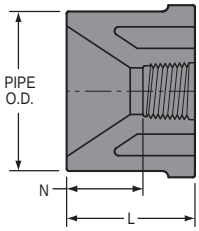
[1] Outlet sized with bushing

REDUCER BUSHING (continued)
Flush Style
Spigot x Socket



Part Number		Size	L	N	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
837-916F	---	24x16	12	4	134.57	---
837-918F	---	24x18	12	3	112.54	---
837-920F	---	24x20	12	2	79.50	---

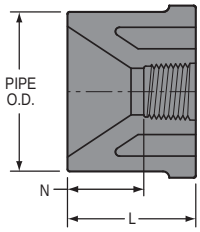
REDUCER BUSHING
Flush Style
Spigot x Fipt



Part Number		Size	L	N	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
838-052	838-052C	3/8x1/4	31/32	3/8	.01	.01
838-071	838-071C	1/2x1/8	1	9/16	.02	.02
838-072	838-072C	1/2x1/4	1	7/8	.02	.02
838-073	838-073C	1/2x3/8	1-3/32	17/32	.02	.02
838-098	838-098C	3/4x1/4	1-7/32	5/8	.04	.04
838-099	838-099C	3/4x3/8	1-1/4	21/32	.04	.04
838-101	838-101C	3/4x1/2	1-1/4	7/16	.03	.03
838-127	---	1x1/8	1-13/32	29/32	.07	---
838-128	---	1x1/4	1-13/32	25/32	.07	---
838-129	838-129C	1x3/8	1-13/32	19/32	.07	.07
838-130	838-130C	1x1/2	1-5/32	21/32	.06	.06
838-131	838-131C	1x3/4	1-3/8	21/32	.05	.06
838-166	838-166C	1-1/4x1/2	1-15/32	23/32	.10	12
838-167	838-167C	1-1/4x3/4	1-7/16	23/32	.09	.10
838-168	838-168C	1-1/4x1	1-17/32	5/8	.07	.09
838-206	---	1-1/2x1/8	1-11/16	1-1/4	.15	---

REDUCER BUSHING (continued)
Flush Style

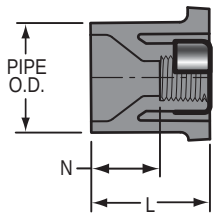
Spigot x Fipt



Part Number		Size	L	N	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
838-207	838-207C	1-1/2x1/4	1-9/16	1-3/16	.13	.14
838-209	838-209C	1-1/2x1/2	1-11/16	31/32	.17	.17
838-210	838-210C	1-1/2x3/4	1-9/16	27/32	.13	.18
838-211	838-211C	1-1/2x1	1-23/32	13/16	.14	.16
838-212	838-212C	1-1/2x1-1/4	1-1/2	9/16	.07	.10
838-247	838-247C	2x1/2	1-29/32	1-5/32	.25	.27
838-248	838-248C	2x3/4	1-7/8	1-5/32	.26	.27
838-249	838-249C	2x1	1-29/32	1	.25	.27
838-250	838-250C	2x1-1/4	1-19/32	21/32	.18	.25
838-251	838-251C	2x1-1/2	1-9/16	5/8	.14	.20
838-287	838-287C	2-1/2x1/2	2-3/8	1-21/32	.41	.46
838-288	838-288C	2-1/2x3/4	2-7/16	1-5/8	.45	.48
838-289	838-289C	2-1/2x1	2-5/32	1-1/4	.42	.48
838-290	838-290C	2-1/2x1-1/4	2-13/32	1-3/8	.42	.45
838-291	838-291C	2-1/2x1-1/2	2-3/8	1-13/32	.47	.50
838-292	838-292C	2-1/2x2	2-1/16	1-1/16	.25	.33
838-334	838-334C	3x3/4	2-9/32	1-1/2	.57	.63
838-335	838-335C	3x1	2-9/32	1-11/32	.58	.63
838-336	838-336C	3x1-1/4	2-1/4	1-3/8	.57	.61
838-337	838-337C	3x1-1/2	2-1/4	1-5/8	.59	.62
838-338	838-338C	3x2	2-3/16	1-7/32	.63	.58
838-339	838-339C	3x2-1/2	2-3/8	3/4	.46	.50
838-419	---	4x1-1/2	3-3/16	2-5/16	1.44	---
838-420	838-420C	4x2	2-11/16	1-21/32	1.10	1.20
838-421	838-421C	4x2-1/2	2-21/32	1-1/16	1.08	1.15
838-422	838-422C	4x3	2-5/8	1	.86	.85
838-528	838-528C	6x2	3-17/32	2-1/2	2.92	3.04
838-530	838-530C	6x3	3-17/32	2-1/8	2.98	3.14
838-532	838-532C	6x4	3-17/32	2-1/32	2.54	2.68

SPECIAL REINFORCED REDUCER BUSHING
Flush Style

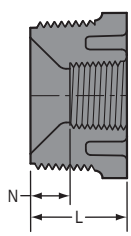
Spigot x SR Fipt



Part Number		Size	L	N	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
838-128SR	838-128CSR	1x1/4	1-13/32	25/32	.08	.08
838-166SR	---	1-1/4X1/2	1-7/16	3/4	.11	---
838-207SR	838-207CSR	1-1/2x1/4	1-9/16	1	.13	.14
838-209SR	838-209CSR	1-1/2x1/2	1-23/32	31/32	.16	.18
838-210SR	838-210CSR	1-1/2x3/4	1-9/16	13/16	.14	.15
838-247SR	838-247CSR	2x1/2	1-29/32	1-5/32	.25	.25
838-248SR	838-248CSR	2x3/4	1-29/32	1-5/32	.26	.28
838-249SR	838-249CSR	2x1	1-7/8	31/32	.26	.27
838-334SR	838-334CSR	3x3/4	2-9/32	1-17/32	.58	.63
838-335SR	838-335CSR	3x1	2-9/32	1-11/32	.59	.63
838-336SR	838-336CSR	3x1-1/4	2-1/4	1-5/16	.57	.63
838-337SR	838-337CSR	3x1-1/2	2-1/4	1-3/8	.58	.64
838-528SR	838-528CSR	6x2	3-1/2	2-9/16	2.81	2.96
838-530SR	838-530CSR	6x3	3-17/32	2-1/8	2.94	3.07
838-532SR	838-532CSR	6x4	3-1/2	1-15/16	2.59	2.62

REDUCER T.T. BUSHING
Flush Style

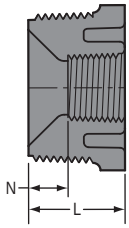
Mipt x Fipt



Part Number		Size	L	N	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
839-041	839-041C	1/4x1/8	23/32	11/32	.01	.01
839-052	839-052C	3/8x1/4	13/16	1/8	.01	.01

REDUCER T.T. BUSHING (continued)
Flush Style

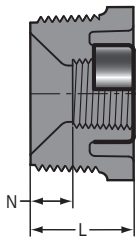
Mipt x Fipt



Part Number		Size	L	N	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
839-072	839-072C	1/2x1/4	29/32	9/32	.02	.02
839-073	839-073C	1/2x3/8	15/16	11/32	.01	.01
839-098	839-098C	3/4x1/4	1-1/32	7/16	.03	.04
839-099	839-099C	3/4x3/8	1-1/32	7/16	.03	.03
839-101	839-101C	3/4x1/2	15/16	3/16	.02	.02
839-128	839-128C	1x1/4	1-1/8	17/32	.05	.06
839-129	839-129C	1x3/8	1-7/32	5/8	.05	.06
839-130	839-130C	1x1/2	1-1/16	5/16	.04	.06
839-131	839-131C	1x3/4	1-1/8	13/32	.03	.04
839-166	839-166C	1-1/4x1/2	1-5/16	9/16	.10	.11
839-167	839-167C	1-1/4x3/4	1-9/32	9/16	.08	.09
839-168	---	1-1/4x1	1-3/16	9/32	.06	---
---	839-168C	1-1/4x1	1-9/32	1-1/32	---	.06
839-209	839-209C	1-1/2x1/2	1-11/32	19/32	.12	.13
839-210	839-210C	1-1/2x3/4	1-11/32	19/32	.12	.13
839-211	839-211C	1-1/2x1	1-11/32	13/32	.10	.11
839-212	839-212C	1-1/2x1-1/4	1-11/32	13/32	.06	.07
839-247	839-247C	2x1/2	1-3/8	21/32	.17	.18
839-248	839-248C	2x3/4	1-3/8	5/8	.17	.18
839-249	839-249C	2x1	1-3/8	15/32	.18	.19
839-250	839-250C	2x1-1/4	1-3/8	7/16	.16	.17
839-251	839-251C	2x1-1/2	1-3/8	13/32	.12	.13
839-292	839-292C	2-1/2x2	1-29/32	7/8	.22	.23
839-337	839-337C	3x1-1/2	1-15/16	29/32	.49	.52
839-338	839-338C	3x2	1-15/16	15/16	.45	.47
839-339	839-339C	3x2-1/2	1-15/16	5/8	.37	.39
839-420	839-420C	4x2	2-1/8	1-1/8	.83	.87
839-422	839-422C	4x3	2-1/8	1/2	.71	.74
839-532	839-532C	6x4	2-7/8	1-5/32	2.26	2.40

SPECIAL REINFORCED REDUCER T.T. BUSHING

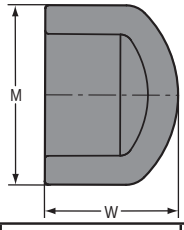
Mipt x SR Fipt



Part Number		Size	L	N	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
839-128SR	----	1x1/4	1-1/8	17/32	.05	---
839-209SR	839-209CSR	1-1/2x1/2	1-11/32	19/32	.13	.13
839-210SR	839-210CSR	1-1/2x3/4	1-11/32	19/32	.12	.13
839-247SR	839-247CSR	2x1/2	1-3/8	21/32	.18	.19
839-248SR	839-248CSR	2x3/4	1-3/8	5/8	.18	.19
839-249SR	839-249CSR	2x1	1-3/8	15/32	.19	.20
839-420SR	839-420CSR	4x2	2-1/8	1-1/8	.88	.91

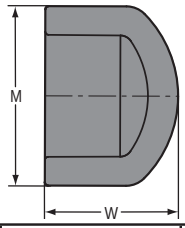
CAP

Socket



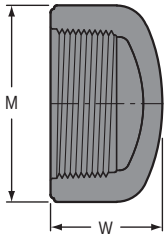
Part Number		Size	M	W	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
847-002	847-002C	1/4	13/16	15/16	.01	.01
847-003	847-003C	3/8	31/32	1-1/8	.02	.02
847-005	847-005C	1/2	1-3/16	1-7/32	.03	.03
847-007	847-007C	3/4	1-3/8	1-13/32	.05	.05
847-010	847-010C	1	1-23/32	1-5/8	.08	.08
847-012	847-012C	1-1/4	2-3/32	1-27/32	.16	.13
847-015	847-015C	1-1/2	2-11/32	2	.16	.17
847-020	847-020C	2	2-27/32	2-9/32	.26	.37
847-025	847-025C	2-1/2	3-17/32	2-5/8	.48	.50
847-030	847-030C	3	4-5/32	3-1/32	.70	.93
847-040	847-040C	4	5-1/4	3-9/16	1.15	1.46
847-050F	847-050CF	5	6-1/2	4-7/16	1.83	5.28
847-060	847-060C	6	7-1/2	4-7/8	3.17	3.30

CAP
Socket **(continued)**



Part Number		Size	M	W	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
847-080	847-080C	8	9-23/32	6-3/8	6.10	6.36
847-100F	847-100CF	10	12-1/4	5-15/16	8.26	7.49
847-120F	847-120CF	12	14-1/4	7-1/8	11.30	11.72
847-140F	847-140CF	14	15-1/2	8	14.65	16.54
847-160F	847-160CF	16	17-7/8	9	23.44	24.52
847-180F	847-180CF	18	19-15/16	9-1/4	28.88	28.88
847-200F	847-200CF	20	22	12-3/4	49.05	52.00
847-240F	847-240CF	24	26-3/8	17-1/4	89.38	89.74

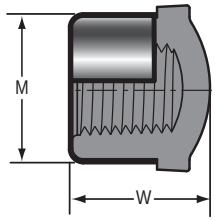
CAP
Fipt



Part Number		Size	M	W	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
848-002	848-002C	1/4	29/32	15/16	.02	.02
848-003	848-003C	3/8	31/32	29/32	.02	.02
848-005	848-005C	1/2	1-3/16	1-1/16	.04	.05
848-007	848-007C	3/4	1-3/32	1-7/32	.04	.05
848-010	848-010C	1	1-27/32	1-7/16	.10	.11
848-012	848-012C	1-1/4	2-7/32	1-17/32	.15	.15
848-015	848-015C	1-1/2	2-17/32	1-5/8	.19	.20
848-020	848-020C	2	3-5/32	1-25/32	.29	.30
848-025	848-025C	2-1/2	3-5/8	2-7/16	.54	.58
848-030	848-030C	3	4-3/8	2-7/16	.90	.78
848-040	848-040C	4	5-7/16	3-1/16	1.32	1.45
848-060F	848-060CF	6	7-3/16	4-3/8	2.07	6.18
848-080F	848-080CF	8	9-3/8	4-3/8	3.62	10.07
848-100F	848-100CF	10	11-5/8	5-3/4	7.44	7.69
848-120F	---	12	13-13/16	6-3/16	10.77	---

SPECIAL REINFORCED CAP

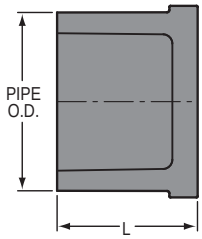
SR Fipt



Part Number		Size	M	W	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
848-002SR	848-002CSR	1/4	27/32	27/32	.02	.02
848-003SR	848-003CSR	3/8	31/32	29/32	.03	.03
848-005SR	848-005CSR	1/2	1-3/16	1-1/8	.04	.05
848-007SR	848-007CSR	3/4	1-3/8	1-3/32	.05	.06
848-030SR	848-030CSR	3	4-9/32	2-7/16	.79	.84

PLUG

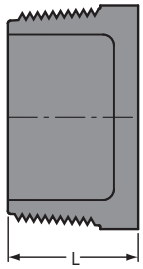
Spigot



Part Number		Size	L	Approx. Wt. (Lbs.)	
PVC	CPVC			PVC	CPVC
849-005	849-005C	1/2	1-1/8	.02	.03
849-007	849-007C	3/4	1-1/4	.03	.04
849-010	849-010C	1	1-3/8	.06	.07
849-012	---	1-1/4	1-17/32	.10	---
849-015	---	1-1/2	1-11/16	.13	---
849-020	849-020C	2	1-7/8	.21	.22
849-025F	849-025CF	2-1/2	5-3/8	1.10	1.17
849-030F	849-030CF	3	5-5/8	1.63	1.42
849-040F	849-040CF	4	6-1/2	2.76	3.00
849-060F	849-060CF	6	9	6.71	8.59
849-080F	849-080CF	8	11-3/8	12.73	13.50
849-100F	849-100CF	10	11-15/16	17.99	19.14
849-120F	849-120CF	12	14-1/8	26.34	31.17

PLUG

Mipt



Part Number		Size	L	Approx. Wt. (Lbs.)	
PVC	CPVC			PVC	CPVC
850-002	850-002C	1/4	23/32	.01	.01
850-003	850-003C	3/8	13/16	.01	.01
850-005	850-005C	1/2	13/16	.02	.02
850-007	850-007C	3/4	7/8	.02	.03
850-010	850-010C	1	1-1/4	.06	.06
850-012	850-012C	1-1/4	1-9/32	.08	.08
850-015	850-015C	1-1/2	1-11/32	.10	.11
850-020	850-020C	2	1-3/8	.15	.20
850-025	850-025C	2-1/2	1-25/32	.30	.33
850-030	850-030C	3	1-7/8	.43	.45
850-040	850-040C	4	2-3/32	.77	.79
850-060	850-060C	6	2-3/32	1.73	1.80
850-080F	850-080CF	8	8-5/8	11.45	12.39
850-100F	850-100CF	10	8-7/16	12.91	13.76



CLAMP-ON SADDLES
Simple Two-Piece Design Engineered for Reliability



Spears® PVC & CPVC Clamp-On Saddles allow quick, easy and reliable addition of branch lines to existing piping system lines. These versatile saddle units can be used in either temporary or permanent installations on all types of pipe with IPS (Iron Pipe size) outside diameter, such as PVC, CPVC, Polyethylene, Polypropylene and Steel.

Excellent Metal-to-Plastic System Transition
Easily installs on metal pipe as a transition to plastic system.

PVC & CPVC Tee or Cross Configurations
Available in PVC White, PVC Gray or CPVC in 2" - 12" IPS pipe saddle with socket outlets in sizes 1/2" - 6" and Special Reinforced (SR) threaded outlets in sizes 1/2" - 6", single Tee or double Cross configurations.

Patented SR Design Female Threads
Patented Special Reinforced (SR) design on female thread outlets for superior strength.

O-ring Options
Choice of high grade Buna-N or EPDM O-rings for Schedule 40 and EPDM or FKM O-rings for Schedule 80, for application specific selection for optimum chemical resistance.

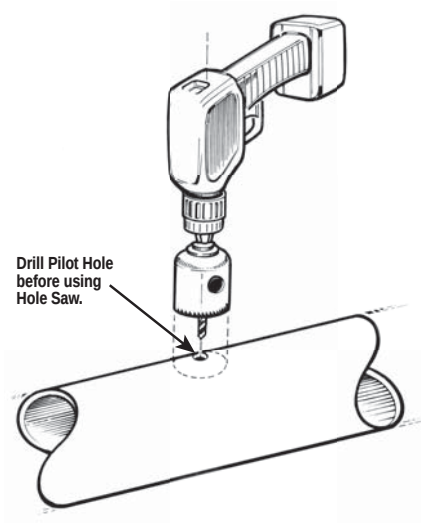
Multi-Bolt Design, Choice of Hardware
Positive attachment eliminates splitting problems associated with plastic wedge fasteners and outperforms 2-Bolt clamp saddle designs. Choose zinc plated or stainless steel nut, bolt and washer hardware.

Excellent Pressure Capabilities
Maximum internal pressure rating of 235 psi through 4", 200 psi for 6", and 150 psi for 8" - 12" at 73°F.

Sample Engineering Specification
All thermoplastic saddles shall be clamp-on type with O-ring seal constructed from PVC Type I cell classification 12454 or CPVC Type IV cell classification 23447. All O-rings shall be Buna-N, EPDM or FKM. All saddles shall be piloted at O-ring area for positive positioning in pipe. All bolt clamping hardware shall be zinc plated steel or stainless steel. All threaded saddle outlets shall be Special Reinforced (SR) design. Saddles shall be pressure rated at 235 psi for use on pipe sizes through 4" nominal IPS diameters, 200 psi for use on 6" pipe, and 150 psi for use on 8" - 12" pipe, maximum internal pressure for water at 73°F, as manufactured by Spears® Manufacturing Company.

Clamp-On Saddle Installation Instructions

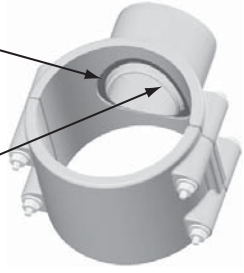
1. Using a standard industrial grade hole-saw, cut specified hole in desired position on pipe according to recommended hole saw size engraved on the saddle. **Note:** Care must be taken to deburr hole and remove all residue from hole area to assure tight fit and avoid leakage.
2. Fully seat O-ring in groove on underside of saddle outlet component. Position over hole and fully seat saddle onto pipe. Note: Certain saddle outlets are piloted. Be sure pilot lip fully engages with hole in pipe.
3. Place strap component opposite outlet and secure with bolts (4), nuts (4) and washers (8). Important: Washers MUST be placed under each bolt head (1) and under each nut (1) to avoid damage to saddle.
4. Tighten bolts to specified torque.

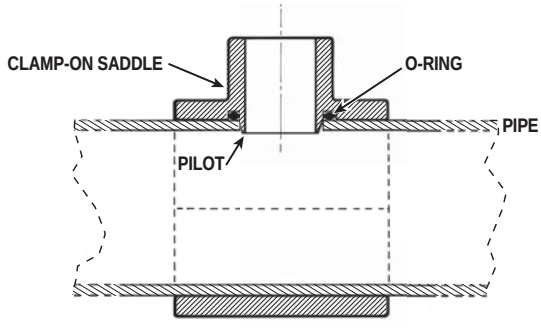


Saddle Size	2	3	4	6 & up
Recommended Bolt-Torque -ft/lb	8	8	8	10

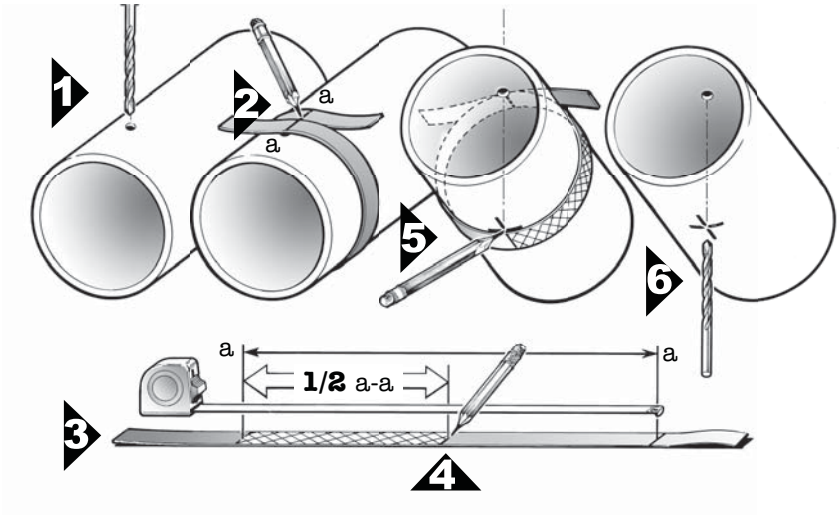
O-ring seal provides positive, trouble-free sealing to pipe.

Special pilot engages with hole in pipe to prevent saddle dislocation.





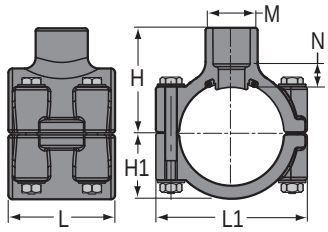
For Double Outlet Saddle Installation —Determine second outlet hole position as shown



CLAMP ON SADDLE x SOCKET
SINGLE OUTLET

Dimensions Also Applicable to
866**S**-XXX, 866**V**-XXX & 866**SV**-XXX

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



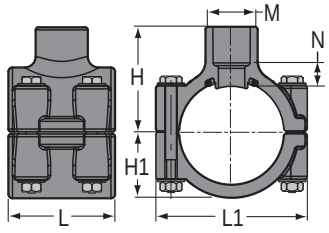
Part Number		Size	H	H1	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)	
PVC	CPVC										PVC	CPVC
866-247	866-247C	2x1/2	2-3/8	1-1/2	2-7/16	3-7/16	1-3/16	5/16	3/4	8	.56	.59
866-248	866-248C	2x3/4	2-1/2	1-1/2	2-7/16	3-7/16	1-3/8	5/16	7/8	8	.57	.60
866-249	866-249C	2x1	2-5/8	1-1/2	2-7/16	3-7/16	1-11/16	5/16	1-1/8	8	.40	.62
866-250	866-250C	2x1-1/4	2-3/4	1-1/2	2-7/16	3-7/16	2-1/16	5/16	1-1/2	8	.68	.64
866-251	866-251C	2x1-1/2	2-15/16	1-1/2	2-7/16	3-7/16	2-3/8	5/16	1-1/2	8	.65	.70
866-291	866-291C	2-1/2x1-1/2	3-3/16	1-11/16	4-1/16	4	2-3/8	3/8	1-3/4	8	1.02	1.09
866-333[1]	866-333C[1]	3x1/2	3-5/16	2-1/16	3	4-5/8	1-3/8	13/16	7/8	8	.88	.92
866-334	866-334C	3x3/4	3-1/16	2-1/16	3	4-5/8	1-3/8	9/32	7/8	8	.85	.89
866-335	866-335C	3x1	3-3/16	2-1/16	3	4-5/8	1-11/16	5/16	1-1/8	8	.91	.91
866-336[1]	866-336C[1]	3x1-1/4	4-1/32	2-1/16	4-3/32	4-5/8	3	1-1/32	2-1/4	8	1.48	1.56
866-337[1]	866-337C[1]	3x1-1/2	4-1/32	2-1/16	4-3/32	4-5/8	3	29/32	2-1/4	8	1.41	1.52
866-338	866-338C	3x2	3-5/8	2-1/16	4-3/32	4-5/8	3	3/8	2-1/4	8	1.24	1.31
866-415[1]	866-415C[1]	4x1/2	4-3/32	2-5/8	3	5-9/16	2-3/8	31/32	1-1/8	8	1.31	1.38
866-416[1]	866-416C[1]	4x3/4	4-3/32	2-5/8	3	5-9/16	2-3/8	27/32	1-1/8	8	1.29	1.35
866-417	866-417C	4x1	3-13/16	2-5/8	3	5-5/8	1-11/16	7/16	1-1/8	8	1.24	1.31
866-418[1]	866-418C[1]	4x1-1/4	4-13/32	2-5/8	4-3/32	5-5/8	2-3/8	29/32	1-3/4	8	1.70	1.80
866-419	866-419C	4x1-1/2	4-1/8	2-5/8	4-3/32	5-9/16	2-3/8	1/2	1-3/4	8	1.63	1.72
866-420	866-420C	4x2	4-3/16	2-5/8	4-1/8	5-5/8	3	7/16	2-1/4	8	1.69	1.79
866-421[1]	866-421C[1]	4x2-1/2	5	2-5/8	5-7/16	5-23/32	4-9/32	3/4	3	8	2.78	2.95
866-422	866-422C	4x3	4-5/8	2-19/32	5-7/16	5-11/16	4-1/4	1/2	3	8	2.39	2.57
866-523[1]	866-523C[1]	6x1/2	5-13/32	3-7/8	3	7-3/4	1-11/16	1-7/32	1-1/8	10	2.35	2.50
866-524[1]	866-524C[1]	6x3/4	5-7/16	3-7/8	3	7-3/4	1-11/16	1-1/8	1-1/8	10	2.33	2.47
866-525	866-525C	6x1	5-1/8	3-7/8	3	7-15/16	1-11/16	11/16	1-1/8	10	2.29	2.43
866-526[1]	866-526C[1]	6x1-1/4	5-15/16	3-7/8	4-1/8	7-3/4	3	1-3/8	2-1/4	10	3.28	3.48
866-527[1]	866-527C[1]	6x1-1/2	5-15/16	3-7/8	4-1/8	7-3/4	3	1-1/4	2-1/4	10	3.22	3.43
866-528	866-528C	6x2	5-1/2	3-7/8	4-1/8	7-3/4	3	11/16	2-1/4	10	3.04	3.23
866-529[1]	866-529C[1]	6x2-1/2	6-7/16	3-7/8	6	7-15/16	4-1/4	1-1/8	3	10	4.73	5.02
866-530	866-530C	6x3	5-15/16	3-7/8	6	7-15/16	4-1/4	25/32	3	10	4.35	4.61
866-532	866-532C	6x4	6	3-29/32	6	7-15/16	5-3/16	5/8	4	10	5.09	5.49

[1] Outlet sized with bushing

CLAMP ON SADDLE x SOCKET SINGLE OUTLET (continued)

Dimensions Also Applicable to
866**S**-XXX, 866**V**-XXX & 866**SV**-XXX

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number		Size	H	H1	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)	
PVC	CPVC										PVC	CPVC
866-573[1]	866-573C[1]	8x1/2	7-3/4	4-7/8	9-1/2	8-1/2	5-5/16	1-1/2	4	10	9.70	10.09
866-574[1]	866-574C[1]	8x3/4	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-3/4	4	10	9.65	10.07
866-575[1]	866-575C[1]	8x1	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-5/8	4	10	9.67	10.07
866-576[1]	866-576C[1]	8x1-1/4	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-1/2	4	10	9.79	10.23
866-577[1]	866-577C[1]	8x1-1/2	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-3/8	4	10	10.23	10.44
866-578[1]	866-578C[1]	8x2	7-11/16	4-7/8	8-1/2	10-1/8	5-1/4	1-7/8	4	10	10.28	10.50
866-579[1]	866-579C[1]	8x2-1/2	8-5/32	4-7/8	8-15/32	10	5-7/32	2-1/2	4	10	9.43	10.02
866-580[1]	866-580C[1]	8x3	7-11/16	4-7/8	8-1/2	10-1/8	5-1/4	1-7/16	4	10	10.21	10.61
866-582	866-582C	8x4	7-5/16	4-7/8	8-1/2	10-1/8	5-1/4	11/16	4	10	12.22	12.89
866-585	866-585C	8x6	8-3/32	4-7/8	8-1/2	10-1/8	7-5/8	11/16	6	10	9.80	9.30
866-621[1]	866-621C[1]	10x2	8-7/8	6-1/32	8-1/2	12-5/16	5-1/4	1-15/16	4	10	13.02	13.56
866-624	866-624C	10x4	8-15/32	6-1/32	8-1/2	12-5/16	5-1/4	13/16	4	10	11.92	12.46
866-626	866-626C	10x6	9-9/32	6-1/32	8-1/2	12-5/16	7-5/8	13/16	6	10	12.92	13.50
866-664	866-664C	12x4	9-9/16	7-5/32	8-1/2	14-5/16	5-1/4	7/8	4	10	15.47	16.42
866-666	866-666C	12x6	10-3/8	7-5/32	8-1/2	14-5/16	7-5/8	7/8	6	10	16.33	17.20

[1] Outet sized with bushing

1) Clamp On Saddle Standard Hardware: Zinc Bolts w/EPDM O-ring Seal
   e.g. Part Number 866-247 = 2x1/2 PVC Clamp On Saddle, Socket, EPDM O-ring, Zinc Bolts.

2) Clamp On Saddles w/Stainless Steel (SS) Bolts,Add The Letter **"S"** Before The Dash.
   e.g. Part Number 866**S**-247 = 2x1/2 PVC Clamp On Saddle, Socket, EPDM O-ring, Stainless Steel Bolts.

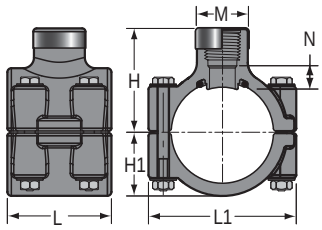
3) Clamp On Saddles w/FKM O-ring Seal, Add The Letter **"V"** Before The Dash.
   e.g. Part Number 866**V**-247 = 2x1/2 PVC Clamp-On Saddle, Socket, FKM O-ring, Zinc Bolts.

4) Clamp-On Saddles w/Stainless Steel Bolts & FKM O-ring Seal, Add The Letter **"SV"** Before The Dash.
   e.g. Part Number 866**SV**-247 = 2x1/2 PVC Clamp On Saddle, Socket FKM O-ring, Stainless Steel Bolts.

CLAMP ON SADDLE x SR FIPT
SINGLE OUTLET

Dimensions Also Applicable to
867**S**-XXXSR, 867**V**-XXXSR & 867**SV**-XXXSR

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F

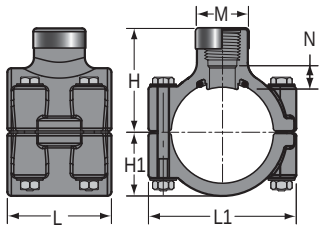


Part Number		Size	H	H1	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)	
PVC	CPVC										PVC	CPVC
867-247SR	867-247CSR	2x1/2	2-3/8	1-1/2	2-7/16	3-7/16	1-3/16	5/16	3/4	3/4	.56	.59
867-248SR	867-248CSR	2x3/4	2-1/2	1-1/2	2-7/16	3-7/16	1-3/8	5/8	7/8	7/8	.57	.60
867-249SR	867-249CSR	2x1	2-5/8	1-1/2	2-7/16	3-7/16	1-11/16	9/16	1-1/8	1-1/8	.40	.62
867-250SR	867-250CSR	2x1-1/4	2-3/4	1-1/2	2-7/16	3-7/16	2-1/16	11/16	1-1/2	1-1/2	.61	.64
867-251SR	867-251CSR	2x1-1/2	2-15/16	1-1/2	2-7/16	3-7/16	2-3/8	3/4	1-1/2	1-1/2	.65	.70
867-291SR	867-291CSR	2-1/2x1-1/2	3-3/16	1-11/16	4-1/16	4	2-3/8	13/16	1-3/4	1-3/4	1.02	1.09
867-333SR[1]	867-333CSR[1]	3x1/2	3-5/16	2-1/16	3	4-5/8	1-3/8	15/16	7/8	7/8	.89	.93
867-334SR	867-334CSR	3x3/4	3-1/16	2-1/16	3	4-5/8	1-3/8	9/16	7/8	7/8	.87	.91
867-335SR	867-335CSR	3x1	3-3/16	2-1/16	3	4-5/8	1-11/16	9/16	1-1/8	1-1/8	.89	.93
867-336SR[1]	867-336CSR[1]	3x1-1/4	4-1/32	2-1/16	4-3/32	4-5/8	3	1-5/16	2-1/4	2-1/4	1.51	1.61
867-337SR[1]	867-337CSR[1]	3x1-1/2	4-1/32	2-1/16	4-3/32	4-5/8	3	2-11/16	2-1/4	2-1/4	1.47	1.56
867-338SR	867-338CSR	3x2	3-5/8	2-1/16	4-3/32	4-5/8	3	7/8	2-1/4	2-1/4	1.36	1.40
867-415SR[1]	867-415CSR[1]	4x1/2	4-3/32	2-5/8	3	5-9/16	2-3/8	1-1/8	1-1/8	1-1/8	1.32	1.39
867-416SR[1]	867-416CSR[1]	4x3/4	4-3/32	2-5/8	3	5-9/16	2-3/8	1-1/8	1-1/8	1-1/8	1.31	1.38
867-417SR	867-417CSR	4x1	3-13/16	2-5/8	3	5-5/8	1-11/16	11/16	1-1/8	1-1/8	1.26	1.33
867-418SR[1]	867-418CSR[1]	4x1-1/4	4-13/32	2-5/8	4-3/32	5-5/8	2-3/8	1-7/32	1-3/4	1-3/4	1.75	1.85
867-419SR[1]	867-419CSR[1]	4x1-1/2	4-1/8	2-5/8	4-3/32	5-9/16	2-3/8	15/16	1-3/4	1-3/4	1.68	1.78
867-420SR	867-420CSR	4x2	4-3/16	2-5/8	4-1/8	5-5/8	3	15/16	2-1/4	2-1/4	1.78	1.87
867-421SR[1]	867-421CSR[1]	4x2-1/2	5	2-5/8	5-7/16	5-23/32	4-9/32	1-7/32	3	3	2.91	3.13
867-422SR	867-422CSR	4x3	4-5/8	2-19/32	5-7/16	5-11/16	4-1/4	31/32	3	3	2.53	2.69
867-523SR[1]	867-523CSR[1]	6x1/2	5-13/32	3-7/8	3	7-3/4	1-11/16	1-3/8	1-1/8	1-1/8	2.37	2.50
867-524SR[1]	867-524CSR[1]	6x3/4	5-7/16	3-7/8	3	7-3/4	1-11/16	1-3/8	1-1/8	1-1/8	2.35	2.50
867-525SR	867-525CSR	6x1	5-1/8	3-7/8	3	7-15/16	1-11/16	15/16	1-1/8	1-1/8	2.31	2.45
867-526SR[1]	867-526CSR[1]	6x1-1/4	5-15/16	3-7/8	4-1/8	7-3/4	3	1-11/16	2-1/4	2-1/4	3.31	3.52
867-527SR[1]	867-527CSR[1]	6x1-1/2	5-15/16	3-7/8	4-1/8	7-3/4	3	1-3/4	2-1/4	2-1/4	3.27	3.48
867-528SR	867-528CSR	6x2	5-1/2	3-7/8	4-1/8	7-3/4	3	1-7/32	2-1/4	2-1/4	3.13	3.32
867-529SR[1]	867-529CSR[1]	6x2-1/2	6-7/16	3-7/8	6	7-15/16	4-1/4	1-9/16	3	3	4.87	5.17
867-530SR	867-530CSR	6x3	5-15/16	3-7/8	6	7-15/16	4-1/4	1-1/4	3	3	4.46	4.78
867-532SR	867-532CSR	6x4	6	3-29/32	6	7-15/16	5-3/16	1-3/8	4	4	5.44	5.78

CLAMP ON SADDLE x SR FIPT SINGLE OUTLET (continued)

Dimensions Also Applicable to
867**S**-XXXSR, 867**V**-XXXSR & 867**SV**-XXXSR

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



[1] Outlet sized with bushing

Part Number		Size	H	H1	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)	
PVC	CPVC										PVC	CPVC
867-573SR	867-573CSR	8x1/2	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	3	4	10	9.69	10.07
867-574SR[1]	867-574CSR[1]	8x3/4	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	3	4	10	9.70	10.25
867-575SR	867-575CSR	8x1	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-13/16	4	10	9.81	10.08
867-576SR[1]	867-576CSR[1]	8x1-1/4	9-5/16	4-15/16	8-9/16	9-29/32	5-7/32	1-19 /32	4	10	9.68	9.85
867-577SR[1]	867-577CSR[1]	8x1-1/2	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-3/4	4	10	---	---
867-578SR[1]	867-578CSR[1]	8x2	7-11/16	4-7/8	8-1/2	10-1/8	5-1/4	2-3/8	4	10	---	---
867-579SR[1]	867-579CSR[1]	8x2-1/2	8-1/8	4-7/8	8-1/2	10-1/8	5-1/4	2-1/2	4	10	---	---
867-580SR[1]	867-580CSR[1]	8x3	7-11/16	4-7/8	8-1/2	10-1/8	5-1/4	1-15/16	4	10	---	---
867-582SR	867-582CSR	8x4	7-5/16	4-7/8	8-1/2	10-1/8	5-1/4	1-1/2	4	10	7.74	8.09
867-585SR	867-585CSR	8x6	8-3/32	4-7/8	8-1/2	10-1/8	7-5/8	2-3/32	6	10	8.61	9.08
867-624SR	867-624CSR	10x4	8-15/32	6-1/32	8-1/2	12-5/16	5-1/4	2-3/16	4	10	---	---
867-626SR	867-626CSR	10x6	9-9/32	6-1/32	8-1/2	12-5/16	7-5/8	3-3/16	6	10	---	---
867-664SR	867-664CSR	12x4	9-9/16	7-5/32	8-1/2	14-5/16	5-1/4	1-5/8	4	10	---	---
867-666SR	867-666CSR	12x6	10-3/8	7-5/32	8-1/2	14-5/16	7-5/8	2-1/4	6	10	---	---

[1] Outlet sized with bushing

1) Clamp On Saddle Standard Hardware: Zinc Bolts w/EPDM O-ring Seal
e.g. Part Number 867-247SR = 2x1/2 PVC Clamp On Saddle, SR Threaded, EPDM O-ring, Zinc Bolts.

2) Clamp On Saddles w/Stainless Steel (SS) Bolts,Add The Letter **"S"** Before The Dash.
e.g. Part Number 867**S**-247SR = 2x1/2 PVC Clamp On Saddle, SR Threaded, EPDM O-ring, Stainless Steel Bolts.

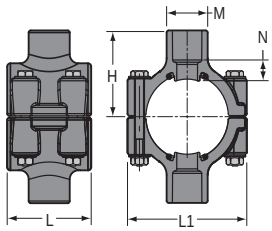
3) Clamp On Saddles w/FKM O-ring Seal, Add The Letter **"V"** Before The Dash.
e.g. Part Number 867**V**-247SR = 2x1/2 PVC Clamp-On Saddle, SR Threaded, FKM O-ring, Zinc Bolts.

4) Clamp-On Saddles w/Stainless Steel Bolts & FKM O-ring Seal, Add The Letter **"SV"** Before The Dash.
e.g. Part Number 867**SV**-247SR = 2x1/2 PVC Clamp On Saddle, SR Threaded FKM O-ring, Stainless Steel Bolts.

CLAMP ON SADDLE x SOCKET
DOUBLE OUTLET

Dimensions Also Applicable to
868**S**-XXX, 868**V**-XXX & 868**SV**-XXX

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number		Size	H	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)	
PVC	CPVC									PVC	CPVC
868-247	868-247C	2x1/2	2-3/8	2-7/16	3-7/16	1-3/16	5/16	3/4	8	.56	.59
868-248	868-248C	2x3/4	2-1/2	2-7/16	3-7/16	1-3/8	5/16	7/8	8	.57	.60
868-249	868-249C	2x1	2-5/8	2-7/16	3-7/16	1-11/16	5/16	1-1/8	8	.40	.62
838-250	838-250C	2x1-1/4	2-3/4	2-7/16	3-7/16	2-1/16	5/16	1-1/2	8	.61	.64
868-251	868-251C	2x1-1/2	2-15/16	2-7/16	3-7/16	2-3/8	5/16	1-1/2	8	.65	.70
868-291	868-291C	2-1/2x1-1/2	3-3/16	4-1/16	4	2-3/8	3/8	1-3/4	8	1.02	1.09
868-333[1]	868-333C[1]	3x1/2	3-5/16	3	4-5/8	1-3/8	13/16	7/8	8	.93	.97
868-334	868-334C	3x3/4	3-1/16	3	4-5/8	1-3/8	9/32	7/8	8	.89	.92
868-335	868-335C	3x1	3-3/16	3	4-5/8	1-11/16	5/16	1-1/8	8	.91	.96
868-336[1]	868-336C[1]	3x1-1/4	4-1/32	4-3/32	4-5/8	3	1-1/32	2-1/4	8	1.94	2.06
868-337[1]	868-337C[1]	3x1-1/2	4-1/32	4-3/32	4-5/8	3	29/32	2-1/4	8	1.82	1.97
868-338	868-338C	3x2	3-5/8	4-3/32	4-5/8	3	3/8	2-1/4	8	1.47	1.57
868-415[1]	868-415C[1]	4x1/2	4-3/32	3	5-9/16	2-3/8	31/32	1-1/8	8	1.43	1.51
868-416[1]	868-416C[1]	4x3/4	4-3/32	3	5-9/16	2-3/8	27/32	1-1/8	8	1.39	1.46
868-417	868-417C	4x1	3-13/16	3	5-5/8	1-11/16	7/16	1-1/8	8	1.30	1.37
868-418[1]	868-418C[1]	4x1-1/4	4-13/32	4-3/32	5-5/8	2-3/8	29/32	1-3/4	8	1.92	2.04
868-419	868-419C	4x1-1/2	4-1/8	4-3/32	5-9/16	2-3/8	1/2	1-3/4	8	1.77	1.87
868-420	868-420C	4x2	4-3/16	4-1/8	5-5/8	3	7/16	2-1/4	8	1.90	2.01
868-421[1]	868-421C[1]	4x2-1/2	5	5-7/16	5-23/32	4-9/32	3/4	3	8	3.69	3.98
868-422	868-422C	4x3	4-5/8	5-7/16	5-11/16	4-1/4	1/2	3	8	2.92	3.16
868-523[1]	868-523C[1]	6x1/2	5-13/32	3	7-3/4	1-11/16	1-7/32	1-1/8	10	2.48	2.63
868-524[1]	868-524C[1]	6x3/4	5-7/16	3	7-3/4	1-11/16	1-1/8	1-1/8	10	2.44	2.58
868-525	868-525C	6x1	5-1/8	3	7-15/16	1-11/16	11/16	1-1/8	10	2.35	2.49
868-526[1]	868-526C[1]	6x1-1/4	5-15/16	4-1/8	7-3/4	3	1-3/8	2-1/4	10	3.72	3.93
868-527[1]	868-527C[1]	6x1-1/2	5-15/16	4-1/8	7-3/4	3	1-1/4	2-1/4	10	3.60	3.84
868-528	868-528C	6x2	5-1/2	4-1/8	7-3/4	3	11/16	2-1/4	10	3.25	3.44
868-529[1]	868-529C[1]	6x2-1/2	6-7/16	6	7-15/16	4-1/4	1-1/8	3	10	5.58	5.93
868-530	868-530C	6x3	5-15/16	6	7-15/16	4-1/4	25/32	3	10	4.81	5.11
868-532	868-532C	6x4	6	6	7-15/16	5-3/16	5/8	4	10	5.56	6.10
868-573[1]	868-573C[1]	8x1/2	8-3/32	8-1/2	10-1/8	5-1/4	2-3/16	4	10	11.50	12.06

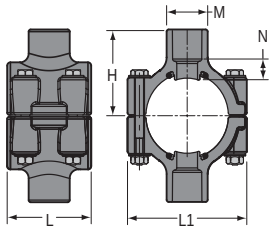
[1] Outlet sized with bushing

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Progressive Products from Spears® Innovation and Technology

CLAMP ON SADDLE x SOCKET DOUBLE OUTLET (continued)

Dimensions Also Applicable to
868**S**-XXX, 868**V**-XXX & 868**SV**-XXX

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number		Size	H	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)	
PVC	CPVC									PVC	CPVC
868-574[1]	868-574C[1]	8x3/4	8-3/32	8-1/2	10-1/8	5-1/4	2-3/4	4	10	11.45	12.01
868-575[1]	868-575C[1]	8x1	8-3/32	8-1/2	10-1/8	5-1/4	2-5/8	4	10	11.52	12.02
868-576[1]	868-576C[1]	8x1-1/4	8-3/32	8-1/2	10-1/8	5-1/4	2-1/2	4	10	11.48	11.88
868-577[1]	868-577C[1]	8x1-1/2	8-3/32	8-1/2	10-1/8	5-1/4	2-3/8	4	10	11.30	11.78
868-578[1]	868-578C[1]	8x2	7-11/16	8-1/2	10-1/8	5-1/4	1-7/8	4	10	11.00	11.47
868-579[1]	868-579C[1]	8x2-1/2	8-1/8	8-1/2	10-1/8	5-1/4	1-11/16	4	10	8.90	9.21
868-580[1]	868-580C[1]	8x3	7-11/16	8-1/2	9-7/8	5-7/32	2-1/16	4	10	10.25	10.92
868-582	868-582C	8x4	7-5/16	8-1/2	10-1/8	5-1/4	11/16	4	10	8.00	8.62
868-585	868-585C	8x6	8-3/32	8-1/2	10-1/8	7-5/8	11/16	6	10	10.32	10.81
868-624	868-624C	10x4	8-15/32	8-1/2	12-5/16	5-1/4	13/16	4	10	15.37	12.99
868-626	868-626C	10x6	9-9/32	8-1/2	12-5/16	7-5/8	13/16	6	10	14.51	15.15
868-664	868-664C	12x4	9-9/16	8-1/2	14-5/16	5-1/4	7/8	4	10	15.75	17.06
868-666	868-666C	12x6	10-3/8	8-1/2	14-5/16	7-5/8	7/8	6	10	17.58	18.64

[1] Outlet sized with bushing

1) Clamp On Saddle Standard Hardware: Zinc Bolts w/EPDM O-ring Seal
   e.g. Part Number 868-247 = 2x1/2 PVC Clamp On Saddle, Socket, EPDM O-ring, Zinc Bolts.

2) Clamp On Saddles w/Stainless Steel (SS) Bolts,Add The Letter **"S"** Before The Dash.
   e.g. Part Number 868**S**-247 = 2x1/2 PVC Clamp On Saddle, Socket, EPDM O-ring, Stainless Steel Bolts.

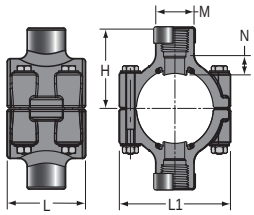
3) Clamp On Saddles w/FKM O-ring Seal, Add The Letter **"V"** Before The Dash.
   e.g. Part Number 868**V**-247 = 2x1/2 PVC Clamp-On Saddle, Socket, FKM O-ring, Zinc Bolts.

4) Clamp-On Saddles w/Stainless Steel Bolts & FKM O-ring Seal, Add The Letter **"SV"** Before The Dash.
   e.g. Part Number 868**SV**-247 = 2x1/2 PVC Clamp On Saddle, Socket FKM O-ring, Stainless Steel Bolts.

CLAMP ON SADDLE x SR FIPT
DOUBLE OUTLET

Dimensions Also Applicable to
869**S**-XXXSR, 869**V**-XXXSR & 869**SV**-XXXSR

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number		Size	H	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)	
PVC	CPVC									PVC	CPVC
869-247SR	869-247CSR	2x1/2	2-3/8	2-7/16	3-7/16	1-3/16	5/16	3/4	8	.56	.59
869-248SR	869-248CSR	2x3/4	2-1/2	2-7/16	3-7/16	1-3/8	5/8	7/8	8	.57	.60
869-249SR	869-249CSR	2x1	2-5/8	2-7/16	3-7/16	1-11/16	9/16	1-1/8	8	.40	.62
869-250SR	869-250CSR	2x1-1/4	2-3/4	2-7/16	3-7/16	2-1/16	11/16	1-1/2	8	.61	.64
869-251SR	869-251CSR	2x1-1/2	2-15/16	2-7/16	3-7/16	2-3/8	3/4	1-1/2	8	.65	.70
869-291SR	869-291CSR	2-1/2x1-1/2	3-3/16	4-1/16	4	2-3/8	13/16	1-3/4	8	1.02	1.09
869-333SR[1]	869-333CSR[1]	3x1/2	3-5/16	3	4-5/8	1-3/8	15/16	7/8	8	.96	1.00
869-334SR	869-334CSR	3x3/4	3-1/16	3	4-5/8	1-3/8	9/16	7/8	8	.93	.96
869-335SR	869-335CSR	3x1	3-3/16	3	4-5/8	1-11/16	9/16	1-1/8	8	.95	1.00
869-336SR[1]	869-336CSR[1]	3x1-1/4	4-1/32	4-3/32	4-5/8	3	1-5/16	2-1/4	8	2.01	2.15
869-337SR[1]	869-337CSR[1]	3x1-1/2	4-1/32	4-3/32	4-5/8	3	2-11/16	2-1/4	8	1.93	2.06
869-338SR	869-338CSR	3x2	3-5/8	4-3/32	4-5/8	3	7/8	2-1/4	8	1.71	1.74
869-415SR[1]	869-415CSR[1]	4x1/2	4-3/32	3	5-9/16	2-3/8	1-1/8	1-1/8	8	1.46	1.53
869-416SR[1]	869-416CSR[1]	4x3/4	4-3/32	3	5-9/16	2-3/8	1-1/8	1-1/8	8	1.43	1.52
869-417SR	869-417CSR	4x1	3-13/16	3	5-5/8	1-11/16	11/16	1-1/8	8	1.34	1.41
869-418SR[1]	869-418CSR[1]	4x1-1/4	4-13/32	4-3/32	5-5/8	2-3/8	1-7/32	1-3/4	8	2.02	2.13
869-419SR	869-419CSR	4x1-1/2	4-1/8	4-3/32	5-9/16	2-3/8	15/16	1-3/4	8	1.87	1.99
869-420SR	869-420CSR	4x2	4-3/16	4-1/8	5-5/8	3	15/16	2-1/4	8	2.08	2.18
869-421SR[1]	869-421CSR[1]	4x2-1/2	5	5-7/16	5-23/32	4-9/32	1-7/32	3	8	3.96	4.29
869-422SR	869-422CSR	4x3	4-5/8	5-7/16	5-11/16	4-1/4	31/32	3	8	3.19	3.39
869-523SR[1]	869-523CSR[1]	6x1/2	5-13/32	3	7-3/4	1-11/16	1-3/8	1-1/8	10	2.51	2.64
869-524SR[1]	869-524CSR[1]	6x3/4	5-7/16	3	7-3/4	1-11/16	1-3/8	1-1/8	10	2.48	2.63
869-525SR	869-525CSR	6x1	5-1/8	3	7-15/16	1-11/16	15/16	1-1/8	10	2.39	2.53
869-526SR[1]	869-526CSR[1]	6x1-1/4	5-15/16	4-1/8	7-3/4	3	1-11/16	2-1/4	10	3.79	4.03
869-527SR[1]	869-527CSR[1]	6x1-1/2	5-15/16	4-1/8	7-3/4	3	1-3/4	2-1/4	10	3.70	3.93
869-528SR	869-528CSR	6x2	5-1/2	4-1/8	7-3/4	3	1-7/32	2-1/4	10	3.43	3.62
869-529SR[1]	869-529CSR[1]	6x2-1/2	6-7/16	6	7-15/16	4-1/4	1-9/16	3	10	5.85	6.23
869-530SR	869-530CSR	6x3	5-15/16	6	7-15/16	4-1/4	1-1/4	3	10	5.04	5.45
869-532SR	869-532CSR	6x4	6	6	7-15/16	5-3/16	1-3/8	4	10	6.26	6.67
869-573SR[1]	869-573CSR[1]	8x1/2	8-3/32	8-1/2	10-1/8	5-1/4	3	4	10	11.52	12.02

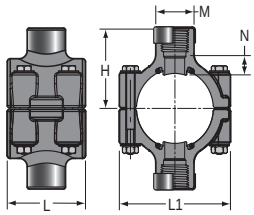
[1] Outlet sized with bushing

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CLAMP ON SADDLE x SR FIPT DOUBLE OUTLET (continued)

Dimensions Also Applicable to
869**S**-XXXSR, 869**V**-XXXSR & 869**SV**-XXXSR

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number		Size	H	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)	
PVC	CPVC									PVC	CPVC
869-574SR[1]	869-574CSR[1]	8x3/4	8-3/32	8-1/2	10-1/8	5-1/4	3	4	10	---	---
869-575SR[1]	869-575CSR[1]	8x1	8-3/32	8-1/2	10-1/8	5-1/4	2-13/16	4	10	---	---
869-576SR[1]	869-576CSR[1]	8x1-1/4	8-3/32	8-1/2	10-1/8	5-1/4	2-3/4	4	10	---	---
869-577SR[1]	869-577CSR[1]	8x1-1/2	8-3/32	8-1/2	10-1/8	5-1/4	2-3/4	4	10	---	---
869-578SR[1]	869-578CSR[1]	8x2	7-11/16	8-1/2	10-1/8	5-1/4	2-3/8	4	10	---	---
869-579SR[1]	869-579CSR[1]	8x2-1/2	8-1/8	8-1/2	10-1/8	5-1/4	2-1/2	4	10	---	---
869-580SR[1]	869-580CSR[1]	8x3	7-11/16	8-1/2	10-1/8	5-1/4	1-15/16	4	10	---	---
869-582SR	869-582CSR	8x4	7-5/16	8-1/2	10-1/8	5-1/4	1-1/2	4	10	8.59	9.29
869-585SR	869-585CSR	8x6	8-3/32	8-1/2	10-1/8	7-5/8	2-3/32	6	10	10.32	10.81
869-624SR	869-624CSR	10x4	8-15/32	8-1/2	12-5/16	5-1/4	2-3/16	4	10	---	---
869-626SR	869-626CSR	10x6	9-9/32	8-1/2	12-5/16	7-5/8	3-3/16	6	10	---	---
869-664SR	869-664CSR	12x4	9-9/16	8-1/2	14-5/16	5-1/4	1-5/8	4	10	---	---
869-666SR	869-666CSR	12x6	10-3/8	8-1/2	14-5/16	7-5/8	2-1/4	6	10	---	---

[1] Outlet sized with bushing

1) Clamp On Saddle Standard Hardware: Zinc Bolts w/EPDM O-ring Seal
   e.g. Part Number 869-247SR = 2x1/2 PVC Clamp On Saddle, SR Threaded, EPDM O-ring, Zinc Bolts.

2) Clamp On Saddles w/Stainless Steel (SS) Bolts, Add The Letter **"S"** Before The Dash.
   e.g. Part Number 869**S**-247SR = 2x1/2 PVC Clamp On Saddle, SR Threaded, EPDM O-ring, Stainless Steel Bolts.

3) Clamp On Saddles w/FKM O-ring Seal, Add The Letter **"V"** Before The Dash.
   e.g. Part Number 869**V**-247SR = 2x1/2 PVC Clamp-On Saddle, SR Threaded, FKM O-ring, Zinc Bolts.

4) Clamp-On Saddles w/Stainless Steel Bolts & FKM O-ring Seal, Add The Letter **"SV"** Before The Dash.
   e.g. Part Number 869**SV**-247SR = 2x1/2 PVC Clamp On Saddle, SR Threaded FKM O-ring, Stainless Steel Bolts.

Allows Connection to Existing Pipelines Under Pressure



Specially designed tapping saddle allows pipe branch connection to pressurized “Hot” lines without system shut-down. Available in PVC White, Gray or CPVC Gray configurations.

- Industrial Grade Bolt-on Saddle with EPDM or FKM O-ring Seals and Choice of Zinc Plated Steel or Type 316 Stainless Steel Hardware.
- Built-in Brass or Stainless Steel Cutter Easily Cuts Hole in PVC, CPVC, HDPE and PP Pipe. Special Design Captures and Retains Coupon from Hole.
- Pressure Rated up to 235 psi @ 73°F.
- Available to fit IPS Pipe 2" through 8" with Versatile 3/4" Socket - 1" Spigot Combination Branch Outlet or 1"-1/2" Socket - 2" Spigot Combination Branch Outlet

TECHNICAL DATA

Maximum Service Temperatures

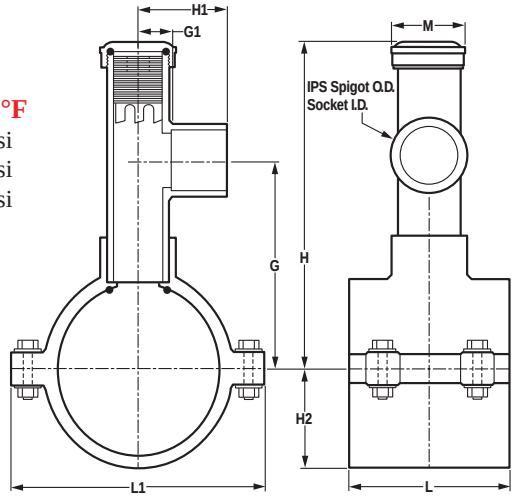
PVC	140°F
CPVC	200°F

Note: Elevated service temperatures require system pressure de-rating.

Pressure Rating @ 73°F

2" – 4"	235 psi
6"	200 psi
8"	150 psi

Note: Some leakage is possible during the tapping process, therefore “hot-taps” are not recommended for corrosive or dangerous fluid medium.



Dimensions - EPDM Saddle x Socket (Spigot) Zinc Plated Bolds

Part Number	Size	G	G1	H	H 1	H2	L	L1	M
HT2-248	2 x 3/4 (1)	3-9/16	1	6-3/16	2	1-1/2	2-7/16	3-1/2	2
HT2-251	2 x 1-1/2 (2)	4-9/16	1-1/4	8-15/16	2-11/16	1-1/2	2-7/16	3-1/2	2-7/8
HT2-288	2-1/2 x 3/4 (1)	3-15/16	1	6-9/16	2	1-3/4	4-1/8	4-1/8	2
HT2-291	2-1/2 x 1-1/2 (2)	4-13/16	1-1/4	9-3/16	2-11/16	1-3/4	4-1/8	4-1/8	2-7/8
HT2-334	3 x 3/4 (1)	4-1/6	1	6-11/16	2	2	3	4-3/4	2
HT2-337	3 x 1-1/2 (2)	5-1/4	1-1/4	9-5/8	2-11/16	2	4-1/8	4-3/4	2-7/8
HT2-416	4 x 3/4 (1)	4-11/16	1	7-5/16	2	2-5/8	3	5-13/16	2
HT2-419	4 x 1-1/2 (2)	5-13/16	1-1/4	10-3/16	2-11/16	2-5/8	4-1/8	5-13/16	2-7/8
HT2-524	6 x 3/4 (1)	6	1	8-5/8	2	3-7/8	3	8-1/8	2
HT2-527	6 x 1-1/2 (2)	7-1/8	1-1/4	11-1/2	2-11/16	3-7/8	4-1/8	8-1/8	2-7/8
HT2-574	8 x 3/4 (1)	7-1/4	1	9-7/8	2	4-7/8	8-1/2	10-1/8	2
HT2-577	8 x 1-1/2 (2)	8-9/16	1-1/4	12-9/16	2-11/16	4-7/8	8-1/2	10-1/8	2-7/8

EPDM Saddle x Socket (Spigot) SS316 Bolts, Add The Letter **“S”** Before The Dash. e.g. Part Number HT2**S**-248 = 2x3/4 PVC Bolt On Saddle, EPDM O-ring, Stainless Steel Hardware.
FKM Saddle x Socket (Spigot) Zinc Plated Bolts, Add The Number **“3”** Before The Dash. e.g. Part Number HT**3**-248 = 2x3/4 PVC Bolt On Saddle, FKM O-ring, Zink Plated Hardware.
FKM Saddle x Socket (Spigot) SS316 Bolts, Add **“3S”** Before The Dash. e.g. Part Number HT**3S**-248 = 2x3/4 PVC Bolt On Saddle, FKM O-ring, Stainless Steel Hardware.
EPDM with Stainless Steel Cutter & Bolts, Add **“S2S”** Before The Dash. e.g. Part Number HT**S2S**-248 = 2x3/4 PVC Bolt On Saddle, EPDM O-ring, Stainless Steel Cutter & Hardware.
FKM with Stainless Steel Cutter & Bolts, Add **“S3S”** Before The Dash. e.g. Part Number HT**S3S**-248 = 2x3/4 PVC Bolt On Saddle, FKM O-ring, Stainless Steel Cutter & Hardware.

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Basic Installation

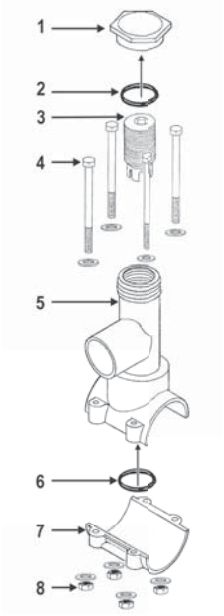
Hot-Tap Saddles are designed for adding branch connections to piping systems under live ("hot") pressure. Hot-Tap Saddle branch outlets are either 3/4" socket (with 1" Spigot O.D.) or 1-1/2" socket (with 2" Spigot O.D.) in saddle sizes 2" through 8" to fit IPS pipe using a built-in O-ring seal. Internal cutter is operated using conventional ratchet and drive extension and permanently retains coupon cut from pipe. Maximum operating pressure at 73°F is 235 psi for saddle sizes 2" - 4", 200 psi for 6" saddles & 150 psi for 8".

SEE PRODUCT INSTALLATION INSTRUCTION FOR DETAILS

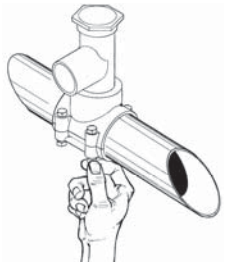
COMPONENTS

The Hot-Tap Saddle includes the following components:

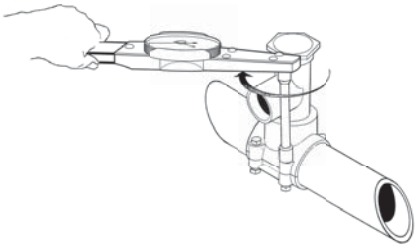
1. Cap
2. Upper O-ring
3. Hot-Tap Cutter
4. Bolt/Washer
5. Saddle Body
6. Lower O-ring
7. Saddle Bottom
8. Nut/Washer



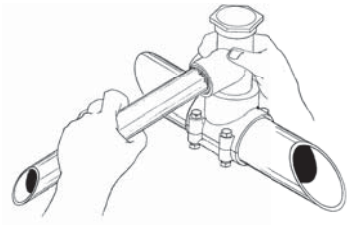
STEP 1 Assemble on Pipe



STEP 2 Torque to Specifications



STEP 3 Cement Branch Take-off

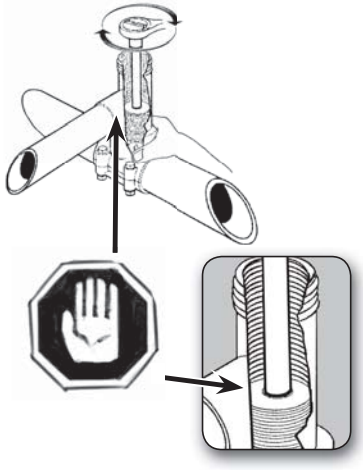


Allow joint to cure.

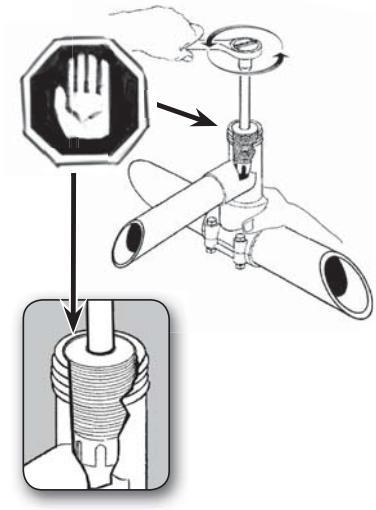
STEP 4 Remove Cap



STEP 5 Tap to Required Depth



STEP 6 Back-off Cutter to Top to Open Flow



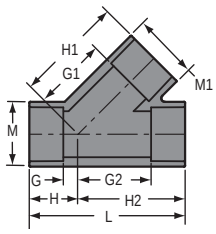
STEP 7 Reinstall Opening Sealed Cap



WYE

Socket x Socket x Socket

1/2" - 2" 235 psi @ 73°F
2-1/2" - 6" 150 psi @ 73°F
8" & Up & All Fab 100 psi @ 73°F



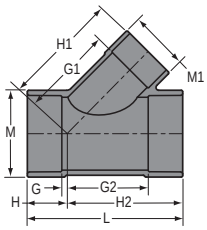
Part Number		Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
875-005	875-005C	1/2	1/4	1-5/32	1-5/32	1-1/8	2-1/16	2-1/32	3-3/16	1-5/32	1-5/32	.12	.13
875-007	875-007C	3/4	5/16	1-3/8	1-3/8	1-5/16	2-3/8	2-3/8	3-23/32	1-3/8	1-3/8	.19	.20
875-010	875-010C	1	5/16	1-3/4	1-3/4	1-7/16	2-29/32	2-7/8	4-11/32	1-11/16	1-11/16	.31	.33
875-012	875-012C	1-1/4	13/32	2-5/32	2-5/32	1-21/32	3-13/32	3-13/32	5-3/32	2-1/16	2-1/16	.50	.53
875-015	875-015C	1-1/2	17/32	2-1/2	2-1/2	1-29/32	3-7/8	3-7/8	5-13/16	2-5/16	2-5/16	.70	.74
875-020	875-020C	2	5/8	3-7/32	3-7/32	2-5/32	4-7/8	4-7/8	6-7/8	2-7/8	2-7/8	1.20	1.28
875-025	875-025C	2-1/2	27/32	3-31/32	3-31/32	2-19/32	5-23/32	5-23/32	8-5/16	3-1/2	3-1/2	2.00	2.08
875-030	875-030C	3	31/32	4-3/4	4-25/32	2-27/32	6-5/8	6-21/32	9-1/2	4-3/16	4-3/16	3.02	3.12
875-040	875-040C	4	1-1/4	6-1/32	6-1/32	3-1/2	8-9/32	8-9/32	11-25/32	5-1/4	5-1/4	5.10	5.31
875-050F	---	5	5-1/8	10-11/16	10-11/16	8-1/8	13-11/16	13-11/16	21-13/16	6-5/16	6-5/16	9.34	---
875-060	875-060C	6	1-5/32	8-25/32	8-3/16	4-3/16	11-25/32	11-3/16	15-3/8	7-9/16	7-9/16	12.01	12.67
875-080	875-080C	8	1-15/16	11-11/32	11-11/32	5-31/32	15-11/32	15-11/32	21-5/16	9-3/4	9-3/4	25.44	26.97
875-080F	875-080CF	8	5-1/16	15-7/8	13-11/16	9-5/16	20-1/8	17-15/16	27-1/4	9-5/8	9-5/8	39.76	44.67
875-100F	875-100CF	10	6-1/2	18-7/8	17-1/4	11-3/4	24-1/8	22-1/2	34-1/4	11-15/16	11-15/16	65.51	75.04
875-120F	875-120CF	12	7-1/8	21-13/16	19-7/8	13-3/8	28-1/16	26-1/8	39-1/2	14-1/8	14-1/8	109.85	123.20
875-140F	875-140CF	14	9-13/16	23-13/16	23-13/16	16-13/16	30-13/16	30-13/16	47-5/8	15-1/2	15-1/2	135.75	149.48
875-160F	875-160CF	16	10-1/8	26-1/8	26-1/8	18-1/8	34-1/8	34-1/8	52-1/4	17-11/16	17-11/16	183.59	211.73
875-180F	875-180CF	18	10	29-3/8	28	19	38-3/8	37	56	19-7/8	19-7/8	255.49	292.04
875-200F	---	20	11-5/8	31-5/8	31-5/8	21-5/8	41-5/8	41-5/8	63-1/4	22-1/16	22-1/16	399.60	---
875-240F	---	24	14-1/4	38-1/4	38-1/4	26-1/4	50-1/4	50-1/4	76-1/2	26-7/16	26-7/16	617.50	---

[1] Outlet sized with bushing

REDUCING WYE

Socket x Socket x Socket

1/2" - 2-1/2" 235 psi @ 73°F
3" - 6" 150 psi @ 73°F
8" & Up & All Fab 100 psi @ 73°F



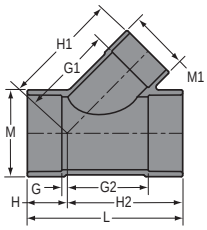
Part Number		Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
875-131[1]	---	1x1x3/4	1/4	2-7/32	1-27/32	1-3/8	2-31/32	2-31/32	4-11/32	1-11/16	1-11/16	.35	---
875-167[1]	875-167C[1]	1-1/4x1-1/4x3/4	3/8	2-3/4	2-1/4	1-5/8	3-3/4	3-1/2	5-1/8	2-1/16	2-1/16	.61	.65
875-168[1]	875-168C[1]	1-1/4x1-1/4x1	3/8	2-5/8	2-1/4	1-5/8	3-3/4	3-1/2	5-1/8	2-1/16	2-1/16	.56	.62
875-210[1]	875-210C[1]	1-1/2x1-1/2x3/4	1/2	3-1/2	2-9/16	1-7/8	4-1/2	3-15/16	5-13/16	2-11/32	2-11/32	.88	.94
875-211[1]	875-211C[1]	1-1/2x1-1/2x1	1/2	3	2-9/16	1-7/8	4-5/32	3-15/16	5-13/16	2-11/32	2-11/32	.83	.89
875-212[1]	875-212C[1]	1-1/2x1-1/2x1-1/4	1/2	3-1/4	2-9/16	1-7/8	4-1/2	3-15/16	5-13/16	2-11/32	2-11/32	.74	.82
875-248[1]	875-248C[1]	2x2x3/4	5/8	4-5/32	3-7/32	2-5/32	5-5/32	4-7/8	6-7/8	2-7/8	2-7/8	1.46	1.56
875-250[1]	875-250C[1]	2x2x1-1/4	5/8	3-5/16	3-3/8	2-5/32	5	4-3/4	6-7/8	2-7/8	2-7/8	1.46	1.52
---	875-251C[1]	2x2x1-1/2	1/2	3-23/32	3-11/32	2-1/32	5-3/32	4-7/8	6-7/8	2-7/8	2-7/8	---	1.44
875-291[1]	---	2-1/2x2-1/2x1-1/2	1	6-1/4	4-9/16	3-1/16	7-5/8	6-5/8	9-11/16	4-3/16	4-3/16	4.34	---
875-292[1]	---	2-1/2x2-1/2x2	1/2	3-3/4	4-3/4	2-1/2	6-7/8	6-1/2	9-3/8	4-1/4	4-1/4	3.97	---
875-335[1]	875-335C[1]	3x3x1	11/16	5-7/8	4-7/32	2-9/16	6-15/16	6-1/8	8-23/32	4-3/16	4-3/16	3.27	3.57
875-336[1]	875-336C[1]	3x3x1-1/4	7/8	5-3/4	4-1/8	2-3/4	7	6	8-3/4	4-3/16	4-3/16	3.21	3.34
875-337[1]	875-337C[1]	3x3x1-1/2	2-5/8	5-1/2	4-1/4	2-5/8	6-7/8	6-1/8	8-3/4	4-3/16	4-3/16	3.14	3.21
875-338[1]	875-338C[1]	3x3x2	1	5-11/32	4-3/4	2-7/8	6-31/32	6-5/8	9-1/2	4-3/16	4-3/16	3.48	3.21
875-339[1]	875-339C[1]	3x3x2-1/2	7/8	4-1/8	4-21/32	2-3/4	6-3/4	6	8-3/4	4-3/16	4-3/16	2.97	3.11
875-419[1]	---	4x4x1-1/2	1	6-5/8	5-1/4	3-1/4	8-13/16	7-1/2	10-3/4	5-1/4	5-3/16	6.04	---
875-420	875-420C	4x4x2	–7/8	5-5/32	4-11/16	1-3/8	6-11/16	6-15/16	8-5/16	5-9/32	2-29/32	2.78	2.92
875-421F	---	4x4x2-1/2	4-9/16	8-13/16	9-1/16	6-13/16	10-1/2	11-5/16	18-1/8	5-1/4	3-1/2	5.37	---
875-422	875-422C	4x4x3	1/2	5-7/16	5-7/32	2-3/4	7-5/16	7-15/32	10-7/32	5-1/4	4-3/16	3.98	4.18
875-528[1]	875-528C[1]	6x6x2	1/16	8-13/16	6-9/16	3-1/16	10-5/16	9-9/16	12-5/8	7-9/16	5-7/16	9.78	10.10
875-528F	875-528CF	6x6x2	1-15/16	9-3/16	8-9/16	5-3/16	10-15/16	11-13/16	17	7-1/2	2-13/16	9.36	10.07
875-530[1]	875-530C[1]	6x6x3	-1/16	8-3/8	6-11/16	3	10-1/4	9-11/16	12-5/8	7-9/16	5-3/8	9.60	9.82
875-530F	875-530CF	6x6x3	2-15/16	10-5/16	9-9/16	6-3/16	12-9/16	12-13/16	19	7-1/2	4-1/8	13.92	12.14
875-532	875-532C	6x6x4	31/32	6-9/16	5-11/16	3-15/16	8-27/32	8-23/32	12-21/32	7-9/16	5-7/16	8.61	9.22
875-578[1]	875-578C[1]	8x8x2	2	14-15/16	11-1/4	6	16-9/16	16-7/16	21-1/4	9-11/16	9-11/16	34.05	35.44
875-578F	875-578CF	8x8x2	7/8	10-1/2	9-1/2	5-1/8	12-1/4	13-3/4	18-7/8	9-5/8	2-13/16	17.93	19.12
875-579F	875-579CF	8x8x2-1/2	1-7/16	10-15/16	10-1/16	5-11/16	12-15/16	14-5/16	20	9-5/8	3-7/16	21.92	22.00
875-580F	875-580CF	8x8x3	1-15/16	11-5/8	10-9/16	6-3/16	13-7/8	14-13/16	21	9-5/8	4-1/8	21.92	18.87
875-582	875-582C	8x8x4	11/16	9-1/8	8-3/16	3-5/16	11-3/8	12-3/16	15-1/2	9-23/32	5-1/4	14.25	14.98
875-582F	875-582CF	8x8x4	2-15/16	11-7/8	11-9/16	7-3/16	14-1/8	15-13/16	23	9-5/8	5-3/16	18.50	27.78
875-585[1]	875-585C[1]	8x8x6	2	12-15/16	11-1/4	6	15-15/16	15-1/4	21-1/4	9-11/16	9-11/16	30.74	32.29
875-585F	875-585CF	8x8x6	4-15/16	13-15/16	13-9/16	9-3/16	17-3/16	17-13/16	27	9-5/8	7-1/2	32.97	34.75
875-621[1]	---	10x10x2	3-3/4	6	14-1/2	9	17-1/2	19-3/4	28-3/4	11	7-1/2	30.84	---

[1] Outlet sized with bushing

REDUCING WYE (continued)

Socket x Socket x Socket

1/2" - 2-1/2" 235 psi @ 73°F
3" - 6" 150 psi @ 73°F
8" & Up & All Fab 100 psi @ 73°F



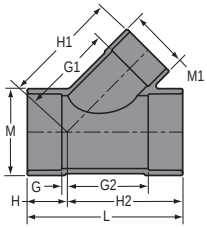
Part Number		Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
875-621F	875-621CF	10x10x2	1/4	11-7/8	10-1/2	5	13-5/8	15-3/4	20-3/4	11-15/16	2-13/16	41.46	26.48
875-622F	---	10x10x2-1/2	1/8	12-5/16	10-7/8	5-3/8	14-5/16	16-1/8	21-1/2	11-15/16	3-7/16	29.34	---
875-623[1]	---	10x10x3	7/8	12-7/8	11-5/8	6-1/8	15-1/4	16-7/8	23	12	4-1/8	30.70	---
875-623F	875-623CF	10x10x3	3/4	13	11-1/2	6	15-1/4	16-3/4	22-3/4	11-15/16	4-1/8	31.71	29.62
875-624[1]	---	10x10x4	1-7/8	10-5/8	12-5/8	7-1/8	12-1/4	17-7/8	25	12	5-3/8	30.56	---
875-624F	875-624CF	10x10x4	1-3/4	13-1/4	12-1/2	7	15-1/2	17-3/4	24-3/4	11-15/16	5-3/16	39.93	39.21
875-626	875-626C	10x10x6	-9/32	12-27/32	11-1/32	4-23/32	15-7/8	16-1/32	20-3/4	12-1/32	7-19/32	28.12	31.56
875-626F	875-626CF	10x10x6	3-3/4	15-5/16	14-1/2	9	18-9/16	19-3/4	28-3/4	11-15/16	7-1/2	42.69	29.74
875-628	875-628C	10x10x8	1-7/32	12-3/4	12-1/4	6-7/32	16-25/32	17-9/32	23-1/2	12-1/32	9-23/32	34.14	38.99
875-628F	875-628CF	10x10x8	5-1/4	17-1/4	16	10-1/2	21-1/2	21-1/4	31-3/4	11-15/16	9-5/8	55.19	56.37
875-661F	875-661CF	12x12x2	1-5/16	13-3/16	11-7/16	4-15/16	14-15/16	17-11/16	22-5/8	14-1/8	2-13/16	37.58	40.76
875-662F	---	12x12x2-1/2	15/16	13-5/8	11-13/16	5-5/16	15-5/8	18-1/16	23-3/8	14-1/8	3-7/16	43.72	---
875-663F	875-663CF	12x12x3	1/8	14-5/16	12-7/8	6-3/8	16-9/16	19-1/8	25-1/2	14-1/8	4-1/8	43.39	44.74
875-664F	875-664CF	12x12x4	5/8	14-9/16	13-3/8	6-7/8	16-13/16	19-5/8	26-1/2	14-1/8	5-3/16	48.41	49.06
875-666F	875-666CF	12x12x6	2-5/8	16-5/8	15-3/8	8-7/8	19-7/8	21-5/8	30-1/2	14-1/8	7-1/2	64.52	58.24
875-668F	875-668CF	12x12x8	4-1/4	18-9/16	17	10-1/2	22-13/16	23-1/4	33-3/4	14-1/8	9-5/8	71.04	68.98
875-670F	875-670CF	12x12x10	5-3/4	20-3/16	18-1/2	12	25-7/16	24-3/4	36-3/4	14-1/8	11-15/16	80.79	81.76
875-694F	875-694CF	14x14x4	1-1/4	15-5/16	15-1/4	8-1/4	17-9/16	22-1/4	30-1/2	15-1/2	5-3/16	68.80	63.95
875-696F	875-696CF	14x14x6	2	17-3/8	16	9	20-5/8	23	32	15-1/2	7-1/2	78.50	83.85
875-698F	875-698CF	14x14x8	4-1/4	19-5/16	18-1/4	11-1/4	23-9/16	25-1/4	36-1/2	15-1/2	9-5/8	90.50	82.78
875-700F	875-700CF	14x14x10	5-3/4	20-15/16	19-3/4	12-3/4	26-3/16	26-3/4	39-1/2	15-1/2	11-15/16	84.58	107.47
875-702F	875-702CF	14x14x12	7-1/4	22-9/16	21-1/4	14-1/4	28-13/16	28-1/4	42-1/2	15-1/2	14-1/8	108.22	115.64
875-754F	875-754CF	16x16x4	1-1/8	16-5/8	17-1/8	9-1/8	18-7/8	25-1/8	34-1/4	17-11/16	5-3/16	76.47	88.48
875-756F	875-756CF	16x16x6	1-5/8	18-11/16	17-5/8	9-5/8	21-15/16	25-5/8	35-1/4	17-11/16	7-1/2	105.73	94.93
875-758F	875-758CF	16x16x8	3-5/8	20-5/8	19-5/8	11-5/8	24-7/8	27-5/8	39-1/4	17-11/16	9-5/8	120.00	108.85
875-760F	875-760CF	16x16x10	5-1/8	22-1/4	21-1/8	13-1/8	27-1/2	29-1/8	42-1/4	17-11/16	11-15/16	123.77	137.97
875-762F	875-762CF	16x16x12	6-1/2	23-7/8	22-1/2	14-1/2	30-1/8	30-1/2	45	17-11/16	14-1/8	142.80	146.49
875-764F	875-764CF	16x16x14	7-7/8	25-1/8	23-7/8	15-7/8	32-1/8	31-7/8	47-3/4	17-11/16	15-1/2	161.25	167.10
875-784F	875-784CF	18x18x4	0	17-7/8	18	9	20-1/8	27	36	19-7/8	5-3/16	116.63	119.05
875-786F	875-786CF	18x18x6	3/8	20-1/8	18-9/16	9-3/8	23-3/8	27-9/16	36-15/16	19-7/8	7-1/2	114.13	131.59
875-788F	875-788CF	18x18x8	3	21-7/8	21	12	26-1/8	30	42	19-7/8	9-5/8	92.20	146.16
875-790F	875-790CF	18x18x10	4-1/2	23-1/2	22-1/2	13-1/2	28-3/4	31-1/2	45	19-7/8	11-15/16	164.27	163.18
875-792F	875-792CF	18x18x12	6	25-1/8	24	15	31-3/8	33	48	19-7/8	14-1/8	184.56	184.28
875-794F	875-794CF	18x18x14	7	26-3/8	25	16	33-3/8	34	50	19-7/8	15-1/2	225.00	211.65
875-796F	875-796CF	18x18x16	8-1/2	27-3/8	26-1/2	17-1/2	35-3/8	35-1/2	53	19-7/8	17-11/16	225.00	243.00
875-814F	---	20x20x4	1	19-3/16	19	9	21-7/16	29	38	22-1/16	5-3/16	142.64	---
875-816F	---	20x20x6	1/8	21-1/4	19-7/8	9-7/8	24-1/2	29-7/8	39-3/4	22-1/16	7-1/2	156.65	---

[1] Outlet sized with bushing

REDUCING WYE (continued)

Socket x Socket x Socket

1/2" - 2-1/2" 235 psi @ 73°F
3" - 6" 150 psi @ 73°F
8" & Up & All Fab 100 psi @ 73°F

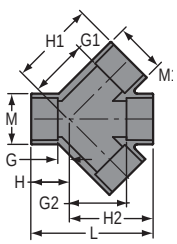


Part Number		Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
875-816F	---	20x20x6	1/8	21-1/4	19-7/8	9-7/8	24-1/2	29-7/8	39-3/4	22-1/16	7-1/2	156.65	---
875-818F	---	20x20x8	2-5/8	23-3/16	22-5/8	12-5/8	27-7/16	32-5/8	45-1/4	22-1/16	9-5/8	173.00	---
875-820F	---	20x20x10	4-1/8	24-13/16	24-1/8	14-1/8	30-1/16	34-1/8	48-1/4	22-1/16	11-15/16	190.74	---
875-822F	875-822CF	20x20x12	5-5/8	26-7/16	25-5/8	15-5/8	32-11/16	35-5/8	51-1/4	22-1/16	14-1/8	237.50	213.90
875-824F	875-824CF	20x20x14	7-1/8	27-11/16	27-1/8	17-1/8	34-11/16	37-1/8	54-1/4	22-1/16	15-1/2	243.75	239.07
875-826F	875-826CF	20x20x16	8-1/2	28-11/16	28-1/2	18-1/2	36-11/16	38-1/2	57	22-1/16	17-11/16	250.00	321.08
875-828F	---	20x20x18	10-1/8	30-11/16	30-1/8	20-1/8	39-11/16	40-1/8	60-1/4	22-1/16	19-7/8	255.62	---
875-904F	---	24x24x4	3	21-3/4	21	9	24	33	42	26-7/16	5-3/16	230.78	---
875-906F	---	24x24x6	7/8	23-13/16	23-1/8	11-1/8	27-1/16	35-1/8	46-1/4	26-7/16	7-1/2	248.89	---
875-908F	---	24x24x8	1-3/4	25-3/4	25-3/4	13-3/4	30	37-3/4	51-1/2	26-7/16	9-5/8	269.27	---
875-910F	---	24x24x10	3-1/4	27-3/8	27-1/4	15-1/4	32-5/8	39-1/4	54-1/2	26-7/16	11-15/16	291.66	---
875-912F	---	24x24x12	4-3/4	29	28-3/4	16-3/4	35-1/4	40-3/4	57-1/2	26-7/16	14-1/8	264.99	---
875-914F	---	24x24x14	6-1/4	30-1/4	30-1/4	18-1/4	37-1/4	42-1/4	60-1/2	26-7/16	15-1/2	283.70	---
875-916F	---	24x24x16	7-3/4	31-1/4	31-3/4	19-3/4	39-1/4	43-3/4	63-1/2	26-7/16	17-11/16	310.60	---
875-918F	---	24x24x18	9-1/4	33-1/4	33-1/4	21-1/4	42-1/4	45-1/4	66-1/2	26-7/16	19-7/8	255.60	---
875-920F	---	24x24x20	9-5/8	34-3/16	33-5/8	21-5/8	44-3/16	45-5/8	67-1/4	26-7/16	22-1/16	372.56	---

DOUBLE WYE

Socket x Socket x Socket x Socket

100 psi @ 73°F

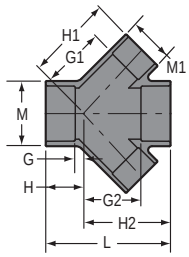


Part Number		Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
876-020F	876-020CF	2	3-7/8	6-1/4	6-1/4	5-7/16	7-13/16	7-13/16	13-3/16	2-7/8	2-7/8	2.97	3.01
876-030F	876-030CF	3	4-7/8	8-1/8	8-1/8	6-3/4	10-1/16	10-1/16	16-13/16	4-3/16	4-3/16	6.48	5.84
876-040F	876-040CF	4	4-11/16	9-3/16	9-3/16	6-15/16	11-7/16	11-7/16	18-3/8	5-3/16	5-3/16	9.74	13.33
876-060F	876-060CF	6	4-15/16	12-5/8	11-9/16	8-3/16	15-7/8	14-13/16	23	7-1/2	7-1/2	25.44	28.16
876-080F	876-080CF	8	5-1/16	15-7/8	13-11/16	9-5/16	20-1/8	17-15/16	27-1/4	9-5/8	9-5/8	48.35	55.13
876-100F	876-100CF	10	6-1/2	18-7/8	17-1/4	11-3/4	24-1/8	22-1/2	34-1/4	11-15/16	11-15/16	65.51	94.00
876-120F	876-120CF	12	7-1/8	21-13/16	19-7/8	13-3/8	28-1/16	26-1/8	39-1/2	14-1/8	14-1/8	101.98	149.15

REDUCING DOUBLE WYE

Socket x Socket x Socket x Socket

3" - 6" 150 psi @ 73°F
All Fab 100 psi @ 73°F



Part Number		Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
876-338	876-338C	3x2	3/8	4-1/4	4-13/32	2-1/4	5-3/4	5-29/32	8	4-3/16	2-7/8	2.24	2.24
876-421F	876-421CF	4x2-1/2	4-9/16	8-13/16	9-1/16	6-13/16	10-1/2	11-5/16	18-1/8	5-1/4	3-1/2	5.37	6.00
876-422F	876-422CF	4x3	4-11/16	10	9-3/16	6-15/16	11-13/16	11-7/16	18-3/8	5-3/16	5-3/16	13.87	14.00
876-528F	876-528CF	6x2	1-15/16	9-3/16	8-9/16	5-3/16	10-15/16	11-13/16	17	7-1/2	2-13/16	10.07	11.45
876-529F	876-529CF	6x2-1/2	2-7/16	9-5/8	9-1/16	5-11/16	11-5/8	12-5/16	18	7-1/2	3-7/16	13.21	14.00
876-530F	876-530CF	6x3	2-15/16	10-15/16	9-9/16	6-3/16	12-9/16	12-13/16	19	7-1/2	4-1/8	13.21	12.14
876-532F	876-532CF	6x4	3-15/16	10-9/16	10-9/16	7-3/16	12-13/16	13-13/16	21	7-1/2	5-3/16	18.77	19.78
876-578F	876-578CF	8x2	7/8	10-1/2	9-1/2	5-1/8	12-1/4	13-3/4	18-7/8	9-5/8	2-13/16	14.55	19.56
876-579F	876-579CF	8x2-1/2	1-7/16	10-15/16	10-1/16	5-11/16	12-15/16	14-5/16	20	9-5/8	3-7/16	21.92	22.00
876-580F	876-580CF	8x3	1-15/16	11-5/8	10-9/16	6-3/16	13-7/8	14-13/16	21	9-5/8	4-1/8	18.87	21.92
876-582F	876-582CF	8x4	2-15/16	11-7/8	11-9/16	7-3/16	14-1/8	15-13/16	23	9-5/8	5-3/16	20.88	24.78
876-585F	876-585CF	8x6	4-15/16	13-15/16	13-9/16	9-3/16	17-3/16	17-13/16	27	9-5/8	7-1/2	28.76	41.48
876-621F	876-621CF	10x2	1/4	11-7/8	10-1/2	5	13-5/8	15-3/4	20-3/4	11-15/16	2-13/16	26.48	26.98
876-622F	876-622CF	10x2-1/2	1/8	12-5/16	10-7/8	5-3/8	14-5/16	16-1/8	21-1/2	11-15/16	3-7/16	29.34	32.27
876-623F	876-623CF	10x3	3/4	13	11-1/2	6	15-1/4	16-3/4	22-3/4	11-15/16	4-1/8	22.67	29.62
876-624F	876-624CF	10x4	1-3/4	13-1/4	12-1/2	7	15-1/2	17-3/4	24-3/4	11-15/16	5-3/16	30.53	34.22
876-626F	876-626CF	10x6	3-3/4	15-5/16	14-1/2	9	18-9/16	19-3/4	28-3/4	11-15/16	7-1/2	40.05	46.55
876-628F	876-628CF	10x8	5-1/4	17-1/4	16	10-1/2	21-1/2	21-1/4	31-3/4	11-15/16	9-5/8	55.99	60.66
876-661F	876-661CF	12x2	1-5/16	13-3/16	11-7/16	4-15/16	14-15/16	17-11/16	22-5/8	14-1/8	2-13/16	37.58	40.76
876-662F	876-662CF	12x2-1/2	15/16	13-5/8	11-13/16	5-5/16	15-5/8	18-1/16	23-3/8	14-1/8	3-7/16	44.74	55.95
876-663F	876-663CF	12x3	1/8	14-5/16	12-7/8	6-3/8	16-9/16	19-1/8	25-1/2	14-1/8	4-1/8	43.39	44.74
876-664F	876-664CF	12x4	5/8	14-9/16	13-3/8	6-7/8	16-13/16	19-5/8	26-1/2	14-1/8	5-3/16	40.74	49.06
876-666F	876-666CF	12x6	2-5/8	16-5/8	15-3/8	8-7/8	19-7/8	21-5/8	30-1/2	14-1/8	7-1/2	68.02	58.24
876-668F	876-668CF	12x8	4-1/4	18-9/16	17	10-1/2	22-13/16	23-1/4	33-3/4	14-1/8	9-5/8	71.03	86.23
876-670F	876-670CF	12x10	5-3/4	20-3/16	18-1/2	12	25-7/16	24-3/4	36-3/4	14-1/8	11-15/16	80.79	100.26

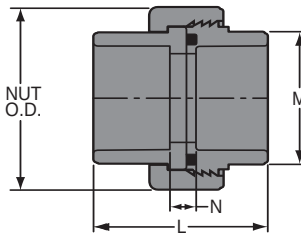
UNION (Old Style)

Socket x Socket

Dimensions Also Applicable to

897-XXX EPDM O-ring Seal Units

235 psi @ 73°F



Part Number w/FKM O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
857-002	857-002C	1/4	1-15/16	15/16	5/8	1-21/32	.09	.10
857-003	857-003C	3/8	2-5/32	1-1/32	19/32	1-25/32	.11	.11
857-005	857-005C	1/2	2-3/32	1-9/32	11/32	1-31/32	.15	.16
857-007	857-007C	3/4	2-3/8	1-17/32	11/32	2-1/2	.26	.28
857-010	857-010C	1	2-9/16	1-27/32	3/8	2-7/8	.37	.39
857-012	857-012C	1-1/4	2-7/8	2-7/32	3/8	3-5/16	.50	.52
857-015	857-015C	1-1/2	3-3/32	2-9/16	15/32	3-9/16	.60	.63
857-020	857-020C	2	3-5/8	3-1/32	9/16	4-3/16	.96	1.05
857-025	857-025C	2-1/2	4-3/8	3-5/8	15/16	4-7/8	1.51	1.66
857-030	857-030C	3	5-1/16	4-3/8	1-3/16	5-3/4	2.33	2.51
857-040	857-040C	4	5-7/8	5-13/32	1-3/8	7-1/16	3.74	3.98

1) For (Socket X Socket) Unions Equipped With EPDM O-ring, Replace The 857 With An 897 Before The Dash.
e.g. Part Number **897-002** = 1/4" PVC, Union, Socket x Socket, With **EPDM** O-rings.

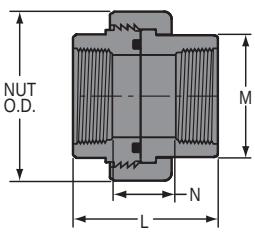
UNION (Old Style)

Fipt x Fipt

Dimensions Also Applicable to

898-XXX EPDM O-ring Seal Units

235 psi @ 73°F



Part Number w/FKM O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
858-002	858-002C	1/4	1-15/16	15/16	11/16	1-21/32	.10	.10
858-003	858-003C	3/8	2-5/32	1-1/32	15/16	1-25/32	.12	.13
858-005	858-005C	1/2	2-3/32	1-9/32	19/32	1-31/32	.16	.17
858-007	858-007C	3/4	2-3/8	1-17/32	3/4	2-1/2	.28	.30

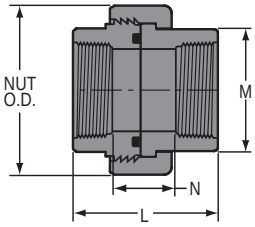
UNION (Old Style) (continued)

Fipt x Fipt

Dimensions Also Applicable to

898-XXX EPDM O-ring Seal Units

235 psi @ 73°F



Part Number w/FKM O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
858-010	858-010C	1	2-9/16	1-27/32	7/16	2-7/8	.39	.41
858-012	858-012C	1-1/4	2-7/8	2-7/32	7/8	3-5/16	.56	.61
858-015	858-015C	1-1/2	3-3/32	2-9/16	1-5/32	3-9/16	.65	.69
858-020	858-020C	2	3-5/8	3-1/32	1-11/16	4-3/16	1.05	1.13
858-025	858-025C	2-1/2	4-3/8	3-5/8	1-7/8	4-7/8	1.67	1.74
858-030	858-030C	3	5-1/16	4-3/8	1-13/16	5-3/4	2.51	2.70
858-040	858-040C	4	5-7/8	5-7/16	2-3/8	7-1/16	4.07	4.30

1) For (Fipt X Fipt) Unions Equipped With EPDM O-ring, Replace The 858 With An 898 Before The Dash.
e.g. Part Number **898-002** = 1/4" PVC, Union, Fipt x Fipt, With **EPDM** O-rings.

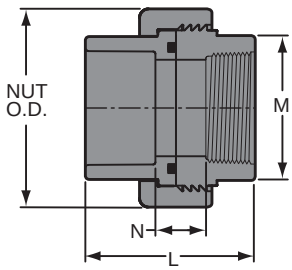
UNION (Old Style)

Socket x Fipt

Dimensions Also Applicable to

899-XXX EPDM O-ring Seal Units

235 psi @ 73°F



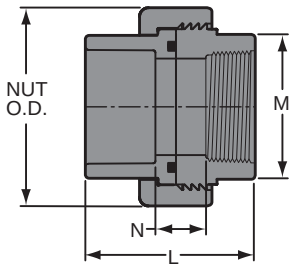
Part Number w/FKM O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
859-002	---	1/4	1-15/16	15/16	21/32	1-21/32	.08	---
859-003	---	3/8	2-5/32	1-1/32	3/4	1-25/32	.10	---
859-005	859-005C	1/2	2-3/32	1-9/32	15/32	1-31/32	.16	.17
859-007	859-007C	3/4	2-3/8	1-17/32	9/16	2-1/2	.27	.29
859-010	859-010C	1	2-9/16	1-27/32	13/32	2-7/8	.38	.40
859-012	859-012C	1-1/4	2-7/8	2-7/32	5/8	3-5/16	.52	.54
859-015	859-015C	1-1/2	3-1/8	2-19/32	27/32	3-9/16	.63	.66

UNION (Old Style) (continued)

Socket x Fipt

Dimensions Also Applicable to
899-XXX EPDM O-ring Seal Units

235 psi @ 73°F



Part Number w/FKM O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
859-020	859-020C	2	3-5/8	3-1/32	1-1/16	4-3/16	1.00	1.10
859-025	859-025C	2-1/2	4-3/8	3-5/8	1-13/32	4-7/8	1.58	1.66
859-030	859-030C	3	5-1/16	4-3/8	1-1/2	5-3/4	2.42	2.61
859-040	859-040C	4	5-7/8	5-7/16	1-7/8	7-1/16	3.91	4.13

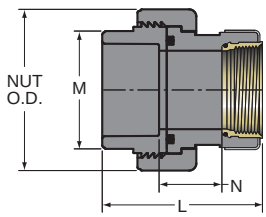
1) For (Socket X Fipt) Unions Equipped With EPDM O-ring, Replace The 859 With An 899 Before The Dash.
e.g. Part Number **899-002** = 1/4" PVC, Union, Socket x Fipt, With **EPDM** O-rings.

TRANSITION UNION

Socket x Brass Fipt Threaded Insert and FKM O-ring Seal

Dimensions Also Applicable to **899**-XXXBR EPDM O-ring Seal Units

235 psi @ 73°F



Part Number w/FKM O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
859-005BR	859-005CBR	1/2	2-1/4	1-9/32	3/4	1-31/32	.21	. 22
859-007BR	859-007CBR	3/4	2-11/16	1-17/32	15/16	2-1/2	.35	.36
859-010BR	859-010CBR	1	2-13/16	1-7/8	1-1/32	2-7/8	.52	.55
859-012BR	859-012CBR	1-1/4	3-9/32	2-7/32	1-1/16	3-5/16	.69	.71
859-015BR	859-015CBR	1-1/2	3-1/2	2-9/16	1-3/32	3-17/32	.89	.92
859-020BR	859-020CBR	2	3-5/8	2-7/8	1-1/4	4-5/16	1.60	1.64

Not intended to convey or dispense water for human consumption through drinking or cooking

1) For (Socket X Metal Fipt) Unions Equipped With EPDM O-ring, Replace The 859 With An 899 Before The Dash.
e.g. Part Number **899-010BR** = 1" PVC, Union Socket x Metal Fipt With **EPDM** O-rings.

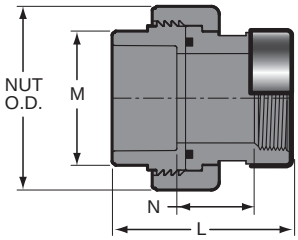
SPECIAL REINFORCED UNION (Old style)

Socket x SR Fipt

Dimensions Also Applicable to

899-XXXSR EPDM O-ring Seal Units

235 psi @ 73°F



Part Number w/FKM O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
859-002SR	859-002CSR	1/4	2-1/16	15/16	25/32	1-21/32	.09	.10
859-003SR	859-003CSR	3/8	2-9/32	1-1/32	29/32	1-25/32	.13	.15
859-005SR	859-005CSR	1/2	2-9/32	1-9/32	21/32	1-31/32	.17	.19
859-007SR	859-007CSR	3/4	2-19/32	1-17/32	25/32	2-1/2	.28	.27
859-010SR	859-010CSR	1	2-15/16	1-27/32	25/32	2-7/8	.40	.42
859-012SR	859-012CSR	1-1/4	3-5/32	2-7/32	29/32	3-5/16	.55	.59
859-015SR	859-015CSR	1-1/2	3-13/32	2-9/16	1-1/32	3-9/16	.67	.71
859-020SR	859-020CSR	2	4-3/32	3-1/32	1-19/32	4-3/16	1.12	1.21
859-030SR	859-030CSR	3	5-1/4	4-3/8	1-11/16	5-3/4	2.50	2.60
859-040SR	859-040CSR	4	5-7/8	5-13/32	2-1/8	7-3/32	3.96	4.21

1) For (Socket X SR Fipt) Unions Equipped With EPDM O-ring, Replace The 859 With An 899 Before The Dash.
e.g. Part Number **899-002SR** = 1/4" PVC, Union, Socket x SR Fipt, With **EPDM** O-rings.

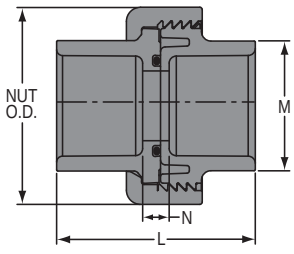
UNION 2000

Socket x Socket

Dimensions Also Applicable to

8097-XXX EPDM O-ring Seal Units

1/2" - 4" 235 psi @ 73°F
6" 150 psi @ 73°F



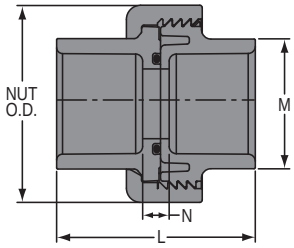
Part Number w/FKM O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
8057-005	8057-005C	1/2	2-3/32	1-3/16	11/32	1-7/8	.12	.08
8057-007	8057-007C	3/4	2-3/8	1-13/32	3/8	2-9/32	.17	.19
8057-010	8057-010C	1	2-11/16	1-23/32	7/16	2-9/16	.28	.17
8057-012	8057-012C	1-1/4	2-15/16	2-3/32	7/16	3-3/32	.36	.40

UNION 2000 (continued)

Socket x Socket

Dimensions Also Applicable to
8097-XXX EPDM O-ring Seal Units

1/2" - 4" 235 psi @ 73°F
6" 150 psi @ 73°F



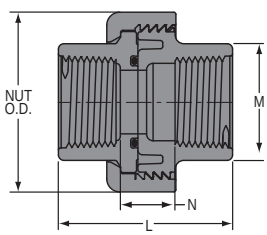
Part Number w/FKM O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
8057-015	8057-015C	1-1/2	3-1/4	2-3/8	1/2	3-1/2	.50	.51
8057-020	8057-020C	2	3-17/32	2-7/8	17/32	4-9/32	.86	.89
8057-025	8057-025C	2-1/2	4-7/32	3-1/2	25/32	6-5/32	2.14	2.25
8057-030	8057-030C	3	4-1/4	4-3/16	1/2	6-5/32	2.16	2.50
8057-040	8057-040C	4	5-1/8	5-1/4	5/8	7-3/4	3.75	3.97
8057-060	8057-060C	6	6-27/32	7-1/2	25/32	11-5/8	10.38	10.88

UNION 2000

Fipt x Fipt

Dimensions Also Applicable to
8098-XXX EPDM O-ring Seal Units

1/2" - 4" 235 psi @ 73°F
6" 150 psi @ 73°F



Part Number w/FKM O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
8058-005	8058-005C	1/2	1-29/32	1-3/16	17/32	1-7/8	.08	.08
8058-007	8058-007C	3/4	2-1/16	1-3/8	9/16	2-9/32	.17	.18
8058-010	8058-010C	1	2-17/32	1-11/16	25/32	2-9/16	.21	.11
8058-012	8058-012C	1-1/4	2-21/32	2-1/32	3/4	3-1/8	.38	.40
8058-015	8058-015C	1-1/2	2-25/32	2-3/8	29/32	3-1/2	.53	.50
8058-020	8058-020C	2	3-1/8	3	1-3/16	4-7/32	.89	.94
8058-025	8058-025C	2-1/2	4-1/32	3-9/16	1-15/32	6-5/32	1.67	1.74
8058-030	8058-030C	3	4-5/32	4-9/32	1-13/32	6-5/32	2.37	2.50
8058-040	8058-040C	4	4-21/32	5-1/4	1-21/32	7-3/4	3.59	4.03
8058-060	8058-060C	6	6-1/8	7-21/32	2-13/16	11-19/32	12.10	11.96

SPECIAL REINFORCED UNION 2000

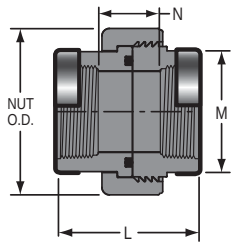
SR Fipt x SR Fipt

Dimensions Also Applicable to

8098-XXXSR EPDM O-ring Seal Units

1/2" - 4" 235 psi @ 73°F

6" 150 psi @ 73°F



Part Number w/FKM O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
8058-005SR	8058-005CSR	1/2	2	1-3/16	5/8	1-7/8	.14	.14
8058-007SR	8058-007CSR	3/4	2-5/32	1-3/8	21/32	2-9/32	.15	.20
8058-010SR	8058-010CSR	1	2-9/16	1-11/16	13/16	2-9/16	.21	.24
8058-012SR	8058-012CSR	1-1/4	2-23/32	2-1/32	13/16	3-1/8	.39	.41
8058-015SR	8058-015CSR	1-1/2	2-27/32	2-13/32	29/32	3-17/32	.59	.56
8058-020SR	8058-020CSR	2	3-7/32	3-1/32	1-3/16	4-7/32	.97	1.02
8058-025SR	8058-025CSR	2-1/2	4-3/32	3-9/16	1-15/32	6-5/32	1.66	1.73
8058-030SR	8058-030CSR	3	4-3/16	4-9/32	1-3/8	6-5/32	2.44	2.50
8058-040SR	8058-040CSR	4	4-11/16	5-1/4	1-11/16	7-3/4	3.73	4.17
8058-060SR	8058-060CSR	6	6-3/16	7-11/16	2-13/16	11-5/8	10.98	11.54

UNION 2000

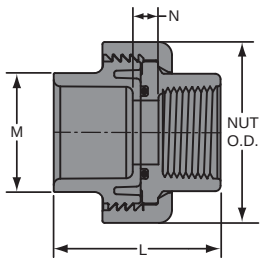
Socket x Fipt

Dimensions Also Applicable to

8099-XXX EPDM O-ring Seal Units

1/2" - 4" 235 psi @ 73°F

6" 150 psi @ 73°F



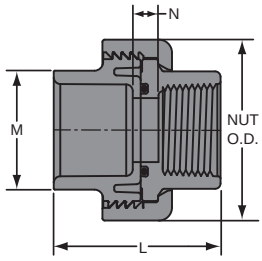
Part Number w/FKM O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
8059-005	8059-005C	1/2	1-7/8	1-3/16	5/16	1-7/8	.11	.08
8059-007	8059-007C	3/4	2-1/16	1-13/32	5/16	2-9/32	.18	.19
8059-010	8059-010C	1	2-13/32	1-23/32	13/32	2-9/16	.20	.09
8059-012	8059-012C	1-1/4	2-19/32	2-3/32	13/32	3-1/8	.35	.37
8059-015	8059-015C	1-1/2	2-13/16	2-3/8	1/2	3-1/2	.49	.50

UNION 2000 (continued)

Socket x Fipt

Dimensions Also Applicable to
8099-XXX EPDM O-ring Seal Units

1/2" - 4" 235 psi @ 73°F
6" 150 psi @ 73°F



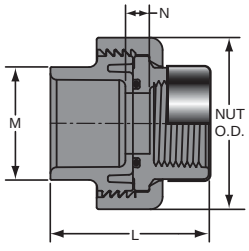
Part Number w/FKM O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
8059-020	8059-020C	2	2-31/32	2-7/8	13/32	4-9/32	.92	.96
8059-025	8059-025C	2-1/2	3-15/32	3-1/2	13/32	6-3/16	1.58	1.66
8059-030	8059-030C	3	3-25/32	4-3/16	17/32	6-5/32	2.17	2.32
8059-040	8059-040C	4	4-3/8	5-1/4	5/8	7-3/4	3.64	3.83
8059-060	8059-060C	6	6-27/32	7-1/2	1-1/2	11-5/8	11.69	11.80

UNION 2000

Socket x SR Fipt

Dimensions Also Applicable to
8099-XXXSR EPDM O-ring Seal Units

1/2" - 4" 235 psi @ 73°F
6" 150 psi @ 73°F



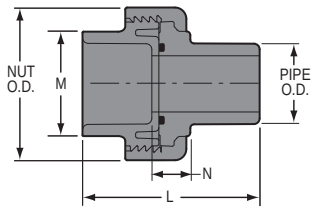
Part Number w/FKM O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
8059-005SR	8059-005CSR	1/2	1-29/32	1-3/16	11/32	1-7/8	.12	.09
8059-007SR	8059-007CSR	3/4	2-5/32	1-13/32	13/32	2-9/32	.14	.20
8059-010SR	8059-010CSR	1	2-7/16	1-23/32	7/16	2-9/16	.20	.20
8059-012SR	8059-012CSR	1-1/4	2-5/8	2-3/32	7/16	3-1/8	.37	.39
8059-015SR	8059-015CSR	1-1/2	2-13/16	2-3/8	1/2	3-1/2	.56	.56
8059-020SR	8059-020CSR	2	3	2-7/8	7/16	4-7/32	1.00	1.04
8059-025SR	8059-025CSR	2-1/2	3-27/32	3-15/32	27/32	6-3/16	2.19	2.29
8059-030SR	8059-030CSR	3	3-3/4	4-3/16	1/2	6-9/32	2.24	2.38
8059-040SR	8059-040CSR	4	4-3/8	5-1/4	5/8	7-3/4	2.81	2.95
8059-060SR	8059-060CSR	6	6-27/32	7-1/2	2-5/32	11-5/8	11.50	11.95

UNION 2000

Socket x Spigot

Dimensions Also Applicable to **8096**-XXX EPDM O-ring Seal Units

1/2" - 4" 235 psi @ 73°F
6" 150 psi @ 73°F



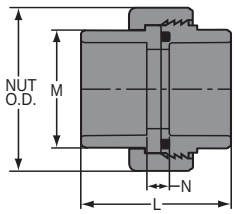
Part Number w/FKM O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						PVC	CPVC
8056-005	8056-005C	1/2	2-5/16	1-3/16	9/16	1-7/8	.12	.13
8056-007	8056-007C	3/4	2-5/8	1-3/8	21/32	2-9/32	.19	.21
8056-010	8056-010C	1	2-15/16	1-23/32	5/8	2-9/16	.29	.30
8056-012	8056-012C	1-1/4	3-7/32	2-3/32	11/16	3-3/16	.41	.41
8056-015	8056-015C	1-1/2	3-1/2	2-3/8	11/16	3-9/16	.50	.54
8056-020	8056-020C	2	3-3/4	2-7/8	3/4	4-5/16	.81	.85
8056-025	8056-025C	2-1/2	4-21/32	3-15/32	1-5/32	6-5/32	2.23	2.30
8056-030	8056-030C	3	4-25/32	4-5/32	7/32	6-5/32	2.28	2.40
8056-040	8056-040C	4	5-5/8	5-1/4	1-1/8	7-23/32	3.95	4.04
8056-060	8056-060C	6	7-3/4	7-9/16	1-1/2	11-11/16	11.84	12.68

PVC TRANSITION UNION

DIN (mm) Socket x ASTM (in) Socket

Dimensions Also Applicable to **8697**-XXX EPDM O-ring Seal Units

235 psi @ 73°F
(PN 16 @ 22°C)



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8657-020	20mm x 1/2	2-1/16	1-9/32	5/16	1-31/32	.16
8657-025	25mm x 3/4	2-11/32	1-17/32	11/32	2-1/2	.27
8657-032	32mm x 1	2-9/16	1-27/32	3/8	2-7/8	.37
8657-040	40mm x 1-1/4	2-7/8	2-7/32	3/8	3-5/16	.52
8657-050	50mm x 1-1/2	3-1/8	2-9/16	5/16	3-9/16	.59
8657-063	63mm x 2	3-5/8	3-1/32	9/16	4-3/16	.94
8657-090	90mm x 3	5-1/16	4-3/8	1-3/16	5-3/4	2.31
8657-110	110mm x 4	5-7/8	5-7/16	1-3/8	7-1/16	3.91

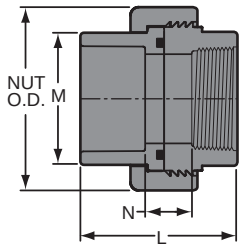
1) For DIN (mm) Socket X ASTM (in) Socket Unions Equipped with EPDM O-ring, Replace The 8657 With An 8697 Before The Dash.
e.g. Part Number **8697-020** = 20mm x 1/2" PVC, Union Socket x Socket With **EPDM** O-rings.

PVC TRANSITION UNION

DIN (mm) Socket x ASTM (in) Fipt

Dimensions Also Applicable to **8698**-XXX EPDM O-ring Seal Units

235 psi @ 73°F
(PN 16 @ 22°C)



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8658-020	20 mm x 1/2	2-3/32	1-9/32	19/32	1-31/32	.16
8658-025	25mm x 3/4	2-3/8	1-17/32	3/4	2-1/2	.28
8658-032	32mm x 1	2-9/16	1-27/32	7/16	2-7/8	.38
8658-040	40mm x 1-1/4	2-7/8	2-7/32	7/8	3-5/16	.56
8658-050	50mm x 1-1/2	3-3/32	2-9/16	1-5/32	3-9/16	.61
8658-063	63mm x 2	3-9/16	3-1/32	1-5/8	4-3/16	.99
8658-090	90mm x 3	5-1/16	4-3/8	1-13/16	5-3/4	2.41
8658-110	110mm x 4	5-7/8	5-7/16	2-3/8	7-1/16	4.07

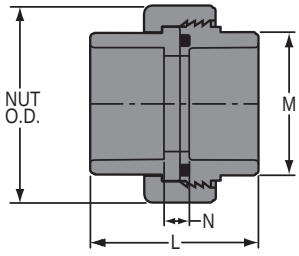
1) For DIN (mm) Socket X NPT (in) Fipt Unions Equipped with EPDM O-ring, Replace The 8658 With An 8698 Before The Dash.
e.g. Part Number **8698-020** = 20mm x 1/2" PVC, Union, DIN Socket x ASTM Fipt With **EPDM** O-rings.

PVC TRANSITION UNION

JIS (mm) Socket X ASTM (in) Socket

Dimensions Also Applicable to **8297**-XXX EPDM O-ring Seal Units

235 psi @ 73°F
(PN 16 @ 22°C)



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8257-016	16 DN x 1/2	2-1/16	1-9/32	5/16	1-31/32	.15
8257-020	20 DN x 3/4	2-3/8	1-17/32	5/16	2-1/2	.26
8257-025	25 DN x 1	2-9/16	1-27/32	3/8	2-7/8	.37
8257-030	30 DN x 1-1/4	2-15/16	2-3/32	7/16	3-3/16	.42
8257-040	40 DN x 1-1/2	3-1/8	2-9/16	5/16	3-9/16	.61
8257-050	50 DN x 2	3-5/8	3-1/32	9/16	4-3/16	.97
8257-075	75 DN x 3	5-1/16	4-3/8	1-3/16	5-3/4	2.34
8257-100	100 DN x 4	5-7/8	5-13/32	1-11/32	7-1/8	3.75

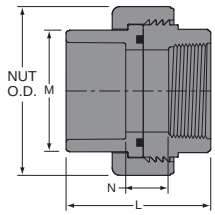
1) For JIS (mm) Socket X ASTM (in) Socket Unions Equipped with EPDM O-ring, Replace The 8257 With An 8297 Before The Dash.
e.g. Part Number **8297-016** = 16mm x 1/2" PVC, Union, JIS Socket x ASTM Socket With **EPDM** O-rings.

PVC TRANSITION UNION

JIS (mm) Socket X ASTM (in) Fipt

Dimensions Also Applicable to **8298**-XXX EPDM O-ring Seal Units

235 psi @ 73°F
(PN 16 @ 22°C)



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8258-016	16 DN x 1/2	2-3/32	1-9/32	19/32	1-31/32	.16
8258-020	20 DN x 3/4	2-3/8	1-17/32	3/4	2-1/2	.27
8258-025	25 DN x 1	2-25/32	1-23/32	13/16	2-21/32	.38
8258-030	30 DN x 1-1/4	2-7/8	2-7/32	7/8	3-5/16	.57
8258-040	40 DN x 1-1/2	3-1/8	2-17/32	25/32	3-17/32	.63
8258-050	50 DN x 2	3-11/16	2-7/8	1-7/32	4-9/32	1.02
8258-075	75 DN x 3	5-1/16	4-3/8	1-13/16	5-3/4	2.43
8258-100	100 DN x 4	5-7/8	5-7/16	2-3/8	7-1/16	3.96

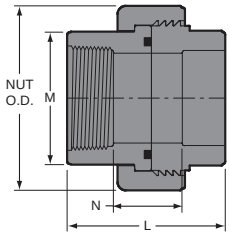
1) For JIS (mm) Socket X ASTM (in) Fipt Unions Equipped with EPDM O-ring, Replace The 8258 With An 8298 Before The Dash.
e.g. Part Number **8298-016** = 16dn x 1/2" PVC, Union, JIS Socket x ASTM Fipt With **EPDM** O-rings.

PVC TRANSITION UNION

BSP Threaded x ASTM (in) Socket

Dimensions Also Applicable to **8399**-XXX EPDM O-ring Seal Units

235 psi @ 73°F
(PN 16 @ 22°C)



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8359-005	1/2	1-29/32	1-3/16	13/32	1-15/16	.12
8359-007	3/4	2-3/8	1-17/32	9/16	2-1/2	.27
8359-010	1	2-9/16	1-27/32	13/32	2-7/8	.38
8359-012	1-1/4	2-5/8	2-1/4	7/16	3-3/16	.37
8359-015	1-1/2	3-3/32	2-9/16	23/32	3-9/16	.62
8359-020	2	3-1/32	3	17/32	4-1/4	.85
8359-030	3	5	4-3/8	1-11/16	5-25/32	2.43
8359-040	4	5-7/8	5-7/16	1-7/8	7-1/16	3.84

1) For BSP Threaded X ASTM (in) Socket Unions Equipped with EPDM O-ring, Replace The 8359 With An 8399 Before The Dash.
e.g. Part Number **8399-005** = 1/2" PVC, Union, BSP Thread x ASTM Socket With **EPDM** O-rings.

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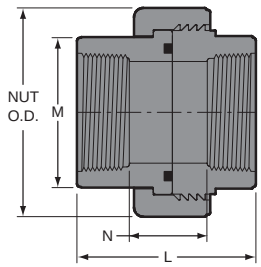
PVC TRANSITION UNION

BSP Threaded x ASTM (in.) Fipt

Dimensions Also Applicable to

8398-XXX EPDM O-ring Seal Units

235 psi @ 73°F
(PN 16 @ 22°C)



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8358-005	1/2	2-3/32	1-9/32	19/32	1-31/32	.16
8358-007	3/4	2-3/8	1-17/32	27/32	2-1/2	.28
8358-010	1	2-9/16	1-27/32	7-16	2-7/8	.39
8358-012	1-1/4	2-23/32	2-1/32	27/32	3-3/16	.40
8358-015	1-1/2	3-3/32	2-9/16	1-5/32	3-9/16	.64
8358-020	2	3-9/16	3-1/32	1-5/8	4-3/16	1.05
8358-030	3	5-1/32	4-11/32	1-15/16	5-25/32	2.52
8358-040	4	5-7/8	5-7/16	2-3/8	7-1/16	4.00

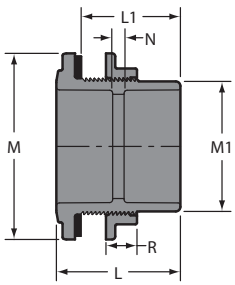
1) For BSP Threaded X ASTM Fipt Unions Equipped with EPDM O-ring, Replace The 8358 With An 8398 Before The Dash.
e.g. Part Number **8398-005** = 1/2" PVC, Union, BSP Thread x ASTM Fipt With **EPDM** O-rings.

NEW STYLE - TANK ADAPTER

Socket x Socket

Dimensions Also Applicable to 8170**E**-XXX & 8170**V**-XXX

150 psi @ 73°F



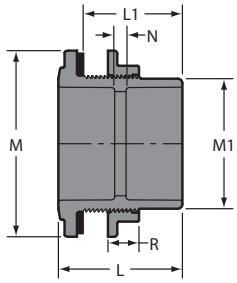
Part Number		Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
8170-002	8170-002C	1/4	2-1/2	1-13/16	1-1/2	1-1/16	1-3/16	1/2	.10	.11
8170-003	8170-003C	3/8	2-1/2	1-27/32	1-5/8	31/32	7/8	1/2	.11	.12
8170-005	8170-005C	1/2	2-15/16	2-3/16	2-1/16	1-3/16	1-1/8	5/8	.22	.23
8170-007	8170-007C	3/4	2-15/16	2-3/16	2-1/4	1-5/8	15/16	5/8	.26	.27
8170-010	8170-010C	1	3-5/16	2-9/16	2-5/8	2	1-1/16	5/8	.37	.41
8170-012	8170-012C	1-1/4	3-7/16	2-5/8	3-1/8	2-5/16	15/16	5/8	.42	.45

NEW STYLE - TANK ADAPTER (continued)

Socket x Socket

Dimensions Also Applicable to 8170**E**-XXX & 8170**V**-XXX

150 psi @ 73°F



Part Number		Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
8170-015	8170-015C	1-1/2	3-5/8	2-13/16	3-5/8	2-11/16	13/16	5/8	.98	1.04
8170-020	8170-020C	2	4-1/8	3-1/4	4-7/8	3-1/4	1-1/16	3/4	1.28	1.33
8170-025	8170-025C	2-1/2	4-27/32	3-7/8	5-1/4	3-9/16	29/32	1	1.79	2.60
8170-030	8170-030C	3	5-1/2	4-1/2	6	4-9/16	1-11/16	1	2.62	2.69
8170-040	8170-040C	4	5	4	7-1/2	5-1/2	7/16	1-1/4	3.13	3.40
8170-080	8170-080C	8	8-5/8	7	12-15/16	10-1/4	1/2	1-1/2	16.02	17.30

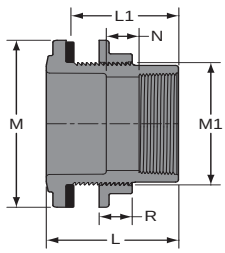
Tank Adapter Referenced Dimension Tolerance = ± 1/16"

NEW STYLE - TANK ADAPTER

Socket x Fipt

Dimensions Also Applicable to 8171**E**-XXX & 8171**V**-XXX

150 psi @ 73°F



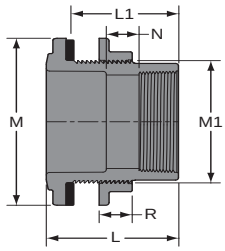
Part Number		Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
8171-002	8171-002C	1/4	2-1/2	1-13/16	1-1/2	1-1/16	1-1/4	1/2	.10	.11
8171-003	8171-003C	3/8	2-1/2	1-13/16	1-5/8	1-3/16	1-3/16	1/2	.11	.12
8171-005	8171-005C	1/2	2-15/16	2-3/16	2-1/16	1-3/16	1-1/4	5/8	.22	.23
8171-007	8171-007C	3/4	2-15/16	2-15/32	2-1/4	1-5/8	1-3/16	5/8	.25	.26
8171-010	8171-010C	1	3-5/16	2-13/16	2-5/8	1-31/32	1-1/4	5/8	.36	.38
8171-012	8171-012C	1-1/4	3-13/32	2-27/32	3-3/32	2-5/16	1-17/32	5/8	.50	.53
8171-015	8171-015C	1-1/2	3-5/8	2-13/16	3-5/8	2-11/16	1-1/4	5/8	.67	.71
8171-020	8171-020C	2	4-1/8	3-1/4	4-7/8	3-1/4	1-5/8	3/4	1.32	1.34

NEW STYLE - TANK ADAPTER (continued)

Socket x Fipt

Dimensions Also Applicable to 8171**E**-XXX & 8171**V**-XXX

150 psi @ 73°F



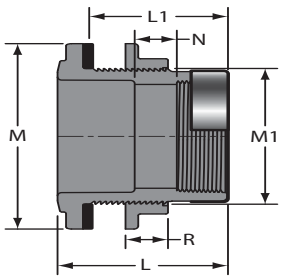
Part Number		Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
8171-025	8171-025C	2-1/2	4-7/8	7/8	5-1/4	3-13/16	1-13/16	1	1.78	1.92
8171-030	8171-030C	3	5-1/2	4-1/2	6	4-9/16	2-3/16	1	2.61	2.80
8171-040	8171-040C	4	5	4	7-1/2	5-1/2	1-1/4	1-1/4	3.24	3.36
8171-060	8171-060C	6	4-31/32	4-1/16	10-1/16	7-11/16	1/16	1-1/4	5.65	5.92

NEW STYLE - TANK ADAPTER

Socket x SR Fipt

Dimensions Also Applicable to 8171**E**-XXXSR & 8171**V**-XXXSR

150 psi @ 73°F



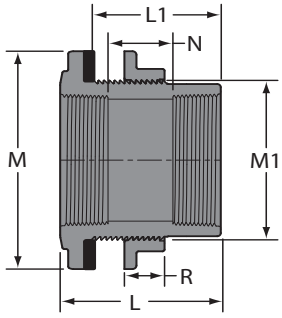
Part Number		Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
8171-002SR	8171-002CSR	1/4	2-1/2	1-13/16	1-1/2	1-1/16	1-1/4	1/2	.11	.11
8171-003SR	8171-003CSR	3/8	2-1/2	1-13/16	1-5/8	1-3/16	1-3/16	1/2	.12	.13
8171-005SR	8171-005CSR	1/2	2-15/16	2-1/4	2-1/16	1-7/32	1-9/32	5/8	.22	.24
8171-007SR	8171-007CSR	3/4	2-15/16	2-3/16	2-1/4	1-5/8	1-1/4	5/8	.26	.28
8171-010SR	8171-010CSR	1	3-5/16	2-13/16	2-5/8	1-31/32	1-1/4	5/8	.36	.38
8171-012SR	8171-012CSR	1-1/4	3-13/32	2-5/8	3-3/32	2-5/16	1-17/32	5/8	.50	.53
8171-015SR	8171-015CSR	1-1/2	3-5/8	2-13/16	3-5/8	2-11/16	1-1/4	5/8	.70	.74
8171-020SR	8171-020CSR	2	4-1/8	3-1/4	4-7/8	3-1/4	1-5/8	3/4	1.36	1.70
8171-025SR	8171-025CSR	2-1/2	4-7/8	3-7/8	5-1/4	3-13/16	1-11/16	1	1.90	1.99
8171-030SR	8171-030CSR	3	5-1/2	4-1/2	6	4-9/16	2-3/16	1	2.78	2.82
8171-040SR	8171-040CSR	4	5	4	7-1/2	5-1/2	1-1/4	1-1/4	3.60	4.45
8171-060SR	8171-060CSR	6	4-31/32	4-1/16	10-1/16	7-11/16	1/16	1-1/4	5.74	6.02

NEW STYLE - TANK ADAPTER

Fipt x Fipt

Dimensions Also Applicable to 8172**E**-XXX & 8172**V**-XXX

150 psi @ 73°F



Part Number		Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
8172-002	8172-002C	1/4	2-1/2	1-13/16	1-1/2	1-1/16	1-5/16	1/2	.10	.11
8172-003	8172-003C	3/8	2-1/2	1-13/16	1-5/8	1-3/16	1-3/8	1/2	.13	.14
8172-005	8172-005C	1/2	2-15/16	2-3/16	2-1/16	1-3/16	1-13/32	5/8	.23	.24
8172-007	8172-007C	3/4	2-15/16	2-15/32	2-1/4	1-5/8	1-1/2	5/8	.25	.26
8172-010	8172-010C	1	3-5/16	2-13/16	2-5/8	1-31/32	1-1/4	5/8	.36	.38
8172-012	8172-012C	1-1/4	3-13/32	2-27/32	3-3/32	2-5/16	1-17/32	5/8	.50	.53
8172-015	8172-015C	1-1/2	3-19/32	3-1/16	3-19/32	2-21/32	1-11/16	5/8	.68	.72
8172-020	8172-020C	2	4-1/8	3-1/4	4-7/8	3-1/4	2-3/16	3/4	1.34	1.42
8172-025	8172-025C	2-1/2	4-7/8	3-7/8	5-1/4	3-13/16	2-1/4	1	1.91	2.06
8172-030	8172-030C	3	5-1/2	4-1/2	6	4-9/16	2-11/16	1	2.80	2.95
8172-040	8172-040C	4	5	4	7-1/2	5-1/2	2	1-1/4	3.53	3.70
8172-060	8172-060C	6	5	4-3/16	9-7/8	7-31/32	1-5/32	1-1/4	5.90	6.21





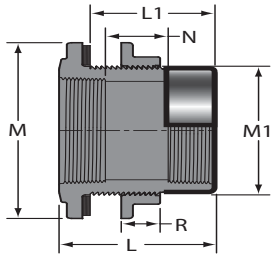


NEW STYLE - TANK ADAPTER

Fipt x SR Fipt

Dimensions Also Applicable to 8172**E**-XXXSR & 8172**V**-XXXSR

150 psi @ 73°F



Part Number		Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
8172-002SR	8172-002CSR	1/4	2-1/2	1-7/8	1-9/16	1-1/16	1-5/16	1/2	.12	.13
8172-003SR	8172-003CSR	3/8	2-1/2	1-13/16	1-5/8	1-3/16	1-3/8	1/2	.14	.15
8172-005SR	8172-005CSR	1/2	2-15/16	2-3/16	2-1/16	1-7/32	1-13/32	5/8	.24	.25
8172-007SR	8172-007CSR	3/4	2-15/16	2-15/32	2-1/4	1-5/8	1-3/16	5/8	.26	.25
8172-010SR	8172-010CSR	1	3-15/16	2-19/32	2-5/8	1-31/32	1-1/4	5/8	.38	.36
8172-012SR	8172-012CSR	1-1/4	3-13/32	2-27/32	3-3/32	2-5/16	1-17/32	5/8	.50	.53
8172-015SR	8172-015CSR	1-1/2	3-5/8	2-13/16	3-5/8	2-11/16	1-3/4	5/8	.73	.77
8172-020SR	8172-020CSR	2	4-1/8	3-1/4	4-27/32	3-1/32	2-1/8	3/4	1.34	1.41
8172-025SR	8172-025CSR	2-1/2	4-7/8	3-7/8	5-1/4	3-13/16	2-1/4	1	1.97	2.11
8172-030SR	8172-030CSR	3	5-15/32	4-17/32	5-31/32	4-17/32	2-21/32	1	2.87	3.02
8172-040SR	8172-040CSR	4	5	4	7-1/2	5-1/2	2	1-1/4	3.61	3.80

TANK ADAPTER GASKET SECTION	SIZE	O.D.*	I.D.*	T
	1/4	1.49	0.99	1/4
	3/8	1.62	1.12	1/4
	1/2	1.98	1.41	1/4
	3/4	2.20	1.57	1/4
	1	2.60	1.90	1/4
	1-1/4	3.04	2.23	1/4
	1-1/2	3.54	2.57	1/4
	2	4.76	3.15	1/4
	2-1/2	5.13	3.70	1/4
	3	5.86	4.39	1/4
	4	7.34	5.31	1/4
	6	9.85	7.95	3/16
	8	12.70	9.94	3/8

New Style Tank Adapter Gasket & Hole Size Requirements

Tank Adapter Size	Recommended Minimum Hole Size	Minimum Inside Curvature Radius (inches)	Maximum Tank Wall Thickness (inches)
1/4	1-1/16	2.50	.50
3/8	1-3/16	3.00	.50
1/2	1-1/2	4.00	.75
3/4	1-3/4	5.00	.75
1	2	7.00	.86
1-1/4	2-3/8	9.50	.86
1-1/2	2-3/4	12.00	.86
2	3-3/8	18.50	1.19
2-1/2	3-7/8	23.50	1.50
3	4-5/8	32.50	2.00
4	5-1/2	43.50	1.25
6	8	79.50	2.06
8	10-3/8	98.00	4.25

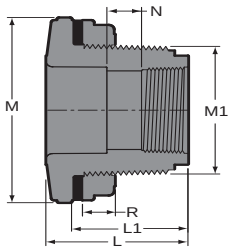
*** Both outside and inside dimensions are +/- .01 to .03 shore hardness 50-60**

OLD STYLE - TANK ADAPTER

Socket x Fipt

Dimensions Also Applicable to 871**E**-XXX

150 psi @ 73°F



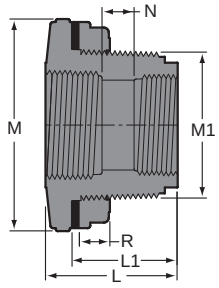
Part Number		Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
871-005	871-005C	1/2	2-27/32	2-11/32	2-9/32	1-9/32	1-3/8	5/8	.24	.26
871-007	871-007C	3/4	2-23/32	2-7/32	2-1/2	1-5/8	29/32	5/8	.30	.32
871-010	871-010C	1	2-25/32	2-1/8	2-13/16	1-7/8	25/32	21/32	.34	.34
871-012	871-012C	1-1/4	3-1/8	2-7/16	3-29/32	2-11/32	27/32	5/8	.64	.63
871-015	871-015C	1-1/2	3-5/32	2-21/32	3-29/32	2-11/32	3/4	5/8	.55	.59
871-020	871-020C	2	3-3/16	2-17/32	4-31/32	3-15/32	13/16	3/4	1.33	1.43
871-030	871-030C	3	4-19/32	3-13/16	6-7/16	4-15/32	31/32	1-3/16	2.47	2.63
871-040	871-040C	4	4-7/16	3-23/32	7-7/16	5-1/2	1/2	1-1/4	3.17	3.37

OLD STYLE - TANK ADAPTER

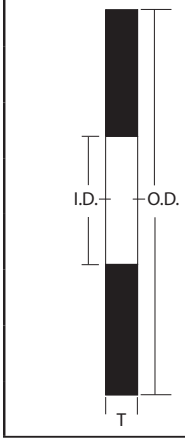
Fipt x Fipt

Dimensions Also Applicable to 872**E**-XXX

150 psi @ 73°F



Part Number		Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
872-005	872-005C	1/2	2-27/32	2-11/32	2-9/32	1-9/32	1-13/32	5/8	.24	.26
872-007	872-007C	3/4	2-23/32	2-1/4	2-1/2	1-5/8	1-5/32	5/8	.31	.32
872-010	872-010C	1	2-25/32	2-5/16	2-13/16	1-7/8	25/32	5/8	.36	.38
872-012	872-012C	1-1/4	3-1/8	2-5/8	3-27/32	2-11/32	1-1/8	5/8	.67	.65
872-015	872-015C	1-1/2	3-1/8	2-5/8	3-29/32	2-11/32	1-1/16	5/8	.58	.61
872-020	872-020C	2	3-5/32	2-3/8	5-1/16	3-7/16	1-5/32	3/4	1.35	1.42
872-030	872-030C	3	4-19/32	3-13/16	6-7/16	4-15/32	1-11/32	1-3/16	2.56	2.61
872-040	872-040C	4	4-7/16	3-1/2	7-1/2	5-1/2	15/16	1-1/4	3.34	3.47

TANK ADAPTER GASKET SECTION	SIZE	O.D.*	I.D.*	T
	1/2	2.25	1.33	3/16
	3/4	2.49	1.69	3/16
	1	2.79	1.94	3/16
	1-1/4	3.81	2.39	3/16
	1-1/2	3.81	2.39	3/16
	2	4.89	3.51	3/16
	3	6.30	4.49	3/16
	4	7.33	5.50	3/16

Old Style Tank Adapter Gasket & Hole Size Requirements

Tank Adapter Size	Recommended Minimum Hole Size	Minimum Inside Curvature Radius (inches)	Maximum Tank Wall Thickness (inches)
1/2	1-3/8	3.88	1.06
3/4	1-3/4	5.00	1.06
1	2	6.12	1.06
1-1/4	2-7/16	10.75	1.34
1-1/2	2-7/16	10.75	1.34
2	3-9/16	18.50	1.16
3	4-9/16	31.00	1.75
4	5-9/16	42.75	1.81

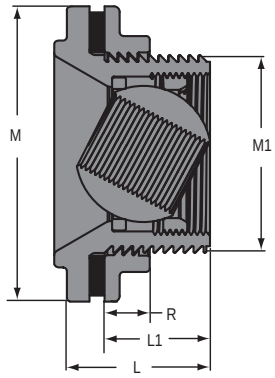
*** Both outside and inside dimensions are +/- .03 shore hardness 65-70**

SELF ALIGNING TANK ADAPTER

Fipt

Dimensions Also Applicable to 8172**ESA**-XXX & 8172**VSA**-XXX

75 psi @ 73°F



Part Number		Size	L	L1	M	M1	R	Approx. Wt. (Lbs.)	
PVC	CPVC							PVC	CPVC
8172SA-010	8172SA-010C	1	2-9/16	1-3/4	4-7/8	3-1/4	3/4	1.11	1.23
8172SA-020	8172SA-020C	2	2-11/16	1-3/4	6	4-9/16	1	1.99	2.09
8172SA-030	8172SA-030C	3	3-1/4	2-1/4	7-1/2	5-1/2	1-1/4	2.61	2.97

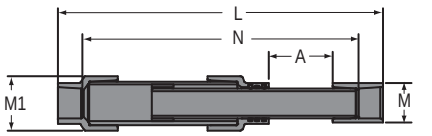
FABRICATED EXPANSION JOINTS WITH 6" & 12" TRAVEL

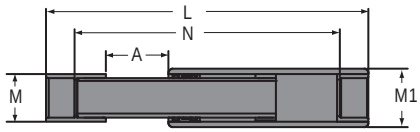
Socket x Socket

1/2" - 2" 235 psi @ 73°F
2-1/2" & 12" 150 psi @ 73°F
14" 100 psi @ 73°F

Note: "A" = midpoint of extension

Sizes 1/2", 3/4" & 1" Configuration





Sizes 1-1/4" & Up Configuration

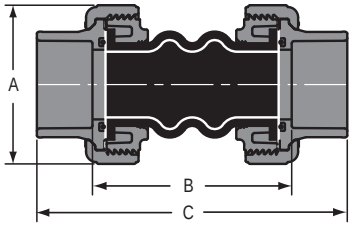
Part Number		Size	A	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC							PVC	CPVC
826-005x6	826-005x6C	1/2	3	13-11/16	1-9/32	1-23/32	11-15/16	.50	.55
826-007x6	826-007x6C	3/4	3	14-13/16	1-1/2	2-1/16	12-13/16	1.00	1.10
826-010x6	826-010x6C	1	3	15-15/16	1-23/32	2-11/32	13-11/16	1.00	1.10
826-012x6	826-012x6C	1-1/4	3	15-3/4	2-7/32	2-3/8	13-3/8	1.50	1.65
826-015x6	826-015x6C	1-1/2	3	16-1/8	2-11/32	2-7/8	13-7/16	2.00	2.20
826-020x6	826-020x6C	2	3	16-15/16	2-7/8	3-1/2	13-15/16	3.00	3.30
826-025x6	826-025x6C	2-1/2	3	18-7/8	4-3/16	4-1/2	14-7/8	6.00	6.60
826-030x6	826-030x6C	3	3	18-3/4	4-3/16	4-1/2	15-1/4	6.00	6.60
826-040x6	826-040x6C	4	3	19-3/4	5-5/16	5-9/16	15-3/16	7.00	7.70
826-060x6	826-060x6C	6	3	22-3/4	7-11/16	8-5/8	16-3/4	26.50	29.15
826-080x6	826-080x6C	8	3	27-1/4	9-11/16	10-3/4	19-1/4	40.50	44.55
826-100x6	826-100x6C	10	3	35-7/8	11-13/16	12-3/4	25-7/8	67.00	73.70
826-120x6	826-120x6C	12	3	39-1/2	14-1/8	16	27-1/2	134.00	147.40
826-140x6	---	14	3	49-3/4	15-5/8	16	34-7/8	104.27	---

Part Number		Size	A	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC							PVC	CPVC
826-005x12	826-005x12C	1/2	6	16-11/16	1-9/32	1-23/32	14-15/16	.57	.63
826-007x12	826-007x12C	3/4	6	17-13/16	1-1/2	2-1/16	15-13/16	1.14	1.26
826-010x12	826-010x12C	1	6	18-15/16	1-23/32	2-11/32	16-11/16	1.14	1.26
826-012x12	826-012x12C	1-1/4	6	18-3/4	2-7/32	2-3/8	16-3/8	1.71	1.88
826-015x12	826-015x12C	1-1/2	6	19-1/8	2-11/32	2-7/8	16-7/16	2.28	2.51
826-020x12	826-020x12C	2	6	19-15/16	2-7/8	3-1/2	16-15/16	3.43	3.77
826-025x12	826-025x12C	2-1/2	6	21-7/8	4-3/16	4-1/2	17-7/8	6.85	7.54
826-030x12	826-030x12C	3	6	21-3/4	4-3/16	4-1/2	18-1/4	6.85	7.54
826-040x12	826-040x12C	4	6	22-3/4	5-5/16	5-9/16	18-3/16	8.00	8.80
826-060x12	826-060x12C	6	6	25-3/4	7-11/16	8-5/8	19-3/4	30.27	33.30
826-080x12	826-080x12C	8	6	30-1/4	9-11/16	10-3/4	22-1/4	46.26	50.89
826-100x12	826-100x12C	10	6	38-7/8	11-13/16	12-3/4	28-7/8	76.53	84.19
826-120x12	826-120x12C	12	6	42-1/2	14-1/8	16	30-1/2	153.07	141.22
826-140x12	---	14	6	52-3/4	15-5/8	16	37-7/8	159.00	---

ELASTOMER EXPANSION JOINT WITH NEOPRENE BELLOWS

Socket x Socket

150 psi @ 73°F

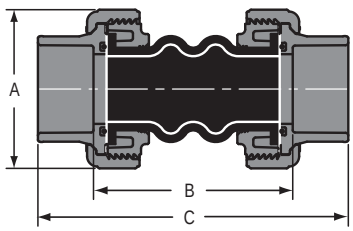


Part Number		Size	A	B	C	MAXIMUM MOVEMENTS				Approx. Wt. (Lbs.)	
PVC	CPVC					COMPRESSION	EXTENSION	LATERAL	ANGULAR	PVC	CPVC
EJ02-007	---	3/4	2-1/4	6-3/8	8-3/8	7/8	1/4	7/8	35°	.50	---
EJ02-010	---	1	2-9/16	5-15/16	8-3/16	7/8	1/4	7/8	25°	.71	---
EJ02-012	---	1-1/4	3-1/8	6-1/16	8-9/16	7/8	1/4	7/8	25°	.70	---
EJ02-015	---	1-1/2	3-9/16	5-7/8	8-5/8	7/8	1/4	7/8	20°	1.07	---
EJ02-020	---	2	4-3/16	5-7/16	8-7/16	7/8	1/4	7/8	15°	1.54	---
EJ20-025	---	2-1/2	6-1/8	6-3/16	9-3/4	7/8	1/4	7/8	15°	4.49	---
EJ02-030	---	3	6-1/8	6-3/16	10	7/8	1/4	7/8	15°	4.71	---

ELASTOMER EXPANSION JOINT WITH EPDM BELLOWS

Socket x Socket

150 psi @ 73°F

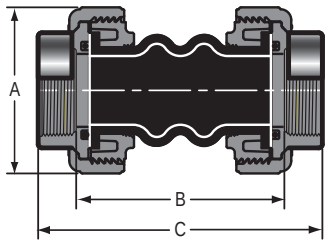


Part Number		Size	A	B	C	MAXIMUM MOVEMENTS				Approx. Wt. (Lbs.)	
PVC	CPVC					COMPRESSION	EXTENSION	LATERAL	ANGULAR	PVC	CPVC
EJ22-007	EJ22-007C	3/4	2-1/4	6-3/8	8-3/8	7/8	1/4	7/8	35°	.32	.39
EJ22-010	EJ22-010C	1	2-9/16	5-15/16	8-3/16	7/8	1/4	7/8	25°	.70	.81
EJ22-012	EJ22-012C	1-1/4	3-1/8	6-1/16	8-9/16	7/8	1/4	7/8	25°	.81	.84
EJ22-015	EJ22-015C	1-1/2	3-9/16	5-7/8	8-5/8	7/8	1/4	7/8	20°	1.03	1.07
EJ22-020	EJ22-020C	2	4-3/16	5-7/16	8-7/16	7/8	1/4	7/8	15°	1.54	1.61
EJ22-025	EJ22-025C	2-1/2	6-1/8	6-3/16	9-3/4	7/8	1/4	7/8	15°	4.49	4.77
EJ22-030	EJ22-030C	3	6-1/8	6-3/16	10	7/8	1/4	7/8	15°	4.81	5.04

ELASTOMER EXPANSION JOINT WITH NEOPRENE BELLOWS

SR Fipt x SR Fipt

150 psi @ 73°F

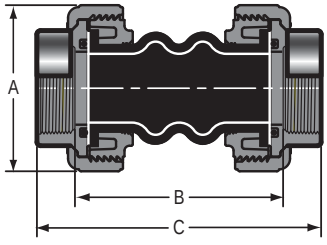


Part Number		Size	A	B	C	MAXIMUM MOVEMENTS				Approx. Wt. (Lbs.)	
PVC	CPVC					COMPRESSION	EXTENSION	LATERAL	ANGULAR	PVC	CPVC
EJ01-007SR	---	3/4	2-1/4	6-3/8	7-3/16	7/8	1/4	7/8	35°	.51	---
EJ01-010SR	---	1	2-9/16	6	7-3/4	7/8	1/4	7/8	25°	.73	---
EJ01-012SR	---	1-1/4	3-1/8	6-1/16	7-15/16	7/8	1/4	7/8	25°	.73	---
EJ01-015SR	---	1-1/2	3-9/16	5-7/8	7-3/4	7/8	1/4	7/8	20°	1.15	---
EJ01-020SR	---	2	4-3/16	5-7/16	7-3/8	7/8	1/4	7/8	15°	1.58	---
EJ01-025SR	---	2-1/2	6-1/8	6-3/16	9	7/8	1/4	7/8	15°	4.63	---
EJ01-030SR	---	3	6-1/8	6-3/16	9	7/8	1/4	7/8	15°	4.84	---

ELASTOMER EXPANSION JOINT WITH EPDM BELLOWS

SR Fipt x SR Fipt

150 psi @ 73°F



Part Number		Size	A	B	C	MAXIMUM MOVEMENTS				Approx. Wt. (Lbs.)	
PVC	CPVC					COMPRESSION	EXTENSION	LATERAL	ANGULAR	PVC	CPVC
EJ21-007SR	EJ21-007CSR	3/4	2-1/4	6-3/8	7-3/16	7/8	1/4	7/8	35°	.33	.39
EJ21-010SR	EJ21-010CSR	1	2-9/16	6	7-3/4	7/8	1/4	7/8	25°	.71	.83
EJ21-012SR	EJ21-012CSR	1-1/4	3-1/8	6-1/16	7-15/16	7/8	1/4	7/8	25°	.74	.76
EJ21-015SR	EJ21-015CSR	1-1/2	3-9/16	5-7/8	7-3/4	7/8	1/4	7/8	20°	1.15	1.19
EJ21-020SR	EJ21-020CSR	2	4-3/16	5-7/16	7-3/8	7/8	1/4	7/8	15°	1.58	1.65
EJ21-025SR	EJ21-025CSR	2-1/2	6-1/8	6-3/16	9	7/8	1/4	7/8	15°	4.63	4.91
EJ21-030SR	EJ21-030CSR	3	6-1/8	6-3/16	9	7/8	1/4	7/8	15°	4.85	5.19


SPEARS
THERMOPLASTIC
FLANGES
MOLDED & FABRICATED
MADE IN THE U.S.A.
WITH PRIDE
TECHNICAL INFORMATION
WEIGHTS & DIMENSIONS
SPEARS® MANUFACTURING COMPANY
Since 1969
SYLMAR, CALIFORNIA
Visit our web site
www.spearsmfg.com

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GENERAL INFORMATION

Recommendations For Installers And Users

Plastic piping systems should be **ENGINEERED, INSTALLED**, and **OPERATED** in accordance with **ESTABLISHED DESIGN AND ENGINEERING STANDARDS AND PROCEDURES** for plastic piping systems. Suitability for the intended service application should be determined by the installer and /or user prior to installation of a plastic piping system. **PRIOR TO ASSEMBLY, all piping system components should be inspected for damage or irregularities. Mating components should be checked to assure that tolerances and engagements are compatible. Do not use any components that appear irregular or do not fit properly. Contact the appropriate manufacturer of the component product in question to determine usability.**

Solvent Weld Connections — Use quality solvent cements and primers formulated for the intended service application, pipe size and type of joint. While the pipe and fitting materials may be compatible with the intended medium, the solvent cement may not be. Consult the manufacturer for suitability of use. Read and follow the cement and primer manufacturers' applications and cure time instructions thoroughly. Be sure to use the correct size applicator.

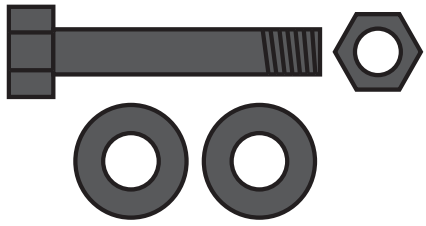
Threaded Connections — Use a quality grade thread sealant.**WARNING: SOME PIPE JOINT COMPOUNDS OR PTFE PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING TO PLASTIC.** Spears® Manufacturing Company recommends the use of Spears® **Blue 75™** thread sealant which has been tested for compatibility with Spears® products. Please follow the sealant manufacturer's application/installation instructions. Choice of an appropriate thread sealant other than th ose listed above is at the discretion of the installer . 1 to 2 turns beyond **FINGER TIGHT** is generally all that is required to make a sound plastic thread connection. Unnecessary **OVERTIGHTENING** will cause **DAMAGE TO BOTH PIPE AND FITTING.**

"Lead Free" low lead certification – unless otherwise specified, all Spears® Thermoplastic Flanges specified here-in are certified by NSF International to ANSI/NSF® Standard 61, Annex G and is in compliance with California's Health & Safety Code Section 116825 (commonly known as AB1953) and Vermont Act 193. Weighted average lead content <=0.25%.





Bolt Kit Selection Guide



Bolt Hardware Kits Available
For Connection of 2-Spears® Flanges
Includes Bolts, Nuts & Flat Washers for Specified Flange Size

Order Gaskets & Bolt Kits Separately

- Pre-coated, Anti-seize Lubricated Bolts
- Available in Zinc Coated Steel, Type 316 Stainless Steel or Type 304 Stainless Steel

Flange Size	Bolts* Per Kit	Diameter (in.-TPI)	Length (in.)	Kit Part Number		
				Zinc	316 SS	304 SS
1/2 & 3/4	4	1/2 - 13	2	HK-005	HK1-005	HK2-005
1 & 1-1/4	4	1/2 - 13	2-1/4	HK-010	HK1-010	HK2-010
1-1/2	4	1/2 - 13	2-1/2	HK-015	HK1-015	HK2-015
2	4	5/8 - 11	3	HK-020	HK1-020	HK2-020
2-1/2	4	5/8 - 11	3-1/4	HK-025	HK1-025	HK2-025
3	4	5/8 - 11	3-1/2	HK-030	HK1-030	HK2-030
4	8	5/8 - 11	3-1/2	HK-040	HK1-040	HK2-040
5 & 6	8	3/4 - 10	4	HK-060	HK1-060	HK2-060
8	8	3/4 - 10	4-1/2	HK-080	HK1-080	HK2-080
10 & 12	12	7/8 - 9	5	HK-120	HK1-120	HK2-120

* Each Bolt Includes Nut & Two (2) Flat Washers

Bolt Torque

Recommended Bolt Torque is shown in **Table 1.** Threads should be clean and well lubricated. Actual field conditions may require variations in these recommendations. **CAUTION: UNNECESSARY OVER TORQUING WILL DAMAGE THE FLANGE.**

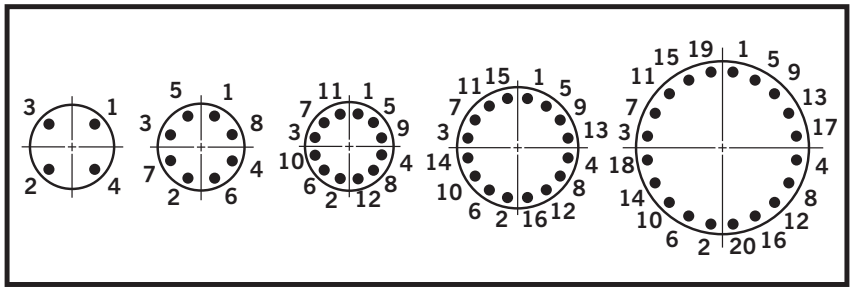
Table 1

Flange Size (in.)	Recommended Torque (ft. lbs.)
1/2 - 1-1/2	12
2 - 4	25
5	30
6 - 8	40
10	64
12	95
14 - 24	110

Torque Sequence

Bolt Torque sequence is shown Below in **Table 2.**

Table 2



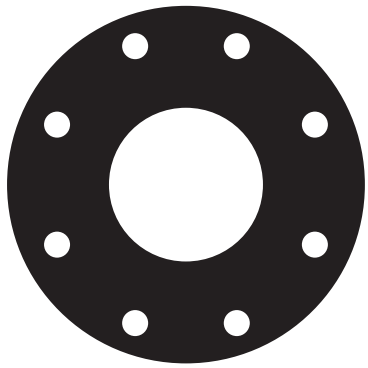
Gaskets

Full faced, 1/8" thick elastomer gaskets with a Shore “A” Durometer of approximately 70 is recommended.

Gasket Selection Guide

Following Gasket Numbers Available from Spears®

Order Gaskets & Bolt Kits Separately
- 1/8" Full-Face design with ANSI Class 150 Bolt Patterns
- Pressure rated to 150 psi @ 73°F
- Available in Buna-N, EPDM, or FKM



Flange Size	Bolts Per Kit	Gasket Part Number		
		Buna-N	EPDM	FKM
1/2	4	GK1-005	GK2-005	GK3-005
3/4	4	GK1-007	GK2-007	GK3-007
1	4	GK1-010	GK2-010	GK3-010
1-1/4	4	GK1-012	GK2-012	GK3-012
1-1/2	4	GK1-015	GK2-015	GK3-015
2	4	GK1-020	GK2-020	GK3-020
2-1/2	4	GK1-025	GK2-025	GK3-025
3	4	GK1-030	GK2-030	GK3-030
4	8	GK1-040	GK2-040	GK3-040
5	8	GK1-050	GK2-050	GK3-050
6	8	GK1-060	GK2-060	GK3-060
8	8	GK1-080	GK2-080	GK3-080
10	12	GK1-100	GK2-100	GK3-100
12	12	GK1-120	GK2-120	GK3-120

Flange Make-up

Once a flange is joined to pipe, the method for joining two flanges is as follows:

1. Piping runs joined to the flanges must be installed in a straight line position to the flange to avoid stress at the flange du e to misalignment. Piping must also be secured and supported to prevent lateral movement which can create stress and damage the flange.
2. With gasket in place, align the bolt holes of the mating flanges by rotating the ring into position.
3. Insert all bolts, washers (two standard flat washers per bolt), and nuts.
4. Make sure the faces of the mating surfaces are flush against gasket prior to bolting down the flanges.
5. Tighten the nuts by hand until they are snug. Establish uniform pressure over the flange face by tightening the bolts in 5 f t.-lbs. increments according to the sequence shown in **Table 2** following a 180° opposing sequence.
6. Care must be taken to avoid “bending” the flange when joining a Spears ® flange to a “raised face” flange, or a wafer-style valve. Do not use bolts to bring together improperly mated flanges.

Configuration Terminology

Multi-Bolt Pattern Ring — Bolt hole drilling accepts ANSI and Metric Flanges
Socket — Slip socket connection for solvent cement welding
Spigot — Pipe O.D. connection for solvent welding
Fipt — Female Iron Pipe Thread
SR Fipt — Spears® patented Special Reinforced (SR) plastic thread
IPS — Iron Pipe Size
PIP — Plastic Irrigation Pipe

Technical Information

Application

Molded CLASS 150 Flange fittings are coupling devices designed for joining IPS (Iron Pipe Size) plastic piping systems, where f requent disassembly may be required, and can be used as a transitional fitting for joining plastic to metal piping systems. Suitability of application is at the discretion of the user.

Pressure Rating

150 psi, water at 73°F.

Flange Types

One Piece — Available in socket configuration, sizes 1/2" through 8"; threaded and SR threaded (Special Reinforced) configuration sizes 1/2" through 4".

Van Stone Style — Two-piece design with rotating flange ring, available in socket configurations, sizes 1/2" through 16"; threaded configurations, sizes 1/2" through 4" and spigot configurations, sizes 1/2" through 12".

Blind — Closed ring design for capping off a mating flange, flanged fitting or flanged valve, available in sizes 1/2" through 12".

Materials

All injection molded flanges are produced from either PVC or CPVC materials approved for potable water use by the National Sanitation Foundation (NSF®).

Glass-filled PVC or CPVC materials may be used in certain V an Stone Style flange rings and large diameter Blind flanges where additional reinforcement is deemed necessary.

Conformance Standards

Socket & Spigot — ASTM D 2467 (PVC); ASTM F 439 (CPVC), as applicable.

Threads — ASTM F 1498.

Bolt Hole Pattern — ANSI B16.5; ASTM D 4024.

Material — ASTM D 1784 (PVC Cell Classification 12454-B, CPVC Cell Classification 23447-B).

Weights & Dimensions

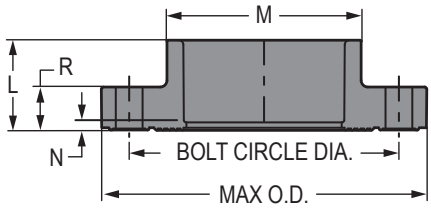
Specified minimum bolt lengths are based on the use of two Spears ® Flanges, two standard flat washers, standard nut and 1/8" thick elastomer full face gasket. Mating with other brands or accessories may require variation. Bolts and gaskets are not supplied with flanges.

Dimension references:

L = Overall length of hub, ± 1/16 inch.
M = Outside diameter of socket hub, ± 1/16 inch.
N = (Laying Length) socket/spigot bottom to seal-ring face of flange, ± 1/16 inch.
R = Height (thickness) of flange ring, ± 1/16 inch.
Max O.D. = Outside diameter of ring, ± 1/16 inch.
Bolt Circle Diameter = ANSI B 16.5 Standard; ASTM D 4024, ± 1/16 inch.

Flange One Piece

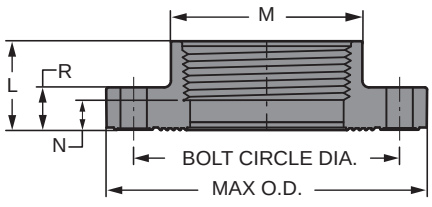
Socket



Part Number		Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
851-005	851-005C	1/2	1-1/16	1-9/32	1/8	9/16	2-3/8	4	1/2	2	3-1/2	.22	.24
851-007	851-007C	3/4	1-3/16	1-1/2	1/8	5/8	2-3/4	4	1/2	2	3-7/8	.31	.31
851-010	851-010C	1	1-5/16	1-13/16	3/16	3/4	3-1/8	4	1/2	2-1/4	4-1/4	.44	.47
851-012	851-012C	1-1/4	1-7/16	2-7/32	3/16	23/32	3-1/2	4	1/2	2-1/4	4-5/8	.41	.42
851-015	851-015C	1-1/2	1-19/32	2-1/2	3/16	23/32	3-7/8	4	1/2	2-1/2	5-1/16	.58	.61
851-020	851-020C	2	1-27/32	3	5/16	27/32	4-3/4	4	5/8	3	6	.82	.95
851-025	851-025C	2-1/2	2-1/4	3-1/2	1/2	1	5-1/2	4	5/8	3-1/4	7	1.63	1.67
851-030	851-030C	3	2-5/16	4-9/32	3/8	1-1/16	6	4	5/8	3-1/4	7-1/2	1.74	1.81
851-040	851-040C	4	2-7/16	5-7/32	3/16	1-5/32	7-1/2	8	5/8	3-1/2	9-1/16	2.67	2.78
851-050	851-050C	5	3-1/4	6-3/8	1/4	1	8-1/2	8	3/4	3-3/4	10-1/8	3.00	3.17
851-060	851-060C	6	3-1/4	7-9/16	1/4	1-3/8	9-1/2	8	3/4	4	11	4.06	4.34
851-080	851-080C	8	4-17/32	9-3/4	1/2	1-7/16	11-11/16	8	3/4	4-1/2	13-5/8	7.67	8.02
851-100F	851-100CF	10	9-27/32	11-15/16	4-5/8	1-1/4	14-1/4	12	7/8	4	16	16.96	19.27
851-120F	851-120CF	12	10-7/8	14-3/16	4-11/16	1-13/32	17	12	7/8	4	19	26.37	30.67

Flange One Piece

Fipt

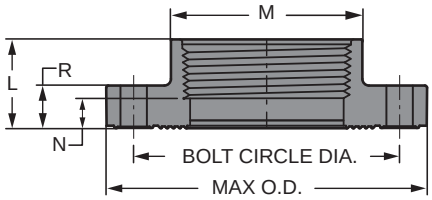


Part Number		Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
852-005	852-005C	1/2	1-1/16	1-5/16	9/32	9/16	2-3/8	4	1/2	2	3-1/2	.21	.22
852-007	852-007C	3/4	1-3/16	1-17/32	15/32	5/8	2-3/4	4	1/2	2	3-7/8	.30	.32
852-010	852-010C	1	1-5/16	1-13/16	7/16	3/4	3-1/8	4	1/2	2-1/4	4-1/4	.41	.48
852-012	852-012C	1-1/4	1-3/8	2-7/32	17/32	23/32	3-1/2	4	1/2	2-1/4	4-5/8	.44	.46
852-015	852-015C	1-1/2	1-11/16	2-1/2	19/32	23/32	3-27/32	4	1/2	2-1/2	5-1/16	.61	.64

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Progressive Products from Spears® Innovation and Technology

Flange One Piece (continued)

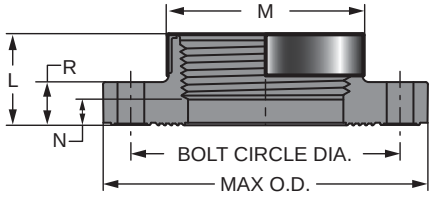
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Part Number		Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
852-020	852-020C	2	1-27/32	3	7/8	7/8	4-3/4	4	5/8	3	6	.96	1.00
852-025	852-025C	2-1/2	2-1/4	3-1/2	15/16	1	5-1/2	4	5/8	3-1/4	7	1.65	1.41
852-030	852-030C	3	2-5/16	4-9/32	29/32	1-1/16	6	4	5/8	3-1/4	7-1/2	1.83	1.91
852-040	852-040C	4	2-1/16	5-7/16	5/16	1-1/4	7-1/2	8	5/8	3-1/2	9	2.79	2.86
852-050F	852-050CF	5	6-5/8	6-1/8	5-1/4	1-5/16	8-1/2	8	3/4	3-3/4	10-1/8	5.25	5.51
852-060F	852-060CF	6	6-15/16	7-1/4	5-1/2	1-5/16	9-1/2	8	3/4	4	11	7.16	7.69
852-080F	852-080CF	8	8-9/16	9-7/16	6-15/16	1-7/16	11-3/4	8	3/4	4-1/2	13-1/2	13.41	13.92
852-100F	852-100CF	10	7-3/8	11-3/4	5-1/2	1-3/8	14-1/4	12	7/8	5	16	20.65	20.72
852-120F	852-120CF	12	7	13-15/16	5	1-3/8	17	12	7/8	4	19	21.79	22.59

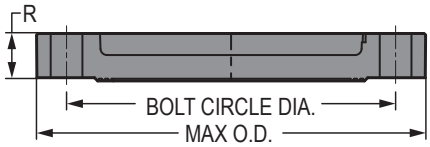
Special Reinforced Flange One Piece

SR Fipt



Part Number		Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
852-005SR	852-005CSR	1/2	1-3/32	1-7/32	11/32	9/16	2-3/8	4	1/2	2	3-1/2	.20	.22
852-007SR	852-007CSR	3/4	1-3/16	1-3/8	7/16	5/8	2-3/4	4	1/2	2	3-7/8	.27	.30
852-010SR	852-010CSR	1	1-7/16	1-23/32	17/32	21/32	3-1/8	4	1/2	2-1/4	4-1/4	.37	.39
852-012SR	852-012CSR	1-1/4	1-9/16	2-1/16	19/32	21/32	3-1/2	4	1/2	2-1/4	4-5/8	.49	.52
852-015SR	852-015CSR	1-1/2	1-3/4	2-7/16	3/4	3/4	3-7/8	4	1/2	2-1/2	5	.63	.67
852-020SR	852-020CSR	2	1-13/16	3-1/32	13/16	13/16	4-3/4	4	5/8	3	5-31/32	.99	1.04
852-025SR	852-025CSR	2-1/2	2-1/8	3-19/32	3/8	1	5-1/2	4	5/8	3-1/4	7	1.58	1.69
852-030SR	852-030CSR	3	2-5/16	4-9/32	27/32	1-1/16	6	4	5/8	3-1/4	7-1/2	1.79	1.97
852-040SR	852-040CSR	4	2-1/2	5-1/4	1	1-5/32	7-1/2	8	5/8	3-1/2	9	2.74	2.89

BLIND FLANGE

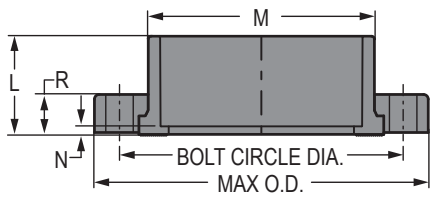


Part Number		Size	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
853-005	853-005C	1/2	17/32	2-3/8	4	1/2	2	3-17/32	.19	.21
853-007	853-007C	3/4	5/8	2-3/4	4	1/2	2	3-7/8	.28	.27
853-010	853-010C	1	3/4	3-1/8	4	1/2	2-1/4	4-1/4	.41	.47
853-012	853-012C	1-1/4	23/32	3-1/2	4	1/2	2-1/4	4-5/8	.37	.40
853-015	853-015C	1-1/2	23/32	3-27/32	4	1/2	2-1/2	5-1/16	.50	.52
853-020	853-020C	2	27/32	4-3/4	4	5/8	3	5-31/32	.82	.88
853-025	853-025C	2-1/2	1	5-1/2	4	5/8	3-1/4	7	1.61	1.63
853-030	853-030C	3	1-1/16	6	4	5/8	3-1/4	7-1/2	1.63	1.69
853-040	853-040C	4	1-5/32	7-1/2	8	5/8	3-1/2	9-1/16	2.42	2.98
853-060	853-060C	6	1-3/8	9-1/2	8	3/4	4	11	4.36	4.45
853-080	853-080C	8	1-7/16	11-3/4	8	3/4	4-1/2	13-1/2	6.83	7.20
853-100	853-100C	10	1-11/16	14-1/4	12	7/8	5	16	11.32	11.80
853-120	853-120C	12	1-11/16	17	12	7/8	5	19	15.49	17.20

Flange Van Stone Style

(Two Piece)

Socket

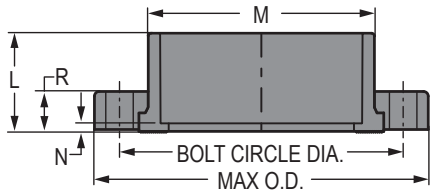


Part Number		Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
854-005	854-005C	1/2	1-1/32	1-7/32	5/32	17/32	2-3/8	4	1/2	2	3-1/2	.19	.20
854-007	854-007C	3/4	1-1/8	1-7/16	5/32	9/16	2-3/4	4	1/2	2	3-7/8	.26	.27
854-010	854-010C	1	1-9/32	1-3/4	5/32	5/8	3-1/8	4	1/2	2-1/4	4-1/4	.36	.37
854-012	854-012C	1-1/4	1-13/32	2-5/32	5/32	11/16	3-1/2	4	1/2	2-1/4	4-5/8	.46	.45
854-015	854-015C	1-1/2	1-17/32	2-7/16	3/16	3/4	3-7/8	4	1/2	2-1/2	5	.56	.60
854-020	854-020C	2	1-11/16	2-15/16	3/16	13/16	4-3/4	4	5/8	3	6	.85	.91

Flange Van Stone Style (continued)

(Two Piece)

Socket



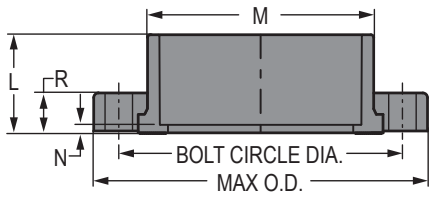
Part Number		Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
854-025	854-025C	2-1/2	2	3-1/2	3/16	31/32	5-1/2	4	5/8	3-1/4	7	1.40	1.40
854-030	854-030C	3	2-1/8	4-1/4	1/4	1-1/16	6	4	5/8	3-1/4	7-1/2	1.66	1.70
854-040	854-040C	4	2-1/2	5-1/4	1/4	1-1/8	7-1/2	8	5/8	3-1/2	9	2.68	2.84
854-050	854-050C	5	3	6-1/4	3/8	1-1/8	8-1/2	8	3/4	3-3/4	10-1/8	3.35	3.60
854-060	854-060C	6	3-3/8	7-9/16	7/16	1-9/32	9-1/2	8	3/4	4	11	4.54	4.67
854-080	854-080C	8	4-3/8	9-5/16	9/32	1-3/8	11-3/4	8	3/4	4-1/2	13-1/2	6.69	7.06
854-100	854-100C	10	5-11/16	11-3/4	21/32	1-5/8	14-1/4	12	7/8	5	16	11.45	11.76
854-120	854-120C	12	7-1/4	13-3/4	5/8	1-1/2	17	12	7/8	5	19	16.78	18.50
854-140	854-140C	14	7-1/2	15-1/2	1/2	2	18-3/4	12	1	5-1/2	21	26.84	28.42
854-160	854-160C	16	8-3/4	17-3/4	3/4	2-3/8	21-1/4	16	1	6-1/2	23-1/2	37.64	24.81
854-180	854-180C	18	9	20	1/4	2-3/8	22-3/4	16	1-1/8	6-1/2	25	45.33	46.48

Flange Van Stone Style

with Plastic Solid Ring

(Two Piece)

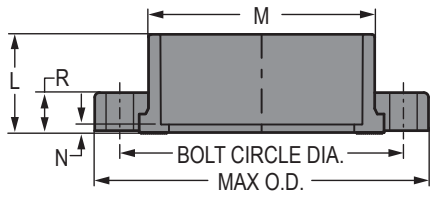
Socket



Part Number		Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
S854-020	---	2	1-11/16	2-15/16	3/16	13/16	4-3/4	4	5/8	3	6	.85	---
S854-030	S854-030C	3	2-1/8	4-1/4	1/4	1-1/16	6	4	5/8	3-1/4	7-1/2	1.66	1.70
S854-040	S854-040C	4	2-1/2	5-1/4	1/4	1-1/8	7-1/2	8	5/8	1/2	9	3.02	2.84
S854-060	S854-060C	6	3-3/8	7-9/16	7/16	1-9/32	9-1/2	8	3/4	4	11	4.54	4.67

Flange Van Stone Style (continued)

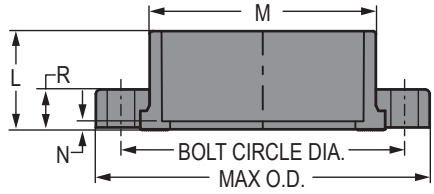
with Plastic Solid Ring
(Two Piece)
Socket



Part Number		Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
S854-080	S854-080C	8	4-3/8	9-5/16	3/8	1-3/8	11-3/4	8	3/4	4-1/2	13-1/2	6.69	7.06
S854-100	S854-100C	10	5-11/16	11-3/4	11/16	1-5/8	14-1/4	12	7/8	5	16	11.69	11.76
S854-120	S854-120C	12	7-1/4	13-3/4	5/8	1-3/4	17	12	7/8	5	19	16.78	19.13

Flange Van Stone Style

with Multi-Bolt Pattern Ring
(Two Piece)
Socket



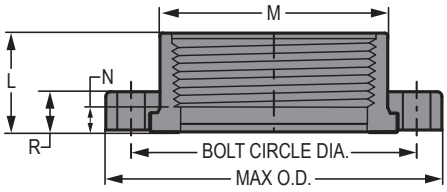
Part Number		Size	L	M	N	R	Bolt Circle Dia.		No. of Bolt Holes	Bolt Size	Max O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC						Min	Max				PVC	CPVC
M854-020	M854-020C	2	1-11/16	2-15/16	3/16	13/16	4-1/2	4-15/16	4	5/8	6	.85	.93
M854-060	M854-060C	6	3-3/8	7-9/16	7/16	1-9/32	9-7/32	9-1/2	8	3/4	11	4.80	5.09
M854-080	M854-080C	8	4-3/8	9-5/16	3/8	1-3/8	11-1/2	11-3/4	8	3/4	13-1/2	6.69	7.21

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Progressive Products from Spears® Innovation and Technology

Flange Van Stone Style

(Two Piece)

Fipt

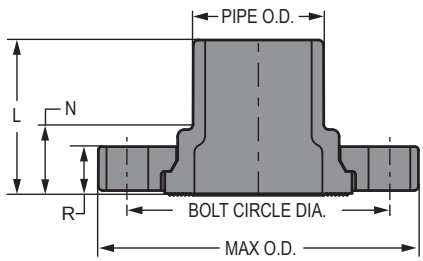


Part Number		Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC											PVC	CPVC
855-005	855-005C	1/2	1-1/32	1-7/32	9/32	17/32	2-3/8	4	1/2	2	3-1/2	.19	.20
855-007	855-007C	3/4	1-5/32	1-3/8	13/32	9/16	2-3/4	4	1/2	2	3-7/8	.27	.28
855-010	855-010C	1	1-1/4	1-3/4	5/16	5/8	3-1/8	4	1/2	2-1/4	4-1/4	.36	.39
855-012	855-012C	1-1/4	1-3/8	2-1/8	13/32	11/16	3-1/2	4	1/2	2-1/4	4-5/8	.46	.47
855-015	855-015C	1-1/2	1-15/32	2-7/16	13/32	3/4	3-7/8	4	1/2	2-1/2	5	.55	.61
855-020	855-020C	2	1-9/16	2-31/32	1/2	13/16	4-3/4	4	5/8	3	6	.87	.94
855-025	855-025C	2-1/2	2	3-9/16	7/16	1	5-1/2	4	5/8	3-1/4	7	1.22	1.50
855-030	855-030C	3	2-1/8	4-1/4	1/2	1-1/16	6	4	5/8	3-1/4	7-1/2	1.73	1.79
855-040	855-040C	4	2-1/16	5-1/4	3/8	1-1/4	7-1/2	8	5/8	3-1/2	9	2.61	2.78
855-060F	855-060CF	6	6-3/8	7-3/16	4-15/16	1-1/4	9-1/2	8	3/4	4	11	7.62	7.69
855-080F	855-080CF	8	8-1/8	9-5/16	6-7/16	1-1/2	11-3/4	8	3/4	4-1/2	13-1/2	12.84	13.92
855-100F	855-100CF	10	10-3/8	11-9/16	8-9/16	1-11/16	14-1/4	12	7/8	5	16	20.65	20.72
855-120F	855-120CF	12	11-13/16	13-3/4	9-3/4	1-5/8	17	12	7/8	5	19	33.52	34.00

Flange Van Stone Style

(Two Piece)

Spigot

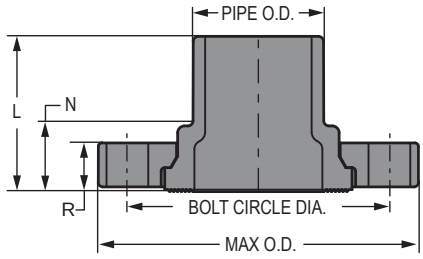


Part Number		Size	L	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC										PVC	CPVC
856-005	856-005C	1/2	1-3/4	29/32	17/32	2-3/8	4	1/2	2	3-1/2	.20	.21
856-007	856-007C	3/4	1-15/16	31/32	9/16	2-3/4	4	1/2	2	3-7/8	.29	.30
856-010	856-010C	1	2-3/16	1-1/32	5/8	3-1/8	4	1/2	2-1/4	4-1/4	.39	.41
856-012	856-012C	1-1/4	2-11/32	1-3/32	11/16	3-1/2	4	1/2	2-1/4	4-5/8	.50	.50

Flange Van Stone Style (continued)

(Two Piece)

Spigot



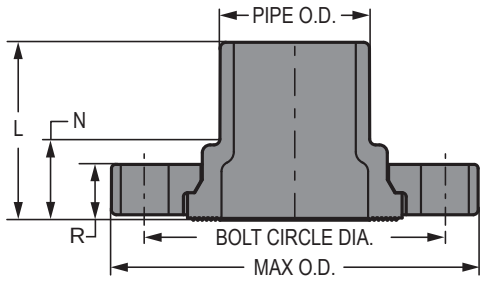
Part Number		Size	L	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC										PVC	CPVC
856-015	856-015C	1-1/2	2-5/8	1-9/32	3/4	3-7/8	4	1/2	2-1/2	5	.60	.65
856-020	856-020C	2	2-7/8	1-11/32	13/16	4-3/4	4	5/8	3	6	.94	1.00
856-025	856-025C	2-1/2	3-1/16	1-9/32	1	5-1/2	4	5/8	3-1/4	7	1.29	1.54
856-030	856-030C	3	3-3/8	1-7/16	1-1/16	6	4	5/8	3-1/4	7-1/2	1.82	1.88
856-040	856-040C	4	3-7/8	1-5/8	1-1/4	7-1/2	8	5/8	3-1/2	9	2.93	3.12
856-060	856-060C	6	4-3/4	1-25/32	1-9/32	9-1/2	8	3/4	4	11	4.62	4.79
856-080	856-080C	8	5-7/8	1-15/16	1-3/8	11-3/4	8	3/4	4-1/2	13-1/2	7.95	8.17
856-100	856-100C	10	8	2-1/4	1-5/8	14-1/4	12	7/8	5	16	15.61	16.09
856-120	856-120C	12	8-1/2	2-3/16	1-5/8	17	12	7/8	5	19	21.31	22.70

Flange Van Stone Style

with Multi-Bolt Pattern Ring

(Two Piece)

Spigot



Part Number		Size	L	N	R	Bolt Circle Dia.		No. of Bolt Holes	Bolt Size	Max. O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC					Min.	Max.				PVC	CPVC
M856-020	M856-020C	2	2-7/8	1-11/32	13/16	4-1/2	4-15/16	4	5/8	6	.94	1.00
M856-060	M856-060C	6	4-3/4	1-25/32	1-9/32	9-7/32	9-1/2	8	3/4	11	4.77	5.21
M856-080	M856-080C	8	5-7/8	1-15/16	1-3/8	11-1/2	11-3/4	8	3/4	13-1/2	7.95	8.32

Technical Information

Application

Fabricated IPS and PIP Flange fittings are coupling devices designed for joining IPS (Iron Pipe Size) or PIP (Plastic Irrigation Pipe) plastic piping systems, where frequent disassembly may be required. These flanges can be used as transitional fittings for joining IPS-to-IPS, PIP-to-PIP, IPS-to-PIP, or plastic to metal piping systems. Suitability of application is at the discretion of the user.

Pressure Rating

All standard fabricated flanges are Van Stone Style (except blind flange) — two piece design with rotating flange ring.

Class 150 IPS Flanges (with steel ring): 150 psi, water at 73°F.

IPS Flanges 18" - 24" (with plastic ring): 50 psi, water at 73°F.

IPS Flanges, Class 300 Bolt Pattern (with plastic ring): 1/2" - 16" 150 psi, 18" - 24" 50 psi, water at 73°F .

Blind Flanges, 14" - 24": 50 psi, water at 73°F.

PIP Flanges, 6" - 16" (with plastic ring & molded IPS flanges w/PIP Adapters): 125 psi, water at 73°F

PIP Flanges, 18" - 24" (with steel ring): 125 psi, water at 73°F

Flange Types

Van Stone Style Class 150 IPS (with steel ring) — Fabricated PVC body with steel flange ring, available in sizes 18" through 24", slip socket and 14" through 24", spigot.

Van Stone Style IPS (with plastic ring) — Fabricated PVC body with PVC flange ring, available in sizes 18" through 24", slip socket and 14" through 24", spigot.

Van Stone Style PIP (with plastic ring) — PIP adapter fabricated to injection molded PVC Van Stone Style IPS flange, available in sizes 6" through 16", slip socket.

Van Stone Style PIP (with steel ring) — Fabricated PVC body with steel flange ring, available in sizes 14" through 24", slip socket.

Blind — Closed ring design for capping off a mating flange; fabricated PVC available in sizes 5" and 14" through 24".

Special Note On PIP Flange Sizes

In order to facilitate connections between IPS and PIP systems, all Plastic Irrigation Pipe flanges are fabricated with PIP sockets using standard IPS Flange Rings. These are indicated in dimension tables under "Size" as (nominal IPS flange size) x (actual PIP O.D.), such as: 6" x 6.140".

To better meet user needs, Spears® offers flanges for 15.300" O.D. PIP with either 14" or 16" IPS Flange Rings. In addition, both 18.360" and 18.701" O.D. PIP are offered with 18" IPS Flange Rings.

Materials

All fabricated flanges are produced from PVC & CPVC materials approved for potable water use by the National Sanitation Foundation (NSF®).

Steel flange rings are carbon steel.

Conformance Standards

Materials — ASTM D 1784 (PVC Cell Classification 12454-B, CPVC Cell Classification 23447-B).

Weights & Dimensions

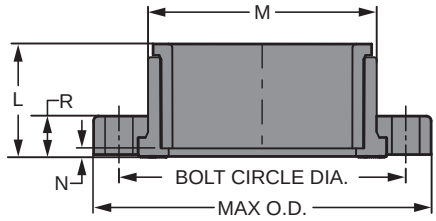
Specified minimum bolt lengths are based on the use of two Spears ® Flanges, two standard flat washers, standard nut and 1/8" thick elastomer full face gasket. Mating with other brands or accessories may require variations.

Note: Bolts and gaskets are not supplied with flanges.

Dimension references:

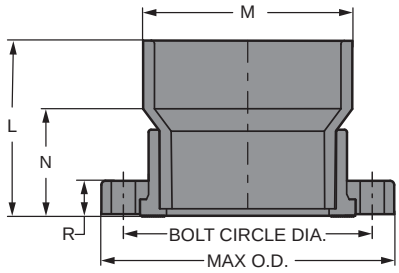
L = Overall length of hub, ± 1/2 inch.
M = Outside diameter of socket hub, ± 1/4 inch.
N = (Laying Length) socket bottom to seal-ring face of flange, ± 1/2 inch.
R = Height (thickness) of flange ring, ± 1/16 inch.
Max O.D = Outside diameter of ring, ± 1/16 inch.
Bolt Circle Diameter = ANSI B16.5 Standard; ASTM D 4024, ± 1/16 inch.

Flange Van Stone Style PIP
(with Plastic Ring)
Socket



Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
354-060F	6x6.140	4-1/16	7-9/16	11/16	1-1/4	9-1/2	8	3/4	4	11-1/2	5.53
354-080F	8x8.160	4-15/16	9-3/8	9/16	1-1/2	11-3/4	8	3/4	4-1/2	13-5/8	8.30
354-100F	10x10.200	6-1/4	11-3/4	1	1-5/8	14-1/4	12	7/8	5	16	14.49
354-120F	12x12.240	7-5/16	13-13/16	1-1/16	1-5/8	17	12	7/8	5	19	21.59
354-151F	16x15.300	8-11/16	17-3/4	11/16	2-3/8	21-1/4	16	1	6-1/2	23-1/2	66.06

Flange Van Stone Style PIP
(with Plastic Ring)
Socket

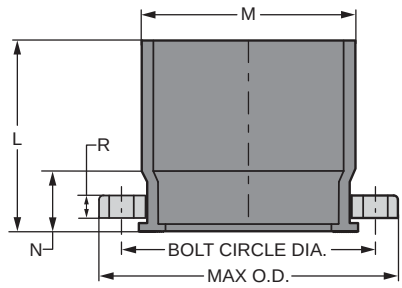


Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
354-150F	14x15.300	19-5/16	16-3/16	10-5/16	2	18-3/4	12	1	5-1/2	21	47.29

Flange Van Stone Style PIP

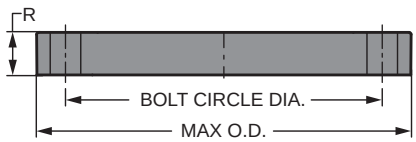
(with Steel Ring)

Socket



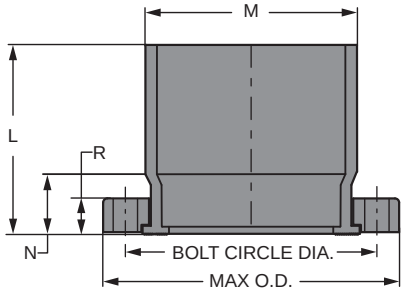
Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
354-181F	18x18.701	15-1/8	19-13/16	6-1/8	1/2	22-3/4	16	1-1/8	3	25	53.80
354-182F	18x18.360	11-5/8	19-1/2	5-5/8	1/2	22-3/4	16	1-1/8	3	25	53.80
354-200F	20x20.400	11-3/8	21-9/16	5-3/8	1/2	25	20	1-1/8	3	27-1/2	63.06
354-201F	20x22.047	16-9/16	23-1/4	6-9/16	1/2	25	20	1-1/8	3	27-1/2	64.43
354-241F	24x24.803	19-7/8	26-3/16	7-7/8	1/2	29-1/2	20	1-1/4	3	32	90.50

Blind Flange



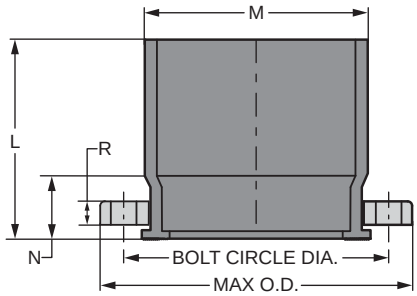
Part Number		Size	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)	
PVC	CPVC								PVC	CPVC
853-050F	853-050CF	5	1	8-1/2	8	3/4	4-1/8	10-1/16	3.63	3.90
853-140F	853-140CF	14	1-1/2	18-3/4	12	1	4-1/8	21	27.50	28.39
853-160F	853-160CF	16	1-1/2	21-1/4	16	1	4-1/8	23-1/2	33.83	37.21
853-180F	853-180CF	18	1-1/2	22-3/4	16	1-1/8	4-1/8	25	39.52	43.47
853-200F	853-200CF	20	1-1/2	25	20	1-1/8	4-1/8	27-1/2	47.67	52.43
853-240F	853-240CF	24	1-1/2	29-1/2	20	1-1/4	5-1/2	32	61.96	68.15

Flange Van Stone Style IPS
(with Plastic Ring)
Socket



Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
854-180FP	18	15	19-1/8	6	1-1/2	22-3/4	16	1-1/8	4-1/8	25	36.09
854-200FP	20	16	21-3/16	6	1-1/2	25	20	1-1/8	5-1/2	27-1/2	55.09
854-240FP	24	19	25-3/8	7	1-1/2	29-1/2	20	1-1/4	5-1/2	32	80.93

Flange Van Stone Style IPS
(with Steel Ring)
Socket

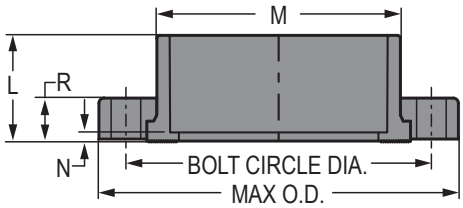


Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
854-180FS	18	14	19-1/8	5	1/2	22-3/4	16	1-1/8	3	25	49.30
854-200FS	20	15	21-3/16	5	1/2	25	20	1-1/8	3	27-9/16	65.00
854-240FS	24	18	25-3/8	6	1/2	29-1/2	20	1-1/4	3	32	86.15

Flange Van Stone Style Class 300

(with Plastic Ring)

Socket

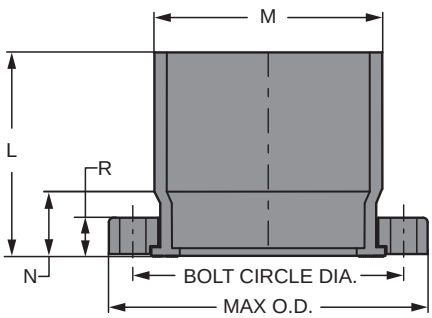


Part Number		Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.
PVC	CPVC										
854-005CL300	854-005CL300C	1/2	1	1-3/16	3/16	1/2	2-5/8	4	1/2	2	3-3/4
854-007CL300	854-007CL300C	3/4	1-1/8	1-3/8	3/16	1	3-1/4	4	5/8	3-1/2	4-5/8
854-010CL300	854-010CL300C	1	1-1/4	1-3/4	3/16	1	3-1/2	4	5/8	3-1/2	4-7/8
854-012CL300	854-012CL300C	1-1/4	1-3/8	2-1/8	1/8	1	3-7/8	4	5/8	3-1/2	5-1/4
854-015CL300	854-015CL300C	1-1/2	1-1/2	2-7/16	3/16	1	4-1/2	4	5/8	3-1/2	6-1/8
854-020CL300	854-020CL300C	2	1-11/16	2-15/16	3/16	1	5	8	5/8	3-1/2	6-1/2
854-025CL300	854-025CL300C	2-1/2	2	3-9/16	1/4	1	5-7/8	8	3/4	3-1/2	7-1/2
854-030CL300	854-030CL300C	3	2-1/8	4-1/4	1/4	1	6-5/8	8	3/4	3-1/2	8-1/4
854-040CL300	854-040CL300C	4	2-1/2	5-1/4	1/4	1-1/2	7-7/8	8	3/4	4-1/2	10
854-060CL300	854-060CL300C	6	3-7/16	7-9/16	3/8	1-1/2	10-5/8	12	3/4	4-1/2	12-1/2
854-080CL300	854-080CL300C	8	4-3/8	9-3/8	5/16	1-1/2	13	12	7/8	4-1/2	15
854-100CL300	854-100CL300C	10	5-11/16	11-3/4	5/8	1-1/2	15-1/4	16	1	4-1/2	17-1/2
854-120CL300	854-120CL300C	12	7-5/16	13-13/16	9/16	1-1/2	17-3/4	16	1-1/8	4-1/2	20-1/2
854-140CL300	854-140CL300C	14	7-9/16	15-9/16	9/16	2	20-1/4	20	1-1/8	5-1/2	23
854-160CL300	854-160CL300C	16	8-9/16	17-3/4	9/16	2	22-1/2	20	1-1/4	6	25-1/2

Flange Van Stone Style Class 300

(with Plastic Ring)

Socket

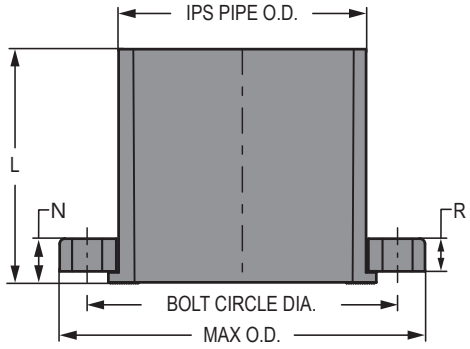


Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
854-180CL300	18	15	19-1/8	6	2	24-3/4	24	1-1/4	6	28	61.11
854-200CL300	20	15-1/4	21-3/16	5-1/4	2	27	24	1-1/4	6	30-1/2	68.38
854-240CL300	24	19	25-3/8	7	2	32	24	1-1/2	6	36	134.51

Flange Van Stone Style IPS

(with Plastic Ring)

Spigot

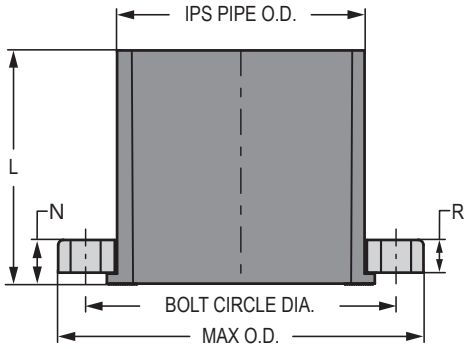


Part Number	Size	L	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
856-140FP	14	15-5/16	7-9/16	2	18-3/4	12	1	5-1/2	21	24.00
856-160FP	16	17-13/16	8-9/16	2-3/8	21-1/4	16	1	6-1/2	23-1/2	61.83
856-180FP	18	19-9/16	9-9/16	2-3/8	22-3/4	16	1-1/8	6-1/2	25	34.81
856-200FP	20	13	2-1/16	1-1/2	25	20	1-1/8	5-1/2	27-1/2	42.50
856-240FP	24	16- 3/8	2-1/8	1-1/2	29-1/2	20	1-1/4	5-1/2	32	68.00

Flange Van Stone Style IPS

(with Steel Ring)

Spigot



Part Number	Size	L	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
856-140FS	14	10	15/16	1/2	18-3/4	12	1	3	21	36.63
856-160FS	16	11	1	1/2	21-1/4	16	1	3	23-1/2	46.50
856-180FS	18	12	1-1/16	1/2	22-3/4	16	1-1/8	3	25	47.27
856-200FS	20	13	1-1/16	1/2	25	20	1-1/8	3	27-1/2	59.00
856-240FS	24	15-3/8	1-1/8	1/2	29-1/2	20	1-1/4	3	32	84.00


SPEARS
Thermoplastic Valves & Actuated Valves & Accessories
MADE IN THE U.S.A.
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PRODUCT GUIDE & ENGINEERING SPECIFICATIONS
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Since 1969
SYLMAR, CALIFORNIA
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Introduction to Spears® Valves

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Since 1969, Spears® Manufacturing Company has developed high quality thermoplastic piping system components to better meet industry needs. Spears® thermoplastic valves have been developed through years of product improvement testing, combined with the latest in computer aided engineering and manufacturing technology. Today, Spears® valves are recognized for their quality, reliability and long service life. Backed by the best in customer service and product availability, Spears® valves are the first choice for use in a wide variety of applications, including Industrial & Chemical Processing, Turf & Irrigation, Pool & Spa, and numerous Original Equipment Manufacture products.

Valve Function Basics

Ball Valves

Ball valves derive their name from the on/off function accomplished by means of a flow-controlling ball located in the center of the valve body. A hole through the center of the ball (valve bore) connects the inlet and outlet sides of the valve for fluid stream transfer. The ball rotates 90° on an axis perpendicular to the fluid stream in order to block flow in the “off” position. The ball is held in place between two valve seats, which serve as a “bubble tight” seal off, while providing lubrication during valve operation. Elastomer O-rings are used in the stem and seal carrier to prevent fluid leakage. Pressure drop is virtually eliminated in the full-open position, since the valve bore is the same size as Schedule 80 system piping. The T-Style ball valve is a special configuration incorporating a Tee fitting at one end of the valve. This design maintains close proximity of the valve to the fluid mainline to minimize “dead leg” of potential fluid accumulation, where required by specific application.

3-Way Ball Valves

3-Way ball valves are “diverter” style ball valves that provide an additional port to redirect the fluid stream. Valve configurations are either vertical (bottom branch port) or horizontal (side branch port). Multiple ball-port options are available in which different hole patterns in the valve ball provide alternative paths to divert flow. These diverter style 3-Way ball valves have no shutoff on the branch ports.

Check Valves

Check valves are automatic valves that open with forward flow and close with reverse flow. Exact operation will vary depending on the type of check valve mechanism. These include a ball (Ball Check), a swinging disc (Swing Check), a “double disc” (Butterfly Check), a weighted plug (Y-Check), and spring assisted types of check devices. These include a spring assisted swinging disc (Spring Check) and a spring mounted linear disc (In-Line Spring Check). Regardless of type, a check valve has a closure device positioned in the valve body between inlet and outlet so that the fluid stream is easily transmitted in the direction of flow, but is allowed to move against the check device in the event of flow in the reverse direction. Reversed flow is stopped or held in “check” by fluid backflow pressure which seats the closure device against the valve body. Standard elastomer O-ring seals are used in all Spears® Ball Check Valves and Industrial Swing Check Valves. Utility Swing and Spring Check Valves, and Butterfly Check Valves use an elastomer membrane seal; In-Line Spring Check Valves and Y-Check valves use an elastomer seat. Spears® Check Valves have been carefully engineered to minimize pressure drop and can be installed in either horizontal or vertical positions, within the limitations of the specific type of closure device. Ball Check Valves are well suited for general applications of fluids free from debris and entrained solids. Butterfly Check Valves have minimum space requirements and, along with Swing Check Valves, are better for use with fluids containing solids or debris. Swing Check Valves additionally allow higher volume of fluid transmission. Industrial Swing Check models can be fitted with an optional counter balance device to further control closing speed. The Utility Spring Check Valve (spring assisted Swing Check) aids in valve closing, while the In-Line Spring Check can be adjusted for resistance to opening pressure.

Swing Check Ball Valves

Swing check ball valves are a special design that combines the basic function of a ball valve and a swing check valve for use in general purpose applications where an in-line ball and check valve configuration is required.

Gate Valves

Gate valves perform an on/off function accomplished by means of a flow-controlling gate centered in the valve body between the inlet and outlet sides of the valve. The gate moves along a vertical stem axis, perpendicular to the fluid stream, thereby blocking the flow in the closed position and variably increasing the flow as the gate is moved to the full open position. Spears® gate valves use either a cylindrical plug (Plug Gate Valves) or a wedge-shaped gate and sealing surface design (regular Gate Valves). Both provide positive shut off when engaged with the valve body in the closed position and feature non-rising type stem. This provides vertical movement of the gate without extension of the stem above the valve body.

Butterfly Valves

Butterfly valves are rotary valves in which a disc is rotated 90° to open or close the flow passage. In the full closed position, the disc seals against an elastomer seat. Flow control can be accomplished by varying the degree to which the disc is opened. Spears® Standard and True Lug type Butterfly Valves utilize a special offset disc and low contact seat designed. Spears® Wafer style Butterfly Valve incorporates a special low contact, disc-mounted seat and centered disc. These designs minimize operation torque and improve sealing capabilities over conventional rubber seated valves.

Diaphragm Valves

Diaphragm valves utilize a moveable elastomeric membrane, or “diaphragm”, to constrict the flow passage through the valve, thereby controlling or throttling fluid flow. The diaphragm additionally isolates system fluids from internal moving parts of the valve. In the Weir-Type design, a raised area in the center of the waterway serves as a seal-off point for the elastomeric diaphragm. When installed in a horizontal position, this additionally facilitates drainage of fluid from the valve. From the full-open position, operation of the valve is accomplished by rotating the handle to vertically move a compressor unit on a threaded shaft. This compresses the attached elastomeric diaphragm to constrict the waterway and finally seal-off flow. Spears® diaphragm valves provide an indicator in the center of the handle for 360° visibility of valve position, and a special stop on the compressor to prevent damage from over-tightening. The T-Style “Zero Dead-Leg” Diaphragm Valve is a special configuration incorporating a Tee fitting at one end of the valve. This design maintains close proximity of the valve to the fluid mainline to minimize “dead leg” of potential fluid accumulation, where required by specific application.

Globe Valves & Y-Pattern Valves

Globe valves are characterized by a partition separating the two halves of the body with a center passage that is opened and closed by a screw-down/screw-up seat mounted at right angle to the body. The “Globe” name was derived from the original spherical body design for these valves. Globe valves offer excellent flow regulating characteristics, but have a high resistance due to the turning flow path. The Y-Pattern Valve (aka, “oblique valves”) is a hybrid globe valve incorporating an angled stem. This less restrictive flow path design improves flow while maintaining the same excellent throttling characteristics as a globe valve.

Needle Valves

Needle valves are small sizes of globe valves fitted with a tapered plug. The tapered plug or “needle” is screwed in or out of a mating orifice in the body and thus controls the effective orifice size. Needle valves are excellent for metering and other fine adjustment flow control applications. Spears® Needle Valves use PTFE stem seals and no elastomers for optimum chemical resistance. These are produced in both a conventional “globe” pattern and convenient right-angle pattern design for application versatility.

ISO 9001 Certified Design & Manufacturing Quality Program

Spears® Quality Management System is certified to the strict requirements of ISO 9001 for optimum control of product design, development, and production. Quality improvement and customer satisfaction are central to each stage of producing Spears® valves from conception through final delivery.

Development & Testing

The foundation of Spears® products is development, testing, and more testing. Spears® valve development combines proven experience with structural testing at the design level. Materials and design are correlated in computer engineering stress analysis to yield the optimum structure and function of each valve component. Resulting products are then subjected to numerous tests for performance validation of dimensional stability, sealing capability, hydrostatic burst pressure, operational torque, flow capacity, vacuum application suitability and cyclic pressure analysis. Once approved, production valves and components are routinely subjected to dimensional, functional and burst pressure verification tests.

100% Sealing Capability Verification

All Spears® ball valves are air-tested for 100% verification of positive sealing during the manufacturing process.

Hydrostatic Burst Pressure Verification

Representative valve samples are routinely subjected to an internal hydrostatic pressure of 3.2 times their designated pressure rating in a 60-70 second test per ASTM D 1599 during each production run.

Vacuum Service

Validation of Spears® valves rated for vacuum service is determined from 1-hour tests at 26 in. Hg vacuum with less than 1 in. Hg loss. A vacuum lubricant should be applied to elastomer-seated valve seats, such as Spears® Butterfly Valve or True Union Ball Check Valve, to prevent the seat from drying out in vacuum service applications.

Spears® Valve Innovations

Not all plastic valves are the same. Spears® valves incorporate several unique features not found in competitive products. The following are a few examples of Spears® innovative improvements to conventional valve designs.

Spears® Safe-T-Shear® Stem

This important SAFETY FEATURE was developed to help prevent line fluids from leaking out in the event of ball valve stem damage. Engineered for high strength, the stem incorporates a special shear point to control accidental breakage. Over-torquing breaks occur above the stem O-ring leaving the seal intact until repair or replacement can be made.

Spears® Heavy Buttress Thread Components

When it comes to handling the hydraulic force of high internal pressures, the brute strength of the buttress thread is clearly the best. Its broad bearing surface with an angular backing provide greater thrust support than conventional square-cut, ACME-type threads commonly used in similar ball valve components. All Spears® Ball Valve union nuts and seal carriers are designed with buttress threads for greater strength and pressure handling capabilities — one of the strongest in the plastic valve industry!

Low Torque, Low Wear Butterfly Valve Seats

Spears® Butterfly Valves provide the lowest operating torque available. Sealing contact between disc and seat takes place only at the close of the valve, allowing free travel through the full range of opening. This unique design eliminates seat creep, extrusion and wear typical with conventional liner-type seats. Exclusive design interlocks seat and body to prevent washout or blowout.

Flow Balanced Ball Check Valves

Improper ball check valve design can significantly restrict flow, create ball-chatter and even result in reverse ball travel and open flow shutoff! As a result of extensive design testing, Spears® has engineered the internal flow characteristics of the True Union Ball Check Valve to optimize fluid transmission and virtually eliminate ball-chatter.

Special Reinforced (SR) Female Plastic Threads

This patented Special Reinforced (SR) design is one of the most significant improvements in female plastic thread reliability. Not just an added reinforcing ring, this unique pre-compression design compensates for expansion forces generated from normal tapered pipe thread joint make-up. Radial stress is neutralized in normal installations and contained in severe over tightening situations. Spears® SR Threads are available on a variety of Spears® industrial valves using SS316 reinforcement for optimum chemical and corrosion resistance. Spears® SR Female Spigot Adapters are also available for quick conversion of any slip-socket style valve end connector.

Spears® Thermoplastic Piping System Materials

Benefits of Spears® Thermoplastic System Materials

Unlike metal, plastics never rust, scale, or pit — they virtually last forever. Thermoplastics are abrasion resistant, chemical and corrosion resistant, nonconductive, lightweight, and operate at lower friction-loss levels than metals. Moreover, plastics are nontoxic and environmentally safe. Adding these benefits with ease of installation at substantially lower costs, thermoplastic piping system components are the proven choice for years of maintenance free system operations.

Joining Methods for Spears® Thermoplastic Systems

Spears® thermoplastic piping system products are designed around primary components manufactured from PVC, CPVC or PP materials and their glass filled varieties. PVC and CPVC materials can be easily joined by solvent cement welding plus threaded, flanged or mechanical coupled connections. Spears® PP products are joined by using flanged or threaded connections featuring Spears® patented Special Reinforced (SR) female plastic threads.

Material Considerations in Application and System Design

PVC, CPVC and PP thermoplastic piping system components will give years of trouble free service with proper attention to application and system design. To avoid problems, the following key points must be considered when selecting materials for an application and in designing a system for their use.

1. **Fluid incompatibility** of certain chemicals, especially petroleum distillates and derivatives, can cause environmental stress cracking in different thermoplastic compounds. Chemical compatibility of all valve or system components, including solvent cements, must be verified before installation. Verification of fluid compatibility is at the discretion of the user.

2. **Temperature-pressure relationships** must be considered. Product pressure ratings are based on use of water mediums at 73°F. In general, product pressure ratings must be de-rated as temperature increases (see Temperature Pressure Table for individual valves).

3. **Expansion and contraction** is greater in thermoplastic systems than in metal systems. As a result, system design must be flexible to allow for movement. Use of Spears® Thermoplastic Expansion Joints is recommended.

4. **Extreme heat or cold** where internal fluids may freeze or where temperatures may exceed thermoplastic design limits must be avoided, including consideration of storage locations.

5. **Direct sun exposure** results in high thermal heat absorption, especially in darker color thermoplastic materials. A white water-based exterior latex paint can be applied to reduce heat buildup.

6. **Lower impact resistance** of thermoplastic system components than that of metal systems requires avoidance of sharp, pointed objects in both above and below ground installations, including mounting devices and backfilling operations.

7. **Proper installation** is essential. Special attention must be given to technique and instructions for making solvent cemented connections, threaded connections, flanged connections, and for installation of valves and other individual system components. System design must also take into account support, thrust blocking, transition to different materials and other installation related factors.

8. **Threaded joints** require several considerations. First, pressure capacities of threaded system components should be de-rated to 50% of the rating for corresponding type and size of thermoplastic pipe. ***NOTE:*** *Valves have individual pressure ratings and do not require de-rating for threaded connections.* Second, as with internal fluids, certain paste sealants may cause environmental stress cracking in thermoplastic materials, and compatibility should be verified before use. Finally, the leading cause of thread joint failures is from over tightening female thermoplastic threads. Use of Spears® Special Reinforced (SR) Threads is recommended.

9. **Hydraulic Shock** (water hammer; surge pressure) in thermoplastic piping systems can burst pipe, fittings, and valves. Anticipated surge pressures should be calculated and included in maximum internal pressure ratings of system components (specified "Non-Shock" pressure rating for valves). Safeguards should be incorporated in system design to vent pressures and eliminate entrapped air. Fluid velocities should not exceed a maximum of 5 feet per second in thermoplastic systems.

10. **Non-liquid transport** — ***WARNING:*** *Spears® Manufacturing Company* ***DOES NOT RECOMMEND*** *the use of thermoplastic piping products for systems to distribute or store compressed air or gases. The use of Spears® products in compressed air or gas systems automatically voids Spears® warranty for such products, and their use against our recommendation is entirely the responsibility and liability of the installer. Spears® Manufacturing Company will not accept responsibility for damage or impairment from its products, or other consequential or incidental damages caused by misapplication, incorrect assembly, and/or exposure to harmful substances or conditions.*

Individual Materials Overview

Thermoplastics

PVC — Poly Vinyl Chloride

PVC is one of the most specified thermoplastics for piping system components, including, valves, fittings, flanges, and many specialty products. PVC has excellent chemical and corrosion resistance to a broad range of fluids including water, deionized water, most mineral acids, bases, salts and paraffinic hydrocarbon solutions. PVC is not recommended for use with chlorinated or aromatic hydrocarbons, esters, or polar solvents such as ketones. Spears® PVC materials conform to ASTM Cell Classification 12454 (formerly designated as Type I, Grade 1). The maximum recommended service temperature of PVC products is 140°F (60°C).

Glass Reinforced PVC — Fiberloc®

Fiberloc® is a registered trademark of PolyOne Corporation Fiberloc® is a glass fiber reinforced PVC composite material. While maintaining the traditional properties of PVC, Fiberloc® increases its strength, stiffness, and dimensional stability from glass fiber reinforcement. The maximum recommended service temperature of Fiberloc® products is 140°F (60°C).

CPVC — Chlorinated Poly Vinyl Chloride

Chlorinated PVC is used for higher temperature applications than PVC, especially for handling hot corrosive liquids. With similar chemical and corrosion resistance to PVC, increased chlorine content gives CPVC superior thermal resistance. CPVC is not recommended for use with chlorinated or aromatic hydrocarbons, esters, or polar solvents such as ketones. Spears® CPVC materials conform to ASTM Cell Classification 23447 (formerly designated as Type IV, Grade 1). The maximum recommended service temperature of CPVC products is 200°F (93°C).

Glass Reinforced CPVC

This special composite compound has the basic properties of CPVC with additional strength, stiffness, and dimensional stability from glass fiber reinforcement. The maximum recommended service temperature of glass reinforced CPVC products is 200°F (93°C).

PP — Polypropylene

Polypropylene is used in a variety of Spears® valves where different chemical resistance and lower temperature impact resistance is required as compared to PVC or CPVC. The excellent impact resistance characteristics of polypropylene make this polymer the choice for Spears® valve handles. Spears® PP products carry a maximum recommended service temperature of 180°F (82°C).

Glass Reinforced PP

Glass reinforced polypropylene is used in numerous valves and valve accessories where additional strength or stiffness is required over standard PP materials while maintaining basically the same range of chemical resistance.

PTFE/PFA — Polytetrafluoroethylene/ Perfluoroalkoxy Resin

PTFE is a ram extrusion process while PFA is a melt processed fluoroplastic. These fluoroplastics are virtually inert to most chemicals, acids bases and solvents. Due to their low coefficient of friction, these materials are considered “self-lubricating” making them an excellent choice for valve seats, bearings and thrust washers. Spears® proprietary processing of PTFE with other materials allows low friction characteristics to be built into a variety of thermoplastic components used in Spears® valves. Fluoroplastics are serviceable to 500°F (260°C).

PTFE/HDPE

Spears® proprietary composition of PTFE and High Density Polyethylene is used in a variety of valve seats, bearing washers, and other valve components requiring durability and improved lubricity. The chemical resistance of HDPE is somewhat higher than that of LDPE and generally exceeds that of PVC and CPVC. HDPE has excellent resistance to acids, alcohols and bases. In comparison to PVC and CPVC, HDPE is somewhat less resistant to aliphatic hydrocarbons and has more limited resistance to oxidizing agents. HDPE is serviceable to 230°F (110°C).

Low Extractable PVC

Low Extractable PVC material developed for use in UPW (Ultra Pure Water) and other high purity applications. Independently tested, Low Extractable PVC provides superior resistance to regular PVC for leaching of anion, cation, and numerous trace metals when subjected to 18.2 megohm deionized water while maintaining ease of installation. Low Extractable PVC has the same basic chemical resistance as regular PVC.

Elastomers

EPR (EPDM) — Ethylene propylene rubber

Used in O-ring seals, EPR is recommended for water, chlorinated water, dilute acids and alkalines, alcohols, and has excellent resistance to ozone. EPR is not recommended for petroleum oils, di-ester lubricants, strong acids, or strong alkalines. The maximum recommended service temperature of EPR is 300°F (149°C).

FKM — Fluoroelastomer

Fluoroelastomers are a special purpose fluorocarbon-based synthetic rubber categorized under the ASTM designation of "FKM". The FKM O-ring is commonly referred to as a "Viton® O-ring". However, "Viton®" is only one of many FKM brand names and is a registered trademark of DuPont Performance Elastomers L.L.C. Spears® uses general purpose Type 1 FKM O-rings with a minimum of 66% fluorine content for the best balance of overall properties. FKM exhibits a very broad range of chemical resistance, including petroleum oils, di-ester based lubricants, silicate fluids and greases, halogenated hydrocarbons, and mineral acids. FKM is not recommended for ketones, amines, anhydrous ammonia, hot hydrofluoric or chlorosulfonic acids, or automotive brake fluids. The maximum recommended service temperature of FKM is 400°F (204°C).

Nitrile (Buna-N) — Nitrile elastomer

Used in O-ring seals, nitrile elastomers are recommended for petroleum oils and fluids, silicone oils and greases, di-ester based lubricants, ethylene glycol based fluids, and cold water. Nitrile is not recommended for phosphate ester hydraulic fluids, halogenated hydrocarbons, strong acids, ketones, ozone or automotive brake fluids. The maximum recommended service temperature of nitrile is 275°F (135°C).

FFKM (Aegis™, Kalrez®) — Perfluoroelastomer

Aegis™ is a trademark of ISC Freudenberg-NOK, Kalrez® is a registered trademark of DuPont-Dow Elastomers. These specialty materials are virtually inert and provide the greatest range of chemical resistance found in an elastomer. However, be aware that perfluoroelastomers are substantially more expensive than other elastomer compounds. Perfluoroelastomer are serviceable to 600°F (360°C) and performance is limited at very low temperatures.

CSM (Hypalon®) — Chlorosulfonated Polyethylene

Hypalon® is a registered trademark of DuPont-Dow Elastomers. CSM is a close match to neoprene, but it has improved chemical resistance. This specialty compound offers good abrasion resistance with superior resistance to weather, ozone, sunlight and oxidation. CSM has excellent resistance to alcohols, alkalis and acids, very good color stability with moderate resistance to oils and gasoline. CSM is not recommended for use with aromatic solvents. CSM has limited flexibility at low temperatures and relatively poor compression set. As a result, CSM is not generally manufactured as O-rings. CSM is serviceable to 300°F (149°C). Hypalon® is offered as an alternative diaphragm elastomer in Spears® Diaphragm Valves.

PFA/FEP Encapsulated O-rings

O-ring encapsulation places a PFA or FEP material around a FKM elastomer core to provide very high chemical resistance. However, this is not without a trade-off. The PFA/FEP encapsulation is far less resilient than an elastomer and may not perform as well in certain O-ring applications. PFA/FEP encapsulated O-rings should be used only where an elastomer O-ring cannot meet requirements.

Elastomer Backed PTFE

Used in Spears® PTFE Diaphragm Valves, this chemically bonded laminate provides the chemical resistance of PTFE with improved resilience from a thick elastomer backing for greater sealing capability than solid PTFE Diaphragms. Use of heavier, high grade EPDM or FKM backing materials eliminates the need for "gas barrier" PTFE Diaphragm designs.

Metals

Zinc Plated Steel

Zinc plated carbon steel is the standard for general purpose bolts, nuts and fasteners. Zinc plated steel provides good corrosion resistance for most dry environment applications and normal operating conditions.

Stainless Steel

Stainless Steel provides superior corrosion resistance than natural or plated carbon steels. Common grade is 18-8, which is excellent for general purpose use in nuts, bolts and fasteners. SS302 and SS304 are commonly used in a variety of sheet stock or deep drawn metal components. SS316 is the preferred choice for harsh chemical and corrosion environments and is used in the majority of Spears® industrial valves and accessories where stainless steel is required.

PTFE Coated Stainless Steel

Where very high chemical resistance is needed, Spears® offers a special PTFE coated, stainless steel Butterfly Valve stem. This tough, chemically bonded coating makes the stem virtually inert to most chemicals without loss of function or reliability.

Special Alloys (Titanium, Hastaloy®, Alloy 20, etc.)

A variety of specialty metals can be obtained on a custom order basis for use in Spears® products where specific chemical or corrosion resistance is required and specified by user. Please note that custom components generally require extended lead-time and may have significant costs.

Temperature Pressure De-rating for PVC, CPVC & PP Thermoplastic Materials

Elevated temperature fluid mediums require a de-rating of thermoplastic pipe maximum internal pressure ratings at 73°F. To determine the maximum internal pressure rating at an elevated temperature, simply multiply the pipe pressure rating at 73°F by the percentage specified for the desired temperature.

PLEASE NOTE — Valves have different elevated temperature ratings than pipe & fittings. See individual valve recommendations.

System Operating Temperature °F (°C)	73 (23)	80 (27)	90 (32)	100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
PVC	100%	90%	75%	62%	50%	40%	30%	22%	-0-	-0-	-0-	-0-	-0-	-0-	-0-
CPVC	100%	100%	91%	82%	73%	65%	57%	50%	45%	40%	32%	25%	22%	20%	-0-
PP	100%	90%	75%	70%	65%	50%	42%	36%	30%	25%	20%	15%	-0-	-0-	-0-

Typical Physical Properties of PVC, CPVC & PP Thermoplastic Materials

The following table lists typical physical properties of PVC, CPVC and PP thermoplastic materials. Variations may exist depending on specific compound and product.

Properties	ASTM Test Method	PVC	CPVC	PP Natural*
Mechanical Properties, 73°F				
Specific Gravity	D 792	1.41	1.55	.907
Tensile Strength, psi	D 638	7,200	8,000	5,240
Modulus of Elasticity, psi	D 638	440,000	360,000	231,000
Compressive Strength, psi	D 695	9,000	10,100	---
Flexural Strength, psi	D 790	13,200	15,100	---
Izod Impact, notched, ft-lb/in	D 256	.65	1.50	3.02
Thermal Properties				
Heat Deflection Temperature, °F at 66 psi	D 648	165	217	201
Thermal Conductivity, BTU/hr/sq ft/°F/in	C 177	1.02	.95	
Coefficient of Linear Expansion, in/in/°F	D 696	3.1×10^{-5}	3.4×10^{-5}	5.42×10^{-5}
Flammability				
Limiting Oxygen Index, %	D 2863	43	60	
UL 94 Rating		94V-0	V-0, 5VB, 5VA	HB
Other Properties				
Water Absorption, % 24 hr.	D 570	.05	.03	.02
Industry Standard Color		Dark Gray / White	Medium Gray	Natural/Beige
Minimum ASTM Cell Classification	D 1784/D 4101	12454	23447	PP0112 B65242
NSF® Potable Water Approved		Yes	Yes	Yes

* Glass filled PP will have slightly different values with higher tensile strength.

Spears® Valve Standards

Standards provide greater assurance of product performance and consistency, and are available to assist design engineers in system specification. The most frequently referenced industry standards for plastic piping systems are ASTM Standard Specifications and Practices. Along with ASTM Standards, additional product specifications and certifications form the basis of product conformance to which Spears® valves are manufactured.

Individual Standards Overview

ASTM — American Society for Testing and Materials

ASTM D 1784

Specifies compound physical requirements for PVC and CPVC materials used in the manufacture of thermoplastic valves, pipe, and fittings. The standard classifies compounds on the basis of several physical and chemical properties. Conformance to a particular material classification requires meeting the minimum requirements specified.

ASTM D 1785 and F 441

Specifies physical dimensions, test requirements, and maximum operating pressures, for Schedule 40, 80 and 120 PVC (D 1785) and CPVC (F 441) pressure pipe.

ASTM D 2466 and F 438

Specifies physical dimensions, test requirements, and workmanship for Schedule 40 PVC (D 2466) and CPVC (F 438) pressure fittings.

ASTM D 2464 and F 437

These standards have been incorporated into ASTM D 2467 and F 439, respectively.

ASTM D 2467 and F 439

Specifies physical dimensions, test requirements, and workmanship for Schedule 80 PVC (D 2467) and CPVC (F 439) pressure fittings.

ASTM D 2564, F 493, and F 656

Specifies requirements for PVC (D 2564) and CPVC (F 493) solvent cement, including component compounds, minimum resin content, viscosity, and physical performance. Standard F 656 specifies requirements for primers to be used with PVC solvent cements.

ASTM D 2846

Specifies physical dimensions, test requirements, and workmanship for CPVC Hot-and-Cold Water Distribution Systems, commonly referred to as CTS (Copper Tube Size).

ASTM D 2855

Specifies standard practice and procedures for making PVC pipe and fitting joints with solvent cement.

ASTM D 4101

Specifies classification of injection molding and extrusion grades of Polypropylene (PP) materials according to physical characteristics. Conformance to a particular material classification requires meeting the minimum requirements specified.

ASTM F 1498

Specifies dimensions and gauging of tapered pipe threads on plastic pipe and fittings.

ASTM F 1970

Specifies performance criteria testing, and end connection dimensions for products such as ball valves and check valves.

ANSI — American National Standards Institute

ANSI B1.20.1

Specifies basic thread form, taper, and tolerances of general purpose tapered pipe threads (metal).

ANSI B16.5

Specifies standard bolt hole patterns and basic dimensions for Class 150 steel pipe flanges.

NSF® — National Sanitation Foundation

NSF® is a third party product approval agency which tests manufacturer's product against a variety of health and product performance standards. They are one of the most recognized agencies for issuing approval of plastic piping system products for potable water use.

NSF® Standard 14

Certifies product suitability for potable water use, product conformance to applicable ASTM standards, and establishes minimum requirements for manufacturer's quality control programs through routine testing and facilities inspections.

NSF® Standard 14 Special Engineering Appurtenance Program (S.E.)

In addition to Standard 14 general requirements, the S.E. program establishes product performance requirements where no directly applicable ASTM specifications exist. NSF® S.E. specifications are developed from a combination of applicable portions of ASTM specifications and manufacturer's design specifications as a standard for conformance verification.

NSF® Standard 61

Developed to establish minimum requirements for the control of potential adverse health effects from products in contact with drinking water. Certifies product suitability for use in potable water systems through toxicological testing for contaminates or impurities. NSF® Standard 61 compliance is a prerequisite to NSF® Standard 14 certification.

True Union 2000 Ball Valves

One of the Most Versatile, Compact Valve Designs Available

Spears® True Union 2000 Ball Valves, 3-Way Ball Valves and Ball Check Valves provide maximum versatility with fully interchangeable valve cartridges. Provides for easier system design modifications and upgrades in multiphase projects, or anywhere changes in valve types are desired. Simply exchange any True Union 2000 valve in-line using existing union nuts. Also mates with Spears® new 2000 Pipe Unions. All True Union 2000 valves feature a low profile, compact design for minimal space requirements. Additionally, Spears® offers valve Retrofit Kits for easy in-line replacement of other valves and factory installed Actuation Packages.



True Union 2000
Industrial Ball Valve



True Union 2000
Industrial Ball Check Valve



True Union 2000
Standard Ball Valve



True Union 2000
Industrial 3-Way Horizontal
Diverter Ball Valve



True Union 2000
Industrial 3-Way Vertical
Ball Valve



True Union 2000
Industrial Tee-Style
Ball Valve

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Progressive Products from Spears® Innovation and Technology



Features – PVC, CPVC

This multi-featured, space saving quarter-turn shutoff valve is designed to meet the demands of today's industrial and chemical processing applications. PVC and CPVC valves are available in IPS sizes 1/2" through 6" with socket/regular thread, SR (Special Reinforced) thread, flanged or spigot end connectors and 8" Venturied valve with socket or flanged ends. Also available in metric socket and BSP thread sizes 1/2" through 2".

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Also Available in Spears® High Purity, Low Extractable PVC Material
- Interchangeable with all True Union 2000 Valves Mates with Union 2000 Pipe Unions
- High Impact Polypropylene Handle
- Built-in Handle Lockout
- Schedule 80 Full-Bore Design
- Strong, Buttress Thread Union Nuts
- Spears® Double O-ring Safe-T-Shear® Stem Design
- EPDM or FKM O-rings
- Spears® Safe-T-Blocked® Seal Carrier
- Self Adjusting PTFE Floating Seat Design
- Fully Serviceable, Replaceable Components
- Sizes 1/2" - 4" pressure rated to 235 psi @ 73°F. Sizes 6" and 8" Venturied and all Flanged to 150 psi @ 73°F.
- EPDM Valves NSF® Certified for Potable Water use
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricants
- Manufactured to ASTM F 1970

Sample Engineering Specification

All thermoplastic ball valves shall be True Union 2000 Industrial type manufactured to ASTM F 1970 and constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All valves shall have Safe-T-Shear® stem with double O-ring stem seals. All valve handles shall be polypropylene with built-in lockout mechanism. All valve union nuts shall have Buttress threads. All seal carriers shall be Safe-T-Blocked®. All valve components shall be replaceable. All EPDM valves shall be certified by NSF International for use in potable water service. All 1/2" through 4" valves shall be pressure rated to 235 psi, all 6" and 8" Venturied and all flanged valves shall be pressure rated to 150 psi for water at 73°F.

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Number[1,2]					Pressure Rating
		Socket	Threaded	SR Threaded	Flanged	Spigot	
1/2	EPDM	1829-005	included	1821-005SR	1823-005	1827-005	235 psi Non-Shock Water @ 73°F (Flanged 150 psi Non-Shock) Water @ 73°F
	FKM	1839-005	included	1831-005SR	1833-005	1837-005	
3/4	EPDM	1829-007	included	1821-007SR	1823-007	1827-007	
	FKM	1839-007	included	1831-007SR	1833-007	1837-007	
1	EPDM	1829-010	included	1821-010SR	1823-010	1827-010	
	FKM	1839-010	included	1831-010SR	1833-010	1837-010	
1-1/4	EPDM	1829-012	included	1821-012SR	1823-012	1827-012	
	FKM	1839-012	included	1831-012SR	1833-012	1837-012	
1-1/2	EPDM	1829-015	included	1821-015SR	1823-015	1827-015	
	FKM	1839-015	included	1831-015SR	1833-015	1837-015	
2	EPDM	1829-020	included	1821-020SR	1823-020	1827-020	
	FKM	1839-020	included	1831-020SR	1833-020	1837-020	
2-1/2	EPDM	1822-025	1821-025	1821-025SR	1823-025	1827-025	
	FKM	1832-025	1831-025	1831-025SR	1833-025	1837-025	
3	EPDM	1822-030	1821-030	1821-030SR	1823-030	1827-030	
	FKM	1832-030	1831-030	1831-030SR	1833-030	1837-030	
4	EPDM	1822-040	1821-040	1821-040SR	1823-040	1827-040	
	FKM	1832-040	1831-040	1831-040SR	1833-040	1837-040	
6	EPDM	1822-060	1821-060	1821-060SR	1823-060	1827-060	150 psi Non-Shock Water @ 73°F
	FKM	1832-060	1831-060	1831-060SR	1833-060	1837-060	
8[3]	EPDM	1822-080	—	—	1823-080	—	
	FKM	1832-080	—	—	1833-080	—	

1) For CPVC, add the letter "C" following the size code of part number listed (e.g.,1829-005**C**, 1821-005**C**SR)
2) For Special Ball Vent Design, add the letter "V" before the dash separator (e.g.,1829**V**-005, 1821**V**-005CSR)
3) 8" Venturied Valves are 6" ball valves fitted with 6x8 end connector adapters.

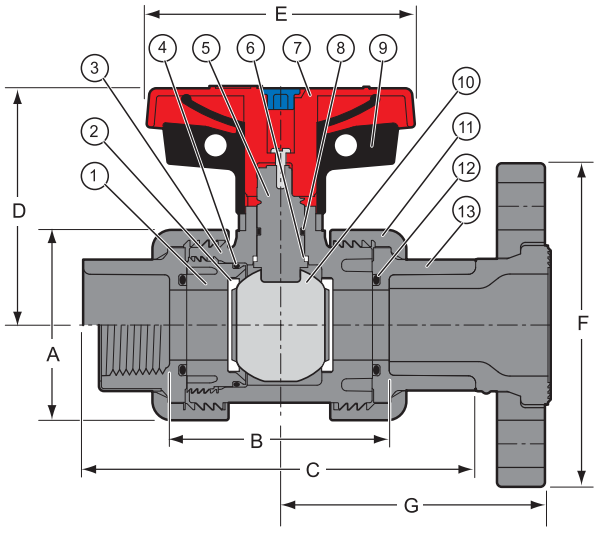
Optional Vented Ball Valves

Same valve with special ball vent design for sodium hypochlorite (bleach) and other chemical applications where entrapped fluids may form caustic crystalline residues and pressure build up from gases developed. Valve has a 1/8" vent hole in ball to equalize internal fluid pressures. Install valve with ball vent on the pressure (upstream) side when in closed position.

Optional Accessories*

- Retro-Fit End Connector Sets for Valve Replacement
- Split-Nut Repair Kits for Union Nut Replacement
- Supplemental End Connectors
- Round Safety Handles
- Handle Lockout Ring
- Stem Extension Kits
- Square Operator Nuts
- Multi Mount Valve/Actuation Mounting Kits
- Mini-Mount Actuation Mounting Kits

* See ***"BALL VALVE ACCESSORIES"*** section for details of individual products.



Replacement Parts

No.	Component	Qty.	Material
1	Seal Carrier	1	PVC/CPVC
2	Seat	2	PTFE
3	Body	1	PVC/CPVC
4	Carrier O-ring	1	EPDM/FKM
5	Stem	1	PVC/CPVC
6	Stem Bearing	1	PP
7	Handle	1	PP
8	Stem O-ring	2	EPDM/FKM
9	Handle Lock	1	PP
10	Ball	1	PVC/CPVC
11	Union Nut	2	PVC/CPVC
12	End Connector O-ring	2	EPDM/FKM
13	End Connector	2	PVC/CPVC

Dimensions, Weights, Operating Torque & C_V Values

Nominal Size	Dimensions Reference (inches, ± 1/16)										Approx. Wt. (Lbs.)		Oper.[2] Torque (in. lbs.)	Cv^3 Values		
	A	B[1]		C			D	E	F	G	PVC	CPVC		Soc/Thd	Flanged	Spigot
		Soc/Thd	Spigot	Socket	Thread	Spigot										
1/2	1-7/8	2-3/8	2-7/8	4-3/16	3-3/16	4-5/8	2-9/16	2-13/16	3-1/2	2-31/32	.36	.38	16	29	18	27
3/4	2-1/4	2-3/4	3-1/4	4-3/4	4-1/4	5-1/4	2-7/8	3-3/8	3-7/8	3-5/16	.56	.58	17	63	39	57
1	2-1/2	2-7/8	3-1/2	5-1/8	4-11/16	5-3/4	3-1/8	3-7/16	4-1/2	3-5/8	.74	.77	22	120	73	108
1-1/4	3-1/16	3-1/4	3-13/16	5-3/4	5-3/16	6-5/16	3-5/8	3-7/8	4-5/8	3-31/32	1.13	1.19	28	243	151	223
1-1/2	3-1/2	3-1/2	4	6-1/4	5-7/16	6-3/4	4	4-3/16	5	4-3/8	1.54	1.60	61	357	223	333
2	4-5/16	4-25/32	5-3/16	7-3/4	7-13/16	8-1/4	4-1/2	5-3/32	6	5-1/4	2.72	2.85	77	599	395	571
2-1/2	5-3/8	6-7/8	7-13/16	10-7/16	9-11/16	11-3/8	5-1/8	6-1/4	7-1/2	6	7.42	7.70	132	856	579	734
3	6-3/16	7	7-13/16	10-11/16	9-7/8	11-9/16	5-7/8	7-5/8	7-1/2	6-13/16	7.46	7.81	132	1416	974	1322
4	7-3/4	7-5/16	8-1/4	11-7/8	10-1/4	12-3/4	6-3/4	9	9	7-1/2	12.35	12.48	396	2865	1952	2672
6	11-5/8	11-1/16	13	17-1/16	15-3/4	18-1/2	8-1/8	14-5/16	11-1/4	10-3/16	37.53	40.55	732	6638	4824	6149
8[4]	11-5/8	23-3/16	---	31-7/8	---	---	8-1/8	14-5/16	13-1/2	17-13/16	50.84	55.92	732	N/A	N/A	N/A

1: Valve Lay Length
2: Torque required at valve maximum internal pressure rating, 5ft/sec. Flow velocity; due to adjustment differences during installation, actual values may vary.
3: Gallons per minute at 1 psi pressure drop. Valves calculated from laying length, based on derivative of Hazen-Williams equation with surface roughness factor of C=150.
4: 8" Venturied Valves are 6" ball valves fitted with 6x8 end connector adapters.

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 4"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	6" and 8"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

NOTE: Flanged Valves have a base pressure rating of 150 psi.

True Union 2000 Industrial 3-Way Ball Valves





Quick-View Valve Selection Chart
3-Way Vertical Ball Valve

Valve Size	O-ring Material	PVC Part Number[1, 2, 3, 4]				Pressure Rating
		Socket	SR Threaded	Flanged	Spigot	
1/2	EPDM	4722L1-005	4721L1-005SR	4723L1-005	4727L1-005	235 psi Non-Shock Water @ 73°F (Flanged 150 psi Non-Shock) Water @ 73°F
	FKM	4732L1-005	4731L1-005SR	4733L1-005	4737L1-005	
3/4	EPDM	4722L1-007	4721L1-007SR	4723L1-007	4727L1-007	
	FKM	4732L1-007	4731L1-007SR	4733L1-007	4737L1-007	
1	EPDM	4722L1-010	4721L1-010SR	4723L1-010	4727L1-010	
	FKM	4732L1-010	4731L1-010SR	4733L1-010	4737L1-010	
1-1/4	EPDM	4722L1-012	4721L1-012SR	4723L1-012	4727L1-012	
	FKM	4732L1-012	4731L1-012SR	4733L1-012	4737L1-012	
1-1/2	EPDM	4722L1-015	4721L1-015SR	4723L1-015	4727L1-015	
	FKM	4732L1-015	4731L1-015SR	4733L1-015	4737L1-015	
2	EPDM	4722L1-020	4721L1-020SR	4723L1-020	4727L1-020	
	FKM	4732L1-020	4731L1-020SR	4733L1-020	4737L1-020	
2-1/2	EPDM	4722L1-025	4721L1-025SR	4723L1-025	4727L1-025	150 psi Non-Shock Water @ 73°F
	FKM	4732L1-025	4731L1-025SR	4733L1-025	4737L1-025	
3	EPDM	4722L1-030	4721L1-030SR	4723L1-030	4727L1-030	
	FKM	4732L1-030	4731L1-030SR	4733L1-030	4737L1-030	
4	EPDM	4722L1-040	4721L1-040SR	4723L1-040	4727L1-040	
	FKM	4732L1-040	4731L1-040SR	4733L1-040	4737L1-040	

1: For CPVC valve, add the letter "C" to the part number (e.g. 4722L1-005**C**)
2: For Double L-Port, add the number "2" to the part number (e.g. 4722L**2**-005)
3: For Triple L-Port, add the number "3" to the part number (e.g. 4722L**3**-005)
4: For T-Port, add the letter "T1" to the part number (e.g. 4722**T1**-005)

Quick-View Valve Selection Chart
3-Way Horizontal Diverter Valve (no branch shutoff)

Valve Size	O-ring Material	PVC Part Number[1, 2]				Pressure Rating
		Socket	SR Threaded	Flanged	Spigot	
1/2	EPDM	5022L1-005	5021L1-005SR	5023L1-005	5027L1-005	235 psi Non-Shock Water @ 73°F (Flanged 150 psi Non-Shock) Water @ 73°F
	FKM	5032L1-005	5031L1-005SR	5033L1-005	5037L1-005	
3/4	EPDM	5022L1-007	5021L1-007SR	5023L1-007	5027L1-007	
	FKM	5032L1-007	5031L1-007SR	5033L1-007	5037L1-007	
1	EPDM	5022L1-010	5021L1-010SR	5023L1-010	5027L1-010	
	FKM	5032L1-010	5031L1-010SR	5033L1-010	5037L1-010	
1-1/4	EPDM	5022L1-012	5021L1-012SR	5023L1-012	5027L1-012	
	FKM	5032L1-012	5031L1-012SR	5033L1-012	5037L1-012	
1-1/2	EPDM	5022L1-015	5021L1-015SR	5023L1-015	5027L1-015	
	FKM	5032L1-015	5031L1-015SR	5033L1-015	5037L1-015	
2	EPDM	5022L1-020	5021L1-020SR	5023L1-020	5027L1-020	
	FKM	5032L1-020	5031L1-020SR	5033L1-020	5037L1-020	
2-1/2	EPDM	5022L1-025	5021L1-025SR	5023L1-025	5027L1-025	150 psi Non-Shock Water @ 73°F
	FKM	5032L1-025	5031L1-025SR	5033L1-025	5037L1-025	
3	EPDM	5022L1-030	5021L1-030SR	5023L1-030	5027L1-030	
	FKM	5032L1-030	5031L1-030SR	5033L1-030	5037L1-030	
4	EPDM	5022L1-040	5021L1-040SR	5023L1-040	5027L1-040	
	FKM	5032L1-040	5031L1-040SR	5033L1-040	5037L1-040	

1: For CPVC valve, add the letter "C" to the part number (e.g. 5022L1-005**C**)
2: For T-Port, add the letter "T1" to the part number (e.g. 5022**T1**-005)

True Union 2000 Industrial 3-Way Ball Valves

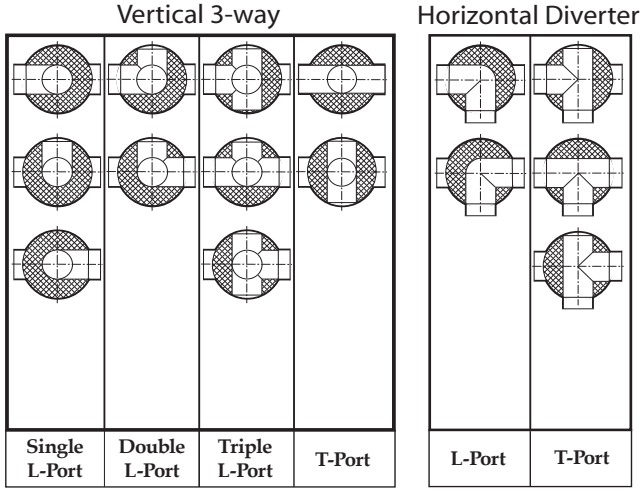
Features – PVC, CPVC

Versatile design provides multiple port and configuration options for controlling flow distribution in industrial and chemical processing applications. Choose Vertical 3-Way (L-Port Diverter, T-Port Off) or Horizontal Diverter configurations with open branch (no shutoff) design. Valves are available in IPS sizes 1/2" through 4" with socket, SR threaded (Special Reinforced), flanged or spigot end connectors. Venturied 6" (4" valves with 4 x 6 reducers) are also available with socket or flanged valve end connections.

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Vertical 3-Way or Horizontal Diverter Design (no branch shutoff)
- L-Port, Multi L-Port & T-Port Ball Configuration Options
- Interchangeable with all True Union 2000 Valves, Mates with Union 2000 Pipe Unions
- High Impact Polypropylene Handle
- Built-in Handle Lockout
- Strong, Buttress Thread Union Nuts
- Spears® Double O-ring Safe-T-Shear® Stem Design
- EPDM or FKM O-rings
- Spears® Safe-T-Blocked® Seal Carrier
- Self Adjusting PTFE Floating Seat Design
- Fully Serviceable, Replaceable Components
- Sizes 1/2" - 2" pressure rated to 235 psi @ 73°F
  Sizes 2-1/2" - 4" and all Flanged to 150 psi @ 73°F
- EPDM Valves NSF® Certified for Potable Water use
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricants
- Manufactured to ASTM F 1970
- Metric Socket and BSP Thread Available

3-Way Port Options

Diverter Valves have no shut-off on branch.



Ball Port Options viewed from top of valve.

Optional Accessories*

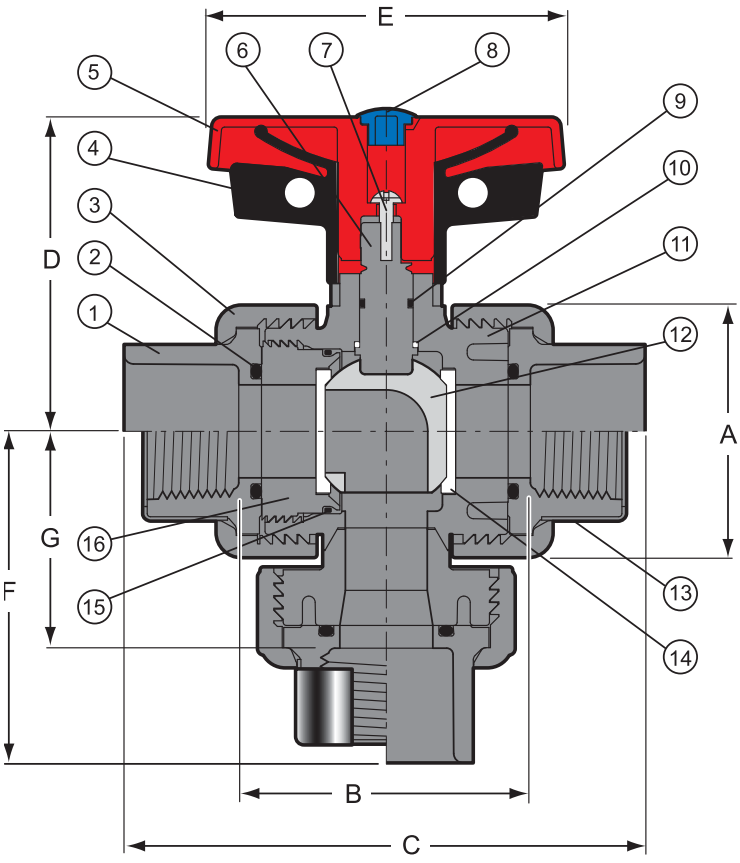
- Retro-Fit End Connector Sets for Valve Replacement
- Split-Nut Repair Kits for Union Nut Replacement
- Supplemental End Connectors
- Stem Extension Kits
- Square Operator Nuts
- Multi Mount Valve/Actuation Mounting Kits

* See ***"BALL VALVE ACCESSORIES"*** section for details of individual products.

Sample Engineering Specification

All thermoplastic ball valves shall be True Union 2000 3-Way [specify horizontal or vertical] type with [specify port option] manufactured to ASTM F 1970 and constructed from PVC Type I, ASTM D 1784 Cell Classification 12454, or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All valves shall have Safe-T-Shear® stem with double O-ring stem seals. All valve handles shall be polypropylene with built-in lockout mechanism. All valve union nuts shall have Buttress threads. All seal carriers shall be Safe-T-Blocked®. All valve components shall be replaceable. All EPDM valves shall be certified by NSF International for use in potable water service. All PVC and CPVC 1/2" through 2" valves shall be pressure rated to 235 psi, all 2-1/2" through 4" and all flanged valves shall be pressure rated to 150 psi for water at 73°F as manufactured by Spears® Manufacturing Company.

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Replacement Parts

No.	Component	Qty.	Material
1	End Connector	3	PVC/CPVC
2	End Connector O-ring	3	EPDM/FKM
3	Union Nut	3	PVC/CPVC
4	Handle Lock	1	PP
5	Handle	1	PP
6	Stem	1	PVC/CPVC
7	Screw	1	Stainless Steel
8	Handle Cover	1	PP
9	Stem O-ring	2	EPDM/FKM
10	Stem Bearing*	1	PTFE
11	Body	1	PVC/CPVC
12	Ball	1	PVC/CPVC
13	End Connector Collar	3	Stainless Steel
14	Seat	2	PTFE
15	Carrier O-ring	1	EPDM/FKM
16	Seal Carrier	1	PVC/CPVC

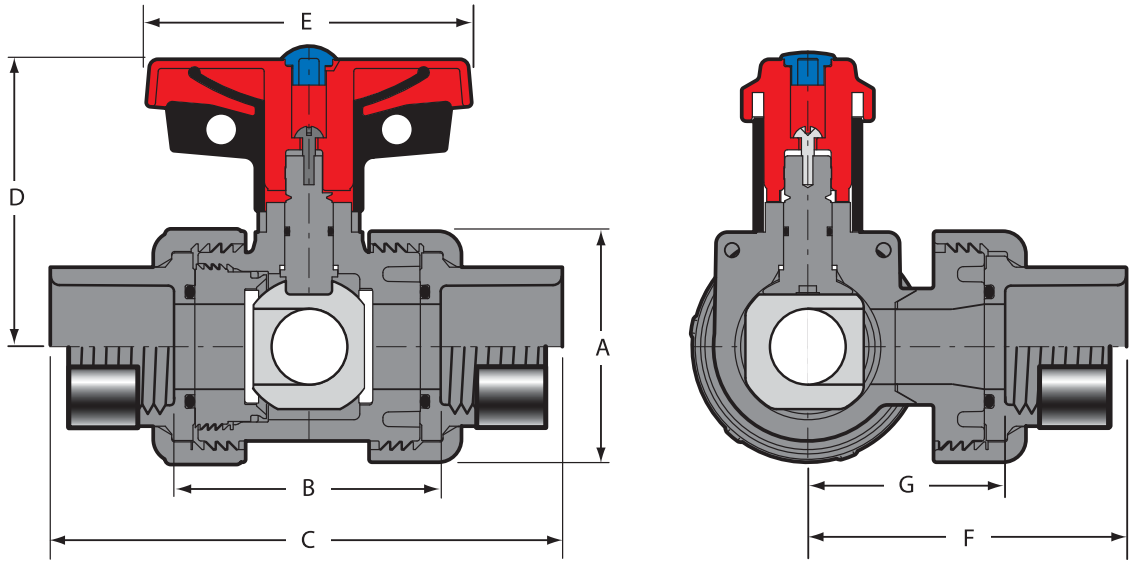
Note: Applies to both Vertical and Horizontal configurations.
* For sizes 2-1/2, 3 & 4 only.

NOTE: Diverter style valve has no shutoff on branch.

Vertical 3-Way Ball Valves — Dimensions & Operating Torque

Vertical 3-Way Ball Valve														Oper.[2] Torque (in. lbs.)
Nominal Size	A	B[1]		C			D	E	F			G		
		Soc/SR Thd	Spigot	Socket	SR Thd	Spigot			Socket	SR Thread	Spigot	Soc/SR Thd	Spigot	
1/2	1-7/8	2-7/16	2-15/16	4-1/4	3-27/32	4-3/4	2-9/16	2-13/16	2-3/4	2-9/16	2-13/16	1-11/16	2	12
3/4	2-1/4	2-3/4	3-5/16	4-3/4	4-1/4	5-3/8	2-7/8	3-5/16	3	2-3/4	3-5/16	2	2-5/16	12
1	2-1/2	2-7/8	3-1/2	5-1/8	4-11/16	5-3/4	3-1/8	3-7/16	3-1/4	3	3-9/16	2-1/8	2-7/16	20
1-1/4	3-1/16	3-1/4	3-13/16	5-3/4	5-3/16	6-5/16	3-5/8	3-13/16	3-3/4	3-3/8	4-1/16	2-3/8	2-13/16	25
1-1/2	3-1/2	3-1/2	4	6-1/4	5-7/16	6-3/4	4	4-3/16	4-3/16	3-13/16	4-1/2	2-3/16	3-1/8	40
2	4-1/4	4-3/4	5-3/16	7-3/4	6-3/4	8-1/4	4-1/2	5-1/8	5	4-1/2	5-5/16	3-1/2	3-3/4	67
2-1/2	5-3/8	5-7/8	7-13/16	9-5/16	8-1/2	11-3/8	5-1/8	6-1/4	5-7/8	5-1/2	6-7/16	4-1/8	5-5/16	120
3	6-3/16	6-7/8	7-13/16	10-11/16	9-3/4	11-9/16	5-7/8	7-5/8	6-11/16	6-3/16	7-3/16	4-3/4	5-5/16	120
4	7-1/2	7-1/4	8-1/4	11-13/16	10-1/4	12-13/16	6-3/4	9-3/16	7-1/8	6-3/4	8-3/4	5-7/8	6-1/2	336

1: Valve Lay Length
2: Torque required at valve maximum internal pressure rating, 5ft/sec. Flow velocity; due to adjustment differences during installation, actual values may vary.



NOTE: Diverter style valve has no shutoff on branch

Horizontal Diverter 3-Way Ball Valves Dimensions & Operating Torque

Nominal Size	A	B[1]		C			D	E	F			G		Oper.[2] Torque (in. lbs.)
		Soc/SR Thread	Spigot	Socket	SR Thread	Spigot			Socket	SR Thread	Spigot	Soc/SR Thread	Spigot	
1/2	1-3/16	2-7/16	2-15/16	4-3/16	3-13/16	4-3/4	2-9/16	2-13/16	2-9/16	2-3/8	2-13/16	1-11/16	2	12
3/4	2-1/4	2-3/4	3-15/16	4-3/4	4-1/4	5-3/8	2-7/8	3-5/16	3	2-3/4	3-5/16	2	2-5/16	12
1	2-1/2	2-7/8	3-1/2	5-1/8	4-11/16	5-3/4	3-1/8	3-7/16	3-1/4	3	3-9/16	2-1/8	2-7/16	20
1-1/4	3-1/16	3-1/4	3-13/16	5-3/4	5-3/16	6-5/16	3-5/8	3-13/16	3-3/4	3-3/8	4-1/16	2-3/8	2-13/16	25
1-1/2	3-1/2	3-1/2	4	6-1/4	5-7/16	6-3/4	4	4-3/16	4-3/16	3-13/16	4-1/2	2-3/16	3-1/8	40
2	4-1/4	4-3/4	5-3/16	7-3/4	6-3/4	8-1/4	4-1/2	5-1/8	5	4-1/2	5-5/16	3-1/2	3-3/4	67
2-1/2	5-3/8	5-7/8	7-13/16	9-5/16	8-1/2	11-3/8	5-1/8	6-1/4	5-7/8	5-1/2	6-7/16	4-1/8	5-5/16	120
3	6-3/16	6-7/8	7-13/16	10-11/16	9-3/4	11-9/16	5-7/8	7-5/8	6-11/16	6-3/16	7-3/16	4-3/4	5-5/16	120
4	7-1/2	7-1/4	8-1/4	11-13/16	10-1/4	12-13/16	6-3/4	9-3/16	7-1/8	6-3/4	8-3/4	5-7/8	6-1/2	336

1: Valve Lay Length
2: Torque required at valve maximum internal pressure rating, 5ft/sec. Flow velocity; due to adjustment differences during installation, actual values may vary.

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	2-1/2" - 4"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

NOTE: Flanged Valves have a base pressure rating of 150 psi.

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True Union 2000 Industrial Tee-Style Ball Valves



Tee x Socket

Features – PVC, CPVC

Spears® True Union 2000 Industrial Tee-Style Ball Valve design integrates valve and Tee-fitting for direct branch take-off laterals. The "Tee-Valve" provides a stronger, more compact connection by eliminating the need for a reducer, additional length of pipe, and one of the end connections on the ball valve. Close proximity of valve to mainline emulates a "zero dead-leg" design to minimize any areas of fluid stagnation. Custom produced to specified Tee and Valve connection sizes. Also available in metric sizes.

- Chemical & Corrosion Resistant PVC, CPVC or Low Extractable PVC materials
- Multi-featured Industrial Grade
- Built-in Handle Lockout
- Fully Serviceable, Replaceable Components
- Seal Carrier Adjustment Tool included
- ISO Pattern Actuation Mounting Option
- Spears® Dual O-ring Safe-T-Shear® Stem
- Self Adjusting PTFE Floating Seat
- Sizes 1/2" - 2" Pressure Rated to 235 psi @ 73°F
- EPDM Valves NSF® Certified for Potable Water Use

Sample Engineering Specification

All lateral branch valve connections shall be made using integrated Tee-style ball valve and Tee fitting. Tee-style ball valves shall be True Union 2000 Industrial type manufactured to ASTM F 1970 and constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447; or Low Extractable PVC, ASTM D 1784 Cell Classification 12343. All O-rings shall be EPDM or FKM. All valves shall have Safe-T-Shear® stem with double O-ring stem seals. All valve handles shall be polypropylene with built-in lockout. All valve union nuts shall have Buttress threads. All seal carriers shall be Safe-T-Blocked®. All valve components shall be replaceable. Mainline Tee fittings shall be Schedule 80 manufactured in accordance with ASTM D 2467 for PVC or F 439 for CPVC. All EPDM valves shall be certified by NSF International for use in potable water service. All 1/2" through 2" valves shall be pressure rated to 235 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

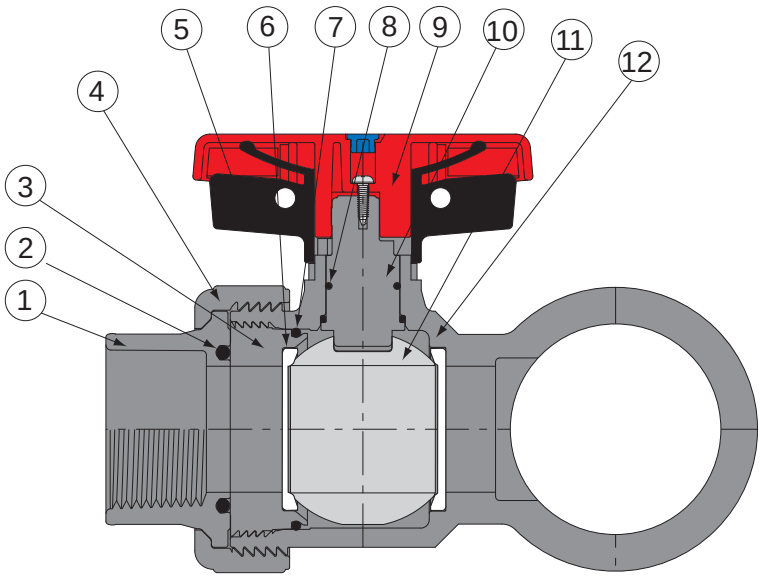
Quick-View Valve Selection Chart

T-Valves can be custom produced in any standard Tee and Valve size combination

Size (Tee x Valve Outlet)	PVC		CPVC	
	EPDM	FKM	EPDM	FKM
1/2	182901-005	183901-005	182901-005C	183901-005C
3/4	182901-007	183901-007	182901-007C	183901-007C
1	182901-010	183901-010	182901-010C	183901-010C
1-1/4	182901-012	183901-012	182901-012C	182901-012C
1-1/2	182901-015	183901-015	182901-015C	183901-015C
2	182901-020	183901-020	182901-020C	183901-020C
3/4x1/2	182901-101	183901-101	182901-101C	183901-101C
1x1/2	182901-130	183901-130	182901-130C	183901-130C
1x3/4	182901-131	183901-131	182901-131C	183901-131C
1-1/4x1/2	182901-166	183901-166	182901-166C	182901-166C
1-1/4x3/4	182901-167	183901-167	182901-167C	183901-167C
1-1/4x1	182901-168	183901-168	182901-168C	183901-168C
1-1/2x1/2	182901-209	183901-209	182901-209C	183901-209C
1-1/2x3/4	182901-210	183901-210	182901-210C	183901-210C
1-1/2x1	182901-211	183901-211	182901-211C	183901-211C
2x1/2	182901-247	183901-247	182901-247C	183901-247C
2x3/4	182901-248	183901-248	182901-248C	183901-248C
2x1	182901-249	183901-249	182901-249C	183901-249C
2x1-1/2	182901-251	183901-251	182901-251C	183901-251C
3x1/2	182901-333	183901-333	182901-333C	183901-333C
3x1	182901-335	183901-335	182901-335C	183901-335C
3x1-1/2	182901-337	183901-337	182901-337C	183901-337C
3x2	182901-338	183901-338	182901-338C	183901-338C
4x1	182901-417	183901-417	182901-417C	183901-417C
4x1-1/2	182901-419	183901-419	182901-419C	183901-419C
4x2	182901-420	183901-420	182901-420C	183901-420C
6x2	182901-528	183901-528	182901-528C	183901-528C
8x2	182901-578	183901-578	182901-578C	183901-578C

Additional Notes: For Low Extractable PVC valves, add the letters BL to the part number (e.g. 182901-005**BL**)
Valve assembly includes debris plug in valve socket end (to be removed on installation) and cable-tie affixed spare end connector.

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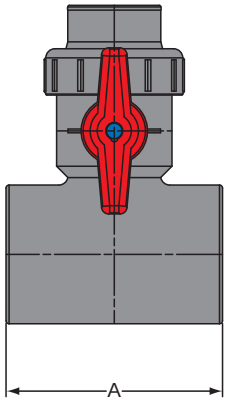


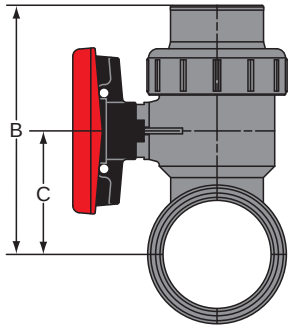
Replacement Parts

No.	Component	Qty.	Material
1	End Connector	1	PVC/CPVC
2	End Connector O-ring	1	EPDM/FKM
3	Seal Carrier	1	PVC/CPVC
4	Union Nut	3	PVC/CPVC
5	Handle Lock	1	PP
6	Seat	2	PTFE
7	Carrier O-ring	1	EPDM/FKM
8	Stem O-ring	2	EPDM/FKM
9	Handle	1	PP
10	Stem	1	PVC/CPVC
11	Ball	1	PVC/CPVC
12	Body	1	PVC/CPVC

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)





Dimensions, Operating Torque & Cv Values

Nominal Size	Dimensions Reference (inches, ± 1/16)				Approx. Wt. (Lbs.)		Oper.[1] Torque (in. lbs.)	Cv[2] (Value only)
	A	B		C	PVC	CPVC		
		Socket	Threaded					
1/2	2-5/16	3-3/4	3-9/16	1-5/8	.48	.52	16	29
3/4	3-7/16	4-1/4	4	1-7/8	.70	.77	17	63
1	4	4-11/16	4-7/16	2-1/16	1.10	1.15	22	120
1-1/4	4-1/4	5-5/16	5	2-7/16	1.64	1.73	28	243
1-1/2	5-1/8	6-1/8	5-11/16	3	2.26	2.37	61	357
2	5-7/8	7-5/16	6-13/16	3-7/16	3.72	3.82	77	599
3/4x1/2	4	3-7/8	3-11/16	1-3/4	.51	.54	16	29
1x1/2	3-7/16	4	3-13/16	1-7/8	.58	.61	16	29
1x3/4	3-11/16	4-3/8	4-1/2	2	.78	.80	17	63
1-1/4x1/2	4-1/4	4	3-13/16	1-7/8	.77	.80	16	29
1-1/4x3/4	4-1/4	4-1/4	4	1-7/8	.90	.94	17	63
1-1/4x1	4-1/4	4-13/16	4-5/8	2-3/16	1.78	1.96	22	120
1-1/2x1/2	4-3/8	4-1/4	4-1/16	2-1/8	.86	.89	16	29
1-1/2x3/4	4-1/8	4-5/8	4-3/8	2-3/16	.91	.94	16	63
1-1/2x1	4-1/2	5	4-13/16	2-3/8	1.37	1.51	16	120
2x1/2	4-3/16	4-9/16	4-3/8	2-7/16	1.06	1.17	16	29
2x3/4	4-3/8	4-15/16	4-11/16	2-9/16	1.23	1.28	17	63
2x1	4-3/4	5-1/4	5-1/16	2-5/8	1.38	1.45	22	120
2x1-1/2	5-7/8	6-1/16	5-7/8	2-15/16	2.33	2.63	61	29
3x1/2	5-1/2	5-1/8	4-15/16	3	1.60	1.66	16	29
3x1	5-1/2	5-7/8	5-11/16	3-1/4	2.19	2.25	22	120
3x1-1/2	7-1/4	6-9/16	6-3/8	3-7/16	3.66	3.87	61	357
3x2	6-11/16	7-11/16	7-3/16	3-13/16	4.61	4.86	77	599
4x1	7-7/16	6-5/16	6-1/8	3-11/16	3.25	3.52	22	120
4x1-1/2	7-3/8	7-5/16	7-1/8	4-3/16	4.01	4.37	61	357
4x2	7-3/4	8-5/16	7-3/4	4-7/16	5.20	5.68	77	599
6x2	10-3/16	9-5/8	9-1/8	5-3/4	9.26	11.68	77	599
8x2	15-5/8	12-5/8	12-1/8	8-3/4	17.42	18.70	77	599

1: Torque required at valve maximum internal pressure rating, 5ft/sec. Flow velocity; due to adjustment differences during installation, actual valves may vary.
2: Gallons per minute at 1 psi pressure drop. Valves calculated from laying length, based on derivative of Hazen-Williams equation with surface roughness factor of C=150. Cv values are for basic Ball Valve only, excluding Tee end connection.

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Features – PVC, CPVC

Flow tested design provides quick response with positive seal for prevention of system back flow in industrial and chemical processing applications. Valves are available in IPS sizes 1/2" through 6" with socket/regular thread, SR threaded (Special Reinforced), flanged or spigot end connectors and 8" venturied valve with socket or flanged ends. Also available in metric socket and BSP thread sizes 1/2" through 2".

Sample Engineering Specification

All thermoplastic check valves shall be True Union 2000 Industrial Ball Check type manufactured to ASTM F 1970 and constructed from PVC Type I, ASTM D 1784, Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All valve union nuts shall have Buttress threads. All valve seats shall be a standard O-ring type. All seal carriers shall be Safe-T-Blocked®. All valve components shall be replaceable. All EPDM valves shall be listed by NSF® for use in potable water service. All PVC and CPVC 1/2" through 4" valves shall be pressure rated to 235 psi, all 6" and 8" Venturied and all flanged valves shall be pressure rated to 150 psi for water at 73°F as manufactured by Spears® Manufacturing Company.

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Also Available in Spears® High Purity, Low Extractable PVC Material
- Strong, Buttress Thread Union Nuts
- Spears® Safe-T-Blocked® Seal Carrier
- Uses Standard O-ring Seat
- EPDM or FKM O-rings
- Fully Serviceable, Replaceable Components
- Sizes 1/2" - 4" Pressure Rated to 235 psi @ 73°F, Sizes 6" and 8" Venturied and all Flanged Pressure Rated to 150 psi @ 73°F
- Suitable for Either Horizontal or Vertical Installations
- EPDM valves NSF® Certified for Potable Water use
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricants
- Manufactured to ASTM F 1970

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Number[1]					Pressure Rating
		Socket	Threaded	SR Threaded	Flanged	Spigot	
1/2	EPDM	4529-005	included	4521-005SR	4523-005	4527-005	235 psi Non-Shock Water @ 73°F (Flanged 150 psi Non-Shock) Water @ 73°F
	FKM	4539-005	included	4531-005SR	4533-005	4537-005	
3/4	EPDM	4529-007	included	4521-007SR	4523-007	4527-007	
	FKM	4539-007	included	4531-007SR	4533-007	4537-007	
1	EPDM	4529-010	included	4521-010SR	4523-010	4527-010	
	FKM	4539-010	included	4531-010SR	4533-010	4537-010	
1-1/4	EPDM	4529-012	included	4521-012SR	4523-012	4527-012	
	FKM	4539-012	included	4531-012SR	4533-012	4537-012	
1-1/2	EPDM	4529-015	included	4521-015SR	4523-015	4527-015	
	FKM	4539-015	included	4531-015SR	4533-015	4537-015	
2	EPDM	4529-020	included	4521-020SR	4523-020	4527-020	
	FKM	4539-020	included	4531-020SR	4533-020	4537-020	
2-1/2	EPDM	4522-025	4521-025	4521-025SR	4523-025	4527-025	
	FKM	4532-025	4531-025	4531-025SR	4533-025	4537-025	
3	EPDM	4522-030	4521-030	4521-030SR	4523-030	4527-030	
	FKM	4532-030	4531-030	4531-030SR	4533-030	4537-030	
4	EPDM	4522-040	4521-040	4521-040SR	4523-040	4527-040	
	FKM	4532-040	4531-040	4531-040SR	4533-040	4537-040	
6	EPDM	4522-060	4521-060	4521-060SR	4523-060	4527-060	150 psi Non-Shock Water @ 73°F
	FKM	4532-060	4531-060	4531-060SR	4533-060	4537-060	
8[2]	EPDM	4522-080	—	—	4523-080	—	
	FKM	4532-080	—	—	4533-080	—	

1: For CPVC valve, add the letter "C" to the part number (e.g., 4529-005**C**, 4521-005**C**SR)
2: 8" Venturied Valves are 6" ball valves fitted with 6x8 end connector adapters

Optional Accessories*

- Retro-Fit End Connector Sets for Valve Replacement
- Split-Nut Repair Kits for Union Nut Replacement
- Supplemental End Connectors

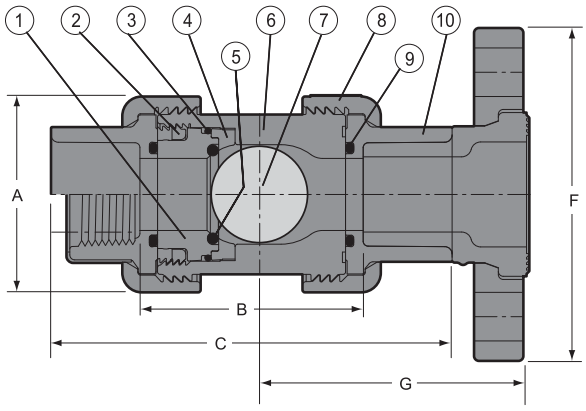
* See ***"BALL VALVE ACCESSORIES"*** section for details of individual products.

Ball Check Foot Valves



Spears® Ball Check Valves easily convert to foot valves utilizing optional Foot Valve Screen adapters found in Ball Valve Accessories section.

True Union 2000 Industrial Ball Check Valves



Replacement Parts

No.	Component	Qty.	Material
1	Seal Carrier	1	PVC/CPVC
2	Seal Carrier Nut	1	PVC/CPVC
3	Carrier O-ring	1	EPDM/FKM
4	Seat Plate	1	PVC/CPVC
5	Seat O-ring	1	EPDM/FKM
6	Body	1	PVC/CPVC
7	Ball	1	PVC/CPVC
8	Union Nut	2	PVC/CPVC
9	End Connector O-ring	2	EPDM/FKM
10	End Connector	2	PVC/CPVC

Dimensions, Weights, & C_V Values

Nominal Size	Dimensions Reference (inches, ± 1/16)								Approx. Wt. (Lbs.)		Cv Values			Horizontal Closing	
	A	B[1]		C			F	G	PVC	CPVC	Soc/Thd	Flange	Spigot	Feet of Head (water)	GPM (minimum)
		Soc/Thd	Spigot	Socket	Thread	Spigot									
1/2	1-7/8	2-7/16	2-7/8	4-3/16	3-13/16	4-5/8	3-1/2	2-31/32	.30	.33	6.3	6	6.3	1.6	.10
3/4	2-1/4	2-3/4	3-1/4	4-3/4	4-1/4	5-1/4	3-7/8	3-5/16	.46	.50	17	16	17	1.6	.10
1	2-1/2	2-7/8	3-1/2	5-1/8	4-11/16	5-3/4	4-1/4	3-5/8	.70	.74	25	24	25	1.6	.25
1-1/4	3-1/16	3-1/4	3-3/16	5-3/4	5-3/16	6-5/16	4-5/8	3-31/32	1.04	1.09	65	61	65	1.6	.40
1-1/2	3-1/2	3-1/2	4	6-1/4	5-7/16	6-3/4	5	4-3/8	1.37	1.45	86	82	86	1.6	.75
2	4-5/16	4-25/32	5-3/16	7-3/4	7-27/32	8-1/4	6	5-1/4	2.47	2.62	130	125	130	1.6	.75
2-1/2	6-3/16	5-7/8	7-13/16	9-5/16	8-1/2	11-3/8	7-1/2	6	6.80	7.25	200	193	200	1.0	1.50
3	6-3/16	6-7/8	7-13/16	10-11/16	9-3/4	11-9/16	7-1/2	6-13/16	6.98	7.35	275	268	275	1.0	4.00
4	7-3/4	7-5/16	8-1/4	11-13/16	10-1/4	12-3/4	9	7-1/2	12.13	12 .96	500	489	500	1.0	5.50
6	11-5/8	11-1/6	13	17-1/16	15-3/4	18-1/2	11-1/4	10-3/16	37.07	39.98	800	794	800	N/A	N/A
8[3]	11-5/8	23-3/16	---	31-7/8	---	---	13-1/2	17-13/16	50.84	55.92	N/A	N/A	N/A	N/A	N/A

1: Valve Lay Length
2: Gallons per minute at 1 psi pressure drop. Valves calculated from laying length, based on derivative of Hazen-Williams equation with surface roughness factor of C=150.
3: 8" Venturied Valves are 6" ball valves fitted with 6x8 end connector adapters

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 4"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	6" and 8"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

NOTE: Flanged valves have a base pressure rating of 150 psi

General Installation Information: Ball check valves may be installed in either horizontal or vertical position. A minimum of ten (10) pipe diameters distance maintained from any pump or other source of turbulence. Check valves **MUST** be installed with the valves **FLOW** arrow pointing in the direction of flow.

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True Union 2000 Standard Ball Valves



Sample Engineering Specification

All thermoplastic ball valves shall be True Union 2000 Standard type manufactured to ASTM F 1970 and constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All valves shall have Safe-T-Shear® stem with O-ring stem seal. All handles shall be polypropylene. All union nuts shall have Buttress threads. All seal carriers shall be Safe-T-Blocked®. All EPDM valves shall be certified by NSF International for use with potable water. All 1/2" - 2" valves shall be pressure rated to 235 psi, all 2-1/2" - 4" and all flanged valves to 150 psi for water @ 73°F, as manufactured by Spears® Manufacturing Company.

Features – PVC, CPVC

Economical, low profile quarter-turn shutoff valve is excellent for general purpose and many O.E.M applications. PVC and CPVC valves are available in IPS sizes 1/2" through 4" with socket, regular thread, SR threaded (Special Reinforced), flanged or spigot end connectors.

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Interchangeable with all True Union 2000 Valves, Mates with Union 2000 Pipe Unions
- High Impact Polypropylene Handle
- Schedule 80 Full-Bore Design
- Strong, Buttress Thread Union Nuts
- Spears® Single O-ring Safe-T-Shear® Stem Design
- Spears® Safe-T-Blocked® Seal Carrier
- Replaceable PTFE/HDPE Floating Seat Design
- EPDM or FKM O-rings
- Sizes 1/2" - 2" pressure rated to 235 psi @ 73°F
- Sizes 2-1/2" - 4" and all flanged pressure rated to 150 psi @ 73°F
- EPDM valves NSF® Certified for Potable Water use
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricants
- Manufactured to ASTM F 1970

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Number[1]					Pressure Rating
		Socket	Threaded	SR Threaded	Flanged	Spigot	
1/2	EPDM	3629-005	included	3621-005SR	3623-005	3627-005	235 psi Non-Shock Water @ 73°F (Flanged 150 psi Non-Shock) Water @ 73°F
	FKM	3639-005	included	3631-005SR	3633-005	3637-005	
3/4	EPDM	3629-007	included	3621-007SR	3623-007	3627-007	
	FKM	3639-007	included	3631-007SR	3633-007	3637-007	
1	EPDM	3629-010	included	3621-010SR	3623-010	3627-010	
	FKM	3639-010	included	3631-010SR	3633-010	3637-010	
1-1/4	EPDM	3629-012	included	3621-012SR	3623-012	3627-012	
	FKM	3639-012	included	3631-012SR	3633-012	3637-012	
1-1/2	EPDM	3629-015	included	3621-015SR	3623-015	3627-015	
	FKM	3639-015	included	3631-015SR	3633-015	3637-015	
2	EPDM	3629-020	included	3621-020SR	3623-020	3627-020	
	FKM	3639-020	included	3631-020SR	3633-020	3637-020	
2-1/2	EPDM	3622-025	3621-025	3621-025SR	3623-025	3627-025	150 psi Non-Shock Water @ 73°F
	FKM	3632-025	3631-025	3631-025SR	3633-025	3637-025	
3	EPDM	3622-030	3621-030	3621-030SR	3623-030	3627-030	
	FKM	3632-030	3631-030	3631-030SR	3633-030	3637-030	
4	EPDM	3622-040	3621-040	3621-040SR	3623-040	3627-040	
	FKM	3632-040	3631-040	3631-040SR	3633-040	3637-040	

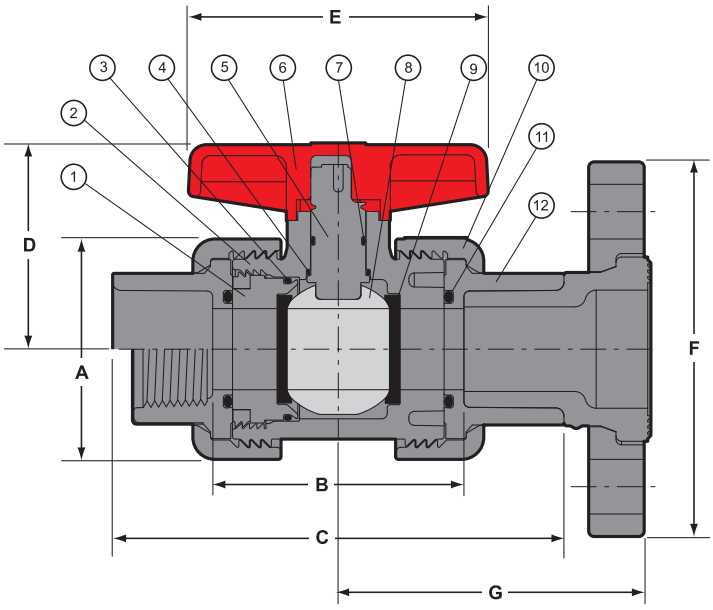
1: For CPVC valve, add the letter "C" to the part number (e.g., 3629-005**C**, 3621-005**C**SR)

Optional Accessories*

- Retro-Fit End Connector Sets for Valve Replacement
- Split-Nut Repair Kits for Union Nut Replacement
- Supplemental End Connectors
- Round Safety Handles
- Stem Extension Kits
- Square Operator Nuts
- Multi Mount Valve/ Actuation Mounting Kits
- Mini-Mount Actuation Mounting Kits

* See ***"BALL VALVE ACCESSORIES"*** section for details of individual products.

True Union 2000 Standard Ball Valves



Replacement Parts

No.	Component	Qty.	Material
1	Seal Carrier	1	PVC/CPVC
2	Body	1	PVC/CPVC
3	Carrier O-ring	1	EPDM/FKM
4	Stem Bearing [1,2]	1	PP
5	Stem	1	PVC/CPVC
6	Handle	1	PP
7	Stem O-ring	1	EPDM/FKM
8	Ball	1	PVC/CPVC
9	Seat	2	PTFE/HDPE
10	Union Nut	2	PVC/CPVC
11	End Connector O-ring	2	EPDM/FKM
12	End Connector	2	PVC/CPVC

1: O-Ring up to 2"
2: PTFE Thrust Bearing: 2-1/2", 3" & 4"

Dimensions, Weights, Operating Torque & Cv Values

Nominal Size	A	B[1]		C			D	E	F	G	Approx. Wt. (Lbs.)		Oper.[2] Torque (in. lbs.)	Cv Values[3]	
		Soc/Thd	Spigot	Socket	Thread	Spigot					PVC	CPVC		Soc/Thd/Spig	Flanged
1/2	1-7/8	2-7/16	2-7/8	4-3/16	3-13/16	4-5/8	1-5/8	2-1/2	3-1/2	2-31/32	.33	.35	12	29	18
3/4	2-1/4	2-3/4	3-1/4	4-3/4	4-1/4	5-1/4	2	3	3-7/8	3-5/16	.51	.54	20	63	39
1	2-1/2	2-7/8	3-1/2	5-1/8	4-11/16	5-3/4	2-5/16	3-7/16	4-1/4	3-5/8	.71	.75	25	120	73
1-1/4	3-1/16	3-1/4	3-13/16	5-3/4	5-3/16	6-5/16	2-13/16	3-9/16	4-5/8	3-31/32	1.12	1.17	35	243	151
1-1/2	3-1/2	3-1/2	4	6-1/4	5-7/16	6-3/4	3-1/16	3-7/8	5	4-3/8	1.47	1.53	45	357	223
2	4-1/4	4-3/4	5-13/16	7-3/4	6-3/4	8-1/4	3-3/4	5	6	5-1/4	2.62	2.75	94	599	395
2-1/2	6-3/16	7	7-13/16	10-1/2	8-1/2	11-3/8	5-7/8	7-5/8	7	6	7.42	7.70	120	856	579
3	6-3/16	7	7-13/16	10-11/16	9-3/4	11-9/16	5-7/8	7-5/8	7-1/2	6-13/16	7.46	7.81	120	1416	974
4	7-5/8	7-1/2	8-1/4	12-1/16	10-1/4	12-3/4	6-3/4	6-3/4	9-1/16	7-1/2	12.35	12.48	336	2865	1952

1: Valve Lay Length
2: Torque required at valve maximum internal pressure rating, 5ft/sec. Flow velocity; due to adjustment differences during installation, actual valves may vary.
3: Gallons per minute at 1 psi pressure drop. Valves calculated from laying length, based on derivative of Hazen-Williams equation with surface roughness factor of C=150.

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	2-1/2" - 4"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

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True Union Ball Valves
(Regular Style)



Sample Engineering Specification

All thermoplastic ball valves shall be True Union type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All valves shall have Safe-T-Shear® stem and double stop Polypropylene handle. All valve union nuts shall have Buttress threads. All seal carriers shall be Safe-T-Blocked®. All valve components shall be replaceable. All EPDM valves shall be certified by NSF International for use in potable water service. All 1/2" - 2" valves shall be pressure rated at 235 psi and all 2-1/2" - 6" and all flanged valves shall be pressure rated at 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Features – PVC, CPVC

This versatile, quarter-turn shutoff valve is well suited for industrial and chemical processing applications. Available in IPS Sizes 1/2"- 4" with socket, threaded or flanged end connectors. 6" Venturied valve (4" valve with 4 x 6 adapter) available with either socket or flanged end connection. Also available with metric 20mm - 110mm or 1/2" - 4" BSP threaded end connectors.

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Schedule 80 Full-Bore Design
- Strong, Buttress Thread Union Nuts
- Fully Serviceable, Replaceable Components
- Spears® Safe-T-Blocked® Seal Carrier
- Self Adjusting PTFE Floating Seat Design
- EPDM or FKM O-rings
- High Impact Polypropylene Handle
- Spears® Safe-T-Shear® Stem Design
- Sizes 1/2" - 2" Pressure Rated to 235 psi @ 73°F, Sizes 2-1/2" - 6" and all flanged Pressure Rated to 150 psi @ 73°F
- EPDM valves NSF® Certified for Potable Water use
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricants
- Manufactured to ASTM F 1970

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Number[1]			Pressure Rating
		Threaded	Socket	Flanged	
1/2	EPDM	2329-005	included	2323-005	235 psi Non-Shock Water @ 73°F (Flanged 150 psi Non-Shock) Water @ 73°F
	FKM	2339-005	included	2333-005	
3/4	EPDM	2329-007	included	2323-007	
	FKM	2339-007	included	2333-007	
1	EPDM	2329-010	included	2323-010	
	FKM	2339-010	included	2333-010	
1-1/4	EPDM	2329-012	included	2323-012	
	FKM	2339-012	included	2333-012	
1-1/2	EPDM	2329-015	included	2323-015	
	FKM	2339-015	included	2333-015	
2	EPDM	2329-020	included	2323-020	
	FKM	2339-020	included	2333-020	
2-1/2	EPDM	2321-025	2322-025	2323-025	150 psi Non-Shock Water @ 73°F
	FKM	2331-025	2332-025	2333-025	
3	EPDM	2321-030	2322-030	2323-030	
	FKM	2331-030	2332-030	2333-030	
4	EPDM	2321-040	2322-040	2323-040	
	FKM	2331-040	2332-040	2333-040	
6[2] venturied	EPDM	---	2322-060	2323-060	
	FKM	---	2332-060	2333-060	

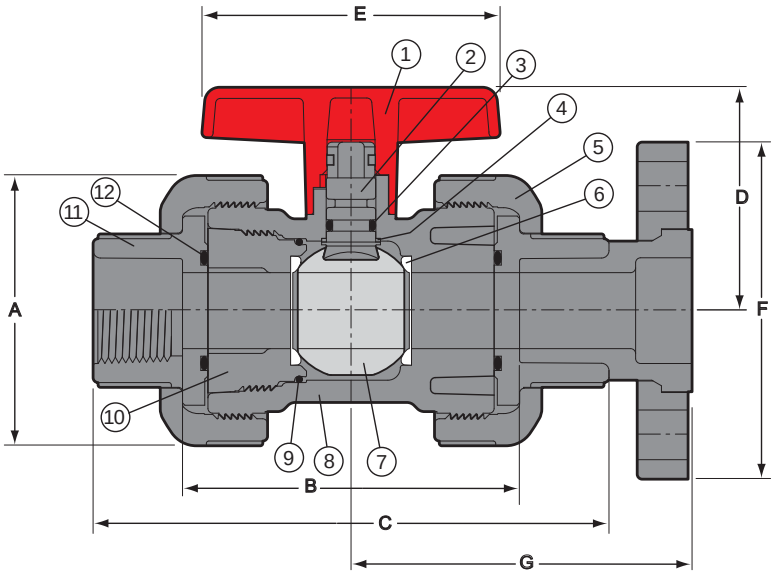
1: For CPVC valves, add the letter "C" to part numbers listed (e.g., 2339-005**C**).
2: Consists of 4" True Union Ball Valve with two 4" x 6" Adapters.

Optional Accessories*

- Round Safety Handle
- Stem Extension Kit
- 2" Square / T-Style Operator Nut

* See ***"BALL VALVE ACCESSORIES"*** section for details of individual products.

True Union Ball Valves
(Regular Style)



Replacement Parts

No.	Component	Qty.	Material
1	Handle	1	PP
2	Stem	1	PVC/CPVC
3	Stem O-ring	1	EPDM/FKM
4	Stem Bearing*	1	PP
5	Union Nut	2	PVC/CPVC
6	Seat**	2	PTFE
7	Ball	1	PVC/CPVC
8	Body	1	PVC/CPVC
9	Carrier O-ring	1	EPDM/FKM
10	Seal Carrier	1	PVC/CPVC
11	End Connector	2	PVC/CPVC
12	End Connector O-ring	2	EPDM/FKM

* Sizes 1-1/4" and larger.
** Seat O-ring (not shown) on sizes 2-1/2" and larger.

Dimensions, Weights, Operating Torque & C_V Values

Nominal Size	Dimension Reference (inches, ± 1/16)							Approx. Wt. (Lbs.)				Oper.[2] Torque (in.-lb.)	C_V[4] Values	
								PVC		CPVC				
	A	B[1]	C	D	E	F	G	Soc/Thd	Flanged	Soc/Thd	Flanged		Soc/Thd	Flanged
1/2	2-9/16	3-7/16	5-3/16	2-13/32	2-23/32	3-1/2	3-15/32	1.05	1.23	.95	1.14	20	25	18
3/4	3-1/32	4-1/16	6-3/16	2-5/8	3-3/16	3-7/8	4	1.44	1.64	1.50	1.73	30	51	36
1	3-13/32	4-5/16	6-9/16	2-13/16	3-23/32	4-1/4	4-5/16	1.91	2.22	2.08	2.43	40	97	67
1-1/4	3-11/16	4-1/2	7-1/16	2-31/32	4-1/8	4-5/8	4-19/32	2.38	2.78	2.52	2.91	60	204	142
1-1/2	4-3/8	5-5/16	8-1/32	3-9/32	4-15/32	5	5-9/32	3.63	4.00	3.82	4.26	80	285	201
2	5-3/16	5-13/16	8-13/16	4-13/32	5-1/4	6	5-23/32	5.40	6.14	5.70	6.54	90	540	381
2-1/2	7-7/16	8-3/8	11-7/8	4-29/32	9-7/8	7	7-3/16	12.87	14.26	13.44	15.85	300	712	512
3	7-7/16	8-3/16	11-15/16	4-29/32	9-7/8	7-1/2	7-11/32	13.24	15.67	13.85	16.96	300	1294	925
4	8-15/16	8-11/16	13-3/16	5-19/32	10-13/16	9-1/16	8-5/32	19.58	24.32	20.49	25.83	400	2629	1868
6 Socket[3]	8-15/16	19-5/8	26-1/16	6-3/4	10-13/16	11-1/4	14-11/16	22.66	30.98	26.11	34.78	400	N/A	N/A
6 Flanged[3]	11-3/16	29-3/8	N/A	6-3/4	10-13/16	11-1/4	14-11/16	N/A	N/A	N/A	N/A	400	N/A	N/A

1: Valve Lay Lengths.
2: Torque required at valve maximum internal pressure rating, 5 ft./sec. flow velocity.
3: Consists of 4" True Union Ball Valve with two 4" x 6" Adapters.
4: Gallons per minute at 1 psi pressure drop. Values calculated from valve laying length, based on derivative of Hazen-Williams equation with surface roughness factor of C=150. C_V Valves for 6" venturied flange and socket valves are not available.

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	2-1/2" - 6"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

NOTE: Flanged Valves have a base pressure rating of 150 psi.

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True Union Ball Check Valves
(Regular Style)



Sample Engineering Specification

All thermoplastic check valves shall be True Union Ball type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All valve union nuts shall have Buttress threads. All valve components shall be replaceable. All EPDM valves shall be certified by NSF International for use in potable water service. All 1/2" - 2" valves shall be pressure rated at 235 psi and all 2-1/2" - 6" and all flanged valves shall be pressure rated at 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Number[1]			Pressure Rating
		Threaded	Socket	Flanged	
1/2	EPDM	2229-005	included	2223-005	235 psi Non-Shock Water @ 73°F (Flanged 150 psi Non-Shock) Water @ 73°F
	FKM	2239-005	included	2233-005	
3/4	EPDM	2229-007	included	2223-007	
	FKM	2239-007	included	2233-007	
1	EPDM	2229-010	included	2223-010	
	FKM	2239-010	included	2233-010	
1-1/4	EPDM	2229-012	included	2223-012	
	FKM	2239-012	included	2233-012	
1-1/2	EPDM	2229-015	included	2223-015	
	FKM	2239-015	included	2233-015	
2	EPDM	2229-020	included	2223-020	
	FKM	2239-020	included	2233-020	
2-1/2	EPDM	2221-025	2222-025	2223-025	150 psi Non-Shock Water @ 73°F
	FKM	2231-025	2232-025	2233-025	
3	EPDM	2221-030	2222-030	2223-030	
	FKM	2231-030	2232-030	2233-030	
4	EPDM	2221-040	2222-040	2223-040	
	FKM	2231-040	2232-040	2233-040	
6[2] venturied	EPDM	---	2222-060	2223-060	
	FKM	---	2232-060	2333-060	

1: For CPVC valves, add the letter "C" to part numbers listed (e.g., 2239-005**C**).
2: Consists of 4" True Union Ball Valve with two 4" x 6" Adapters.

Features – PVC, CPVC

Flow tested design provides quick response with positive seal for prevention of system back flow in industrial and chemical processing applications. Available in IPS Sizes 1/2"- 4" with socket, threaded or flanged end connectors. 6" Venturied valve (4" valve with 4 x 6 adapters) available with either socket or flanged end connection. Also available with metric 20mm - 110mm or 1/2" - 4" BSP thread end connectors. **Note:** Seal carrier is **NOT** blocked (for Safe-T-Blocked® seal carrier design, see True Union 2000 Industrial Ball Check Valve).

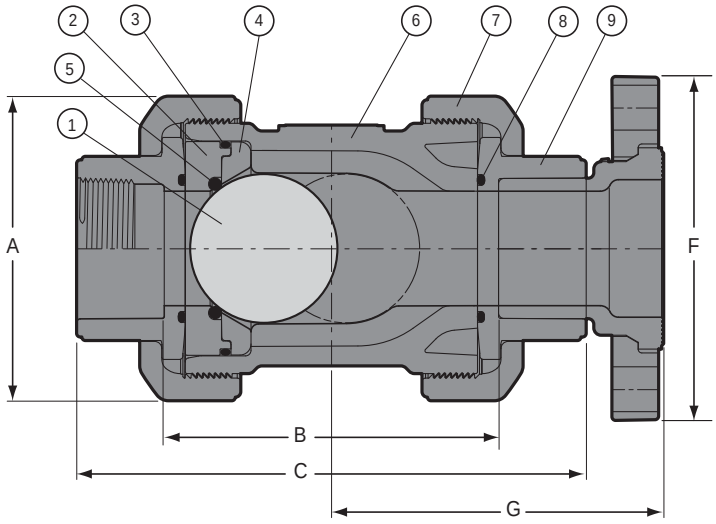
- Chemical & Corrosion Resistant PVC or CPVC Construction
- Strong, Buttress Thread Union Nuts
- Fully Serviceable, Replaceable Components
- Uses Standard O-ring Seat
- EPDM or FKM O-rings
- Sizes 1/2" - 2" Pressure Rated to 235 psi @ 73°F, Sizes 2-1/2" - 6" and all Flanged Pressure Rated to 150 psi @ 73°F
- Suitable for Either Horizontal or Vertical Installations
- EPDM valves NSF® Certified for Potable Water use
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricants
- Manufactured to ASTM F 1970

Ball Check Foot Valves

Spears® Ball Check Valves easily convert to foot valves utilizing optional Foot Valve Screen adapters found in Ball Valve Accessories section.



True Union Ball Check Valves
(Regular Style)



Replacement Parts

No.	Component	Qty.	Material
1	Ball	1	PVC/CPVC
2	Seal Carrier	1	PVC/CPVC
3	Carrier O-ring	1	EPDM/FKM
4	Seat Plate	1	PVC/CPVC
5	Seat O-ring	1	EPDM/FKM
6	Body	1	PVC/CPVC
7	Union Nut	2	PVC/CPVC
8	End Connector O-ring	2	EPDM/FKM
9	End Connector	2	PVC/CPVC

Dimensions, Weights, C_V Values & Horizontal Closing Requirements

Nominal Size	Dimension Reference (inches, ± 1/16)					Approx. Wt. (Lbs.)		Cv^3 Values		Horizontal Closing	
	A	B[1]	C	F	G	PVC	CPVC	Threaded/ Socket	Flanged	Feet of Head (water)	GPM (mini-mum)
1/2	2-9/16	3-5/16	5-1/8	3-1/2	3-7/16	.56	.61	11	10	1.6	.10
3/4	3	4	6-1/8	3-7/8	3-15/16	.91	.99	18	17	1.6	.10
1	3-7/16	4-1/4	6-1/2	4-1/4	4-3/8	1.20	1.30	32	30	1.6	.25
1-1/4	3-11/16	4-1/2	7	4-5/8	4-9/16	1.50	1.60	58	55	1.6	.40
1-1/2	4-3/8	5-5/16	8-1/16	5	5-1/4	2.50	2.70	94	89	1.6	.75
2	5-1/8	5-3/4	8-3/4	6	5-5/8	3.70	4.00	153	146	1.6	.75
2-1/2	7-3/8	8-5/16	11-7/8	7	7-1/4	11.10	12.21	159	155	1.0	1.50
3	7-3/8	8-1/8	11-7/8	7-1/2	7-1/2	10.84	11.91	378	361	1.0	4.00
4	8-15/16	8-1/4	12-15/16	9-1/16	8-1/8	17.60	19.36	551	537	1.0	5.50
6 Socket[2]	8-15/16	19-5/8	26-1/16	N/A	N/A	22.45	27.61	N/A	N/A	N/A	N/A
6 Flanged[2]	11-3/16	29-3/8	N/A	11-1/4	14-3/4	31.21	37.07	N/A	N/A	N/A	N/A

1: Valve Lay Length
2: Consists of 4" True Union Ball Check Valve with two 4" x 6" Adapters.
3: Gallons per minute at 1 psi pressure drop.
C_V Values for 6" venturied flange and socket valves are not available.

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	2-1/2" - 6"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

NOTE: Flanged Valves have a base pressure rating of 150 psi.

General Installation Information: Ball check valves may be installed in either horizontal or vertical position. A minimum of ten (10) pipe diameters distance maintained from any pump or other source of turbulence. Ball Check valves **MUST** be installed with the valves **FLOW** arrow pointing in the direction of flow.

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Compact 2000 Ball Valves



Sample Engineering Specification

All thermoplastic ball valves shall be 2000 Compact sealed unit type manufactured to ASTM F 1970 and constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All valves shall have Safe-T-Shear® stem with O-ring stem seal. All handles shall be polypropylene. All EPDM valves shall be certified by NSF International for use with potable water. All 1/2" - 2" valves shall be pressure rated to 235 psi, for water @ 73°F, as manufactured by Spears® Manufacturing Company.

Features – PVC, CPVC

Economical, low profile quarter-turn shutoff valve is excellent for general purpose and many O.E.M applications. PVC and CPVC valves are available in IPS sizes 1/2" through 2" with socket and regular thread.

- Industrial Grade, Maintenance-Free Sealed Unit
- New Actuator-Ready Body – Accepts Spears® Improved Mini-Mount Actuator Mounting Kits
- New Double O-ring Stem Seal
- Spears® Safe-T-Shear Stem
- PTFE Self Adjusting Floating Seats
- EPDM or FKM O-ring Seals
- Full 235 psi Pressure Rating @ 73°F
- EPDM valves NSF® Certified for Use with Potable Water
- Suitable for Vacuum Service
- Produced in ASTM IPS sizes 1/2" - 2" with Socket or Threaded End Connectors.

Optional Accessories*

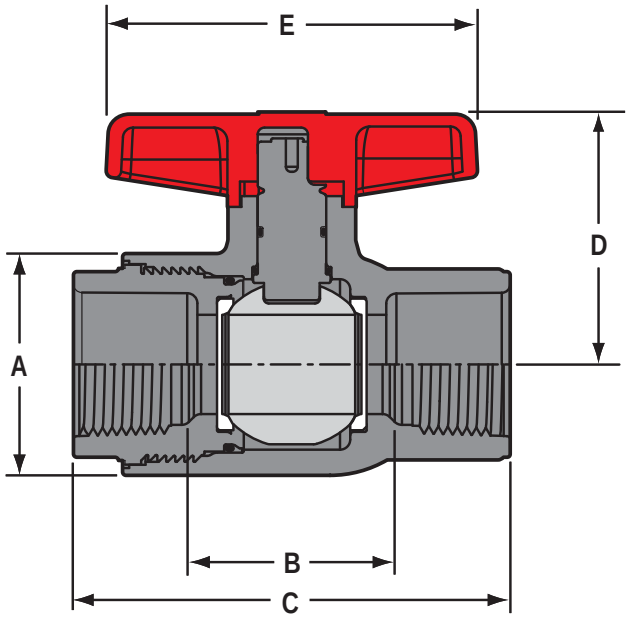
- Round Safety Handles
- Stem Extension Kits
- Square Operator Nuts
- Multi Mount Valve/Actuation Mounting Kits
- Mini-Mount Actuation Mounting Kits

* See ***"BALL VALVE ACCESSORIES"*** section for details of individual products.

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Number[1]		Pressure Rating
		Socket	Threaded	
1/2	EPDM	6622-005	6621-005	235 psi Non-Shock Water @73°F
	FKM	6632-005	6631-005	
3/4	EPDM	6622-007	6621-007	
	FKM	6632-007	6631-007	
1	EPDM	6622-010	6621-010	
	FKM	6632-010	6631-010	
1-1/4	EPDM	6622-012	6621-012	
	FKM	6632-012	6631-012	
1-1/2	EPDM	6622-015	6621-015	
	FKM	6632-015	6631-015	
2	EPDM	6622-020	6621-020	
	FKM	6632-020	6631-020	

1: For CPVC Valves, add the letter "C" to part numbers listed. (e.g., 6622-005**C**)



Dimensions, Weights, Operating Torque & Cv Values

Nominal Size	Dimension Reference (inches, ± 1/16)						Approx. Wt. (Lbs.)		Oper.[2] Torque (in.-lb.)	Cv[3] Values
	A	B[1]		C	D	E				
		Socket	Threaded				PVC	CPVC		
1/2	1-7/16	1-1/4	1-5/8	3-1/16	1-5/8	1-5/8	.18	.20	10	42
3/4	1-13/16	1-1/2	2-1/16	3-9/16	2	2	.29	.31	20	87
1	2-1/16	1-3/4	2-3/16	4	2-5/16	2-5/16	.44	.46	25	157
1-1/4	2-5/8	2-1/6	2-3/4	4-5/8	2-13/16	2-13/16	.68	.70	30	311
1-1/2	3	2-1/2	3-3/8	5-5/16	3-1/16	3-1/16	.99	1.03	50	429
2	3-5/8	3	4	6	3-3/4	3-3/4	1.64	1.70	90	768

1: Valve Lay Length
2: Torque required at valve maximum internal pressure rating, 5ft/sec. Flow velocity.
3: Gallons per minute at 1 psi pressure drop. Valves calculated from laying length, based on derivative of Hazen-Williams equation with surface roughness factor of C=150.

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

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Features – PVC, CPVC

This industrial grade, quarter turn shutoff valve is popular where maintenance-free installations are desired for a variety of chemical processing, industrial and OEM applications. IPS Sizes 1/2" - 4" available with socket, threaded or flanged end connectors, 6" size available with socket or flanged end connectors. 6" valve uses high-efficiency lever style handle for easier operation.

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Maintenance-Free Sealed Unit
- Schedule 80 Full-Bore Design
- High Impact Polypropylene Handle
- Spears® Single O-ring Safe-T-Shear® Stem Design
- EPDM or FKM O-rings
- Self Adjusting PTFE Floating Seat Design
- Sizes 1/2" - 2" Pressure Rated to 235 psi @ 73°F, Sizes 3" - 6" and all Flanged Pressure Rated to 150 psi @ 73°F
- EPDM valves NSF® Certified for Potable Water use
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricant
- Manufactured to ASTM F 1970

Note: Valve size 6" uses Lever Handle (not shown)

Sample Engineering Specification

All thermoplastic ball valves shall be Compact sealed unit type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, Cell Classification 23447. All O-rings shall be EPDM or FKM. All valves shall have Safe-T-Shear® stem and Polypropylene handle. All EPDM valves shall be certified by NSF International for use in potable water service. All 1/2" - 2" valves shall be pressure rated at 235 psi, all 3" - 6" and all flanged valves shall be pressure rated at 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

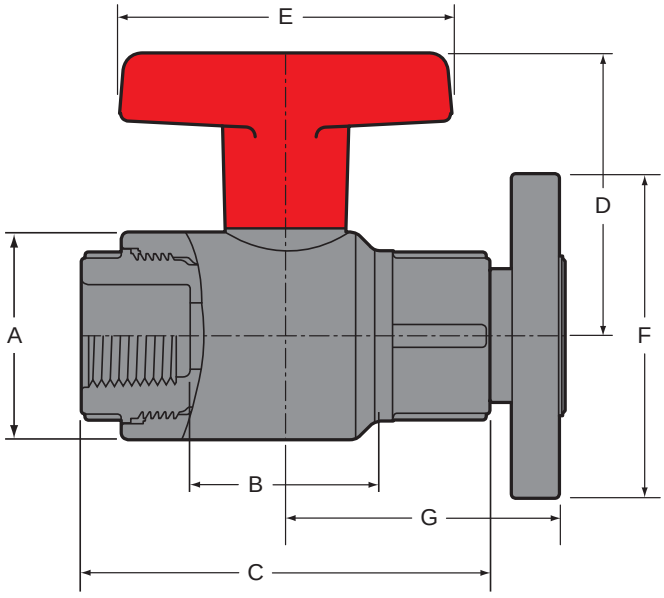
Valve Size	O-ring Material	PVC Part Numbers[1]			Pressure Rating
		Socket	Threaded	Flanged	
1/2	EPDM	2122-005	2121-005	2123-005	235 psi Non-Shock Water @ 73°F (Flanged 150 psi Non-Shock) Water @ 73°F
	FKM	2132-005	2131-005	2133-005	
3/4	EPDM	2122-007	2121-007	2123-007	
	FKM	2132-007	2131-007	2133-007	
1	EPDM	2122-010	2121-010	2123-010	
	FKM	2132-010	2131-010	2133-010	
1-1/4	EPDM	2122-012	2121-012	2123-012	
	FKM	2132-012	2131-012	2133-012	
1-1/2	EPDM	2122-015	2121-015	2123-015	
	FKM	2132-015	2131-015	2133-015	
2	EPDM	2122-020	2121-020	2123-020	
	FKM	2132-020	2131-020	2133-020	
3	EPDM	2122-030	2121-030	2123-030	150 psi Non-Shock Water @ 73°F
	FKM	2132-030	2131-030	2133-030	
4	EPDM	2122-040	2121-040	2123-040	
	FKM	2132-040	2131-040	2133-040	
6	EPDM	2122-060	---	2123-060	
	FKM	2132-060	---	2133-060	

1: For CPVC valves, add the letter "C" to the part numbers listed (e.g., 2131-005**C**).

Optional Accessories*

- Round Safety Handle
- Stem Extension Kit
- Mini-Mount Actuation Mounting Kit
- 2" Square/T-Style Operator Nut

*See ***"BALL VALVE ACCESSORIES"*** section for details of individual products.



Dimensions, Weights, Operating Torque & C_V Values

Nominal Size	Dimension Reference (inches, ± 1/16)								Approx. Wt. (Lbs.)		Oper.[2] Torque (in.-lb.)	C_V[3] Values	
	A	B[1]		C	D	E[4]	F	G	PVC	CPVC		Soc/Thd	Flanged
		Socket	Threaded										
1/2	1-11/16	1-5/8	1-7/8	3-3/8	2-5/16	2-3/4	3-1/2	2-17/32	.31	.32	20	36	20
3/4	2-1/8	1-15/16	2-7/16	4-1/16	2-11/16	3-1/4	3-7/8	2-27/32	.49	.52	30	74	42
1	2-7/16	2-1/16	2-3/8	4-7/16	2-7/8	3-3/4	4-1/4	3-1/16	.64	.69	40	141	80
1-1/4	2-13/16	2-3/8	3	4-15/16	3-5/16	4-1/8	4-5/8	3-13/32	.93	.98	60	284	163
1-1/2	3-1/4	2-13/16	3-1/2	5-5/8	3-11/16	4-1/2	5	4	1.39	1.45	80	402	229
2	4-1/16	3-3/8	4-7/16	6-1/2	4-3/8	5-1/4	5-7/8	4-13/32	2.33	2.45	90	706	429
3	5-5/16	4-9/16	5-1/2	8-5/16	5-1/2	7-21/32	7-1/2	5-7/16	4.49	5.02	300	1660	1079
4	7-3/8	6-3/16	7-3/16	10-5/32	6-5/8	10-27/32	9-1/16	6-7/8	9.50	10.24	400	3104	2028
6[4]	10-3/16	8	10-3/4	14-1/8	8-1/16	14-5/16	11-1/4	8-21/32	21.48	23.41	900	7942	5268

1: Valve Lay Length
2: Torque required at valve maximum internal pressure rating, 5 ft./sec. flow velocity.
3: Gallons per minutes at 1 psi pressure loss. Values calculated from valve laying length, based on derivative of Hazen-Williams equation with surface roughness factor of C =150.
4: 6" valve has lever handle, dimension is from valve centerline (not illustrated)

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	3" - 6"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

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Sample Engineering Specification

All thermoplastic ball valves shall be Single Entry type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454. All O-rings shall be Buna-N, EPDM or FKM. All valves shall have Safe-T-Shear® stem and double stop Polypropylene handle. All valve union nuts shall have Buttress threads. All valve components shall be replaceable. All EPDM valves shall be certified by NSF International for use in potable water service. All 1/2" - 2" valves shall be pressure rated at 235 psi and all 3" - 4" valves shall be pressure rated at 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Features – PVC Gray & PVC White

This quarter-turn shutoff valve is widely chosen for industrial and chemical processing, turf and irrigation, plus pool and spa applications. Available in PVC Gray or PVC White, IPS Sizes 1/2"- 4" with socket or threaded end connectors. **Note:** Seal carrier is NOT blocked (see True Union 2000 Valves).

- Chemical & Corrosion Resistant PVC Gray or PVC White Construction
- Schedule 80 Full-Bore Design
- Strong, Buttress Thread Union Nut
- High Impact Polypropylene Handle
- Spears® Single O-ring Safe-T-Shear® Stem Design
- Buna-N, EPDM or FKM O-rings
- Self Adjusting PTFE Floating Seat Design
- Fully Serviceable, Replaceable Components
- Sizes 1/2" - 2" Pressure Rated to 235 psi @ 73°F, Sizes 3" - 4" Pressure Rated to 150 psi @ 73°F
- Valves with EPDM O-rings NSF® Certified for Potable Water use
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricant
- Manufactured to ASTM F 1970

Quick-View Valve Selection Chart

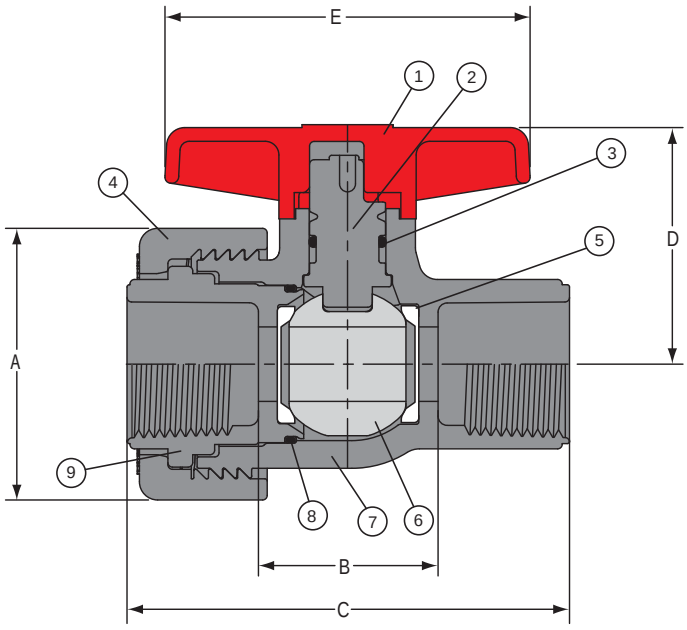
Valve Size	O-ring Material	PVC Gray Part Numbers[1]		Pressure Rating
		Socket	Threaded	
1/2	Buna-N	2412-005G	2411-005G	235 psi Non-Shock Water @ 73°F
	EPDM	2422-005G	2421-005G	
	FKM	2432-005G	2431-005G	
3/4	Buna-N	2412-007G	2411-007G	
	EPDM	2422-007G	2421-007G	
	FKM	2432-007G	2431-007G	
1	Buna-N	2412-010G	2411-010G	
	EPDM	2422-010G	2421-010G	
	FKM	2432-010G	2431-010G	
1-1/4	Buna-N	2412-012G	2411-012G	
	EPDM	2422-012G	2421-012G	
	FKM	2432-012G	2431-012G	
1-1/2	Buna-N	2412-015G	2411-015G	
	EPDM	2422-015G	2421-015G	
	FKM	2432-015G	2431-015G	
2	Buna-N	2412-020G	2411-020G	
	EPDM	2422-020G	2421-020G	
	FKM	2432-020G	2431-020G	
3	Buna-N	2412-030G	2411-030G	150 psi Non-Shock Water @ 73°F
	EPDM	2422-030G	2421-030G	
	FKM	2432-030G	2431-030G	
4	Buna-N	2412-040G	2411-040G	
	EPDM	2422-040G	2421-040G	
	FKM	2432-040G	2431-040G	

1: For PVC White valves, replace the letter "G" with the letter "W" at the end of the part number listed (e.g., 2421-005**W**).

Optional Accessories*

- Round Safety Handle
- Stem Extension Kit
- 2" Square / T-Style Operator Nut

*See ***"BALL VALVE ACCESSORIES"*** section for details of individual products.



Replacement Parts

No.	Component	Qty.	Material
1	Handle	1	PP
2	Stem	1	PVC
3	Stem O-ring	1	Buna-N/EPDM/FKM
4	Union Nut	1	PVC
5	Seat	2	PTFE
6	Ball	1	PVC
7	Body	1	PVC
8	Carrier O-ring	1	Buna-N/EPDM/FKM
9	End Connector	1	PVC

Seat O-rings (not shown) on sizes 3" and larger.

Dimensions, Weights, Operating Torque & C_V Values

Nominal Size	Dimension Reference (inches, ± 1/16)						Approx. Wt. (Lbs.)	Oper.[2] Torque (in.-lb.)	C_V[3] Values
	A	B[1]		C	D	E			
		Socket	Threaded						
1/2	1-15/16	1-1/4	1-5/8	3-1/16	1-5/8	2-1/2	.22	20	38
3/4	2-3/8	1-7/16	2-1/8	3-9/16	2	3	.36	30	76
1	2-5/8	1-5/8	2-1/8	3-7/8	2-5/16	3-15/16	.50	40	146
1-1/4	3-1/8	1-15/16	2-1/4	4-1/8	2-13/16	3-1/2	.75	60	292
1-1/2	3-9/16	2-3/8	2-3/4	4-5/8	3-1/16	3-7/8	1.00	80	412
2	4-5/16	3-1/16	3-5/8	5-1/2	3-3/4	5	2.00	90	720
3	6-3/16	4-3/8	5-3/8	8-1/8	5-1/2	7-5/8	7.00	300	1660
4	7-3/4	5-11/16	6-7/8	9-3/4	6-1/8	9-1/16	12.00	400	3104

1: Valve Lay Length
2: Torque required at valve maximum internal pressure rating, 5 ft./sec. flow velocity; due to adjustment differences during installation, actual values may vary.
3: Gallons per minute at 1 psi pressure drop. Values calculated from valve laying length, based on derivative of Hazen-Williams equation with surface roughness factor of C=150.

Temperature Pressure Rating

System Operating Temperature °F (°C)			73 (23)	100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	235 (1.62)	146 (1.01)	118 (.81)	94 (.65)	71 (.49)	52 (.36)	-0- (-0-)
	3" - 4"	PVC	150 (1.03)	93 (.64)	75 (.52)	60 (.41)	45 (.31)	33 (.23)	-0- (-0-)

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PVC



CPVC

Features - PVC White, PVC Gray & CPVC

A high quality, economical quarter-turn shutoff valve designed for irrigation, pool and spa, and general purpose applications. IPS sizes 1/2" - 2" available in PVC White, PVC Gray or CPVC with socket or threaded end connectors. Sizes 3" - 4" available in PVC White with socket or threaded end connectors. 6" size available in PVC White with socket end connectors and high-efficiency lever style handle for easier operation.

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Economical Sealed Unit
- Schedule 80 Full-Bore Design
- High Impact Polypropylene Handle
- Spears® Single O-ring Safe-T-Shear® Stem Design
- EPDM O-rings
- PTFE/HDPE Floating Seat Design
- Sizes 1/2" - 6" Pressure Rated to 150 psi @ 73°F
- NSF® Certified for Potable Water use
- Assembled with Silicone-Free, Water Soluble lubricant

Note: Valve sizes 2-1/2", 3", 4" and 6" are not available in CPVC. Refer to Compact Ball Valve
Valve size 6" uses Lever Handle (not shown)

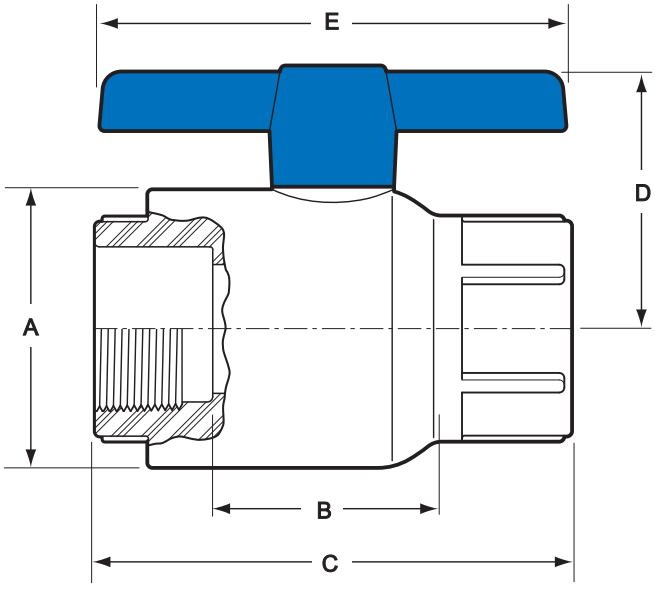
Sample Engineering Specification

All thermoplastic ball valves shall be Utility sealed unit type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM. All valves shall have Safe-T-Shear® stem and Polypropylene handle. All valves shall be certified by NSF International for use in potable water service. All valves shall be pressure rated at 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Number[1, 2]		Pressure Rating
		Socket	Threaded	
1/2	EPDM	2622-005	2621-005	150 psi Non-Shock Water @ 73°F
3/4	EPDM	2622-007	2621-007	
1	EPDM	2622-010	2621-010	
1-1/4	EPDM	2622-012	2621-012	
1-1/2	EPDM	2622-015	2621-015	
2	EPDM	2622-020	2621-020	
2-1/2	EPDM	2622-025	2621-025	
3	EPDM	2622-030	2621-030	
4	EPDM	2622-040	2621-040	
6	EPDM	2622-060	---	

1: For CPVC valves, add the letter "C" to part numbers listed (e.g., 2621-005**C**).
2: For PVC Gray, add the letter "G" to part numbers listed (e.g. 2621-005**G**).



Dimensions, Weights & C_V Values

Nominal Size	Dimension Reference (inches, ± 1/16)						Approx. Wt. (Lbs.)		C_V[2] Values
	A	B[1]		C	D	E[3]	PVC	CPVC	
		Socket	Threaded						
1/2	1-7/16	1-7/32	1-7/32	2-21/32	1-11/16	2-3/4	.16	.17	46
3/4	1-25/32	1-7/16	1-7/16	2-29/32	2-1/32	3-1/4	.25	.27	91
1	2-1/16	1-19/32	1-19/32	3-3/8	2-13/32	3-17/32	.34	.36	160
1-1/4	2-9/16	1-31/32	1-31/32	3-7/8	2-27/32	3-25/32	.57	.60	306
1-1/2	2-31/32	2-15/32	2-25/32	4-11/16	3-5/32	3-5/32	.88	.90	429
2	3-9/16	2-13/16	3-3/16	5-5/32	3-7/8	4-9/32	1.34	1.34	755
2-1/2	4-5/16	3-17/32	4-7/16	7-1/16	4-3/16	5-1/32	2.31	N/A	1126
3	5-11/32	4-5/32	5-1/8	7-15/16	5-9/16	7-3/4	4.78	N/A	1660
4	6-11/16	5-1/8	6-7/32	9-3/16	6-5/32	9-5/32	8.00	N/A	3129
6[3]	10-3/16	8-3/32	---	14-3/16	8-5/32	14-3/32	23.24	N/A	7942

1: Valve Lay Length
2: Gallons per minute at 1 psi pressure drop. Values calculated from valve laying length, based on derivative of Hazen-Williams equation with surface roughness factor of C=150.
3: 6" valve has lever handle, dimension is from valve stem centerline (not illustrated)

Temperature Pressure Rating

System Operating Temperature °F (°C)		73 (23)	100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)
Valve Pressure Rating psi (MPa)	PVC	150 (1.03)	93 (.64)	75 (.52)	60 (.41)	45 (.31)	33 (.23)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
	CPVC	150 (1.03)	123 (.85)	110 (.76)	98 (.68)	86 (.58)	75 (.52)	68 (.47)	60 (.41)	48 (.33)	38 (.26)	-0- (-0-)

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CWV Ball Valves



Features - PVC White

A high quality, economical quarter-turn shutoff valve designed for irrigation, pool and spa, and general purpose applications. IPS sizes 1/2" - 2" available in PVC White.

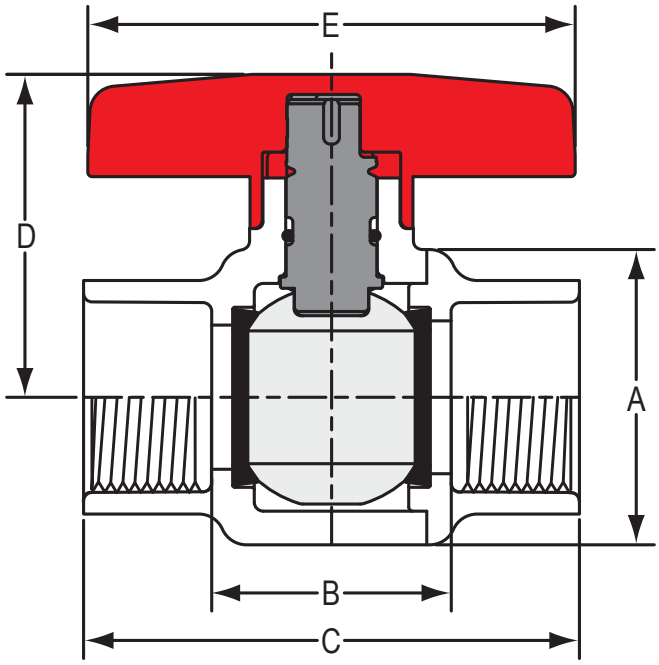
- Chemical & Corrosion Resistant PVC Construction
- Economical Sealed Unit
- High Impact Polypropylene Handle
- Spears® Single O-ring Safe-T-Shear® Stem Design
- EPDM O-rings
- Sizes 1/2" - 2" Pressure Rated to 125 psi @ 73°F
- NSF® Certified for Potable Water use
- Assembled with Silicone-Free, Water Soluble lubricant

Sample Engineering Specification

All thermoplastic ball valves shall be CWV sealed unit type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454. All O-rings shall be EPDM. All valves shall have Safe-T-Shear® stem and Polypropylene handle. All valves shall be certified by NSF International for use in potable water service. All valves shall be pressure rated at 125 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Number		Pressure Rating
		Socket	Threaded	
1/2	EPDM	8722-005	8721-005	125 psi Non-Shock Water @ 73°F
3/4	EPDM	8722-007	8721-007	
1	EPDM	8722-010	8721-010	
1-1/4	EPDM	8722-012	8721-012	
1-1/2	EPDM	8722-015	8721-015	
2	EPDM	8722-020	8721-020	



Dimensions

Size	A	B		C	D	E
		Socket	Threaded			
1/2	1-5/16	1-7/32	1-7/32	2-5/8	1-9/16	2-5/8
3/4	1-5/8	1-15/32	1-7/16	2-15/16	1-15/16	2-7/8
1	1-7/8	1-5/8	1-5/8	3-7/16	2-1/4	3-3/8
1-1/4	2-3/8	2	2	3-7/8	2-3/4	3-7/8
1-1/2	2-3/4	2-7/16	2-3/4	4-5/8	3-1/8	4-1/2
2	3-11/32	2-25/32	2-25/32	5-1/8	3-23/32	4-31/32

Temperature Pressure Rating

System Operating Temperature °F (°C)		73 (23)	100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)
Valve Pressure Rating psi (MPa)	PVC	125 (.86)	78 (.54)	63 (.45)	50 (.35)	38 (.26)	28 (.19)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)

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CTS 1/4-Turn Angle Supply Stop



Features – CPVC

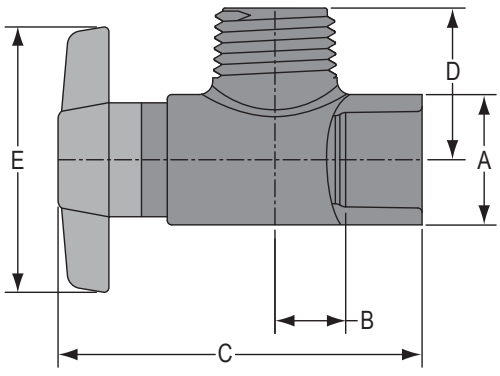
Used at plumbing fixtures to terminate and control hot and cold water, this all-plastic quarter-turn shutoff valve is specially designed for use with CTS (Copper Tube Size) CPVC Hot & Cold Water Distribution Systems. Available in 1/2" CTS Socket or Spears® patented Special Reinforced (SR) 1/2" FIPT female thread inlet x 1/2" straight male thread outlet for connection to conventional 1/2" FPT faucet or toilet supply lines with captive seals.

- Easy 1/4-Turn Shutoff
- All Plastic Corrosion Proof Construction
- CTS CPVC Tan Body with Tan Colored High Impact Polypropylene Handle
- High Quality EPDM Seals
- NSF® Certified to ASTM F 1970 for use in ASTM D 2846 Hot & Cold Water Distribution Systems rated to 100 psi @ 180°F

Sample Engineering Specification

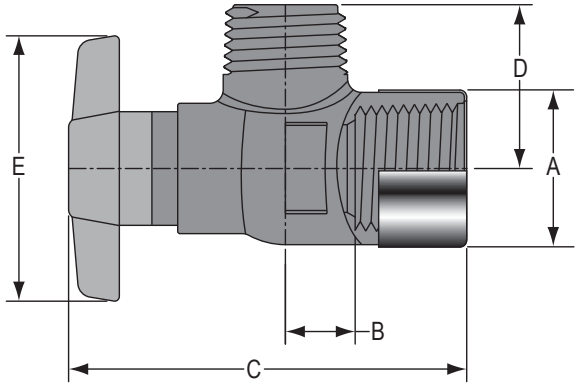
All thermoplastic Angle Supply Stops shall be Copper Tube Size (CTS) sealed unit type constructed from CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM. All valves shall have Polypropylene handle. All Angle Supply Stops shall be pressure rated at 100 psi for water at 180°F, as manufactured by Spears® Manufacturing Company.

Dimensions



1/4-Turn Angle Supply Stop
Socket x NPT

Nominal Size	A	B	C	D	E
1/2	27/32	7/16	2-13/32	1	1-3/4
1/2 x 3/8	7/8	7/16	2-3/8	7/8	1-3/4



1/4-Turn Angle Supply Stop
SR Fipt x NPT

Nominal Size	A	B	C	D	E
1/2	1	15/32	2-21/32	1	1-3/4
1/2 x 3/8	1-1/32	15/32	2-5/8	31/32	1-3/4

Quick-View Valve Selection Chart

Valve Size	O-ring Material	Part Number		Pressure Rating
		Socket	SR Threaded	
1/2	EPDM	7722-005	7721-005SR	100 psi Non-Shock Water @ 180°F
1/2 x 3/8	EPDM	7722-073	7721-073SR	100 psi Non-Shock Water @ 180°F

CTS Ball Valves



Features – CPVC

A high quality, quarter-turn shutoff valve designed for line-stop use in Copper Tube Size (CTS) CPVC hot and cold water distribution systems as specified in ASTM D 2846. Approved by national, state and most municipal building codes for use in residential and commercial structures, as well as recreational vehicles, modular homes and mobile home applications. Check local codes for acceptability and restrictions. Available in CTS sizes 1/2" - 2" with socket end connectors.

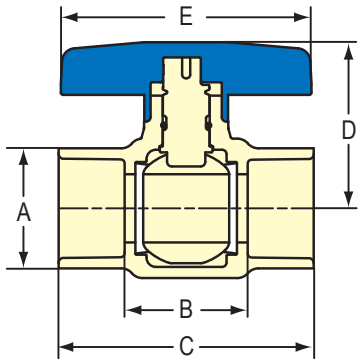
- Chemical & Corrosion Resistant CPVC Construction
- Maintenance-Free Sealed Unit
- High Impact Polypropylene Handle
- Spears® Single O-ring Safe-T-Shear® Stem Design
- EPDM O-rings
- PTFE/HDPE Floating Seat Design
- Suitable for Commercial Hot Water Systems
- Sizes 1/2" - 2" Pressure Rated to 100 psi @ 180°F
- NSF® Certified for Potable Water use
- Assembled with Silicone-Free, Water Soluble Lubricant
- Manufactured to ASTM F 1970

Sample Engineering Specification

All thermoplastic ball valves shall be Copper Tube Size (CTS) sealed unit type constructed from CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM. All valves shall have double stop Polypropylene handle. All valves shall be certified by NSF International for use in potable water service. All valves shall be pressure rated at 100 psi for water at 180°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

Valve Size	O-ring Material	Part Number Socket	Pressure Rating
1/2	EPDM	1922-005	100 psi Non-Shock Water @ 180°F
3/4	EPDM	1922-007	
1	EPDM	1922-010	
1-1/4	EPDM	1922-012	
1-1/2	EPDM	1922-015	
2	EPDM	1922-020	



Dimensions, Weights & C_V Values

Nominal Size	Dimension Reference (inches, ± 1/16)					Approx. Wt. (Lbs.)	C_V[2] Values
	A	B[1]	C	D	E		
1/2	1-7/32	1-1/16	2-3/32	1-11/32	2	.09	37
3/4	1-9/16	1-11/32	2-25/32	1-3/4	2-23/32	.16	84
1	1-7/8	1-9/16	3-3/8	2-3/8	3-1/2	.27	151
1-1/4	2-13/32	1-15/16	4-3/16	2-25/32	3-3/4	.47	229
1-1/2	2-27/32	2-3/8	5-1/32	3-5/32	4-9/32	1.05	330
2	3-17/32	2-3/4	6-3/16	3-27/32	5	1.38	598

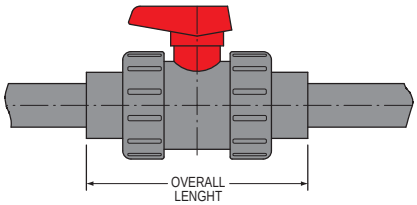
1: Valve Lay Length
2: Gallons per minute at 1 psi pressure drop. Values calculated from valve laying length, based on derivative of Hazen-Williams equation with roughness factor of C=150.

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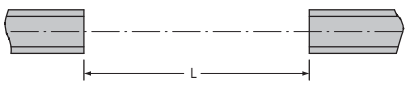


True Union 2000 Retrofit Kits

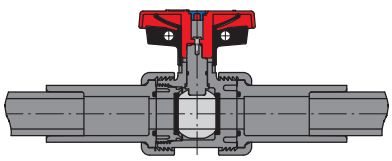
Easily converts any system over to all True Union 2000 style valves for consistent valve type and uniform maintenance. Special extended socket style End Connectors (2) allow retrofit replacement of older Spears® and other brand valves in existing piping systems with a new True Union 2000 valve. Simply cut out old valve according to specified dimension and install retrofit end connectors. End connectors are provided with either EPDM or FKM O-rings.



Ball Valve for Replacement



Pipe Laying Length After Cutting



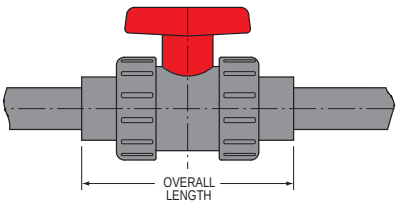
True Union 2000 Ball Valve Installed with Retrofit Kit

True Union Retrofit Kits - Other Brand Valves (Socket Style Only)

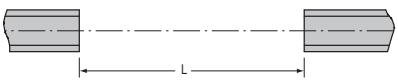
Kit Size	EPDM		FKM	
	PVC	CPVC	PVC	CPVC
1/2	RFK2-005	RFK2-005C	RFK3-005	RFK3-005C
3/4	RFK2-007	RFK2-007C	RFK3-007	RFK3-007C
1	RFK2-010	RFK2-010C	RFK3-010	RFK3-010C
1-1/4	RFK2-012	RFK2-012C	RFK3-012	RFK3-012C
1-1/2	RFK2-015	RFK2-015C	RFK3-015	RFK3-015C
2	RFK2-020	RFK2-020C	RFK3-020	RFK3-020C
2-1/2	RFK2-025	RFK2-025C	RFK3-025	RFK3-025C
3	RFK2-030	RFK2-030C	RFK3-030	RFK3-030C
4	RFK2-040	RFK2-040C	RFK3-040	RFK3-040C

Cut-Out Dimensions

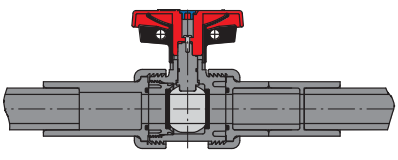
Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	4-29/32	5-7/16	6-3/32	7-1/4	7-1/2	8-17/32	10-3/4	11-7/16	14-15/16



Ball Valve for Replacement



Pipe Laying Length After Cutting



True Union Ball Valve Installed with Retrofit Kit

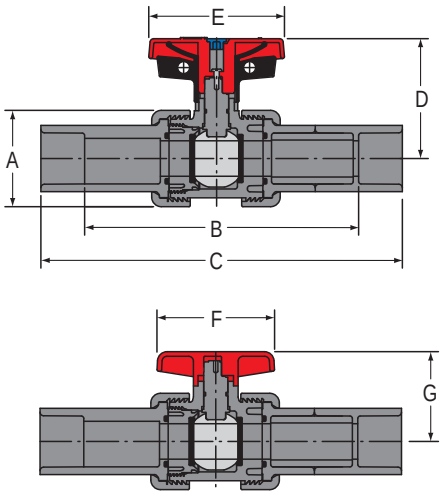
True Union Retrofit Kits - Older (Regular Style) Spears® Valves

(Socket Style Only)

Kit Size	EPDM		FKM	
	PVC	CPVC	PVC	CPVC
1/2	RFKS2-005	RFKS2-005C	RFKS3-005	RFKS3-005C
3/4	RFKS2-007	RFKS2-007C	RFKS3-007	RFKS3-007C
1	RFKS2-010	RFKS2-010C	RFKS3-010	RFKS3-010C
1-1/4	RFKS2-012	RFKS2-012C	RFKS3-012	RFKS3-012C
1-1/2	RFKS2-015	RFKS2-015C	RFKS3-015	RFKS3-015C
2	RFKS2-020	RFKS2-020C	RFKS3-020	RFKS3-020C
2-1/2	RFKS2-025	RFKS2-025C	RFKS3-025	RFKS3-025C
3	RFKS2-030	RFKS2-030C	RFKS3-030	RFKS3-030C
4	RFKS2-040	RFKS2-040C	RFKS3-040	RFKS3-040C

Cut-Out Dimensions

Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	5-5/16	6-1/4	6-11/16	7-1/8	8-3/16	8-15/16	12	12-1/16	13-3/16



True Union 2000 Retrofit Ball Valve Complete replacement valve for older Spears® 2300 series Regular True Union Ball Valves.

Retrofit valve consists of either Spears® Standard or Industrial True Union 2000 Ball Valve supplied with factory installed extended socket end connectors. Simply cut out old valve to specified dimensions **(see cut-out dimensions, page 40)** and install Retrofit Valve end connectors.

Dimensions

Size	A ± 1/16	B ± 1/16	C ± 1/16	D ± 1/16	E ± 1/16	F ± 1/16	G ± 1/16
1/2	1-7/8	5-5/16	7-1/16	2-9/16	2-13/16	2-1/2	1-5/8
3/4	2-1/4	6-1/4	8-1/4	2-7/8	3-5/16	3	2
1	2-1/2	6-11/16	8-15/16	3-1/8	3-7/16	3-7/16	2-5/16
1-1/4	3-1/16	7-1/8	9-3/4	3-5/8	3-13/16	3-9/16	2-13/16
1-1/2	3-1/2	8-3/16	10-15/16	4	4-3/16	3-7/8	3-1/16
2	4-1/4	8-15/16	11-15/16	4-1/2	5-1/8	5	3-3/4
2-1/2	6-3/16	12	15-1/2	5-1/8	6-1/4	7-5/16	5-7/8
3	6-3/16	12-1/16	15-7/8	5-7/8	7-5/8	7-5/16	5-7/8
4	7-5/8	13-3/16	19	6-3/4	9-3/16	8-3/8	6-3/4

True Union 2000 Retrofit Ball Valve - Replaces Older (Regular Style) Spears® Valves

Size	TU 2000 Industrial Retrofit Ball Valves				TU 2000 Standard Retrofit Ball Valves			
	EPDM		FKM		EPDM		FKM	
	PVC	CPVC	PVC	CPVC	PVC	CPVC	PVC	CPVC
1/2	1822RS-005	1822RS-005C	1832RS-005	1832RS-005C	3622RS-005	3622RS-005C	3632RS-005	3632RS-005C
3/4	1822RS-007	1822RS-007C	1832RS-007	1832RS-007C	3622RS-007	3622RS-007C	3632RS-007	3632RS-007C
1	1822RS-010	1822RS-010C	1832RS-010	1832RS-010C	3622RS-010	3622RS-010C	3632RS-010	3632RS-010C
1-1/4	1822RS-012	1822RS-012C	1832RS-012	1832RS-012C	3622RS-012	3622RS-012C	3632RS-012	3632RS-012C
1-1/2	1822RS-015	1822RS-015C	1832RS-015	1832RS-015C	3622RS-015	3622RS-015C	3632RS-015	3632RS-015C
2	1822RS-020	1822RS-020C	1832RS-020	1832RS-020C	3622RS-020	3622RS-020C	3632RS-020	3632RS-020C
2-1/2	1822RS-025	1822RS-025C	1832RS-025	1832RS-025C	3622RS-025	3622RS-025C	3632RS-025	3632RS-025C
3	1822RS-030	1822RS-030C	1832RS-030	1832RS-030C	3622RS-030	3622RS-030C	3632RS-030	3632RS-030C
4	1822RS-040	1822RS-040C	1832RS-040	1832RS-040C	3622RS-040	3622RS-040C	3632RS-040	3632RS-040C

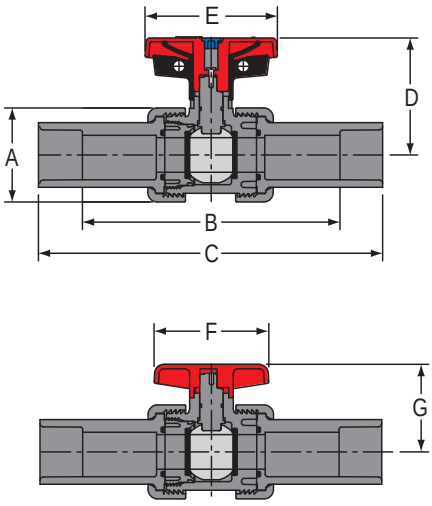
True Union 2000 Check Valve Seal Carrier Tool

Size	Part Number
1/2	TSK-00503
3/4	TSK-00703
1	TSK-01003
1-1/4	TSK-01203
1-1/2	TSK-01503
2	TSK-02003
3	TSK-03003
4	TSK-04003
6	TSK-06003



True Union 2000 Ball Valve Seal Carrier Tool

Size	Part Number
1/2	TSK1-00503
3/4	TSK1-00703
1	TSK1-01003
1-1/4	TSK1-01203
1-1/2	TSK1-01503
2	TSK1-02003
3	TSK-03003
4	TSK-04003
6	TSK-06003



True Union 2000 Retrofit Ball Valve Complete universal replacement valve for domestic and import PVC or CPVC valve.

Retrofit consists of either Spears® Standard or Industrial True Union 2000 Ball Valve supplied with factory installed extended socket end connectors. Simply cut out old valve to specified dimensions **(see cut-out dimensions, page 40)** and install Retrofit Valve end connectors.

Dimensions

Size	A ± 1/16	B ± 1/16	C ± 1/16	D ± 1/16	E ± 1/16	F ± 1/16	G ± 1/16
1/2	1-7/8	4-15/16	6-11/16	2-9/16	2-13/16	2-1/2	1-5/8
3/4	2-1/4	5-7/16	7-1/2	2-7/8	3-3/8	3	2
1	2-1/2	6-1/16	8-5/16	3-1/8	3-7/16	3-7/16	2-5/16
1-1/4	3-1/16	7-5/16	9-7/8	3-5/8	3-7/8	3-9/16	2-13/16
1-1/2	3-1/2	7-1/2	10-5/16	4	4-3/16	3-7/8	3-1/16
2	4-1/4	8-1/2	11-1/2	4-1/2	5-1/8	5	3-3/4
2-1/2	6-3/16	10-7/8	14-3/8	5-7/8	7-5/8	7-5/16	5-7/8
3	6-3/16	11-1/2	15-3/16	5-7/8	7-5/8	7-5/16	5-7/8
4	7-5/8	14-3/8	18-15/16	6-3/4	9	8-3/8	6-3/4

True Union 2000 Retrofit Ball Valve - Replaces Other Brand Valves

Size	TU 2000 Industrial Retrofit Ball Valves				TU 2000 Standard Retrofit Ball Valves			
	EPDM		FKM		EPDM		FKM	
	PVC	CPVC	PVC	CPVC	PVC	CPVC	PVC	CPVC
1/2	1822R-005	1822R-005C	1832R-005	1832R-005C	3622R-005	3622R-005C	3632R-005	3632R-005C
3/4	1822R-007	1822R-007C	1832R-007	1832R-007C	3622R-007	3622R-007C	3632R-007	3632R-007C
1	1822R-010	1822R-010C	1832R-010	1832R-010C	3622R-010	3622R-010C	3632R-010	3632R-010C
1-1/4	1822R-012	1822R-012C	1832R-012	1832R-012C	3622R-012	3622R-012C	3632R-012	3632R-012C
1-1/2	1822R-015	1822R-015C	1832R-015	1832R-015C	3622R-015	3622R-015C	3632R-015	3632R-015C
2	1822R-020	1822R-020C	1832R-020	1832R-020C	3622R-020	3622R-020C	3632R-020	3632R-020C
2-1/2	1822R-025	1822R-025C	1832R-025	1832R-025C	3622R-025	3622R-025C	3632R-025	3632R-025C
3	1822R-030	1822R-030C	1832R-030	1832R-030C	3622R-030	3622R-030C	3632R-030	3632R-030C
4	1822R-040	1822R-040C	1832R-040	1832R-040C	3622R-040	3622R-040C	3632R-040	3632R-040C

Split-Nut Repair Kits for All True Union 2000 Valves, Union 2000 Pipe Unions and True Union Diaphragm Valves

- Allows replacement of broken Union Nuts
- No Reduction in Valve Operating Pressure
- Kit includes 2-piece Split Nut and SS 316 Gear Clamp
- Simply cut or remove broken nut, align Split-Nut halves around end connector and secure with Gear Clamp. Thread nut onto valve to complete repair.

Note: Split-Nut Repair Kit does **NOT** fit Regular Style True Union Valves



Valve Size	PVC Kit	CPVC Kit
1/2	SNK-005	SNK-005C
3/4	SNK-007	SNK-007C
1	SNK-010	SNK-010C
1-1/4	SNK-012	SNK-012C
1-1/2	SNK-015	SNK-015C
2	SNK-020	SNK-020C
2-1/2	SNK-025	SNK-025C
3	SNK-030	SNK-030C
4	SNK-040	SNK-040C



Supplemental End Connector Sets for All True Union 2000 Valves, Union 2000 Pipe Unions and True Union Diaphragm Valves

- Allows easy conversion of valve end connections due to system change, modification, or inadvertent misorder of product.
- Each set includes 2 each of either Socket, SR Threaded or Spigot End connectors with either EPDM or FKM O-rings installed.

Socket End Connector Set (2)

Valve Size	PVC Part Number		CPVC Part Number	
	EPDM O-ring	FKM O-ring	EPDM O-ring	FKM O-ring
1/2	ECS2-005	ECS3-005	ECS2-005C	ECS3-005C
3/4	ECS2-007	ECS3-007	ECS2-007C	ECS3-007C
1	ECS2-010	ECS3-010	ECS2-010C	ECS3-010C
1-1/4	ECS2-012	ECS3-012	ECS2-012C	ECS3-012C
1-1/2	ECS2-015	ECS3-015	ECS2-015C	ECS3-015C
2	ECS2-020	ECS3-020	ECS2-020C	ECS3-020C
2-1/2	ECS2-025	ECS3-025	ECS2-025C	ECS3-025C
3	ECS2-030	ECS3-030	ECS2-030C	ECS3-030C
4	ECS2-040	ECS3-040	ECS2-040C	ECS3-040C
6	ECS2-060	ECS3-060	ECS2-060C	ECS3-060C

SR Threaded End Connector Set (2)

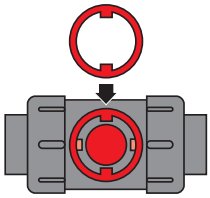
Valve Size	PVC Part Number		CPVC Part Number	
	EPDM O-ring	FKM O-ring	EPDM O-ring	FKM O-ring
1/2	ECSRT2-005	ECSRT3-005	ECSRT2-005C	ECSRT3-005C
3/4	ECSRT2-007	ECSRT3-007	ECSRT2-007C	ECSRT3-007C
1	ECSRT2-010	ECSRT3-010	ECSRT2-010C	ECSRT3-010C
1-1/4	ECSRT2-012	ECSRT3-012	ECSRT2-012C	ECSRT3-012C
1-1/2	ECSRT2-015	ECSRT3-015	ECSRT2-015C	ECSRT3-015C
2	ECSRT2-020	ECSRT3-020	ECSRT2-020C	ECSRT3-020C
2-1/2	ECSRT2-025	ECSRT3-025	ECSRT2-025C	ECSRT3-025C
3	ECSRT2-030	ECSRT3-030	ECSRT2-030C	ECSRT3-030C
4	ECSRT2-040	ECSRT3-040	ECSRT2-040C	ECSRT3-040C
6	ECSRT2-060	ECSRT3-060	ECSRT2-060C	ECSRT3-060C

Spigot End Connector Set (2)

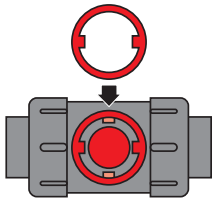
Valve Size	PVC Part Number		CPVC Part Number	
	EPDM O-ring	FKM O-ring	EPDM O-ring	FKM O-ring
1/2	ECSP2-005	ECSP3-005	ECSP2-005C	ECSP3-005C
3/4	ECSP2-007	ECSP3-007	ECSP2-007C	ECSP3-007C
1	ECSP2-010	ECSP3-010	ECSP2-010C	ECSP3-010C
1-1/4	ECSP2-012	ECSP3-012	ECSP2-012C	ECSP3-012C
1-1/2	ECSP2-015	ECSP3-015	ECSP2-015C	ECSP3-015C
2	ECSP2-020	ECSP3-020	ECSP2-020C	ECSP3-020C
2-1/2	ECSP2-025	ECSP3-025	ECSP2-025C	ECSP3-025C
3	ECSP2-030	ECSP3-030	ECSP2-030C	ECSP3-030C
4	ECSP2-040	ECSP3-040	ECSP2-040C	ECSP3-040C
6	ECSP2-060	ECSP3-060	ECSP2-060C	ECSP3-060C

Handle Lockout Ring for True Union 2000 Industrial Ball Valves

- Use with Built-in Handle Lockout Device
- Allows selective lockout position of Lock-Open Only or Lock-Closed Only
- Simply remove valve handle and install ring below handle lockout mechanism



Lock-Closed Only Position



Lock-Open Only Position

Valve Size	Part Number
1/2	TU2LR-005
3/4	TU2LR-007
1	TU2LR-010
1-1/4	TU2LR-012
1-1/2	TU2LR-015
2	TU2LR-020
2-1/2 & 3	TU2LR-030
4	TU2LR-040



Typical Application (VALVE AND RISER NOT INCLUDED)

Stem Extension Kits

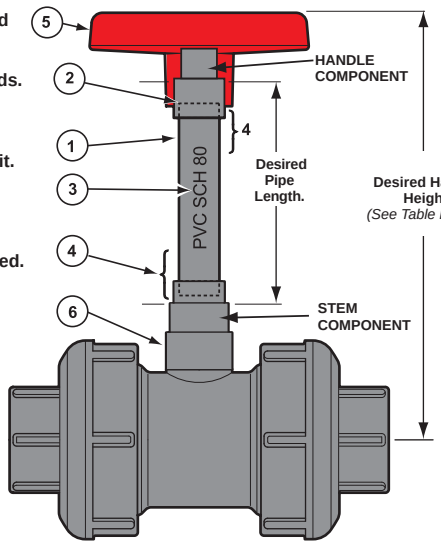
- Kits for True Union 2000 Valves and for Regular True Union, Single Entry or Compact Ball Valves
- Simple 2-Piece Kit for use with existing Valve Handle and Schedule 80 pipe, or can be ordered factory assembled to desired length as 1-piece unit.
- Kit includes 1 - Stem Adapter and 1 - Handle Adapter
- Corrosion resistant PVC construction

2-Piece Stem Extension Kit

Valve Size	Part Numbers[1]	
	For True Union 2000, Compact 2000 & Single Entry Ball Valves[2]	For Regular True Union & Compact Ball Valves
1/2	BVSE2-005-000	BVSE-005-000
3/4	BVSE2-007-000	BVSE-007-000
1	BVSE2-010-000	BVSE-010-000
1-1/4	BVSE2-012-000	BVSE-012-000
1-1/2	BVSE2-015-000	BVSE-015-000
2	BVSE2-020-000	BVSE-020-000
2-1/2 & 3	BVSE2-030-000	BVSE-030-000
4	BVSE2-040-000	BVSE-040-000
6	BVSE2-060-000	N/A

1: For factory assembled units replace last 3 zeros with length code. See **SSB-1 Part 1 List Price Catalog** – *Thermoplastic Valves, Ball Valve Accessories & Repair Kits* for length codes.
2: Not for use on True Union 2000 Industrial 3-Way Ball Valves

1. **Cut pipe square to desired length** *(See Table Below)*.
2. **Bevel and deburr pipe ends.**
3. **Align edge of print string or mark each end of pipe for alignment; check dry fit.**
4. **Solvent cement components to pipe making sure alignment marks are properly matched.**
5. **Push valve handle onto extension assembly.**
6. **Position assembly over valve stem and rotate into place.**



Required for Assembly:

- Two-Piece Stem Extension Kit
- Desired Length of PVC Schedule 80 Pipe*
- Saw & Miter Box or Wheel-Type Cutter
- PVC Solvent Cement & Primer
- Black Marker
- Ruler

*** NOT INCLUDED**

Use the Schedule 80 pipe size listed for the appropriate valve size										
Valve Size (in.)	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6
Required Sch 80 Pipe Size	**3/4**			**1**					**1-1/2**	
To calculate the length of Schedule 80 pipe needed, ***subtract*** the appropriate figure shown below from the desired handle height										
For True Union 2000 Industrial Ball Valves[1]										
Valve Size (in.)	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6
Subtract (in.)	**3-7/8**	**4**	**4-5/16**	**5**	**5-5/8**	**6-1/4**	**8-1/16**	**8-1/16**	**9-5/8**	**10-11/16**
Minimum Height (in.)	4-9/16	5-3/16	5-1/2	6-3/4	7-3/8	8	9-13/16	9-13/16	11-5/8	12-3/4
For True Union 2000 Standard, Compact 2000 & Single Entry Ball Valves										
Valve Size (in.)	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	N/A
Subtract (in.)	**2-1/2**	**3-1/16**	**3-9/16**	**4-1/4**	**4-5/8**	**5-11/16**	**7-11/16**	**7-11/16**	**9**	N/A
Minimum Height (in.)	3-5/8	4-1/4	4-3/4	6	6-3/8	7-7/16	9-1/2	9-1/2	11	N/A
For Regular True Union & Compact Ball Valves										
Valve Size (in.)	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	N/A
Subtract (in.)	**3-5/16**	**4**	**4-5/16**	**5-1/8**	**5-5/8**	**6-1/16**	**7-1/8**	**7-1/8**	**8-3/8**	N/A
Minimum Height (in.)	4-1/2	5-1/4	5-1/2	7	7-1/2	8	9	9	10-1/2	N/A

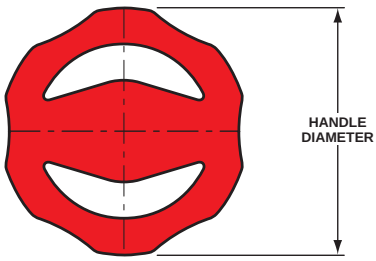
1: Stem Extension does not permit use of Handle Lockout on True Union 2000 Industrial Ball Valves.

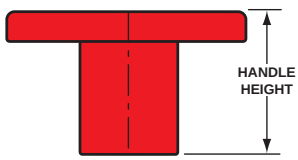
Round Safety Handles

- Handles for True Union 2000 Valves and for Regular True Union, Single Entry or Compact Ball Valves
- Helps prevent accidental operation of valve
- Special design provides positive hand grip
- Impact and corrosion resistant Polypropylene construction

Note: Round Handle does not allow use of Handle Lockout on True Union 2000 Industrial Ball Valve. Not for use on True Union 2000 Industrial 3-Way Ball Valve.









Typical Application
(VALVE NOT INCLUDED)

Valve Size	Part Numbers					Handle Height	Handle Diameter
	For TU 2000, Compact 2000, & Single Entry, & Utility Ball Valves		For Regular True Union & Compact Ball Valves				
	3-Slot Stem	1-Slot Stem	3-Slot Stem	1-Slot Stem	Flat/2-D Stem		
1/2	RSH2-005	RSH5-005	RSH-005	RSH6-005	RSH4-005	1-13/32	2-1/2
3/4	RSH2-007	RSH5-007	RSH-007	RSH6-007	RSH4-007	1-9/16	2-7/8
1	RSH2-010	RSH5-010	RSH-010	RSH6-010	RSH4-010	1-9/16	3-1/4
1-1/4	RSH2-012	RSH5-012	RSH-012	RSH6-012	RSH4-012	1-13/16	3-9/16
1-1/2	RSH2-015	RSH5-015	RSH-015	RSH6-015	RSH4-015	1-15/16	4-3/16
2	RSH2-020	RSH5-020	RSH-020	RSH6-020	RSH4-020	2-1/4	5-1/16
2-1/2 & 3	RSH2-030	RSH5-030	NA	NA	RSH-030	2-3/4	6-11/16
4	RSH2-040	RSH5-040	NA	NA	RSH-040	3	8-1/8

2" Square / T-Style Operator Nuts

- Operator Nuts for True Union 2000 Valves and for Regular True Union, Single Entry or Compact Ball Valves
- Designed for use with standard 2" square drive or conventional “T” drive operators

Note: Not for use on True Union 2000 Industrial 3-Way Ball Valves



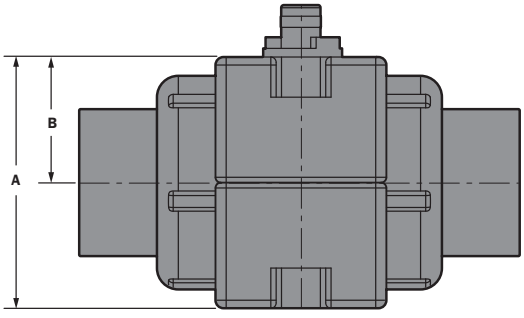
Valve Size	Part Numbers		
	All True Union (Reg./2000) Compact, Compact 2000 & Single Entry Ball Valves	For True Union 2000 Industrial, Standard & Single Entry Ball Valves	For Regular True Union & Compact Ball Valves
1/2	VTN2-005	N/A	N/A
3/4	VTN2-007		
1	VTN2-007		
1-1/4	VTN2-012		
1-1/2	VTN2-015		
2	VTN2-020		
2-1/2 & 3	N/A	VTN2-030	VTN-030
4		VTN2-040	VTN-040

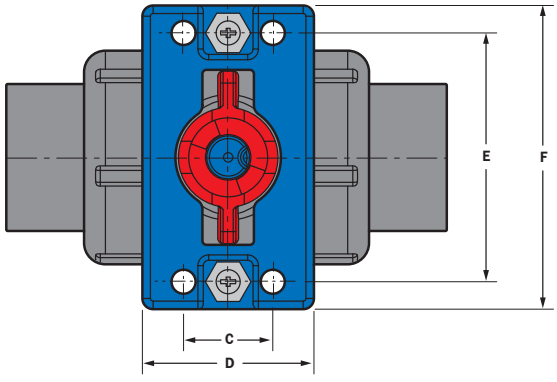


Multi-Mount Valve Mounting Brackets

- Separate Brackets for True Union 2000 Industrial & Standard Ball Valves and for Regular True Union Ball Valves.
- Provides solid, versatile valve mounting to machinery supports, panels, etc.
- Simple 2-piece clamp-on unit allows quick removal of valve for maintenance or servicing without altering position.
- Includes mounting hardware.
- Impact and corrosion resistant Polypropylene construction.
- Easily adapts to actuator mount using optional Multi-Mount Actuator Mounting Platform.

Notes:
1) Bracket does not fit True Union 2000 Industrial 3-Way Ball Valves.
2) True Union 2000 Valve brackets come with Stainless Steel hardware, Regular True Union brackets come with zinc-plated steel hardware.
3) Will not fit with Low Profile Actuation Mounting Kit.





Multi-Mount Valve Mounting Brackets

True Union 2000 Industrial Ball Valve

Valve Size	Part Number	Dimensions					
		A	B	C	D	E	F
1/2	TUMB2-005	2.38	1.19	1.04	1.72	2.46	3.54
3/4	TUMB2-007	2.82	1.41	1.10	1.81	2.75	3.54
1	TUMB2-010	2.98	1.49	1.04	2.00	2.90	3.54
1-1/4	TUMB2-012	3.60	1.80	1.25	2.00	3.50	4.13
1-1/2	TUMB2-015	4.00	2.00	1.38	2.15	3.90	4.53
2	TUMB2-020	5.00	2.50	1.50	2.50	4.50	5.10
2-1/2 & 3	TUMB2-030	6.30	3.15	2.00	3.25	6.25	7.00
4	TUMB2-040	8.25	4.12	2.00	4.10	7.72	8.50

Regular True Union Ball Valve

Valve Size	Part Number	Dimensions					
		A	B	C	D	E	F
1/2	TUMB-005	2.92	1.46	0.68	1.55	2.25	4.44
3/4	TUMB-007	3.54	1.77	0.94	1.87	2.55	4.87
1	TUMB-010	3.56	1.78	1.05	2.00	2.87	5.12
1-1/4	TUMB-012	3.98	1.99	1.19	2.09	3.25	5.31
1-1/2	TUMB-015	4.54	2.27	1.47	2.47	3.84	5.90
2	TUMB-020	5.56	2.78	1.81	2.75	4.75	7.00
2-1/2 & 3	TUMB-030	7.54	3.77	2.47	3.75	6.87	9.47
4	TUMB-040	9.16	4.58	2.72	4.19	8.28	11.41



Multi-Mount Actuator Mounting Platforms

- Separate Platforms for True Union 2000 Valves and for Regular True Union Ball Valves.
- Add-on actuator adapter for use with Multi-Mount Valve Mounting Bracket (may also be purchased with bracket as complete kit).
- Universal actuator mounting accepts ISO, MSS or comparable square bolt-pattern actuators.
- Impact and corrosion resistant Polypropylene construction.
- Includes hardware for mounting Platform to Bracket

Notes:

1) True Union 2000 Valve platforms come with Stainless Steel hardware, Regular True Union platform come with zinc-plated steel hardware.

2) See Complete Multi-Mount Actuation Mounting Kit for applicable dimensions.

Valve Size	Part Numbers	
	For True Union 2000 Ball Valves	For Regular True Union Ball Valves
1/2	MMP1-005	MMP-005
3/4	MMP1-007	MMP-007
1	MMP1-010	MMP-010
1-1/4	MMP1-012	MMP-012
1-1/2	MMP1-015	MMP-015
2	MMP1-020	MMP-020
2-1/2 & 3	MMP1-030	MMP-030
4	MMP1-040	MMP-040

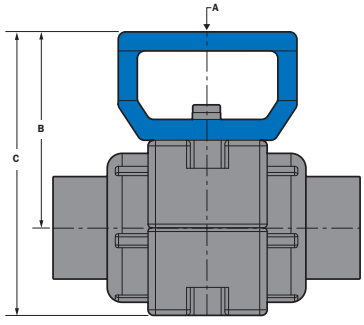
Complete Multi-Mount Actuation Mounting Kits

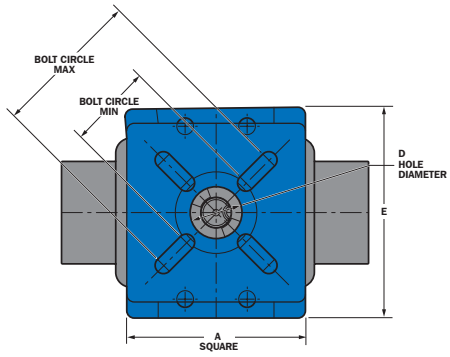




- Separate Platforms for True Union 2000 Industrial Ball Valves & for True Union 2000 Standard Ball Valves and for Regular True Union Ball Valves.
- Combines Multi-Mount Valve Mounting Bracket and Multi-Mount Actuator Mounting Platform into one complete kit.
- Provides solid, fully supported valve and actuator mounting.
- Impact and corrosion resistant Polypropylene construction.
- Bracket and platform hardware included

Notes: 1) True Union 2000 Valve kits come with Stainless Steel hardware, Regular True Union kits come with zinc-plated steel hardware.
2) Does not fit True Union 2000 Industrial 3-way Ball Valves
3) Actuator coupling not included (see Valve Stem Output Detail for design of user supplied drive coupling).





Valve Size	True Union 2000 Ball Valves	Regular True Union Ball Valves	Dimensions									
			A	TU 2000 B	Reg. TU B	TU 2000 C	Reg. TU C	D	TU 2000 E	Reg. TU E	Bolt Circle Max	Bolt Circle Min.
1/2	TUAK1-005	TUAK-005	3.00	3.00	3.24	4.19	4.67	.87	3.54	4.44	2.50	1.41
3/4	TUAK1-007	TUAK-007	3.00	3.13	3.46	4.54	5.20	.87	3.54	4.87	2.50	1.41
1	TUAK1-010	TUAK-010	3.00	3.31	3.60	4.88	5.38	.87	3.54	5.12	2.50	1.41
1-1/4	TUAK1-012	TUAK-012	3.75	4.64	4.80	6.44	6.76	.90	4.13	5.31	3.00	1.41
1-1/2	TUAK1-015	TUAK-015	3.75	5.02	5.27	7.02	7.52	.90	4.53	5.90	3.00	1.41
2	TUAK1-020	TUAK-020	3.75	5.52	5.77	8.02	8.52	1.12	5.10	7.00	3.12	1.75
2-1/2 & 3	TUAK1-030	TUAK-030	5.25	6.34	6.91	9.49	10.63	1.37	7.00	9.47	5.00	2.20
4	TUAK1-040	TUAK-040	5.25	7.99	8.36	12.11	12.86	1.37	8.50	11.41	5.00	2.20

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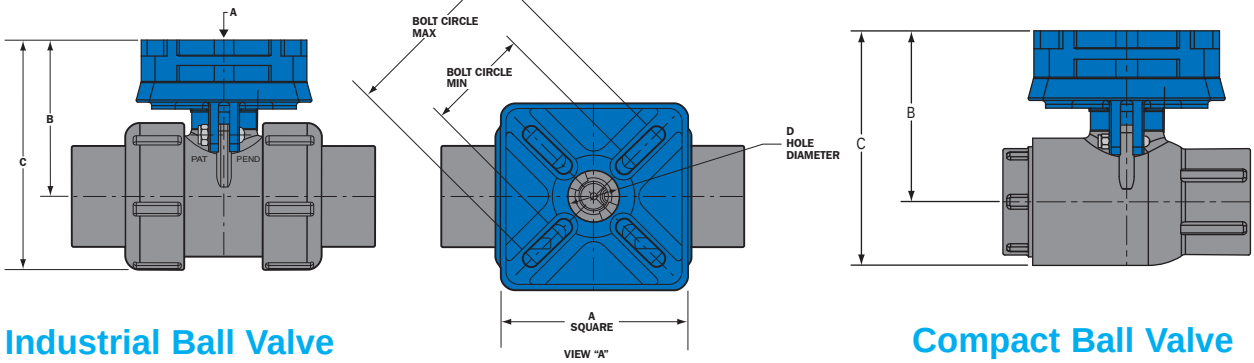


Low Profile Actuation Mounting Kits

- Separate kits for True Union 2000 Industrial & Industrial 3-Way Ball Valves and for True Union 2000 Standard Ball Valves.
- Compact bolt-on mount provides positive actuator support and alignment.
- Universal actuator mounting plate accepts ISO, MSS or comparable square bolt-pattern actuators.
- Impact and corrosion resistant Polypropylene construction.
- Includes Stainless Steel hardware for mounting to valve.

Notes: 1) Actuator coupling not included (see Valve Stem Output Detail for design of user supplied drive coupling).

2) Will not assemble with Multi-Mount Valve mounting bracket – See Mini-Mount Actuation Mounting Kit or Mini-Mount Combo Actuation Mounting Kit.



Industrial Ball Valve

Compact Ball Valve

Dimensions

Valve Size	True Union 2000 Ind Ball Valves	True Union 2000 Std Ball Valves	Compact 66-Series	Dimensions							
				A	TU 2000 B	66 Series B	TU 2000 C	66 Series C	D	Bolt Circle Max.	Bolt Circle Min.
1/2	AMB5-005	AMB6-005		3.18	2.45	2.45	3.38	3.16	0.87	3.00	1.62
3/4	AMB5-007	AMB6-007		3.18	2.61	2.61	3.78	3.50	0.87	3.00	1.75
1	AMB5-010	AMB6-010		3.18	2.77	2.77	4.10	3.79	0.87	3.00	1.75
1-1/4	AMB5-012	AMB6-012		3.68	3.40	3.40	4.97	4.68	0.87	3.75	2.00
1-1/2	AMB5-015	AMB6-015		3.68	3.64	3.64	5.42	5.12	0.87	3.75	2.00
2	AMB5-020	AMB6-020		3.68	4.31	4.31	6.45	6.10	1.12	3.75	2.50
2-1/2 & 3	AMB5-030	AMB6-030	N/A	5.25	5.56	N/A	8.64	N/A	1.96	5.62	4.50
4	AMB5-040	AMB6-040	N/A	5.75	6.11	N/A	9.97	N/A	2.68	5.88	4.80
6	AMB5-060	N/A	N/A	5.75	7.92	N/A	13.73	N/A	2.88	5.88	4.80

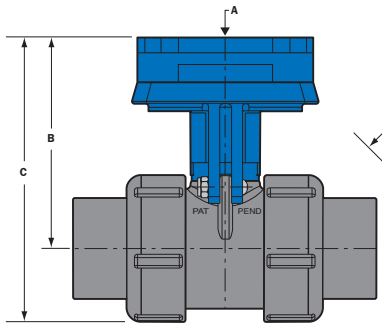




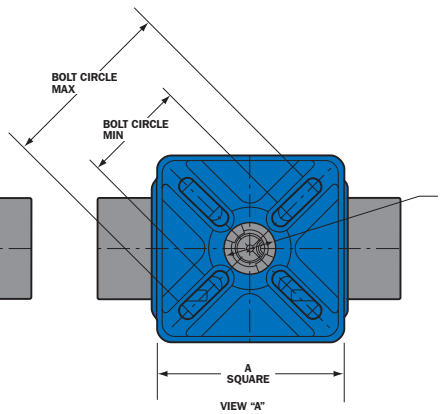
Mini-Mount Actuation Mounting Kits

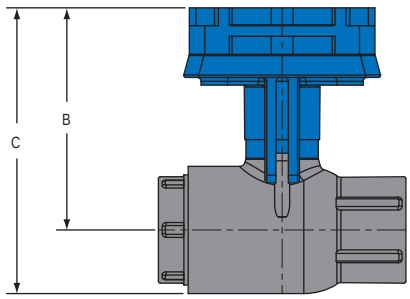
- Separate kits for True Union 2000 Industrial & Industrial 3-Way Ball Valves and for True Union 2000 Standard Ball Valves.
- Simple bolt-on mount provides positive actuator support and alignment.
- Universal actuator mounting plate accepts ISO, MSS or comparable square bolt-pattern actuators.
- Impact and corrosion resistant Polypropylene construction.
- Includes Stainless Steel hardware for mounting to valve.

Note: 1) Actuator coupling not included (see Valve Stem Output Detail for design of user supplied drive coupling).



Industrial Ball Valve





Compact Ball Valve

Dimensions

Valve Size	TU 2000 Ind Ball Valves	TU 2000 Std Ball Valves	Compact 66-Series	Compact 21-Series	Dimensions									
					A	TU 2000 B	66 Series B	21 Series B	TU 2000 C	66 Series C	21 Series C	D	Bolt Circle Max.	Bolt Circle Min.
1/2	AMB2-005	AMB3-005		AMB4-005	3.18	2.95	2.95	2.90	3.88	3.66	3.75	0.87	3.00	1.62
3/4	AMB2-007	AMB3-007		AMB4-007	3.18	3.36	3.36	3.47	4.53	4.25	4.51	0.87	3.00	1.75
1	AMB2-010	AMB3-010		AMB4-010	3.18	3.60	3.60	3.61	4.93	4.62	4.80	0.87	3.00	1.75
1-1/4	AMB2-012	AMB3-012		AMB4-012	3.68	4.37	4.37	4.30	5.94	5.65	5.71	0.87	3.75	2.00
1-1/2	AMB2-015	AMB3-015		AMB4-015	3.68	4.64	4.64	4.60	6.42	6.12	6.22	0.87	3.75	2.00
2	AMB2-020	AMB3-020		AMB4-020	3.68	5.47	5.47	5.32	7.61	7.26	7.38	1.12	3.75	2.50
2-1/2 & 3	AMB2-030	AMB3-030	N/A	AMB4-030	5.25	6.15	N/A	5.87	9.23	N/A	8.87	1.96	5.62	4.50
4	AMB2-040	AMB3-040	N/A	AMB4-040	5.75	6.92	N/A	6.91	10.78	N/A	10.59	2.68	5.88	4.80
6	AMB2-060	N/A	N/A	AMB2-060	5.75	8.31	N/A	8.31	14.12	N/A	13.39	2.88	5.88	4.85

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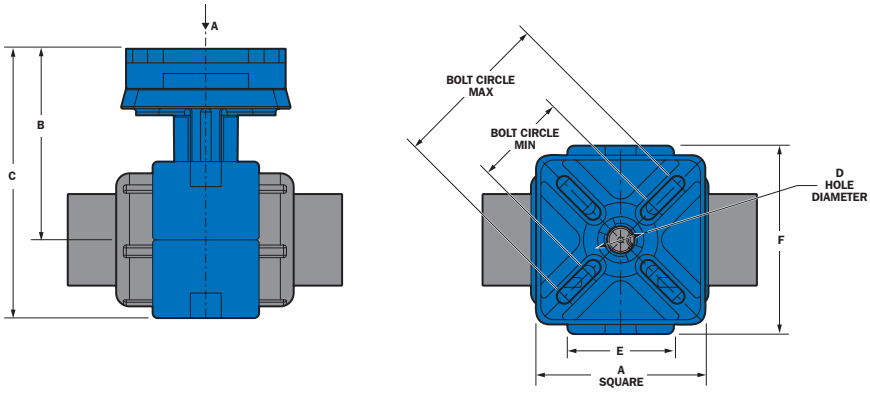
Mini-Mount Combo Actuation Mounting Kits



- Separate, complete actuation mounting kit specially designed for True Union 2000 Industrial Ball Valve and for True Union 2000 Standard Ball Valve.
- Combines Multi-Mount Bracket with Mini-Mount Actuation Mounting Kit for additional mounting support.
- Universal actuator mounting plate accepts ISO, MSS or comparable square bolt-pattern actuators.
- Impact and corrosion resistant Polypropylene construction.
- Includes Stainless Steel hardware for mounting to valve.

Notes: 1) Does not fit True Union 2000 Industrial 3-way Ball Valves

2) Actuator coupling not included (see Valve Stem Output Detail for design of user supplied drive coupling).



Dimensions

Valve Size	True Union 2000 Industrial Ball Valves	True Union 2000 Standard Ball Valves	Dimensions							
			A	B	C	D	E	F	Bolt Circle Max.	Bolt Circle Min.
1/2	TUAK2-005	TUAK3-005	3.18	2.95	4.14	.87	1.72	3.54	3.00	1.62
3/4	TUAK2-007	TUAK3-007	3.18	3.36	4.77	.87	1.81	3.54	3.00	1.75
1	TUAK2-010	TUAK3-010	3.18	3.60	5.09	.87	2.00	3.54	3.00	1.75
1-1/4	TUAK2-012	TUAK3-012	3.68	4.37	6.17	.87	2.00	4.13	3.75	2.00
1-1/2	TUAK2-015	TUAK3-015	3.68	4.64	6.64	.87	2.15	4.53	3.75	2.00
2	TUAK2-020	TUAK3-020	3.68	5.47	7.97	1.12	2.50	5.10	3.75	2.50
2-1/2 & 3	TUAK2-030	TUAK3-030	5.75	6.15	9.30	1.96	3.25	7.00	5.62	4.50
4	TUAK2-040	TUAK3-040	5.75	6.92	11.05	2.68	4.10	8.50	5.88	4.80

Standard and Compact Foot Valve Screens

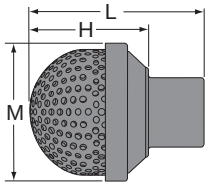


- Easily converts Ball Check Valve to a Foot Valve.
- Standard IPS spigot connection fits slip-socket valve end connector.
- Enlarged screen provides open area equivalent to valve for optimum flow characteristics.
- Chemical and corrosion resistant PVC, CPVC or Compact HDPE threaded construction.
- Compact fits any IPS socket or threaded Ball Check Valve

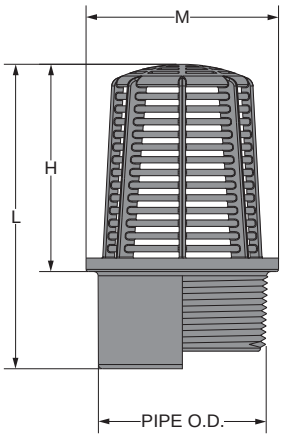


Typical Application
(VALVE NOT INCLUDED)

Standard Dimensions



Size	Part Number		L	H	M
	PVC	CPVC	±1/16	±1/32	±1/16
1/2	FVS-005	FVS-005C	3-7/16	2-1/2	2-1/4
3/4	FVS-007	FVS-007C	3-1/2	2-7/16	2-5/16
1	FVS-010	FVS-010C	3-5/8	2-9/16	2-5/8
1-1/4	FVS-012	FVS-012C	3-7/8	2-9/16	2-5/8
1-1/2	FVS-015	FVS-015C	5-15/32	4-1/64	4-7/16
2	FVS-020	FVS-020C	5-1/2	4-1/64	4-7/16
2-1/2	FVS-025	FVS-025C	6-7/16	4-3/4	5-5/8
3	FVS-030	FVS-030C	6-5/8	4-3/4	5-11/16
4	FVS-040	FVS-040C	6-29/32	4-3/4	5-3/4
6	FVS-060	FVS-060C	7-3/8	4-11/16	7-3/16



Compact Dimensions

Size	Part Number			H	L		M	
	Threaded		Spigot	±1/32	±1/16		±1/16	
	PVC	HDPE	PVC		Threaded	Spigot	Threaded	Spigot
1/2	CFVS1-005	CFVS1-005P	CFVS7-005	1-9/16	2-7/32	2-5/16	31/32	1-3/32
3/4	CFVS1-007	CFVS1-007P	CFVS7-007	1-27/32	2-1/2	2-25/32	1-7/32	1-5/16
1	CFVS1-010	CFVS1-010P	CFVS7-010	2-1/16	2-7/8	3-3/32	1-7/16	1-5/8
1-1/4	CFVS1-012	CFVS1-012P	CFVS7-012	2-7/32	3-1/4	3-15/32	1-27/32	2
1-1/2	CFVS1-015	CFVS1-015P	CFVS7-015	2-19/32	3-5/8	3-29/32	2-1/8	2-1/4
2	CFVS1-020	CFVS1-020P	CFVS7-020	2-15/16	4	4-5/16	2-5/8	2-3/4

Valve Stem Output Detail

For All True Union 2000, Compact 2000, & Single Entry Ball Valves

Size	A (max.)	B (max.)	C (max.)	D (max.)	E (max.)		Flat (max.)	Fig
					1-PIN SLOT	3-PIN SLOT		
1/2	1.43	.26	.52	.26	.30	.21	N/A	3
3/4	1.79	.33	.56	.28	.30	.21		
1	2.10	41	.62	.31	.33	.23		
1-1/4	2.61	.55	.56	.28	.32	.19		
1-1/2	2.87	.62	.75	.37	.38	.27		
2	3.52	.65	.95	.47	.44	.31		
2-1/2 & 3	5.28	1.16	1.28	.63	.56	.44		2
4	5.81	.91	1.86	.93	.75	.63		
6	7.53	1.33	2.12	N/A	N/A	N/A	1.92	1

For Regular True Union & Compact Ball Valves

Size	A (max.)	B (max.)	C (max.)	D (max.)	E (max.)	Flat (max.)	Fig.
1/2	1.48	.31	.52	.26	.21	N/A	3
3/4	1.88	.35	.56	.28	.21		
1	2.18	.48	.62	.31	.23		
1-1/4	2.66	.66	.56	.28	.19		
1-1/2	2.87	.67	.75	.37	.27		
2	3.60	.89	.95	.47	.31		
2-1/2 & 3	4.86	1.01	1.48	N/A	N/A	1.21	1
4	6.24	1.33	2.12			1.92	
6	7.53	1.33	2.12			1.92	

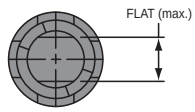


FIG. 1

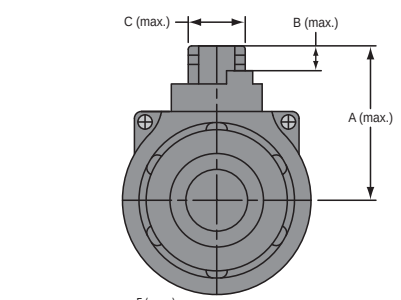
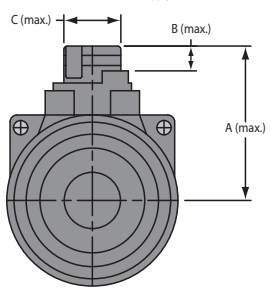


FIG. 2 FIG. 3



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Sample Engineering Specification

All thermoplastic valves shall be sealed unit Lab type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All valves shall have double stop Polypropylene handle. All 1/4" valves shall have optional field installable male thread and tubing end connector adapters. All EPDM valves shall be certified by NSF International for use in potable water service. All EPDM valves shall be pressure rated at 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Features – PVC, CPVC

This versatile quarter-turn shutoff valve is ideally suited for a variety of laboratory, system monitoring and OEM applications. Available in IPS sizes 1/4" - 3/8" with socket or threaded end connectors, plus 1/4" threaded Valve & Adapter Kit to provide multiple connection options.

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Maintenance-Free Sealed Unit
- Individual Valve or Multi-functional Valve & Adapter Kit
- Schedule 80 Full-Bore Design
- High Impact Polypropylene Handle
- EPDM or FKM O-rings
- PTFE Floating Seat Design
- Sizes 1/4" - 3/8" Pressure Rated to 150 psi @ 73°F
- EPDM Valves NSF® Certified for Potable Water use
- Assembled with Silicone-Free, Water Soluble Lubricant

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Number[1,2]			Pressure Rating
		Socket	Threaded	Threaded with Kit	
1/4	EPDM	1522-002	1521-002	1529-002	150 psi Non-Shock Water @ 73°F
	FKM	1532-002	1531-002	1539-002	
3/8	EPDM	1522-003	1521-003	N/A	
	FKM	1532-003	1531-003	N/A	

1: For CPVC Valves, add the letter "C" to part number listed (e.g., 1521-002**C**)
2: For valves with 1/4" I.D. tubing adapters, add the letter "A" to the part number listed (e.g., 1529-002**A**)



LAB BALL VALVE WITH ADAPTER KIT

Valve & Adapter Kit

Kit allows multiple connection options. Adapters use O-ring seals for easy connection to threaded valve. Complete Kit includes:

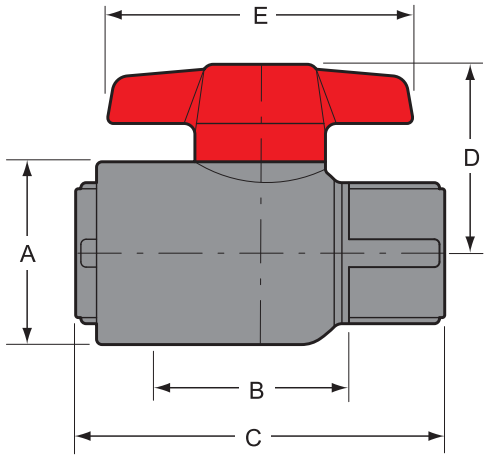
1 – Threaded 1/4" Valve
2 – O-ring Sealed 1/4" MPT x Mipt Adapters
2 – EPDM or FKM O-rings (AS568-013 size)
1 – End Connector Wrench

2 – O-ring Sealed 1/4" MPT x 3/8" I.D. Tubing Barb Adapters
- OR -
2 – O-ring Sealed 1/4" MPT x 1/4" I.D. Tubing Barb Adapters
(Must Add "**A**" to Valve/Kit Part No.)

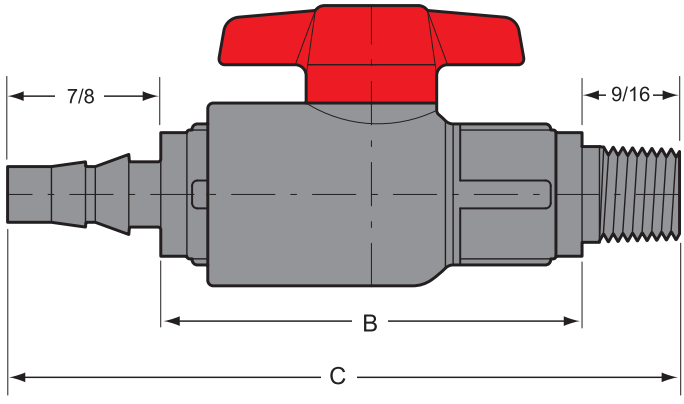
Lab Ball Valve Adapter Kit Only

Valve Size	O-ring Material	Part Number	
		PVC	CPVC
1/4	EPDM	LVKE-002	LVKE-002C
	FKM	LVKV-002	LVKV-002C

Kit Includes:
2 – O-rings
1 – End Connector Wrench
2 – 1/4" MPT x Mipt Adapters
2 – 1/4" MPT x 3/8" I.D. Tubing Barb Adapters



Basic Valve



Valve with Adapter Kit

Dimensions, Weights & C_V Values

Nominal Size	Dimension Reference (inches, ± 1/16)					Approx. Wt. (Lbs.)		C_V[2] Values
	A	B[1]	C	D	E	PVC	CPVC	
1/4	1-1/16	15/16	2-1/8	1-1/16	1-3/4	.10	.11	10
1/4 w/Kit	1-1/16	2-7/16	3-7/8	1-1/16	1-3/4	.14	.15	6
3/8	1-5/16	1	2-3/16	1-1/4	2	.12	.13	24

1: Valve Lay Length
2: Gallons per minute at 1 psi pressure drop. Values calculated from valve laying length, based on derivative of Hazen-Williams equation with roughness factor of C=150.

Temperature Pressure Rating

System Operating Temperature °F (°C)		73 (23)	100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)
Valve Pressure Rating psi (MPa)	PVC	150 (1.03)	124 (.85)	100 (.69)	75 (.52)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
	CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.69)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	-0- (-0-)

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Features – PVC, CPVC & PP

Needle Valves provide proportional opening to needle travel for more accurate metering applications and other fine adjustment flow control applications. Special design PTFE seal eliminates elastomer type seals or O-rings that can contribute to chemical compatibility problems. PVC, CPVC and Polypropylene valves are available with 1/4", 3/8" and 1/2" NPT female threaded ends in either standard Globe Pattern or special Angle Pattern configuration that eliminates need for additional elbow in various system setups.

- Chemical & Corrosion Resistant PVC, CPVC or PP Construction
- Precision Metering Chamber
- Globe & Angle Body Configurations
- Removable Bonnet For Easy Disassembly & Cleaning
- Solid PTFE Stem Seal - No Elastomer Seal or Lubricants Used
- Built-in Panel or Bracket Mounting Nut
- Easy-Grip Polypropylene Handle
- PVC & CPVC Pressure Rated to 235 psi @ 73°F
  Polypropylene Pressure Rated to 150 psi @ 73°F

Sample Engineering Specification

All thermoplastic Needle Valves shall be constructed from PVC, ASTM D 1784 Cell Classification 12454, CPVC, ASTM D 1784 Cell Classification 23447, or Polypropylene, ASTM D 4101. All valves shall be globe pattern or angle pattern body configuration with 1/4", 3/8" or 1/2" female NPT end connections. All valves shall have removable bonnet cap with replaceable PTFE seal. No elastomer seals shall be used. All valves shall have built-in panel mounting nut and high impact polypropylene handles. All PVC and CPVC valves shall be pressure rated to 235 psi and all Polypropylene valves to 150 psi for water @ 73°F, as manufactured by Spears® Manufacturing Company.

Cv Values

Size	Globe Pattern	Angle Pattern
1/4" - 3/8"	.310	.426
1/2"	.62	.78

Gallons per minute at 1 psi pressure drop.

Quick-View Needle Valve Selection Chart

Valve Size	PVC Part Numbers[1,2]						Pressure Rating
	Globe Pattern			Angle Pattern			
	Socket	SR Threaded	Threaded	Socket	SR Threaded	Threaded	
1/4"	5592-002	N/A	5591-002	5692-002	N/A	5691-002	PVC & CPVC 235 psi, PP 150 psi Non-Shock Water @ 73°F
3/8"	5592-003	5591-003SR	5591-003	5692-003	N/A	5691-003	
1/2"	5592-005	5591-005SR	5591-005	5692-005	5691-005SR	5691-005	

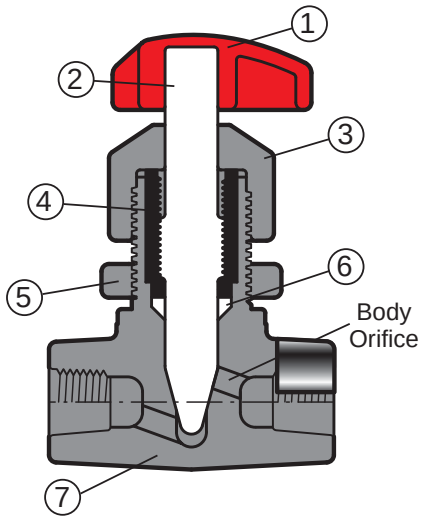
1: For CPVC Valve, add the letter "C" to the part number (e.g. 5591-002**C**)
2: For threaded Polypropylene Valve, add the letter "P" to the part number (e.g. 5591-002**P**, 5591-005**P**SR)

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/4"-1/2"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
		PP	150	105	90	80	65	50	45	30	20	-0-	-0-	-0-

Panel Mounting Instructions

Spears® Needle Valves may be easily mounted to panel or bracket ranging from 3/16" to 1/2" in thickness using the accompanying template. Prepare mounting hole to panel opening dimensions. Slots may be cut in various positions to allow more versatile orientation. Open valve partially. Remove Bonnet Cap with needle assembly (do not fully disassemble) and Panel Nut from valve body. Insert valve body through mounting hole and seat lugs. Reinstall Panel Nut and tighten snug. Carefully reinstall Bonnet Cap and needle assembly, tighten snug. ***Caution:*** *Failure to partially open the valve or back the needle off prior to re-assembly may damage needle when tightening Bonnet Cap.*



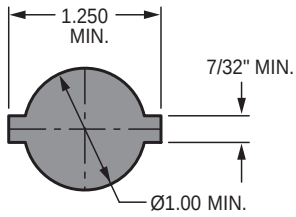
Replacement Parts

No.	Component	Qty.	Material
1	Handle	1	PP
2	Needle Stem	1	PVC/CPVC/PP
3	Bonnet Cap	1	PVC/CPVC/PP
4	Stem Nut	1	GFPP
5	Panel Nut	1	PVC/CPVC/PP
6	Seal	1	PTFE
7	Body	1	PVC/CPVC/PP

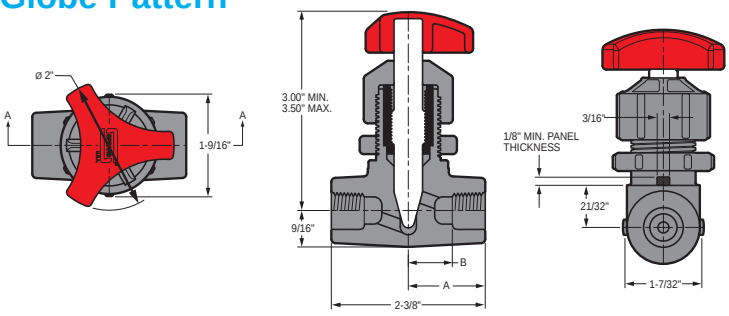
Body Orifice Dimensions

Valve Size	Body Orifice Ø
1/4	3/16"
3/8	3/16"
1/2	1/4"

Panel Opening



Globe Pattern

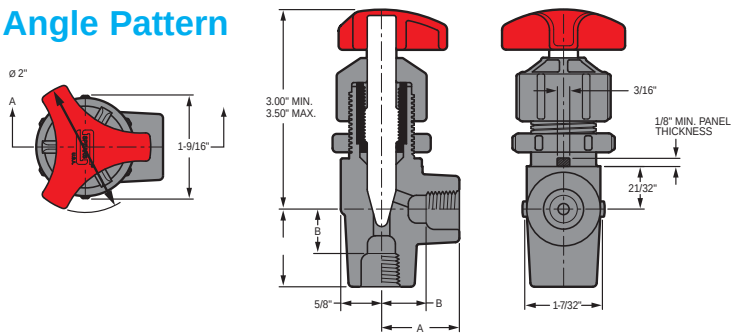


Dimensions

Valve Size	End Connection	A	B
1/4	Threaded	1-3/16	21/32
	Socket		9/16
3/8	Threaded		9/16
	Socket		7/16
1/2	Threaded	1-3/8	21/32
	Socket		1/2

Threaded Valve Dimensions apply to both Standard and SR Threads.

Angle Pattern



Needle Valve Adapter Kit

Valve Size	O-ring Material	Part Number	
		PVC	CPVC
1/4	EPDM	LVKE-002	LVKE-002C
	FKM	LVKV-002	LVKV-002C

Kit Includes:
2 – O-rings
1 – End Connector Wrench
2 – 1/4" MPT x Mipt Adapters
2 – 1/4" MPT x 3/8" I.D. Tubing Barb Adapters

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Sample Engineering Specification

All thermoplastic valves shall be Plug Gate style constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447, with Polypropylene bonnets and high impact Polypropylene hand wheel. All valves shall have non-rising stem and Plug-style Polyethylene gate with Strain-Equalizing thread. All valve components shall be replaceable. All 1/2" - 2" valves shall be pressure rated to 235 psi and all flanged valves 1/2" - 8" to 150 psi for water @ 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Numbers[1]			Pressure Rating
		Socket	SR Threaded	Flanged	
1/2	Buna-N	5212-005	5211-005SR	5213-005	235 psi Non-Shock Water @ 73°F (Flanged 150 psi Non-Shock Water @ 73°F)
	EPDM	5222-005	5221-005SR	5223-005	
	FKM	5232-005	5231-005SR	5233-005	
3/4	Buna-N	5212-007	5211-007SR	5213-007	
	EPDM	5222-007	5221-007SR	5223-007	
	FKM	5232-007	5231-007SR	5233-007	
1	Buna-N	5212-010	5211-010SR	5213-010	
	EPDM	5222-010	5221-010SR	5223-010	
	FKM	5232-010	5231-010SR	5233-010	
1-1/4	Buna-N	5212-012	5211-012SR	5213-012	
	EPDM	5222-012	5221-012SR	5223-012	
	FKM	5232-012	5231-012SR	5233-012	
1-1/2	Buna-N	5212-015	5211-015SR	5213-015	
	EPDM	5222-015	5221-015SR	5223-015	
	FKM	5232-015	5231-015SR	5233-015	
2	Buna-N	5212-020	5211-020SR	5213-020	
	EPDM	5222-020	5221-020SR	5223-020	
	FKM	5232-020	5231-020SR	5233-020	
6	EPDM	---	---	5223-060	
	FKM	---	---	5233-060	
8	EPDM	---	---	5223-080	
	FKM	---	---	5233-080	

1: For CPVC valves, add the letter "C" to the part number (e.g; 5222-005**C**, 5211-005**C**SR)

Features – PVC, CPVC

Spears® Plug Gate Valve utilizes a cylindrical "plug-style" gate for more uniform sealing and positive shutoff. Low-profile, compact design and non-rising stem saves space for the most demanding applications. Spears® Strain-Equalizing stem/wedge design combined with improved Polypropylene bonnet makes this one of the most reliable thermoplastic gate valves available. Valves are produced from PVC or CPVC bodies in IPS sizes of 1/2" - 2" with Socket & SR Threaded or 1/2" - 8" Flanged end connections.

- Chemical & Corrosion Resistant PVC or CPVC Construction with Polypropylene Bonnet
- Polyethylene Plug-Style Gate Provides Cylindrical Internal Seal
- Non-Rising Stem with Patented Strain-Equalizing Threads
- 6" and 8" Valves Features Built-in Position Indicator
- High-Impact Polypropylene Hand Wheel
- Fully Serviceable In-line with Repair Kits or Full Internal Replacement Cartridges
- Buna-N, EPDM or FKM O-ring Seals
- Sizes 1/2" – 2" Pressure Rated to 235 psi @ 73°F Flanged through 8" to 150 psi @ 73°F
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricants
- Optional 2" Square/T-Style Operator Nut available.

Plug Gate Valve O-ring Repair Kit

All kits include Stem O-ring (2), Bonnet O-ring (1).

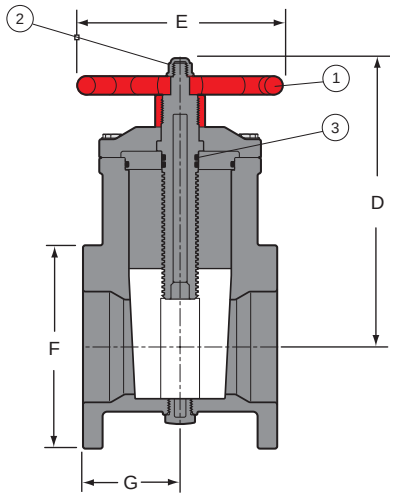
Valve Size	Part Number		
	Buna-N O-ring	EPDM O-ring	FKM O-ring
1/2, 3/4 & 1	PGT-BRK-010	PGT-ERK-010	PGT-VRK-010
1-1/4, 1-1/2 & 2	PGT-BRK-020	PGT-ERK-020	PGT-VRK-020
6	---	PGT-ERK-060	PGT-VRK-060
8	---	PGT-ERK-080	PGT-VRK-080

Plug Gate Valve Internal Replacement Cartridge

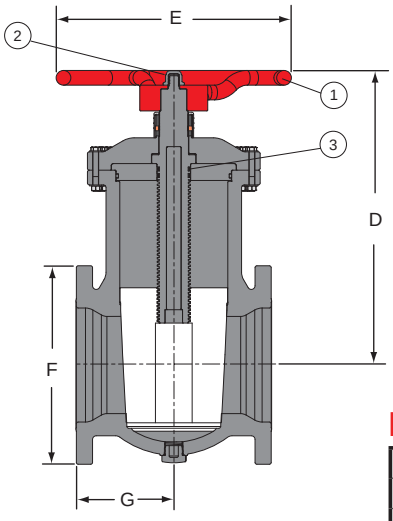
Internal Replacement Cartridge includes complete, fully assembled Handle Nut, Stem O-ring, Bonnet O-ring, and Gate for direct insertion into existing valve body.

Valve Size	Part Number					
	Buna-N O-rings	CPVC w/ Buna-N O-rings	EPDM O-rings	CPVC w/ EPDM O-rings	FKM O-rings	CPVC w/ FKM O-rings
1/2, 3/4 & 1	5210-010	5210-010C	5220-010	5220-010C	5230-010	5230-010C
1-1/4, 1-1/2 & 2	5210-020	5210-020C	5220-020	5220-020C	5230-020	5230-020C
6	---	---	5220-060	5220-060C	5230-060	5230-060C
8	---	---	5220-080	5220-080C	5230-080	5230-080C

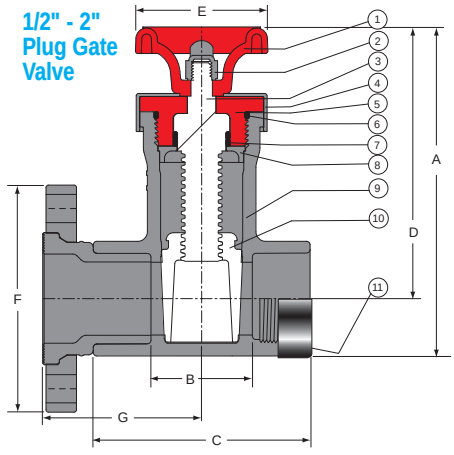
6" Plug Gate Valve



8" Plug Gate Valve



1/2" - 2" Plug Gate Valve



Replacement Parts

No	Component	Qty.	Material
1	Handwheel	1	PP
2	Nut	1	PVC
3	Stem O-Ring	2	EPDM, FKM

Replacement Parts

No	Component	Qty.	Material
1	Handwheel	1	PP
2	Nut	1	PVC
3	Stem	1	PP
4	Bonnet Retainer	1	PVC
5	Bonnet	1	PP
6	Bonnet O-ring	1	Buna-N, EPDM, FKM
7	Stem O-ring	2	Buna-N, EPDM, FKM
8	Stem Support	1	PVC/CPVC
9	Body	1	PVC/CPVC
10	Gate	1	PE
11	SS Collar	2	SS 316

Dimensions & Weights

Nominal Size	Dimension Reference (inches)								Approx. Wt. (Lbs.)			
	A	B		C	D	E	F	G	PVC		CPVC	
		Socket	SR Thread						Soc/Thd	Flanged	Soc/Thd	Flanged
1/2	5	1-1/4	1-11/16	3-1/16	4-1/8	2-5/8	3-1/2	2-11/32	.38	.77	.39	.80
3/4	5	1-1/4	1-15/16	3-5/16	4-1/8	2-5/8	3-7/8	2-1/2	.40	.95	.41	.99
1	5	1-1/4	1-3/4	3-1/2	4-1/8	2-5/8	4-1/4	2-21/32	.43	1.21	.44	1.27
1-1/4	8-5/8	2-21/32	3-7/16	5-1/4	7-1/8	3-7/16	4-5/8	3-5/8	1.84	2.83	1.85	2.89
1-1/2	8-5/8	2-21/32	3-5/8	5-15/32	7-1/8	3-7/16	5	3-15/16	1.94	3.15	1.98	3.27
2	8-5/8	2-21/32	3-27/32	5-23/32	7-1/8	3-7/16	5-15/16	4-5/32	2.11	3.99	2.17	4.18
6	---	---	---	---	15-5/8	10-7/8	11	5-1/4	---	35.53	---	43.56
8	---	---	---	---	20-1/16	16	13-1/2	6-5/8	---	54.59	---	74.55

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	235 (1.62)	140 (.97)	130 (.90)	90 (.62)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	95 (.66)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	6" - 8"	PVC	150 (1.03)	130 (.90)	110 (.76)	60 (.41)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.69)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

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Features – PVC, CPVC

This solid, proven design is well suited for a variety of chemical, industrial and irrigation applications. Spears® Gate Valves are feature-packed with a variety of end connector options. Individual special features are found in each size range 1/2" through 2", 2-1/2" & 3", and in the full featured Heavy Industrial 4" valve. See Spears® Plug Gate Valves for 6" size.

- Heavy Bodied PVC & CPVC Construction
- Tapered Wedge with Specially Designed Sealing Surface
- Non-Rising Stem Design
- Patented Strain-Equalizing Stem/Wedge Thread
- O-ring Stem Seals Instead of Packing - No Retightening Required
- Buna-N, EPDM, or FKM O-ring Seals
- Positive Grip, High Impact Polypropylene Handwheel Operator
- Fully Serviceable, Replaceable Components - Accessible Without Valve Removal
- EPDM Gate Valves NSF® Certified for Potable Water use
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricants
- Metric Socket and BSP Thread Available, 1/2" - 2"



1/2" - 2" PVC & CPVC Heavy Duty Gate Valves

- Available with socket, threaded or flanged end connectors.
- Pressure rated to 200 psi @ 73°F. Flanged Valve Pressure Rated to 150 psi @ 73°F



2-1/2" & 3" PVC & CPVC Heavy Duty Gate Valves

- Available with socket, SR Threaded (Special Reinforced) threaded or flanged end connectors.
- Pressure rated to 150 psi @ 73°F.
- Optional 2" Square/T-Style Operator Nut available.

Note: 2-1/2" size is a bushed down 3" valve.



4" PVC & CPVC Heavy Industrial Gate Valves

- Available with socket, SR Threaded (Special Reinforced) threaded or flanged end connectors.
- Pressure rated to 235 psi @ 73°F. Flanged Valve Pressure Rated to 150 psi @ 73°F
- SS 316 Exterior Bonnet & Hardware
- Built-in Quick-View Position Indicator
- Optional 2" Square/T-Style Operator Nut available.

Sample Engineering Specification

All thermoplastic Gate Valves shall be constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447. All O-rings shall be Buna-N, EPDM or FKM. All EPDM valves shall be NSF® certified for potable water use. All valves shall have non-rising stem and Polypropylene handwheel. All valve gate wedges shall have Strain-Equalizing threads. PVC valves shall have Polypropylene wedge and CPVC valves shall have CPVC wedge. All valve components shall be replaceable. All 1/2" through 2" valves shall be pressure rated at 200 psi, all 2-1/2" through 3" and all flanged valves shall be pressure rated at 150 psi, and all 4" valves shall be pressure rated at 235 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Numbers[1]			Pressure Rating
		Socket	Threaded	Flanged	
1/2	Buna-N	2012-005	2011-005	2013-005	200 psi Non-Shock Water @ 73°F (Flanged 150 psi Non-Shock Water @ 73°F)
	EPDM	2022-005	2021-005	2023-005	
	FKM	2032-007	2031-005	2033-005	
3/4	Buna-N	2012-007	2011-007	2013-007	
	EPDM	2022-007	2021-007	2023-007	
	FKM	2032-007	2031-007	2033-007	
1	Buna-N	2012-010	2011-010	2013-010	
	EPDM	2022-010	2021-010	2023-010	
	FKM	2032-010	2031-010	2033-010	
1-1/4	Buna-N	2012-012	2011-012	2013-012	
	EPDM	2022-012	2021-012	2023-012	
	FKM	2032-012	2031-012	2033-012	
1-1/2	Buna-N	2012-015	2011-015	2013-015	
	EPDM	2022-015	2021-015	2023-015	
	FKM	2032-015	2031-015	2033-015	
2	Buna-N	2012-020	2011-020	2013-020	
	EPDM	2022-020	2021-020	2023-020	
	FKM	2032-020	2031-020	2033-020	
2-1/2	Buna-N	2012-025[3]	2011-025[3]	2013-025[3]	150 psi Non-Shock Water @ 73°F
	EPDM	2022-025[3]	2021-025[3]	2023-025[3]	
	FKM	2032-025[3]	2031-025[3]	2033-025[3]	
3	Buna-N	2012-030	2011-030SR	2013-030	
	EPDM	2022-030	2021-030SR	2023-030	
	FKM	2032-030	2031-030SR	2033-030	
4	Buna-N	2012-040	2011-040SR	2013-040	235[2] psi Non-Shock Water @ 73°F
	EPDM	2022-040	2021-040SR	2023-040	
	FKM	2032-040	2031-040SR	2033-040	

1: For CPVC valves, add the letter "C" to the part numbers (e.g., 2031-005**C**).
2: Flanged end connectors have a Maximum Internal Pressure Rating of 150 psi @ 73°F.
3: Outlet sized with bushing.

C_V Values

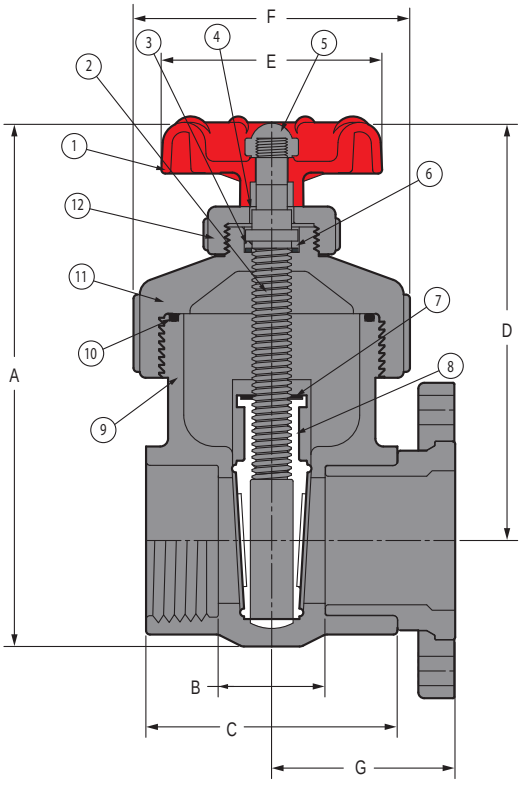
Nominal Size	Cv[1] Gallons/Minute	
	Socket/Threaded	Flanged
1/2	19	15
3/4	37	29
1	44	39
1-1/4	128	105
1-1/2	144	127
2	333	279
2-1/2	See Note 2	
3	335	323
4	583	566

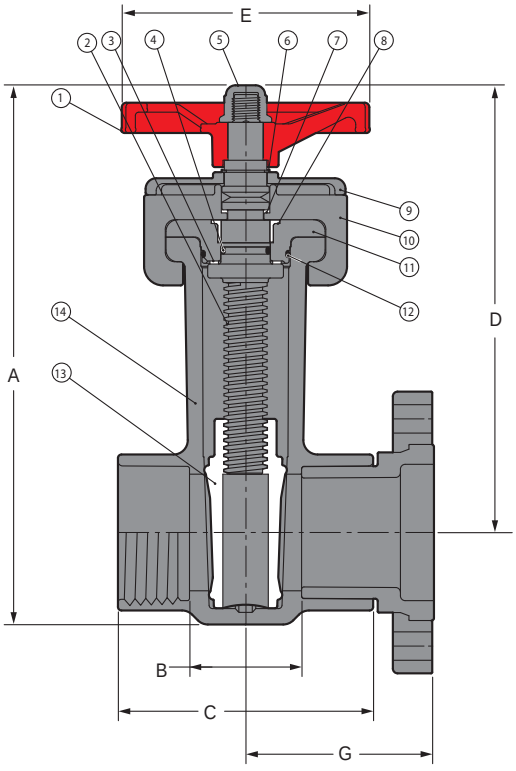
Flanged valves calculated for additional laying length of flanged valve.
1: Gallons per minute at 1 psi pressure drop.
2: Size 2-1/2" is a reducer bushed down 3" valve, C_V not available.

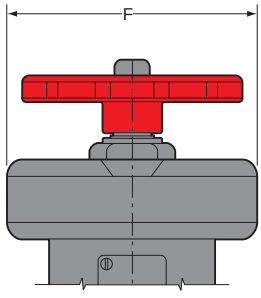
Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2"-2"	PVC	200 (1.38)	135 (.93)	120 (.83)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	200 (1.38)	155 (1.07)	140 (.97)	125 (.86)	110 (.76)	100 (.69)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	2-1/2"-3"	PVC	150 (1.03)	130 (.90)	110 (.76)	60 (.41)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.69)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	4"	PVC	235 (1.62)	140 (.97)	130 (.90)	90 (.62)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	95 (.66)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

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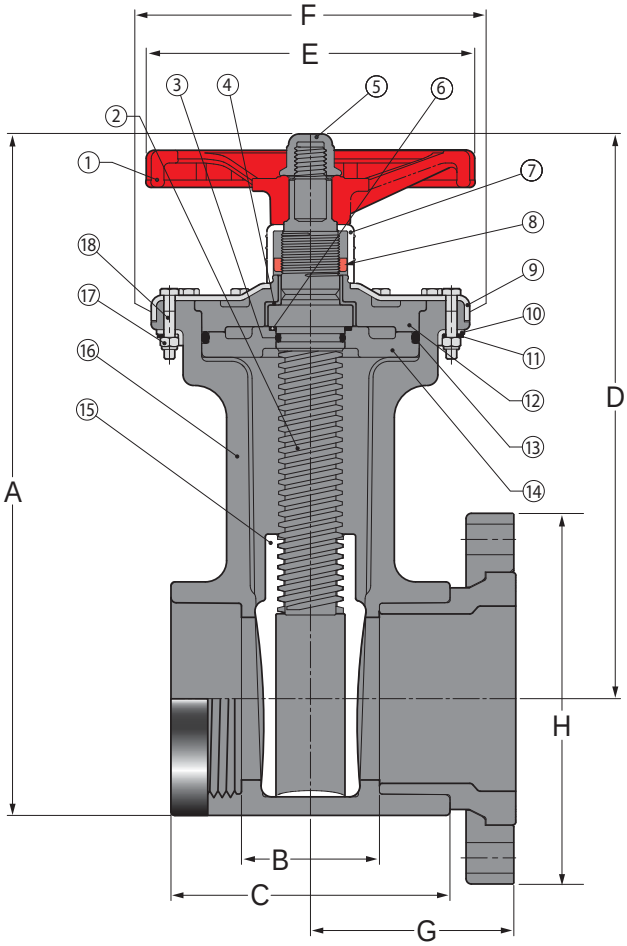


1/2" - 2" Replacement Parts

No.	Component	Qty.	Material
1	Handle	1	PP
2	Stem	1	PVC/CPVC
3	Stem O-ring	1	Buna-N/EPDM/FKM
4	Stem Bushing	1	PP
5	Stem Nut	1	PVC/CPVC
6	Stem Washer	1	PP
7	Wedge Washer/O-ring	1	Buna-N/EPDM/FKM
8	Wedge	1	PP/CPVC
9	Body (Socket/Threaded)	1	PVC/CPVC
10	Bonnet O-ring	1	Buna-N/EPDM/FKM
11	Bonnet	1	PVC/CPVC
12	Bonnet Nut	1	PVC/CPVC

2-1/2" & 3" Replacement Parts

No.	Component	Qty.	Material
1	Handle	1	PP
2	Stem	1	PVC/CPVC
3	Stem Bearing	1	PP
4	Stem O-ring	1	Buna-N/EPDM/FKM
5	Stem Nut	1	PVC
6	Stem Retaining Ring	1	SS 316
7	Split Washer	1	PP
8	Stem Bushing	1	PP
9	Bonnet Retainer	1	PVC/CPVC
10	Bonnet Half	2	PVC/CPVC
11	Seal Carrier	1	PVC/CPVC
12	Carrier O-ring	1	Buna-N/EPDM/FKM
13	Wedge	1	PP/CPVC
14	Body	1	PVC/CPVC



4" Replacement Parts

No.	Component	Qty.	Material
1	Handle	1	PP
2	Stem	1	PVC/CPVC
3	Stem O-ring	1	Buna-N/EPDM/FKM
4	Stem Bushing	1	PTFE/HDPE
5	Stem Nut	1	PVC/CPVC
6	Stem Washer	1	PP
7	Indicator Cover	1	PVC Clear
8	Indicator Nut	1	PP Yellow
9	Bonnet Retainer	1	SS 316
10	Retainer Bracket	2	SS 316
11	Bracket Lock	1	SS 316
12	Bonnet	1	PVC/CPVC
13	Seal Carrier O-ring	1	Buna-N/EPDM/FKM
14	Seal Carrier	1	PVC/CPVC
15	Wedge	1	PP/CPVC
16	Body	1	PVC/CPVC
17	Locknut	12	SS 316
18	Hex Bolt	12	SS 316

Dimensions & Weights

Nominal Size	Dimension Reference (inches, ± 1/16)								Approx. Wt. (Lbs.)			
	A	B[1]	C	D	E	F	G	H	PVC		CPVC	
									Soc/Thd	Flanged	Soc/Thd	Flanged
1/2	5-1/8	1-1/4	2-13/16	4-1/8	2-5/8	2-11/16	2-3/8	3-1/2	.51	.92	.56	.98
3/4	5-1/8	1-1/4	2-13/16	4-1/8	2-5/8	2-11/16	2-1/2	3-7/8	.52	1.09	.57	1.16
1	5-13/32	1-1/4	3-5/16	4-5/16	2-5/8	2-15/16	2-3/4	4-1/4	.67	1.46	.73	1.54
1-1/4	8-1/16	1-9/16	3-9/16	6-9/16	3-7/16	3-15/16	3-1/16	4-5/8	1.61	2.58	1.73	2.74
1-1/2	8-1/16	1-9/16	3-3/4	6-9/16	3-7/16	3-15/16	3-7/16	5	1.63	2.81	1.75	3.03
2	8-9/16	1-11/16	3-15/16	6-7/8	3-7/16	4-7/16	3-5/8	6	1.95	3.81	2.15	4.09
2-1/2	14-5/16	3-3/8	7-3/8	11-7/8	6-11/16	7-1/4	5-1/8	7	9.48	11.91	9.60	12.89
3	14-5/16	2-15/16	6-11/16	11-7/8	6-11/16	7-1/4	4-15/16	7-1/2	9.03	12.21	9.43	13.40
4	16	3-3/8	7-15/16	13-1/4	8	7-9/16	4-7/8	9	13.67	18.39	14.66	19.75

1: Valve Lay Length



2" Square / T-Style Operator Nuts

- Fits Spears® Gate Valves.
- Combination design for use with either standard 2" square drive or conventional “T” drive operators.

Size	Part Number
1/2, 3/4, 1	GTN-005
1-1/4, 1-1/2, 2	GTN-012
2-1/2 & 3	GTN-030
4	GTN-040



Features - PVC, CPVC

Spears® Globe Valves provide close throttling control throughout the entire range of operation through positive shutoff. This makes the Globe Valve an excellent choice for throttling applications where pressure drop is not critical. Valves are available in PVC and CPVC materials in larger IPS sizes of 2-1/2" through 6" with Flanged end connections.

- Excellent Throttling Characteristics
- Chemical & Corrosion Resistant PVC or CPVC Construction – No Wetted Metal Parts
- Fully Serviceable In-line with Factory Assembled Internal Repair Kit
- Buna-N, EPDM or FKM Seat & Seals
- Sizes 2-1/2" – 6" Pressure Rated to 150 psi @ 73°F
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricants

Sample Engineering Specification

All thermoplastic Globe valves shall be constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All seals shall be Buna-N, EPDM or FKM. All valves shall have a high impact polypropylene handwheel. All PVC and CPVC 2-1/2" through 6" valves shall be pressure rated to 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

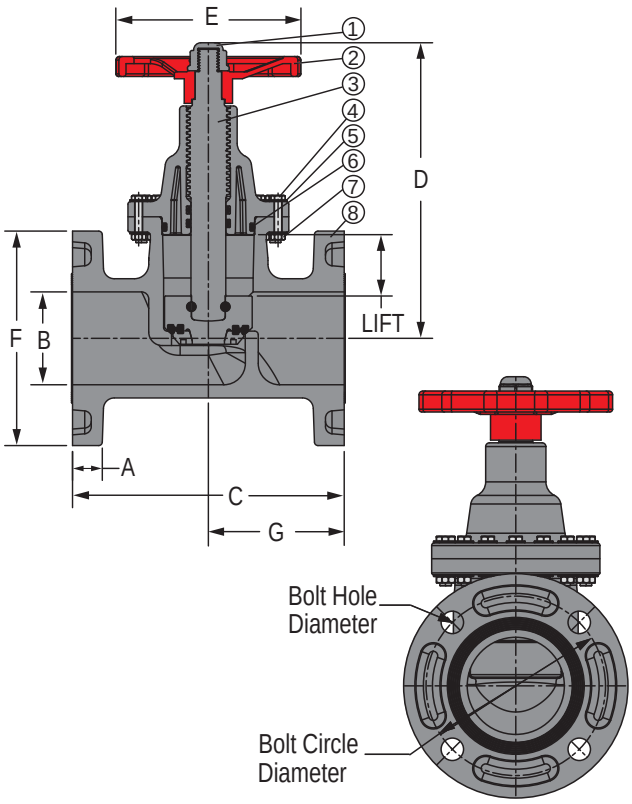
Valve Size	Seals	PVC Part Numbers[1] Flanged	Pressure Rating
2-1/2	Buna-N[2]	6013-025	150 psi Non-Shock Water @ 73°F
	EPDM	6023-025	
	FKM	6033-025	
3	Buna-N[2]	6013-030	
	EPDM	6023-030	
	FKM	6033-030	
4	Buna-N[2]	6013-040	
	EPDM	6023-040	
	FKM	6033-040	
6	Buna-N[2]	6013-060	
	EPDM	6023-060	
	FKM	6033-060	

1: For CPVC Globe Valves, add the letter "C" to the part number listed (e.g; 6023-025**C**).
2: Valves with Buna-N seals available in PVC only.

Globe Valve Internal Repair Kit

Internal Repair Kit includes: Bonnet O-ring (1) along with a factory assembled (required) internal component replacement unit consisting of Bonnet assembled with Stem O-rings, Seat and Seal Carrier components. Install in valve using existing valve Bolts, Nuts, Washers and Handle Nut.

Valve Size	Part Number				
	Buna-N O-ring	EPDM O-ring	CPVC w/EPDM O-ring	FKM O-ring	CPVC w/FKM O-ring
2-1/2	GL-BRK-025	GL-ERK-025	GL-ERK-025C	GL-VRK-025	GL-VRK-025C
3	GL-BRK-030	GL-ERK-030	GL-ERK-030C	GL-VRK-030	GL-VRK-030C
4	GL-BRK-040	GL-ERK-040	GL-ERK-040C	GL-VRK-040	GL-VRK-040C
6	GL-BRK-060	GL-ERK-060	GL-ERK-060C	GL-VRK-060	GL-VRK-060C



Replacement Parts

NO.	COMPONENT	QTY.	MATERIAL
1	Handle Nut	1	PVC
2	Handle	1	PP
3	Stem Assembly[1]	1	PVC/CPVC; BUNA-N/EPDM/FKM
4	Hex Bolt	1	SS 316
5	Flat Washer	1	SS 316
6	Bonnet O-ring	1	BUNA-N/EPDM/FKM
7	Hex Nut	1	SS 316
8	Body	1	PVC/CPVC

1 - Stem Assembly Includes: Stem (1), Bonnet (1), Stem O-rings (2), Dowel Pins (2), Dowel Pin Plugs (2), Seal Carrier (1), Seat (1), Seat Retainer (1)

C_V Values

Nominal Size	C_V[1]
2-1/2	62
3	85
4	125
6	221

1: Gallons per minute at 1 psi pressure drop.

Dimensions

Nominal Size	A	B	C	D (Open)	E	F	G	LIFT	Bolt Circle Diameter	Bolt Hole Diameter	Number of Bolt Holes
2-1/2	1-1/16	3-1/4	9-1/2	12-1/2	6-9/16	7-1/2	4-3/4	2-1/8	5-1/2	3/4	4
3	1-1/16	3-1/4	9-1/2	12-1/2	6-9/16	7-1/2	4-3/4	2-1/8	6	3/4	4
4	1-1/8	4-1/4	11-1/2	13-1/4	11	9	5-3/4	2-3/16	7-1/2	3/4	8
6	1-1/4	6-5/16	16-1/4	17-7/8	11	11	8-1/8	3-1/4	9-1/2	7/8	8

Temperature Pressure Rating

System Operating Temperature °F (°C)		73 (23)	100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66	160 (71)	170 (77)	180 (82)	190 (88)
Valve Pressure Rating psi (MPa)	PVC	150 (1.03)	124 (.85)	100 (.69)	75 (.52)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
	CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.69)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	-0- (-0-)

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Sample Engineering Specification

All thermoplastic valves shall be Y-Pattern configuration constructed from PVC, ASTM D 1784 Cell Classification 12454, or CPVC, ASTM D 1784 Cell Classification 23447. All valves shall have Buttress thread bonnet and standard O-ring type seating disc. All O-rings shall be EPDM or FKM. All valves shall have high impact polypropylene handles. All 1/2" - 2" valves shall be pressure rated at 150 psi and all 3" - 4" valves shall be pressure rated at 90 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Features - PVC Gray, PVC Clear & CPVC

The Y-Pattern valve is a closing-down, globe type valve design that provides proportional opening to seating disc travel. As such, Y-Pattern valves are ideally suited for flow regulating applications. The Y-pattern configuration reduces pressure loss over that of standard globe valves. Available in IPS Sizes 1/2"- 4" with socket, SR threaded, flanged, socket union or SR threaded union end connectors.

- Chemical & Corrosion Resistant PVC Gray, PVC Clear or CPVC Construction
- Buttress Thread Bonnet
- Fully Serviceable, Replaceable Components
- Standard O-ring Seal Seating Disc & Seals
- EPDM or FKM O-rings
- High Impact Polypropylene Handle
- Assembled with Silicone-Free, Water Soluble Lubricants
- Sizes 1/2" - 2" Pressure Rated to 150 psi @ 73°F, Sizes 3" - 4" Pressure Rated to 90 psi @ 73°F

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Material[1,2,3]					Pressure Rating
		Socket	SR Threaded	Flanged	Socket Union	SR Threaded Union	
1/2	EPDM	1722-005	1721-005SR	1723-005	172A-005	172B-005SR	150 psi Non-Shock Water @73°F
	FKM	1732-005	1731-005SR	1733-005	173A-005	173B-005SR	
3/4	EPDM	1722-007	1721-007SR	1723-007	172A-007	172B-007SR	
	FKM	1732-007	1731-007SR	1733-007	173A-007	173B-007SR	
1	EPDM	1722-010	1721-010SR	1723-010	172A-010	172B-010SR	
	FKM	1732-010	1731-010SR	1733-010	173A-010	173B-010SR	
1-1/4	EPDM	1722-012	1721-012SR	1723-012	172A-012	172B-012SR	
	FKM	1732-012	1731-012SR	1733-012	173A-012	173B-012SR	
1-1/2	EPDM	1722-015	1721-015SR	1723-015	172A-015	172B-015SR	
	FKM	1732-015	1731-015SR	1733-015	173A-015	173B-015SR	
2	EPDM	1722-020	1721-020SR	1723-020	172A-020	172B-020SR	
	FKM	1732-020	1731-020SR	1733-020	173A-020	173B-020SR	
3	EPDM	1722-030	1721-030SR	1723-030	172A-030	172B-030SR	90 psi Non-Shock Water @73°F
	FKM	1732-030	1731-030SR	1733-030	173A-030	173B-030SR	
4	EPDM	1722-040	1721-040SR	1723-040	172A-040	172B-040SR	
	FKM	1732-040	1731-040SR	1733-040	173A-040	173B-040SR	

1: For CPVC Y-Pattern, add the letter "C" to the part number (e.g. 1722-005**C**)
2: For PVC Clear Y-Pattern, add the letters "CL" to the part number (e.g. 1722-005**CL**) or (e.g. 172A-005**CL**)
3: For CPVC or Clear Special Reinforced Y-Pattern, (e.g. 1721-005**CSR**) or (e.g.1721-005**CLSR**)

Replacement Parts

NO.	COMPONENT	QTY.	MATERIAL
1	Body[1] (SOC/SR/FLG/UNION)	1	PVC/CLEAR/CPVC
2	Stem Assembly	1	PVC/CPVC;EPDM/FKM
3	Seal Carrier O-ring	1	EPDM/FKM
4	Bonnet Nut	1	PVC/CPVC
5	Bonnet	1	PVC/CPVC
6	Handwheel	1	PP
7	Stem Nut	1	PVC
8	Union O-ring	2	EPDM/FKM
9	Union Socket End	2	PVC/CPVC
10	Union SR Thread End	2	PVC/CPVC

1 - SR-Fipt Body Includes: Body (1), Spigot Adapters (2), SS Collars (2)
- Flange Body Includes: Body (1), Spigot Hubs (2), Flange Rings (2)
- Union Body Includes: Body (1), Spigot Ends (2), Nuts (2)

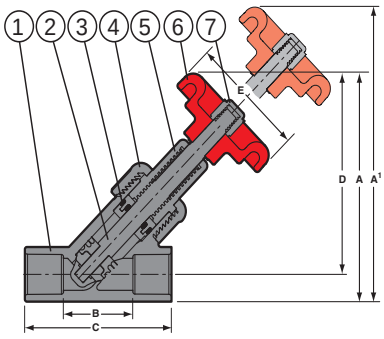
2 - Stem Assembly Includes: Stem (1), Seat Retainer (1), Seat Plate (1), Seat (1), Seal Carrier (1), Retainer Plate (1) (Except 4"), Stem O-ring (1)

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0-
	3" - 4"	PVC	90 (.70)	85 (.62)	75 (.52)	60 (.41)	40 (.30)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	90 (.70)	85 (.62)	80 (.55)	75 (.52)	70 (.48)	60 (.41)	50 (.34)	45 (.31)	40 (.30)	35 (.24)	30 (.21)	-0-

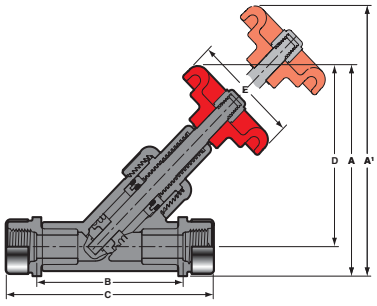
C_V Values

Size	Values
1/2	6.7
3/4	12.6
1	22.9
1-1/4	33.8
1-1/2	50.7
2	79.2
3	235
4	387



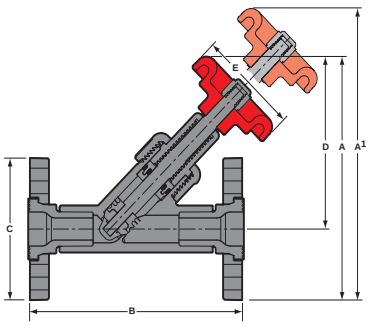
Socket Y-Pattern Dimensions & Weights

Nominal Size	Dimension Reference (inches, ± 1/16)						Approx. Wt. (Lbs.)	
	A1	A	B	C	D	E	Socket	
							PVC	CPVC
1/2	6-3/8	4-9/16	1-5/8	3-3/8	4	2-3/8	.31	.33
3/4	7-1/2	5-1/4	2	4	4-9/16	2-3/8	.50	.53
1	6-15/16	5-7/8	2-1/2	4-3/4	5-1/8	2-3/8	.78	.90
1-1/4	10-15/16	7-5/8	3-1/16	5-9/16	6-1/2	3-1/2	1.21	1.28
1-1/2	12	8-5/8	3-9/16	6-5/16	7-1/2	3-1/2	1.66	1.76
2	13-13/16	9-15/16	4-1/2	7-1/2	8-1/2	3-1/2	2.96	3.10
3	20	14-1/2	6-9/16	10-5/16	12-7/16	6-5/8	5.34	5.64
4	25-1/2	18-1/4	8-5/8	13-1/8	15-5/8	7-15/16	9.97	10.45



SR Threaded Y-Pattern Dimensions & Weights

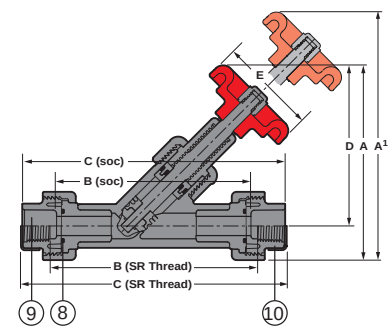
Nominal Size	Dimension Reference (inches, ± 1/16)						Approx. Wt. (Lbs.)	
	A1	A	B	C	D	E	SR Threaded	
							PVC	CPVC
1/2	6-1/2	4-11/16	3-5/8	5-1/16	4	2-3/8	.31	.33
3/4	7-5/8	5-7/16	4-3/8	5-13/16	4-9/16	2-3/8	.50	.53
1	8-5/8	6-1/8	5-3/16	7	5-1/8	2-3/8	.85	.90
1-1/4	11-1/8	7-3/4	6	7-15/16	6-1/2	3-1/2	1.21	1.28
1-1/2	12-1/4	8-7/8	6-15/16	8-13/16	7-1/2	3-1/2	1.66	1.76
2	14-1/16	10-3/16	8-1/8	10-1/8	8-1/2	3-1/2	2.96	3.10
3	20	14-13/16	11	14-1/4	12-7/16	6-5/8	5.34	5.64
4	25-13/16	18-1/2	14	14-3/4	15-5/8	7-15/16	9.97	10.45



Flanged Y-Pattern Dimensions & Weights

Nominal Size	Dimension Reference (inches, ± 1/16)						Approx. Wt. (Lbs.)	
	A1	A	B	C	D	E	Flanged	
							PVC	CPVC
1/2	7-9/16	5-3/4	5-11/16	3-1/2	4	2-3/8	.82	.85
3/4	8-3/4	6-1/2	6-7/16	3-7/8	4-9/16	2-3/8	1.23	1.28
1	9-3/4	7-1/4	7-1/4	4-1/4	5-1/8	2-3/8	1.70	1.81
1-1/4	12-1/4	8-7/8	8-1/8	4-5/8	6-1/2	3-1/2	2.40	2.52
1-1/2	13-3/8	10	9-3/16	5	7-1/2	3-1/2	3.07	3.25
2	15-3/8	11-1/2	10-3/8	6	8-1/2	3-1/2	5.20	5.42
3	21-11/16	16-3/16	12-1/16	7-1/2	12-7/16	6-5/8	9.44	10.07
4	27-7/16	20-3/16	14-9/16	9-1/16	15-5/8	7-15/16	14.87	16.15

Note: 4" flanged Y-Pattern use split flange ring



True Union Y-Pattern Dimensions & Weights

Nominal Size	Dimension Reference (inches, ± 1/16)								Approx. Wt. (Lbs.)	
	A1	A	B		C		D	E	Union	
			Socket	SR Thread	Socket	SR Thread			PVC	CPVC
1/2	7	5-3/16	5-1/8	5-1/2	6-7/8	7	4-1/4	2-5/8	.59	.62
3/4	8-3/16	6	5-7/8	6-7/16	7-7/8	7-7/8	4-7/8	2-5/8	.97	1.02
1	9-1/8	6-5/8	6-1/2	7-3/8	8-3/4	9	5-3/8	2-5/8	1.33	1.41
1-1/4	11-1/2	8-3/16	7-7/16	6-3/16	9-15/16	10-1/8	6-5/8	3-1/2	1.53	1.63
1-1/2	12-13/16	9-3/8	8-3/16	9	10-15/16	10-15/16	7-9/16	3-1/2	3.06	3.25
2	14-9/16	10-11/16	9-7/16	10-13/16	12-7/16	12-13/16	8-5/8	3-1/2	4.90	5.16
3	21-1/8	15-5/8	13-5/8	15-3/8	17-3/8	18-3/16	12-1/2	6-5/8	14.06	14.37
4	25	19-7/16	17-1/16	19-1/4	21-5/8	22-5/16	7-15/16	7-15/16	17.39	19.23

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Progressive Products from Spears® Innovation and Technology



Sample Engineering Specification

All thermoplastic valves shall be Wafer Butterfly type constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447. All valve seats and O-rings shall be Buna-N, EPDM or FKM. Seat shall be a non-liner type mounted to the valve disc. All valves shall have built-in Santoprene™ Thermoplastic Elastomer (TFE) flange gaskets. Wafer style valves shall be for mounting between two flanges having bolt hole pattern that conform to ANSI/ASME B16.5 CL 150. Disc shall be centered with Type 316L Stainless Steel Stem. Stem shall be isolated from the process medium for dry operation. Lever operated valves shall be equipped with high impact polypropylene handle having 7-position stops and built-in lockout capability. Gear operated valves shall be equipped with position indicator and high impact polypropylene handwheel. Valves shall be pressure rated at 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Features - PVC, CPVC

Spears® Wafer Butterfly Valve is a multi-featured design incorporating laying lengths that allow direct replacement of common Cast Iron valves such as Keystone Model 228 and Bray Series 30 Butterfly Valves. Wafer Valves feature built–in Santoprene™ Thermoplastic Elastomer (TPE) flange gaskets, easy operating disc-mounted seat, and fully isolated stem design. Available in sizes 2" through 12", with choice of Buna-N, EPDM or FKM Seats on PVC Valves, EPDM or FKM on CPVC Valves.

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Special Designed Laying Lengths for Direct Replacement of Common Cast Iron Butterfly Valves
- Built-in Santoprene™ Thermoplastic Elastomer (TPE) Gaskets on Valve Flange Faces
- Easy Operating Disc Mounted Seat in Choice of Buna-N, EPDM, or FKM
- Fully Isolated (Dry) Solid Type 316L Stainless Steel Stem
- Reversible High Impact Polypropylene Lever Handle with 7-Position Stops and Built-in Lockout Capability
- Optional High Efficiency Gear Operator with Cast Aluminum Housing, Polypropylene Handwheel and Built-in Position Indicator
- Compatible with ANSI/ASME B16.5 Class 150 Bolt Pattern Flanges
- Pressure Rated to 150 psi for water @ 73°F (23°C)

PVC Quick-View Valve Selection Chart

Valve Size	O-ring Material	STANDARD VALVE DESIGN PVC Part Number[1] w/Lever Handle	w/Gear Operator	Valve Only	Pressure Rating
2	Buna-N	751311-020	751321-020	751301-020	150 psi Non-Shock Water @ 73°F
	EPDM	752311-020	752321-020	752301-020	
	FKM	753311-020	753321-020	753301-020	
2-1/2	Buna-N	751311-025	751321-025	751301-020	
	EPDM	752311-025	752321-025	752301-025	
	FKM	753311-025	753321-025	753301-025	
3	Buna-N	751311-030	751321-030	751301-030	
	EPDM	752311-030	752321-030	752301-030	
	FKM	753311-030	753321-030	753301-030	
4	Buna-N	751311-040	751321-040	751301-040	
	EPDM	752311-040	752321-040	752301-040	
	FKM	753311-040	753321-040	753301-040	
6	Buna-N	751311-060	751321-060	751301-060	
	EPDM	752311-060	752321-060	752301-060	
	FKM	753311-060	753321-060	753301-060	
8	Buna-N	751311-080	751321-080	751301-080	
	EPDM	752311-080	752321-080	752301-080	
	FKM	753311-080	753321-080	753301-080	
10	Buna-N	751311-100	751321-100	751301-100	
	EPDM	752311-100	752321-100	752301-100	
	FKM	753311-100	753321-100	753301-100	
12	Buna-N	751311-120	751321-120	751301-120	
	EPDM	752311-120	752321-120	752301-120	
	FKM	753311-120	753321-120	753301-120	

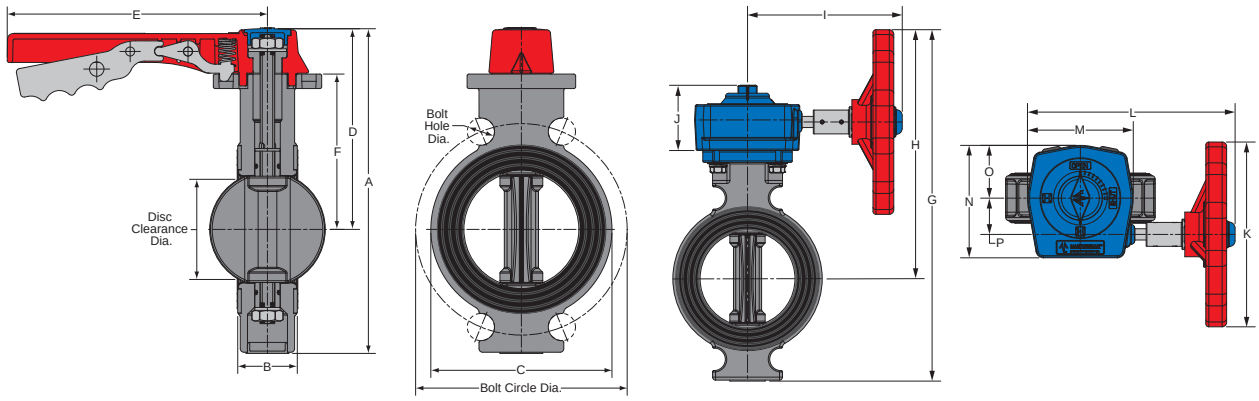
1: For CPVC EPDM & FKM valves, add the letter "C" to part numbers listed (e.g., 752311-030**C**).

General Installation Information

Spears® Wafer Butterfly Valves are designed for system connections between two flanges having ANSI B16.5 Class 150 bolt hole patterns. The valve handle (or gear operator) is reversible 180°for either left or right side operation. Wafer Butterfly Valves have built-in flange gaskets and are designed for installation with user supplied hex bolts, nuts and flat washers. The valve must be positioned with gasket areas evenly located between mating flange sealing surfaces. Valve Bolt Specification bolt lengths in table below are minimums based on use of two (2) Spears® flanges, Valve with built-in gaskets, standard S.A.E. hex bolts and Standard Plate "W" Series flat washers.

Caution: Spears® Wafer Butterfly Valves are designed for use with flanges or flanged equipment having minimum waterway inside diameter no less than that of Schedule 80 PVC pipe (ASTM D 1785). ***Use of smaller inside diameter flange connections may result in obstruction and damage to the valve disc and seat.***

Wafer Butterfly Valves



PVC & CPVC Wafer Butterfly Valve Bolt Specifications & Dimensions

Valve Size	Bolt Diameter (in.)	Bolt Length (in.)	No. of Bolt Holes
2	5/8	4-1/2	4
2-1/2	5/8	5	4
3	5/8	5	4
4	5/8	5-1/2	8
6	3/4	6	8
8	3/4	6-1/2	8
10	7/8	7	12
12	7/8	7-1/2	12

Size	A	B	C	D	E	F	Bolt Circle Diameter[2]			No. of Bolts[3]	Bolt Hole Dia.	Disc Clearance Dia.
							ANSI	PN16 (mm)	PN10 ISO DIN (mm)			
2	8-5/8	1-11/16	3-3/4	5-9/16	9	4	4-3/4	125	125	4	13/16	1-1/2
2-1/2	9-5/8	1-13/16	4-1/2	6-1/16	9	4-1/2	5-1/2	145	145	4	13/16	1-15/16
3	10-1/8	1-13/16	5	6-7/16	9	4-7/8	6	NA	NA	4	7/8	2-3/4
4	11-13/16	2-1/16	6-1/4	6-15/16	9	5-3/8	7-1/2	180	180	4 (8)	15/16	3-7/16
6	14-7/8	2-3/16	8-9/16	9-3/8	11-7/8	7-1/8	9-1/2	240	240	4 (8)	7/8	5-7/16
8	17-7/16	2-9/16	10-3/4	10-5/8	13-13/16	8-7/16	11-3/4	NA	295	4 (8)	15/16	7-3/16
10[1]	NA	2-9/16	12-7/8	NA	NA	10-11/16	14-1/4	355	350	4 (12)	1-1/8	9-3/16
12[1]	NA	3-1/16	15-9/16	NA	NA	11-11/16	17	410	400	4 (12)	1-1/2	11-1/8

1: 10" and 12" valves are only available with gear operator.
2: Holes are oversized to accommodate different bolt patterns — ASME/ANSI B16.1 – Cast Iron Pipe Flanges and Flanged Fittings - Class 150 Bolt Patterns; PN10 & PN16 = B54504 – Circular Flanges for Pipes, Valves and Fittings (PN - Designated); DIN = DIN8063 Part 4 – Pipe Joint Assemblies and Fittings for Unplasticized Polyvinyl Chloride (PVC-U) Pressure Pipe.
3: Valve is positioned with 4 of 8 required Flange Bolts in sizes 4 to 8 inches and 4 of 12 in sizes 10 and 12 inches.

Size	G	H	I	J	K	L	M	N	O	P
2	12-1/4	9-1/8	6-1/2	2-3/4	8	8-3/4	4-1/2	4-3/4	2-1/4	1-1/2
2-1/2	13-1/8	9-1/2	6-1/2	2-3/4	8	8-3/4	4-1/2	4-3/4	2-1/4	1-1/2
3	13-5/8	10	6-1/2	2-3/4	8	8-3/4	4-1/2	4-3/4	2-1/4	1-1/2
4	14-3/4	10-1/2	6-1/2	2-3/4	8	8-3/4	4-1/2	4-3/4	2-1/4	1-1/2
6	17-3/4	12-1/4	6-1/2	2-3/4	8	8-3/4	4-1/2	4-3/4	2-1/4	1-1/2
8	20-3/8	13-1/2	6-1/2	2-3/4	8	8-3/4	4-1/2	4-3/4	2-1/4	1-1/2
10	24	15-7/8	6-3/4	3	8	9-1/4	5-1/8	5-7/8	2-1/2	2-1/8
12	26-3/8	16-7/8	6-3/4	3	8	9-1/4	5-1/8	5-7/8	2-1/2	2-1/8

Temperature Pressure Rating

System Operating Temperature °F (°C)		100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
	CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

Standard & True Lug Design



Lever Handle



True Lug



Gear Operating



Lug Insert Style



14" Standard PVC & CPVC Butterfly Valves

Features - PVC, CPVC

Spears® patented Butterfly Valve design departs from traditional liner-seat type valve to eliminate seat creep, reduce operating torque and provide positive seal-off. Ideally suited for flow control or throttling, this high-performance valve is offered with a full variety of options for greater application versatility in industrial and chemical processing applications. Available in IPS sizes 1-1/2" - 14" in Standard or 1-1/2" - 12" True Lug (factory installed lugs) style.

- Special off-set Disc lifts quickly from seat to reduce wear and reduce operating torque.
- Patented Limited Contact Seat design provides free travel - eliminates seat creep, extrusion and wear. Field replaceable without full valve disassembly.
- Interlocking Body & Seat prevents wash-out or blow-out.
- Buna-N, EPDM or FKM Seat & Seals
- Fully Isolated Solid Type 316L Stainless Steel Stem
- Reversible High Impact Polypropylene Lever Handle with 7-Position stops & Built-in Lockout (standard handle on 1-1/2" - 8" valves; not available on 10" & larger valves)
- High Efficiency Gear Operator with Cast Aluminum Housing, Polypropylene Handwheel, and Built-in Position Indicator (available for all sizes; standard on 10" & larger valves)
- Lug Insert Style valve has factory installed SS316 or zinc plated steel lug inserts.
- Standard valve accepts field-installable Lug Inserts Set option
- True Lug design has factory installed zinc plated or SS 316 lugs and is specially designed for connection to either side of valve.
- Pressure Rated to 150 psi @ 73°F including Dead-End Service.
- ANSI/ASME B16.5 Class 150 Bolt Pattern
- Valves with EPDM Seals & Seats are NSF® Certified for Potable water use.

Sample Engineering Specification

All thermoplastic valves shall be Butterfly type constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447. All valve seats and O-rings shall be Buna-N, EPDM or FKM. Seat shall be a non-liner type interlocked to valve body. Bolt hole patterns shall conform to ANSI/ASME B16.5 Class 150. Disc shall be offset design with fully isolated Type 316L stainless steel stem and Type 316 stainless steel hardware. Lever operated valves shall be equipped with high impact polypropylene handle having built-in lockout capability. Gear operated valves shall be equipped with position indicator and high impact polypropylene handwheel. Valve bodies shall accept field installable lug inserts or shall be factory installed lug inserts, or be True Lug type. Lugs shall be stainless steel or zinc plated steel. Valves shall be pressure rated at 150 psi for water at 73°F through 12", as manufactured by Spears® Manufacturing Company.

Optional Accessories

- PTFE Coated Stem
- Stem Extension Kit
- PTFE Seat Sleeve
- Lever Handle Kit (standard on 1-1/2" - 8" valves)
- Gear Operator Kit (standard on 10" & larger valves)
- T-Handle Kit
- Field Installable Lug Insert Sets (for Standard valve)
- Speed Handle (for gear operated valves)
- 2" Square/T-Style Operator Nut (for gear operated valves)
- Chainwheel Operator Kit (for gear operated valves)
- Positive Stem Stop (for gear operated valves)
- Submersible Gear Operators

* See ***"BUTTERFLY VALVE ACCESSORIES"*** section for details of individual products.

Standard & Lug Insert Style Quick-View Valve Selection Chart

Valve Size	O-ring Material	STANDARD VALVE DESIGN PVC Part Number[1] w/Lever Handle	STANDARD VALVE DESIGN PVC Part Number[1] w/Gear Operator	STANDARD VALVE DESIGN PVC Part Number[1] Valve Only	LUG INSERT VALVE DESIGN PVC Part Number[1] Installed with 316 Stainless Steel Lug Inserts[2,3,4] w/Lever Handle	w/Gear Operator	Valve Only	Pressure Rating
1-1/2	Buna-N	721311-015	721321-015	721301-015	721311G-015	721321G-015	721301G-015	150 psi Non-Shock Water @ 73°F
	EPDM	722311-015	722321-015	722301-015	722311G-015	722321G-015	722301G-015	
	FKM	723311-015	723321-015	723301-015	723311G-015	723321G-015	723301G-015	
2	Buna-N	721311-020	721321-020	721301-020	721311G-020	721321G-020	721301G-020	
	EPDM	722311-020	722321-020	722301-020	722311G-020	722321G-020	722301G-020	
	FKM	723311-020	723321-020	723301-020	723311G-020	723321G-020	723301G-020	
2-1/2	Buna-N	721311-025	721321-025	721301-025	721311G-025	721321G-025	721301G-025	
	EPDM	722311-025	722321-025	722301-025	722311G-025	722321G-025	722301G-025	
	FKM	723311-025	723321-025	723301-025	723311G-025	723321G-025	723301G-025	
3	Buna-N	721311-030	721321-030	721301-030	721311G-030	721321G-030	721301G-030	
	EPDM	722311-030	722321-030	722301-030	722311G-030	722321G-030	722301G-030	
	FKM	723311-030	723321-030	723301-030	723311G-030	723321G-030	723301G-030	
4	Buna-N	721311-040	721321-040	721301-040	721311G-040	721321G-040	721301G-040	
	EPDM	722311-040	722321-040	722301-040	722311G-040	722321G-040	722301G-040	
	FKM	723311-040	723321-040	723301-040	723311G-040	723321G-040	723301G-040	
6	Buna-N	721311-060	721321-060	721301-060	721311G-060	721321G-060	721301G-060	
	EPDM	722311-060	722321-060	722301-060	722311G-060	722321G-060	722301G-060	
	FKM	723311-060	723321-060	723301-060	723311G-060	723321G-060	723301G-060	
8	Buna-N	721311-080	721321-080	721301-080	721311G-080	721321G-080	721301G-080	
	EPDM	722311-080	722321-080	722301-080	722311G-080	722321G-080	722301G-080	
	FKM	723311-080	723321-080	723301-080	723311G-080	723321G-080	723301G-080	
10	Buna-N	10" AND LARGER NOT AVAILABLE WITH LEVER HANDLE	721321-100	721301-100	10" AND LARGER NOT AVAILABLE WITH LEVER HANDLE	721321G-100	721301G-100	
	EPDM		722321-100	722301-100		722321G-100	722301G-100	
	FKM		723321-100	723301-100		723321G-100	723301G-100	
12	Buna-N		721321-120	721301-120		721321G-120	721301G-120	
	EPDM		722321-120	722301-120		722321G-120	722301G-120	
	FKM		723321-120	723301-120		723321G-120	723301G-120	
14	EPDM		722321-140	722301-140		--	--	100 psi @ 73°F
	FKM		723321-140	723301-140		--	--	

1: For CPVC valves, add the letter "C" to part numbers listed (e.g., 722311-030**C**).
2: For factory installed Lug Insert Valve with Zinc Plated Lugs, substitute the letter "G" with the the letter "K" (e.g. 721311**K**-030)
3: For True Lug Design Valve with Stainless Steel Lugs, substitute the letter "G" with the letter "L" (e.g. 721311**L**-030).
4: For True Lug Design Valve with Zinc Plated Steel Lugs, substitute the letter "G" with the letter "Z" (e.g. 721311**Z**-030).
Note: Optional BFV with submersible gear operators available, inquire with Spears®.

Temperature Pressure Rating

System Operating Temperature °F (°C)		100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
	CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

See dimensions and additional Technical Information on following pages

Polypropylene



Sample Engineering Specification

All thermoplastic valves shall be Butterfly type constructed from Polypropylene, ASTM D 4101. All valve seats and O-rings shall be Buna-N, EPDM or FKM. Seat shall be a non-liner type interlocked to valve body. Bolt hole pattern shall conform to ANSI/ASME B16.5 Class 150. Disc shall be offset design with fully isolated, Type 316L stainless steel stem and Type 316 stainless steel hardware. Lever operated valves shall be equipped with high impact polypropylene handle having built-in lockout capability. Gear operated valves shall be equipped with position indicator and high impact polypropylene handwheel. Valves shall be pressure rated at [see table] for water at 73°F, as manufactured by Spears® Manufacturing Company.

Material Note: UV Stabilized Polypropylene with beige pigment sizes 1-1/2" - 12" are glass reinforced, sizes 14" - 24" are not.

Features

Spears® patented Butterfly Valve design departs from traditional liner-seat type valve to eliminate seat creep, reduce operating torque and provide positive seal-off. Broad range of chemical resistance makes Polypropylene well suited for industrial and chemical processing applications. Designed for flow control or throttling, this high-performance valve is offered with a full variety of options for greater application versatility. Available in IPS sizes 1-1/2" - 24" with custom produced 30" to 60" valves available.

- UV Stabilized Polypropylene Construction
- Special off-set Disc lifts quickly from seat to reduce wear and reduce operating torque.
- Patented Limited Contact Seat design provides free travel - eliminates seat creep, extrusion and wear. Field replaceable without full valve disassembly.
- Interlocking Body & Seat prevents wash-out or blow-out.
- Buna-N, EPDM or FKM Seat & Seals
- Solid Type 316L Stainless Steel Stem, fully isolated from process fluids
- Reversible High Impact Polypropylene Lever Handle with 7-Position stops & Built-in Lockout (standard handle on 1-1/2" - 8" valves; not available on 10" & larger valves)
- High Efficiency Gear Operator with Cast Aluminum Housing, Polypropylene Handwheel, and Built-in Position Indicator (available for all sizes; standard on 10" & larger valves)
- Pressure ratings include Dead-End Service (See Chart).
- ANSI/ASME B16.5 Class 150 Bolt Pattern

Optional Accessories

- PTFE Coated Stem
- Stem Extension Kit
- PTFE Seat Sleeve (through 12" size)
- Lever Handle Kit (standard on 1-1/2" - 8" valves)
- Gear Operator Kit (standard on 10" & larger valves)
- T-Handle Kit
- Speed Handle (for gear operated valves)
- 2" Square/T-Style Operator Nut (for gear operated valves)
- Chainwheel Operator Kit (for gear operated valves)
- Positive Stem Stop (for gear operated valves)
- Submersible Gear Operators

* See ***"BUTTERFLY VALVE ACCESSORIES"*** section for details of individual products.

Polypropylene Quick-View Valve Selection Chart

Valve Size	O-ring Material	w/Lever Handle	w/Gear Operator	Valve Only	Pressure Rating
1-1/2	Buna-N	721311-015P	**Special Order**	721301-015P	150 psi Non-Shock Water @ 73°F
	EPDM	722311-015P	**Special Order**	722301-015P	
	FKM	723311-015P	**Special Order**	723301-015P	
2	Buna-N	721311-020P	721321-020P	721301-020P	
	EPDM	722311-020P	722321-020P	722301-020P	
	FKM	723311-020P	723321-020P	723301-020P	
2-1/2	Buna-N	721311-025P	721321-025P	721301-025P	
	EPDM	722311-025P	722321-025P	722301-025P	
	FKM	723311-025P	723321-025P	723301-025P	
3	Buna-N	721311-030P	721321-030P	721301-030P	
	EPDM	722311-030P	722321-030P	722301-030P	
	FKM	723311-030P	723321-030P	723301-030P	
4	Buna-N	721311-040P	721321-040P	721301-040P	
	EPDM	722311-040P	722321-040P	722301-040P	
	FKM	723311-040P	723321-040P	723301-040P	
6	Buna-N	721311-060P	721321-060P	721301-060P	
	EPDM	722311-060P	722321-060P	722301-060P	
	FKM	723311-060P	723321-060P	723301-060P	
8	Buna-N	721311-080P	721321-080P	721301-080P	
	EPDM	722311-080P	722321-080P	722301-080P	
	FKM	723311-080P	723321-080P	723301-080P	
10	Buna-N	10" and Larger not available with Lever Handle	721321-100P	721301-100P	
	EPDM		722321-100P	722301-100P	
	FKM		723321-100P	723301-100P	
12	Buna-N		721321-120P	721301-120P	
	EPDM		722321-120P	722301-120P	
	FKM		723321-120P	723301-120P	
14	Buna-N		—	—	100 psi Non-Shock Water @ 73°F
	EPDM		722321-140P	722301-140P	
	FKM		723321-140P	723301-140P	
16	Buna-N		—	—	85 psi Non-Shock Water @ 73°F
	EPDM		722321-160P	722301-160P	
	FKM		723321-160P	723301-160P	
18	Buna-N		—	—	70 psi Non-Shock Water @ 73°F
	EPDM		722321-180P	722301-180P	
	FKM		723321-180P	723301-180P	
20	Buna-N		—	—	50 psi Non-Shock Water @ 73°F
	EPDM		722321-200P	722301-200P	
	FKM		723321-200P	723301-200P	
24	Buna-N		—	—	
	EPDM		722321-240P	722301-240P	
	FKM		723321-240P	723301-240P	

Note: 30" - 60" Polypropylene Butterfly Valves produced to order

Temperature Pressure Rating

System Operating Temperature °F (°C)		100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)
Valve Pressure Rating psi (MPa)	1-1/2"-12"	150 (1.03)	105 (.72)	90 (.62)	80 (.55)	65 (.45)	50 (.34)	45 (.31)	30 (.21)	20 (.14)	-0-
	14"	100 (.69)	70 (.48)	60 (.41)	53 (.37)	43 (.26)	33 (.23)	30 (.21)	20 (.14)	13 (.09)	-0-
	16"	85 (.59)	60 (.41)	51 (.35)	45 (.31)	37 (.26)	28 (.19)	26 (.18)	17 (.12)	11 (.08)	-0-
	18"	70 (.48)	49 (.34)	42 (.29)	37 (.26)	30 (.21)	23 (.16)	21 (.14)	14 (.10)	9 (.06)	-0-
	20"-24"	50 (34)	35 (.24)	30 (.21)	27 (.19)	22 (.15)	17 (.12)	15 (.10)	10 (.07)	7 (.05)	-0-

High Purity TFM Lined



Features - CPVC

This advanced technology TFM Lined valve is specially designed and produced for applications requiring high purity and maximum chemical resistance. Spears® exclusive component-interface seal fully isolates process media to disc and liner contact only. Custom produced in sizes 2" through 6".

- Direct disc-to-liner seal between ECTFE fluoropolymer disc and TFM liner for positive shut-off. Specially designed offset disc lifts quickly from sealing surface to minimize wear and reduce operating torque.
- Special disc-to-liner interface isolates valve components from process media. Eliminates stem and elastomer backing seal contact with process fluids. In the unlikely event of seal failure, leakage is expelled externally to protect process integrity. TFM skirt is integrally formed as part of the liner to isolate the CPVC body.
- Solid, fully isolated type 316 stainless steel stem is additionally PTFE coated as a safeguard.
- Lug style, chemical and corrosion resistant CPVC body features integrally molded actuation mounting pad and provides increased temperature handling capability to 200°F.
- 316 stainless steel Lug Inserts provide quick single-side valve installation and easy system add-on.
- Low Profile Gear Operator features high efficiency worm gear drive with built-in position indicator and high impact polypropylene handwheel. Operator housing is powder coated for improved cleanliness. Reversible for either right or left side operation.
- 150 psi Maximum Internal Pressure rating at 73°F.

Sample Engineering Specification

All thermoplastic Butterfly Valves shall be constructed from CPVC Type IV Cell Classification 23447 with TFM liner and ECTFE disc. Disc and liner interface shall isolate valve components and elastomeric seals from process media. Valve Stem shall be PTFE coated type 316 stainless steel. Body shall be lug style with 18-8 stainless steel or type 316 stainless steel lugs. Bolt hole patterns shall conform to ANSI/ASME B16.5 Class 150. Valve shall be gear operated with powder coated operator housing, position indicator, and high impact polypropylene handwheel. Valve shall be pressure rated at 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Factory Reconditioning

In the event of damage, this maintenance-free valve can be factory reconditioned in order to maintain optimum serviceability and assure proper component isolation function. Valve reconditioning is made on an exchange basis with original limited warranty. Contact Spears® Technical Services for additional information.

Material Specifications

Media Contact Components:

Liner/seat	TFM (Hostaflon® — modified - PTFE)
Disc	ECTFE (HALAR® — ethylene chlorotrifluoroethylene)

No Media-Contact Components:

Body	CPVC (chlorinated polyvinylchloride)
Stem	Type 316 Stainless Steel, PTFE coated
O-ring Backing	FKM (fluorocarbon)
Bushings	Glass Reinforced Polypropylene blend / Polyurethane
Gear Operator	Die Cast Aluminum
Handwheel	Polypropylene

Quick-View Valve Selection Chart

Valve Size	Part Number	Pressure Rating
2	253322-020	150 psi Non-Shock Water @ 73°F
3	253322-030	
4	253322-040	
6	253322-060	

NOTE: High Purity TFM Lined Butterfly Valve has the same basic dimensions as Spears® Standard Butterfly Valve.

HALAR® is a registered trademark of Ausimont, Inc.
Hostaflon® is a registered trademark of Hoechst Celanese Corporation.

PVC Pool Butterfly Valves



Features - PVC White

Distinct White Body with Blue Handle readily identifies this high quality PVC Butterfly Valve specifically designed for chlorinated water applications such as swimming pools. Fully isolated, non-wetted stainless steel stem with limited-contact EPDM seat provides maximum resistance to chlorinated water with superior ease of operation. Available in IPS sizes 1-1/2" through 12".

- White PVC Valve with Blue PP Handle provides easy application identification for chlorinated water
- Type 316L non-wetted stainless steel stem is fully isolated from system fluid, but still compatible with chlorinated water
- Patented limited-contact seat is field replaceable
- High-grade EPDM seat & seals
- Blue polypropylene lever handle with built-in lockout (10" & 12" valves are gear operated only)
- Optional gear operated valve with powder coated cast aluminum housing and Blue polypropylene handwheel
- ANSI/ASME B16.5 Class 150 bolt pattern flange connection
- All sizes pressure rated to 150 psi @ 73°F
- Optional SS 316 field-installable Lug Inserts sets
- Pneumatic or electric actuation available

Sample Engineering Specification

All Pool Butterfly Valves shall be constructed from PVC with EPDM seals suitable for chlorinated water applications. Valve body shall be white (gray disc) with blue handle for application identification. All handles shall be high impact polypropylene. Lever handles shall have built-in lockout capability. Stem shall be Type 316L stainless steel and non-wetted. Valve bodies shall have ANSI/ASME B16.5 bolt patterns and accept optional field installable lug inserts. Valves shall be pressure rated at 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

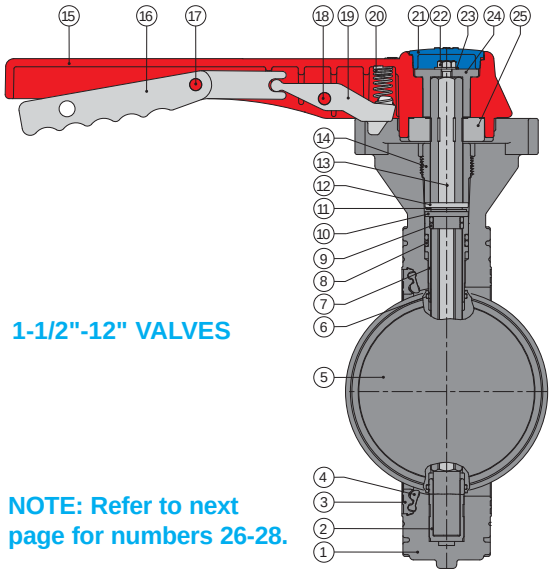
PVC Lever Handle with EPDM Seat		
Size	**Part Number**	**Pressure Rating**
1-1/2	682311-015	150 psi Non-Shock Water @ 73°F
2	682311-020	
2-1/2	682311-025	
3	682311-030	
4	682311-040	
6	682311-060	
8	682311-080	
PVC Gear Operated with EPDM Seat		
Size	**Part Number**	**Pressure Rating**
1-1/2	682321-015	150 psi Non-Shock Water @ 73°F
2	682321-020	
2-1/2	682321-025	
3	682321-030	
4	682321-040	
6	682321-060	
8	682321-080	
10	682321-100	
12	682321-120	

CAUTION: THE POOL BUTTERFLY VALVE IS NEITHER INTENDED NOR WARRANTED FOR INDUSTRIAL OR CHEMICAL PROCESSING APPLICATIONS

Replacement Parts for 1-1/2" - 12" PVC & CPVC Standard, True Lug and Polypropylene Valves

No	Component	Qty.	Material
1	Body	1	PVC/CPVC
2	Stem Bearing	1	PTFE/GFPP
3	Seal Carrier	1	PVC/CPVC/PP
4	Seat	1	Buna-N, EPDM, FKM
5	Disc	1	PVC/CPVC/PP
6	Disc O-ring	2	Buna-N, EPDM, FKM
7	Stem Bushing	1	PTFE/GFPP
8	Stem Bushing O-ring	2	Buna-N, EPDM, FKM
9	Stem O-ring	2	Buna-N, EPDM, FKM
10	Stem Washer - Hex	1	PTFE
11	Stem Washer - Slot*	1-2	SS 316
12	Stem Washer - Round	1	PTFE/GFPP
13	Stem	1	SS 316
14	Stem Nut	1	PVC/CPVC
15	Handle Body	1	PP
16	Handle Grip	1	GFPVC
17	Grip Pin	1	PP
18	Lock Pin	1	PP
19	Handle Lock	1	GFPVC
20	Handle Spring	1	SS 316
21	Handle Cover	1	PP
22	Hex Bolt	1	SS 316
23	Flat Washer	1	SS 316
24	Handle Bushing	1	GFPVC
25	Disc Timing Stop	1	CPVC
26	Lug Insert	4-12	SS/Zinc Plated Steel
27	Gear Operator Assembly	1	Cast Aluminum
28	Hand Wheel	1	PP
True Lug Only (not shown):			
Seal Carrier Flange Plate		1	PVC/CPVC
Lug & Nut		4-12	SS/Zinc Plated Steel
Plate O-ring		1	Buna-N, EPDM, FKM

Notes: *2-Slotted washers used on 6" & larger
1: See 14"-24" PP valve illustration for Gear Operator Components, No. 8 - 16



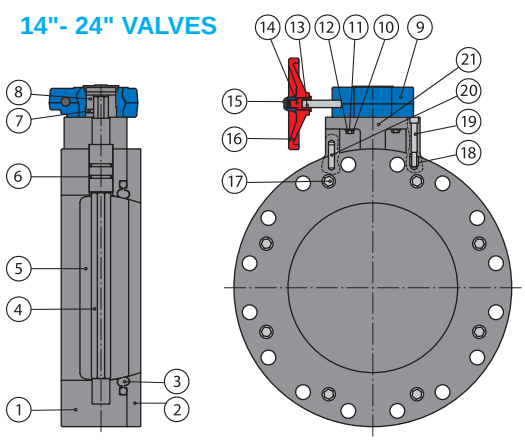
1-1/2"-12" VALVES

NOTE: Refer to next page for numbers 26-28.

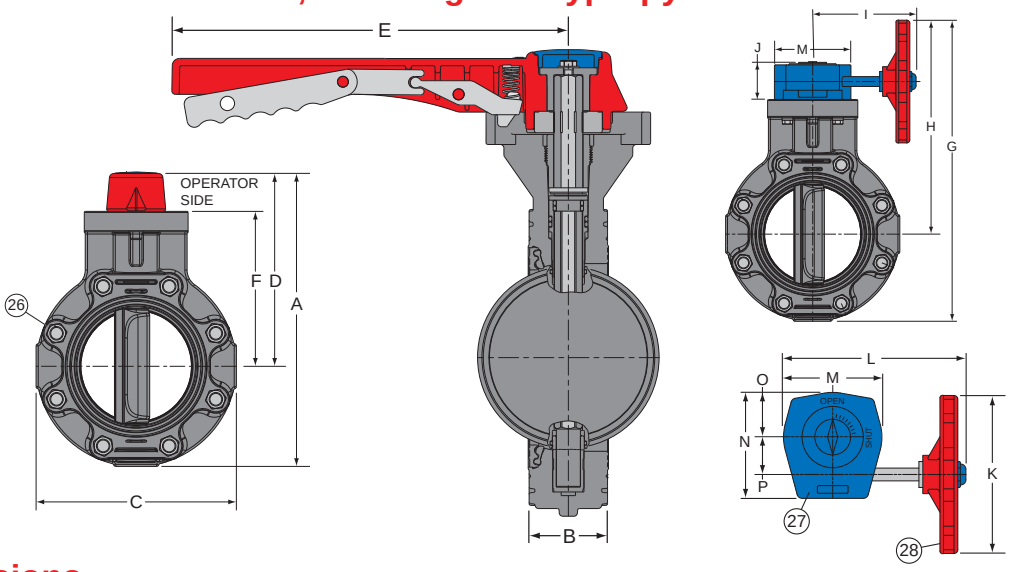
Replacement Parts for 14" - 24" Polypropylene Valves

No.	Component	Qty	Material
1	Body	1	PP
2	Seal Carrier	1	PP
3	Seat	1	EPDM/FKM
4	Stem	1	SS 316L
5	Disc	1	PP
6	Stem O-ring	2	EPDM/FKM
7	Set Screw	1	Steel
8	Drive Bushing	1	Steel
9	Gear Operator	1	Epoxy Coated Aluminum
10	Flat Washer	4	SS 316
11	Lock Washer	4	SS 316
12	Hex Head Cap Screw	4	SS 316
13	Handwheel Pin	1	SS 316
14	Handwheel Adapter	1	GFPVC
15	Handwheel Nut	1	PP
16	Handwheel	1	PP
17	Hex Bolts	6-12	Nylon
18	Thread Insert	2	Steel
19	Hex Head Cap Screws	2	SS 316
20	Dowel Pin	1	Steel
21	Tower	1	PP

14"- 24" VALVES



Standard, True Lug & Polypropylene



Dimensions

Nominal Size	Pressure Rating[1] (psi)	A	B		C	D	E	F	G
			Standard, Lug Insert, & Polypropylene	True Lug					
1-1/2	150	8-5/32	1-9/16	2-1/4	5	5-19/32	9-3/32	4-3/32	11-5/32
2	150	9-11/32	1-15/16	2-9/16	6	6-13/32	9	4-3/4	13-1/8
2-1/2	150	10-9/32	2	2-3/4	7	6-25/32	9-1/4	5-1/4	13-1/8
3	150	11-1/2	2-3/32	2-13/16	7-1/2	7-27/32	12	5-5/8	14-5/32
4	150	13	2-9/32	3	9	8-1/2	12	6-1/4	15-5/8
6	150	16-19/32	2-3/4	3-13/32	10-31/32	11-3/32	13-7/8	8-19/32	19-7/32
8	150	18-5/8	2-15/16	3-23/32	13-1/2	12	13-15/16	9-1/2	21-7/16
10	150	N/A	3-1/4	4-1/4	16	N/A	N/A	11	26-5/8
12	150	N/A	3-1/2	4-1/2	19	N/A	N/A	12	29-1/8
14	100[2]	N/A	6-1/4	N/A	21	N/A	N/A	13-3/16	29
16	85[2]	N/A	6-3/4	N/A	23-1/2	N/A	N/A	14-7/16	31-1/2
18	70[2]	N/A	7-1/8	N/A	25	N/A	N/A	15-3/16	33
20	50[2]	N/A	7-3/4	N/A	27-1/2	N/A	N/A	16-7/16	35-1/2
24	50[2]	N/A	8-7/16	N/A	32	N/A	N/A	18-11/16	40
30-60	Contact Spears® for 30" to 60" Valve Dimensions								

Nominal Size	H	I	J	K	L	M	N	O	P
1-1/2	8-21/32	6-7/16	2-3/8	8	8-13/16	4-13/16	5-3/16	2-13/16	1-27/32
2	10-1/8	6-7/16	2-3/8	8	8-13/16	4-13/16	5-3/16	2-13/16	1-27/32
2-1/2	9-5/8	6-7/16	2-3/8	8	8-13/16	4-13/16	5-3/16	2-13/16	1-27/32
3	10-17/32	6-7/16	2-3/8	8	8-13/16	4-13/16	5-3/16	2-13/16	1-27/32
4	11-1/8	6-7/16	2-3/8	8	8-13/16	4-13/16	5-3/16	2-13/16	1-27/32
6	13-23/32	6-7/16	2-13/32	7-15/16	8-7/8	4-27/32	5-5/32	2-7/32	1-27/32
8	14-11/16	6-7/16	2-13/32	7-15/16	8-7/8	4-27/32	5-3/16	2-7/32	1-27/32
10	18-5/8	7-1/8	2-3/8	8	9-13/16	5-3/8	5-15/16	2-7/16	2-11/32
12	19-5/8	7-1/8	2-3/8	8	9-13/16	5-3/8	5-15/16	2-7/16	2-11/32
14	18-1/2	7-3/8	2-9/16	8	10-13/16	6-7/8	7-7/16	3-1/8	3
16	19-3/4	7-3/8	2-9/16	8	10-13/16	6-7/8	7-7/16	3-1/8	3
18	20-1/2	7-3/8	2-9/16	8	10-13/16	6-7/8	7-7/16	3-1/8	3
20	21-3/4	7-3/8	2-9/16	8	10-13/16	6-7/8	7-7/16	3-1/8	3
24	24	7-3/8	2-9/16	8	10-13/16	6-7/8	7-7/16	3-1/8	3
30-60	Contact Spears® for 30" to 60" Valve Dimensions								

1: Maximum Internal Pressure Rating @ 73°F
2: Additional pressure rating is possible with attention to flow direction.

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Progressive Products from Spears® Innovation and Technology

C_V Values & Operating Torque

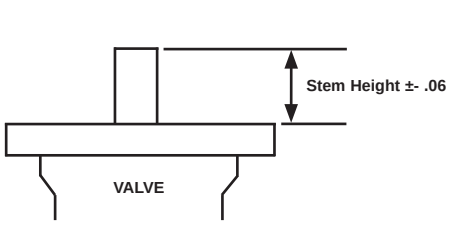
Valve Size	C_V[1] Degrees Open						Operating[2] Torque (in.-lbs.)
	15°	30°	45°	60°	75°	90°	
1-1/2	2	8	20	36	61	81	100
2	3	11	27	49	82	109	110
2-1/2	5	19	48	86	144	192	206
3	9	35	86	155	259	345	360
4	10	41	103	185	308	411	420
6	28	113	281	506	844	1125	720
8	56	225	562	1012	1687	2249	1200
10	111	444	1110	1998	3330	4440	1320
12	158	631	1577	2839	4732	6309	1920
14	176	705	1762	3172	5286	7048	See Notes
16	211	846	2114	3805	6341	8455	
18	273	1092	2730	4914	8190	10920	
20	355	1418	3545	6381	10635	14180	
24	467	1866	4665	8397	13995	18660	

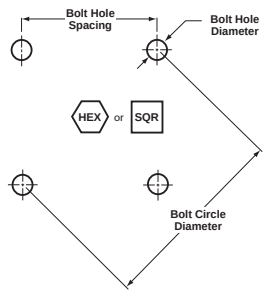
1: Gallons per minute at 1 psi pressure drop.
2: Operating torque for large diameter valves varies significantly with system operating pressure, flow direction and velocity. Contact Spears® for torque requirement based on application.

Actuator Mounting Dimensions For Custom Actuation

Size	Bolt Hole Spacing		Bolt Hole Diameter		Bolt Circle Diameter		Hex	Square	Stem Height	
							+.000 -.006	+.000 -.002		
	Standard	Wafer	Standard	Wafer	Standard	Wafer	Standard	Wafer	Standard	Wafer
1-1/2	1.95	N/A	.34	N/A	2.75	N/A	.375	N/A	.75	N/A
2	1.95	2.47	.34	.40	2.75	3.50	.500	.375	.75	1.30
2-1/2	1.95	2.47	.34	.40	2.75	3.50	.500	.375	.75	1.34
3	2.65	2.47	.41	.40	3.75	3.50	.563	.500	1.00	1.34
4	2.65	2.47	.41	.40	3.75	3.50	.625	.500	1.04	1.37
6	3.17	2.83	.41	.40	4.48	4.00	.875	.750	1.27	1.80
8	3.17	3.17	.41	.40	4.48	4.48	1.000	.875	1.29	1.96
10	3.54	N/A	.41	N/A	5.00	N/A	1.125	N/A	1.38	N/A
12	3.54	N/A	.41	N/A	5.00	N/A	1.250	N/A	1.38	N/A
14	3.54	N/A	.41	N/A	5.00	N/A	1.250	N/A	1.62	N/A
16	3.54	N/A	.41	N/A	5.00	N/A	1.250	N/A	1.75	N/A
18	3.54	N/A	.41	N/A	5.00	N/A	1.250	N/A	1.75	N/A
20	3.93	N/A	.41	N/A	5.56	N/A	1.250	N/A	1.75	N/A
24	4.33	N/A	.41	N/A	6.12	N/A	1.250	N/A	1.75	N/A

Note: Standard = Standard, Lug & True Lug Style Valves
Wafer = Wafer Style Valves





General Installation Information

Spears® Butterfly Valves are designed for system connections either between two flanges, or with single-side (flange one-side only) connection for dead-end service using lug style valves. Lug Insert Valves require attention to flow direction, True Lug valves may be installed either direction. The valve handle (or gear operator) is reversible 180° for either left or right side operation. Spears® Butterfly Valves are designed for installation with user supplied 1/8" full-faced gaskets, hex bolts, nuts and flat washers.

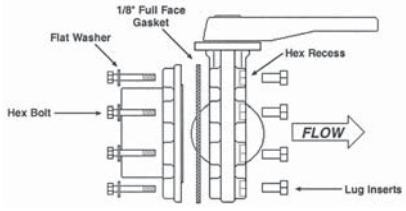
Caution: Spears® Butterfly Valves are designed for use with flanges or flanged equipment having minimum waterway inside diameter no less than that of Schedule 80 PVC pipe (ASTM D 1785). ***Use of smaller inside diameter flange connections may result in obstruction and damage to the valve disc.***

PVC & CPVC Butterfly Valve Torque and Hardware Requirements

Valve Size (in.)	No. of Bolt Holes	Bolt Torque (ft.- lb.)	Standard Valve					Valve with Lug Inserts					True Lug Valve			
			Bolt Lengths[1] (in.)		Bolt Diameter (in.)	Bolt Threads per inch	Flat Washer O.D. (in.)	Bolt Lenghts[1] (in.)		Bolt Diameter (in.)	Lug Threads per inch	Flat Washer O.D. (in.)	Bolt Lengths[2] (in.)	Bolt Diameter (in.)	Lug Threads per inch	Flat Washer O.D. (in.)
			Single Side	Dual Flange[3]				Single Side	2nd Flange[2]							
1-1/2	4	12	3-1/4	4-1/4	1/2	13	1-3/8	1-3/4	1-1/2	1/2	13	1-3/8	1-1/2	7/16	14	1-1/4
2	4	25	3-3/4	4-3/4	5/8	11	1-3/4	2	1-3/4	5/8	11	1-3/4	1-1/2	1/2	13	1-3/8
2-1/2	4	25	4-1/4	5-1/4	5/8	11	1-3/4	2-1/4	2	5/8	11	1-3/4	1-3/4	1/2	13	1-3/8
3	4	25	4-1/4	5-1/2	5/8	11	1-3/4	2-1/4	2	5/8	11	1-3/4	2	1/2	13	1-3/8
4	8	25	4-1/2	5-3/4	5/8	11	1-3/4	2-1/2	2	5/8	11	1-3/4	2	1/2	13	1-3/8
6	8	40	5-1/4	6-3/4	3/4	10	2	3-1/4	2-1/4	3/4	10	2	2-1/4	5/8	11	1-3/4
8	8	40	5-3/4	7-1/4	3/4	10	2	3-3/4	2-1/4	3/4	10	2	2-1/4	5/8	11	1-3/4
10	12	64	6-1/2	8-1/4	7/8	9	2-1/4	4	3	7/8	9	2-1/4	2-3/4	3/4	10	2
12	12	95	6-3/4	8-1/2	7/8	9	2-1/4	4-1/4	3	7/8	9	2-1/4	2-3/4	3/4	10	2

1: Minimum bolt lengths based on use of Spears® flanges, 1/8" full faced gaskets, standard S.A.E. hex bolts and Standard Plate Series flat washers.
2: Specified bolt lengths are maximum allowable for maintaining proper clearance in initial Single-Side installation with Lugs where anticipated 2nd Flange installation option is to be retained without removal of valve.
3: Minimum bolt length through 2-flanges, 2-gaskets, 2-flat washers and 1-valve body.

Single-Side (flange one side) Installation Using Standard Valve with Lug Inserts (for field installable Insert Sets or valves with factory installed Lug Inserts)



CAUTION: *Flange must be installed on side of valve* ***opposite*** *the hex nut recesses for Single-Side Installation as illustrated.*

(Flange, bolts, nuts, washers and gaskets not included. Lug inserts may be ordered separately.)

Polypropylene Butterfly Valve Torque and Hardware Requirements

Valve Size	No. of Bolt Holes	Bolt Diameter (in.)	Bolt Torque (ft.- lb.)	Bolt Lengths	Valve Lay Length
1-1/2	4	1/2	12	Bolt lengths will vary according to thickness of valve, mating flanges, nuts and gaskets used. The following formula may be use to calculate bolt length for installation with mating flange each side. **L = V + 2 (F + G + W) + N** **Where: L = Minimum Bolt Length** **V = Valve Lay Length** **F = Flange Thickness** **G = Gasket Thickness** **W = Washer Thickness** **N = Nut Thickness**	1-9/16
2	4	5/8	25		1-7/8
2-1/2	4	5/8	25		2-1/16
3	4	5/8	25		2-1/8
4	8	5/8	25		2-5/16
6	8	3/4	40		3
8	8	3/4	40		2-3/4
10	12	7/8	64		3-1/4
12	12	7/8	95		3-1/2
14	12	1	110		6-1/4
16	16	1	110		6-3/4
18	16	1-1/8	110		7-1/8
20	20	1-1/8	110		7-3/4
24	20	1-1/4	110		8-1/2

Lug Insert Sets



- Field installable lugs for all Spears® PVC & CPVC Standard Butterfly Valves only.
- Allows easy single-side installation to mating flange.
- Choice of high corrosion resistant 316 stainless steel or zinc plated steel construction.

Valve Size	316 Stainless Steel Part Number	Zinc Plated Steel Part Number
1-1/2	LUG1-015	LUG2-015
2 & 2-1/2	LUG1-020	LUG2-020
3	LUG1-030	LUG2-030
4	LUG1-040	LUG2-040
6 & 8	LUG1-080	LUG2-080
10 & 12	LUG1-120	LUG2-120

Lever Handle Kits



- Exact replacement or conversion handle for Spears® 1-1/2" through 8" Butterfly Valves.
- High impact polypropylene construction featuring quick-action reinforced polymer position stop and grip with built-in lock-out capability.
- Includes all components and hardware assembled for quick installation.

Valve Size	Part Number
1-1/2	BFH-015
2 & 2-1/2	BFH-020
3	BFH-030
4	BFH-040
6	BFH-060
8	BFH-080

T-Handle Kits



- Specialty Handle for minimum space requirements.
- High impact polypropylene construction featuring quick-action reinforced polymer position stop and grip with built-in lock-out capability.

Valve Size	Part Number
3	BFTH-030
4	BFTH-040

Speed Handle for Gear Operator



- Quickly attaches to Spears® Gear Operator Handle to allow rapid opening or closing of valve.

Valve Size	Part Number
1-1/2 - 12	SH-120

Positive Stem Stop for Butterfly Valve with Gear Operator



- Provides positive stop for Gear Operator shaft to avoid changes in the degree of opening for varying flow conditions.

Valve Size	Part Number
1-1/2 - 12	PSS-120
14 - 24	PSS-240

2" Square / T-Style Operator Nuts



- Allows operation with conventional 2" Square or T-Style handle wrenches.
- Fits All Spears® Butterfly Valve Gear Operators.

(NOT FOR USE ON VALVE STEM)

Valve Size	Part Number
1-1/2 - 24	GTN-040



Gear Operator Kits

For Wafer Style Butterfly Valves replace the “GO” prefix with “GOW” in the part number.

- Bolt-on conversion or replacement unit for all Spears® Butterfly Valves.
- Cast aluminum construction with high efficiency worm gear drive, built-in position indicator and easy-grip polypropylene handwheel.
- Includes all components and hardware for direct mount to valve.

Gear Operator Kits

Valve Size	1-1/2	2	2-1/2	3	4	6	8	10	12
Part Number	GO-015	GO-020	GO-025	GO-030	GO-040	GO-060	GO-080	GO-100	GO-120

Powder Coated Gear Operator Kits

Valve Size	1-1/2	2	2-1/2	3	4	6	8	10	12
Part Number	GOP-015	GOP-020	GOP-025	GOP-030	GOP-040	GOP-060	GOP-080	GOP-100	GOP-120

Extended Chemical Resistance Options

Spears® offers several options for extended chemical resistance in PVC, CPVC and Polypropylene Butterfly Valves, including those listed below. Contact Spears® for additional ordering information.

PTFE Seat Sleeves

- PTFE envelope-type sleeve encases and isolates Spears® standard elastomer seat for extended chemical resistance while maintaining resiliency and sealing capability.
- Available for valve sizes 1-1/2" - 12"
- Sold factory-installed in PVC, CPVC or PP valves.

PTFE Coated Valve Stems

- Durable, bonded PTFE coating over standard SS 316L stem for extended chemical resistance.
- Viable alternative to more costly special alloy stems.
- Available for all valve sizes.
- Sold factory installed in PVC, CPVC or PP valves.

True-Lug Butterfly Valve Bolt Kit

Connects 1-Side of True-Lug Valve to 1-Spears® Flange Includes Bolts & Flat Washers
Use 2-Kits For Dual Spears® Flanges

Size	Part Number		
	Zinc Plated	SS316	SS304
1-1/2	BFHKL-015	BFHKL1-015	BFHKL2-015
2	BFHKL-020	BFHKL1-020	BFHKL2-020
2-1/2	BFHKL-025	BFHKL1-025	BFHKL2-025
3	BFHKL-030	BFHKL1-030	BFHKL2-030
4	BFHKL-040	BFHKL1-040	BFHKL2-040
6 & 8	BFHKL-080	BFHKL1-080	BFHKL2-080
10 & 12	BFHKL-120	BFHKL1-120	BFHKL2-120



(VALVE NOT INCLUDED)

Chainwheel Operator Kits

For Wafer Style Butterfly Valves replace the "CO" prefix with "COW" in the part number.

- Bolt-on conversion unit for all Spears® Butterfly Valves. Includes all hardware for direct mount to valve.
- Enables operation of Spears® Butterfly Valves in high, normally out of reach locations. Makes valve opening or closing easy by means of a slight pull on the sprocket chain.
- Unit consists of Cast Aluminum high efficiency Gear Operator with Aluminum Alloy Sprocket Rim and Chain Guide.
- Chain options provide choice of 316 Stainless Steel, Hot-Dipped Galvanized or Brass. Order separately to desired length.

Note: In horizontal system installations, Chainwheel Operators should be generally mounted with operator below valve (inverted valve) to maintain clearance between chain and system piping. Check for adequate clearance before installing an operator in a top-mount position.

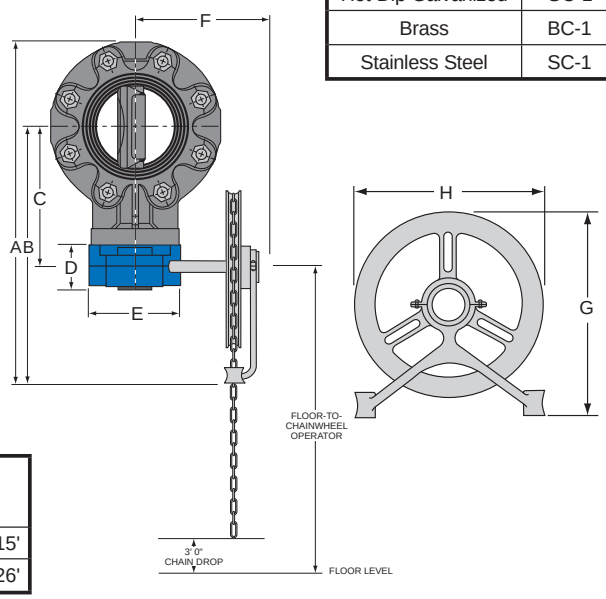
Valve Size	Part Number
2	CO-020
2-1/2	CO-025
3	CO-030
4	CO-040
6	CO-060
8	CO-080
10	CO-100
12	CO-120
14-24	CO-140

2-1/2" and smaller kits available on special order basis.

LOCK-LINK CHAIN OPTIONS	Part Number
Hot-Dip Galvanized	GC-1
Brass	BC-1
Stainless Steel	SC-1

Determining Floor-to-Chainwheel Height

Typical orientation is shown for valve in horizontal piping system installation. Floor-to-Chainwheel height is determined by subtracting the specified "C" dimension from the system centerline height (add "C" dimension if used with top-mount orientation). In vertical piping system installations, the Floor-to-Chainwheel height is the same as that for the centerline location of the valve in the system.



How to Order Chain

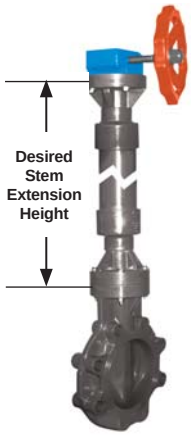
Required chain length is based on chain drop at 3 ft. from floor.

Floor-to-Chainwheel Height	7'	8'	9'	10'	11'	12'	13'	14'	15'
Required Chain Length	10'	12'	14'	16'	18'	20'	22'	24'	26'

Chainwheel Operator Dimensions (Note: w denotes Wafer Style Butterfly Valve Dimensions)

Valve Size	A	A w	B	B w	C	C w	D	D w	E	E w	F	F w	G	G w	H	H w
2	12-15/16	12-3/16	9-15/16	9-1/8	5-7/8	5-1/8	2-3/8	2-3/8	4-13/16	4-13/16	5-7/16	5-7/16	7-3/4	7-3/4	7-3/8	7-3/8
2-1/2	13-11/16	13-3/16	10-3/16	9-5/8	6-1/8	5-5/8	2-3/8	2-3/8	4-13/16	4-13/16	5-7/16	5-7/16	7-3/4	7-3/4	7-3/8	7-3/8
3	14-7/16	13-3/4	10-11/16	10-1/16	6-5/8	6-1/16	2-3/8	2-3/8	4-13/16	4-13/16	5-7/16	5-7/16	7-3/4	7-3/4	7-3/8	7-3/8
4	15-15/16	14-13/16	11-7/16	10-1/2	7-3/8	6-1/2	2-3/8	2-3/8	4-13/16	4-13/16	5-7/16	5-7/16	7-3/4	7-3/4	7-3/8	7-3/8
6	19-5/16	17-13/16	13-13/16	12-1/4	9-3/4	8-1/4	2-3/8	2-3/8	4-13/16	4-13/16	5-7/16	5-7/16	7-3/4	7-3/4	7-3/8	7-3/8
8	21-9/16	20-7/16	14-13/16	13-9/16	10-3/4	9-9/16	2-3/8	2-3/8	4-13/16	4-13/16	5-7/16	5-7/16	7-3/4	7-3/4	7-3/8	7-3/8
10	24-3/16	–	16-3/16	–	12-1/8	–	2-3/8	–	5-3/8	–	6-7/16	–	7-3/4	–	7-3/8	–
12	26-11/16	–	17-3/16	–	13-1/8	–	2-3/8	–	5-3/8	–	6-7/16	–	7-3/4	–	7-3/8	–
14	31	–	20-1/2	–	14-1/2	–	2-3/4	–	6-7/8	–	7-1/4	–	10-1/2	–	9	–
16	33-1/2	–	21-3/4	–	15-3/4	–	2-3/4	–	6-7/8	–	7-1/4	–	10-1/2	–	9	–
18	35	–	22-1/2	–	16-1/2	–	2-3/4	–	6-7/8	–	7-1/4	–	10-1/2	–	9	–
20	37-1/2	–	23-3/4	–	17-3/4	–	2-3/4	–	6-7/8	–	7-1/4	–	10-1/2	–	9	–
24	42	–	26	–	20	–	2-3/4	–	6-7/8	–	7-1/4	–	10-1/2	–	9	–





Stem Extensions

For Wafer Style Butterfly Valves replace the “BFSE” prefix with “BFSEW” in the part number.

- Designed for use on Spears® Butterfly Valves.
- Corrosion Resistant PVC Housing.
- Stainless Steel Internal Extension Shaft.
- All Mounting Hardware Included.
- Detailed Instructions for Quick Assembly.
- Fabricated to Order in Standard 6" Increments.

Typical Application ***(VALVE NOT INCLUDED)***

Gear Operator (shown) or Lever Handle Sold with Valve

Stem Extension Height	Valve Size						
	1-1/2	2 & 2-1/2	3	4	6	8	10
24	BFSE-015-240	BFSE-020-240	BFSE-030-240	BFSE-040-240	BFSE-060-240	BFSE-080-240	BFSE-100-240
30	BFSE-015-300	BFSE-020-300	BFSE-030-300	BFSE-040-300	BFSE-060-300	BFSE-080-300	BFSE-100-300
36	BFSE-015-360	BFSE-020-360	BFSE-030-360	BFSE-040-360	BFSE-060-360	BFSE-080-360	BFSE-100-360
42	BFSE-015-420	BFSE-020-420	BFSE-030-420	BFSE-040-420	BFSE-060-420	BFSE-080-420	BFSE-100-420
48	BFSE-015-480	BFSE-020-480	BFSE-030-480	BFSE-040-480	BFSE-060-480	BFSE-080-480	BFSE-100-480
54	BFSE-015-540	BFSE-020-540	BFSE-030-540	BFSE-040-540	BFSE-060-540	BFSE-080-540	BFSE-100-540
60	BFSE-015-600	BFSE-020-600	BFSE-030-600	BFSE-040-600	BFSE-060-600	BFSE-080-600	BFSE-100-600
66	BFSE-015-660	BFSE-020-660	BFSE-030-660	BFSE-040-660	BFSE-060-660	BFSE-080-660	BFSE-100-660
72	BFSE-015-720	BFSE-020-720	BFSE-030-720	BFSE-040-720	BFSE-060-720	BFSE-080-720	BFSE-100-720
78	BFSE-015-780	BFSE-020-780	BFSE-030-780	BFSE-040-780	BFSE-060-780	BFSE-080-780	BFSE-100-780
84	BFSE-015-840	BFSE-020-840	BFSE-030-840	BFSE-040-840	BFSE-060-840	BFSE-080-840	BFSE-100-840
90	BFSE-015-900	BFSE-020-900	BFSE-030-900	BFSE-040-900	BFSE-060-900	BFSE-080-900	BFSE-100-900
96	BFSE-015-960	BFSE-020-960	BFSE-030-960	BFSE-040-960	BFSE-060-960	BFSE-080-960	BFSE-100-960
102	BFSE-015-1020	BFSE-020-1020	BFSE-030-1020	BFSE-040-1020	BFSE-060-1020	BFSE-080-1020	BFSE-100-1020
108	BFSE-015-1060	BFSE-020-1080	BFSE-030-1080	BFSE-040-1080	BFSE-060-1080	BFSE-080-1080	BFSE-100-1080
114	BFSE-015-1140	BFSE-020-1140	BFSE-030-1140	BFSE-040-1140	BFSE-060-1140	BFSE-080-1140	BFSE-100-1140
120	BFSE-015-1200	BFSE-020-1200	BFSE-030-1200	BFSE-040-1200	BFSE-060-1200	BFSE-080-1200	BFSE-100-1200

Stem Extension Height	Valve Size					
	12	14	16	18	20	24
24	BFSE-120-240	BFSE-140-240	BFSE-160-240	BFSE-180-240	BFSE-200-240	BFSE-240-240
30	BFSE-120-300	BFSE-140-300	BFSE-160-300	BFSE-180-300	BFSE-200-300	BFSE-240-300
36	BFSE-120-360	BFSE-140-360	BFSE-160-360	BFSE-180-360	BFSE-200-360	BFSE-240-360
42	BFSE-120-420	BFSE-140-420	BFSE-160-420	BFSE-180-420	BFSE-200-420	BFSE-240-420
48	BFSE-120-480	BFSE-140-480	BFSE-160-480	BFSE-180-480	BFSE-200-480	BFSE-240-480
54	BFSE-120-540	BFSE-140-540	BFSE-160-540	BFSE-180-540	BFSE-200-540	BFSE-240-540
60	BFSE-120-600	BFSE-140-600	BFSE-160-600	BFSE-180-600	BFSE-200-600	BFSE-240-600
66	BFSE-120-660	BFSE-140-660	BFSE-160-660	BFSE-180-660	BFSE-200-660	BFSE-240-660
72	BFSE-120-720	BFSE-140-720	BFSE-160-720	BFSE-180-720	BFSE-200-720	BFSE-240-720
78	BFSE-120-780	BFSE-140-780	BFSE-160-780	BFSE-180-780	BFSE-200-780	BFSE-240-780
84	BFSE-120-840	BFSE-140-840	BFSE-160-840	BFSE-180-840	BFSE-200-840	BFSE-240-840
90	BFSE-120-900	BFSE-140-900	BFSE-160-900	BFSE-180-900	BFSE-200-900	BFSE-240-900
96	BFSE-120-960	BFSE-140-960	BFSE-160-960	BFSE-180-960	BFSE-200-960	BFSE-240-960
102	BFSE-120-1020	BFSE-140-1020	BFSE-160-1020	BFSE-180-1020	BFSE-200-1020	BFSE-240-1020
108	BFSE-120-1080	BFSE-140-1080	BFSE-160-1080	BFSE-180-1080	BFSE-200-1080	BFSE-240-1080
114	BFSE-120-1140	BFSE-140-1140	BFSE-160-1140	BFSE-180-1140	BFSE-200-1140	BFSE-240-1140
120	BFSE-120-1200	BFSE-140-1200	BFSE-160-1200	BFSE-180-1200	BFSE-200-1200	BFSE-240-1200

Basic Stem Extension height is 24" and is manufactured in standard 6" increments. Intermediate Stem Extension heights are available and are priced to the next full 6" increment. For heights over 120", please contact your servicing Spears® Regional Distribution Center.



Features – PVC, CPVC & PP

This full-featured valve is engineered to provide accurate throttling control and shutoff for industrial, chemical and water treatment applications. Weir-type design eliminates entrapped fluids in valve and is excellent for handling liquids with suspended solids, viscous fluids and slurries. Available in PVC, CPVC and Glass Filled Polypropylene with a variety of Diaphragm material options. PVC & CPVC 1/2" - 2" valves with Flanged Body, Spigot Body or True Union style Socket & Threaded ends or Optional Special Reinforced (SR) Threads, and sizes 2-1/2" - 8" with Flanged Body. Polypropylene 1/2" - 2" valves with True Union style Special Reinforced (SR) Threaded ends and sizes 2-1/2" - 8" with Flanged Body. True Union style also available in metric socket and BSP thread sizes 1/2" through 2".

- True Union Style with Buttress Thread Union Nuts - Mate with Spears® True Union 2000 Ball valves and Union 2000 Pipe Unions.
- EPDM, FKM, or Elastomer (EPDM or FKM) Bonded PTFE Diaphragms.
- PVC & CPVC Sizes 1/2" - 2" Pressure Rated to 235 psi @ 73°F, Sizes 2-1/2" - 4" and all flanged Pressure Rated to 150 psi @ 73°F, 6" Pressure Rated to 100 psi and 8" to 75 psi @ 73°F
- Polypropylene Sizes 1/2" - 4" Pressure rated to 150 psi @ 73°F
- Easy-Grip, High Impact Polypropylene Handwheel
- Built-in, Clear-View Position Indicator
- Stainless Steel External Hardware
- Fully Serviceable, Replaceable Components
- Suitable for Vacuum Service
- Assembled with Silicone-Free Lubricants (no lubricant in media contact area)

Sample Engineering Specification

All thermoplastic Diaphragm valves shall be Weir-type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447, or Polypropylene, ASTM D 4101. All diaphragms shall be EPDM, FKM or PTFE with EPDM or FKM backing. All valves shall have built-in position indicator with polypropylene handwheel. All True Union style valve union nuts shall have Buttress threads. All PVC and CPVC 1/2" through 2" valves shall be pressure rated to 235 psi, all 2-1/2" through 4" and all flanged valves and valves with PTFE backing shall be pressure rated to 150 psi, all 6" valves shall be pressure rated to 100 psi, and all 8" valves shall be pressure rated to 75 psi for water at 73°F. All Polypropylene valves shall be pressure rated to 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Special Options

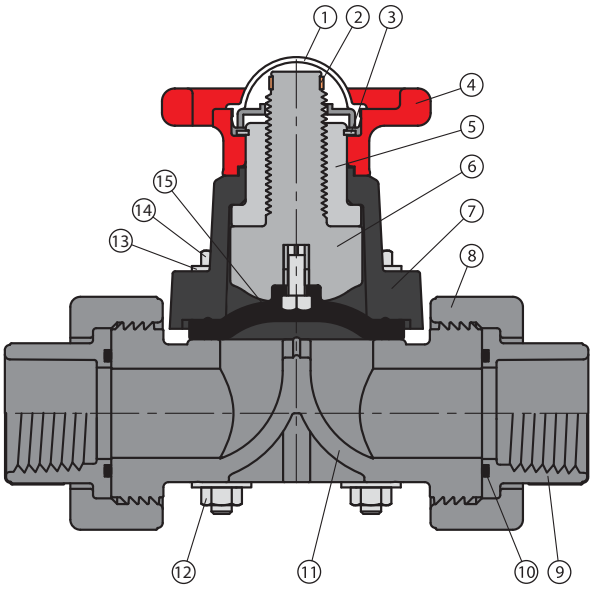
- Hypalon® (CSM) Diaphragms
- Natural Polypropylene Body
- Electric or Pneumatic Actuation

PVC, CPVC & PP Diaphragm Valve Quick-View Selection Chart

Size	O-ring Material	Diaphragm Material	PVC Part Number[1]				PP Part Number		Pressure Rating
			Soc/Thd	SR Threaded	Spigot	Flanged	SR Threaded	Flanged	
1/2	EPDM	EPDM	2729-005	2721-005SR	2727-005	2723-005	2721-005PSR		True Union & Spigot Style w/ Elastomer Diaphragms 235 psi Non-Shock Water @ 73°F
		PTFE[2]	2729T-005	2721T-005SR	2797T-005	2793T-005	2721T-005PSR		
	FKM	FKM	2739-005	2731-005SR	2737-005	2733-005	2731-005PSR		
		PTFE[2]	2739VT-005	2731VT-005SR	2797VT-005	2793VT-005	2731VT-005PSR		
3/4	EPDM	EPDM	2729-007	2721-007SR	2727-007	2723-007	2721-007PSR		
		PTFE[2]	2729T-007	2721T-007SR	2797T-007	2793T-007	2721T-007PSR		
	FKM	FKM	2739-007	2731-007SR	2737-007	2733-007	2731-007PSR		
		PTFE[2]	2739VT-007	2731VT-007SR	2797VT-007	2793VT-007	2731VT-007PSR		
1	EPDM	EPDM	2729-010	2721-010SR	2727-010	2723-010	2721-010PSR		
		PTFE[2]	2729T-010	2721T-010SR	2797T-010	2793T-010	2721T-010PSR		
	FKM	FKM	2739-010	2731-010SR	2737-010	2733-010	2731-010PSR		
		PTFE[2]	2739VT-010	2731VT-010SR	2797VT-010	2793VT-010	2731VT-010PSR		
1-1/4	EPDM	EPDM	2729-012	2721-012SR	2727-012	2723-012	2721-012PSR		
		PTFE[2]	2729T-012	2721T-012SR	2797T-012	2793T-012	2721T-012PSR		
	FKM	FKM	2739-012	2731-012SR	2737-012	2733-012	2731-012PSR		
		PTFE[2]	2739VT-012	2731VT-012SR	2797VT-012	2793VT-012	2731VT-012PSR		
1-1/2	EPDM	EPDM	2729-015	2721-015SR	2727-015	2723-015	2721-015PSR		
		PTFE[2]	2729T-015	2721T-015SR	2797T-015	2793T-015	2721T-015PSR		
	FKM	FKM	2739-015	2731-015SR	2737-015	2733-015	2731-015PSR		
		PTFE[2]	2739VT-015	2731VT-015SR	2797VT-015	2793VT-015	2731VT-015PSR		
2	EPDM	EPDM	2729-020	2721-020SR	2727-020	2723-020	2721-020PSR		Flanged Style & Valves w/ PTFE Diaphragms 150 psi Non-Shock Water @ 73°F
		PTFE[2]	2729T-020	2721T-020SR	2797T-020	2793T-020	2721T-020PSR		
	FKM	FKM	2739-020	2731-020SR	2737-020	2733-020	2731-020PSR		
		PTFE[2]	2739VT-020	2731VT-020SR	2797VT-020	2793VT-020	2731VT-020PSR		
2-1/2	EPDM	EPDM				2723-025		2723-025P	
		PTFE[2]				2793T-025		2793T-025P	
	FKM	FKM				2733-025		2733-025P	
		PTFE[2]				2793VT-025		2793VT-025P	
3	EPDM	EPDM				2723-030		2723-030P	
		PTFE[2]				2793T-030		2793T-030P	
	FKM	FKM				2733-030		2733-030P	
		PTFE[2]				2793VT-030		2793VT-030P	
4	EPDM	EPDM				2723-040		2723-040P	
		PTFE[2]				2793T-040		2793T-040P	
	FKM	FKM				2733-040		2733-040P	
		PTFE[2]				2793VT-040		2793VT-040P	
6	EPDM	EPDM				2723-060		2723-060P	100 psi Non-Shock Water @ 73°F
		PTFE[2]				2793T-060		2793T-060P	
	FKM	FKM				2733-060		2733-060P	
		PTFE[2]				2793VT-060		2793VT-060P	
8	EPDM	EPDM				2723-080		2723-080P	75 psi Non-Shock Water @ 73°F
		PTFE[2]				2793T-080		2793T-080P	
	FKM	FKM				2733-080		2733-080P	
		PTFE[2]				2793VT-080		2793VT-080P	

1: For CPVC valves, add the letter "C" to part numbers listed (e.g., 2729-005**C**). Custom end connections available upon request.

2: Elastomer-backed PTFE (standard EPDM backed; special order FKM backed)



Replacement Parts

No.	Component	Qty.	Material
1	Indicator Cover	1	PVC Clear
2	Indicator	1	PE
3	Retaining Ring	1	SS
4	Handwheel	1	PP
5	Compressor Bushing	1	PTFE/CPVC
6	Compressor	1	CPVC
7	Bonnet	1	GFPP
8	Union Nut	1	PVC/CPVC/GFPP
9	Union End	2	PVC/CPVC/GFPP
10	Union End O-ring	2	EPDM/FKM
11	Body	1	PVC/CPVC/GFPP
12	Nut	4-16	SS
13	Flat Washer	8-32	SS
14	Bolt	4-16	SS
15	Diaphragm	1	EPDM/FKM/PTFE

1: Component applicable to True Union style valves only.
2: True Union Socket/Threaded Valve illustrated

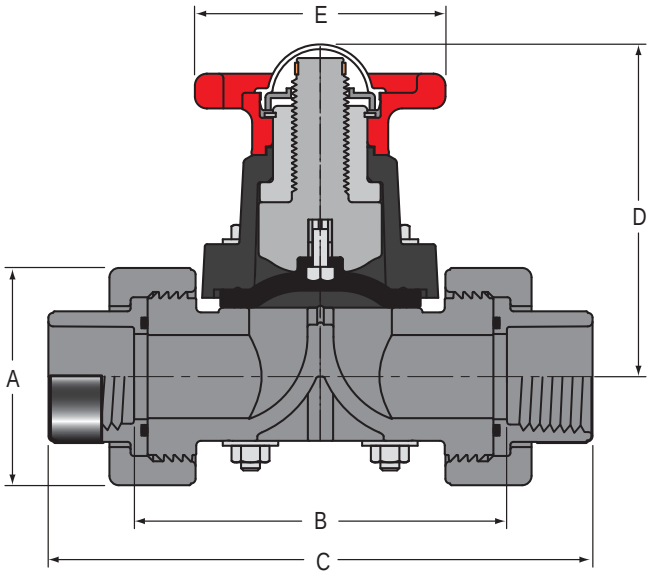
Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0-
		PP	150 (1.03)	105 (.72)	90 (.62)	80 (.55)	75 (.52)	65 (.45)	55 (.38)	50 (.34)	45 (.31)	-0-	-0-	-0-
	2-1/2" - 4"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0-
		PP	150 (1.03)	105 (.72)	90 (.62)	80 (.55)	75 (.52)	65 (.45)	55 (.38)	50 (.34)	45 (.31)	-0-	-0-	-0-
	6"	PVC	100 (.70)	90 (.62)	80 (.55)	65 (.38)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	100 (.70)	95 (.66)	90 (.62)	85 (.59)	80 (.55)	75 (.52)	70 (.48)	65 (.45)	60 (.41)	55 (.38)	50 (.34)	-0-
		PP	100 (.70)	90 (.62)	85 (.59)	75 (.52)	70 (.48)	60 (.41)	55 (.38)	50 (.34)	45 (.31)	-0-	-0-	-0-
	8"	PVC	75 (.52)	70 (.48)	65 (.45)	60 (.41)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	75 (.52)	72 (.49)	70 (.48)	67 (.46)	65 (.45)	62 (.43)	60 (.41)	55 (.38)	50 (.34)	45 (.31)	40	-0-
		PP	75 (.52)	62 (.43)	60 (.41)	57 (.39)	55 (.38)	52 (.36)	50 (.34)	47 (.32)	45 (.31)	-0-	-0-	-0-

C_V Values PVC, CPVC & PP

Valve Size	PERCENT OPEN			
	100%	75%	50%	25%
1/2	5.1	4.8	4.2	2.4
3/4	8.0	7.5	6.5	3.8
1	11.5	10.8	9.4	5.4
1-1/4	22.0	20.6	18.0	10.3
1-1/2	28.2	26.4	23.0	13.3
2	52.9	49.6	43.2	24.9
2-1/2	119.0	111.5	97.1	55.9
3	119.0	111.5	97.1	55.9
4	189.2	177.3	154.4	88.9
6	402.2	375.8	327.0	187.5
8	700.0	659.5	573.2	328.4

Gallons per minute at 1 psi pressure drop.

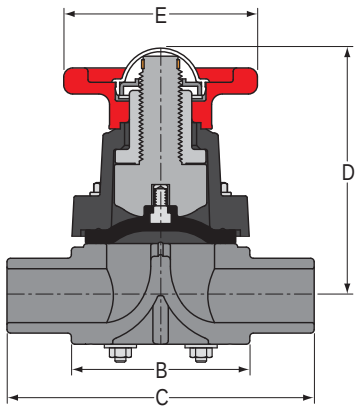


Socket, Threaded & SR Threaded End Connectors Dimension & Weights

Nominal Size	Dimension Reference (inches, ± 1/16)						Approx. Wt. (Lbs.)	
	A	B[1]	C		D	E	PVC	CPVC
			Socket	Threaded				
1/2	1-15/16	3-7/8	5-9/16	5-3/16	3-11/32	2-7/8	1.12	1.14
3/4	2-1/2	4-1/2	6-7/16	5-15/16	3-3/4	3-1/8	1.37	1.36
1	2-9/16	4-15/16	7-3/16	6-13/16	4-7/16	3-3/8	2.35	2.43
1-1/4	3-5/16	5-1/2	8-7/8	8-1/4	5-5/8	3-7/8	3.91	4.03
1-1/2	3-17/32	6-5/16	9-5/16	8-7/16	5-5/8	4-5/8	4.08	4.21
2	4-7/32	7-1/2	10-9/16	9-1/2	7	6-5/8	7.06	7.25

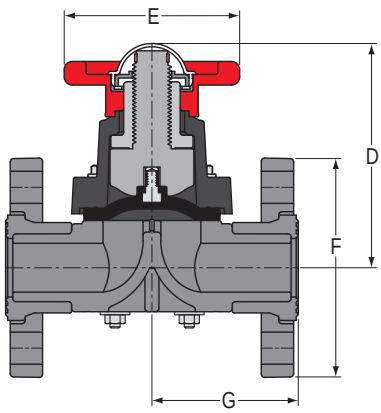
1: Valve Lay Length.

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Progressive Products from Spears® Innovation and Technology



Spigot Diaphragm Dimensions & Weights

Nominal Size	Dimension Reference (inches, ± 1/16)				Approx. Wt. (Lbs.)	
	B	C	D	E	PVC	CPVC
1/2	2-5/8	4-7/8	3-11/32	2-7/8	.61	.63
3/4	2-3/4	5	3-3/4	3-1/4	.79	.82
1	3-1/8	5-3/8	4-7/16	3-5/16	1.32	1.36
1-1/4	3-3/4	6-1/4	5-5/8	4-19/32	2.41	2.50
1-1/2	3-3/4	6-1/2	5-5/8	4-19/32	2.43	2.52
2	4-3/4	7-3/4	7	5-7/8	4.15	4.43



Flanged Diaphragm Dimensions & Weights

Nominal Size	Dimension Reference (inches, ± 1/16)				Approx. Wt. (Lbs.)	
	D	E	F	G	PVC	CPVC
1/2	3-11/32	2-7/8	3-1/2	2-9/16	.98	1.02
3/4	3-3/4	3-1/4	3-7/8	2-5/8	1.31	1.37
1	4-7/16	3-5/16	4-1/4	2-13/16	2.00	2.08
1-1/4	5-5/8	4-19/32	4-5/8	3-1/4	3.71	3.76
1-1/2	5-5/8	4-19/32	5	3-3/8	3.88	4.04
2	7	5-7/8	6	4	5.59	5.71
2-1/2	10-1/4	8-7/8	7-1/2	5-19/32	15.75	16.43
3	10-1/4	8-7/8	7-1/2	5-19/32	15.75	16.45
4	12-1/4	10-1/2	9	6-5/8	24.44	25.37
6	16-3/4	18-13/32	11	9-3/8	53.90	58.43
8	21	21-19/32	13-1/2	11-5/32	96.28	100.05

Tee - Style “Zero Dead-Leg” Diaphragm Valves



Tee x Spigot

Features – PVC, LXT PVC & CPVC

Spears® Tee-Style “Zero-Dead-Leg” Diaphragm Valve design integrates valve and Tee-fitting for direct branch take-off and eliminates the need for tees and reducing fittings normally required for service drops and other tie-ins to the loop. The Tee-Style valve provides a stronger, more compact connection enabling throttling, sampling, draining or diverting of critical process fluids. The “Zero Dead-leg” design is excellent for DI water and other critical applications. Close proximity of valve to mainline minimizes any areas of fluid stagnation by eliminating “dead leg” that can harbor bacterial growth and other contamination. Produced to order with Spigot, Socket & Threaded, or Special Reinforced (SR) Threaded end connection valve sizes 1/2" through 2", and specified Tee Socket connection sizes for virtually any mainline connection size.

Sample Engineering Specification

All lateral branch valve connections shall be made using Tee-style Diaphragm Valves. All valves shall be constructed from PVC, ASTM D 1784 Cell Classification 12454; CPVC Type IV, ASTM D 1784 Cell Classification 23447; or Low Extractable LXT PVC, ASTM D 1784 Cell Classification 12343. Diaphragms shall be EPDM, FKM or elastomer backed, bonded PTFE. All valves with elastomer diaphragms shall be pressure rated to 235 psi and all valves with PTFE diaphragms to 150 psi, for water at 73°F, as manufactured by Spears® Manufacturing Company.

T-Style Valve Advantages

- Chemical & Corrosion Resistant PVC, CPVC or Low Extractable LXT PVC materials
- Minimizes Fluid Stagnation
- Improves Branch Valve Connection Strength
- Simplifies Installation

Diaphragm Valve Features

- Multi-featured Industrial Grade
- Built-in Position Indicator
- EPDM, FKM, or Elastomer Backed PTFE Diaphragm
- 235 psi Pressure Rating @ 73°F (150 psi for PTFE Diaphragms)
- High Impact Polypropylene Handle
- Fully Serviceable, Replaceable Components

Quick-View Selection Chart

The following Base Part Numbers must be completed according to desired configuration size. Contact Spears® for the appropriate Tee size x Valve size code designations to replace the “xxx” in each.

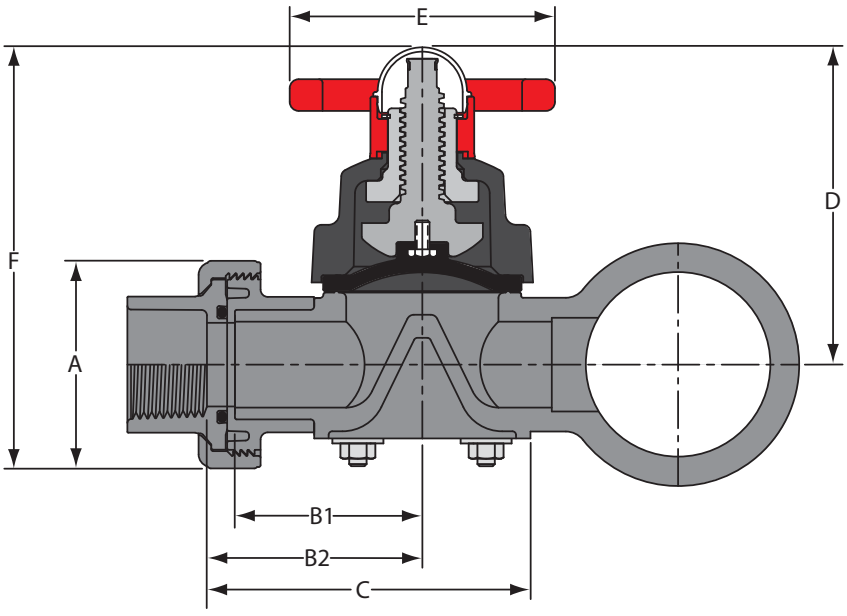
Diaphragm Material	PVC Base Part Number			Pressure Rating @ 73°F (23°C)
	Spigot	Socket & Threaded	SR Threaded	
EPDM	2727ZD-xxx	2729ZD-xxx	2721ZD-xxxSR	1/2" – 2" 235 psi
FKM	2737ZD-xxx	2739ZD-xxx	2731ZD-xxxSR	
PTFE, EPDM Backing	2797TZD-xxx	2729TZD-xxx	2721TZD-xxxSR	1/2" – 2" 150 psi
PTFE/FKM Backing	2797VTZD-xxx	2739VTZD-xxx	2731VTZD-xxxSR	

Diaphragm Material	CPVC Base Part Number			Pressure Rating @ 73°F (23°C)
	Spigot	Socket & Threaded	SR Threaded	
EPDM	2727ZD-xxxC	2729ZD-xxxC	2721ZD-xxxCSR	1/2" – 2" 235 psi
FKM	2737ZD-xxxC	2739ZD-xxxC	2731ZD-xxxCSR	
PTFE, EPDM Backing	2797TZD-xxxC	2729TZD-xxxC	2721TZD-xxxCSR	1/2" – 2" 150 psi
PTFE/FKM Backing	2797VTZD-xxxC	2739VTZD-xxxC	2731VTZD-xxxCSR	

Diaphragm Material	Low Extracable LXT PVC Base Part Number			Pressure Rating @ 73°F (23°C)
	Spigot	Socket & Threaded	SR Threaded	
EPDM	2727ZD-xxxBL	2729ZD-xxxBL	2721ZD-xxxSRBL	1/2" – 2" 235 psi
FKM	2737ZD-xxxBL	2739ZD-xxxBL	2731ZD-xxxSRBL	
PTFE, EPDM Backing	2797TZD-xxxBL	2729TZD-xxxBL	2721TZD-xxxSRBL	1/2" – 2" 150 psi
PTFE/FKM Backing	2797VTZD-xxxBL	2739VTZD-xxxBL	2731VTZD-xxxSRBL	

Note: LXT PVC Valves are typically used with elastomer backed PTFE Diaphragms to maintain purity in most applications.

Tee - Style “Zero Dead-Leg” Diaphragm Valves



Dimensions

Nominal Size	Dimension Reference (±1/16)						
	A	Spigot B1	Socket Threaded B2	C	D	E	F
1/2	1-15/16	2-3/16	2-1/2	3-13/16	3-5/16	2-7/8	4-5/16
3/4	2-3/8	2-3/8	2-3/4	4-1/8	3-3/4	3-1/4	4-9/16
1	2-5/8	2-11/16	3-1/16	4-5/8	4-7/16	3-5/16	5-3/4
1-1/4	3-3/16	3-1/8	3-1/2	5-3/8	5-5/8	4-5/8	7-1/4
1-1/2	3-9/16	3-1/4	3-3/4	5-5/8	5-5/8	4-5/8	7-7/16
2	4-5/16	4-7/8	4-3/8	6-3/4	7	5-7/8	9-3/16

Temperature Pressure Rating

Nominal Valve Size	73°F to 100°F	110°F	120°F	130°F	140°F
1/2" - 2"	150	135	110	75	50

Valves have elevated temperature pressure ratings different than pipe, as shown in chart above. Maximum PVC system service temperature is 140°F.

Cv Values

Valve Size	PERCENT OPEN			
	100%	75%	50%	25%
1/2	5.1	4.8	4.2	2.4
3/4	8.0	7.5	6.5	6.5
1	11.5	10.8	9.4	9.4
1-1/4	22.0	20.6	18.0	18.0
1-1/2	28.2	26.4	23.0	23.0
2	52.9	49.6	43.2	43.2

Note: Cv values are for basic Diaphragm Valve only, excluding Tee end connection.

Industrial Swing Check Valves



Sample Engineering Specification

All thermoplastic check valves shall be flanged Swing Check type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447, or Polypropylene, ASTM D 4101. All O-rings shall be EPDM or FKM. All valves components shall be replaceable. All valves shall have top-entry access with O-ring sealed drain plug for in-line servicing. All valves shall have optional external Arrow Position Indicator or optional external Counter Balance. All 3/4" - 4" valves shall be pressure rated to 150 psi, all 6" valves to 100 psi, and all 8" valves to 70 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

Valve Size	O-ring Material	Part Number[1,2,3]	Pressure Rating
3/4	EPDM	4423-007	150 psi Non-Shock Water @ 73°F
	FKM	4433-007	
1	EPDM	4423-010	
	FKM	4433-010	
1-1/4	EPDM	4423-012	
	FKM	4433-012	
1-1/2	EPDM	4423-015	
	FKM	4433-015	
2	EPDM	4423-020	
	FKM	4433-020	
2-1/2	EPDM	4423-025	
	FKM	4433-025	
3	EPDM	4423-030	
	FKM	4433-030	
4	EPDM	4423-040	
	FKM	4433-040	
6	EPDM	4423-060	100 psi @ 73°F
	FKM	4433-060	
8	EPDM	4423-080	70 psi @ 73°F
	FKM	4433-080	

1: For CPVC valves, add the letter "C" to part numbers listed (e.g. 4423-025**C**).
2: For valve with Arrow Position Indicator, add the letter "I" before the dash separator (e.g., 4423**I**-025).
3: For Polypropylene valves, add the letter "P" to the part number (e.g. 4423-025**P**).

Features – PVC, CPVC & PP

Designed for optimum flow, quick response and positive shutoff with minimum turbulence, this industrial grade Swing Check Valve is used in a variety of industrial and chemical processing applications where high volume fluid transfer is required. Suitable for horizontal or up-flow vertical applications. Available in PVC, CPVC and Glass Filled Polypropylene, IPS 3/4" - 8" with Flanged Body.

Engineered for Quick Response, Full-Flow Fluid Transfer

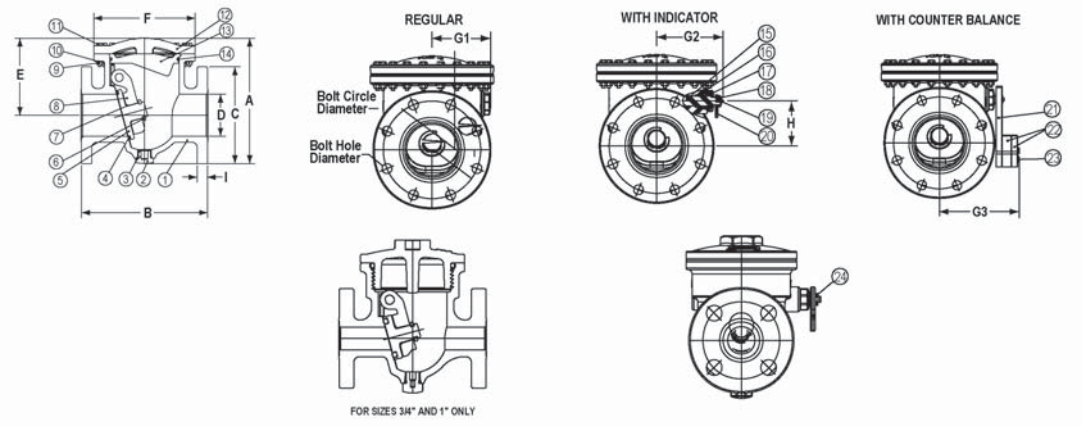
- Heavy Bodied All-Plastic Interior Construction
- Top Access & O-ring Sealed Drain Plug for In-line Servicing
- Standard O-ring type Seat & Seals in EPDM or FKM
- Sizes 3/4" - 4" Pressure Rated to 150 psi @ 73°F, 6" Pressure Rated to 100 psi and 8" to 70 psi @ 73°F
- Stainless Steel External Hardware
- Fully Serviceable, Replaceable Components
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricants

Options & Accessories

- External Arrow Position Indicator[1]
- External Counter Balance[1]
- Natural Polypropylene Body

1: Available as assembled valve or kit for installed valve

General Installation Information: Industrial Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves **MUST** be installed with the valves **FLOW** arrow pointing in the direction of flow. Do not install valve upside down. Normal flange-bolt assembly in top holes of the valve flange requires bolt insertion through the companion flange with nuts secured on Swing Check flange side. Certain system configurations involving direct connection of a Swing Check Valve to other flanged equipment may require consideration of this bolt clearance.



Replacement Parts

No.	Component	Qty.	Material
1	Body	1	PVC/CPVC/PP
2	Plug	1	PVC/CPVC/PP
3	Plug O-ring	1	EPDM/FKM
4	Disc O-ring A	1	EPDM/FKM
5	Disc	1	PVC/CPVC/PP
6	Disc Ret. Clip	1	PP
7	Disc O-ring B	1	EPDM/FKM
8	Swing Arm	1	PVC/CPVC/PP
9	Nut	12-30	SS 316
10	Washer	24-60	SS 316
11	Bolt	12-30	SS 316
12	Bonnet	1	PVC/CPVC/PP

No.	Component	Qty.	Material
13	Seal Carrier	1	PVC/CPVC/PP
14	Body O-ring	1	EPDM/FKM
15	Arm Pin	1	PVC/CPVC/PP
16	Arm Pin Seal	2	FKM
17	Arm Pin Plug	1	PVC/CPVC/PP
18	Arm Pin Washer	1	SS 316
19	Arm Pin Bolt	1	SS 316
20	Indicator	1	PP
21	Counterbalance	1	PVC
22	Weight Block	1	PVC
23	Weight Block Bolt	2	SS 316
24	Arm Pin Ret. Clip	1	PP

Dimensions & Weights

Nominal Size	A	B	C	D	E	F	G1	G2	G3	H	I	Approx. Wt (Lbs.)	
												PVC	CPVC
3/4	5-5/16	5-1/2	3-7/8	3/4	3-3/4	3-3/4	2-1/2	3	4	1-7/16	1/2	1.72	1.80
1	6-5/8	6-5/16	4-1/4	31/32	4-1/2	4-1/2	2-25/32	3-7/32	4-7/32	1-21/32	5/8	2.62	2.80
1-1/4	7-3/8	7-3/32	5	1-19/32	4-9/16	5-3/4	3-3/16	3-25/32	4-3/8	1-27/32	23/32	4.61	4.87
1-1/2	7-3/8	7-3/32	5	1-19/32	4-9/16	5-3/4	3-3/16	3-25/32	4-3/8	1-27/32	23/32	4.61	4.87
2	8-1/2	7-7/8	6	2	5-1/4	7	3-9/16	4-1/8	4-23/32	2-29/32	13/16	6.99	7.24
2-1/2	10-3/4	10-1/4	7-1/2	3-1/8	6-3/4	8-5/8	4-1/4	5	6-9/32	3-1/16	7/8	14.77	15.74
3	10-3/4	10-1/4	7-1/2	3-1/8	6-3/4	8-5/8	4-1/4	5	6-9/32	3-1/16	7/8	14.77	15.74
4	11-3/4	11-13/16	9	3-29/32	7-1/4	9-1/2	4-1/2	5-1/4	6-17/32	3-17/32	31/32	18.37	19.78
6	15-5/8	15-3/4	11	5-7/8	9-1/2	13-7/16	6	6-3/4	8-1/32	5-1/32	1	42.64	44.56
8	19-1/8	19-23/32	13-1/2	7-7/8	11-5/8	16-5/16	7	7-3/4	9-1/32	6-1/2	1-5/32	68.85	76.05

C_V Values

Valve Size	Cv[1]
3/4	18
1	24
1-1/4	70
1-1/2	70
2	95
2-1/2	300
3	300
4	480
6	1100
8	1900

1: Gallons per minute at 1 psi pressure drop.

Nominal Size	Bolt Circle Diameter	Bolt Hole Diameter	Number of Bolt Holes
3/4	2-3/4	5/8	4
1	3-1/8	5/8	4
1-1/4	3-1/2	5/8	4
1-1/2	3-7/8	5/8	4
2	4-3/4	3/4	4
2-1/2	5-1/2	3/4	4
3	6	3/4	4
4	7-1/2	3/4	8
6	9-1/2	7/8	8
8	11-3/4	7/8	8

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	3/4" – 4"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0-
		PP	150 (1.03)	105 (.72)	90 (.62)	80 (.55)	75 (.52)	65 (.45)	55 (.38)	50 (.34)	45 (.31)	-0-	-0-	-0-
	6"	PVC	100 (.70)	90 (.62)	80 (.55)	65 (.38)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	100 (.70)	95 (.66)	90 (.62)	85 (.59)	80 (.55)	75 (.52)	70 (.48)	65 (.45)	60 (.41)	55 (.38)	50 (.34)	-0-
		PP	100 (.70)	90 (.62)	85 (.59)	75 (.52)	70 (.48)	60 (.41)	55 (.38)	50 (.34)	45 (.31)	-0-	-0-	-0-
	8"	PVC	70 (.48)	65 (.45)	60 (.41)	50 (.34)	45 (.31)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	70 (.48)	65 (.45)	62 (.43)	60 (.41)	57 (.39)	55 (.38)	52 (.36)	50 (.34)	45 (.31)	42 (.29)	40 (.28)	-0-
		PP	70 (.48)	60 (.41)	57 (.39)	55 (.38)	52 (.36)	50 (.34)	47 (.32)	45 (.31)	40 (.28)	-0-	-0-	-0-

Arrow Position Indicator Kit

Spears® Swing Check Valve Indicator Kit is designed for field installation of external Indicator Arrow in Spears® Swing Check Valves. This kit can be installed through the bonnet assembly and removal of valve from line is not required.

Valve Size	Part Numbers		
	PVC Kit	CPVC Kit	PP Kit
3/4	I3K-007	I3K-007C	I3K-007P
1	I3K-010	I3K-010C	I3K-010P
1-1/4 & 1-1/2	I3K-015	I3K-015C	I3K-015P
2	I3K-020	I3K-020C	I3K-020P
2-1/2 & 3	I3K-030	I3K-030C	I3K-030P
4	I3K-040	I3K-040C	I3K-040P
6	I3K-060	I3K-060C	I3K-060P
8	I3K-080	I3K-080C	I3K-080P

Kit Includes:

1 - Extended Shaft
2 - Shaft Cup Seals
1 - Shaft Nut
1 - Indicator Arrow
1 - Retaining clip

Application of Counter Balance

Swing Check Valves operate in response to a fluid stream flow opening a swinging disc. As the fluid stream slows and reverses, the disc responds by swinging to the closed position. Sudden reversal of flow direction can result in “slamming” condition as the disc closes. The function of the Counter Balance mechanism is to start the disc closing earlier as the fluid stream begins to slow so that it is almost closed when flow reversal takes place, thereby eliminating slamming of the disc. Available as installed unit with valve or as a kit for adaptation of installed valves.

Counter Balance Kits

Spears® Swing Check Valve Counter Balance Kit is designed for field installation of counter balance mechanism in Spears® Swing Check Valves. This kit can be installed through the bonnet assembly and removal of valve from line is not required.

Valve Size	Part Numbers		
	PVC Kit	CPVC Kit	PP Kit
3/4	CB3K-007	CB3K-007C	CB3K-007P
1	CB3K-010	CB3K-010C	CB3K-010P
1-1/4 & 1-1/2	CB3K-015	CB3K-015C	CB3K-015P
2	CB3K-020	CB3K-020C	CB3K-020P
2-1/2 & 3	CB3K-030	CB3K-030C	CB3K-030P
4	CB3K-040	CB3K-040C	CB3K-040P
6	CB3K-060	CB3K-060C	CB3K-060P
8	CB3K-080	CB3K-080C	CB3K-080P

Kit Includes:

1 - Extended Shaft
2 - Shaft Cup Seals
1 - Shaft Nut
1 - Counter Balance
1 - Retaining Bolt
1 - Flat Washer
1 - Extra Weight Plates (1-small & 1-large)
1 - Plate Mounting Bolts (2-long & 2 short).



Sample Engineering Specification

All thermoplastic check valves Shall be Utility Swing Check or Utility Spring Check type constructed form PVC Type I, ASTM D 1784 Cell Classification 12454. All valves shall be maintenance free seal unit construction with EPDM seat and weighted disc. All Spring Check Valves shall have stainless steel spring assisted operation. All valves shall have external flow arrow direction designation. All valves shall be certified by NSF International for use in potable water service. All valves shall be pressure rated to 150 psi for water @ 73°F in full flow (open) position and to 75 psi @ 73°F back pressure (closed), as manufactured by Spears® Manufacturing Company.

Features - PVC White & PVC Clear

Spears® Utility Swing Check and spring assisted Utility Spring Check Valves offer a compact, high performance check valve for Landscape & Irrigation, Pool & Spa, Aquaculture, OEM and many general purpose applications. These maintenance free sealed units feature long-life EPDM elastomer seats with weighted disc for full-flow with minimal restriction and positive shutoff. Spring assisted "Spring Check" model incorporates a positive-pressure spring to assist in valve closing without slamming. Produced from PVC White or PVC Clear material with Socket, Threaded or SR Threaded end connectors. Available in IPS Sizes 1/2" through 8" for Swing Check Valves and 1/2" through 4" for Spring Check Valves.

- Chemical & Corrosion Resistant PVC White or High Visibility PVC Clear Construction
- No Metal Parts on Swing Check - Stainless Steel Spring on Spring Check
- Maintenance Free Sealed Unit in a Compact Space Saving Design
- Engineered for Maximum Flow, Quick Response & Positive Shutoff
- Long-Life, High Grade EPDM Seat with Weighted Disc
- Spring Assisted Spring Check Model Option for Positive Closing
- Sizes 1/2" – 8" Pressure Rated to 150 psi @ 73°F Full-Flow (open) and 75 psi @ 73°F Back Pressure (closed)
- Suitable for either Horizontal or Vertical Up-flow Installations and Vacuum Service
- NSF® Certified for Potable Water Use
- Silicone-Free Assembly

Quick-View Utility Swing Check Valve Selection Chart

Valve Size	Seat Material	PVC Material[1]			Pressure Rating
		Socket	Threaded	SR Threaded	
1/2	EPDM	S1520-05	S1520-05F	S1520-05FSR	150 psi @ 73°F Full Flow (Open) 75 psi Back Pressure (Closed)
3/4	EPDM	S1520-07	S1520-07F	S1520-07FSR	
1	EPDM	S1520-10	S1520-10F	S1520-10FSR	
1-1/4	EPDM	S1520-12	S1520-12F	S1520-12FSR	
1-1/2	EPDM	S1520-15	S1520-15F	S1520-15FSR	
2	EPDM	S1520-20	S1520-20F	S1520-20FSR	
2-1/2	EPDM	S1520-25	S1520-25F	S1520-25FSR	
3	EPDM	S1520-30	S1520-30F	S1520-30FSR	
4	EPDM	S1520-40	S1520-40F	S1520-40FSR	
6	EPDM	S1520-60	S1520-60F	S1520-60FSR	
8	EPDM	S1520-80	N/A	N/A	

1: For PVC Clear Swing Check, replace dash (-) separator with the letter "C" in the part number (e.g. S1520**C**05), (e.g. S1520**C**05F) or (e.g. S1520**C**05FSR)

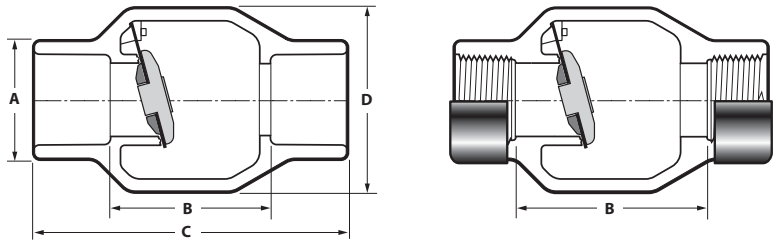
Quick-View Utility Spring Check Valve Selection Chart

Valve Size	Seat Material	PVC Material[1]			Pressure Rating
		Socket	Threaded	SR Threaded	
1/2	EPDM	S1580-05	S1580-05F	S1580-05FSR	150 psi @ 73°F Full Flow (Open) 75 psi Back Pressure (Closed)
3/4	EPDM	S1580-07	S1580-07F	S1580-07FSR	
1	EPDM	S1580-10	S1580-10F	S1580-10FSR	
1-1/4	EPDM	S1580-12	S1580-12F	S1580-12FSR	
1-1/2	EPDM	S1580-15	S1580-15F	S1580-15FSR	
2	EPDM	S1580-20	S1580-20F	S1580-20FSR	
2-1/2	EPDM	S1580-25	S1580-25F	S1580-25FSR	
3	EPDM	S1580-30	S1580-30F	S1580-30FSR	
4	EPDM	S1580-40	S1580-40F	S1580-40FSR	

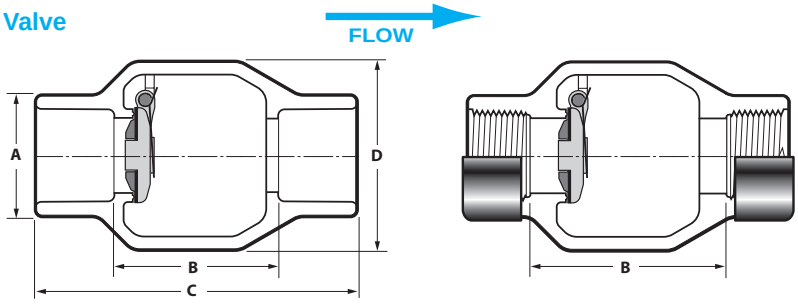
1: For PVC Clear Spring Check, replace dash (-) separator with the letter "C" in the part number (e.g. S1580**C**05), (e.g. S1580**C**05F) or (e.g. S1580**C**05FSR)

Utility Swing & Spring Check Valves

Utility Swing Check Valve



Utility Spring Check Valve



Dimensions

Nominal Size	Dimension Reference (inches, ± 1/16)					
	A	B		C	D	
		Socket	Threaded/SR Threaded		Swing	Spring
1/2	1-3/8	2-19/32	2-5/8	4-3/32	2-1/8	2-5/8
3/4	1-3/8	2-5/32	2-1/16	4-1/16	2-1/8	2-5/8
1	1-11/16	2-5/16	2-15/16	4-9/16	2-5/8	2-5/8
1-1/4	2-1/16	2-15/16	3-5/8	5-1/2	3-3/8	3-3/8
1-1/2	2-7/16	3	3-11/16	5-5/8	3-3/8	3-3/8
2	3	3-5/8	4-3/8	6-3/8	4-1/4	4-1/4
2-1/2	3-9/16	4-3/8	5-1/4	7-7/8	5-1/8	5-1/8
3	4-5/16	4-11/16	5-5/8	8-7/16	5-3/4	5-3/4
4	5-1/4	6	7-1/16	10-1/16	6-3/8	6-3/8
6	7-11/16	8-1/2	11-5/16	14-9/16	9-1/4	N/A
8	9-7/16	11-3/16	N/A	19-1/4	11-15/16	N/A

General Installation Information: Utility Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves **MUST** be installed with the valves **FLOW** arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5ft./sec. Minimum opening pressure less than 0.5 psi.

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 8"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
			150 (1.03)	140 (.97)	130 (.90)	120 (.83)	-110- (.76)	-100- (.70)	-90- (.62)	-80- (.55)	-70- (.48)	-60- (.41)	-50- (.34)	-0- (-0-)

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Progressive Products from Spears® Innovation and Technology

Compression Utility Swing Check Valves



Sample Engineering Specification

All thermoplastic check valves Shall be Utility Compression Swing Check type constructed form PVC Type I, ASTM D 1784 Cell Classification 12454. All valves shall be maintenance free seal unit construction with EPDM seat and weighted disc. All valves shall have external flow arrow direction designation. All valves shall be certified by NSF International for use in potable water service. All valves shall be pressure rated to 150 psi for water @73°F in full flow (open) position and to 75 psi @ 73°F back pressure (closed), as manufactured by Spears® Manufacturing Company.

Quick-View Compression Utility Swing Check Valve Selection Chart

Valve Size	Seat Material	PVC Material[1] Compression	Pressure Rating
1/2	EPDM	S1500-05	150 psi @ 73°F Full Flow (Open) 75 psi Back Pressure (Closed)
3/4	EPDM	S1500-07	
1	EPDM	S1500-10	
1-1/4	EPDM	S1500-12	
1-1/2	EPDM	S1500-15	
2	EPDM	S1500-20	
2-1/2	EPDM	S1500-25	
3	EPDM	S1500-30	
4	EPDM	S1500-40	

1: For PVC Clear, replace dash (-) separator with the letter "C" in the part number (e.g. S1500**C**05).

Features - PVC White & PVC Clear

Spears® Compression Utility Swing Check Valves offer a compact, high performance check valve with EPDM gasketed compression-type ends for fast, convenient connection to virtual and IPS size pipe, plastic or metal. Maintenance-free sealed unit design features long-life EPDM elastomer seats and weighted disc for full flow with minimal restriction and positive shutoff. Produced from PVC White or PVC Clear with White compression end connectors and EPDM seats. Available in IPS Sizes 1/2" through 4".

- Standard Swing Check Assembly Maintains a Positive Seal
- Convenient Compression Ends for Quick Connections
- Engineered for Maximum Flow, Quick Response & Positive Shutoff
- Excellent for Pool & Spa, OEM and General Purpose Applications
- Compact, Space-Saving Design
- Replaceable PVC White or Clear Sealed Unit
- High Grade EPDM Seat
- Suitable for Horizontal or Vertical Up-flow Installations
- Pressure Rated to 150 psi @ 73°F Full Flow (open), 75 psi Back Pressure (closed)
- Maximum Service Temperature 140°F (temperature/pressure de-ratings apply)



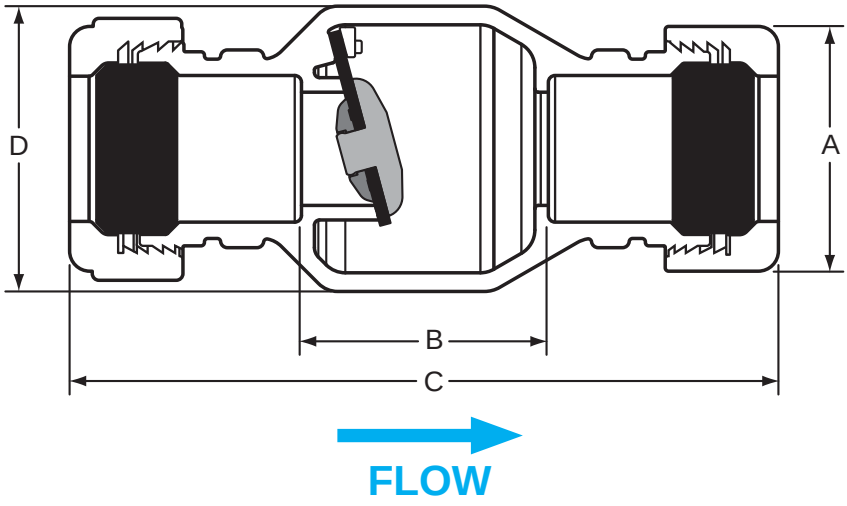
Compression Coupling Nut Wrenches

Part Number	Size
CCW-005	1/2
CCW-007	3/4
CCW-010	1
CCW-012	1-1/4
CCW-015	1-1/2
CCW-020*	2
CCW-030**	3
* CCW-020 - Wrench also fits 2-1/2" Coupling Body **CCW-030 - Wrench also fits 4" Coupling Body	

Compression Coupling Nut Wrench Sets

Part Number	Size
CCW-000	Set
Complete Set of Wrenches, Sizes 1/2" - 3"	

Compression Utility Swing Check Valves



WARNING: The compression joints provide a positive seal but do not restrain pipe from thrust and movement under pressure. Use of compression joint requires blocking of connecting pipe to prevent any movement. Failure to do so can result in system failure or severe personal injury. Use in cold water/fluid applications only.

Dimensions

Nominal Size	Dimension Reference (inches, ± 1/16)			
	A	B	C	D
1/2	1-3/4	1-3/4	5-15/16	2-1/8
3/4	2-1/16	1-3/4	6	2-1/8
1	2-7/16	2-1/4	6-5/16	2-21/32
1-1/4	2-15/16	2-15/16	8-9/16	3-3/8
1-1/2	3-5/16	2-15/16	8-17/32	3-3/8
2	3-3/4	3-1/2	9-7/32	4-1/4
2-1/2	4-11/16	4-1/4	11-3/32	5-1/8
3	5-7/16	4-9/16	12-3/8	5-23/32
4	6-3/4	5-15/16	16-7/8	6-3/8

General Installation Information: Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves **MUST** be installed with the valve's **FLOW** arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure less than 0.5 psi.

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 4"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
			150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

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True Union Utility Swing & Spring Check Valves



Features - PVC White & PVC Clear

Spears® True Union Utility Swing Check and spring assisted True Union Utility Spring Check Valves offer a compact, high performance check valve for Landscape & Irrigation, Pool & Spa, Aquaculture, OEM 1 and many general purpose applications. True Union design allows for easy in-line replacement of maintenance free sealed units. These valves feature long-life EPDM elastomer seats with weighted disc for full-flow with minimal restriction and positive shutoff. Spring assisted "Spring Check" model incorporates a positive-pressure spring to assist in valve closing without slamming. Produced from PVC White or PVC Clear material with Socket, Threaded or SR Threaded end connectors in IPS Sizes 1/2" through 4".

- Chemical & Corrosion Resistant PVC White or High Visibility PVC Clear Construction
- No Metal Parts on Swing Check - Stainless Steel Spring on Spring Check
- True Union style for Easy In-line Replacement of Sealed Unit
- Strong Buttress Threaded Union Nuts
- Engineered for Maximum Flow, Quick Response & Positive Shutoff
- Long-Life, High Grade EPDM Seat with Weighted Disc
- Spring Assisted Spring Check Model Option for Positive Closing
- Pressure Rated to 150 psi @ 73°F Full-Flow (open) and 75 psi @ 73°F Back Pressure (closed)
- Suitable for either Horizontal or Vertical Up-flow Installations and Vacuum Service
- NSF® Certified for Potable Water Use
- Silicone-Free Assembly

Sample Engineering Specification

All thermoplastic check valves Shall be True Union Utility Swing Check or True Union Utility Spring Check type constructed form PVC Type I, ASTM D 1784 Cell Classification 12454. All union nuts shall have Buttress threads coupled to a replaceable sealed unit with EPDM seat and weighted disc. All Spring Check Valves shall have stainless steel spring assisted operation. All valves shall have external flow arrow direction designation. All valves shall be certified by NSF International for use in potable water service. All valves shall be pressure rated to 150 psi for water @73°F in full flow (open) position and to 75 psi @ 73°F back pressure (closed), as manufactured by Spears® Manufacturing Company.

Quick-View True Union Utility Swing Check Valve Selection Chart

Valve Size	Seat Material	PVC Material[1]			Pressure Rating
		Socket	Threaded	SR Threaded	
1/2	EPDM	S1720-05	S1720-05F	S1720-05FSR	150 psi @ 73°F Full Flow (Open) 75 psi Back Pressure (Closed)
3/4	EPDM	S1720-07	S1720-07F	S1720-07FSR	
1	EPDM	S1720-10	S1720-10F	S1720-10FSR	
1-1/4	EPDM	S1720-12	S1720-12F	S1720-12FSR	
1-1/2	EPDM	S1720-15	S1720-15F	S1720-15FSR	
2	EPDM	S1720-20	S1720-20F	S1720-20FSR	
2-1/2	EPDM	S1720-25	S1720-25F	S1720-25FSR	
3	EPDM	S1720-30	S1720-30F	S1720-30FSR	
4	EPDM	S1720-40	S1720-40F	S1720-40FSR	

1: For PVC Clear Swing Check, replace dash (-) separator with the letter "C" in the part number (e.g. S1720**C**05), (e.g. S1720**C**05F) or (e.g. S1720**C**05FSR)

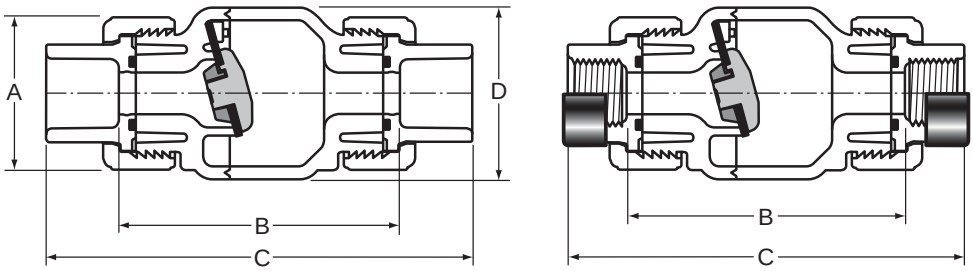
Quick-View True Union Utility Spring Check Valve Selection Chart

Valve Size	Seat Material	PVC Material[1]			Pressure Rating
		Socket	Threaded	SR Threaded	
1/2	EPDM	S1780-05	S1780-05F	S1780-05FSR	150 psi @ 73°F Full Flow (Open) 75 psi Back Pressure (Closed)
3/4	EPDM	S1780-07	S1780-07F	S1780-07FSR	
1	EPDM	S1780-10	S1780-10F	S1780-10FSR	
1-1/4	EPDM	S1780-12	S1780-12F	S1780-12FSR	
1-1/2	EPDM	S1780-15	S1780-15F	S1780-15FSR	
2	EPDM	S1780-20	S1780-20F	S1780-20FSR	
2-1/2	EPDM	S1780-25	S1780-25F	S1780-25FSR	
3	EPDM	S1780-30	S1780-30F	S1780-30FSR	
4	EPDM	S1780-40	S1780-40F	S1780-40FSR	

1: For PVC Clear Spring Check, replace dash (-) separator with the letter "C" in the part number (e.g. S1780**C**05), (e.g. S1780**C**05F) or (e.g. S1780**C**05FSR)

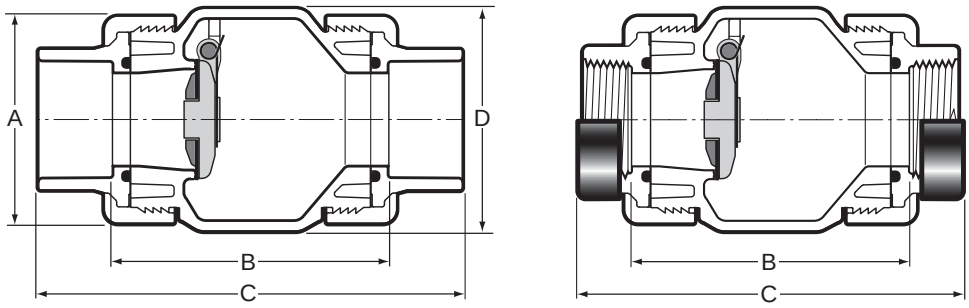
True Union Utility Swing & Spring Check Valves

True Union Utility Swing Check Valve



True Union Utility Spring Check Valve

FLOW



Dimensions

Nominal Size	A	Dimension Reference (inches, ± 1/16)				D	
		B		C			
		Socket	Threaded/SR Threaded	Socket	Threaded/SR Threaded	Swing	Spring
1/2	1-7/8	3-7/16	3-1/2	5-3/16	4-13/16	2-1/8	2-5/8
3/4	2-1/4	3-9/16	3-9/16	5-1/2	4-15/16	2-1/8	2-5/8
1	2-9/16	4-1/8	4-5/16	6-7/16	6	2-5/8	2-5/8
1-1/4	3-1/8	4-7/8	5-1/16	7-7/16	6-13/16	3-3/8	3-3/8
1-1/2	3-9/16	4-9/16	4-3/4	7-3/8	6-1/2	3-3/8	3-3/8
2	4-5/16	5-5/8	5-3/4	8-5/8	7-9/16	4-1/4	4-1/4
2-1/2	6-3/16	7-7/16	7-9/16	10-15/16	10-3/16	5-11/16	5-11/16
3	6-13/16	7-7/16	7-1/2	11-3/16	10-1/4	5-11/16	5-11/16
4	7-3/4	9-3/4	9-7/8	14-5/16	12-3/4	7-1/4	7-1/4

General Installation Information: True Union Swing Check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves **MUST** be installed with the valves **FLOW** arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5ft./sec. Minimum opening pressure less than 0.5 psi.

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 4"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
			150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

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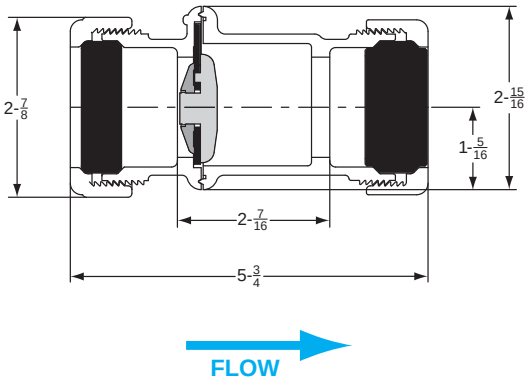
Sump Pump Swing Check Valves



Sample Engineering Specification

All thermoplastic check valves shall be Sump Pump Swing Check type constructed form PVC Type I, ASTM D 1784 Cell Classification 12454. All valves shall be maintenance free seal unit construction with EPDM seat and weighted disc. All valves shall have external flow arrow direction designation. All valves shall be dual-fit design with Buna-N Compression Gaskets for use with either IPS sizes 1-1/4" or 1-1/2" pipe. All valves shall be pressure rated to 150 psi for water @ 73°F in full flow (open) position and to 75 psi @ 73°F back pressure (closed), as manufactured by Spears® Manufacturing Company.

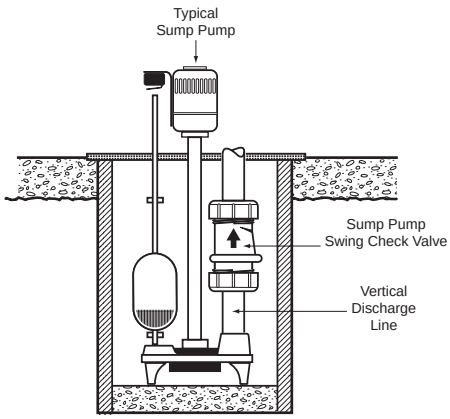
Dimensions



Features - PVC White & PVC Clear

Spears® Sump Pump Swing Check Valves provide a high performance specialty valve engineered for use on sump pump discharge lines, as illustrated. This compact valve is a maintenance free sealed Check Valve featuring long-life EPDM elastomer seats and weighted disc for full-flow with minimal restriction and positive shutoff. Produced in PVC White with compression type end connectors. Dual-fit design is available with Buna-N Gaskets for both 1-1/4" and 1-1/2" pipe.

- All Plastic Construction with Elastomer Seals – No Metal Parts
- Includes Compression End Connectors with Buna-N Gaskets for Use on Either 1-1/4" or 1-1/2" Pipe
- Angled Seat and Weighted Flapper for Low-Pressure Seal
- Pressure Rated to 150 psi @ 73°F Full-Flow (open) and 75 psi @ 73°F Back Pressure (closed)
- Suitable for Vertical Up-flow or Horizontal Installations



General Installation Information: Sump Pump Swing Check Valves may be installed in either vertical up-flow (see illustration) or horizontal positions on pump discharge line. Check valves **MUST** be installed with the valve's **FLOW** arrow pointing in the direction of the flow. In horizontal installations, the designated side must be positioned “up”. Do Not install Check Valve upside down.

Quick-View Sump Pump Swing Check Valve Selection Chart

Valve Size	Seat Material	PVC Material[1] Socket	Pressure Rating
1-1/4 & 1-1/2	EPDM	S1400-15	150 psi @ 73°F Full Flow (Open) 75 psi Back Pressure (Closed)

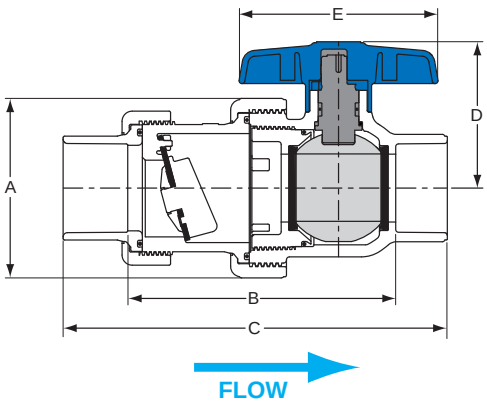
1: For PVC Clear Sump Pump, replace dash (-) separator with the letter "C" in the part number (e.g., S1400**C**15)

Swing Check Ball Valves



Sample Engineering Specification

All thermoplastic check valves shall be Swing Check Ball Valve combination type constructed form PVC Type I, ASTM D 1784 Cell Classification 12454. All Ball Valve units shall have Safe-T-Shear® stem, Safe-T-Blocked® Seal Carrier and double stop Polypropylene handle. All valve components shall be replaceable. All Swing Check Units shall be maintenance free seal unit construction with EPDM seat and weighted disc. All valves shall have external flow arrow direction designation. All valves shall be pressure rated to 150 psi for water @73°F in full flow (open) position and to 75 psi @ 73°F back pressure (closed), as manufactured by Spears® Manufacturing Company.



Features - PVC White

Spears® Swing Check Ball Valve offers a compact, high performance one-piece combination valve for applications requiring an in-line Ball Valve and Check Valve. This space, time and labor saving valve is designed for general purpose use and in wastewater pumping applications, such as ejector pits. Provides quick shut-off for easy pump or equipment servicing. Fully serviceable Ball Valve with replaceable, maintenance free sealed Check Valve Cartridge featuring long-life EPDM elastomer seats and weighted disc for full-flow with minimal restriction and positive shutoff. Produced in PVC White with socket end connectors. Available in IPS sizes 1-1/2" and 2".

- Compact, Space-Saving Design
- Union Design Allows Easy Service and Cleaning
- High Grade EPDM Seals
- Replaceable PTFE/HDPE Ball Valve Seats
- Safe-T-Blocked® Seal Carrier on Ball Valve with Safe-T-Shear® Stem and High Impact Polypropylene Handle
- Replaceable Sealed Check Valve Cartridge with Weighted EPDM Seat
- Pressure Rated to 150 psi @ 73°F Full-Flow (open) and 75 psi @ 73°F Back Pressure (closed)
- Suitable for Horizontal or Vertical Up-flow Installations

General Installation Information: Swing Check Ball Valves are designed for horizontal installations, but may be installed in up-flow only vertical position. The Check Valve portion **MUST** be installed with the valve's **FLOW** arrow pointing in the direction of flow and with the designated side up in horizontal installations. Do Not install Check Valve upside down. The Ball Valve portion may be rotated and installed in any position. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure is less than 0.5 psi.

Quick-View Swing Check Ball Valve Selection Chart

Valve Size	Seat Material	PVC Material Socket	Pressure Rating
1-1/2	EPDM	7622-015	150 psi @ 73°F Full Flow (Open) 75 psi Back Pressure (Closed)
2	EPDM	7622-020	

Dimensions

Size	A	B	C	D	E
1-1/2	3-7/8	5-3/4	8-1/4	3-3/16	4-1/4
2	4-7/16	6-11/16	9-3/8	3-7/8	5-1/16

Eliminates Noise in Sump Pump and Sewage Ejector Check Valve Operation



True Union Socket Connection

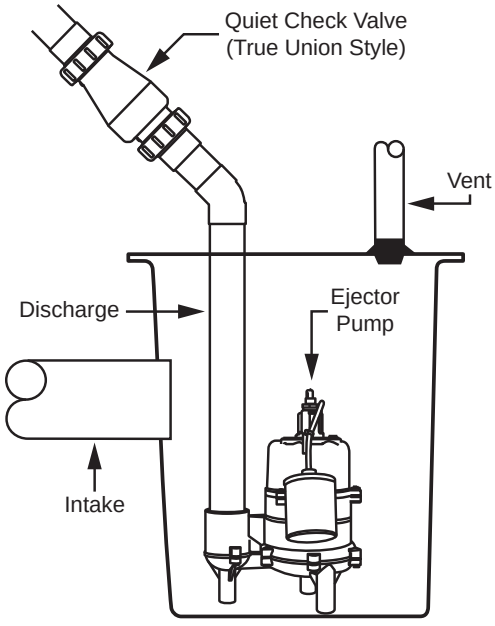
Direct Socket Connection

Spears® Quiet Check Valve has been designed to provide quiet operation in sump pump or sewage ejector pump systems typically found in home basements. The back flow of the water column in the discharge pipe can slam conventional check valves closed, producing a disturbing "thump" when the pump shuts off. The Quiet Check Valve uses a spring controlled rate of closing to prevent slamming and eliminates the noise.

Each Spears® Quiet Check Valve contains both regular socket ends for direct solvent cement connection of the valve and True Union style end connectors for easy valve removal or replacement.

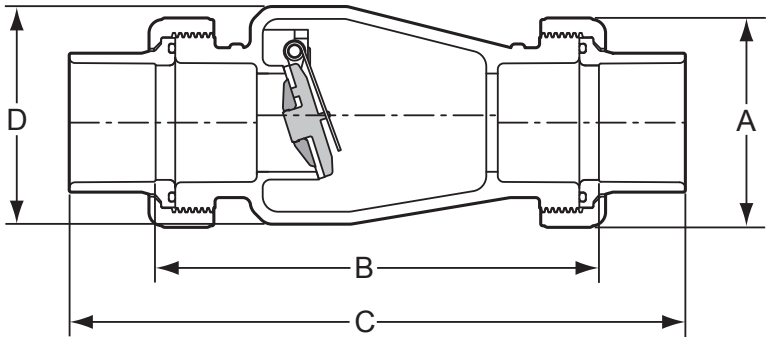
Produced in both 1-1/2" and 2" nominal sizes, the 2" size is the minimum recommended for a sewage discharge system (i.e., sewage ejector pump) while the 1-1/2" size can be used in an effluent system (i.e., sump pump) discharge line to prevent back flow of liquid into sump basin.

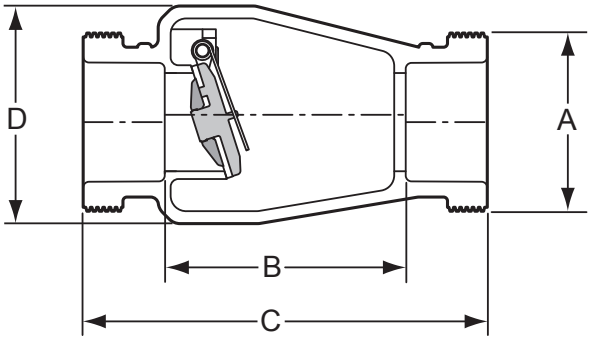
Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature
140°F (60°C)
Temperature/Pressure De-ratings Apply



Typical Application

Technical Information





FLOW

Part Number	Size	A	B	C	D
8622-015	1-1/2	3-3/8	7-1/8	9-15/16	3-1/2
8622-020	2	3-3/4	8-3/4	11-13/16	4-1/2

Part Number	Size	A	B	C	D
8622-015	1-1/2	2-3/4	3-13/16	6-1/2	3-1/2
8622-020	2	3-3/8	5-3/16	8	4-1/2

Note: Includes Both True Union Sockets for Easy Servicing and Direct Socket Connection for Installation in Confined Space

The check valve should be installed 12–18" above the pump discharge, or as recommended by the pump system manufacturer. Be sure check valve installation complies with local codes.

The Quiet Check Valve may be installed in either horizontal or vertical position. Check pump system manufacturer's recommendations for horizontal, vertical or angled positioning of check valve in discharge line. In horizontal installations, orient valve according to "This Side Up" marking for best operation. In all installations, valve **MUST** be installed in proper flow direction as indicated by the flow arrow on body.

Y-Check Valves



Sample Engineering Specification

All thermoplastic valves shall be Y-Check configuration manufactured to ASTM F 1970 and constructed from PVC, ASTM D 1784 Cell Classification 12454, or CPVC, ASTM D 1784 Cell Classification 23447. All valves shall have Buttress thread bonnet and standard O-ring type seating disc. All O-rings shall be EPDM or FKM. All 1/2" - 2" valves shall be pressure rated at 150 psi and all 3" - 4" valves shall be pressure rated at 90 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Features - PVC Gray, PVC Clear & CPVC

Spears® Y-Check Valves are an angle type check valve that automatically stops reverse flow by the dead weight of the disc plug. Y-checks are less affected by turbulent flow and typically have lower shutoff characteristics than ball checks. Valves are available in PVC Gray, PVC Clear, and CPVC materials in IPS Sizes 1/2" through 4" with Socket, SR Threaded or Flanged end connections, plus True Union styles with Socket and SR Threaded ends.

- Chemical & Corrosion Resistant PVC, PVC Clear, and CPVC Construction
- Improved Flow Characteristics Over Ball Checks, Outperforms Spring Loaded Designs
- Easy Access Cap for In-Line Clean Out & Servicing
- Optional True Union Design for Easy Valve Service Replacement
- Standard O-ring type EPDM or FKM Seat & Seals
- Sizes 1/2" – 2" Pressure Rated to 150psi @ 73°F, Sizes 3" – 4" Pressure Rated to 90 psi @ 73°F
- Suitable for either Horizontal or Vertical Up-flow Installations
- Assembled with Silicone-Free, Water Soluble Lubricants

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Number[1,2,3]					Pressure Rating
		Socket	SR Threaded	Flanged	Soc Union	SR Thd Union	
1/2	EPDM	1622-005	1621-005SR	1623-005	162A-005	162B-005SR	150 psi Non-Shock Water @ 73°F
	FKM	1632-005	1631-005SR	1633-005	163A-005	163B-005SR	
3/4	EPDM	1622-007	1621-007SR	1623-007	162A-007	162B-007SR	
	FKM	1632-007	1631-007SR	1633-007	163A-007	163B-007SR	
1	EPDM	1622-010	1621-010SR	1623-010	162A-010	162B-010SR	
	FKM	1632-010	1631-010SR	1633-010	163A-010	163B-010SR	
1-1/4	EPDM	1622-012	1621-012SR	1623-012	162A-012	162B-012SR	
	FKM	1632-012	1631-012SR	1633-012	163A-012	163B-012SR	
1-1/2	EPDM	1622-015	1621-015SR	1623-015	162A-015	162B-015SR	
	FKM	1632-015	1631-015SR	1633-015	163A-015	163B-015SR	
2	EPDM	1622-020	1621-020SR	1623-020	162A-020	162B-020SR	
	FKM	1632-020	1631-020SR	1633-020	163A-020	163B-020SR	
3	EPDM	1622-030	1621-030SR	1623-030	162A-030	162B-030SR	90 psi Non-Shock Water @ 73°F
	FKM	1632-030	1631-030SR	1633-030	163A-030	163B-030SR	
4	EPDM	1622-040	1621-040SR	1623-040	162A-040	162B-040SR	
	FKM	1632-040	1631-040SR	1633-040	163A-040	163B-040SR	

1: For CPVC Y-Check, add the letter "C" to the part number (e.g. 1622-005**C**)
2: For PVC Clear Y-Check, add the letters "CL" to the part number (e.g. 1622-005**CL**) or (e.g. 162A-005**CL**)
3: For CPVC or PVC Clear Special Reinforced Y-Check, (e.g. 1621-005**C**SR) or (e.g.1621-005**CL**SR)

Replacement Parts (next page)

NO.	COMPONENT	QTY.	MATERIAL
1	Body[1] (SOC/SR/FLG/UNION)	1	PVC/CLEAR/CPVC
2	Seat	1	EPDM/FKM
3	Compressor Assembly[2]	1	PVC/CPVC
4	Bonnet O-ring	1	EPDM/FKM
5	Bonnet Nut	1	PVC/CPVC
6	Bonnet	1	PVC/CPVC
7	Retaining Clip	1	PP
8	Plug O-ring	1	EPDM/FKM
9	Plug	1	PVC/CPVC
10	Union O-ring	2	EPDM/FKM
11	Union Socket End	2	PVC/CPVC
12	Union SR Threaded End	2	PVC/CPVC

1 - Body Includes: Body (1), Spigot Adapters (2), SS Collars (2)
- Flange Body Includes: Body (1), Spigot Hubs (2), Flange Rings (2)
- Union Body Includes: Body (1), Spigot Ends (2), Nuts (2)

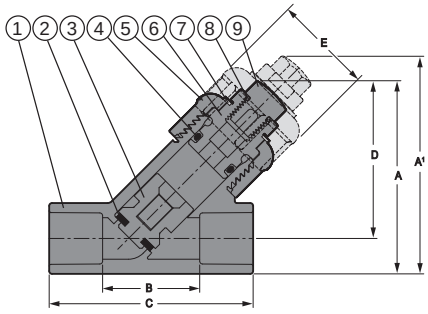
2 - Compressor Assembly Includes: Compressor (1), Weight (1), Compressor Plug (1)

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0-
	3" - 4"	PVC	90 (.70)	85 (.62)	75 (.52)	60 (.41)	40 (.30)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	90 (.70)	85 (.62)	80 (.55)	75 (.52)	70 (.48)	60 (.41)	50 (.34)	45 (.31)	40 (.30)	35 (.24)	30 (.21)	-0-

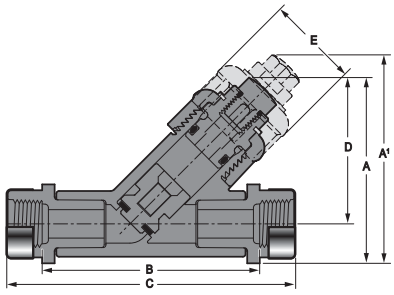
C_V Values

Size	Values
1/2	6.7
3/4	12.6
1	22.9
1-1/4	33.8
1-1/2	50.7
2	79.2
3	235
4	387



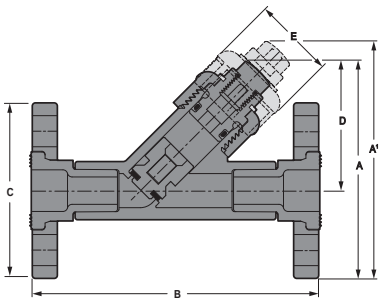
Socket Y-Check Dimensions & Weights

Nominal Size	Dimension Reference (inches, ± 1/16)						Approx. Wt. (Lbs.)	
	A[1]	A	B	C	D	E	Socket	
							PVC	CPVC
1/2	4-1/32	3-5/32	1-19/32	3-11/32	2-19/32	1-5/8	.31	.33
3/4	4-27/32	3-27/32	2	4	3-5/32	2	.50	.53
1	5-5/8	4-1/2	2-15/32	4-23/32	3-5/8	2-1/4	.85	.90
1-1/4	6-1/2	5-5/16	3-1/32	5-9/16	4-9/32	2-13/16	1.21	1.28
1-1/2	7-17/32	6-1/32	3-19/32	6-5/16	4-7/8	3-5/32	1.66	1.76
2	8-15/32	6-29/32	4-31/32	7-1/2	5-1/2	3-23/32	2.96	3.10
3	12-15/32	9-21/32	6-9/16	10-11/32	7-9/16	5-1/4	5.34	5.64
4	15-17/32	12-11/16	8-5/8	13-1/8	9-25/32	6-17/32	9.97	10.45



SR Threaded Y-Check Dimensions & Weights

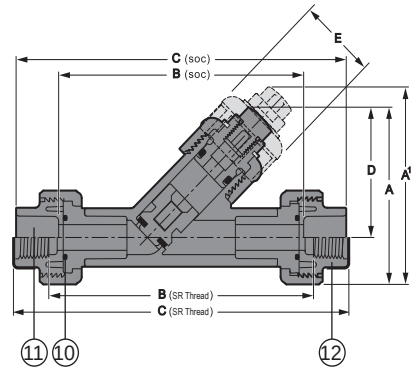
Nominal Size	Dimension Reference (inches, ± 1/16)						Approx. Wt. (Lbs.)	
	A[1]	A	B	C	D	E	SR Threaded	
							PVC	CPVC
1/2	4-5/32	3-9/32	3-27/32	5-1/8	2-19/32	1-5/8	.31	.33
3/4	5	4	4-3/4	5-31/32	3-5/32	2	.50	.53
1	5-25/32	4-21/32	5-9/32	6-15/16	3-5/8	2-1/4	.85	.90
1-1/4	6-23/32	5-1/2	6-1/4	7-31/32	4-9/32	2-13/16	1.21	1.28
1-1/2	7-25/32	6-9/32	7-5/32	8-7/8	4-7/8	3-5/32	1.66	1.76
2	8-3/4	7-3/16	8-5/16	10-1/8	5-1/2	3-23/32	2.96	3.10
3	12-3/4	9-15/16	11-17/32	14-5/16	7-9/16	5-1/4	5.34	5.64
4	15-25/32	12-11/16	14-11/32	17-11/32	9-25/32	6-17/32	9.97	10.45



Flanged Y-Check Dimensions & Weights

Nominal Size	Dimension Reference (inches, ± 1/16)						Approx. Wt. (Lbs.)	
	A[1]	A	B	C	D	E	Flanged	
							PVC	CPVC
1/2	5-7/32	4-11/32	5-23/32	3-1/2	2-19/32	1-5/8	.82	.85
3/4	6-1/16	5-3/32	6-7/16	3-7/8	3-5/32	2	1.23	1.28
1	6-7/8	5-3/4	7-5/32	4-1/4	3-5/8	2-1/4	1.70	1.81
1-1/4	7-25/32	6-9/16	8-1/8	4-5/8	4-9/32	2-13/16	2.40	2.52
1-1/2	8-7/8	7-3/8	9-5/32	5	4-7/8	3-5/32	3.07	3.25
2	10-1/32	8-15/32	10-1/2	5-31/32	5-1/2	3-23/32	5.20	5.42
3	13-29/32	11-5/16	12-1/16	7-1/2	7-9/16	5-1/4	9.44	10.07
4	17-13/32	14-5/16	15-11/16	9-1/16	9-25/32	6-17/32	14.87	16.15

Note: 4" flanged Y-Check use split flange ring



True Union Y-Check Dimensions & Weights

Nominal Size	Dimension Reference (inches, ± 1/16)								Approx. Wt. (Lbs.)	
	A[1]	A	B		C		D	E	Union	
			Socket	SR Thread	Socket	SR Thread			PVC	CPVC
1/2	4-3/8	3-1/2	5-3/32	5-1/2	6-7/8	7	2-19/32	1-5/8	.49	.53
3/4	5-5/16	4-9/32	5-7/8	6-13/32	7-29/32	8	3-5/32	2	.80	.85
1	6-1/16	4-29/32	6-15/32	7-5/16	8-3/4	9	3-5/8	2-1/4	1.13	1.20
1-1/4	7-1/16	5-13/16	7-7/16	8-7/32	10-1/8	10-5/32	4-9/32	2-13/16	1.84	1.90
1-1/2	8-1/8	6-5/8	8-1/4	9	11	11-1/16	4-7/8	3-5/32	2.44	2.52
2	9-7/32	7-5/8	9-13/32	10-13/16	12-7/16	12-13/16	5-1/2	3-23/32	4.33	4.45
3	13-7/16	10-5/8	13-5/8	15-11/32	17-13/32	18-7/32	7-9/16	5-1/4	10.35	10.55
4	16-3/4	13-5/8	17-3/32	19-9/32	21-21/32	22-5/16	9-25/32	6-17/32	18.51	18.80

Drain Plug Tap Size

Y-Check Size	Tap Size (NPT)
1/2	1/4 - 18
3/4	1/4 - 18
1	3/8 - 18
1-1/4	1/2 - 14

Y-Check Size	Tap Size (NPT)
1-1/2	1-11-1/2
2	1-11-1/2
3	1-11-1/2
4	1-11-1/2



Spigot



Wafer



Grooved



Threaded



Flanged

Features – PVC, CPVC

This multi-purpose check valve provides an extremely low profile and very quick response to back flow without slamming. Since most all components are internal, Spears® Butterfly Check Valves require no more space than a piece of pipe and fitting. Special design incorporates flexible reinforced elastomer seal for long life and is suitable for mounting in any position for greater versatility. Available in IPS sizes 2" - 12" with Flanged, Spigot, Male Threaded, Grooved Pipe style & Wafer end connections, and 14" - 24" Flanged, Spigot, Grooved & Wafer end connections. Can be custom produced to virtually any standard pipe diameter.

- Chemical Resistant PVC & CPVC Construction
- No Metal Components
- Quick Response Shut-off In Any Position
- Replaceable Internal Components - Choice of Reinforced EPDM or FKM
- Suitable for Horizontal or Vertical Installation
- Sizes 2" - 8" Pressure Rated to 150 psi for water at 73°F Sizes 10" - 16" Pressure Rated to 100 psi for water at 73°F
- Sizes 18" - 24" Pressure Rated to 50 psi for water at 73°F
- Assembled with Silicone-Free, Water Soluble Lubricants

Sample Engineering Specification

All thermoplastic Check Valves shall be Butterfly design constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell classification 23447. Valves shall be Flanged, Spigot, Male Threaded, Grooved end or Wafer style. All valve seals shall be reinforced EPDM or FKM with replaceable internal components. All 2" - 8" valves shall be pressure rated at 150 psi, all 10" - 16" valves at 100 psi for water at 73°F, all 18" - 24" valves at 50 psi for water at 73°F as manufactured by Spears® Manufacturing Company.

Quick-View Butterfly Check Valve Selection Chart

Valve Size	O-ring Material	PVC Material[1]					Pressure Rating
		Flanged	Spigot	Threaded	Grooved	Wafer	
2	EPDM	5423-020	5427-020	5421A-020	542G-020	5420-020	150 psi Non-Shock Water @73°F
	FKM	5433-020	5437-020	5431A-020	543G-020	5430-020	
2-1/2	EPDM	5423-025	5427-025	5421A-025	542G-025	5420-025	
	FKM	5433-025	5437-025	5431A-025	543G-025	5430-025	
3	EPDM	5423-030	5427-030	5421A-030	542G-030	5420-030	
	FKM	5433-030	5437-030	5431A-030	543G-030	5430-030	
4	EPDM	5423-040	5427-040	5421A-040	542G-040	5420-040	
	FKM	5433-040	5437-040	5431A-040	543G-040	5430-040	
6	EPDM	5423-060	5427-060	5421A-060	542G-060	5420-060	
	FKM	5433-060	5437-060	5431A-060	543G-060	5430-060	
8	EPDM	5423-080	5427-080	5421A-080	542G-080	5420-080	
	FKM	5433-080	5437-080	5431A-080	543G-080	5430-080	
10	EPDM	5423-100	5427-100	5421A-100	542G-100	5420-100	100 psi Non-Shock Water @73°F
	FKM	5433-100	5437100	5431A-100	543G-100	5430-100	
12	EPDM	5423-120	5427-120	5421A-120	542G-120	5420-120	
	FKM	5433-120	5437-120	5431A-120	543G-120	5430-120	
14	EPDM	5423-140	5427-140	N/A	542G-140	5420-140	
	FKM	5433-140	5437-140	N/A	543G-140	5430-140	
16	EPDM	5423-160	5427-160	N/A	542G-160	5420-160	
	FKM	5433-160	5437-160	N/A	543G-160	5430-160	
18	EPDM	5423-180	5427-180	N/A	542G-180	5420-180	50 psi Non-Shock Water @73°F
	FKM	5433-180	5437-180	N/A	543G-180	5430-180	
20	EPDM	5423-200	5427-200	N/A	542G-200	5420-200	
	FKM	5433-200	5437-200	N/A	543G-200	5430-200	
24	EPDM	5423-240	5427-240	N/A	542G-240	5420-240	
	FKM	5433-240	5437-240	N/A	543G-240	5430-240	

1: For CPVC valves add the letter "C" following the size code of the part number listed (e.g., 5423-020**C**)

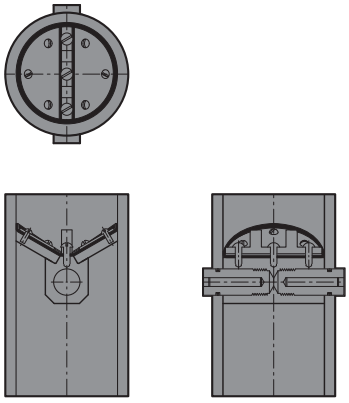
C_V Values

Size	Cv[1]
2	91
2-1/2	123
3	365
4	665
6	1695
8	2990
10	5595
12	8490
14	10,000
16	13,000
18	15,000
20	18,000
24	29,000

1: Gallons per minute at 1 psi pressure drop.

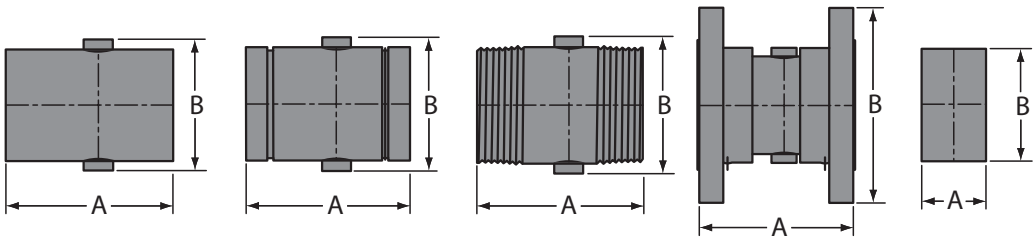
Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	2"- 8"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0-
	10" - 16"	PVC	100 (.70)	90 (.62)	80 (.55)	65 (.38)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	100 (.70)	95 (.66)	90 (.62)	85 (.59)	80 (.55)	75 (.52)	70 (.48)	65 (.45)	60 (.41)	55 (.38)	50 (.34)	-0-
	18" - 24"	PVC	50 (.34)	45 (.31)	40 (.30)	35 (.24)	30 (.21)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	50 (.34)	47 (.32)	45 (.31)	42 (.83)	40 (.30)	37 (.26)	35 (.24)	30 (.21)	25 (.17)	20 (.14)	15 (.10)	-0-



Replacement Parts

No.	Component	Qty.	Material
1	Body	1	PVC/CPVC
2	Flapper	2	PVC/CPVC
3	Flex Seal Gasket	1	EPDM/FKM
4	Flapper Cover	2	PVC/CPVC
5	Flapper Screws	6	PVC/CPVC
6	Hinge Post Screws	3	Encapsulated SS
7	Post Strip	1	PVC/CPVC
8	Post Bolt	3	PVC/CPVC (Steel Reinforced)
9	O-ring	2	EPDM/FKM
10	Hinge Post	1	PVC/CPVC



Dimensions

Size	Spigot (Plain End) Valve, Grooved End Valve & Threaded Valve		Flanged		Wafer		Pressure Rating (psi)
	A	B	A	B	A	B	
2	5-3/4	2-9/16	6-1/16	6	1-3/4	4	150
2-1/2	5-3/4	3-3/32	6-1/8	7	2-3/8	4-3/4	150
3	5-3/4	4-1/32	6-1/4	7-1/2	2-3/4	5-1/4	150
4	6-3/4	4-13/16	7-1/4	9	3-5/8	6-5/8	150
6	10-1/2	7-9/32	11-3/8	11	4-1/4	8-5/8	150
8	14	10-7/32	14-9/16	13-1/2	6	11	150
10	16	11-31/32	17-3/8	16	10	13-1/4	100
12	16	14-1/32	17-1/4	19	12	16	100
14	18	14-3/4	20	21	13	17-5/8	100
16	19-3/4	16-17/32	21-1/4	23-1/2	13-1/2	20-1/8	70
18	26-1/2	19-31/32	27	25	15-1/2	21-1/2	50
20	28-7/8	21-25/32	40-7/8	27-1/2	17	23-3/4	50
24	29-7/8	25-21/32	43-7/8	32	19	24	50

As a general guideline, Opening & Closing Pressures will range from .2 to .5 psi for horizontal applications. Opening pressure tends to decrease in larger size valves. Valves installed in vertical up-flow applications will require slightly higher pressures.

General Installation Information

Butterfly Check Valve seating may be affected by normal system turbulence. Valves should be installed at least 5 pipe diameters away from any fitting. If used as a foot valve, do not place near bottom of a tank. Butterfly type check valves should not be used in continuous cycling applications, such as with reciprocating pumps. This can result in premature failure of sealing membrane. In horizontal installations, always orient the Hinge Post Bolts visible on the external body in a vertical (top and bottom) position, perpendicular to flow. In vertical installations downstream from an elbow, flow velocities can be higher on the outer radius of the elbow. To avoid uneven butterfly plate loading, the Hinge Post Bolts should align with crotch and outer radius of elbow and **NOT** from side to side of the elbow.

Notes: Flanged valves are designed for mounting between two (2) ANSI Class 125/150 bolt pattern flanges using user supplied 1/8" full-faced gaskets, bolts, nuts and flat washers. Male thread ends are standard NPT tapered. Grooved ends are for use with mechanical coupler designed for thermoplastic pipe.

Diaphragm Check Valves



Features – PVC, CPVC

Spears® Diaphragm Check Valves do not depend on gravity, springs, or even reverse flow to seat. Resilient thermoplastic elastomer (TPE) diaphragm is the only moving component, which automatically seats when flow stops. No sticking, no chatter. This specialty elastomer exhibits high flex and tear resistance to provide excellent durability and long life. Valves are available in PVC and CPVC material size of 3/4" with socket and threaded end connections.

- "Normally Closed" operation is excellent for applications with low seating pressure
- Low cracking pressure, 1 to 1-1/2 psi
- Leak-free, silent operation
- Installs just like a Union – in ANY position
- Pressure rated to 150 psi full-flow (open), 100 psi back pressure (closed) for water @ 73°F
- Santoprene™ TPE diaphragm seat provides extended life and durability – fully serviceable and replaceable
- All materials are NSF® Certified for use with potable water

Sample Engineering Specification

All thermoplastic Diaphragm Check Valves shall be Diaphragm design constructed from PVC Type 1, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. Valves shall be socket or threaded ends. All diaphragms shall be Santoprene™ TPE material. Valves shall be pressure rated at 150 psi full-flow (open), 100 psi back pressure (closed) for water @ 73°F, as manufactured by Spears® Manufacturing Company.

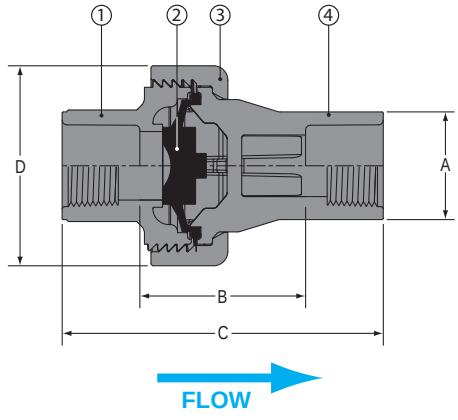
Quick-View Diaphragm Check Valve Selection Chart

Valve Size	Seat Material	PVC Material[1]		Presure Rating
		Socket	Threaded	
3/4	SANTOPRENE™	6562-007	6561-007	150 psi @ 73°F Full Flow (open) 100 psi Back Pressure

1: For CPVC Diaphragm Check Valve, add the letter "C" to the part number (e.g. 6562-007**C**)

Replacement Parts

No.	Component	Qty	Material
1	Body Inlet	1	PVC/CPVC
2	Diaphragm	1	Santoprene™ Rubber
3	Nut	1	PVC/CPVC
4	Body Outlet	1	PVC/CPVC



Dimensions & Weights

Nominal Size	Dimension Reference (inches, ±1/16)					Approx. Wt. (Lbs.)	
	A	B		C	D		
		Socket	Threaded			PVC	CPVC
3/4	1-7/16	2-1/8	2-5/8	4-1/8	2-21/32	.32	.34

NOTE: Check valves **MUST** be installed with the valve's **FLOW** arrow pointing in the direction of the flow. Flow velocity should not exceed 5 ft./sec. Do not use Union Nut to draw together system components. Using a strap wrench, tighten hand-tight plus no more than 1/16 turn. Do not use conventional pipe wrenches.

Santoprene™ is a trademark of Exxon Mobile Corporation

In-Line Adjustable Spring Check Valves



Features - PVC

Adjustable feature allows control of back pressure in system, reduces water hammer, and prevents siphoning. Easily adjusts to hold back from 5 to 32 feet of pressure head, 1 psi (2.3 feet of head) for each full turn of the adjustment screw. Ideal for landscape and irrigation applicators, quickly installs with space saving in-line design.

- 2 - 14 lbs. Adjustable Spring Tension (5 to 32 feet of head) Factory Preset to Approx. 5 psi (12 feet of head)
- Stainless Steel Adjustment Spring with EPDM Seat
- Pressure Rated to 200 psi for Water @ 73°F
- Standard Unit Available in 1/2", 3/4", 1" & 1/2" x 3/4" with Fipt Inlet x Mipt Outlet Configuration
- Plus, Popular Configuration Options of 1/2" Mipt Inlet x Fipt Outlet & 3/4" Fipt Inlet x Fipt Outlet

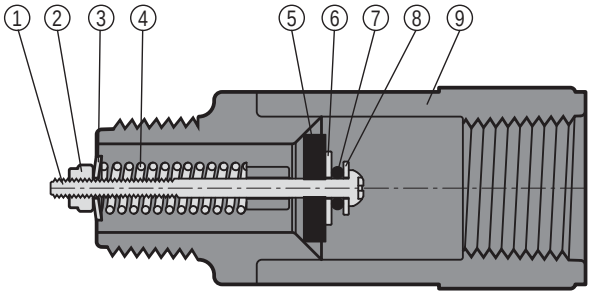
Sample Engineering Specification

All thermoplastic check valves shall be Adjustable Spring Check type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454. All Valve Seats shall be EPDM. All valves shall have external Arrow Flow Indicator. All valves shall be pressure rated to 200 psi water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

Standard Unit - Female Inlet x Male Outlet		
Size	**Part Number**	**Configuration**
1/2	S1102-05	Fipt x Mipt (Inlet x Outlet)
3/4	S1102-07	Fipt x Mipt (Inlet x Outlet)
1	S1102-10	Fipt x Mipt (Inlet x Outlet)
1/2 x 3/4	S1102-05-07	Fipt x Mipt (Inlet x Outlet)
Male Inlet x Female Outlet Option		
Size	**Part Number**	**Configuration**
1/2	S1101-05	Mipt x Fipt (Inlet x Outlet)
Female Inlet x Female Outlet Option		
Size	**Part Number**	**Configuration**
3/4	S1100-07	Fipt x Fipt (Inlet x Outlet)

In-Line Adjustable Spring Check Valves



Replacement Parts

No.	Component	Qty.	Material
1	Screw	1	Stainless Steel
2	Nut	1	Stainless Steel
3	Belleville Washer	1	Stainless Steel
4	Spring	1	Stainless Steel
5	Seat	1	EPDM
6	Washer - A	1	Stainless Steel
7	O-ring	1	EPDM
8	Washer - B	1	Stainless Steel
9	Body	1	PVC

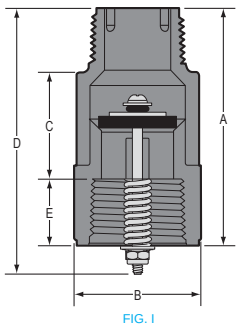


FIG. I

Standard Unit Female Inlet x Male Outlet

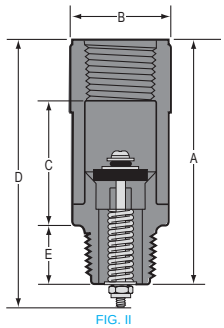


FIG. II

Male Inlet x Female Outlet Option

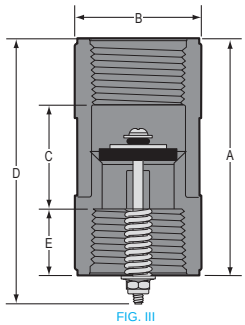


FIG. III

Female Inlet x Female Outlet Option



Dimensions

SIZE	INLET X OUTLET	A ± 1/16	B ± 1/16	C ± 1/16	D ± 1/16	E ± 1/16	FIG.
1/2	FIPT X MIPT	2-5/8	1-3/16	1-3/16	2-3/4	3/4	I
3/4	FIPT X MIPT	2-5/8	1-3/8	1-3/16	2-15/16	3/4	I
1	FIPT X MIPT	3-3/16	1-11/16	1-7/16	3-7/16	7/8	I
1/2 x 3/4	FIPT X MIPT	2-5/8	1-3/8	1-3/16	2-15/16	3/4	I
1/2	MIPT X FIPT	2-7/8	1-3/16	1-7/16	3-1/8	3/4	II
3/4	FIPT X FIPT	2-5/8	1-3/8	1-3/16	2-15/16	3/4	III

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2"-1"	PVC	200 (1.38)	135 (.93)	120 (.83)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)

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Progressive Products from Spears® Innovation and Technology



Basic Valve

Features - PVC Gray

Backwater Valves are designed to prevent backflow in numerous applications where easy service access for maintenance and cleaning is needed. Excellent for use in sanitary or storm sewer drainage systems to prevent waste back up due to inadequate drainage, for balancing multi-level ponds, aquaculture features or storage tank systems, and many other applications. Spears® Backwater Valve has been engineered for improved function and easier service, especially in buried service with use of optional Service-Access Extension Kit.



Valve with Extension Kit

- All PVC Construction with EPDM Flapper Seal
- Threaded Top Plug for Convenient Service
- Simple Snap-In Internal Flapper Assembly for Easy Replacement
- Optional Factory Assembled Service-Access Extension Kits - External Housing with Internal Extension for Convenient Removal, Inspection or Replacement
- Optional Extention Components Kits for Assembly with User-Supplied Pipe
- Available in Sizes 2", 3", 4" and 6" with Socket Ends
- Direct Connection to ASTM D 2665 PVC DWV or other IPS size pipe. Spears® IPS x Sewer Adapters Available for Connection to ASTM 3034 Sewer
- Conforms to ASME/ANSI A112.14.1 for Backwater Valves
- Pressure Rated to 43 psi (100 feet of head) @ 73°F

Sample Engineering Specification

All thermoplastic valves shall be Backwater type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454. All Valve Seats shall be EPDM. All valves shall have external Arrow Flow Indicator. All valves shall be pressure rated to 43 psi (100 feet of Head) for water @ 73°F as manufactured by Spears® Manufacturing Company.

PVC Service-Access Extension Kit Options:

Available as a complete unit, with or without valve, factory assembled to internal flap assembly, extension pipe, and external extension housing with top access adapter in convenient increments of 12", 16", 20", 24", 36", and 48" (measured from top of valve to top of extension). All extension kits can be cut shorter in the field for custom fits. Also available as Extension Components Kits, with or without valve for assembly with user-supplied Class 125 or Schedule 40 pipe. Kits without valve require use of existing valve top Access Plug, all kits require solvent cement assembly to valve. Contact Spears® for pricing on custom cut lengths.

Quick-View Backwater Valve Selection Chart Standard Valve

Valve Size	Seat Material	PVC Material	Pressure Rating
		Socket	
2	EPDM	S275P	43 psi (100 feet of Head)
3	EPDM	S375P	
4	EPDM	S475P	
6	EPDM	S675P	

Quick View Extension Components Kit Options

Extension Adapters and Flap Assembly with or without valve. Must be assembled with user-supplied Class 125 or Schedule 40 Pipe.

Valve Size	Socket Valve With Extension Component Kit	Extension Component Kit Only	Pressure Rating
2	S275P-AK	S275P-ECK	43 psi (100 feet of head)
3	S375P-AK	S375P-ECK	
4	S475P-AK	S475P-ECK	
6	S675P-AK	S675P-ECK	

Quick View Backwater Valves with Extension Kit to Premade Lengths

Socket Valve with complete Extension Assembly in precut lengths.

Valve x Extension Size[1]	Socket Valve With Extension	Valve x Extension Size[1]	Socket Valve With Extension	Pressure Rating
2 x 12HT	S275P-120	4 x 12HT	S475P-120	43 psi (100 feet of head)
2 x 16HT	S273P-160	4 x 16HT	S473P-160	
2 x 20HT	S275P-200	4 x 20HT	S475P-200	
2 x 24HT	S275P-240	4 x 24HT	S475P-240	
2 x 36HT	S275P-360	4 x 36HT	S475P-360	
2 x 48HT	S275P-480	4 x 48HT	S475P-480	
3 x 12HT	S375P-120	6 x 12HT	S675P-120	
3 x 16HT	S373P-160	6 x 16HT	S673P-160	
3 x 20HT	S375P-200	6 x 20HT	S675P-200	
3 x 24HT	S375P-240	6 x 24HT	S675P-240	
3 x 36HT	S375P-360	6 x 36HT	S675P-360	
3 x 48HT	S375P-480	6 x 48HT	S675P-480	

1 - Size designates nominal valve size x extension height (HT-top of valve to top of extension, inches).

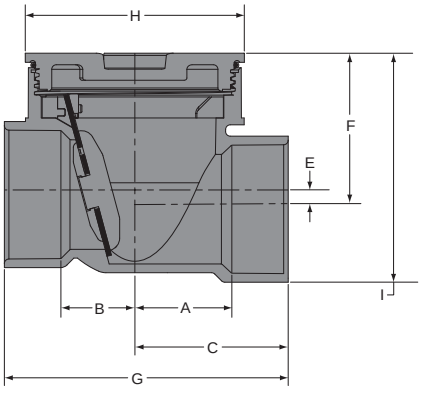
Quick View Service Access Extension Kit Only In Premade Lengths (valve not included)

Extension Assembly in precut lengths. Use exiting valve top Access Plug.

Size[1]	Premade Extension	Size[1]	Premade Extension	Pressure Rating
2 x 12HT	SAEK-020-120	4 x 12HT	SAEK-040-120	43 psi (100 feet of head)
2 x 16HT	SAEK-020-160	4 x 16HT	SAEK-040-160	
2 x 20HT	SAEK-020-200	4 x 20HT	SAEK-040-200	
2 x 24HT	SAEK-020-240	4 x 24HT	SAEK-040-240	
2 x 36HT	SAEK-020-360	4 x 36HT	SAEK-040-360	
2 x 48HT	SAEK-020-480	4 x 48HT	SAEK-040-480	
3 x 12HT	SAEK-030-120	6 x 12HT	SAEK-060-120	
3 x 16HT	SAEK-030-160	6 x 16HT	SAEK-060-160	
3 x 20HT	SAEK-030-200	6 x 20HT	SAEK-060-200	
3 x 24HT	SAEK-030-240	6 x 24HT	SAEK-060-240	
3 x 36HT	SAEK-030-360	6 x 36HT	SAEK-060-360	
3 x 48HT	SAEK-030-480	6 x 48HT	SAEK-060-480	

1 - Size designates nominal valve size x extension height (HT-top of valve to top of extension, inches). All extension kits can be cut shorter in the field for custom fits.

STANDARD VALVE



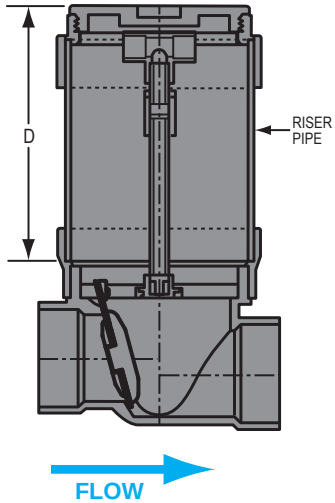
Standard Valve Dimensions

Size	A	B	C	E	F	G	H	I
2	1-13/16	1-3/4	2-5/8	5/16	3-1/4	5-9/32	4-3/16	4-9/16
3	2-5/8	2	4-3/16	13/32	4-1/8	7-3/4	6	6-1/8
4	3-5/8	3-3/4	5-7/16	23/32	5-7/16	10-15/16	8-1/4	7-15/16
6	4-3/4	4-5/8	7-3/4	13/16	7-3/16	15-3/8	11-1/4	10-13/16

VALVE WITH EXTENSION KIT

Valve with Extension Kit Dimensions (Inches)

HEIGHT-D
12
16
20
24
36
48
D = Top of plug Standard Valve to top of plug with Extension



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Progressive Products from Spears® Innovation and Technology



Features - PVC Gray, PVC Clear & CPVC

Spears® Y-type sediment strainers are the perfect choice for in-line removal of suspended solids, sediment, dirt and debris. Convenient removable strainer basket allows quick cleaning with an assortment of screen mesh sizes to meet a variety of application needs. Spears® Y-Strainers are produced from PVC Gray, PVC Clear for fluid visibility and CPVC Gray for higher temperatures. Available with socket, Special Reinforced (SR) threads, flanged, or True Union socket and SR threaded end connectors in IPS sizes 1/2" - 4".

- Provides In-line Protection of Process Equipment
- PVC, CPVC or PVC Clear Construction
- EPDM or FKM O-ring Seals
- Removable Strainer Basket with O-ring Sealed Drain Plug Allows Quick-Flushing or Bleed-Off Valve Connection
- Multiple Strainer Screen Options in PVC, CPVC, and Type 316 Stainless Steel (see Mesh Code table)
- Optional Magnetic Drain Plug for Ferrous Metal Pickup
- Suitable for Horizontal or Vertical Installation
- Sizes 1/2"- 2" Pressure Rated to 150 psi @ 73°F Sizes 3"- 4" to 90 psi @ 73°F
- Assembled with Silicone-Free, Water Soluble Lubricants

Sample Engineering Specification

All sediment strainers shall be Y-type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All Y-strainers shall have replaceable PVC, CPVC or Type 316 stainless steel screens and O-ring sealed drain plugs with magnetic drain plug option. All threaded Y-Strainers shall have Special Reinforced (SR) threads. All Y-Strainers, sizes 1/2"- 2" shall be pressure rated to 150 psi, sizes 3"- 4" to 90 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Y-Strainer Selection Chart

Valve Size	O-ring Material	PVC Material[1,2,3]					Pressure Rating
		Socket	SR Threaded	Flanged	Socket Union	SR Threaded Union	
1/2	EPDM	YS22P__-005	YS21P__-005SR	YS23P__-005	YS2AP__-005	YS2BP__-005	150 psi Non-Shock Water @73°F
	FKM	YS32P__-005	YS31P__-005SR	YS33P__-005	YS3AP__-005	YS3BP__-005	
3/4	EPDM	YS22P__-007	YS21P__-007SR	YS23P__-007	YS2AP__-007	YS2BP__-007	
	FKM	YS32P__-007	YS31P__-007SR	YS33P__-007	YS3AP__-007	YS3BP__-007	
1	EPDM	YS22P__-010	YS21P__-010SR	YS23P__-010	YS2AP__-010	YS2BP__-010	
	FKM	YS32P__-010	YS31P__-010SR	YS33P__-010	YS3AP__-010	YS3BP__-010	
1-1/4	EPDM	YS22P__-012	YS21P__-012SR	YS23P__-012	YS2AP__-012	YS2BP__-012	
	FKM	YS32P__-012	YS31P__-012SR	YS33P__-012	YS3AP__-012	YS3BP__-012	
1-1/2	EPDM	YS22P__-015	YS21P__-015SR	YS23P__-015	YS2AP__-015	YS2BP__-015	
	FKM	YS32P__-015	YS31P__-015SR	YS33P__-015	YS3AP__-015	YS3BP__-015	
2	EPDM	YS22P__-020	YS21P__-020SR	YS23P__-020	YS2AP__-020	YS2BP__-020	
	FKM	YS32P__-020	YS31P__-020SR	YS33P__-020	YS3AP__-020	YS3BP__-020	
3	EPDM	YS22P__-030	YS21P__-030SR	YS23P__-030	YS2AP__-030	YS2BP__-030	90 psi Non-Shock Water @73°F
	FKM	YS32P__-030	YS31P__-030SR	YS33P__-030	YS3AP__-030	YS3BP__-030	
4	EPDM	YS22P__-040	YS21P__-040SR	YS23P__-040	YS2AP__-040	YS2BP__-040	
	FKM	YS32P__-040	YS31P__-040SR	YS33P__-040	YS3AP__-040	YS3BP__-040	

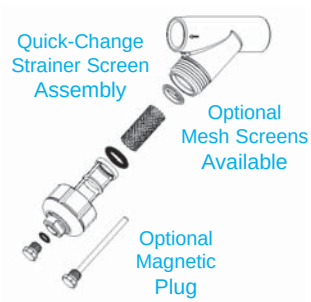
Enter Mesh Code in part number blank as specified in table.
(Contact Spears® for additional strainer sizes).

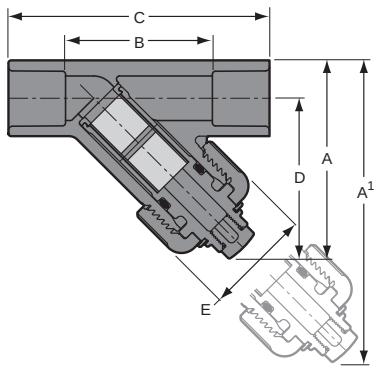
1: For CPVC body & strainer screen unit, replace the letter "P" before the dash separator with the letter "C" and add the letter "C" to the part number (e.g., YS22C8-020**C**)
2: For stainless steel strainer screens, replace the letter "P" (or "C") before the dash separator with the letter "S" (e.g., YS22S8-020; YS22S8-020**C**)
3: For PVC Clear Y-Strainer, add the letters "CL" to the part number (e.g., YS22P8-005**CL**)
Note: End connections for PVC Clear threaded and flanged Y-strainers are PVC Gray components.

Mesh Codes for PVC, CPVC & SS

Mesh	Sieve Opening Size (in.)	Mesh Code
8 Mesh	0.094	8
12 Mesh	0.062	12
20 Mesh	0.033	20
30 Mesh	0.024	30

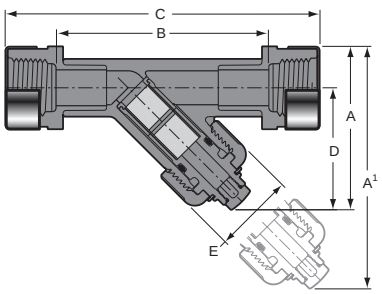
Additional Stainless Steel screens available to 320 mesh, custom ordered.





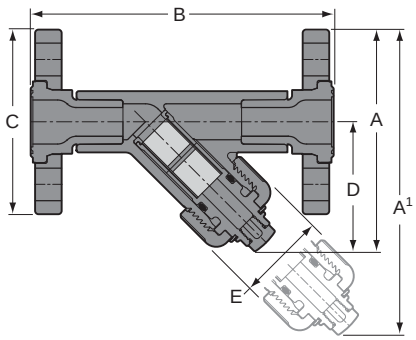
Socket Y-Strainer Dimensions & Weights

Nominal Size	Dimension Reference (inches, ± 1/16)						Approx. Wt. (Lbs.)	
	A1	A	B	C	D	E	Socket	
							PVC	CPVC
1/2	5	3-1/16	1-9/16	3-3/8	2-9/16	1-5/8	.31	.33
3/4	5-3/4	3-11/16	2	4	3	2	.50	.53
1	6-7/8	4-7/16	2-1/2	4-3/4	3-5/8	2-1/4	.85	.90
1-1/4	8-5/32	5-5/16	3-1/16	5-9/16	4-1/4	2-13/16	1.21	1.28
1-1/2	9-1/8	6	3-9/16	6-5/16	4-7/8	3-3/16	1.66	1.76
2	11-3/4	7-5/8	4-1/2	7-1/2	6-3/16	3-1/2	2.96	3.10
3	15	9-11/16	6-9/16	10-5/16	7-5/8	5-1/8	5.34	5.64
4	19-11/16	12-1/2	8-5/8	13-1/8	9-7/8	6-9/16	9.97	10.45



SR Threaded Y-Strainer Dimensions & Weights

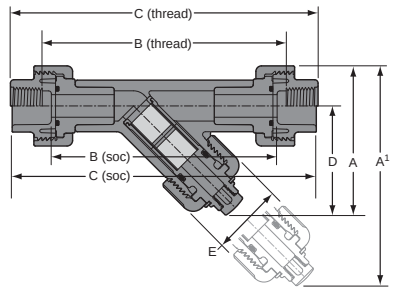
Nominal Size	Dimension Reference (inches, ± 1/16)						Approx. Wt. (Lbs.)	
	A1	A	B	C	D	E	SR Threaded	
							PVC	CPVC
1/2	6-1/2	4-11/16	3-5/8	5-1/16	4	2-3/8	.31	.33
3/4	7-5/8	5-7/16	4-3/8	5-13/16	4-9/16	2-3/8	.50	.53
1	8-5/8	6-1/8	5-3/16	7	5-1/8	2-3/8	.85	.90
1-1/4	11-1/8	7-3/4	6	7-15/16	6-1/2	3-1/2	1.21	1.28
1-1/2	12-1/4	8-7/8	6-15/16	8-13/16	7-1/2	3-1/2	1.66	1.76
2	14-1/16	10-3/16	8-1/8	10-1/8	8-1/2	3-1/2	2.96	3.10
3	20	14-13/16	11	14-1/4	12-7/16	6-5/8	5.34	5.64
4	25-13/16	18-1/2	14	14-3/4	15-5/8	7-15/16	9.97	10.45



Flanged Y-Strainer Dimensions & Weights

Nominal Size	Dimension Reference (inches, ± 1/16)						Approx. Wt. (Lbs.)	
	A1	A	B	C	D	E	Flanged	
							PVC	CPVC
1/2	5-13/16	4-3/16	5-11/16	3-1/2	2-1/2	1-5/8	.82	.85
3/4	7-1/8	5	6-7/16	3-7/8	3-1/8	2	1.23	1.28
1	8-3/16	5-3/4	7-1/4	4-1/4	3-5/8	2-1/4	1.70	1.81
1-1/4	9-7/16	6-9/16	8-1/8	4-5/8	4-9/32	2-13/16	2.40	2.52
1-1/2	10-7/16	7-3/8	9-3/16	5	4-7/8	3-3/16	3.07	3.25
2	13-1/4	9-1/8	10-3/8	6	6-3/16	3-1/2	5.20	5.42
3	16-21/32	11-3/8	12-1/32	7-1/2	7-5/8	5-1/8	9.44	10.07
4	21-19/32	14-5/16	14-9/16	9-1/16	9-7/8	6-9/16	14.87	16.15

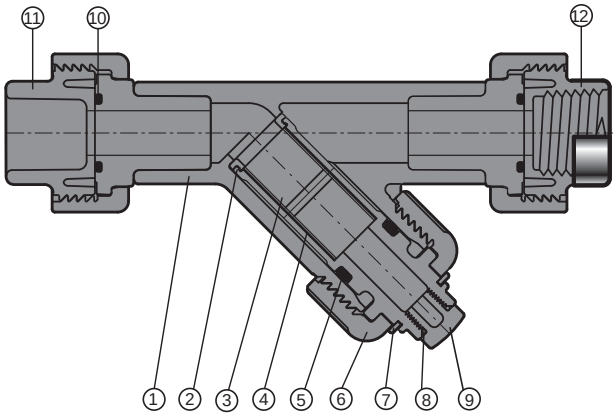
Note: 4" flanged Y-strainer uses split flange ring



True Union Y-Strainer Dimensions & Weights

Nominal Size	Dimension Reference (inches, ± 1/16)								Approx. Wt. (Lbs.)	
	A1	A	B		C		D	E	Union	
			Socket	SR Thread	Socket	SR Thread			PVC	CPVC
1/2	5	3-7/16	5-1/8	5-1/2	6-7/8	7	2-1/2	1-5/8	.49	.53
3/4	6-3/16	4-1/8	5-7/8	6-7/16	7-7/8	7-7/8	3	2	.80	.85
1	7-5/16	4-7/8	6-1/2	7-3/8	8-3/4	9	3-5/8	2-1/4	1.13	1.20
1-1/4	8-5/8	5-13/16	7-7/16	6-3/16	9-15/16	10-1/8	4-1/4	2-13/16	1.84	1.90
1-1/2	9-3/4	6-5/8	8-3/16	9	10-15/16	10-15/16	4-7/8	3-3/16	2.44	2.52
2	12-7/16	8-15/16	9-7/16	10-13/16	12-7/16	12-13/16	6-3/16	3-1/2	4.33	4.45
3	16-1/6	10-3/4	12-3/16	13-15/16	16	16-3/4	7-5/8	5-1/8	10.35	10.55
4	20-15/16	13-3/4	15-5/16	17-1/2	19-13/16	20-1/2	9-7/8	6-9/16	18.51	18.80

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Progressive Products from Spears® Innovation and Technology



Replacement Parts

NO.	COMPONENT	OTY.	MATERIAL
1	Body[1] (SOC/SR/FLANGE/UNION)	1	PVC/PVC CLEAR/CPVC
2	Screen Support Ring	1	PVC/CPVC
3	Screen	1	PVC/CPVC/SS 316
4	Screen Support Housing	1	PVC/CPVC
5	Housing O-ring	1	EPDM/FKM
6	Bonnet Nut	1	PVC/CPVC
7	Retaining Clip	1	PP
8	Plug O-ring	1	EPDM/FKM
9	Plug	1	PVC/CPVC
10	Union O-ring	2	EPDM/FKM
11	Union Socket End	2	PVC/CPVC
12	Union SR Threaded End	2	PVC/CPVC

1 - Body Includes: Body (1), Spigot Adapters (2), SS Collars (2)
- Flange Body Includes: Body (1), Spigot Hubs (2), Flange Rings (2)
- Union Body Includes: Body (1), Spigot Ends (2), Nuts (2)

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Strainer Pressure Rating psi (MPa)	1/2" - 2"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0-
	3" - 4"	PVC	90 (.70)	85 (.62)	75 (.52)	60 (.41)	40 (.30)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	90 (.70)	85 (.62)	80 (.55)	75 (.52)	70 (.48)	60 (.41)	50 (.34)	45 (.31)	40 (.30)	35 (.24)	30 (.21)	-0-

Drain Plug Tap Size

Y-Strainer Size	Tap Size (NPT)
1/2	1/4 - 18
3/4	1/4 - 18
1	3/8 - 18
1-1/4	1/2 - 14
1-1/2	1 - 11 - 1/2
2	1 - 11 - 1/2
3	1 - 11 - 1/2
4	1 - 11 - 1/2

Y-Strainer C_V

Nominal Size	Plastic Strainer Mesh			
	8	12	20	30
1/2	5.5	5.4	5.3	5.2
3/4	8.2	7.8	7.5	7.2
1	14.3	13.9	13.6	13.3
1-1/4	33.6	32.9	29.4	25.4
1-1/2	43.8	41.6	33.0	32.1
2	50.6	50.0	49.6	48.8
3	75.2	74.6	74.0	73.4
4	169.5	169.0	168.8	168.0

Gallons per minute at 1 psi pressure drop.
Plastic Strainers are perforated PVC or CPVC screens.
Standard is mesh.



Optional gauge shown,
not included with basic unit

Features - PVC, CPVC & PP

Gauge Guards isolate process pressure or vacuum gauges from corrosive or other potentially damaging process media by use of a thin PTFE (standard) FKM, or EPDM diaphragm. This flexible membrane accurately transmits system pressure to gauge connection chamber when properly assembled with gauge and liquid filled. Available in PVC, CPVC or Polypropylene construction with 1/2" x 1/4" or 1/4" x 1/4" inlet x outlet NPT connections.

- PTFE Diaphragm (Standard), FKM or EPDM Available
- Type 316 Stainless Steel Fasteners
- 1/4" NPT Gauge Port with O-ring Seal - No Thread Sealant Required
- 1/4" or 1/2" NPT Pressure Inlet Featuring Spears® Patented Special Reinforced (SR) Female Plastic Thread - Suitable for either Plastic or Metal Male NPT Thread Connection
- Pressure Rated to 235 psi @ 73°F, 16 Bar @ 22°C and Full Vacuum Service
- Mount in Any Position

Note: Elevated service temperatures require system pressure de-rating.

Quick View Gauge Guard Selection

Inlet Size (in.)	PVC Part Numbers[1,2,3,4]		
	Diaphragm		
	PTFE	EPDM	FKM
1/4	G0004-002	G0002-002	G0003-002
1/2	G0004-005	G0002-005	G0003-005

1: Gauge Guard only. Contact Spears® for pre-filled Gauge & Gauge Guard combination units.
2: For CPVC, add the letter "C" to the part number (e.g., G0004-002**C**)
3: For PP, add the letter "P" to the part number (e.g., G0004-002**P**)
4: For Special Reinforced add the letters "SR" to the part number (e.g., G0004-002**SR**)

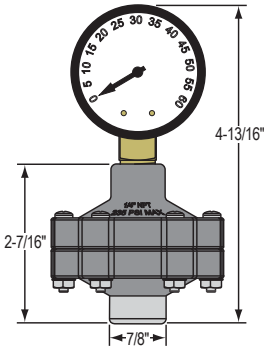
General Installation Information

The Gauge Guard and gauge must be completely filled with a suitable liquid, such as glycerin or distilled water, on the gauge side of the diaphragm in order to accurately transmit system pressure or vacuum. Follow packaged instructions for proper filling and installation. Factory installed Gauge & Gauge Guard units are pre-filled. (Contact Spears® Technical Service for additional information). While PTFE diaphragms generally have a broader range of chemical resistance, FKM or EPDM elastomer diaphragms are more sensitive and should be used in low pressure (i.e., 0-15 psi) and vacuum applications.

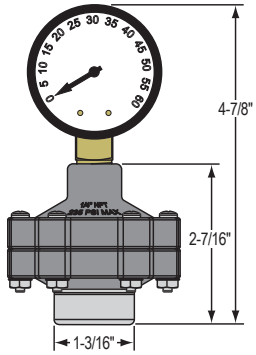
Optional Pre-filled, Factory Installed Gauge & Gauge Guard

Gauge Type	Available Range	Dial	Connection	Housing
Pressure	0-15 psi 0-30 psi 0-60 psi 0-100 psi 0-160 psi 0-200 psi 0-300 psi	Black marking on white face, black dial	1/4 NPT Brass, Bottom Mount	Steel cased, Epoxy enamel finish
Vacuum	0-30 in-Hg			

Dimensions

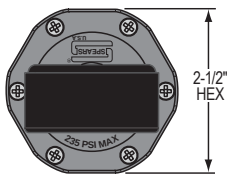


1/4" x 1/4"



1/2" x 1/4"

Top View



Optional gauge shown,
not included with basic unit



Sample Engineering Specification

All thermoplastic Basket Strainers shall be fabricated from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447 material. All O-rings shall be EPDM or FKM. Strainer baskets shall be perforated PVC, CPVC, or type 316 stainless steel, or type 316 stainless steel wire mesh. Standard strainer perforations shall be 1/8" or 3/32" with a minimum open area ratio of 6:1, or specified perforation/mesh opening. Basket strainer sizes 1/2" - 8" shall have quick release clamp retained bonnet, sizes 10" - 12" shall have bolt-on bonnet. Sizes 1-1/4" and larger Basket Strainers shall have pressure release valve and safety pressure gauge. Unit shall be equipped with O-ring sealed drain plug at lower end. Basket Strainer sizes 1/2" - 8" shall be pressure rated at 150 psi, sizes 10" - 12" to 50 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Basket Strainer Selection Chart

Valve Size	O-ring Material	PVC Part Numbers[1,2,3]			Pressure Rating
		Socket	Spigot	Flanged	
1/2	EPDM	BS22P__-005	BS27P__-005	BS23P__-005	150 psi Non-Shock Water @ 73°F
	FKM	BS32P__-005	BS37P__-005	BS33P__-005	
3/4	EPDM	BS22P__-007	BS27P__-007	BS23P__-007	
	FKM	BS32P__-007	BS37P__-007	BS33P__-007	
1	EPDM	BS22P__-010	BS27P__-010	BS23P__-010	
	FKM	BS32P__-010	BS37P__-010	BS33P__-010	
1-1/4	EPDM	BS22P__-012	BS27P__-012	BS23P__-012	
	FKM	BS32P__-012	BS37P__-012	BS33P__-012	
1-1/2	EPDM	BS22P__-015	BS27P__-015	BS23P__-015	
	FKM	BS32P__-015	BS37P__-015	BS33P__-015	
2	EPDM	BS22P__-020	BS27P__-020	BS23P__-020	
	FKM	BS32P__-020	BS37P__-020	BS33P__-020	
2-1/2	EPDM	BS22P__-025	BS27P__-025	BS23P__-025	
	FKM	BS32P__-025	BS37P__-025	BS33P__-025	
3	EPDM	BS22P__-030	BS27P__-030	BS23P__-030	
	FKM	BS32P__-030	BS37P__-030	BS33P__-030	
4	EPDM	BS22P__-040	BS27P__-040	BS23P__-040	
	FKM	BS32P__-040	BS37P__-040	BS33P__-040	
6	EPDM	BS22P__-060	BS27P__-060	BS23P__-060	
	FKM	BS32P__-060	BS37P__-060	BS33P__-060	
8	EPDM	BS22P__-080	BS27P__-080	BS23P__-080	
	FKM	BS32P__-080	BS37P__-080	BS33P__-080	
10	EPDM	BS22P__-100	BS27P__-100	BS23P__-100	50 psi Non-Shock Water @ 73°F
	FKM	BS32P__-100	BS37P__-100	BS33P__-100	
12	EPDM	BS22P__-120	BS27P__-120	BS23P__-120	
	FKM	BS32P__-120	BS37P__-120	BS33P__-120	

Enter Mesh Code in part number blank as specified in table.

(Contact Spears® for additional strainer sizes).

1: For CPVC body & strainer screen unit, replace the letter "P" before the dash separator with the letter "C" and add the letter "C" to the part number (e.g., BS22C8-020**C**)

2: For stainless steel strainer screens, replace the letter "P" (or "C") before the dash separator with the letter "S" (e.g., BS22S8-020; BS22**S**8-020C)

3: For Basket Strainers with PTFE O-rings replace the number 2 with the number 5 (e.g. BS**5**3P-010)

Features – PVC, CPVC

Spears® fabricated Basket Strainers are constructed of heavy bodied PVC or CPVC. Available in IPS sizes 1/2" through 12" with choice of socket, spigot or flanged ends and EPDM, FKM or PTFE encapsulated O-ring seals. A convenient quick release clamp cap is equipped with safety pressure gauge and pressure release ball valve for safer system operation and strainer cleaning. Additional drain plug allows complete drain and flush of unit. Designed to remove unwanted solids from plastic or metal piping systems, Spears® Basket Strainers are ideal for protecting valves, filters, pumps, nozzles or other liquid control devices in corrosive or non-corrosive fluid systems.

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Convenient Quick-Release Clamp For easy Bonnet Removal (Bolt-on Bonnet on Sizes 10" & 12")
- Includes Pressure Release Valve and 0-160 psi Safety Pressure Gauge on sizes 1-1/4" & larger[1] (O-ring sealed plugs provided if valve/gauge not used)
- O-ring Sealed Drain Plug
- EPDM or FKM O-ring Seals
- Perforated PVC & CPVC Strainer Baskets in a Variety of Sizes. Stainless Steel Available in perforation and Multiple Mesh Sizes
- High Volume 6:1 Open Area Ratio
- Sizes 1/2" - 8" Pressure Rated to 150 psi @ 73°F Sizes 10" - 12" Pressure Rated to 50 psi @ 73°F
- Assembled with Silicone-Free Seal Lubricants.

1: Commercial bronze bourdon-tube type pressure gauge w/brass NPT inlet. Check for any chemical compatibility issues. Contact Spears® for PVC, CPVC or PP Gauge Guard isolation devices available.

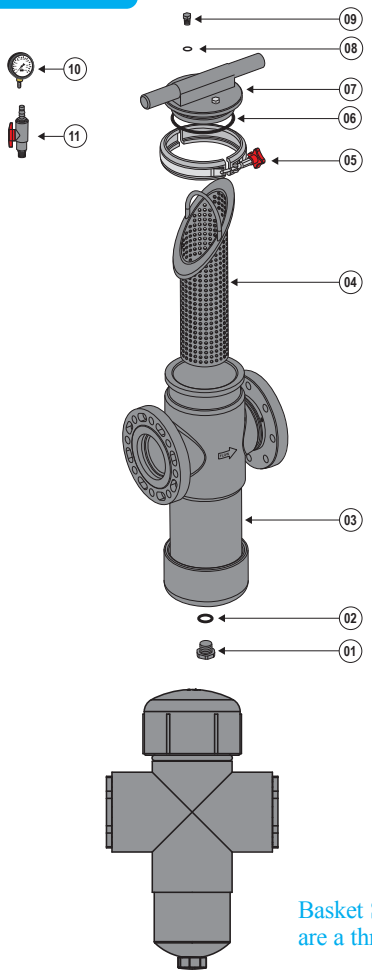
Special Options

- PTFE Encapsulated O-ring Seals
- Bonnet Sight Glass

Perforation Mesh Codes

Perforation Size (in.)	Mesh Code
1/16	12
3/32	8
1/8	6
3/16	4
1/4	3
3/8	2

Example: BS22P**6**-020
Additional perforation and mesh sizes available upon request.

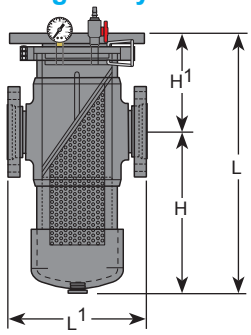


Replacement Parts

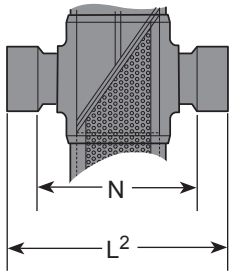
No.	Component	Quantity	Material
1	Drain Plug	1	PVC/CPVC
2	Drain Plug O-ring	1	EPDM/FKM/PTFE
3	Body	1	PVC/CPVC
4	Strainer Basket	1	PVC/CPVC /316 Stainless Steel
5	Bonnet Clamp	1	SS 316
6	Bonnet O-ring	1	EPDM/FKM/PTFE
7	Bonnet	1	PVC/CPVC
8	Plug O-ring	2	EPDM/FKM/PTFE
9	Gauge Port Plug	2	PVC/CPVC
10	Pressure Gauge	1	0-160 psi (1-1/4" & up)
11	Pressure Relief Valve	1	PVC/CPVC (1-1/4" & up)

Notes: 1) Bolt-on Bonnet on Sizes 10" & 12".
2) Port plugs for use when pressure gauge and relief valve are not installed.
3) Valve O-rings correspond to Strainer Basket Specification.

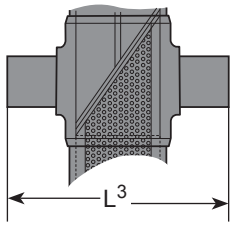
Flanged Style



Socket Style



Spigot Style



Basket Strainer sizes 1/2" through 1" bonnets are a threaded cap with O-ring seal.

Dimensions, Weights & Cv Values

Size	H	H1	L	L1	L2	L3	N	Approx. Wt. (Lbs.)		Cv
								Socket/ Spigot	Flanged	
1/2	5-7/8	4-9/16	10-7/16	9-1/4	6-13/16	9-9/16	5-1/8	2.97	3.35	4.5
3/4	5-7/8	4-9/16	10-7/16	9-1/4	6-7/16	9-7/16	4-7/16	2.99	3.44	10
1	5-7/8	4-9/16	10-7/16	10-3/8	6-13/16	10-1/16	4-1/2	3.02	3.50	15
1-1/4	10-1/4	7-7/8	18-1/8	8-9/16	10-1/16	10-1/4	7-9/16	3.20	3.60	30
1-1/2	10-1/4	7-7/8	18-1/8	8-3/4	11-1/8	11	8-1/8	3.50	3.75	46
2	10-1/4	7-7/8	18-1/8	8-3/4	12-1/8	11	8-5/8	11.00	11.40	72
2-1/2	10-1/4	7-7/8	18-1/8	8-3/4	12-3/8	12-7/8	8-3/8	12.30	12.60	110
3	13-13/16	8-3/4	22-9/16	11-5/8	16-1/8	15	11-5/8	25.00	25.40	172
4	17-5/16	8-3/4	26-1/16	12	18	17-1/2	13-1/2	25.70	26.80	270
6	18-7/8	10-9/16	29-7/16	17-1/8	24-3/8	23-5/16	17-7/8	58.40	60.80	630
8	24-1/2	11-9/16	36-1/16	20-1/2	30-1/2	27-1/2	22	93.60	96.00	750
10	27-1/8	16-5/8	43-3/4	26	34-9/16	34-1/2	24-1/16	200.20	210.30	893
12	34-7/8	17-3/16	52-1/16	28-1/8	38-3/4	36-1/4	26-1/4	229.30	239.80	1063

Cv = Gallons per minute at 1 psi pressure drop.

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 8"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0-
	10" - 12"	PVC	50 (.34)	45 (.31)	40 (.30)	35 (.24)	30 (.21)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	50 (.34)	47 (.32)	45 (.31)	42 (.83)	40 (.30)	37 (.26)	35 (.24)	30 (.21)	25 (.17)	20 (.14)	15 (.10)	-0-



Features – PVC

The Suction Strainer is a special Basket Strainer design that reduces pressure drop, a critical element in suction line applications. While same-size (inlet/outlet) units are available, the enlarged inlet on reducing sizes performs best in suction-line applications.

- Chemical & Corrosion Resistant PVC Construction
- Bolt-on Bonnet with Top Sight Glass, Standard
- Stainless Steel Strainer Basket with 3/16" Perforation, Standard
- Bottom-Drained Internal Strainer Basket for Direct Flushing
- 360° Adjustable Side Mounted Flush-Discharge Valve Assembly
- EPDM Seals Standard
- Pressure rated to 50 psi @ 73°F

Contact Spears® for additional Basket Mesh/Perforation, Elastomer seal options, or other custom requirements desired.

Sample Engineering Specification

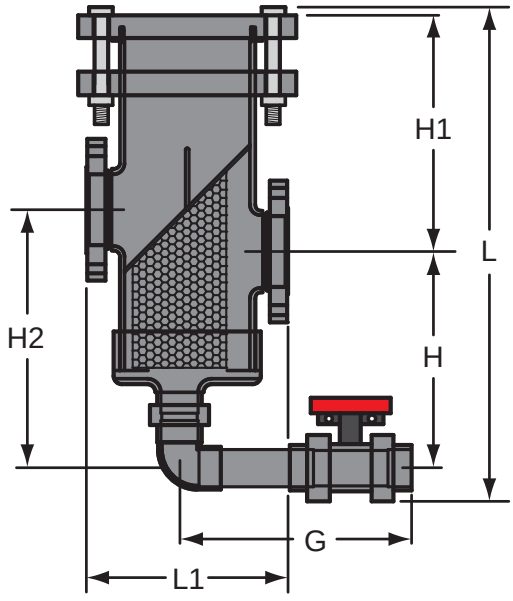
All thermoplastic Suction Strainers shall be fabricated from PVC Type I Cell Classification 12454 material. All O-rings shall be EPDM. Strainer basket shall be type 316 stainless steel. Standard strainer perforations shall be 3/16" with a minimum open area ratio of 6:1. Basket shall have bottom-drained direct discharge with 360° adjustable side discharge assembly, including Ball Valve at terminal end. Unit shall have bolt-on bonnet with built-in sight glass. Suction strainer shall be pressure rated at 50 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Suction Strainer Stainless Steel Baskets 3/16" Perforation

Size	Part Number
4	SSS4-040
6	SSS4-060
8	SSS4-080
10	SSS4-100
12	SSS4-120

Quick-View Suction Strainer Selection Chart

Valve Size	O-ring Material	Part Numbers	Pressure Rating
		Flanged	
4	EPDM	SS23BS4SG-040	50 psi Non-Shock Water @73°F
4 x 2	EPDM	SS23BS4SG-420	
4 x 2-1/2	EPDM	SS23BS4SG-421	
4 x 3	EPDM	SS23BS4SG-422	
6	EPDM	SS23BS4SG-060	
6 x 4	EPDM	SS23BS4SG-532	
8	EPDM	SS23BS4SG-080	
8 x 4	EPDM	SS23BS4SG-582	
8 x 6	EPDM	SS23BS4SG-585	
10	EPDM	SS23BS4SG-100	
10 x 6	EPDM	SS23BS4SG-626	
10 x 8	EPDM	SS23BS4SG-628	
12	EPDM	SS23BS4SG-120	
12 x 8	EPDM	SS23BS4SG-668	
12 x 10	EPDM	SS23BS4SG-670	



Dimensions

Size	G	H	H1	H2	L	L1
4	14-13/16	13-13/16	15-9/16	16-7/16	31-1/2	12-7/8
4 x 2	14-13/16	13-13/16	15-9/16	16-7/16	31-1/2	13-1/2
4 x 2-1/2	14-13/16	13-13/16	15-9/16	16-7/16	31-1/2	12-1/2
4 x 3	14-13/16	13-13/16	15-9/16	16-7/16	31-1/2	12-9/16
6	14-13/16	16-7/8	16-7/8	19-15/16	35-7/8	15-7/8
6 x 4	14-13/16	17-15/16	15-13/16	19-15/16	35-7/8	15-7/8
8	17-15/16	22-1/4	21-13/16	27-7/8	46-1/4	18
8 x 4	17-15/16	24-5/16	19-3/4	27-7/8	46-1/4	18
8 x 6	17-15/16	23-1/4	20-13/16	27-7/8	46-1/4	18-1/8
10	17-15/16	27-13/16	19-11/16	31-11/16	49-11/16	23-15/16
10 x 6	17-15/16	27-13/16	19-11/16	31-11/16	49-11/16	23
10 x 8	17-15/16	27-13/16	19-11/16	31-11/16	49-11/16	22-7/8
12	20-3/16	27-3/16	21-5/8	31-3/16	50-13/16	30
12 x 8	20-3/16	29-1/8	19-9/16	31-3/16	50-13/16	29
12 x 10	20-3/16	28-1/16	20-5/8	31-3/16	50-13/16	29-3/4

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	4" - 12"	PVC	50 (.34)	45 (.31)	40 (.30)	35 (.24)	30 (.21)	-0-	-0-	-0-	-0-	-0-	-0-	-0-

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T-Style Cartridge Filters



Sample Engineering Specification

All sediment filters shall be T-Style cartridge type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, or ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All filters shall have removable Type 304 stainless steel cartridge with [specify from chart] mesh perforation or reinforced screen. All filters shall be pressure rated to 200 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick View T-Style Cartridge Filters Selection Chart

PVC Part Numbers[1]				
Cartridge Filter Mesh[2]	TF Series (Full Size)			
	Standard		Reverse Flow[2]	
	EPDM	FKM	EPDM	FKM
16	TF2-16	TF3-16	TF2-16	TF3-16
32	TF2-32	TF3-32	TF2-32	TF3-32
50	TF2-50	TF3-50	TFR2-50	TFR3-50
76	TF2-76	TF3-76	TFR2-76	TFR3-76
100	TF2-100	TF3-100	TFR2-100	TFR3-100
150	TF2-150	TF3-150	TFR2-150	TFR3-150
200	TF2-200	TF3-200	TFR2-200	TFR3-200
MTF Series (Half-Size)				
16	MTF2-16	MTF3-16	MTF2-16	MTF3-16
32	MTF2-32	MTF3-32	MTF2-32	MTF3-32
50	MTF2-50	MTF3-50	MTFR2-50	MTFR3-50
76	MTF2-76	MTF3-76	MTFR2-76	MTFR3-76
100	MTF2-100	MTF3-100	MTFR2-100	MTFR3-100
150	MTF2-150	MTF3-150	MTFR2-150	MTFR3-150
200	MTF2-200	MTF3-200	MTFR2-200	MTFR3-200

1: For CPVC, Add the letter "C" to the part number (e.g., TF2-16**C**)
2: Mesh sizes 16 and 32 are perforation cartridges. Same cartridge is used for Standard or Reverse Flow filtration. Mesh sizes 50 - 200 are wire cloth screen with perforated stainless steel reinforcement.

Features – PVC, CPVC

In-line T-Style Cartridge Filters provide high capacity filtration of suspended solids, dirt and debris with reusable Type 304 stainless steel filter cartridges in a variety of mesh sizes. Constructed from PVC or CPVC, this special T-style configuration may be easily ganged in parallel for increased flow and filtration capacity. Standard flow (internal-to-external) filter traps sediment inside cartridge while optional reverse flow (external-to-internal) filter traps sediment on outside of cartridge, according to user preference. Available in full-size TF Series or half-size MTF Series units with IPS size 2-1/2" socket - 3" spigot combination inlet/outlet connection that can be easily adapted to other sizes with use of reducer bushings or couplings.

- Provides In-line Protection of Process Equipment
- PVC or CPVC Construction
- EPDM or FKM O-ring Seals
- Heavy, Reinforced Type 304 Stainless Steel Filter Cartridges in Mesh Sizes 16, 32, 50, 76, 100, 150, or 200
- Standard (Internal-to-External) or Reverse Flow (External-to-Internal) Cartridge Design Option
- Bottom Cartridge Removal with Drain Plug for Cleaning, or Bleed-Off Valve Connection
- Installed Units in Parallel for Increased Filtration Capacity
- Pressure Rated to 200 psi @ 73°F
- Assemble with Silicone-Free, Water Soluble Lubricants

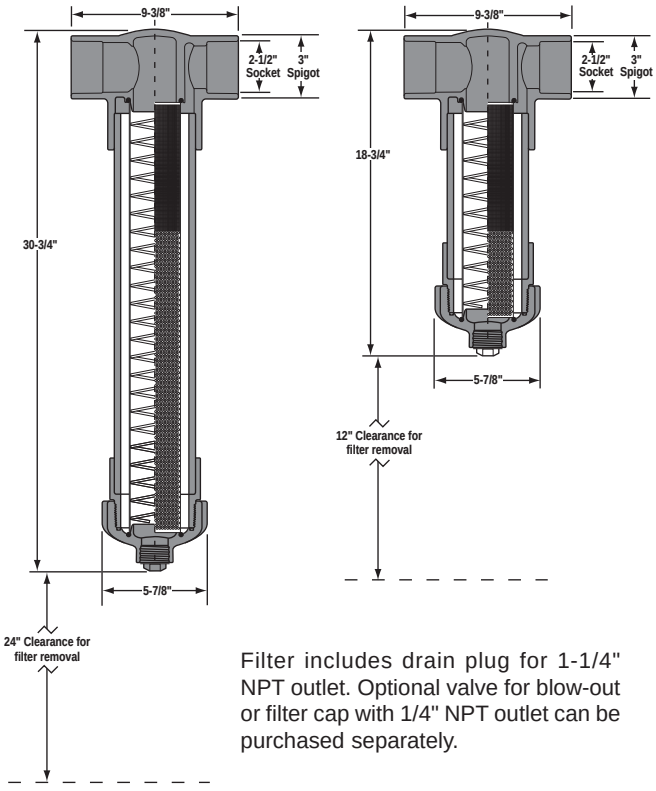
Cartridge Filtration Area

TF Series filter surface area = 214.9 in.^{2} and MTF Series filter surface area = 107.5 in.^{2}. Mesh sizes 16 and 32 are perforated stainless steel, 50 to 200 mesh filters are stainless steel wire cloth with perforated stainless backing and internal wire coil to prevent filter collapse or screen blow-out.

Replacement Filter Cartridges

Mesh Size	Full Size TF Filter Part No.		Half Size MTF Filter Part No.	
	Standard Flow	Reverse Flow	Standard Flow	Reverse Flow
16	FL-16-1	same as Std.	MFL-16-1	same as Std.
32	FL-32-1	same as Std.	MFL-32-1	same as Std.
50	FL-50-1	FLR-50-1	MFL-50-1	MFLR-50-1
76	FL-76-1	FLR-76-1	MFL-76-1	MFLR-76-1
100	FL-100-1	FLR-100-1	MFL-100-1	MFLR-100-1
150	FL-150-1	FLR-150-1	MFL-150-1	MFLR-150-1
200	FL-200-1	FLR-200-1	MFL-200-1	MFLR-200-1

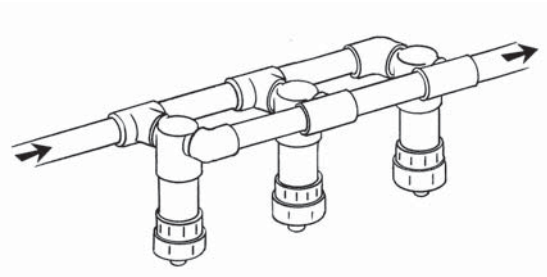
Dimensions



Filter includes drain plug for 1-1/4" NPT outlet. Optional valve for blow-out or filter cap with 1/4" NPT outlet can be purchased separately.

Parallel Filter Installation

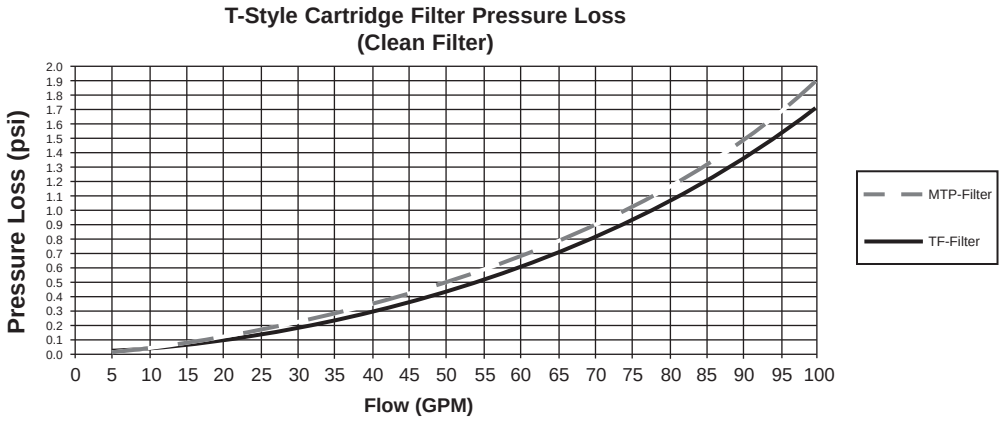
For increased flow or filtration capacity, multiple filters may be installed in parallel as illustrated.



General Installation Information

Avoid installation in direct sun exposure. If required, a white, reflective latex paint coating may be applied to reduce heat absorption. Remove cartridge before solvent cement assembly into system to avoid possible cement contact with screen. Install with proper flow direction as indicated on top of the filter. Be sure to allow clearance in excess of specified space required for removal of cartridge (see drawing notes). Filter drainage or blow-down should be made in normal system flow direction to prevent screen damage. Do not "back flush" unit. Care should be taken in cleaning cartridges to avoid damaging filter screen.

Pressure Loss



Temperature Pressure Rating

System Operating Temperature °F (°C)		100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Filter Pressure Rating psi (MPa)	PVC	200 (1.38)	135 (.93)	120 (.83)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
	CPVC	200 (1.38)	155 (1.07)	140 (.97)	125 (.86)	110 (.76)	100 (.69)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

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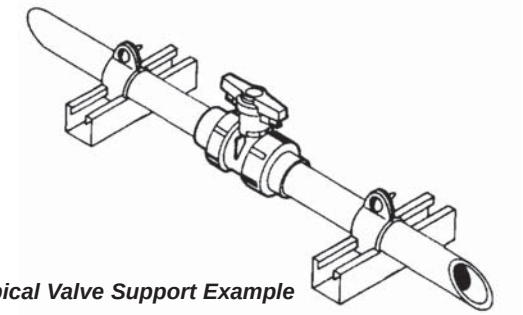
Ease of installation and maintenance is one of the major advantages of using thermoplastic valves. As with any product, certain procedures must be followed for successful installation, service and long life. This section specifies individual installation and maintenance service instructions for Spears® valves. All applicable instructions and procedures should be read thoroughly before starting. Suitability of the intended service application should be determined prior to installation. Please review ***"Material Considerations in Application and System Design"***, in the ***"MATERIALS"*** section of this manual for important additional considerations related valve installations.

Plastic piping systems should be engineered, installed, operated and maintained in accordance with accepted standards and procedures for plastic piping systems. It is absolutely necessary that all design, installation, operation and maintenance personnel be trained in proper handling, installation requirements and precautions for installation and use of plastic piping systems before starting.

Individual valve installation instructions specific to each product type are packaged with product. The following sections of this manual contain safety precautions and procedures for making solvent cement, threaded or flanged joints.

Precautions & Warnings for All Valve, Strainer & Accessories Installations

CAUTION: *The system shall be designed and installed so as not to pull the valve in any direction. Valve and strainers must be supported with conventional piping system support devices.*



Typical Valve Support Example

CAUTION: *All valve connectors and connecting pipe should be inspected for any breaking, chipping, gouging or other visible damage before proceeding. All joining components must be clean and dry. All valves and pipe shall be removed from their packaging or containers and exposed to the environment for a minimum of one hour in order to thermally balance all components. Installation temperatures should be between 40°F and 110°F.*

CAUTION: *All valves with fixed socket end connectors in the body must be installed in the open position to aid in evaporation of solvent vapors which can attack internal components.* ***WARNING: TAKE EXTRA CARE THAT NO PRIMER OR SOLVENT CEMENT IS ALLOWED TO COME IN CONTACT WITH THE BALL OR OTHER INTERNAL VALVE COMPONENTS.***

CAUTION: *Threaded pipe connections require application of a quality grade thread sealant to seal joint assembly. Sealant should be applied to male pipe threads.* ***WARNING: SOME PIPE JOINT COMPOUNDS OR PTFE PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING IN THERMOPLASTIC MATERIALS.***

*Spears® Manufacturing Company recommends the use of Spears® **BLUE 75™** thread sealant which has been tested for compatibility with Spears® products. Please follow the sealant manufacturers' application/installation instructions. Choice of an appropriate thread sealant other than those listed above is at the discretion of the installer.*

CAUTION: ***BEFORE THE VALVE IS CYCLED****, all dirt, sand, grit or other material shall be flushed from the system. This is to prevent scarring of internal components; e.g., ball, cup, wedge, seats, etc.*

WARNING: ***Some Lubricants, including vegetable oils, are known to cause stress cracking in thermoplastic materials.*** *All lubricants should be checked for compatibility with PVC, CPVC or other thermoplastic products. Formulation changes by lubricant manufacturers may alter compatibility of previously acceptable materials and are beyond our control. Choice of lubricant is at the discretion of the installer.*

WARNING: *DO NOT USE COMPRESSED AIR OR GAS TO TEST ANY PVC OR CPVC THERMOPLASTIC PIPING PRODUCT OR SYSTEM, AND DO NOT USE DEVICES PROPELLED BY COMPRESSED AIR OR GAS TO CLEAR SYSTEMS. THESE PRACTICES MAY RESULT IN EXPLOSIVE FRAGMENTATION OF SYSTEM PIPING AND COMPONENTS CAUSING SERIOUS OR FATAL BODILY INJURY. All air must be bled from the system during initial fluid fill. Pressure testing of the system should not be made until all solvent cement joints have properly cured. Initial pressure testing should be made at approximately 10% of the system hydrostatic pressure rating to identify potential problems, prior to testing at higher pressures.*

WARNING: *Systems should not be operated or flushed out at flow velocities greater than 5 feet per second.*

Solvent Cement Welded Joints

Spears® Manufacturing Company recommends following solvent cement manufacturer's recommendations and reading ASTM D 2855, "Standard Practice for Making Solvent-Cemented Joints with Poly Vinyl Chloride (PVC) Pipe and Fittings". This method of joining valves and piping system components is very simple and reliable if procedures are followed correctly. Since variables of temperature, humidity, pipe size, time, and other conditions have a significant effect on solvent cement joints, it is important to understand the principles of each step and make adjustments for actual conditions. Shortcuts or excessive deviations may result in joint failures and / or frozen valve movements.

Safety Precautions

WARNING: **Solvent cements and primers for pipe, fittings and valves are flammable. Extinguish all smoking materials, flames, or other ignition sources in working or storage areas. Be sure to work only in a well-ventilated space. Avoid eye and unnecessary skin contact with all cements, primers or solvents. Ingestion or intentional inhalation of solvent vapors can be harmful or fatal. Additional safety precautions may apply, consult solvent cement manufacturer.**

Selection of Solvent Cement

A wide variety of solvent cements and primers are commercially available. Selection of specific type, grade and consistency of solvent cement should take into account pipe type, size, installation conditions and chemical compatibility of cement and system fluids. Contact solvent cement manufacturer for additional information.

Required Materials

- Saw & miter box or wheel-type cutter
- Pipe deburring & beveling tool or mill file
- Solvent Cement — PVC cement for PVC materials, CPVC cement for CPVC materials; heavy bodied, as manufactured by Spears® Manufacturing Company
- Primer — as manufactured by Spears® Manufacturing Company
- Brush or dauber type cement and primer applicators — select a size no less than 1/2 the pipe diameter (see chart below).
- Use containers — sealable metal or glass to hold cements and primers
- Cotton cleaning rags
- Cleanup solvents — such as tetrahydrofuran (THF) or methylethylketone (MEK)

Recommended Applicator Size for Solvent Cement and Primer

Applicator Type & Size (in.)	Nominal Pipe Size (in.)									
	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	5
Brush*	1/2			1			1-1/2		2	3
Dauber	3/4			1-1/2			Not Recommended			
Roller	Not Recommended							3		

General Procedure Outline

General Preparation

For best results, installation should be made at temperatures between 40°F and 110°F.

All joint components should be inspected for any breaking, chipping, gouging or other visible damage before proceeding. All pipe and fittings should be removed from their packaging or containers and exposed to the installation environment for a minimum of one hour in order to thermally balance all components.

On True Union Ball, Check and Diaphragm valves, remove union nuts and end connectors before priming and cementing connections. With the threads facing the valve, slide the union nut over the pipe to which the end connector socket is to be cemented. Reinstall the valve body and union nuts only after the joint has fully cured.

On valves with fixed socket connections in the body, be sure the valve is in the open position to aid in evaporation of solvent vapors which can attack internal components. **TAKE EXTRA CARE THAT NO PRIMER OR SOLVENT CEMENT IS ALLOWED TO COME IN CONTACT WITH THE BALL OR OTHER INTERNAL VALVE COMPONENTS.**

Step 1: Cut Pipe Square

Pipe ends must be cut square, using a wheel-type cutter or saw & miter box. A fine-toothed hand saw (16-18 teeth / inch) with little or no set is recommended. A power cutoff saw with carbide blade is recommended for high volume cutting.

Step 2: Deburr & Bevel Pipe

Regardless of cutting method used in step 1, burrs are created which must be removed from both the pipe I.D. and O.D. before joining. All pipe ends should be beveled 10° to 15°. Commercially available deburring & beveling tool is recommended, or a mill file may be used.

Step 3: Clean Joint Components

Wipe away all loose dirt and moisture from the pipe O.D. and fitting I.D. with a clean, dry cotton rag. **DO NOT ATTEMPT TO JOIN WET SURFACES.**

Step 4: Check Joint Interference Fit

An interference between pipe and fitting socket is necessary for proper fusion of the joint. To check, lightly insert pipe into fitting socket. **DO NOT FORCE.** Interference between pipe and fitting should occur between 1/3 to 2/3 of the socket depth (full interference fit) and the socket bottom (net fit). Do not use components which improperly mate.

Step 5: Apply Primer

Primer is necessary to penetrate and soften both pipe and fitting socket surfaces in order for the solvent cement to properly bond. **THE MOST FREQUENT CAUSE OF JOINT FAILURES IS INADEQUATE SOLVENT PENETRATION AND SOFTENING OF BONDING SURFACES DURING THE WELDING OPERATION.**

1. Using a brush or applicator size no less than 1/2 the pipe diameter, apply a liberal coat of primer with a scrubbing motion to the fitting socket until the surface is softened and semi-fluid. This may take 5 to 15 seconds depending on size and temperature (larger diameters and lower temperatures will increase required time).
2. Apply primer to pipe in the same manner, extending application area to slightly more than the insertion depth into the fitting socket.
3. Apply a second coat to both the fitting socket and the pipe.
4. Check penetration and softening by scraping the primed surfaces. A few thousandths of the semi-fluid surface should be easily removed. Repeat primer application if necessary.

Step 6: Apply Solvent Cement

Solvent cement must be applied **IMMEDIATELY** to primed surfaces before the primer dries in an alternating 3-coat application. Using a brush or applicator size no less than 1/2 the pipe diameter, apply a liberal coat of solvent cement to the primed pipe surface, then apply a light to medium coat to the primed fitting socket. If a "net fit" was experienced during dry fit check (Step 4), apply an additional coat again to the pipe surface. BE SURE TO USE A VERY LIBERAL AMOUNT OF SOLVENT CEMENT ON PIPE.

VALVE INSTALLATION CAUTION: TAKE EXTRA CARE THAT NO PRIMER OR SOLVENT CEMENT IS ALLOWED TO CONTACT THE BALL OR OTHER INTERNAL VALVE COMPONENTS.

Step 7: Join Components

IMMEDIATELY following application of cement and before it starts to set, insert the pipe into the fitting socket with a one-quarter turn, twisting motion to evenly distribute cement within the joint. A full bead of cement should form around the circumference of the joint. Hold joint together for approximately 30 seconds to make sure the pipe does not move or back out of the socket.

CAUTION: *ABSENCE OF BEAD FORMATION, VOIDS, OR GAPS IN THE BEAD ARE A SIGN OF INSUFFICIENT CEMENT APPLICATION. IF SUCH IS OBSERVED, IMMEDIATELY PULL THE JOINT APART AND REAPPLY AN ADEQUATE AMOUNT OF CEMENT.*

Step 8: Remove Excess Cement

Using a cloth, wipe clean all excess cement from the exterior juncture of the pipe and fitting.

Step 9: Initial Set Time

The joint must not be handled or moved for a minimum of 2 minutes, after which the joint must be handled carefully until the cement has gone through a set period. Recommended minimum set time:

30 minutes minimum at 60° to 100°F (15° to 40°C)
1 hour minimum at 40° to 60°F (5° to 15°C)
2 hours minimum at 20° to 40°F (-5° to 5°C)
4 hours minimum at 0° to 20°F (-20° to -5°C)

Step 10: Joint Cure Time

The joint must adequately cure prior to use (see "Joint Cure Schedule" table below). Required cure time depends on temperature, pipe diameter, and pressure application. The following table is based on the guidelines of ASTM D 2855, "Standard Practice for Making Solvent-Cemented Joints with Poly Vinyl Chloride (PVC) Pipe and Fittings". It is the user's responsibility and risk in determining that the joint has properly cured for handling, testing, and use.

Joint Cure Schedule

Temperature	60° - 100°F		40° - 60°F		20° - 40°F		10° - 20°F	
Nominal Pipe Size (in.)	Test Pressure (psi) 0-180	181-315	Test Pressure (psi) 0-180	181-315	Test Pressure (psi) 0-180	181-315	Test Pressure (psi) 0-180	181-315
1/2 to 1-1/4	1 hour	6 hours	2 hours	12 hours	6 hours	36 hours	8 hours	48 hours
1-1/2 to 3	2 hours	12 hours	4 hours	24 hours	12 hours	72 hours	16 hours	96 hours
3-1/2 to 5	6 hours	18 hours	12 hours	36 hours	36 hours	4 days	72 hours	8 days
6 to 8	8 hours	24 hours	16 hours	48 hours	3 days	9 days	4 days	12 days

NOTE: *Extreme caution should be used when solvent cementing joints at temperatures below 10°F, and many variables exist at temperatures below 20°F. Relative humidity greater than 50% will increase required cure times specified. Consult solvent cement manufacturer for additional information.*

Threaded joints are used where piping system dismantling for occasional cleaning or modification is anticipated. Since threading reduces the effective wall thickness of pipe, pressure ratings of the pipe are reduced to one-half that of unthreaded pipe using solvent cement welded joints. Valves, however, have individual pressure ratings substantially different from that of pipe. As a result, no reduction in the valve's specified pressure rating is necessary for threaded connections. Threaded systems should be made with Schedule 80 pipe only, threaded with an ANSI general purpose tapered pipe thread (NPT). Schedule 40 pipe should not be threaded.

General Procedure Outline

Step 1: Apply Joint Sealant

Threaded connections require application of a quality grade thread sealant to seal joint assembly.

WARNING: ***SOME PIPE JOINT COMPOUNDS OR PTFE PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING IN THERMOPLASTIC MATERIALS. Spears® Manufacturing Company recommends the use of Spears® BLUE 75™*** thread sealant which has been tested for compatibility with Spears® products. Please follow the sealant manufacturers' application / installation instructions. Choice of an appropriate thread sealant other than those listed above is at the discretion of the installer.

Step 2: Assemble Joint by Hand

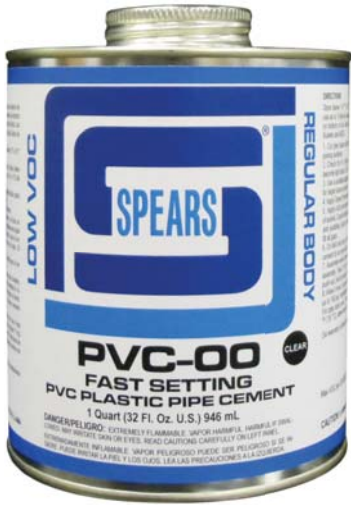
Threaded pipe and valves or fittings should be initially assembled "finger tight" (just enough to fully engage thread clearance).

Step 3: Strap Wrench Make-Up

Threaded plastic pipe and fitting components should always be installed using commercially available strap wrenches. Do not use conventional pipe wrenches which can damage plastic piping materials.

WARNING: ***THE SINGLE MOST COMMON CAUSE OF THREADED JOINT FAILURE IS OVER TIGHTENING.*** *Tapered pipe threads produce radial stress in female fittings. Over tightening can exceed the stress limits of thermoplastic materials, resulting in split fittings.*

Apply strap wrench make-up of ***no more than one to two turns*** beyond finger tight thread engagement. Care should be taken in final positioning so as to avoid the need to "back-up" the wrenched assembly.





Flanged Connections

Flanges are used extensively for connections where removable system components are desired. Such includes periodic system servicing, anticipated system modification or add-on, and temporary component hookups. Flanges are also the standard connection for industrial butterfly type valves.

Pressure Ratings

Plastic pipe flanges are designed for system maximum internal pressures of 150 psi, water at 73°F, which must be taken into consideration when using flanges with higher pressure rated components, such as pipe or valves. As with all thermoplastic piping materials, pressure rating is a function of temperature. Refer to ***"Temperature Pressure Rating for 150 psi Flanges"*** chart below and that specified for individual products. Certain variations may exist according to product type and size.

Bolt Holes & Pattern

Bolt patterns and number of bolt holes are the same as Class 150 metal flanges per ANSI B16.5.

Gaskets

Full faced, 1/8" thick elastomer gaskets with a Shore "A" Durometer of approximately 70 is recommended.

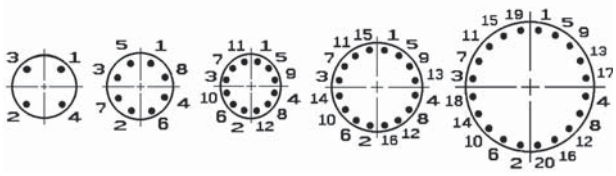
Bolt Torque

Recommended Bolt torque requirements are shown below. Threads should be clean and well lubricated. Actual field conditions may require variations in these recommendations. **CAUTION: UNNECESSARY OVER TORQUING WILL DAMAGE THE FLANGE.**

Flange Size (in.)	Recommended Torque (ft. lbs.)
1/2 - 1-1/2	12
2 - 4	25
5	30
6 - 8	40
10	64
12	95
14 - 24	110

Torque Sequence

Bolts should be tightened in a 180° opposing pattern. Recommended bolt torque sequence is shown in the following table.



General Procedure Outline

Once a flange is attached to the pipe or valve, the method of joining two flanges is as follows:

Step 1: Piping runs joined to the flanges must be installed in a straight line position to the flange to avoid stress at the flange due to misalignment. Piping must also be secured and supported to prevent lateral movement which can create stress and damage the flange.

Step 2: With gasket in place, align the bolt holes of the mating flanges by rotating the ring into position. (Consideration should be given to alignment of One-Piece Flange prior to joining with pipe.)

Step 3: Insert all bolts, washers (two standard flat washers per bolt), and nuts.

Step 4: Make sure the faces of the mating surfaces are flush against gasket prior to bolting down the flanges.

Step 5: Tighten the nuts by hand until they are snug. Establish uniform pressure over the flange face by tightening the bolts in 5 ft.-lbs. increments according to the sequence shown in the above table following a 180° opposing sequence.

Step 6: Care must be taken to avoid "bending" the flange when joining a Spears® flange to a "raised face" flange, or a wafer-style valve. Do not use bolts to bring together improperly mated flanges.

Temperature Pressure Rating

System Operating Temperature °F (°C)		100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Flange Pressure Rating psi (MPa)	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
	CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	PP	150 (1.03)	105 (.72)	90 (.62)	80 (.55)	65 (.45)	50 (.34)	45 (.31)	30 (.21)	20 (.14)	-0- (-0-)	-0- (-0-)	-0- (-0-)

Valve Service & Replacement Kits

For easy servicing and extended valve life, Spears® provides numerous maintenance repair kits and replaceable components for all repairable valves. Repair Kits generally include applicable seats, O-ring seals, diaphragms and other components typically subjected to normal operational wear.

Full Cartridge Replacement Kits are available for all True Union style ball valves and ball check valves. These include complete valve assembly, less union nuts and end connectors. Replacement Cartridges can be directly installed in place of existing valve unit using existing union nuts and end connectors.

Individual valve replacement parts may be ordered from the factory. Complete maintenance service instructions for each valve are available. Please contact Spears® Technical Services Department.

True Union 2000 Industrial Ball Valve
Seat & O-ring Repair Kit

All kits include PTFE Seats (2), End Connector O-rings (2), Seal Carrier O-ring (1), Stem Bushing (1) and Stem O-rings (2). Sizes 2-1/2" & larger includes Seat O-rings (2).

Size	Part Number	
	w/EPDM O-rings	w/FKM O-rings
1/2	TU2-ERK-005	TU2-VRK-005
3/4	TU2-ERK-007	TU2-VRK-007
1	TU2-ERK-010	TU2-VRK-010
1-1/4	TU2-ERK-012	TU2-VRK-012
1-1/2	TU2-ERK-015	TU2-VRK-015
2	TU2-ERK-020	TU2-VRK-020
2-1/2 & 3	TU2-ERK-030	TU2-VRK-030
4	TU2-ERK-040	TU2-VRK-040
6	TU2-ERK-060	TU2-VRK-060

True Union 2000 Industrial Ball Valve
Cartridge Replacement Kit

Includes valve assembly, less union nuts and end connectors.

Size	PVC Part Number[1]	
	w/EPDM O-rings	w/FKM O-rings
1/2	1820-005	1830-005
3/4	1820-007	1830-007
1	1820-010	1830-010
1-1/4	1820-012	1830-012
1-1/2	1820-015	1830-015
2	1820-020	1830-020
2-1/2 & 3	1820-030	1830-030
4	1820-040	1830-040
6	1820-060	1830-060

1: For CPVC Cartridge Kit, add the letter "C" to the part numbers listed (e.g. 1820-005**C**).

True Union 2000 Standard Ball Valve
Seat & O-ring Repair Kit

All kits include PTFE/HDPE Seats (2), End Connector O-rings (2), Seal Carrier O-ring (1), and Stem O-rings (2).

Size	Part Number	
	w/EPDM O-rings	w/FKM O-rings
1/2	TU1-ERK-005	TU1-VRK-005
3/4	TU1-ERK-007	TU1-VRK-007
1	TU1-ERK-010	TU1-VRK-010
1-1/4	TU1-ERK-012	TU1-VRK-012
1-1/2	TU1-ERK-015	TU1-VRK-015
2	TU1-ERK-020	TU1-VRK-020
2-1/2 & 3	TU1-ERK-030	TU1-VRK-030
4	TU1-ERK-040	TU1-VRK-040

True Union 2000 Standard Ball Valve
Cartridge Replacement Kit

Includes valve assembly, less union nuts and end connectors.

Size	PVC Part Number[1]	
	w/EPDM O-rings	w/FKM O-rings
1/2	3620-005	3630-005
3/4	3620-007	3630-007
1	3620-010	3630-010
1-1/4	3620-012	3630-012
1-1/2	3620-015	3630-015
2	3620-020	3630-020
2-1/2 & 3	3620-030	3630-030
4	3620-040	3630-040

1: For CPVC Cartridge Kit, add the letter "C" to the part numbers listed (e.g. 3620-005**C**).

True Union 2000 Industrial 3-Way Ball Valve

Seat & O-ring Repair Kit (Horizontal or Vertical)

All kits include PTFE Seats (2-no branch seal), End Connector O-rings (3), Seal Carrier O-ring (1), Stem Bushing (1) and Stem O-rings (2). Sizes 2-1/2" & larger includes Seat O-rings (2).

Size	Part Number	
	w/EPDM O-rings	w/FKM O-rings
1/2	TU3-ERK-005	TU3-VRK-005
3/4	TU3-ERK-007	TU3-VRK-007
1	TU3-ERK-010	TU3-VRK-010
1-1/4	TU3-ERK-012	TU3-VRK-012
1-1/2	TU3-ERK-015	TU3-VRK-015
2	TU3-ERK-020	TU3-VRK-020
2-1/2 & 3	TU3-ERK-030	TU3-VRK-030
4	TU3-ERK-040	TU3-VRK-040

True Union 2000 Industrial Ball Check Valve

O-ring Repair Kit

All kits include End Connector O-rings (2), Seal Carrier O-ring (1), Seat Plate O-ring (1).

Size	Part Number	
	w/EPDM O-rings	w/FKM O-rings
1/2	CK2-ERK-005	CK2-VRK-005
3/4	CK2-ERK-007	CK2-VRK-007
1	CK2-ERK-010	CK2-VRK-010
1-1/4	CK2-ERK-012	CK2-VRK-012
1-1/2	CK2-ERK-015	CK2-VRK-015
2	CK2-ERK-020	CK2-VRK-020
2-1/2 & 3	CK2-ERK-030	CK2-VRK-030
4	CK2-ERK-040	CK2-VRK-040
6	CK2-ERK-060	CK2-VRK-060

Regular True Union Ball Valve

Seat & O-ring Repair Kit

All kits include End Connector O-rings (2), Seal Carrier O-ring (1), Stem Bushing (1) and Seat O-ring (1).

Size	Part Number	
	w/EPDM O-rings	w/FKM O-rings
1/2	TU-ERK-005	TU-VRK-005
3/4	TU-ERK-007	TU-VRK-007
1	TU-ERK-010	TU-VRK-010
1-1/4	TU-ERK-012	TU-VRK-012
1-1/2	TU-ERK-015	TU-VRK-015
2	TU-ERK-020	TU-VRK-020
2-1/2 & 3	TU-ERK-030	TU-VRK-030
4 & 6	TU-ERK-040	TU-VRK-040

True Union 2000 Industrial 3-Way Ball Valve

Cartridge Replacement Kit

Includes valve assembly, less union nuts and end connectors.

Size	Vertical PVC Part Number[1,2,5]		Horizontal PVC Part Number[1,2,3,4]	
	w/EPDM O-rings	w/FKM O-rings	w/EPDM O-rings	w/FKM O-rings
1/2	4720L1-005	4730L1-005	5020L1-005	5030L1-005
3/4	4720L1-007	4730L1-007	5020L1-007	5030L1-007
1	4720L1-010	4730L1-010	5020L1-010	5030L1-010
1-1/4	4720L1-012	4730L1-012	5020L1-012	5030L1-012
1-1/2	4720L1-015	4730L1-015	5020L1-015	5030L1-015
2	4720L1-020	4730L1-020	5020L1-020	5030L1-020
2-1/2 & 3	4720L1-030	4730L1-030	5020L1-030	5030L1-030
4	4720L1-040	4730L1-040	5020L1-040	5030L1-040

1: For CPVC Cartridge Kit, add the letter "C" to the part numbers listed (e.g. 4720L1-005**C**).
2: For Double L-Port, change "L1" portion of part number to L2 (e.g. 4720**L2**-005).
3: For Tripple L-Port, change "L1" portion of part number to L3 (e.g. 4720**L3**-005).
4: For T-Port, change "L1" portion of part number to "T" (e.g. 4720**T**-005).

True Union 2000 Industrial Ball Check Valve

Cartridge Replacement Kit

Includes valve assembly, less union nuts and end connectors.

Size	PVC Part Number[1]	
	w/EPDM O-rings	w/FKM O-rings
1/2	4520-005	4530-005
3/4	4520-007	4530-007
1	4520-010	4530-010
1-1/4	4520-012	4530-012
1-1/2	4520-015	4530-015
2	4520-020	4530-020
2-1/2 & 3	4520-030	4530-030
4	4520-040	4530-040
6	4520-060	4530-060

1: For CPVC Cartridge Kit, add the letter "C" to the part numbers listed (e.g. 4520-005**C**).

Regular True Union Ball Check Valve

O-ring Repair Kit

Includes ball seal O-ring (1), end-connector O-rings (2), and seal carrier O-ring (1).

Size	Part Number	
	w/EPDM O-rings	w/FKM O-rings
1/2	CK-ERK-005	CK-VRK-005
3/4	CK-ERK-007	CK-VRK-007
1	CK-ERK-010	CK-VRK-010
1-1/4	CK-ERK-012	CK-VRK-012
1-1/2	CK-ERK-015	CK-VRK-015
2	CK-ERK-020	CK-VRK-020
2-1/2 & 3	CK-ERK-030	CK-VRK-030
4	CK-ERK-040	CK-VRK-040

Regular True Union Ball Valve
Cartridge Replacement Kit

Includes valve assembly, less union nuts, and end connectors.

Size	PVC Part Number[1]	
	w/EPDM O-rings	w/FKM O-rings
1/2	2320-005	2330-005
3/4	2320-007	2330-007
1	2320-010	2330-010
1-1/4	2320-012	2330-012
1-1/2	2320-015	2330-015
2	2320-020	2330-020
2-1/2 & 3	2320-030	2330-030
4 & 6	2320-040	2330-040

1 For CPVC Cartridge Kit, add the letter "C" to part numbers listed (e.g., 2320-005**C**).

Regular True Union Ball Check Valve
Cartridge Replacement Kit

Includes valve assembly, less union nuts, and end connectors.

Size	PVC Part Number[1]	
	w/EPDM O-rings	w/FKM O-rings
1/2	2220-005	2230-005
3/4	2220-007	2230-007
1	2220-010	2230-010
1-1/4	2220-012	2230-012
1-1/2	2220-015	2230-015
2	2220-020	2230-020
2-1/2 & 3	2220-030	2230-030
4	2220-040	2230-040

1 For CPVC Cartridge Kit, add the letter "C" to part numbers listed (e.g., 2220-005**C**).

Single Entry Ball Valve
Seat & O-ring Replacement Kit

Includes PTFE seats (2), seat O-rings (2), and seal carrier O-ring (1).

Size	Part Number		
	w/Buna-N O-rings	w/EPDM O-rings	w/FKM O-rings
1/2	SE-BRK-005	SE-ERK-005	SE-VRK-005
3/4	SE-BRK-007	SE-ERK-007	SE-VRK-007
1	SE-BRK-010	SE-ERK-010	SE-VRK-010
1-1/4 & 1-1/2	SE-BRK-015	SE-ERK-015	SE-VRK-015
2	SE-BRK-020	SE-ERK-020	SE-VRK-020
3	SE-BRK-030	SE-ERK-030	SE-VRK-030
4	SE-BRK-040	SE-ERK-040	SE-VRK-040

Gate Valve
O-ring Repair Kit

1/2" through 2" Kit includes stem O-ring (1), body O-ring (1), wedge O-ring or gasket (1), stem bushing (1) and stem washer (1).
2" and 3" Kit includes seal carrier O-ring (1), stem O-ring (1), stem washer (1) and stem bushing (1).
4" Kit includes carrier O-ring (1), stem O-ring (1) and stem bushing.

Size	Part Number		
	w/Buna-N O-rings	w/EPDM O-rings	w/FKM O-rings
1/2	GT-BRK-005	GT-ERK-005	GT-VRK-005
3/4	GT-BRK-007	GT-ERK-007	GT-VRK-007
1	GT-BRK-010	GT-ERK-010	GT-VRK-010
1-1/4	GT-BRK-012	GT-ERK-012	GT-VRK-012
1-1/2	GT-BRK-015	GT-ERK-015	GT-VRK-015
2	GT-BRK-020	GT-ERK-020	GT-VRK-020
2-1/2 & 3	GT-BRK-030	GT-ERK-030	GT-VRK-030
4	GT-BRK-040	GT-ERK-040	GT-VRK-040

Gate Valve
Internal Replacement Cartridge

Includes complete internal assembly with bonnet and handle.

Size	Part Number[1]		
	w/Buna-N O-rings	w/EPDM O-rings	w/FKM O-rings
1/2	2010-005	2020-005	2030-005
3/4	2010-007	2020-007	2030-007
1	2010-010	2020-010	2030-010
1-1/4 & 1-1/2	2010-015	2020-015	2030-015
2	2010-020	2020-020	2030-020

1 For CPVC Cartridge Kit, add the letter "C" to part numbers listed (e.g., 2010-005**C**).

Butterfly Valve
Standard & True Lug Seat Repair Kit

Standard Valve and True Lug Kit through 12" includes Buna-N, EPDM or FKM seat (1) and PVC or CPVC seal carrier (1).

Sizes 14" and larger include EPDM or FKM seat only.

Size	PVC Part Number[1,2]		
	w/Buna-N	w/EPDM	w/FKM
1-1/2	BF-BRK-015	BF-ERK-015	BF-VRK-015
2	BF-BRK-020	BF-ERK-020	BF-VRK-020
2-1/2	BF-BRK-025	BF-ERK-025	BF-VRK-025
3	BF-BRK-030	BF-ERK-030	BF-VRK-030
4	BF-BRK-040	BF-ERK-040	BF-VRK-040
6	BF-BRK-060	BF-ERK-060	BF-VRK-060
8	BF-BRK-080	BF-ERK-080	BF-VRK-080
10	BF-BRK-100	BF-ERK-100	BF-VRK-100
12	BF-BRK-120	BF-ERK-120	BF-VRK-120
14	—	BF-ERK-140	BF-VRK-140
16	—	BF-ERK-160	BF-VRK-160
18	—	BF-ERK-180	BF-VRK-180
20	—	BF-ERK-200	BF-VRK-200
24	—	BF-ERK-240	BF-VRK-240

1: For CPVC Seat Replacement Kit, add a “C” to the end of the part number shown (e.g., BF-BRK-015**C**).
2: For PP, add a “P” to the end of the part number (e.g., BF-BRK-015**P**).

Butterfly Valve
Standard Valve Overhaul Kit

For standard sizes through 12" includes stem nut (1), stem bushing (1), bushing O-ring (2), stem O-ring (2), stem washer - hex (1), stem washer - round (1), timing stop (1), seat (1), seal carrier (1), disc O-ring (2) and stem bearing (1).

Sizes 14" and larger includes stem nut (1) 14" only, stem bearing (1), bearing O-ring (1), stem bushing (1), bushing O-ring (3), seal carrier (1), seat (1) and stem O-ring (2) 16" and larger only.

Size	PVC Part Number[1,2]		
	w/Buna-N	w/EPDM	w/FKM
1-1/2	BF-BOK-015	BF-EOK-015	BF-VOK-015
2	BF-BOK-020	BF-EOK-020	BF-VOK-020
2-1/2	BF-BOK-025	BF-EOK-025	BF-VOK-025
3	BF-BOK-030	BF-EOK-030	BF-VOK-030
4	BF-BOK-040	BF-EOK-040	BF-VOK-040
6	BF-BOK-060	BF-EOK-060	BF-VOK-060
8	BF-BOK-080	BF-EOK-080	BF-VOK-080
10	BF-BOK-100	BF-EOK-100	BF-VOK-100
12	BF-BOK-120	BF-EOK-120	BF-VOK-120
14	—	BF-EOK-140	BF-VOK-140
16	—	BF-EOK-160	BF-VOK-160
18	—	BF-EOK-180	BF-VOK-180
20	—	BF-EOK-200	BF-VOK-200
24	—	BF-EOK-240	BF-VOK-240

1: CPVC Standard Valve Overhaul Kit available through 12" only. Add a “C” to the end of the part number shown (e.g., BF-BOK-015**C**).
2: For PP, add a “P” to the end of the part number (e.g., BF-BOK-015**P**).

Important Repair & Overhaul Kit Note

Ongoing Butterfly Valve design improvements have resulted in variations to repair kits. Standard cataloged kits are for current 72 part number series, dry-stem type valve revision. Kits for previous revisions are available and can be determined by valve serial number. When ordering kits, please specify valve size, material (PVC, CPVC, PP), Standard or True Lug type valve, Buna-N, EPDM or FKM elastomer material, and valve serial number stamped on the bottom of the valve body to insure proper kit selection. Stainless Steel Stems are normally not replaced, but can be ordered separately on request.

Butterfly Valve
True Lug Valve Overhaul Kit

Includes stem nut (1), stem bushing (1), bushing O-ring (1), stem O-ring (1), stem washer - hex (1), stem washer - round (1), timing stop (1), seat (1), seal carrier (1), seal carrier, flange O-ring (1), disc O-ring (2) and stem bearing (1).

Size	PVC Part Number[1]		
	w/Buna-N	w/EPDM	w/FKM
1-1/2	BFT-BOK-015	BFT-EOK-015	BFT-VOK-015
2	BFT-BOK-020	BFT-EOK-020	BFT-VOK-020
2-1/2	BFT-BOK-025	BFT-EOK-025	BFT-VOK-025
3	BFT-BOK-030	BFT-EOK-030	BFT-VOK-030
4	BFT-BOK-040	BFT-EOK-040	BFT-VOK-040
6	BFT-BOK-060	BFT-EOK-060	BFT-VOK-060
8	BFT-BOK-080	BFT-EOK-080	BFT-VOK-080
10	BFT-BOK-100	BFT-EOK-100	BFT-VOK-100
12	BFT-BOK-120	BFT-EOK-120	BFT-VOK-120

1: For CPVC True Lug Valve Overhaul Kit, add a “C” to the end of the part number shown (e.g., BFT-BOK-015**C**).

Butterfly Valve
True Lug Valve Overhaul Kit with Disc

Includes stem nut (1), stem bushing (1), bushing O-ring (1), stem O-ring (1), stem washer - hex (1), stem washer - round (1), timing stop (1), seat (1), seal carrier (1) seal carrier flange O-ring (1), disc (1), disc O-ring (2) and stem bearing (1).

Size	Part Number[1]		
	w/Buna-N	w/EPDM	w/FKM
1-1/2	BFT-BOKD-015	BFT-EOKD-015	BFT-VOKD-015
2	BFT-BOKD-020	BFT-EOKD-020	BFT-VOKD-020
2-1/2	BFT-BOKD-025	BFT-EOKD-025	BFT-VOKD-025
3	BFT-BOKD-030	BFT-EOKD-030	BFT-VOKD-030
4	BFT-BOKD-040	BFT-EOKD-040	BFT-VOKD-040
6	BFT-BOKD-060	BFT-EOKD-060	BFT-VOKD-060
8	BFT-BOKD-080	BFT-EOKD-080	BFT-VOKD-080
10	BFT-BOKD-100	BFT-EOKD-100	BFT-VOKD-100
12	BFT-BOKD-120	BFT-EOKD-120	BFT-VOKD-120

1: For CPVC True Lug Valve Overhaul Kit with Disc, add a “C” to the end of the part number shown (e.g., BFT-BOKD-015**C**).

Butterfly Valve
Standard Valve Overhaul Kit with Disc

For standard sizes through 12" includes stem nut (1), stem bushing (1), bushing O-ring (2), stem O-ring (2), stem washer - hex (1), stem washer - round (1), timing stop (1), seat (1), seal carrier (1), disc (1), disc O-ring (2) and stem bearing (1).

Sizes 14" and larger includes stem nut (1) 14" only, stem bearing (1), bearing O-ring (1), stem bushing (1), bushing O-ring (3), disc (1), seal carrier (1), seat (1) and stem O-ring (2) 16" and larger only.

Size	Part Number[1,2]		
	w/Buna-N	w/EPDM	w/FKM
1-1/2	BF-BOKD-015	BF-EOKD-015	BF-VOKD-015
2	BF-BOKD-020	BF-EOKD-020	BF-VOKD-020
2-1/2	BF-BOKD-025	BF-EOKD-025	BF-VOKD-025
3	BF-BOKD-030	BF-EOKD-030	BF-VOKD-030
4	BF-BOKD-040	BF-EOKD-040	BF-VOKD-040
6	BF-BOKD-060	BF-EOKD-060	BF-VOKD-060
8	BF-BOKD-080	BF-EOKD-080	BF-VOKD-080
10	BF-BOKD-100	BF-EOKD-100	BF-VOKD-100
12	BF-BOKD-120	BF-EOKD-120	BF-VOKD-120
14	—	BF-EOKD-140	BF-VOKD-140
16	—	BF-EOKD-160	BF-VOKD-160
18	—	BF-EOKD-180	BF-VOKD-180
20	—	BF-EOKD-200	BF-VOKD-200
24	—	BF-EOKD-240	BF-VOKD-240

1: CPVC Standard Valve Overhaul Kit available through 12" only. Add a "C" to the end of the part number shown (e.g., BF-BOKD-015**C**).
2: For PP, add a "P" to the end of the part number (e.g., BF-BOKD-O15**P**).

Wafer Butterfly Valve
Overhaul Kit

All Kits include Seat (1), Flange Gaskets (2), Stem Bushing O-rings (2), Bushing Washers (2), Stem Bushings (2).

Size	Part Number		
	w/Buna-N	w/EPDM	w/FKM
2	BFW-BOK-020	BFW-EOK-020	BFW-VOK-020
2-1/2	BFW-BOK-025	BFW-EOK-025	BFW-VOK-025
3	BFW-BOK-030	BFW-EOK-030	BFW-VOK-030
4	BFW-BOK-040	BFW-EOK-040	BFW-VOK-040
6	BFW-BOK-060	BFW-EOK-060	BFW-VOK-060
8	BFW-BOK-080	BFW-EOK-080	BFW-VOK-080
10	BFW-BOK-100	BFW-EOK-100	BFW-VOK-100
12	BFW-BOK-120	BFW-EOK-120	BFW-VOK-120

Wafer Butterfly Valve
Overhaul Kit w/Disc

All Kits include Seat (1), Flange Gaskets (2), Stem Bushing O-rings (2), Stem Bushing Washers (2), Stem Bushings (2), Replacement Disc (1).

Size	Part Number[1]		
	w/Buna-N	w/EPDM	w/FKM
2	BFW-BOKD-020	BFW-EOKD-020	BFW-VOKD-020
2-1/2	BFW-BOKD-025	BFW-EOKD-025	BFW-VOKD-025
3	BFW-BOKD-030	BFW-EOKD-030	BFW-VOKD-030
4	BFW-BOKD-040	BFW-EOKD-040	BFW-VOKD-040
6	BFW-BOKD-060	BFW-EOKD-060	BFW-VOKD-060
8	BFW-BOKD-080	BFW-EOKD-080	BFW-VOKD-080
10	BFW-BOKD-100	BFW-EOKD-100	BFW-VOKD-100
12	BFW-BOKD-120	BFW-EOKD-120	BFW-VOKD-120

1: For CPVC Overhaul Kits with Disc available in EPDM or FKM only. Add a "C" to the end of the part number shown (e.g., BFW-EOKD-020**C**).

Wafer Butterfly Valve
Overhaul Kit

All Kits include Seat (1), Flange Gaskets (2).

Size	Part Number		
	w/Buna-N	w/EPDM	w/FKM
2	BFW-BRK-020	BFW-ERK-020	BFW-VRK-020
2-1/2	BFW-BRK-025	BFW-ERK-025	BFW-VRK-025
3	BFW-BRK-030	BFW-ERK-030	BFW-VRK-030
4	BFW-BRK-040	BFW-ERK-040	BFW-VRK-040
6	BFW-BRK-060	BFW-ERK-060	BFW-VRK-060
8	BFW-BRK-080	BFW-ERK-080	BFW-VRK-080
10	BFW-BRK-100	BFW-ERK-100	BFW-VRK-100
12	BFW-BRK-120	BFW-ERK-120	BFW-VRK-120

Industrial Swing Check Valve
Seat & O-ring Repair Kit

All kits include Bonnet O-ring (1), Disc O-ring (1), Seat O-ring (1), Plug O-ring (1) and Arm Plug O-ring (1).

Size	Part Number	
	w/EPDM O-rings	w/FKM O-rings
3/4	SK-ERK-007	SK-VRK-007
1	SK-ERK-010	SK-VRK-010
1-1/4	SK-ERK-012	SK-VRK-012
1-1/2	SK-ERK-015	SK-VRK-015
2	SK-ERK-020	SK-VRK-020
2-1/2 & 3	SK-ERK-030	SK-VRK-030
4	SK-ERK-040	SK-VRK-040
6	SK-ERK-060	SK-VRK-060
8	SK-ERK-080	SK-VRK-080

Butterfly Check Valve Repair Kit

Repair Kit Contains: 1-Flex Seal Gasket Seat, 1-Hinge Post, 2-Flapper Plates, 2-Flapper Covers, 1-Post Strip, 2-Seat Post O-rings & Plastic Assembly Screws.
Use Existing Hinge post Bolts

Size	Part Number[1]	
	w/EPDM O-rings	w/FKM O-rings
2	BFC-ERK-020	BFC-VRK-020
2-1/2	BFC-ERK-025	BFC-VRK-025
3	BFC-ERK-030	BFC-VRK-030
4	BFC-ERK-040	BFC-VRK-040
6	BFC-ERK-060	BFC-VRK-060
8	BFC-ERK-080	BFC-VRK-080
10	BFC-ERK-100	BFC-VRK-100
12	BFC-ERK-120	BFC-VRK-120

1: For CPVC Butterfly Check Valve Repair Kit, add a "C" to the end of the part number shown (e.g., BFC-ERK-020**C**).

Y-Pattern Valve - Internal Repair Kit

Internal Repair Kit includes: Stem O-ring (1), Seal Carrier (1), along with a factory assembled (required) internal component replacement unit consisting of Stem assembled with Seat & Seal Carrier components. Install in valve using existing valve Bonnet, Bonnet Nut, and Handle/Nut. True Union style valve kits include additional End Connector O-rings (2).

Size	Part Number							
	w/EPDM O-ring	CPVC w/ EPDM O-ring	w/FKM O-ring	CPVC w/FKM O-ring	Union w/ EPDM O-ring	CPVC Union w/ EPDM O-ring	Union w/ FKM O-ring	CPVC Union w/ FKM O-ring
1/2	YV-ERK-005	YV-ERK-005C	YV-VRK-005	YV-VRK-005C	YV-UERK-005	YV-UERK-005C	YV-UVRK-005	YV-UVRK-005C
3/4	YV-ERK-007	YV-ERK-007C	YV-VRK-007	YV-VRK-007C	YV-UERK-007	YV-UERK-007C	YV-UVRK-007	YV-UVRK-007C
1	YV-ERK-010	YV-ERK-010C	YV-VRK-010	YV-VRK-010C	YV-UERK-010	YV-UERK-010C	YV-UVRK-010	YV-UVRK-010C
1-1/4	YV-ERK-012	YV-ERK-012C	YV-VRK-012	YV-VRK-012C	YV-UERK-012	YV-UERK-012C	YV-UVRK-012	YV-UVRK-012C
1-1/2	YV-ERK-015	YV-ERK-015C	YV-VRK-015	YV-VRK-015C	YV-UERK-015	YV-UERK-015C	YV-UVRK-015	YV-UVRK-015C
2	YV-ERK-020	YV-ERK-020C	YV-VRK-020	YV-VRK-020C	YV-UERK-020	YV-UERK-020C	YV-UVRK-020	YV-UVRK-020C
3	YV-ERK-030	YV-ERK-030C	YV-VRK-030	YV-VRK-030C	YV-UERK-030	YV-UERK-030C	YV-UVRK-030	YV-UVRK-030C
4	YV-ERK-040	YV-ERK-040C	YV-VRK-040	YV-VRK-040C	YV-UERK-040	YV-UERK-040C	YV-UVRK-040	YV-UVRK-040C

Y-Check Valve - Seat & O-ring Repair Kit

All Kits include Seat (1), Bonnet O-ring (1), and Plug O-ring (1).
All True Union Kits include Seat (1), Bonnet O-ring (1), Plug O-ring (1), and End Connector O-rings (2).

Size	Part Number			
	w/EPDM O-ring	w/FKM O-ring	Union w/EPDM O-ring	Union w/FKM O-ring
1/2	YC-ERK-005	YC-VRK-005	YC-UERK-005	YC-UVRK-005
3/4	YC-ERK-007	YC-VRK-007	YC-UERK-007	YC-UVRK-007
1	YC-ERK-010	YC-VRK-010	YC-UERK-010	YC-UVRK-010
1-1/4	YC-ERK-012	YC-VRK-012	YC-UERK-012	YC-UVRK-012
1-1/2	YC-ERK-015	YC-VRK-015	YC-UERK-015	YC-UVRK-015
2	YC-ERK-020	YC-VRK-020	YC-UERK-020	YC-UVRK-020
3	YC-ERK-030	YC-VRK-030	YC-UERK-030	YC-UVRK-030
4	YC-ERK-040	YC-VRK-040	YC-UERK-040	YC-UVRK-040

Diaphragm Valve - Diaphragm & End Connector O-ring Replacement Kit

Includes diaphragm (1), and end connector O-rings (2).

Size	Part Number				
	EPDM O-ring & DIAPHRAGM KIT	EPDM O-ring & PTFE* DIAPHRAGM KIT	FKM O-ring & DIAPHRAGM KIT	FKM O-ring & PTFE* DIAPHRAGM KIT	FKM O-ring & FKM Backed Diaphragm Kit
1/2	DV-ERK-005	DV-TERK-005	DV-VRK-005	DV-TVRK-005	DV-VTVRK-005
3/4	DV-ERK-007	DV-TERK-007	DV-VRK-007	DV-TVRK-007	DV-VTVRK-007
1	DV-ERK-010	DV-TERK-010	DV-VRK-010	DV-TVRK-010	DV-VTVRK-010
1-1/4 or 1-1/2	DV-ERK-015	DV-TERK-015	DV-VRK-015	DV-TVRK-015	DV-VTVRK-015
2	DV-ERK-020	DV-TERK-020	DV-VRK-020	DV-TVRK-020	DV-VTVRK-020

*** Elastomer backed PTFE laminated diaphragm.**

Diaphragm Valve - Replacement Diaphragm

Size	Part Number			
	EPDM DIAPHRAGM	FKM DIAPHRAGM	PTFE* DIAPHRAGM	FKM backed PTFE* DIAPHRAGM
1/2	27-39-00541	27-39-00542	27-39-00565	27-39-00566A
3/4	27-39-00741	27-39-00742	27-39-00765	27-39-00766A
1	27-39-01041	27-39-01042	27-39-01065	27-39-01066A
1-1/4 or 1-1/2	27-39-01541	27-39-01542	27-39-01565	27-39-01566
2	27-39-02041	27-39-02042	27-39-02065	27-39-02066
2-1/2 or 3	27-39-03041	27-39-03042	27-39-03065	27-39-03066
4	27-39-04041	27-39-04042	27-39-04065	27-39-04066
6	27-39-06041	27-39-06042	27-39-06065	27-39-06066
8	27-39-08041	27-39-08042	27-39-08065	27-39-08066

*** Elastomer backed PTFE laminated diaphragm.**

Ball Valve Troubleshooting Guide

Spears® True Union, Single Entry and Compact Ball Valves are designed and produced for trouble-free operation and use. However, certain aspects of installation and application can result in valve malfunctions.

This guide identifies some of the more common problems encountered and their necessary corrective actions. Such problems have been categorized as External Leaks, Internal Leaks, Frozen Movements and Structural Breakage.

External Leaks

Location	Possible Cause	Corrective Action
At Thread/Socket Connections	Improper solvent cementing.	Replace end connector(s) according to installation instructions.
	Improper threads.	Check threads for proper size; replace or reinstall.
	Insufficient or improperly applied thread sealant; incompatible sealant (paste).	Reinstall thread connection according to proper procedures; check paste compatibility.
	Over-tightened thread joint splitting connector.	Replace cracked end connector(s).
	Insufficient valve support splitting connector.	Replace cracked end connector(s). Add support on each side of valve.
At Union Nuts	End connector misaligned.	Check system alignment - end connector(s) must be parallel. Check for adequate valve support.
	Displaced or damaged O-ring; particles in O-ring groove.	Remove valve and inspect O-ring for physical or chemical damage. Check O-ring compatibility, replace accordingly. Clean and re-seat O-ring.
	System contraction pulling end connectors; improper end connector spacing.	Check thermal variations; anchor pipe each side of valve; install expansion loop. Correct spacing.
	Loose Union Nut.	Re-tighten nut.
	Displaced or pinched seal carrier O-ring.	Remove and disassemble seal carrier; re-seat or replace O-ring.
At Stem	Damaged stem O-ring.	Remove and disassemble valve stem; inspect for physical or chemical damage. Check O-ring compatibility, clean and replace accordingly.

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Progressive Products from Spears® Innovation and Technology

Ball Valve Troubleshooting Guide

Internal Leaks — In-line Leakage Past Valve

Possible Cause	Corrective Action
Ball obstruction	Check that the valve is in its “full-closed” position. If not, remove valve and check for solids blocking the ball port. Clean and reinstall valve.
Broken Stem	Remove end connector and check for ball rotation while operating valve. Replace as necessary.
Seal Carrier Loose	True Union Valves - remove valve; CAREFULLY tighten seal carrier (located on inlet end of body). Single Entry Valves - CAREFULLY tighten single Union Nut. IMPORTANT: Generally only a slight adjustment is required (either valve). A properly adjusted valve should have significant resistance to operation without binding - AVOID OVER-TIGHTENING!
PTFE Seat Damage or Debris Laden	Remove and disassemble valve seats. Check for excessive debris and physical damage (nicks, cuts, scoring, etc.). Clean and replace as necessary.
Seat O-ring Displaced, Damaged or Debris Laden	Remove and disassemble valve seat O-rings; check for physical or chemical damage. Check O-ring chemical compatibility; clean and replace accordingly. Check for excessive system flow rate.
Ball Damaged	Remove and disassemble valve ball. Check for physical damage (excessive nicks, scoring, etc.) at seat sealing surface (perpendicular to ball port). Clean surface; replace ball if necessary. Check for chemical damage and valve material (PVC, CPVC) compatibility.
Solvent-Cement (glue) Contamination from Installation Spillage	Remove valve and check for glue deposits on ball or seat areas. Clean, if possible; excessive damage may require component replacement.
Thermal Damage (component distortion)	Check system operating temperatures, external heat sources (including direct sun), and heat generated from system design or valve placement.

Frozen Movements — unable, or very difficult, to open/close; sometimes accompanied by stem break (shear)

Possible Cause	Corrective Action
Internal Obstructions; Sediment or Particle Buildup; Solvent Cement on Ball	Remove valve and check for solids, debris or solvent cement deposits blocking the ball or valve interior. Check for sediment particles lodged around ball-to-seat contact areas. Remove stem and check for the same. Clean and reinstall.
Over-tight Seal Carrier	True-Union Valves - remove valve; slightly loosen seal carrier (located on inlet end of body). Single Entry Valves - slightly loosen single Union Nut. IMPORTANT: Generally only a slight adjustment is required (either valve). A properly adjusted valve should have significant resistance to operation without binding.
Chemical Attack (generally appears as distortion, peeling, etching or bleaching of ball sealing surfaces or other internal components)	Check valve material (PVC, CPVC) chemical compatibility with system fluids. Be sure to consider operating temperatures with this determination.

Ball Valve Troubleshooting Guide

Structural Breakage

Location	Possible Cause	Corrective Action
Handle broken	Frozen movements.	See “Frozen Movements” section. Replace.
	External impact.	Identify and correct source.
Handle Stripped	Overextending open/close range.	Replace handle.
	Excessive exposure to direct-sunlight has softened handle material.	Shield or screen valve from direct-sun exposure.
Stem Sheared / Broken	Frozen movements; external impact.	See “Frozen Movements” section.
Broken Union Nut	Nut has been over tightened to draw-up or align end-connectors; external impact.	Adjust spacing between end-connectors for proper valve lay-lengths. Check system alignment - end connector(s) must be parallel.
	Inadequate valve supports.	Provide system support on each side of valve.
	Excessive internal pressure / Hydraulic Shock	Check system pressures and surge pressures; check for entrapped air.
End Connector Break	System misalignment; external impact.	Check system alignment - end connector(s) must be parallel.
	Over-tighten thread-joint connection.	Install new end connector according to installation instructions.
	Inadequate valve support.	Provide system support on each side of valve.
Body Break	External impact.	Identify and correct source.
	Excessive internal pressure.	Check system pressures and surge pressures; check for entrapped air.
	System misalignment.	Check system alignment - end connector(s) must be parallel.
	Inadequate valve support.	Provide system support on each side of valve.
	Chemical attack.	Check chemical compatibility of system fluids.

NOTES: Certain corrective actions of this guide may not be feasible with the Compact Ball Valve (sealed unit).

Improper system operating temperatures and chemical incompatibility can cause a variety of functional and structural failures. Be sure to use proper valve material-types for both temperature and chemical resistance.

Most valve problems are traceable to improper system design or installation. Be sure to have all design performed by a qualified Engineer and installation made by properly trained personnel.

Spears® valve Installation Instructions and Maintenance/Service Procedures should be followed in conjunction with all corrective actions.

Part II - Actuated Thermoplastic Valves

Full Line of Valve Actuation

From basic on-off actuation to full feature, custom applications, Spears® offers a wide variety of both pneumatic and Electric actuated valve packages for Ball Valves, Butterfly Valves and Diaphragm Valves. Spears® maintains one of the broadest lines of valve options to select from in PVC, CPVC and Polypropylene materials.

Pre-Matched Valve & Actuator Packages

Spears® makes actuation easy by matching each valve type and size with the appropriate actuator for proper operating torque and cycle time to assure optimum performance.

Custom Actuation Configurations

Spears® Premium Actuation Packages can be fully customized to user specifications by addition of selected control accessories. Select from our wide variety of accessories and options or contact Spears® for virtually any special actuation need, even if not specified.

Factory Assembled - Ready for Installation

Whether standard or custom configured, actuation packages include valve, actuator mounting, coupling and factory assembled precision actuator ready for installation. Spears® uses only the finest materials in interfacing each valve and actuator to provide reliable operation and long service life.

How to Use This Manual

This manual provides technical information on Spears® actuated valve packages and accessories. Actuation Packages are listed in separate sections by valve type (ball, butterfly, diaphragm) and actuation type (Electric, Pneumatic).

Each section provides full package information including package description, standard valve specifications and options, package actuator specifications and options, a brief list of available accessories, plus a Sample Engineering Specification.

Specifications for actuator Options & Accessories for custom actuation are described in additional sections according to actuator type (Electric or Pneumatic). Each section includes an overview followed by a brief description of each option and accessory.

The appendices provide additional information on general actuation terminology and definitions, and on Spears® part numbering convention for custom actuation for use at the user's discretion. Part number formulation is not required to order valve packages from Spears®, but is provided for those who wish to select the appropriate part number in preparation of a custom valve package order.

Contact Spears® for any desired accessories, options, functions or special controls not listed in this guide.

The information in this manual is believed to be accurate at the time of publication, but is subject to change without notice.

Spears® Actuated Valve Packages

Choose from economical Electro Ball Valve packages, or one of Spears® Premium Actuation packages which can be fully customized to user specifications with addition of custom feature and control accessories for Spears® True Union and Compact 2000 Ball Valves, Butterfly Valves or Diaphragm Valves. Retrofit actuation of existing Spears® valve installations is also available. Contact factory for additional information.

Actuated Valve Packages Overview

Basic Valve Illustration	Valve Type	Basic Valve Options				Actuation Package Available		
		Basic Valve Material	Size Range (inch)	Seal Material Options	End Connector Options	Premium Electric Actuation	Premium Pneumatic Actuation	Electro Series Actuation
 Typical Illustration	True Union Ball Valves	PVC	1/2 - 6	EPDM FKM PTFE	Socket Threaded Flanged	X	X	X 1/2" - 2"
		CPVC	1/2 - 6	EPDM FKM PTFE	Socket Threaded Flanged	X	X	X 1/2" - 2"
 Typical Illustration	Compact 2000 Ball Valves	PVC	1/2 - 6	EPDM FKM	Socket Threaded Flanged	X	X	X 1/2" - 2"
		CPVC	1/2 - 6	EPDM FKM	Socket Threaded Flanged	X	X	X 1/2" - 2"
 Typical Illustration	Butterfly Valves	PVC	1-1/2 - 12	Buna-N EPDM FKM PTFE	Flanged	X	X	
		CPVC	1-1/2 - 12	Buna-N EPDM FKM PTFE	Flanged	X	X	
		PP	1-1/2 - 24[1]	EPDM FKM PTFE	Flanged	X	X	
 Typical Illustration	Diaphragm Valves	PVC	1/2 - 8[2]	EPDM FKM PTFE	Socket[3] Threaded[3] Spigot[4] Flanged	X	X	
		CPVC	1/2 - 8[2]	EPDM FKM PTFE	Socket Threaded Spigot Flanged	X	X	
		PP	1/2 - 8[2]	EPDM FKM PTFE	Threaded Flanged	X	X	

Notes: 1 - Butterfly Valves sizes 30" - 60" produced to order.
2 - 2-1/2" to 8" Diaphragm Valves available in Flanged ends only.
3 - 1/2" - 2" Socket and threaded Diaphragm Valves are True Union style.
4 - Spigot Diaphragm Valves available in sizes 1/2" - 2" only.

Contact Spears® for Additional Custom Configurations to User Specifications

Electro Series Actuated Ball Valves

The Electro Actuated Ball Valve provides high quality, basic on-off electrical actuation at an economical price, with voltage options and special "2-wire" control available. This prepackaged combination is constructed with an all plastic NEMA 4X enclosure directly mounted to a PVC or CPVC valve body for lighter weight and a low profile design for minimal space requirements. All Electro Series Ball Valves are pressure rated to 235 psi and suitable for vacuum service. Available in IPS sizes 1/2" - 2", with socket, threaded, or flanged ends and choice of EPDM or FKM O-ring seals.



Typical Illustration



Typical Illustration

ELECTRO ACTUATED COMPACT 2000 BALL VALVE

Compact Electro Ball Valves are built around Spears® industrial grade Compact 2000 Ball Valve. This heavy bodied, sealed unit design is well suited for a multitude of general purpose, industrial, and OEM actuation needs.

ELECTRO ACTUATED TRUE UNION BALL VALVE

The Electro True Union Ball Valve utilizes Spears® industrial grade True Union Ball Valve. This fully repairable, double union style allows easy in-line removal for servicing and is the valve of choice for many industrial and chemical processing applications.

ELECTRO 50 & 100 ACTUATOR SPECIFICATIONS

Motor: Brushless, Non-Reversing, Shaded Pole, Thermally Protected

Torque: ELECTRO-50 50 in./lbs. (1/2" - 1" Valves)
ELECTRO-100 100 in./lbs. (1-1/4" - 2" Valves)

Opening Time: 5 seconds

Closing Time: 5 seconds

Duty Cycle: 25% standard (optional 75% available)

Limit Switch: Cam Operated, Omni Directional, SPDT

Housing: NEMA 4X (Weatherproof, Corrosion Proof), High Impact Polypropylene, SS 316 Fasteners 1/2" NPT Connection

Indicator: Visual Open/Close - Standard

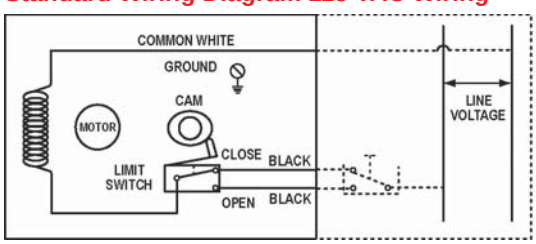
Voltage: 115V standard (see Voltage Options)

Optional "2-Wire" Control:
Control switch setup operates as a solenoid valve. Valve opens when control switch is open 5-seconds and closes when control switch is closed 5-seconds. Uses 4-wire connection with 2 wires to line voltage and 2 wires to SPST control switch.

Voltage Options:

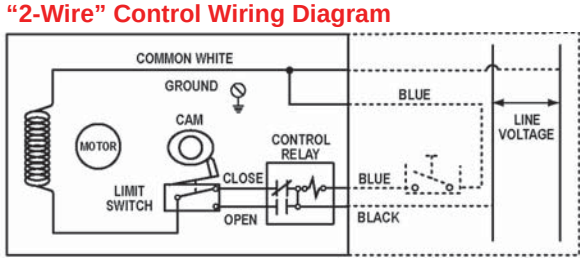
Voltage	Load AMP Electro-50	Load AMP Electro-100
12 VAC	2.40	N/A
24 VAC	2.1	7.8
115 VAC	.6	1.9
230 VAC	.5	1.5
12 VDC	.3	.2
24 VDC	.2	.2

Standard Wiring Diagram 115 VAC Wiring



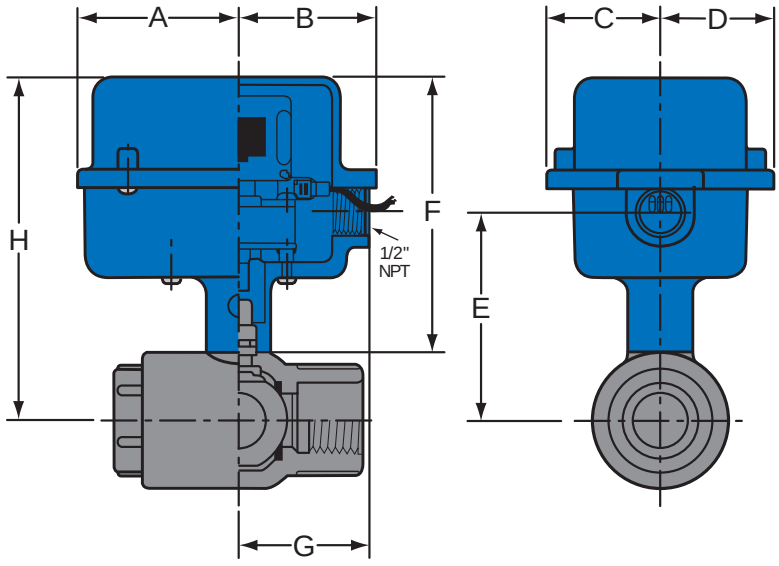
ELECTRO WIRING EXTERNAL WIRING

"2-Wire" Control Wiring Diagram



ELECTRO WIRING EXTERNAL WIRING

Compact Ball Valve



Actuated Compact Ball Valve Dimensions

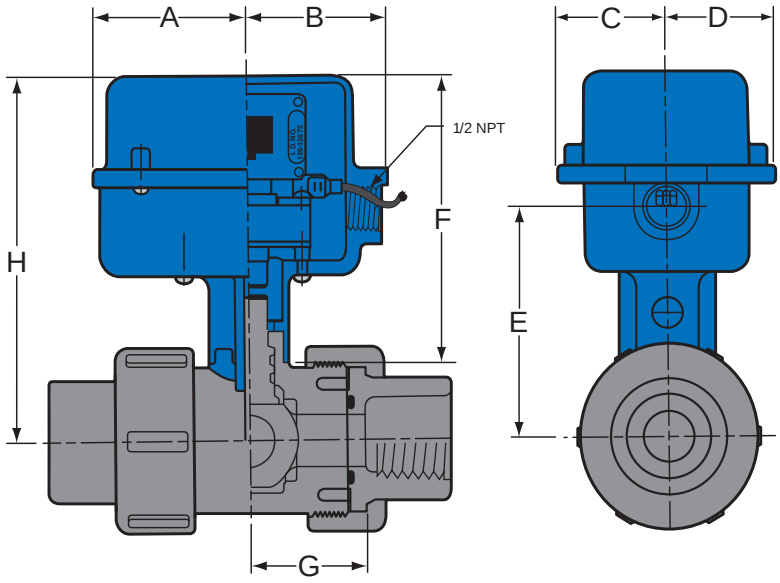
Valve Size	A	B	C	D	E	F	G	H
1/2	2-7/8	2-1/2	2	2	3-3/8	5-5/8	2-5/16	6-5/8
3/4	2-7/8	2-1/2	2	2	3-9/16	5-5/8	2-5/16	6-7/8
1	2-7/8	2-1/2	2	2	3-5/8	5-5/8	2-5/16	7-1/16
1-1/4	3-5/8	2-7/16	2	2	4-3/4	5-7/8	2-7/16	7-5/8
1-1/2	3-5/8	2-7/16	2	2	5	5-7/8	2-7/16	7-7/8
2	3-5/8	2-7/16	2	2	5-1/2	5-7/8	2-7/16	8-3/8

Valve: PVC or CPVC Industrial Grade Valve,
Non-Repairable Sealed Unit
PTFE Seats
EPDM or FKM O-rings
Socket, Threaded or Flanged End Connection
Vacuum Service Rated
Pressure rated to 235 psi water @ 73°F
(Flanged to 150 psi)

Sample Engineering Specification

All actuated ball valves shall be PVC or CPVC construction with direct mount electric actuator. Valve shall be compact sealed unit type, pressure rated to 235 psi @ 73°F (150 psi for flanged), with PTFE seats, Safe-T-Shear® Stem, EPDM or FKM O-rings, and socket, threaded or flanged end connections. Actuator shall be direct mount, with brushless non-reversing quarter turn motors and built in visual open/close position indicator. Actuator housing shall be weather proof and corrosion proof (NEMA 4X) with type 316 stainless steel fasteners, as manufactured by Spears® Manufacturing Company.

True Union Ball Valve



Actuated True Union Ball Valve Dimensions

Valve Size	A	B	C	D	E	F	G	H
1/2	2-7/8	2-1/2	2	2	3-3/8	5-5/8	2-5/16	6-5/8
3/4	2-7/8	2-1/2	2	2	3-9/16	5-5/8	2-5/16	6-7/8
1	2-7/8	2-1/2	2	2	3-5/8	5-5/8	2-5/16	7-1/16
1-1/4	3-5/8	2-7/16	2	2	4-13/16	5-7/8	2-7/16	7-5/8
1-1/2	3-5/8	2-7/16	2	2	5	5-7/8	2-7/16	7-7/8
2	3-5/8	2-7/16	2	2	5-1/2	5-7/8	2-7/16	8-3/8

Valve: PVC or CPVC Industrial Grade Valve
Double Union Style with Blocked Seal Carrier
Fully Repairable & Adjustable
PTFE Seats
EPDM or FKM O-rings
Socket, Threaded or Flanged End Connection
Vacuum Service Rated
Pressure rated to 235 psi water @ 73°F
(Flanged to 150 psi)

Sample Engineering Specification

All actuated ball valves shall be PVC or CPVC construction with direct mount electric actuator. Valve shall be True Union type, pressure rated to 235 psi @ 73°F (150 psi for flanged), with buttress threaded union nuts, PTFE seats, Safe-T-Shear® Stem, EPDM or FKM O-rings, and socket, threaded or flanged end connections. Actuator shall be direct mount, with brushless non-reversing quarter turn motors and built in visual open/close position indicator. Actuator housing shall be weather proof and corrosion proof (NEMA 4X) with type 316 stainless steel fasteners, as manufactured by Spears® Manufacturing Company.



Typical Illustration

Electric True Union Ball Valve



Typical Illustration

Pneumatic True Union Ball Valve



Typical Illustration

Electric Actuated Butterfly Valve



Typical Illustration

Pneumatic Actuated Butterfly Valve



Typical Illustration

Electric Actuated Diaphragm Valve



Typical Illustration



Typical Illustration

Pneumatic Actuated Diaphragm Valve

Spears® True Union 2000 Ball Valve Premium Electric Actuation Package

The compact design of True Union 2000 Ball Valves provides maximum versatility with minimum space requirements. Fully serviceable valve cartridge also mates with Spears® Union 2000 Schedule 80 pipe unions. Both valves and unions utilize Buttress Thread union nuts for superior strength. All ball valves feature Spears® self adjusting Floating Seat design for extended service, and Spears® Safe-T-Shear® Stem with double O-ring stem seals for assurance of fluid containment in case of inadvertent valve damage. Available in chemical and corrosion resistant PVC or CPVC with socket, flanged or Spears® Patented Special Reinforced (SR) threaded.

Actuated package includes polypropylene valve mounting bracket for accurate valve/actuator alignment and support in any position. Premium electric actuator utilizes a reversing type motor with UL approved, built in thermal overload protection. Gear train is permanently lubricated. All hardware is stainless steel. Standard 115 VAC, 60 HZ, with voltage options available.



Declutchable Style Shown

Typical Illustration

True Union 2000 Ball Valve Specifications

Style	Double union • 1/4 turn shut off • Double O-ring stem seals • Safe-T-Shear® Stem • Blocked seal carrier
Material	PVC or CPVC
Size Range	1/2" - 6" & 8" Venturied*
Pressure Rating	1/2" - 4" = 235 psi @ 73°F 6" - 8" & all flanged valves = 150 psi @ 73°F
Vacuum Service	To 26 in-Hg
Seats	PTFE
O-rings	EPDM or FKM
End Connector	Socket, SR Threaded, or Flanged
Certifications	EPDM Valves NSF® Certified for potable water use.

*8" Venturied is 6" valve fitted with 8 x 6 adapters

Standard Actuator Specifications

Motor	Reversing
Thermal Overload Protection	
Voltage	115 VAC, 60 Hz
Lubrication	Permanent

Custom Electric Actuation Options & Accessories

- Modulating (variable positioning)
- Heater & Thermostat
- Additional Limit Switch sets
- Position Indicator
- LED Indicator lights
- Torque Sensor
- Declutchable Manual Override
- Duty Cycle Upgrades (75% & 100%)
- NEMA 4x, 7, & 9 Enclosures
- Spring Return Operation (Fail Safe)
- Voltage Options: 24 VAC, 230 VAC, 12 VDC, 24 VDC

Note: Modulation requires special enclosure for 1/2" - 2" valves.

Sample Engineering Specification

All ball valves shall be electrically actuated True Union 2000 type constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447. All O-rings shall be EPDM or FKM. All valves shall have Safe-T-Shear® stem and double O-ring stem seals. All valve union nuts shall have Buttress threads. All seal carriers shall be Safe-T-Blocked®. All valve components shall be replaceable. All EPDM valves shall be certified by NSF international for use in potable water service. All 1/2" through 4" valves shall be pressure rated at 235 psi and all 6" through 8" & all flanged valves shall be pressure rated at 150 psi for water at 73°F. Electric Actuators shall be factory installed, 115 VAC with thermally protected, reversing motor. All mounting fasteners shall be stainless steel. Actuator shall be equipped with [selected options list], as manufactured by Spears® Manufacturing Company.

Pneumatic Actuated True Union Ball Valves

Spears® True Union 2000 Ball Valve Premium Pneumatic Actuation Package

The compact design of True Union 2000 Ball Valves provides maximum versatility with minimum space requirements. Fully serviceable valve cartridge also mates with Spears® Union 2000 Schedule 80 pipe unions. Both valves and unions utilize Buttress Thread union nuts for superior strength. All ball valves feature Spears® self adjusting Floating Seat design for extended service, and Spears® Safe-T-Shear® Stem with double O-ring stem seals for assurance of fluid containment in case of inadvertent valve damage. Available in chemical and corrosion resistant PVC or CPVC with socket, flanged or Spears® Patented Special Reinforced (SR) threaded.

Actuated package includes polypropylene valve mounting bracket for accurate valve/actuator alignment and support in any position. Premium pneumatic actuator is an Air-to-Air (Double Acting; optional Spring Return) featuring twin piston rack and pinion operation with adjustable stops, and permanent lubrication. Manual override is standard. Housing is hard anodized aluminum with epoxy coated aluminum end caps.



Typical Illustration

True Union 2000 Ball Valve Specifications

Style	Double union • 1/4 turn shut off • Blocked seal carrier • Double O-ring stem seals • Safe-T-Shear® Stem
Material	PVC or CPVC
Size Range	1/2" - 6" & 8" Venturied*
Pressure Rating	1/2" - 4" = 235 psi @ 73°F 6" - 8" & all flanged valves = 150 psi @ 73°F
Vacuum Service	To 26 in-Hg
Seats	PTFE
O-rings	EPDM or FKM
End Connector	Socket, SR Threaded, or Flanged
Certifications	EPDM Valves NSF® Certified for potable water use.

*8" Venturied is 6" valve fitted with 8 x 6 adapters

Standard 2-Position Actuator Specifications

Type	Dual piston • rack & pinion • adjustable stop
Standard Operation	Air-to-Air (double acting)
Supply Pressure	80 psi
Air Connection	1/4" - 1/8"

Custom Pneumatic Actuation Options & Accessories

- Spring Return Operation (Fail Safe)
- 60 psi or 40 psi Operating Pressure
- Declutchable Manual Override
- Pneumatic & Electro Pneumatic Positioners
- 3 & 4 Way Solenoid Valve
  12VDC, 24VDC, 24VAC, 115VAC, 230VAC
  NEMA 4/4x & 7/9 rating
- Dual Power Solenoids
- Output Signal Limit Switches
- Standard Limit Switches
- Dome Position Indicator
- Stainless Steel Gauge Sets
- Customized ID Tags

Sample Engineering Specification

All ball valves shall be pneumatically actuated True Union 2000 type constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447. All O-rings shall be EPDM or FKM. All valves shall have Safe-T-Shear® stem and double O-ring stem seals. All valve union nuts shall have Buttress threads. All seal carriers shall be Safe-T-Blocked®. All valve components shall be replaceable. All EPDM valves shall be Certified by NSF International for use in potable water service. All 1/2" through 4" valves shall be pressure rated at 235 psi and all 6" through 8" and all flanged valves shall be pressure rated at 150 psi for water at 73°F. Pneumatic Actuators shall be factory installed, dual piston, rack & pinion design with adjustable stops. Operation shall be Air-to-Air (double acting) for 80 psi supply pressure. All mounting fasteners shall be stainless steel. Actuator shall be equipped with [selected options list], as manufactured by Spears® Manufacturing Company.

Electric Actuated Butterfly Valves

Spears® Butterfly Valve Premium Electric Actuation Package

Spears® innovative patented seat design departs from traditional liner-seat type valves to eliminate seat creep, reduce operating torque and provide positive seal off. Ideally suited for flow control or throttling, this high performance valve offers a full variety of options for greater application versatility. Fully isolated (Dry Stem), solid type 316 stainless steel with optional PTFE coated stems available for extra protection assurance. PVC and CPVC valves are available in Standard or True Lug style for sizes 1-1/2" through 14". Polypropylene valves are available in Standard valve style for sizes 1-1/2" through 24", plus sizes 30" through 60" produced to order. Premium electric actuator utilizes a reversing type motor with UL approved, built in thermal overload protection. Gear train is permanently lubricated 1/2" NPT conduit outlet. Standard 115 VAC connection.



Declutchable Style Shown

Typical Illustration

Butterfly Valve Specifications

Style	Flanged
Material	PVC, CPVC, UV Stabilized PP
Size Range	PVC/CPVC = 1-1/2" - 12" PP = 1-1/2" - 24" (custom 30" - 60")
Pressure Rating	1-1/2" - 12" =150 psi @ 73°F 14" = 100 psi @ 73°F 16" = 85 psi @ 73°F 18" = 70 psi @ 73°F 20" - 24" = 50 psi @ 73°F
Seats & Seals	Buna-N, EPDM or FKM on PVC/CPVC valves; EPDM or FKM on Polypropylene valves
Bolt Pattern	ANSI Class 125/150

Special Valve Options & Accessories

- PVC & CPVC True-Lug valves w/ factory installed lugs
- PTFE coated stainless steel stem
- Titanium & Hastaloy Stems
- PTFE encased valve seat
- Field installable Lug Insert sets for PVC/ CPVC valves through 12"
- Stem Extensions
- Seat & Seal Replacement Kits
- 30"- 60" Polypropylene valves (contact Spears® for details)

Standard 2-Position Actuator Specifications

Motor Reversing	
Thermal Overload Protection	
Voltage	115 VAC, 60 Hz
Lubrication	Permanent

Note: Contact Spears® for information on valve sizes 14" and larger.

Custom Electric Actuation Options & Accessories

- Modulating (variable positioning)
- Heater & Thermostat
- Additional limit switch sets
- Position indicator
- LED Indicator lights
- Torque sensor
- Declutchable Manual Override
- Duty Cycle Upgrades (75% & 100%)
- NEMA 4x, 7, & 9 Enclosures
- Voltage Options: 24 VAC, 230 VAC, 230 VAC 3-phase 60 Hz, 460 VAC 3-phase 60 Hz, 12 VDC, 24 VDC (see Accessories & Options section for limitations)
- Custom ID Tags

Sample Engineering Specification

All electrically actuated Butterfly valves shall be constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447 or UV stabilized Polypropylene. All valve seats and O-rings shall be Buna-N, EPDM or FKM. Seat shall be a non-liner type interlocked to valve body. Bolt hole pattern shall conform to ANSI/ASME B16.5 CL 125/150. Disc shall be offset design with Type 316 stainless steel stem. Valves shall be pressure rated at [select from specification] for water at 73°F. Electric Actuators shall be factory installed, 115 VAC with thermally protected, reversing motor. Actuator shall be equipped with [selected options list] as manufactured by Spears® Manufacturing Company.

Pneumatic Actuated Butterfly Valves

Spears® Butterfly Valve Premium Pneumatic Actuation Package

Spears® innovative patented seat design departs from traditional liner-seat type valves to eliminate seat creep, reduce operating torque and provide positive seal off. Ideally suited for flow control or throttling, this high performance valve offers a full variety of options for greater application versatility. Fully isolated (Dry Stem), solid type 316 stainless steel stems with optional PTFE coated stems available for extra assurance. PVC and CPVC valves are available in Standard or True Lug style for sizes 1-1/2" through 14". Polypropylene valves are available in Standard valve style for sizes 1-1/2" through 24", plus sizes 30" through 60" produced to order. Premium pneumatic actuator is an Air-to-Air (Double Acting; optional Spring Return) featuring twin piston rack and pinion operation with adjustable stops, and permanent lubrication. Manual override is standard. Housing is hard anodized aluminum with epoxy coated aluminum end caps.



Typical Illustration

Butterfly Valve Specifications

Style	Flanged
Material	PVC, CPVC, PP
Size Range	PVC/CPVC = 1-1/2" - 12" PP = 1-1/2"- 24" (custom 30" - 60")
Pressure Rating	1-1/2" - 12" =150 psi @ 73°F 14" = 100 psi @ 73°F 16" = 85 psi @ 73°F 18" = 70 psi @ 73°F 20" - 24" = 50 psi @ 73°F
Seats & Seals	Buna-N, EPDM or FKM on PVC/CPVC valves; EPDM or FKM on Polypropylene valves
Bolt Pattern	ANSI Class 125/150

Special Valve Options & Accessories

- "True-Lug" style factory installed lugs (PVC & CPVC valves only)
- PTFE coated stainless steel stem
- Titanium & Hastaloy Stems
- PTFE encased valve seat
- Field installable Lug Insert sets for PVC/CPVC valves through 12"
- Stem Extensions
- Seat & Seal Replacement Kits
- 30" - 60" Polypropylene valves (contact Spears® for details)

Standard 2-Position Actuator Specifications

Type	Dual piston • rack & pinion • adjustable stop
Standard Operation	Air-to-Air (double acting)
Supply Pressure	80 psi
Air Connection	1/4" - 1/8" Depends on Actuator

Note: Contact Spears® for information on valve sizes 14" and larger.

Custom Pneumatic Actuation Options & Accessories

- Spring Return Operation (Fail Safe)
- 60 psi or 40 psi Operating Pressure
- Declutchable Manual Override
- Pneumatic & Electro Pneumatic Positioners
- 3 & 4 Way Solenoid Valves
  12VDC, 24 VDC, 24VAC, 115VAC, 230VAC
  NEMA 4/4x & 4.4x.7/9 rating
- Dual Power Solenoids
- Output Signal Limit Switches
- Standard Limit Switches
- Dome Position Indicator
- Stainless Steel Gauge Sets
- Customized ID Tags

Sample Engineering Specification

All pneumatically actuated Butterfly valves shall be constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447 or UV stabilized Polypropylene. All valve seats and O-rings shall be Buna-N, EPDM or FKM. Seat shall be a nonliner type interlocked to valve body. Bolt hole pattern shall conform to ANSI/ASME B16.5 CL 125/150. Disc shall be offset design with Type 316 stainless steel stem and hardware. Valves shall be pressure rated at [select from specifications] for water at 73°F. Pneumatic Actuators shall be factory installed, dual piston, rack & pinion design with adjustable stops. Operation shall be Air-to-Air (double acting) for 80 psi supply pressure. Actuator shall be equipped with [selected options list], as manufactured by Spears® Manufacturing Company.

Spears® Diaphragm Valve Premium Electric Actuation Package

This full-featured industrial grade valve is engineered to provide accurate throttling and shut off for chemical processing, industrial, and water treatment applications. Weir type design eliminates entrapped fluids in valve. Excellent for handling of liquids with suspended solids, viscous materials and slurries. Premium electric actuator utilizes a multi-turn reversing motor with UL approved, built in thermal overload protection and permanently lubricated gear train. 1/2" NPT conduit outlet. Standard 115 VAC, 60 Hz.



Typical Illustration

Diaphragm Valve Specifications

Style	Diaphragm • Weir type • fully repairable
Material	PVC, CPVC, UV Stabilized PP
Size Range	1/2" - 8"
Pressure Rating	PVC & CPVC 1/2" - 2" = 235 psi @ 73°F 1/2" - 4" Flanged = 150 psi @ 73°F 6" = 100 psi @ 73°F 8" = 75 psi @ 73°F PP: 1/2"- 4" = 150 psi @ 73°F 6" = 100 psi @ 73°F 8" = 75 psi @ 73°F With PTFE Diaphragm: 1/2" - 4" = 150 psi @ 73°F
Diaphragm	EPDM, FKM, or elastomer backed PTFE
End Connector	PVC & CPVC = True Union socket/threaded, or Spigot Body (1/2" - 2") Flanged Body (1/2" - 8") PP: True Union threaded (1/2" - 2"), Flanged Body (sizes 2-1/2" - 8")

Standard 2-Position Actuator Specifications

Motor	Multi-turn reversing
Thermal Overload Protection	
Voltage	115 VAC, 60 Hz
Lubrication	Permanent

Special Valve Options & Accessories

- Diaphragm & O-ring Replacement Kits
- Hypalon® (CSM) Diaphragms
- EPDM backed PTFE Diaphragms
- FKM backed PTFE Diaphragms

Custom Electric Actuation Options & Accessories

- Declutchable Manual Override
- Auxiliary Limit Switches
- NEMA 7, 9 & NEMA 4X Enclosures
- Position Indicator Lights (red/green)
- Voltage Options: 12 VDC, 24 VDC, 24 VAC, 230 VAC
  (see Accessories & Options section for limitations)
- Custom ID Tags

Sample Engineering Specification

All electrically actuated diaphragm valves shall be True Union Socket/Thread or Flanged or Spigot type constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447 or UV Stabilized PP. All valve diaphragms shall be EPDM or FKM or Hypalon® or elastomer backed PTFE. All True Union valve union nuts shall have Buttress threads. All valve components shall be replaceable. All 1/2" through 2" valves shall be pressure rated to 235 psi, all 2-1/2" through 4" valves, 1/2" - 4" flanged valves and 1/2" - 4" PTFE diaphragm valves to 150 psi, all 6" valves to 100 psi, and all 8" valves to 75 psi for water at 73°F. Electric Actuators shall be factory installed, 115 VAC with thermally protected, reversing motor. Actuator shall be equipped with [selected options list] as manufactured by Spears® Manufacturing Company.

Unitized Actuated Diaphragm Valves - Pneumatic with Plastic Housing

Spears® Unitized Pneumatic Actuated Diaphragm Valve Package

Industrial grade Weir-type design, excellent for throttling and use with viscous fluids or slurries.

Compact, Light Weight Design
True Union Socket/Thread, SR Thread, or Spigot End Connections - sizes 1/2"-2" Pressure Rated to 235 psi @ 73°F (23°C)
Flanged Ends (& PTFE diaphragms) - sizes 1/2" - 2" Pressure Rated to 150 psi @ 73°F (23°C)
Corrosion Resistant Plastic Housing
Stainless Steel Hardware
90 psi Operating Pressure
Linear Action Operation with Preset Stops
Air-Air, Air-Spring Closed, or Optional Air-Spring Open

NOTE: "Socket" valves include standard plastic thread end connectors.



Typical Illustration

Diaphragm Valve Specifications

Style	Diaphragm • Weir type • fully repairable
Material	PVC, CPVC, PP
Size Range	1/2" - 2"
Pressure Rating	PVC & CPVC 1/2" - 2" = 235 psi @ 73°F Flanged and PTFE Diaphragm 1/2"- 2" = 150 psi @ 73°F PP: 1/2"- 2" = 150 psi @ 73°F
Diaphragm	EPDM, FKM, or elastomer backed PTFE
End Connector	PVC & CPVC = True Union socket/threaded/SR threaded, or Spigot Body (1/2" - 2") Flanged Body (1/2" - 2") PP: True Union SR threaded (1/2" - 2")

Standard 2-Position Actuator Specifications

Valve Sizes 1/2" -2":

Type	Linear action
Standard Operation	Air-to-Air (double acting), Air-to-Spring Closed or Air-to-Spring Open
Supply Pressure	90 psi
Air Connection	1/8"
Body	Polypropylene
Visual Position Indicator	

Special Valve Options & Accessories

- Diaphragm & O-ring Replacement Kits
- Hypalon® (CSM) Diaphragms
- EPDM backed PTFE Diaphragms
- FKM backed PTFE Diaphragms

Custom Pneumatic Actuation Options & Accessories

- Pneumatic & Electro Pneumatic Positioners
- 3 & 4 Way Solenoid Valves
- Customized ID Tags

Sample Engineering Specification

All pneumatically actuated diaphragm valves shall be True Union Socket/Thread or Flanged or Spigot type constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447 or UV Stabilized PP. All valve diaphragms shall be EPDM, FKM or Hypalon® or elastomer backed PTFE. All True Union valve union nuts shall have Buttress threads. All valve components shall be replaceable. All 1/2" through 2" valves shall be pressure rated to 235 psi, 1/2" - 2" flanged valves and 1/2" - 2" PTFE diaphragm valves to 150 psi. Pneumatic Actuators shall be factory installed, linear type with preset stops. Operation shall be Air-to-Air (double acting), Air-to-Spring Closed or Air-to-Spring Open for 90 psi supply pressure range as selected. Actuator shall be equipped with [selected options list], as manufactured by Spears® Manufacturing Company.

Spears® Diaphragm Valve Premium Pneumatic Actuation Package

This full-featured industrial grade valve is engineered to provide accurate throttling and shut off for chemical processing, industrial, and water treatment applications. Weir type design eliminates entrapped fluids in valve. Excellent for handling of liquids with suspended solids, viscous materials and slurries. Premium pneumatic actuators are Air-to-Air (double acting) or Air-to-Spring Closed (optional spring open) Actuator for 1/2" - 2" valves features a packless/glandless linear piston design and one-piece actuator/bonnet constructed from high integrity PES (Polyethersulphone), chemically resistant to virtually all acids, caustics, and solvents. Actuator for 2-1/2" - 4" valves features a linear diaphragm design and chemical resistant Polyester coated housing.



Typical Illustration

Diaphragm Valve Specifications

Style	Diaphragm • Weir type • fully repairable
Material	PVC, CPVC, PP
Size Range	1/2" - 6"
Pressure Rating	PVC & CPVC 1/2" - 2" = 235 psi @ 73°F 1/2" - 4" Flanged =150 psi @ 73°F 6" = 100 psi @ 73°F 8" = 75 psi @ 73°F PP: 1/2" - 4" = 150 psi @ 73°F 6" = 100 psi @ 73°F 8" = 75 psi @ 73°F With PTFE Diaphragm 1/2"- 4" = 150 psi @ 73°F
Diaphragm	EPDM, FKM, or elastomer backed PTFE
End Connector	PVC & CPVC = True Union socket/threaded, or Spigot Body (1/2" - 2") Flanged Body (1/2" - 6") PP: True Union threaded (1/2" - 2"), Flanged Body (2-1/2" - 6")

Standard 2-Position Actuator Specifications

Valve Sizes 1/2" -2":	
Type	Linear action
Standard Operation	Air-to-Air (double acting) or Air-to-Spring Closed (optional spring open)
Supply Pressure	80 psi
Air Connection	1/8"
Body	PES (Polyethersulphone)
Valve Sizes 2-1/2" - 4":	
Type	Linear action
Standard Operation	Air-to-Spring and Air to Air
Standard Operating Pressure	80 psi
Air Connection	1/4" (3" & 4" valves)
Body	Polyester coated

Special Valve Options & Accessories

- Diaphragm & O-ring Replacement Kits
- Hypalon® (CSM) Diaphragms
- EPDM backed PTFE Diaphragms
- FKM backed PTFE Diaphragms

Custom Pneumatic Actuation Options & Accessories

- Spring Return Operation (Fail Safe)
- Visual Position Indicator
- Pneumatic & Electro Pneumatic Positioners
- 3 & 4 Way Solenoid Valves
- Micro Limit Switches
- Custom ID Tags

Sample Engineering Specification

All pneumatically actuated diaphragm valves shall be True Union Socket/Thread or Flanged or Spigot type constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447 or UV Stabilized PP. All valve diaphragms shall be EPDM, FKM or Hypalon® or elastomer backed PTFE. All True Union valve union nuts shall have Buttress threads. All valve components shall be replaceable. All 1/2" through 2" valves shall be pressure rated to 235 psi, all 2-1/2" through 4" valves, 1/2" - 4" flanged valves and 1/2" - 4" PTFE diaphragm valves to 150 psi, all 6" valves to 100 psi. Pneumatic Actuators shall be factory installed, linear type with preset stops. Operation shall be Air-to-Air (double acting) or Air-to-Spring Closed (optional spring open) for 80 psi supply pressure range. Actuator shall be equipped with [selected options list], as manufactured by Spears® Manufacturing Company.

The basic options and accessories listed in this section represent many of the most commonly used for electric actuation, factory configured to order on the actuation package. Contact Spears® for any desired accessories, options, functions, or special controls not listed.

Overview of Basic Options & Accessories

Options & Accessories	Electro Series Ball Valves	Premium Electric TU Ball Valves	Premium Electric Butterfly Valves	Premium Electric Diaphragm Valves
24 VAC	✓	✓	✓	✓
230 VAC	✓	✓	✓	✓
230 VAC 3-phase, 60Hz	--	✓	✓	✓
230 VAC 3-phase, 50 Hz	--	✓	✓	✓
12 VDC	✓	✓	✓	✓
24 VDC	✓	✓	✓	✓
NEMA 4X, 7, 9 Rating	(4X Standard)	✓	✓	✓
Declutchable Manual Override	--	✓	✓	✓
Duty Cycle Upgrade	✓	✓	✓	✓
Spring Return (Fail Safe)	--	✓	✓	--
Positioner Board (modulating)	--	✓	✓	✓
Transmitter	--	✓	✓	✓
“2-Wire” Control Relay	✓	✓	✓	--
Position Indicator (Visual)	✓	✓	✓	--
LED Indicator Lights	--	✓	✓	✓
Heater & Thermostat	--	✓	✓	✓
Limit Switch Sets	--	✓	✓	✓
Torque Sensor	--	✓	✓	✓
Speed Controller	--	✓	✓	✓
Friction Brake	--	✓	✓	--
ID Tag - SS	✓	✓	✓	✓

Contact Spears® for any desired accessories, options, functions, or special controls not listed in this guide.

Standard (2-position) Actuator Voltage Options

Voltage options are listed for each type with 2-position (open/close) actuation. See Modulating Service Option for variable position actuators and applicable voltages.

Electro Series Ball Valves (All 1/2" - 2")

Voltage Options
12 VAC
24 VAC
230 VAC
12 VDC
24 VDC
115 VAC

True Union 2000 Ball Valves

Voltage Options
24 VAC
230 VAC
12 VDC
24 VDC

Diaphragm Valves

Voltage Options
24 VAC
230 VAC
12 VDC
24 VDC

Butterfly Valves

Voltage Options
24 VAC
230 VAC
12 VDC
24 VDC

Enclosure NEMA Rating Options

Standard enclosures are a minimum of NEMA 4. The following NEMA ratings are available for all True Union Ball Valves, Butterfly Valves and Diaphragm Valves (see NEMA Ratings in Terminology & Definitions for additional description detail).

Enclosure Rating	General Description
NEMA 4	Watertight & Dust Tight
NEMA 4X	Watertight & Dust Tight with corrosion resistance
NEMA 7	Explosion Proof (class I, division 1, groups A, B, C, D)
NEMA 9	Explosion Proof (class II, division 1, groups E, F, G)

Declutchable Manual Override Option

Available for all Premium Electric actuated valves.

Valve Type
True Union 2000 Ball Valve
Butterfly Valve
Diaphragm Valve

Slightly different than straight manual override, *Declutchable* Manual Override disengages the actuator gear train for manual operation of the valve. Valves with this option have a hand wheel mounted on top of the actuator for manual valve operation.

Duty Cycle Upgrade Option

Upgrades in duty cycles use heavier motors to handle heat build up from extended operation. Contact Spears® for specific Duty Cycle information.

Spring Return (Fail Safe) Option

An internal spring in the actuator is configured to either open or close upon loss of power supply. Special gear clutch uncouples motor during spring return. Operation can be specified as either fail-open when spring return open is desired or fail-close when spring return close is desired.



"2-Wire" Control Relay

Special control switch setup operates the valve through internally mounted control relay. Valve opens when control switch is open and closes when control switch is closed. Uses 4-wire connection with 2 wires to line voltage and 2 wires to SPST control switch. Available either in normally closed or normally open configuration.



LED Position Indicator Lights

LED (light emitting diode) red/green indicator lights mounted on actuator enclosure to designate open/closed position.



Positioner Board (Modulating)

Modulation is used to control or throttle flow in response to an external control signal. An internally mounted, solid state positioner board accurately controls valve position from open to close. Available in the actuator voltages and input signals shown Note: Modulating Service option includes Duty Cycle Upgrade to a minimum of 75%.

Modulating Actuator Voltage	Input Signal
115 VAC	4-20mA, 0 - 5 VDC, 0 - 10 VDC
230 VAC	4-20mA, 0 - 5 VDC, 0 - 10 VDC
24 VAC	4-20mA, 0 - 5 VDC, 0 - 10 VDC
24 VDC	4-20mA, 0 - 5 VDC, 0 - 10 VDC



Heater and Thermostat

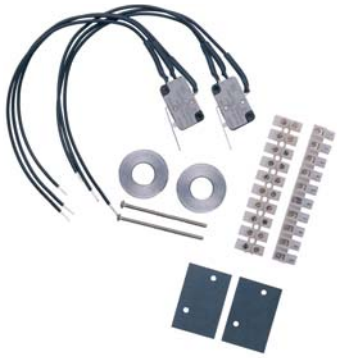
Mounted internally, heats the inside of the enclosure in low temperature environments to prevent condensation and keep internal lubricants fluid. The thermostat activates the heater when the enclosure internal temperature drops below the set point. There are a variety of thermostats available and a set point must be specified at the time of ordering.



Torque Sensor

Internally mounted sensor is adjustable to specific torque limits to avoid damage to valve in the event of blockage.

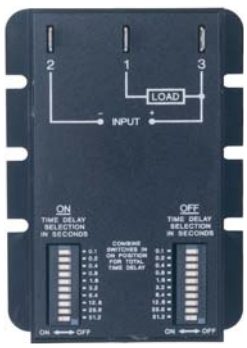
NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Progressive Products from Spears® Innovation and Technology



Auxiliary Limit Switches (Provided in sets of 2)

Additional internally mounted single pole double throw limit switch (SPDT) independent from the motor switches. Typically used for indicator lights, auxiliary equipment, etc. Actuation packages accept from 1 to 2 additional sets of auxiliary limit switches as indicated. When ordering replacement sets, specify hole size of cams (either 3/8" or 1/2").

Valve Type	Auxiliary Limit Switch Sets
True Union Ball Valve	
1/2" - 2"	1
2-1/2" - 3"	1
4" - 6"	2
Butterfly Valve	
1-1/2"	1
2" - 10"	2
12"	2
Diaphragm Valve - all Sizes	



Speed Controller

Internally mounted relays (not shown) and solid state timer allow variable control of valve cycle time (speed) by selecting combinations of ON time and OFF time options. Rate may be slowed, but cannot exceed the standard cycle time specified for the actuator.



Transmitter

The Transmitter module is normally used with the 4-20mA Positioner Board and the board's power supply. It can also be used as a stand alone feedback transmitter when no position controller is used, but will require an external power supply for stand alone application. This internally mounted module provides a 4-20mA output signal directly proportional to the Positioner Board feedback potentiometer. This signal can be used by a remote instrument to monitor or display actuator position. Zero and span adjustments allow adjustment of the Transmitter's 4-20mA signal to correspond with the zero and span positions set by the Positioner Board.



Friction Brake

Internally mounted device which is used to eliminate mechanical "coast" of the actuator motor at the end of its cycle. Brakes are standard on all electrically actuated Butterfly Valves and not applicable to Diaphragm Valves.



Custom ID Tag

Stainless steel valve/actuator ID Tag imprinted to user specified identification criteria. Each tag is 1/2" x 3" and accommodates up to 3 lines of text, maximum of 12 characters and spaces per line.

The basic options and accessories listed in this section represent many of the most commonly used for Pneumatic actuation of Ball Valves and Butterfly Valves (see next section for Pneumatic Diaphragm Valves) factory configured to order on the actuation package. Contact Spears® for any desired accessories, options, functions, or special controls not listed.

Overview of Basic Options & Accessories Available

Standard Pneumatic Actuator Features	Premium Pneumatic True Union Ball Valves	Premium Pneumatic Butterfly Valves
Spring Return (Fail Safe)	✓	✓
40 or 60 psi Operating Pressure	✓	✓
Declutchable Manual Override	✓	✓
Pneumatic Positioner	✓	✓
Electro-Pneumatic Positioner	✓	✓
Transmitter	✓	✓
Dome Position Indicator	✓	✓
Mechanical Limit Switches	✓	✓
Output Signal Mechanical Limit Switches	✓	✓
Output Signal Proximity Limit Switches	✓	✓
3 & 4-Way Solenoid Valve	✓	✓
Dual Power 3 & 4-Way Solenoid Valve	✓	✓
Stainless Steel 3-Gauge Set	✓	✓
ID Tag - SS	✓	✓

Contact Spears® for any desired accessories, options, functions, or special controls not listed in this guide.

Spring Return (Fail Safe) (Air-to-Open or Air-to-Close) Option

An internal spring in the actuator is configured to either open or close upon loss of air supply. Spring return can be specified as either Air-to-Open (fail-close) when spring return close is desired or Air-to-Close (fail-open) when spring return open is desired.

Operating Pressure Option

Standard ball and butterfly valve actuators require an 80 psi supply pressure. With this option, the actuator is configured for lower supply pressures of either 40 psi or 60 psi (must specify).



3 to 15 psi Pneumatic Positioner (for Ball & Butterfly Valves)

Positioner is used to control or throttle flow by modulating the air to the actuator in response to an external 3-15 psi control signal input. Available with NEMA 4 or 4X rated enclosure mounted on top of actuator with flat top green/black indicator or optional high visibility Dome Indicator. Includes pressure gauge set of one (1) input gauge 0-30 psi and two (2) output gauges 0-160 psi. Optional Stainless Steel gauge set available.



Electro-Pneumatic Positioner 4-20mA, 0-5 VDC, or 0-10 VDC

Positioner is used to control or throttle flow by modulating the air to the actuator in response to an external 4-20 milliamp (current), 0-5 VDC (resistive), or 0-10 VDC (resistive) control signal input which is converted to a proportional 3 - 15 psi pneumatic signal used by the positioner. Available with NEMA 4, 4X, 7 or Intrinsically Safe NEMA 7 rated enclosure mounted on top of actuator with flat top green/black indicator or dome indicator with green/red 180°high visibility. Includes pressure gauge set of one (1) input gauge 0-30 psi and two (2) output gauges 0-160 psi. Optional Stainless Steel gauge set available.



Dome Indicator

Dome style beacon with high visibility green/red indicator for improved viewing of valve position. Indicator only. Note: Dome indicators may be included with certain selections of positioners or limit switches.



3 & 4-Way Solenoid Valves

This combination valve operates either as a 3-way or 4-way pilot valve mounted to the actuator. The 3-way valve is a normally closed poppet design to insure tight shut-off. These valves are designed for use with spring return actuators. The 4-way valve can be used as either a 4-way 2 position design or a 3-way normally closed design merely by rotating a gasket located in the sub-base prior to assembly to the actuator. The 3-way operation routes the exhaust pressure to the spring side of the actuator to prevent corrosion problems within the actuator. An optional speed control can be purchased. Air inlet connection is 1/4" NPT. Thermoplastic composite enclosure is NEMA 4, 4x (standard) or NEMA 4, 4x, 7, 9 combination with 1/2" male conduit connection. Standard 115 VAC with voltage options of 230 VAC, 24 VAC, 12 VDC, and 24 VDC.



Dual Power Solenoid Valves

This configuration of 3 & 4-way solenoid valves accepts two separate power sources, one to open and one to close the valve, for use on Air-to-Air (double acting) actuators only.



Limit Switch with Indicator



Output Signal Limit Switches

Mechanical SPDT (2) or DPDT (2)
Proximity SPDT (2) or DPDT (2)

Set of two (2) auxiliary limit switches. Switches deliver a specified output current signal of 4-20mA or resistive signals of 0-5 or 0-10 VDC. Mechanical switches are SPDT or DPDT rated at 10 amp 125/250 VAC. Proximity (non-contact) switches are SPDT or DPDT rated at 1 amp 120 VAC. These limit switches are available with or without 180° visual indicator. Switch enclosure is NEMA 4/4x or NEMA 7/9 rated.



Stainless Steel Gauge Set

Three (3) gauge set. Stainless steel gauge replacement for use on Pneumatic and Electro-Pneumatic Positioners. Includes one (1) input pressure gauge 0-30 psi, and two (2) output pressure gauges 0-160 psi.



Custom ID Tag

Stainless steel valve/actuator ID Tag imprinted to user specified identification criteria. Each tag is 1/2" x 3" and accommodates up to 3 lines of text, maximum of 12 characters and spaces per line.



Transmitter

The Transmitter is an internally mounted module for use in the Positioner. The module is designed to give a 4-20 milliamp linear output signal with a 0-90° Positioner shaft rotation. The unit is environmentally sealed and loop powered. Transmitter is designed for use in General Purpose Locations and is not approved for Hazardous Locations as classified by the NEC.

The basic options and accessories listed in this section represent many of the most commonly used for Pneumatic actuation of Pneumatic Diaphragm Valves (see previous section for Pneumatic Ball Valves and Butterfly Valves) factory configured to order on the actuation package. Contact Spears® for any desired accessories, options, functions, or special controls not listed.

Overview of Basic Options & Accessories Available

Pneumatic Actuator Features	Premium Pneumatic Diaphragm Valves
Spring Return	✓
80 psi Operating Pressure	✓
Declutchable Manual Override	✓
Pneumatic Positioner	✓
Electro-Pneumatic Positioner	✓
Micro Limit Switch Module	✓
3 & 4-Way Solenoid Valve	✓
Stainless Steel 3-Gauge Set	✓
ID Tag - SS	✓

Contact Spears® for any desired accessories, options, functions, or special controls not listed in this guide.

Spring Return (Fail Safe)

An internal spring in the actuator is configured to either open or close upon loss of air supply. Spring return can be specified as either Air-to-Open when spring return close is desired or Air-to-Close when spring return open is desired.

Operating Pressure (for Diaphragm Valves)

Spears® Diaphragm Valves use a 80 to 90 psi standard operating pressure. Other optional pressures are available. Specify pressure requirements at time of order.



3 to 15 psi Pneumatic Positioner (for Diaphragm Valves)

Positioner is used to control or throttle flow by modulating the air to the actuator in response to an external 3-15 psi control signal input. Available with NEMA 4x enclosure mounted on top of actuator with 180° visual indicator. Positioner can be top or bottom loading, with or without gauges. Gauge set includes: 1 input pressure gauge 0-30 psi and 2 output pressure gauges 0-160 psi. Optional Stainless Steel gauge set available.



Electro-Pneumatic Positioner (for Diaphragm Valves), not for air-to-air 4 to 20 mA

Positioner is used to control or throttle flow by modulating the air to the actuator in response to an external 4-20 milliamp control signal input which is converted to a proportional 3-15 psi pneumatic signal used by the positioner. Available with NEMA 4x, enclosure mounted on top of actuator with 180° visual indicator. Used with air-to-spring only



3-Way Solenoid Valves 4-Way Solenoid Valves (for Diaphragm Valves)

Universal operation design allows pressure to any port. 4-way solenoid valve is used for double acting (air-to-air) actuators. 3-way solenoid valve is used for spring return (fail open/fail close) actuators. Air inlet is 1/4" NPT. Enclosures are molded epoxy NEMA 4, 4x (standard) or NEMA 4/4x/7/9 combination with 1/2" conduit connection and brass body (stainless steel body available by special order). Standard 115 VAC with voltage options of 230 VAC, 24 VAC, 12 VDC, and 24 VDC.



Micro Limit Switch Module (for Diaphragm Valves) SPDT (2) or DPDT (2)

Module of two (2) auxiliary mechanical limit switches. Switches are SPDT rated at 10 amp 125/250 VAC. Switch module includes 180° visual indicator. Switch enclosure is NEMA 4/4x/7/9 rated.



Custom ID Tag

Stainless steel valve/actuator ID Tag imprinted to user specified identification criteria. Each tag is 1/2" x 3" and accommodates up to 3 lines of text, maximum of 12 characters and spaces per line.

Additional Actuated Valve Configuration, Options & Accessories Not Specified

Spears® can provide virtually any actuation need for Spears® valves. The following actuated valve configurations, options and accessories not currently specified in this manual are a few of those available on a special order basis. **See Appendix B: Premium Actuated Valve Part Number Selection** for configuration and accessory options. Please contact Spears® for additional technical information or other custom actuation needs. Certain special order options and custom Actuation Packages may require extended lead times. Please contact Spears® for details.

Special Actuated Ball Valves

- Compact 2000 Ball Valves
- Single Entry Ball Valves
- True Union 2000 3-Way Vertical & Horizontal Ball Valves
- Vented Ball Valves

Special Actuated Butterfly Valves

- Tandem 3-Way - two valves operated from one actuator, both closing or both opening at the same time.
- Tandem Diverting - two valves operated from one actuator, one opening while the other closes.
- “No Seat” actuated Butterfly Valves for duct (damper) applications.
- Polypropylene 30" to 60" Actuated Valves (custom produced)

Actuated Gate Valves

- PVC & CPVC Construction
- Sizes 1/2" - 4"
- Socket, Threaded, Flanged End Connections

Special Actuator Options

- Actuators Only
- Actuator Brackets Only
- Actuator Stem Extensions
- Double Powder Coated Electric Enclosures
- Stainless Steel Pneumatic Enclosures
- Electric Spring Return Open or Close with No Override
- Battery Back-up Electric Actuators

Special Switch Sets & Solenoids

- Single Limit Switch & Bracket Only (no actuator) for manual valves
- Double Limit Switch & Bracket Only (no actuator) for manual valves
- Dual Coil 5-Way Solenoid Valves

Replacement Parts

Many replacement parts are available for Spears® electric and pneumatic actuators and valves. Contact Spears® for specific parts needed.

The following valve actuation terminology is provided for better understanding and elimination of miscommunications. Terms and definitions are grouped by related topics and listed in alphabetical order.

GENERAL SYSTEM TERMS

Ambient Temperature - The temperature of the air surrounding the actuator. Generally stated as a maximum and minimum for proper actuator operation. Note that ambient temperature range for an actuator may exceed that of a plastic valve and should not be considered to be the same as the service temperature.

Maximum Line Pressure - The media pressure against which the valve will have to close.

Maximum Service Temperature - Maximum temperature of the media. Service temperature should be considered in selection of the proper thermoplastic valve material for the application.

Media - The material flowing through a valve.

Modulating - Throttling or regulating the flow through a valve by varying the position between open and closed.

On-Off Service - Basic full open or full closed operation to start or stop flow.

Operating Torque - Force required to operate a valve, expressed in inch-pounds or foot-pounds.

Supply Pressure - Facility air pressure supply required to operate pneumatic actuator.

ACTUATOR TERMS

Double Acting - A Pneumatic actuator which uses air to both open and close the valve. Also referred to as “Air-to-Air” operation.

Electric Actuator - An electromechanical device used to actuate (open, close or modulate) a valve. An electric motor and gear train is used to actuate the valve. Numerous application considerations must be made in using an electric actuator. These include, duty cycle, cycle time, supply voltage, operating temperature and enclosure rating (NEMA) for use of electric devices under various environmental conditions.

Fail-Closed - Spring return in a pneumatic actuator which closes the valve upon loss of air pressure. Also referred to as “Air-to Spring Close” or “Spring-to-Close” operation.

Fail-Open - Spring return in a pneumatic actuator which opens the valve upon loss of air pressure. Also referred to as “Air-to-Spring Open” or “Spring-to-Open” operation.

Pneumatic Actuator - An air operated mechanical device used to actuate (open, close or modulate) a valve. The actuator converts air pressure into mechanical force most commonly using either a piston or diaphragm. The mechanical force output can be either rotational, as in actuation of a ball valve, or linear as commonly used in actuation of a diaphragm valve. Pneumatic actuators are not significantly limited by duty cycles and cycle time (virtually instantaneous) found with electric actuators. However, they may require additional accessories to further control speed of operation and a voltage supply for certain electric signal devices which may be desired.

Spring Return - An actuator using a spring to return the valve to either an open or closed position upon loss of power. Spring returns are most commonly used with pneumatic actuators, but can be used on electric actuators where it is necessary for the valve to open or close by design or by system failure (see also Fail-Close and Fail-Open terms).

ACTUATOR ACCESSORY & RATING TERMS

Duty Cycle - The capability of an Electric actuator motor to operate or "cycle" continuously - a 100% Duty Cycle. Ratings less than 100% mean that the actuator motor is capable of intermittent operation, as is the case with most actuation applications. For example, a 25% Duty Cycle means that for each 1-minute of operation, 3-minutes of non-operation is required. Duty cycles greater than 25% are generally needed only when additional work loads are encountered, such as valve modulation or in actuation of larger butterfly valves.

Limit Switches - Electrical switches which may be applied to either electric or Pneumatic actuators to supply a signal that the valve cycle has been completed. In Electric actuators, the primary limit switches are used to control the open and closed position of the valve. Auxiliary limit switches may be used to perform other functions such as starting or stopping a pump. Limit switches are most often mechanical and are activated by physical contact with either a lever or plunger. Proximity switches are electrically tripped without physical contact and may be used with certain computer or micro processor controls.

NEMA Rating - National Electric Manufacturers Association standard for rating electrical component enclosures. The most commonly used NEMA ratings for electric actuator and electrical accessory enclosures are NEMA 4 and NEMA 4X.

NEMA 1: General Purposes - for indoor use without unusual service conditions, primarily to protect components from contact.

NEMA 2: Drip proof - for indoor use with degree of protection against limited amounts of falling water or dirt.

NEMA 3: Rain tight - for outdoor use with protection from windblown dust, rain and sleet, and undamaged by ice formation.

NEMA 4: Watertight and Dust tight - for indoor/outdoor use with a protection from windblown dust, rain or hose directed wash down environments.

NEMA 4X: Watertight and Dust tight - same as NEMA 4 with addition of corrosion resistance.

NEMA 7: Explosion Proof (class I, division 1, groups A, B, C, D) - designed to contain an internal explosion without causing an external hazard when installed in a designated environment group. Group A= atmospheres containing acetylene; Group B = atmospheres containing hydrogen; Group C = atmospheres containing ethyl-ether vapors, ethylene, or cyclopropane; Group D = atmospheres containing gasoline, hexane, naphtha, benzene, butane, propane, alcohol, acetone, benzol, lacquer, solvent vapors or natural gas.

NEMA 9: Explosion Proof (class II, division 1, groups E, F, G) - Dust-ignition-proof enclosures designed to prevent both entrance of dust and external heating capable of igniting dust on the enclosure or in the surrounding atmosphere.Group E = atmospheres containing metal dust including aluminum, magnesium, their commercial alloys, and other metals of similar hazardous characteristics; Group F = atmospheres containing carbon black, coal or coke dust; Group G = atmospheres containing flour, starch, or grain dust.

Positioner - Attachment for either electric or Pneumatic actuators which provides automatic modulating control of the valve position from open to closed. Electric positioners work by comparison of 2-currents, one derived from the input signal and one from the actuator. Pneumatic positioners increase, decrease and balance the air supply according to an input signal from an external control source. Input signals are generated by either a 3 to 15 psi pneumatic signal, or a 4 to 20 milliamp electro-pneumatic signal.

Solenoid Valve - An electro-magnetically operated valve which enables electrical control of air supply to a pneumatic actuator. Solenoids are wired to a manual switch or any electric controller. Double Acting actuators require a 4-way solenoid, Spring-Return actuators require a 3-way solenoid for proper air control. As electrical devices, solenoid valves are available in various NEMA ratings.

Transducer - A device that converts one signal type to another. In actuation controls, the most common use of a transducer is in conversion between electrical signals and pneumatic signals.

Premium Actuated Valve Part Number Selection

The section is provided for formulation of part numbers on custom actuated valve packages. A 3-step process is used to build custom actuated valve part numbers:

Step 1 - Select the desired type, style, options and material of valve from appropriate Valve Selection Table. Specify nominal valve size from Size Code available.

Step 2 -Select the desired actuator style options from the Actuator Selection Tables

Step 3 -Select desired actuator accessories (if any) from the Accessories Selection Tables.

IMPORTANT: Custom accessories are ordered under a separate part number from the actuated Valve Package. Accessory part numbers are ordered individually and factory assembled with selected Actuated Valve Package.

If any accessories are being ordered, add the suffix, "- A " to the end of the Actuated Valve Package part number. This suffix is added only if an Accessory(s) is being selected for add on to the initial Actuated Valve Package.

ACTUATED VALVE PACKAGE PART NUMBER POSITIONS

VALVE CODE	ACTUATOR CODE		SIZE CODE	ACCESSORY DESIGNATION
☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	☐	☐ ☐ ☐	- A
1 - 2 - 3 - 4 - 5	6 - 7 - 8 - 9		10 - 11 - 12	

Optional Control Number
(not used on basic packages)

Step 1: Valve & Size Code Selection

Spears actuated valve selection table include Ball Valves (Selection Table 1) Butterfly Valves (Selection Table 2), Diaphragm Valves (Selection Table 3) and Gate Valves (Selection Table 3A). Use the table information to complete the Valve Code in the package part number.

Table 1: BALL VALVES
(Valve Type - End Connector - O-ring - Special Options - Material – Size Selection)

VALVE CODE ☐ ☐ ☐ ☐ ☐ — 1 - 2 - 3 - 4 - 5

Reserved for Actuator ☐ ☐ ☐ ☐ — 6 - 7 - 8 - 9

SIZE CODE ☐ ☐ ☐ — 10 - 11 – 12

Valve Type
0 = Compact Ball
P = Compact 2000
1 = True Union Ball
2 = TU 2000 Ind. Ball
Z = TU 2000 Std Ball
3 = Utility (Special)
S = Single Entry (Special)
T= TU 2000 Ind Tandem
U = Hor 3-way L Tandem
V = Hor 3-way T Tandem
W= Ver 3-way L Tandem
X= Ver 3-way 2L Tandem
Y= Ver 3-way 3L Tandem
R= Ver 3-way T Tandem
A= Hor 3-way L-port
B= Hor 3-Way T-port
C= Ver 3-Way L-port
D= Ver 3-Way 2L-port
E= Ver 3-Way 3L-port
F= Ver 3-Way T-port

End Connector
(see note 1)
1 = Socket
2 = Thread
3 = SR Thread
4 = Flanged
5 = BSP Thread
6 = DIN Plain (socket)
7 = JIS Plain (socket)
8 = Flange CL300 Drilling
9 = Flange PN 16/10 Drilling (to 160 mm)

O-ring
0 = Buna-N.
1 = EPDM
2 = FKM
3 = PTFE Encapsulated EPDM.
4 = Silicone
5 = FKM/ETP
6 = AFLAS® TFE/P (FEPM)
7 = PTFE Encapsulated FKM

Special Options
0 = None
1 = Lubricant Free (see note 2)
2 = Vented Ball

Material
1 = PVC
2 = CPVC
3 = PP
(see note 1)
4 = LXT PVC

Size
005 =1/2"
007 = 3/4"
010= 1"
012 = 1-1/4"
015 = 1-1/2"
020 = 2"
025 = 2-1/2"
030 = 3"
040 = 4"
060 = 6"

Notes:

1 – PP valves available in regular True Union style sizes1/2" – 4" only, with threaded or SR threaded end connectors only. 1/2" – 2" PVC & CPVC True Union valves ordered as "socket" come with both socket and regular threaded end connectors. 2-1/2" - 6" valves come with socket only.

2 – All Ball Valves are assembled with non-silicone lubricant.

3 – Tandem (Diverting) part number includes two valves operated from one actuator with one opening while the other closes.

Table 2: BUTTERFLY VALVES
(Valve Type - Stem – Seat & O-ring - Special Options - Material – Size Selection)

VALVE CODE Reserved for Actuator **SIZE CODE**

□ □ □ □ □ □ □ □ □ □ □ □

1 - 2 - 3 - 4 - 5 6 - 7 - 8 - 9 **10 - 11 – 12**

Valve Type

4 = Std. Butterfly
5 = True Lug Butterfly
6 = Tandem 3-Way (see note 6)
7 = Tandem Diverting (see note 7)
8 = High Purity TFM
J = Pool Butterfly- white (see note 8)
K =Wafer Butterfly
L = Shaved Std. Butterfly

Stem Material

1 = SS 316
2 = PTFE Coated SS 316
3 = Titanium
4 = Hastaloy

Seat & O-ring (see note 4)

1 = Buna-N
2 = EPDM
3 = FKM
4 = PTFE Sleeved FKM
5 = TFM
6 = PTFE Sleeved EPDM

Special Options (see note 3)

0 = None
1 = Zinc plated Lugs (for True Lug)
2 = SS 316 Lugs (for True Lug)
3 = non lubricated
4 = Zinc lug/ non lubricated
5 = SS 316 lug/ non lubricated
6 = No Seat (duct application)
7= Zinc plated Lug Insert (for Std. Butterfly; see note 9)
8= SS Lug Insert (for Std. Butterfly; see note 9)

Material

1 = PVC (see note 1)
2 = CPVC
3 = PP (see note 2)

Size (see note 5)

015 = 1-1/2”
020 = 2”
025 = 2-1/2”
030 = 3”
040 = 4”
060 = 6”
080 = 8”
100 = 10”
120 = 12”
140 = 14”
160 = 16”
180 = 18”
200 = 20”
240 = 24”

Notes:
1 – PVC and CPVC valves available through 14" only.
2 – All PP and 14" PVC/CPVC valves available in Standard Butterfly style only.
3 – Lugs specified with True Lug and Lug Insert styles only.
4 – PP valves are standard with EPDM or FKM.
5 – Actuated valve sizes 14" and larger are custom produced to order, contact Spears® Technical Services.
6 – Tandem 3-Way part number includes two valves operated from one actuator, both closing or both opening at the same time.
7 – Tandem Diverting part number includes two valves operated from one actuator with one opening while the other closes.
8 – Pool Butterfly Valves available in sizes 1-1/2" to 12" with SS316 Stem, EPDM Seats, PVC White only. No other options are available.
9 – Lug Inserts are used when Lug Style valve is ordered for Tandem Diverting valve type.

Table 3: DIAPHRAGM VALVES
(Valve Type - End Connector - O-ring - Diaphragm - Material – Size Selection)

VALVE CODE **Reserved for Actuator** **SIZE CODE**

□ □ □ □ □ □ □ □ □ □ □ □ □

1 - 2 - 3 - 4 - 5 6 - 7 - 8 - 9 **10 - 11 – 12**

Material (see note 1)
1 = PVC
2 = CPVC
3 = PP
4 = LXT PVC
5 = PVC/Hastaloy-C Bolts
6 = CPVC/Hastaloy-C Bolts
7 = PVC/Titanium Bolts
8 = CPVC/ Titanium Bolts

Size (see note 1)
005 = 1/2"
007 = 3/4"
010 = 1"
012 = 1-1/4"
015 = 1-1/2"
020 = 2"
025 = 2-1/2"
030 = 3"
040 = 4"
060 = 6"
080 = 8"

Valve Type
9 = Diaphragm Valve
H= Zero Dead Leg

Diaphragm
1 = Buna-N
2 = EPDM
3 = FKM
4 = Hypalon® (CSM)
5 = PTFE w/EPDM
6 = PTFE w/FKM

End Connector
(see note 1)
1 = Socket (True Union)
2 = Thread (True Union)
3 = SR Thread (True Union)
4 = Spigot
5 = Flanged
6 = DIN Plain
7 = JIS
8 = BSP Thread

O-ring (see note 2)
0 = None
1 = EPDM
2 = FKM
3 = PTFE Encapsulated EPDM
7 = PTFE Encapsulated FKM

Notes:

1 – All valves with socket, thread, or SR thread end connectors are True Union style only.
Socket end connectors available on PVC and CPVC valve sizes 1/2" – 2" only.
Thread and SR thread end connectors available on PVC, CPVC, and PP valve sizes 1/2" – 2" only.
DIN, JIS, and BSP end connectors available on PVC and CPVC valve sizes 1/2" – 2" only.
Flanged end connectors available on all sizes of PVC and CPVC valves.
Flanged end connectors available on PP valve sizes 3" and larger only.
Zero Dead Leg valves are Socket Tee x selected End Connector code.

2 – O-rings are use on True Union style valves sizes 1/2" – 2" with socket, thread, or SR thread end connectors only.
Enter “0” for all other end connector selections.

Table 3A: GATE VALVES (Special Order Only – Contact Spears® for Availability)
(Valve Type - End Connector - O-ring - Special Options - Material – Size Selection)

VALVE CODE **Reserved for Actuator** **SIZE CODE**

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

1 - 2 - 3 - 4 - 5 6 - 7 - 8 - 9 10 - 11 – 12

Material
(see note 2)
1 = PVC
2 = CPVC

Size
(see note 4)
005 = 1/2"
007 = 3/4"
010 = 1"
012 = 1-1/4"
015 = 1-1/2"
020 = 2"
025 = 2-1/2"
030 = 3"
040 = 4"

Valve Type
G = Gate Valve

Special Options
0 = None
1 = Lubricant Free (see note 3)

End Connector
(see note 1)
1 = Socket
2 = Thread
3 = SR Thread
4 = Flanged
5 = BSP Thread
6 = DIN Plain

O-ring
1 = Buna-N
2 = EPDM
3 = FKM
4 = PTFE Encapsulated

Notes:
1 – SR thread style available on 3" & 4" size only.
Din Plain metric available in 20 mm – 63 mm only.
2 – PVC valves have polypropylene gate wedge, CPVC valves have CPVC gate wedge
3 – Standard valves are assembled with non-silicone lubricant.
4 – Valve size 2-1/2" is 3" valve with 2-1/2" reducer bushings.

Step 2: Actuator Code Selection

Spears actuated valves are available with either electric or pneumatic motors. Actuators are pre matched to each type and size of valve with proper operating torque and cycle time. Additional actuator accessories are selected and are factory installed on the Actuated Valve Package in Step 3 instructions.

Select the applicable options from either the Electric Actuators (Selection Table 4) or Pneumatic Actuators (Selection Table 5) and enter the designated Actuator Code portion of the package part number.

Table 4: ELECTRIC ACTUATORS (Voltage - Enclosure Rating - Manual Override - Duty Cycle)

ACTUATOR CODE — **Optional Control Number** (not used on basic packages)

□ □ □ □ □ □ □ □ □ □ □ □ □

1 - 2 - 3 - 4 - 5 — 6 - 7 - 8 - 9 — 10 - 11 - 12

Reserved for Valve — Reserved for Size

Voltage (see note 1)
- A = 115 VAC 60 Hz
- B = 230 VAC 60 Hz
- C = 230 VAC 3-phase 50 Hz (EU)
- D = 230 VAC 3-phase 60 Hz
- E = 24 VAC
- F = 12 VDC
- G = 24 VDC
- L = 460 VAC 3-Phase 50 Hz (EU)
- M = 460 VAC 3-Phase 60 Hz
- R = 415 VAC 3-Phase 50 Hz (EU)
- S = 230 VAC 50 Hz (EU)
- T = 575 VAC 3-Phase 60Hz (EU)
- U = 115 VAC 50 Hz (EU)
- V = 208 VAC 3-Phase 60 Hz
- X = Single Indicator Switch Only (see note 2)
- Y = Double Indicator Switch Only (see note 2)
- Z = Actuator Bracket Only (see note 2)
- 1 = 480 VAC 50 Hz
- 2 = 480 VAC 60 Hz
- 3 = 480 VAC 3-Phase 50 Hz
- 4 = 480 VAC 3-Phase 60 Hz
- 5 = 380 VAC 3-Phase 60 Hz

Duty Cycle (see note 3)
- 1 = 25%
- 2 = 75%
- 3 = 100%
- 4 = 50%
- 5 = 70% (custom only)
- 6 = 80% (custom only)
- 7 = 40%
- 8 = 60%
- 9 = 20%

Manual Override (see note 4)
- 0 = None
- 1 = Basic Manual Override
- 2 = Declutchable Manual Override
- 3 = Spring Return Open with Declutchable Manual Override (see note 5)
- 4 = Spring Return Close with Declutchable Manual Override (see note 5)
- 5 = Spring Return Open no override (see note 5)
- 6 = Spring Return Close no override (see note 5)
- 7 = RCE Battery Backup Actuator
- 8 = Spring Return Open with Basic Manual Override (see note 5)
- 9 = Spring Return Close with Basic Manual Override (see note 5)

Enclosure
- 1 = NEMA 4
- 2 = NEMA 4x
- 3 = NEMA 7
- 4 = NEMA 9
- 5 = NEMA 4 Double Powder Coated
- 6 = NEMA 4x Double Powder Coated
- 7 = NEMA 7 Double Powder Coated
- 8 = NEMA 9 Double Powder Coated
- 9= AWWA
- A = NEMA 7 Modulation enclosure (for 1/2"-2" modulated Ball /Butterfly)
- B = NEMA 6
- C=NEMA 6P, prolonged submersion at a limited depth.
- D=NEMA 8

Notes:

1 – 460 VAC available on Butterfly Valves only.

2 – Bracket & Indicator Switch Only part numbers do not allow any other options (must be Z000, Y000, or X000).

3 – **Standard Duty Cycles** vary according to valve type and size as indicated in chart below. Standard Duty Cycles can be *upgraded* only. Note: 50% duty cycle available on non-standard, special order actuators only.

Valve Type	Size Range	25% Duty Cycle	75% Duty Cycle	100% Duty Cycle
Ball Valve	1/2" - 2"		X	
Ball Valve	2-1/2" - 4"	X		
Butterfly Valve	1-1/2" - 10"	X		
Butterfly Valve	12" – 24"			X
Diaphragm Valve	1/2" - 8"	X		

4 – Basic Manual Override is standard on Ball Valve sizes 1/2" – 3" with Declutchable Manual Override as an option. Declutchable Manual Override is standard on Ball Valve sizes 4" & larger and all Butterfly Valves. Standard Gate Valve and Diaphragm Valve packages have no override with Declutchable Manual Override as an option. Spring return not available on electric Diaphragm valves.

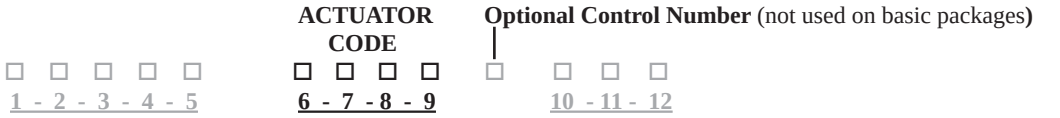
5 – Electric Spring Return Actuators come standard with no type of override. Need to verify if either Declutchable Manual Override or Basic Manual Overrides are available in all applications.

Actuator Only Part Numbers
Individual Premium Electric actuators can be ordered for specific Spears® valve types and sizes. Includes actuator and mounting hardware for specified valve type and size. To specify valve type for actuator only, enter the first digit valve type code followed by zeros (“0”) for remaining 4-digits of the valve code section of the part number plus the applicable 3-digit valve size code (see valve selection Tables 1, 2, or 3). Complete the actuator code selection as described in this section. See Step 3 for any desired actuator accessories.
Example: A 115 VAC electric actuator only with NEMA 4 enclosure, basic manual override and 75% duty cycle for 2" standard True Union Ball Valve would have the following part number: 10000A112-020.

Optional Control Numbers (custom use) – Electric Actuators
1 = AUMA SA07.5-19A/ AUMA-115 Actuator w/remote pilot station
2 = Rotork AQM105 Actuator
3 = RCE15-5-4-1-15 Remote Control Station w/24 VAC Battery Back-up
4 = RCE10-4-1-5-15 Remote Control Station w/24 VDC Battery Back-up
5 = Oversize Housing
6 = AUMA SG05.1 Actuator
7 = AUMA SG05.1-2 Actuator
B = AUMA SG05.1-3 460VAC 3-phase Actuator, indicator lights, 4-20mA positioner, NEMA 4x
8 = AUMA SA07.1-26B Actuator
H = AUMA SAO7.5-38A 115 VAC Single Phase Actuator, (2) Gear Train Limit Switches, Open / Close Torque Switches, Space Heater, Plug & Socket type terminals, Side Mounted hand wheel, Nema 4x enclosure, Reversing starters, Power Supply board, Interface Board - 110 VAC, 3 Push buttons O/S/C, Selector Switch L/O/R, 3 Lights open / fault / close
9 = Actuator Upsize (one size to accommodate accessories)
A = EIM Controls P2N1-3 (460 VA 3-phase Actuator)
C = SURE 25-10, 115 VAC Actuator, Spring return close, w/ modulating 4-20 mA positioner board
D = AUMA SAR07.5-13B/GS63.3, 5000 in.-lb., 460 VAC 3-Phase 60HZ Actuator, indicator lights, 4-20mA positioner, NEMA4x.
E = AUMA SG07.1, 2640 in.-lb., 120VAC Actuator, NEMA 4x/6
F = RCE-40-410-4-115, 115 VAC actuator w/ battery backup
G =Valvcon # IW150HS2DNZN115A. 1-1/2”, w/ heater/thermostat, 2 aux limit switches, Device Net card, declutchable manual override, 115VAC
J = RCE 15-5-4-15, 150 in. lb., 115VAC, 5 sec. cycle, 100% duty rating, NEMA 4x/7/9 enclosure, w/battery backup
X = Actuator assembled with Double Containment Valve & Valve Box (for use in “actuator only” part number)

Note: When control number is used on a package with accessories, the dash (-) is dropped before the “A” due to part number limitations.

Table 5: PNEUMATIC ACTUATOR
(Operation - Operating Pressure - Manual Override)



Operation Mode
H = Air-to-Air
N = Air-to Air, Extended Stops
J = Air-to-Spring Close
K = Air-to Spring Open
O = Air-to-Spring Close, Extended Stops
P = Air-to Spring Open, Extended Stops
W = 3-Way Ball Valve Actuator
(see note 1)

Operating (Supply) Pressure
(see note 2)
1 = 80 psi
2 = 60 psi
3 = 40 psi
4 = 20-100 psi specified (must use with optional Control Number below)
5 = 140 psi (Diaphragm Valve only)
6 = 150 psi
7 = 120 psi
8 = 90 psi (Diaphragm Valve w/Unitized Plastic Housing, 1/2" - 2")

Manual Override
(see note 3)
0 = None
1 = Basic Manual Override (no operator Hand wheel)
2 = Declutchable Manual Override (w/Hand wheel)
3 = Manual Override (w/Hand wheel)

Special Options
0 = None
1 = Polyester Powder Coated
2 = Stainless Steel Housing & Mounting
3 = Autocatalyticly Nickel Infused (ANI) housing
4 = Special Bracketing- TUMB2
5 = Diaphragm w/Unitized Plastic Housing (1/2" - 2")

Notes:
1 – Bracket only part numbers do not allow any other options (must be Z000); available for Ball Valves only.
2 – Operating pressures (1-2-3) apply to Ball valve actuators.
3 – Basic Manual Override is standard on all Ball Valves and Butterfly Valves with Declutchable Manual Override as an option. Standard Diaphragm Valve package has no override. No manual override option sizes 1/2" –2". Declutchable Manual Override is an option on valve sizes 2-1/2" & larger.

Actuator Only Part Numbers
Individual Premium Pneumatic actuators can be ordered for specific Spears® valve types and sizes. Includes actuator and mounting hardware for specified valve type and size. To specify valve type for actuator only, enter the first digit valve type code followed by zeros (“0”) for remaining 4-digits of the valve code section of the part number plus the applicable 3-digit valve size code (see valve selection Tables 1, 2, or 3). Complete the actuator code selection as described in this section. See Step 3 for any desired actuator accessories.

Example: An 80 psi, air-to-air pneumatic actuator only with declutchable manual override for 2" standard Butterfly Valve would have the following part number: 40000H102-020.

Optional Control Numbers (custom use) – Pneumatic Actuators
1 = Downsized actuator for vacuum application
2 = Habonin brand pneumatic actuator
3 = Customer Requested Upsized Actuator (one size larger than standard)
4 = Saunders 602-1/2 actuator
X = Actuator assembled with Double Containment Valve & Valve Box (for use in “actuator only” part number)
Control Numbers for user specified pressure. Must be used with Operating (Supply) Pressure code 7, #4:

A = 20 psi	D = 50 psi	G = 80 psi
B = 30 psi	E = 60 psi	H = 90 psi
C = 40 psi	F = 70 psi	J = 100 psi

Note: When control number is used on a package with accessories, the dash (-) is dropped before the “A” due to part number limitations.

Step 3: Actuator Accessory Selection

Premium actuator accessories are available for both Electric actuators (Selection Table 7) and Pneumatic actuators (Selection Table 8 and 9). Actuator accessory options are selected and ordered separately as individual Accessory part numbers for the actuated valve. If accessory options are to be ordered, be sure the suffix, "- A", was added to the end of the selected Actuated Valve Package part number configured in Step 1 & 2 to designate that the accessories are assembled with the valve package.

A separate part number is used for *each* accessory ordered. Select the desired Accessory Part Number from the selection tables for each accessory.

Example: An electric actuated valve is desired with a heater and thermostat, an SPDT limit switch set and a 0-5 VDC signal positioner board. From Table 7, the following Accessory part numbers should be ordered with the actuated valve package:

Heater & Thermostat = A-H1
Limit Switch Set = A-LS1
Positioner Board = A-PB2

Contact Spears® for any desired accessories or functions not specified in the Accessory Selection Tables.

Selection Table 7: Premium Electric Actuator Accessories

Accessory	Description	Accessory Part Number
Heater	Heater & Thermostat – On @ 41°F, Off @ 60.8°F	**A-H1**
	Heater & Thermostat – On @ 62.6°F, Off @ 80.6°F	**A-H2**
Auxiliary Limit Switches	2-SPDT Limit Switch Set (1/2" shaft cam)	**A-LS1**
	2-SPDT Limit Switch Set (3/8" shaft cam[3])	**A-LS2**
	2-SPDT Limit Switch Set for Electric Spring Return	**A-LS3**
Position Indicators	LED Indicator Lights	**A-P2**
Modulating Positioner Boards	115 VAC 4-20 mA	**A-PB1**
	115 VAC 0-5 VDC	**A-PB2**
	115 VAC 0-10 VDC	**A-PB3**
	230 VAC 4-20 mA	**A-PB4**
	230 VAC 0-5 VDC	**A-PB5**
	230 VAC 0-10 VDC	**A-PB6**
	24 VAC 4-20 mA	**A-PB7**
	24 VAC 0-5 VDC	**A-PB8**
	24 VAC 0-10 VDC	**A-PB9**
	24 VDC 4-20 mA	**A-PB10**
	24 VDC 0-5 VDC	**A-PB11**
	24 VDC 0-10 VDC	**A-PB12**
	115 VAC 4-20MA For Electric Spring Return Actuator	**A-PB13**
Transmitter	4-20mA	**A-T1**
Torque Sensors	Adjustable Electronic Torque Sensor	**A-TS1**
Speed Controller	Variable Speed Controller	**A-SC1**
"2-Wire" Control[1] (operates as solenoid valve)	Control Relay Switch Setup 115 VAC– Normally Closed	**A-CR1**
	Control Relay Switch Setup 115 VAC– Normally Open	**A-CR2**
	Control Relay Switch Setup 24 VAC– Normally Closed	**A-CR3**
	Control Relay Switch Setup 24 VAC– Normally Open	**A-CR4**
	Control Relay Switch Setup 230 VAC– Normally Closed	**A-CR5**
	Control Relay Switch Setup 230 VAC– Normally Open	**A-CR6**
	Control Relay Switch Setup 12 VDC– Normally Closed	**A-CR7**
	Control Relay Switch Setup 12 VDC– Normally Open	**A-CR8**
	Control Relay Switch Setup 24 VDC– Normally Closed	**A-CR9**
	Control Relay Switch Setup 24 VDC– Normally Open	**A-CR10**
Friction Brake[2]	Mechanical Brake	**A-FB1**
Lockout Switch	Power disconnect switch activated when manual override is in use	**A-LK1**

Notes:
1 - "2-Wire" Control is not applicable to Diaphragm Valves
2 – Friction Brake are standard on Butterfly Valves and not applicable to Diaphragm Valves
3 – The A-LS2 is used on 1/2" – 2" basic Ball Valve packages; A-LS1 used on all others.

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(Selection Table 7: Premium Electric Actuator Accessories – continued)

Accessory	Description	Accessory Part Number
Remote/Off/Local Control Switch	Remote/off/local, open/close momentary contact push buttons, red (close) and green (open) position indicating lights	**A-RS1**
Special Hardware	Titanium Bolts	**A-B1**
ID TAG	Type 316 Stainless Steel ID Tag 1/2" x 3" (3-lines, 12-characters & spaces)	**TAG3-015**
Stem Extension	Ball Valve Stem Extension[4]	**A-BVSE-xxx-000**
	True Union 2000 Ball Valve Stem Extension	**A-BVSE2-xxx-000**
	Butterfly Valve Stem Extension	**A-BFSE-xxx-000**
	Diaphragm Valve Stem Extension	**A-DESE-xxx-000**

Note:
4 – Stem Extension Part Numbers: Enter size code for "xxx" in part number. Replace "000" with desired length code in part number; length is from top of valve to bottom of actuator.

Selection Table 8: Ball Valve & Butterfly Valve Premium Pneumatic Actuator Accessories

Accessory	Description			Accessory Part Number
PNEUMATIC POSITIONERS	3-15 psi	NEMA 4	Flat-Top Indicator	**A-PP1**
	3-15 psi	NEMA 4	Dome Indicator	**A-PP2**
	3-15 psi	NEMA 4	Dome Indicator Integrated 2-SPDT Mech. Switches	**A-PP3**
ELECTRO PNEUMATIC POSITIONERS WITH INDICATOR	4-20mA	NEMA 4	Flat-Top Indicator	**A-EP1**
	4-20mA	NEMA 4	Dome Indicator	**A-EP2**
	4-20 mA	NEMA 4	Dome Indicator Integrated 2-SPDT Mech. Switches	**A-EP3**
	4-20mA	NEMA 7	Flat-Top Indicator	**A-EP4**
	4-20mA	Intrinsically Safe (CSA/UL) Flat-Top Indicator		**A-EP5**
	4-20mA	NEMA 7	Dome Indicator	**A-EP6**
	4-20mA	Intrinsically Safe w/2-SPST Proximity Switches		**A-EP22**
SOLENOID VALVES	3 & 4-way	115 VAC	NEMA 4/4x	**A-SV1**
	3 & 4-way	230 VAC	NEMA 4/4x	**A-SV2**
	3 & 4-way	24 VAC	NEMA 4/4x	**A-SV3**
	3 & 4-way	12 VDC	NEMA 4/4x	**A-SV4**
	3 & 4-way	24 VDC	NEMA 4/4x	**A-SV5**
	3 & 4-way	115 VAC	NEMA 4/4x/7/9	**A-SV6**
	3 & 4-way	230 VAC	NEMA 4/4x/7/9	**A-SV7**
	3 & 4-way	24 VAC	NEMA 4/4x/7/9	**A-SV8**
	3 & 4-way	12 VDC	NEMA 4/4x/7/9	**A-SV9**
	3 & 4-way	24 VDC	NEMA 4/4x/7/9	**A-SV10**
	Dual Coil 3 & 4-way	115 VAC	NEMA 4/4x	**A-SV11**
	Dual Coil 3 & 4-way	230 VAC	NEMA 4/4x	**A-SV12**
	Dual Coil 3 & 4-way	24 VAC	NEMA 4/4x	**A-SV13**
	Dual Coil 3 & 4-way	12 VDC	NEMA 4/4x	**A-SV14**
	Dual Coil 3 & 4-way	24 VDC	NEMA 4/4x	**A-SV15**
	Dual Coil 3 & 4-way	115 VAC	NEMA 7/9	**A-SV16**
	Dual Coil 3 & 4-way	230 VAC	NEMA 7/9	**A-SV17**
	Dual Coil 3 & 4-way	24 VAC	NEMA 7/9	**A-SV18**
	Dual Coil 3 & 4-way	12 VDC	NEMA 7/9	**A-SV19**
	Dual Coil 3 & 4-way	24 VDC	NEMA 7/9	**A-SV20**
	Stainless Steel 3 & 4-way 115VAC NEMA 4/4x			**A-SV21**
	3-Way 24 VDC Hi Temperature (Class H) NEMA 4x			**A-SV22**
	3 & 4-way	230 VAC	NEMA 4/4x 1/2" NPT Din Connector	**A-SV23**
LIMIT SWITCH & TRANSMITTER COMBINATION	4-20mA	2-SPDT	NEMA 4/4x/7/9	**A-LS20**
	4-20mA	2-SPDT	NEMA 4/4x/7/9 w/ Visual Indicator	**A-LS21**
	4-20mA	2-DPDT	NEMA 4/4x/7/9	**A-LS22**
	4-20mA	2-DPDT	NEMA 4/4x/7/9 w/ Visual Indicator	**A-LS23**
	4-20mA	2-Proximity	NEMA 4/4x/7/9	**A-LS24**
	4-20mA	2-Proximity	NEMA 4/4x/7/9 w/ Visual Indicator	**A-LS25**

Note: Pneumatic and Electro-Pneumatic positioners include brass gauges: 1 input gauge @ 0-30 psi and 2 output gauges @ 0-160 psi. Stainless steel gauges may be ordered separately.

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(Table 8: Ball Valve & Butterfly Valve Premium Pneumatic Actuator Accessories – continued)

Accessory	Description		Accessory Part Number
LIMIT SWITCHES	2-SPDT	NEMA 4/4x	**A-LS40**
	2-SPDT	NEMA 4/4x w/ Visual Indicator	**A-LS41**
	2-SPDT	NEMA 4/4x w/ Green/Red Dome Indicator	**A-LS41D**
	2-SPDT	NEMA 4/4x w/ Low Profile Indicator	**A-LS41L**
	2-DPDT	NEMA 4/4x	**A-LS42**
	2-DPDT	NEMA 4/4x w/ Visual Indicator	**A-LS43**
	2-Proximity	NEMA 4/4x	**A-LS44**
	2-Proximity	NEMA 4/4x w/Low Profile Indicator NOTE - Requires user supplied intrinsic barrier	**A-LS44L**
	2-Proximity	NEMA 4/4x w/ Visual Indicator	**A-LS45**
	2-Proximity	NEMA 7/9	**A-LS46**
	2-Proximity	NEMA 7/9 w/ Visual Indicator	**A-LS47**
	2-Proximity	NEMA 7/9 w/ Low Profile Indicator	**A-LS47L**
	2-SPDT	NEMA 4/4x/7/9	**A-LS48**
	2-SPDT	NEMA 4/4x 7/9 w/ Visual Indicator	**A-LS49**
	2-DPDT	NEMA 4/4x/7/9	**A-LS50**
	2-DPDT	NEMA 4/4x/7/9 w/ Visual Indicator	**A-LS51**
	4-SPDT	NEMA 4/4x w/ 180° Indicator	**A-LS52**
INDICATORS	Dome Indicator		**A-V2**
TRANSMITTER	4-20mA Output Transmitter		**A-PT1**
PRESSURE GAUGE SET	Stainless steel case, 3-gauge set for use with positioners: 1 – input pressure gauge 0-30 psi, 2- output gauges 0-160 psi		**A-G1**
	Plastic case, 3-gauge set for use with positioners: 1 – input pressure gauge 0-30 psi, 2- output gauges 0-160 psi		**A-G2**
AIR MUFFLERS	Standard Sintered Bronze, 40 micron, 1/8" NPT		**A-M18**
	Standard Sintered Bronze, 40 micron, 1/4" NPT		**A-M14**
	Speed Control Muffler (Adjustable Air Flow) 1/8" NPT		**A-M2V18**
	Speed Control Muffler (Adjustable Air Flow) 1/4" NPT		**A-M2V14**
ID TAG	Type 316 Stainless Steel ID Tag 1/2" x 3" (3-lines, 12-characters & spaces)		**TAG3-015**
Stem Extension	Ball Valve Stem Extension[1]		**A-BVSE-xxx-000**
	True Union 2000 Ball Valve Stem Extension[1]		**A-BVSE2-xxx-000**
	Butterfly Valve Stem Extension[1]		**A-BFSE-xxx-000**

Notes: 1 – Stem Extension Part Numbers: Enter size code for "xxx" in part number. Replace "000" with desired length code in part number; length is from top of valve to bottom of actuator.

Table 9: Diaphragm Valve Premium Pneumatic Actuator Accessories
(Not applicable to Diaphragm Valves with Plastic Actuator Housing)

Accessory	Description		Accessory Part Number
PNEUMATIC POSITIONERS	3-15 psi	NEMA 4x w/ Visual Indicator Top Loading (no gauge)	**A-DPP1**
	3-15 psi	NEMA 4x w/ Visual Indicator Top Loading w/ gauges (3)	**A-DPP2**
	3-15 psi	NEMA 4x w/ Visual Indicator Bottom Loading (no gauge)	**A-DPP3**
	3-15 psi	NEMA 4x w/ Visual Indicator Bottom Loading w/ gauges (3)	**A-DPP4**
ELECTRO PNEUMATIC POSITIONERS	4-20mA (3-15 psi)	NEMA 4 x w/Visual Indicator (up to 2")	**A-DEP1**
	4-20mA (3-15 psi)	NEMA 4 x w/ Visual Indicator w/SS Gauges (up to 2")	**A-DEP2**
	4-20mA (3-15 psi)	NEMA 4 x w/Visual Indicator (2-1/2" & up)	**A-DEP3**
	4-20mA (3-15 psi)	NEMA 4 x w/ Visual Indicator w/SS Gauges (2-1/2" & up)	**A-DEP4**
	4-20mA (3-15 psi)	NEMA 4 x w/ Dome Indicator w/2-SPDT Limit Switches (2-1/2"& up)	**A-DEP5**
3-WAY SOLENOID VALVES	115 VAC	NEMA 4/4x	**A-DSV1**
	230 VAC	NEMA 4/4x	**A-DSV2**
	24 VAC	NEMA 4/4x	**A-DSV3**
	12 VDC	NEMA 4/4x	**A-DSV4**
	24 VDC	NEMA 4/4x	**A-DSV5**
	115 VAC	NEMA 7/9	**A-DSV6**
	230 VAC	NEMA 7/9	**A-DSV7**
	24 VAC	NEMA 7/9	**A-DSV8**
	12 VDC	NEMA 7/9	**A-DSV9**
	24 VDC	NEMA 7/9	**A-DSV10**

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(Table 9: Diaphragm Valve Premium Pneumatic Actuator Accessories – continued)
Not applicable to Diaphragm Valves with Plastic Actuator Housing

Accessory	Description		Accessory Part Number
4-WAY SOLENOID VALVES	115 VAC	NEMA 4/4x	**A-DSV11**
	230 VAC	NEMA 4/4x	**A-DSV12**
	24 VAC	NEMA 4/4x	**A-DSV13**
	12 VDC	NEMA 4/4x	**A-DSV14**
	24 VDC	NEMA 4/4x	**A-DSV15**
	115 VAC	NEMA 7/9	**A-DSV16**
	230 VAC	NEMA 7/9	**A-DSV17**
	24 VAC	NEMA 7/9	**A-DSV18**
	12 VDC	NEMA 7/9	**A-DSV19**
	24 VDC	NEMA 7/9	**A-DSV20**
MICRO[2] LIMIT SWITCHES	2-SPDT	NEMA 4 w/ 180° Visual Indicator	**A-DLS20**
	2-SPDT	NEMA 7/9 w/ 180° Visual Indicator	**A-DLS25**
PROXIMITY LIMIT SWITCHES	2-SPDT	NEMA 4/4x	**A-DLS23**
LIMIT SWITCHES [3]	2-SPDT	NEMA 4	**A-DLS24**
SPEED CONTROLLER	Variable Speed Controller		**A-DPSC1**
ID TAG	Type 316 Stainless Steel ID Tag 1/2" x 3" (3-lines, 12-characters & spaces)		**TAG3-015**
Stem Extensions	Diaphragm Valve Stem Extension[1]		**A-DPSE-xxx-000**
HANDWHEEL OVERRIDE	Handwheel override for 1/2" to 2" Linear Diaphragm Actuators		**A-DHW1**
	Handwheel override for 2-1/2" to 6" Linear Diaphragm Actuators		**A-DHW2**

Notes: 1 – Stem Extension Part Numbers: Enter size code for "xxx" in part number. Replace "000" with desired length code in part number; length is from top of valve to bottom of actuator.
2 – Micro Limit Switches used on valve sizes 1/2" through 2".
3 – Limit Switches used on valve sizes 2-1/2" & larger.

Ball Valve Actuation Questionnaire Checklist
Return Fax To Tech Services: (818) 364-6945

Contact Name: _____ **Date:** _____

Business Name: _____

City: _____ **State:** _____ **Country:** _____

Phone: _____ **Fax:** _____ **E-mail:** _____

Project Name: _____

Ball Valves: **System Media Pressure (Required)** psi _____ kPa _____ Bar _____ **Valve Quantity Each** _____

Nominal Size in _____ mm _____ cm _____

Ball Valve Type :

- ☐ True Union Industrial
- ☐ True Union Standard
- ☐ Compact
- ☐ True Union Tee Style
- ☐ Other Valve Type _____
- ☐ Three Way Horizontal *(See 3-way orientation box below)*
- ☐ Three Way Vertical *(See 3-way orientation box below)*
- ☐ Tandem Three Way

Tandem 3-Way Orientation Document Required

Body Material :

- ☐ PVC
- ☐ CPVC
- ☐ Low-Extractable PVC

O-ring Seals :

- ☐ EPDM
- ☐ FKM
- ☐ Other

(If Other Explain) _____

End Connector :

- ☐ Socket
- ☐ Threaded
- ☐ SR Threaded
- ☐ Flange
- ☐ Spigot
- ☐ Metric
  - ☐ DIN
  - ☐ JIS
- ☐ BSP (Thread)

Vertical 3- Way Orientation

- ☐ Single L Port
- ☐ Triple L Port
- ☐ Double L Port
- ☐ T Port

Horizontal 3- Way Orientation

- ☐ L Port
- ☐ T Port

Pneumatic ☐ **Not all combinations may be available.**

FailSafe Type - *(Position to which valve cycles upon air loss)*

- ☐ Double Acting (No FailSafe. Stays in last activated position)
- ☐ Spring Return - Close (FailSafe in closed position upon air loss)
- ☐ Spring Return - Open (FailSafe in open position upon air loss)
- ☐ Other: _____

Operating Air Pressure (psi) - *(Compressed air supply required to operate actuator)*

☐ 80-150 ☐ Other: _____

Override Type - *(Override used to cycle valve upon air loss)*

☐ Basic ☐ Declutchable ☐ Other: _____

Aux. Limit Switches- *(Additional mechanical switches to operate external lights, alarms etc. (set of 2)*

☐ SPDT- Mechanical ☐ SPDT - Proximity ☐ DPDT - Mechanical

Voltage Signal Type Specify Voltage: _____

Visual Indicator - *(Provides local visual valve position indication)*

☐ Low Profile ☐ Dome ☐ No Indicator

Positioner Type - *(Positioner accepts an input signal from PLC to control valve cycle).*

☐ **Pneumatic Positioner** *(Air supply required to operate valve)*

Signal Pressure - *(Air pressure required to position the valve)*

☐ 3-15 psi ☐ Other: _____

☐ **Electro-Pneumatic Positioner** *(Air and voltage supply required to operate)*

Signal Voltage Input ☐ 4-20mA ☐ Other: _____

☐ With Transmitter - *(Sends output signal to PLC to provide valve position)*

Transmitter Output ☐ 4-20mA ☐ Other: _____

NEMA Rating - *(Enclosure rating indicates level of ingress protection from fluids, solids and gases)*

☐ 4 ☐ 4x ☐ Other: _____

Solenoid Valve - *(Regulates actuator intake/exhaust air supply)*

☐ 3 & 4 Way ☐ Dual Coil *(Double Acting Actuators only)* ☐ Other: _____

Solenoid Valve Voltage

☐ 115 VAC ☐ 230 VAC ☐ Other: _____

NEMA Rating - *(Enclosure rating indicates level of ingress protection from fluids and solids)*

☐ 4 ☐ 4x ☐ Other: _____

☐ **Other Options:** _____

Electric ☐ **Not all combinations may be available.**

☐ Basic Two Position (90 Degree Travel Standard)

☐ 3 Position 90 ☐ 180 ☐

FailSafe Position (if required)

- ☐ Fail Open -FailSafe in open position upon power loss
- ☐ Fail Close-FailSafe in closed position upon power loss

Note: On "Fail Safe" Options Two Positions ONLY Override Not Recommended.

Voltage Supply Power:

☐ 115 VAC ☐ 230 VAC ☐ Other: _____

Frequency ☐ 50 Hertz ☐ 60 Hertz

Phase ☐ Single ☐ Three

Override Type - *(Override used to cycle valve upon power loss)*

☐ Basic ☐ Declutchable ☐ Other: _____

Duty Cycle *(Amount of work valve can accomplish before requiring rest)*

☐ 25% ☐ 75% ☐ Other/Min. Requirement : _____

NEMA Rating - *(Enclosure rating indicates level of ingress protection from fluids and solids)*

☐ 4 ☐ 4x ☐ Other: _____

Positioner Type - *(Positioner accepts an input signal from PLC to control valve cycle)*

☐ **Positioner with Transmitter**

Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

Transmitter - *(Sends output signal to PLC to provide valve position)*

Signal Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

☐ **Positioner - NO Transmitter**

Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

Auxiliary Limit Switches *(Additional mechanical switches to operate external lights, alarms etc.)*

☐ 2 ☐ 4 *(Set of 2 each)*

Standard Accessories -All options not available in all actuator combinations

- ☐ Torque Sensor
- ☐ Friction Brake
- ☐ Battery Backup
- ☐ LED Indicating Lights (red /green)
- ☐ Speed Control
- ☐ 2 Wire Control Relay
- ☐ Heater & Thermostat ☐ [On @ 41F] [Off @ 60.8F] ☐ [On @ 69.8F] [Off @ 89.6F] ☐ [On @ 62.6F] [Off @ 80.6F]

☐ **Other Options:** _____

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Butterfly Valve Actuation Questionnaire Checklist

Return Fax To Tech Services: (818) 364-6945

Contact Name: _____ **Date:** _____

Business Name: _____

City: _____ **State:** _____ **Country:** _____

Phone: _____ **Fax:** _____ **E-mail:** _____

Project Name: _____

Butterfly Valves: **System Media Pressure (Required)** psi _____ kPa _____ Bar _____ **Valve Quantity Each** _____

Nominal Size in _____ mm _____ cm _____

Butterfly Valve Type :

- Standard ☐
- True Lug ☐
- Tandem Diverting ☐
- Pool Valve ☐
- Tandem Three Way ☐
- Wafer ☐ **(Tandem 3-Way Orientation Document Required)**
- Other Valve Type ☐ _____

Body Material :

- PVC ☐
- CPVC ☐
- Polypropylene ☐

O-ring Seals :

- Buna- N ☐
- EPDM ☐
- FKM ☐
- Other ☐

(If Other Explain) _____

Lug Materials :

- SS316 ☐
- Zinc ☐

☐ Other Information: _____

Pneumatic ☐ **Not all combinations may be available.**

FailSafe Type - *(Position to which valve cycles upon air loss)*

- ☐ Double Acting (No FailSafe. Stays in last activated position)
- ☐ Spring Return - Close (FailSafe in closed position upon air loss)
- ☐ Spring Return - Open (FailSafe in open position upon air loss)
- ☐ Other: _____

Operating Air Pressure (psi) - *(Compressed air supply required to operate actuator)*

☐ 80-150 ☐ Other: _____

Override Type - *(Override used to cycle valve upon air loss)*

☐ Basic ☐ Declutchable ☐ Other: _____

Aux. Limit Switches- *(Additional mechanical switches to operate external lights, alarms etc. (set of 2)*

☐ SPDT- Mechanical ☐ SPDT - Proximity ☐ DPDT - Mechanical

Voltage Signal Type Specify Voltage: _____

Visual Indicator - *(Provides local visual valve position indication)*

☐ Low Profile ☐ Dome

Positioner Type - *(Positioner accepts an input signal from PLC to control valve cycle).*

☐ **Pneumatic Positioner** *(Air supply required to operate valve)*

Signal Pressure - *(Air pressure required to position the valve)*

☐ 3-15 psi ☐ Other: _____

☐ **Electro-Pneumatic Positioner** *(Air and voltage supply required to operate)*

Signal Voltage Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

☐ With Transmitter - *(Sends output signal to PLC to provide valve position)*

Transmitter Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

NEMA Rating -*(Enclosure rating indicates level of ingress protection from fluids, solids and gases)*

☐ 4 ☐ 4x ☐ Other: _____

Solenoid Valve - *(Regulates actuator intake/exhaust air supply)*

☐ 3 & 4 Way ☐ Dual Coil *(Double Acting Actuators only)* ☐ Other: _____

Solenoid Valve Voltage

☐ 115 VAC ☐ 230 VAC ☐ Other: _____

NEMA Rating - *(Enclosure rating indicates level of ingress protection from fluids and solids)*

☐ 4 ☐ 4x ☐ Other: _____

☐ **Other Options:** _____

Electric ☐ **Not all combinations may be available.**

☐ Basic Two Position (90 Degree Travel Standard)

FailSafe Position (if required)

- ☐ Fail Open - Open (FailSafe in open position upon power loss)
- ☐ Fail Close - Close (FailSafe in closed position upon power loss)

Note: On "Fail Safe" options two positions ONLY Override Not Recommended.

Voltage Supply Power:

☐ 115 VAC ☐ 230 VAC ☐ Other: _____

Frequency ☐ 50 Hertz ☐ 60 Hertz

Phase ☐ Single ☐ Three

Override Type - *(Override used to cycle valve upon power loss)*

☐ Basic ☐ Declutchable ☐ Other: _____

Duty Cycle *(Amount of work valve can accomplish before requiring rest)*

☐ 25% ☐ 75% ☐ Other/Min. Requirement: _____

NEMA Rating - *(Enclosure rating indicates level of ingress protection from fluids and solids)*

☐ 4 ☐ 4x ☐ Other: _____

Positioner Type - *(Positioner accepts an input signal from PLC to control valve cycle)*

☐ **Positioner with Transmitter**

Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

Transmitter -*(Sends output signal to PLC to provide valve position)*

Signal Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

☐ **Positioner - NO Transmitter**

Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

Auxiliary Limit Switches*(Additional mechanical switches to operate external lights, alarms etc.)*

☐ 2 ☐ 4 *(Set of 2 each)*

Standard Accessories -All options not available in all actuator combinations

- ☐ Torque Sensor
- ☐ Battery Backup
- ☐ Speed Control
- ☐ Heater & Thermostat ☐ [On @ 41F] [Off @ 60.8F] ☐ [On @ 69.8F] [Off @ 89.6F] ☐ [On @ 62.6F] [Off @ 80.6F]
- ☐ Torque Sensor
- ☐ LED Indicating Lights (red /green)
- ☐ 2 Wire Control Relay

☐ **Other Options:** _____

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Diaphragm Valve Actuation Questionnaire Checklist
Return Fax To Tech Services: (818) 364-6945

Contact Name: _____ **Date:** _____

Business Name: _____

City: _____ **State:** _____ **Country:** _____

Phone: _____ **Fax:** _____ **E-mail:** _____

Project Name: _____

Diaphragm Valves: System Media Pressure (Required) psi _____ kPa _____ Bar _____ **Valve Quantity Each** _____

Nominal Size in _____ mm _____ cm _____

Diaphragm Valve Type :
- ☐ EPDM
- ☐ FKM
- ☐ PTFE/FKM
- ☐ PTFE/EPDM
- ☐ Other Valve Type _____

Body Material :
- ☐ PVC
- ☐ CPVC
- ☐ Low-Extractable PVC
- ☐ Polypropylene

End Connector O-rings 1/2" - 2":
- ☐ EPDM
- ☐ FKM
- ☐ PTFE/FKM
- ☐ PTFE/EPDM
- ☐ Other

(If Other Explain) _____

End Connector :
- ☐ Socket
- ☐ SR Threaded
- ☐ Flange
- ☐ Spigot

☐ Other information: _____

Not all combinations may be available.

☐ **Unitized Pneumatic**

☐ **Pneumatic**

FailSafe Type *-(Position to which valve cycles upon air loss)*
- ☐ Double Acting (No FailSafe. Stays in last activated position)
- ☐ Spring Return - Close (FailSafe in closed position upon air loss)
- ☐ Spring Return - Open (FailSafe in open position upon air loss)
- ☐ Other: _____

Operating Air Pressure (psi) - *(Compressed air supply required to operate actuator)*
☐ 80-116 ☐ Other: _____

Override Type - *(Override used to cycle valve upon air loss. Not available in sizes 1/2" -2")*
☐ Basic ☐ Declutchable ☐ Other: _____

Aux. Limit Switches- *(Additional mechanical switches to operate external lights, alarms etc. (set of 2)*
☐ SPDT- Mechanical ☐ SPDT - Proximity ☐ DPDT - Mechanical
Voltage Signal Type: Specify Voltage: _____

Visual Indicator - *(Provides local visual valve position indication)*
☐ Low Profile ☐ Dome

Positioner Type - *(Positioner accepts an input signal from PLC to control valve cycle).*
☐ **Pneumatic Positioner** *(Air supply required to operate valve)*
Signal Pressure - *(Air pressure required to position the valve)*
☐ 3-15 psi ☐ Other: _____
☐ **Electro-Pneumatic Positioner** *(Air and voltage supply required to operate)*
Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____
☐ With Transmitter - *(Sends output signal to PLC to provide valve position)*
Transmitter Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

NEMA Rating -*(Enclosure rating indicates level of housing ingress protection from fluids and solids)*
☐ 4 ☐ 4x ☐ Other: _____

Solenoid Valve - *(Regulates actuator intake/exhaust air supply)*
☐ 3 way (Air-to-Spring) ☐ 4 way (*Double Acting Actuators only*) ☐ Other: _____

Solenoid Valve Voltage
☐ 115 VAC ☐ 230 VAC ☐ Other: _____

NEMA Rating -*(Enclosure rating indicates level of ingress protection from fluids, solids and gases)*
☐ 4 ☐ 4x ☐ Other: _____

☐ **Other Options:** _____

Not all combinations may be available.

☐ **Electric Multi Turn**

Voltage Supply Power:
☐ 115 VAC ☐ 230 VAC ☐ Other: _____

Frequency ☐ 50 Hertz ☐ 60 Hertz

Phase ☐ Single ☐ Three

Override Type - *(Override used to cycle valve upon power loss)*
☐ Basic ☐ Declutchable ☐ Other: _____

Duty Cycle *(Amount of work valve can accomplish before requiring rest)*
☐ 25% ☐ 75% ☐ Other: _____

NEMA Rating - *(Enclosure rating indicates level of ingress protection from fluids and solids)*
☐ 4 ☐ 4x ☐ Other: _____

Positioner Type - *(Positioner accepts an input signal from PLC to control valve cycle)*
☐ **Positioner with Transmitter**
Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____
Transmitter -*(Sends output signal to PLC to provide valve position)*
Signal Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____
☐ **Positioner - NO Transmitter**
Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

Auxiliary Limit Switches *(Additional mechanical switches to operate external lights, alarms etc.)*
☐ 2 ☐ 4 *(Set of 2 each)*

Standard Accessories -All options not available in all actuator combinations
- ☐ Torque Sensor
- ☐ Battery Backup
- ☐ LED Indicating Lights (red /green)
- ☐ Speed Control
- ☐ 2 Wire Control Relay
- ☐ Heater & Thermostat ☐ [On @ 41F] [Off @ 60.8F] ☐ [On @ 69.8F] [Off @ 89.6F] ☐ [On @ 62.6F] [Off @ 80.6F]

☐ **Other Options:** _____

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MADE IN THE U.S.A.
WITH PRIDE
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STANDARDS & SPECIFICATIONS

Standards provide greater assurance of product performance and consistency, and are available to assist design engineers in system specification. The most frequently referenced industry standards for plastic piping systems are ASTM Standard Specifications and Practices. Along with ASTM Standards, additional product specifications and certifications form the basis of product conformance to which Spears® products are manufactured.

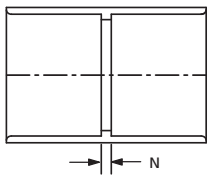
ASTM D 2665	Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings.
ASTM D 3311	Drain, Waste, and Vent (DWV) Plastic Fittings Patterns.
ASTM F 1866	Poly (Vinyl Chloride) (PVC) Plastic Schedule 40 Drainage and DWV Fabricated Fittings.
ASTM D 1784	Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds.
NSF	NSF International Standard 14 (NSF®-dwv) Certified
	NSF International Certified to Uniform Plumbing Code (NSF®-U.P. Code)

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P100 Coupling

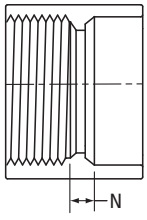
H x H



Part Number	Size	N
P100-015	1-1/2	1/8
P100-020	2	1/8
P100-030	3	3/16
P100-040	4	1/4
P100-060	6	1/4
P100-080	8	1/4
P100-100	10	3/8
P100-120	12	3/8
P100-140	14	3/8

P101 Female Adapter

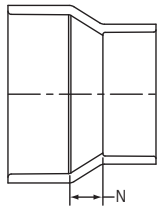
FPT x H



Part Number	Size	N
P101-015	1-1/2	1/4
P101-020	2	1/4
P101-030	3	5/16
P101-040	4	3/8
P101-060	6	11/32

P102 Pipe Increaser - Reducer

H x H



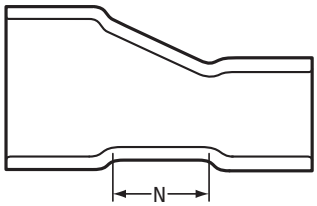
Part Number	Size	N
P102-251	2x1-1/2	11/16
P102-337	3x1-1/2	1-3/32
P102-338	3x2	15/16
P102-420	4x2	1-3/8
P102-422	4x3	15/16
P102-532	6x4	1-7/16
P102-582	8x4	2-11/32
P102-585	8x6	1-3/8
P102-624	10x4	3-3/8
P102-626	10x6	2-9/32
P102-628	10x8	1-5/16
P102-666	12x6	3-1/4
P102-668	12x8	2-1/2
P102-670	12x10	1-11/32
3729-528*	6x2	4-5/8
3729-530*	6x3	6-7/16
3729-578*	8x2	9-1/4
3729-580*	8x3	11-1/16
3729-621*	10x2	11
3729-623*	10x3	16-9/16
3729-661*	12x2	16-3/4
3729-663*	12x3	18-9/16
3729-664*	12x4	15-1/2
3729-691*	14x2	17-7/8
3792-693*	14x3	19-11/16
3729-694*	14x4	16-5/8
3729-696*	14x6	12-1/8
3729-698*	14x8	10-9/16
3729-700*	14x10	4-3/4
3729-702*	14x12	3-1/4

*Fabricated

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Progressive Products from Spears® Innovation and Technology

Pipe Increaser - Eccentric Reducer

H x H

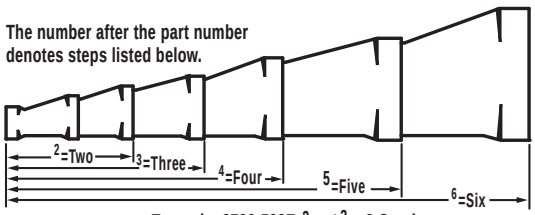


Part Number	Size	N
3729-420E*	4x2	8-13/16
3729-422E*	4x3	4-1/8
3729-528E[3]*	6x2	11-1/4
3729-530E[2]*	6x3	10-13/16
3729-532E*	6x4	5-5/8
3729-580E[3]	8x3	18-3/16
3729-582E[2]*	8x4	13-3/8
3729-585E*	8x6	6-7/8
3729-624E[2]*	10x4	15-1/8
3729-626E*	10x6	8-5/8
3729-628E*	10x8	6-13/16
3729-664E[3]*	12x4	24-1/8
3729-666E[2]*	12x6	17-5/8
3729-668E[2]*	12x8	15-13/16
3729-670E*	12x10	6-7/8

Eccentric Reducer Footnotes

Multi-Step Configurations

The number after the part number denotes steps listed below.

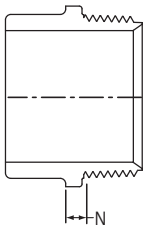


Example: 3729-528E [3] ([3] = 3 Step)

*Fabricated

P103 Trap Adapter - Male

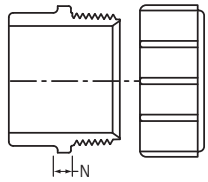
S x SLIP



Part Number	Size	N
P103-015	1-1/2	3/16
P103-020	2	3/16

P103P Trap Adapter - Male

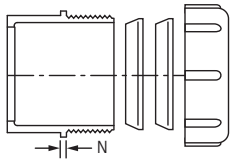
S x SLIP w/Plastic Nut - Built-in Washer



Part Number	Size	N
P103P-212	1-1/2x1-1/4	3/16
P103P-015	1-1/2	3/16
P103P-020	2	3/16

P103R Trap Adapter - Male with 1-1/2 Plastic Nut & Washer and 1-1/2 x 1-1/4 Washer

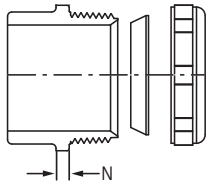
S x SLIP w/Plastic Nut



Part Number	Size	N
P103R-015	1-1/2	3/16

P103X Trap Adapter - Male

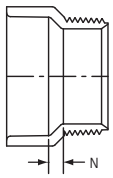
S x SLIP w/Chrome Nut & Washer



Part Number	Size	N
P103X-212	1-1/2x1-1/4	3/16
P103X-015	1-1/2	3/16
P103X-020	2	3/16

P104 Trap Adapter - Female

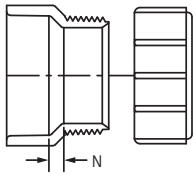
H x SLIP



Part Number	Size	N
P104-015	1-1/2	5/32
P104-020	2	3/16

P104P Trap Adapter - Female

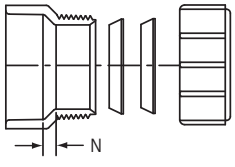
H x SLIP w/Plastic Nut



Part Number	Size	N
P104P-212	1-1/2x1-1/4	3/16
P104P-015	1-1/2	3/16

P104R Trap Adapter - Female w/1-1/2 Plastic Nut & Washer and 1-1/2x1-1/4 Washer

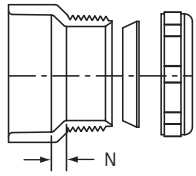
H x SLIP w/Plastic Nut



Part Number	Size	N
P104R-015	1-1/2	3/16

P104X Trap Adapter - Female

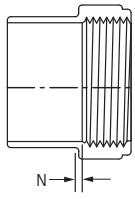
H x SLIP w/Chrome Nut & Washer



Part Number	Size	N
P104X-212	1-1/2x1-1/4	3/16
P104X-015	1-1/2	3/16
P104X-020	2	3/16

P105 Fitting Cleanout Adapter

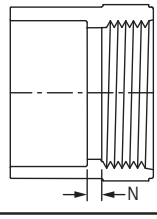
S x FPT



Part Number	Size	N
P105-015	1-1/2	5/32
P105-020	2	1/4
P105-030	3	11/32
P105-040	4	9/32
P105-060	6	3/8
P105-080	8	3/8

P105H Female Cleanout Adapter

H x FPT

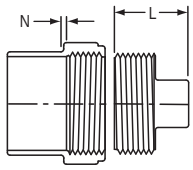


Part Number	Size	N
P105H-040	4	1/4
P105H-060	6	11/32

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P105X Fitting Cleanout Adapter w/C.O. Plug

S X FPT

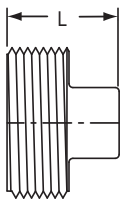


Part Number	Size	L	N
P105X-015	1-1/2	1-3/8	5/32
P105X-020	2	1-17/32	5/32
P105X-030	3	1-1/2	7/32
P105X-040	4	1-25/32	1/4
P105X-060	6	1-31/32	3/8
P105X-080	8	2-1/32	3/8
3978-100*	10	1	0
3978-120*	12	1	0
3978-140*	14	1	0

*Fabricated with Flush C.O. Plugs

P106 Cleanout Plug

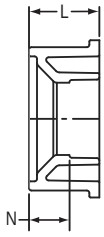
MPT



Part Number	Size	L
P106-015	1-1/2	1-5/16
P106-020	2	1-5/16
P106-025	2-1/2	1-1/2
P106-030	3	1-23/32
P106-040	4	1-7/8
P106-060	6	1-15/16
P106-080	8	2-1/32

P107 Flush Bushing

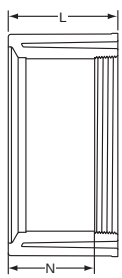
S x H



Part Number	Size	L	N
P107-251	2x1-1/2	1-1/16	1/8
P107-337	3x1-1/2	1-3/4	1
P107-338	3x2	1-25/32	1
P107-420	4x2	2	1-3/16
P107-422	4x3	2	1/2
P107-532	6x4	3-7/16	1-11/16
P107-582	8x4	4-19/32	2-13/16
P107-585	8x6	4-9/16	1-9/16
P107-626	10x6	6-1/32	3-1/32
P107-628	10x8	5-5/16	1-5/16
P107-666	12x6	7-1/2	4-1/2
P107-668	12x8	6-29/32	2-7/8
P107-670	12x10	6-1/2	1-7/16

P108 Flush Bushing (Cleanout Adapter)

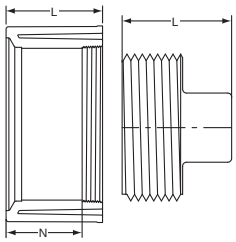
S x FPT



Part Number	Size	L	N
P108-212	1-1/2x1-1/4	7/8	3/16
P108-628	10x8	5-11/32	4-3/16
P108-668	12x8	7-1/2	6-3/8

P108X Flush Bushing (Cleanout Adapter) w/Plug

S x FPT

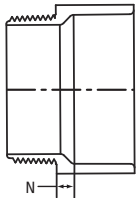


SEE PART NUMBERS - **P108** AND **P106**

P109 Male Adapter

Will not accept tail piece

MPT x H



Part Number	Size	N
P109-169	1-1/4x1-1/2	3/16
P109-015	1-1/2	3/16
P109-020	2	3/16
P109-030	3	3/8
P109-040	4	3/8
P109-060	6	11/16

P110 Flush C.O. Plug

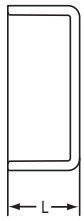
MPT



Part Number	Size	L
P110-015	1-1/2	5/8
P110-020	2	5/8
P110-025	2-1/2	3/4
P110-030	3	11/16
P110-040	4	7/8
P110-060	6	31/32

P116 Cap

SOCKET

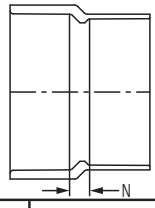


Part Number	Size	L
P116-015	1-1/2	15/16
P116-020	2	1
P116-030	3	1-3/4
P116-040	4	2-1/32
P116-060	6	3-5/16
P116-080	8	6-3/8
3747-100*	10	3-3/4
3747-120*	12	4-1/8
3747-140*	14	5-3/4

*Fabricated

P117 Adapter Coupling (Adapts S&D Spigot to DWV Spigot)

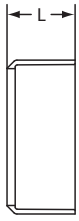
H x H



Part Number	Size	N
P117-040	4	1/2
P117-422	4x3	3/4

P118 Adapter Bushing (Adapts DWV Hub to S&D Spigot)

DWV SPIGOT x HUB

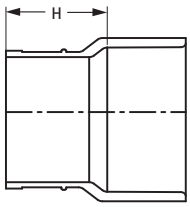


Part Number	Size	L
P118-030	3	1-5/16
P118-040	4	2

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P119 No-Hub Adapter

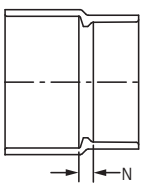
S x H



Part Number	Size	H
P119-015	1-1/2	1-9/16
P119-020	2	1-5/16
P119-030	3	1-13/16
P119-040	4	1-7/8
P119-251	2x1-1/2	1-5/8
P119-422	4x3	2-1/16

P122 Spigot Adapter, Cast Iron

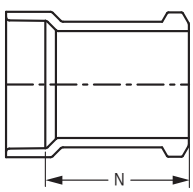
H x H



Part Number	Size	N
P122-040	4x4	9/16

P123 Hub Adapter

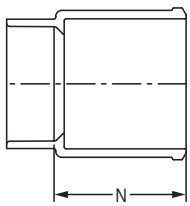
H x S



Part Number	Size	N
P123-020	2	3-7/8
P123-030	3	4-1/8
P123-040	4	4-7/16

P123R Hub Adapter, Cast Iron, Increaser (Plain End: Joint can be made with compression gasket or plastic lead & seal rope - Do Not use hot lead)

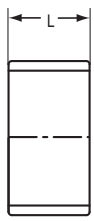
H x S



Part Number	Size	N
P123R-213	1-1/2x2	3-9/16
P123R-342	3x4	4

P130 Repair Coupling

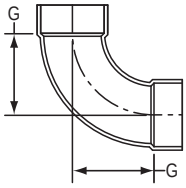
H x H



Part Number	Size	L
P130-015	1-1/2	1-9/16
P130-020	2	1-3/4
P130-030	3	3-3/16
P130-040	4	3-3/4
P130-060	6	6-11/32
P130-080	8	8-3/8
P130-100	10	10-3/8

P300 1/4 Bend

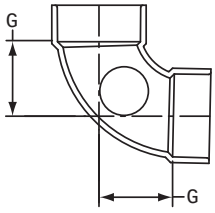
H x H



Part Number	Size	G
P300-015	1-1/2	1-21/32
P300-020	2	2-9/32
P300-030	3	3-1/8
P300-040	4	3-29/32
P300-060	6	4-29/32
P300-080	8	5-29/32
P300-100	10	9-5/8
P300-120	12	10-9/16

P300S 1/4 Bend with Side Inlet

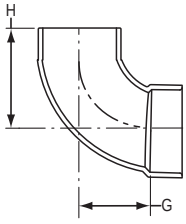
ALL HUB



Part Number	Size	G
P300S-338	3x3x2	3-1/8

P302 1/4 Bend, Street

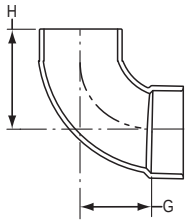
S x H



Part Number	Size	G	H
P302-015	1-1/2	1-9/16	2-13/32
P302-020	2	2-7/32	3-5/32
P302-030	3	3-1/16	4-19/32
P302-040	4	3-7/8	5-5/8
P302-060	6	5	8-11/32

P302 1/4 Bend, Street (continued)

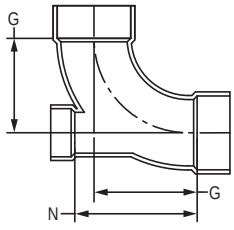
S x H



Part Number	Size	G	
P302-080	8	5-31/32	10-13/32
P302-100	10	9-15/16	15-13/32
P302-120	12	11-3/32	17-7/16

P303 1/4 Bend w/Low Heel Inlet

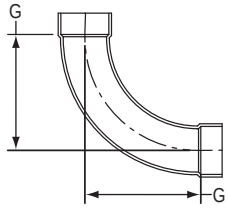
H x H x H



Part Numbe	Size	G	N
P303-338	3x3x2	2-27/32	4-5/32
P303-420	4x4x2	3-5/16	5

P304 Long Sweep 1/4 Bend

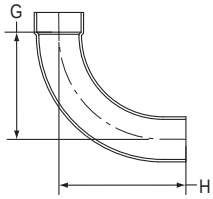
H x H



Part Number	Size	G
P304-015	1-1/2	2-3/4
P304-020	2	2-15/16
P304-030	3	4-1/8
P304-040	4	5-1/32
P304-060	6	8-29/32

P309 Long 1/4 Bend, Street

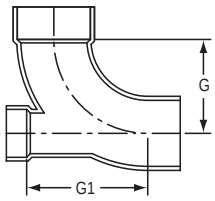
H x S



Part Number	Size	G	H
P309-015	1-1/2	2-3/4	3-1/2
P309-020	2	3-11/32	4-1/16
P309-030	3	4-1/16	5-9/16
P309-040	4	4-15/16	6-11/16
P309-060	6	8-29/32	11-29/32

P310 1/4 Bend, Street w/Low Heel Inlet

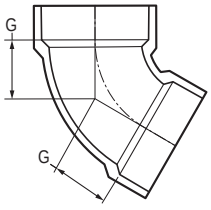
H x S x H



Part Number	Size	G	G1
P310-338	3x3x2	3-1/16	4-5/8

P319 1/6 Bend

H x H

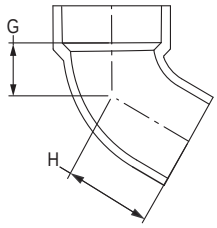


Part Number	Size	G
P319-015	1-1/2	1
P319-020	2	1-5/16
P319-030	3	1-11/16
P319-040	4	2-1/16
3724-060*	6	2-13/16
3724-080*	8	3-3/8
3724-100*	10	4
3724-120*	12	4-3/4
3724-140*	14	10-13/16

*Fabricated

P320 1/6 Bend, Street

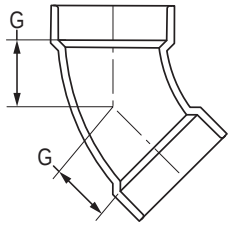
H x S



Part Number	Size	G	H
P320-015	1-1/2	1	1-23/32
P320-020	2	1-5/8	2-1/8
P320-030	3	1-11/32	2-21/32
P320-040	4	1-13/32	3-13/32

P321 1/8 Bend

H x H

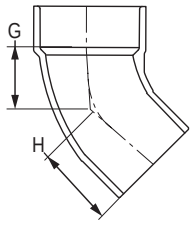


Part Number	Size	G
P321-015	1-1/2	1-1/8
P321-020	2	1-13/32
P321-030	3	1-23/32
P321-040	4	2-1/8
P321-060	6	2-5/32
P321-080	8	2-1/16
P321-100	10	2-5/8
P321-120	12	3-1/8
3717-140*	14	3-7/8

*Fabricated

P323 1/8 Bend, Street

H x S

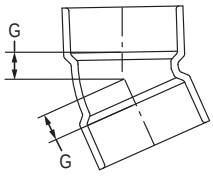


Part Number	Size	G	H
P323-015	1-1/2	1-9/32	2-5/16
P323-020	2	1-17/32	2-3/16
P323-030	3	1-7/8	3-1/8
P323-040	4	2-3/16	3-15/16
P323-060	6	1-9/16	5-5/32
P323-080	8	2-1/16	6-1/2
3727-100*	10	3-1/8	8-3/8

*Fabricated

P324 1/16 Bend

H x H

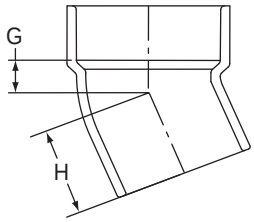


Part Number	Size	G
P324-015	1-1/2	1/2
P324-020	2	11/16
P324-030	3	29/32
P324-040	4	1
P324-060	6	1-5/16
P324-080	8	1-3/8
3716-100*	10	2-3/16
3716-120*	12	2-1/4
3716-140*	14	2-1/2

*Fabricated

P326 1/16 Bend, Street

H X S

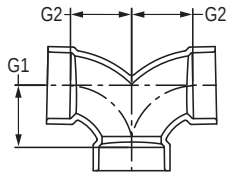


Part Number	Size	G	H
P326-015	1-1/2	1/2	1-5/16
P326-020	2	11/16	1-9/16
P326-030	3	29/32	2-7/32
P326-040	4	1	2-3/4
P326-060	6	1-1/32	4-1/2
P326-080	8	1-1/32	5-17/32
3742-100*	10	13/16	9-9/16
3742-120*	12	2-1/4	11-7/8
3742-140*	14	2-1/2	13-1/2

*Fabricated

P327 Double 1/4 Bend

H x H x H

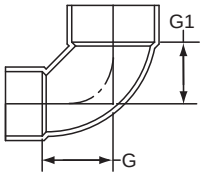


Part Number	Size	G1	G2
P327-015	1-1/2	1-3/4	1-3/4
P327-020	2	2-5/16	2-5/16
P327-030	3	3-1/16	3-1/16
P327-040	4	3-29/32	3-29/32
P327-241	2x1-1/2x1-1/2	1-3/8	4-1/2

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P329 Closet Bend, Reducing

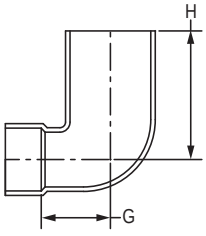
H x H



Part Number	Size	G	G1
P329-342	3x4	3-1/16	2-21/32

P330 Closet Bend, Reducing

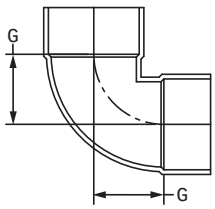
H x S



Part Number	Size	G	H
P330-342	3x4	3-5/8	6

P331 Vent Ell

H x H

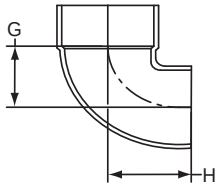


Part Number	Size	G
P331-015	1-1/2	1-3/16
P331-020	2	1-1/2
P331-030	3	1-7/8
P331-040	4	2-1/4
P331-060	6	3-1/2
P331-080	8	4-1/2
P331-100	10	5-3/4
P331-120	12	6-27/32
3706-140*	14	12-1/4

*Fabricated

P333 Vent Ell, Street

H x S

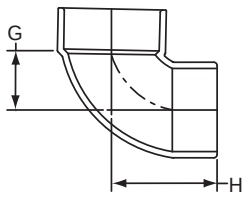


Part Number	Size	G	H
P333-015	1-1/2	1-3/16	2-1/4
P333-020	2	1-1/2	2-3/8
P333-030	3	2-5/16	3-9/16
P333-040	4	3-3/16	4-3/16
3709-060*	6	6-1/8	9-3/8
3709-080*	8	7-1/2	11-3/4
3709-100*	10	8-3/16	13-7/16
3709-120*	12	10-1/2	16-3/4
3709-140*	14	13-15/16	20-15/16

*Fabricated

P335 Trap Elbow (for use with Traps only)

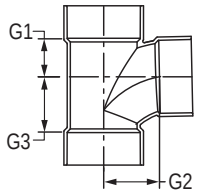
H x S



Part Number	Size	G	H
P335-030	3	2-1/8	3-27/32
P335-040	4	2-5/16	4-7/16

P400 Sanitary Tee

ALL HUB

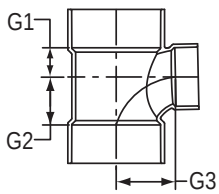


Part Number	Size	G1	G2	G3
P400-015	1-1/2	31/32	1-23/32	1-23/32
P400-020	2	1-11/32	2-5/16	2-5/16
P400-030	3	1-13/16	2-7/8	2-7/8
P400-040	4	2-9/32	3-29/32	3-27/32
P400-060	6	3-7/16	5-1/32	5-1/32
P400-080	8	4-7/16	6	6
P400-100	10	5-1/2	9-29/32	9-29/32
P400-120	12	6-17/32	11	11
3790-140*	14	5-5/16	22-3/4	23-1/16

*Fabricated

P401 Sanitary Tee, Reducing

ALL HUB

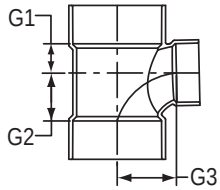


Part Number	Size	G1	G2	G3
P401-241	2x1-1/2x1-1/2	1-3/16	1-15/16	2-3/16
P401-251	2x2x1-1/2	1-1/4	1-27/32	2-3/16
P401-257	2x1-1/2x2	1-3/8	2-5/16	2-5/16
P401-337	3x3x1-1/2	15/16	1-3/4	2-9/16
P401-338	3x3x2	31/32	1-29/32	2-11/16
P401-420	4x4x2	7/8	1-27/32	3-5/32
P401-422	4x4x3	1-3/4	3	3-9/16
P401-532	6x6x4	2-5/32	3-19/32	4-11/16
3790-528*	6x2	3	5-3/8	7-1/16

*Fabricated

P401 Sanitary Tee, Reducing (continued)

ALL HUB



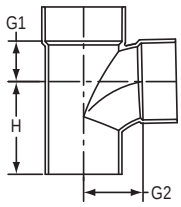
Part Number	Size	G1	G2	G3
3790-530*	6x3	3-1/4	7	9-11/16
3790-578*	8x2	3-3/4	6	8
3790-580*	8x3	3-3/4	7-1/2	10-5/8
3790-582*	8x4	3-7/8	8-7/8	11-1/8
3790-585*	8x6	3-7/8	11-3/4	12-7/8
3790-621*	10x2	3-3/4	6	9
3790-623*	10x3	4-1/16	7-11/16	11-5/8
3790-624*	10x4	4-5/16	9-5/16	12-1/8
3790-626*	10x6	4-15/16	12-13/16	13-7/8
3790-628*	10x8	5-1/4	15-3/4	16-3/16
3790-661*	12x2	4-3/16	6-5/16	10
3790-663*	12x3	4-1/4	7-3/4	12-5/8
3790-664*	12x4	4-5/16	9-3/16	13-1/8
3790-666*	12x6	4-7/8	12-5/8	14-7/8
3790-668*	12x8	5	15-1/2	17-1/8
3790-670*	12x10	5-1/16	18-7/16	20-1/16
3790-691*	14x2	4	6	10-9/16
3790-693*	14x3	4-1/2	8	13-3/16
3790-694*	14x4	4-9/16	9-7/16	13-11/16
3790-696*	14x6	4-5/8	12-3/8	15-7/16
3790-698*	14x8	4-13/16	15-3/16	17-3/4
3790-700*	14x10	4-7/8	18-1/8	20-11/16
3790-702*	14x12	6	22	22-3/8
3790-762*	16x12	5-9/16	21-7/16	23-5/16
3790-792*	18x12	6	21-3/4	24-1/4
3790-822*	20x12	6-1/2	22-1/4	25-1/4
3790-912*	24x12	7-1/2	23	27-1/8

*Fabricated

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P403 Sanitary Tee, Street

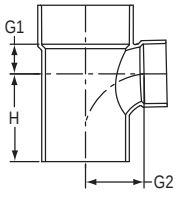
S x H x H



Part Number	Size	G1	G2	H
P403-015	1-1/2	13/16	1-17/32	2-7/16
P403-020	2	1-3/8	2-5/16	3-3/16
P403-030	3	1-7/8	2-15/16	4-3/8
P403-040	4	2-1/4	3-7/8	5-5/8
P403-060	6	3-3/4	4-1/4	7-1/2
P403-080	8	4-13/32	6	9-7/16
P403-100	10	5-15/32	9-15/16	14-9/16
P403-120	12	6-7/16	11-1/16	16-9/32

P404 Sanitary Tee, Street, Reducing

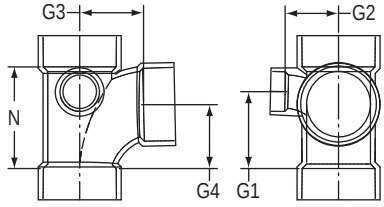
S x H x H



Part Number	Size	G1	G2	H
P404-241	2x1-1/2x1-1/2	1-7/32	2-7/32	2-9/16
P404-251	2x2x1-1/2	1-9/32	2-3/16	2-1/2
P404-257	2x1-1/2x2	1-17/32	2-5/16	2-27/32
P404-337	3x3x1-1/2	7/8	2-1/2	2-3/4
P404-338	3x3x2	1-1/8	2-7/8	2-9/32
P404-420	4x4x2	1-1/8	3-5/16	3-13/16
P404-422	4x4x3	1-3/4	3	5-1/4

P416 Sanitary Tee, with Left Side Inlet

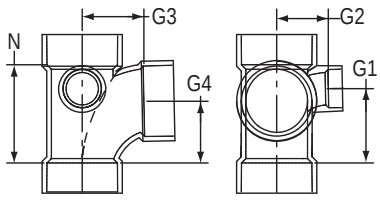
ALL HUB



Part Number	Size	G1	G2	G3	G4	N
P416-337	3x3x3x1-1/2	3-3/4	2-1/2	2-31/32	3-1/16	4-13/16
P416-338	3x3x3x2	3-3/4	2-25/32	2-31/32	3-1/16	4-13/16
P416-420	4x4x4x2	4-1/2	3-1/2	3-3/4	3-1/2	5-7/8

P417 Sanitary Tee, with Right Side Inlet

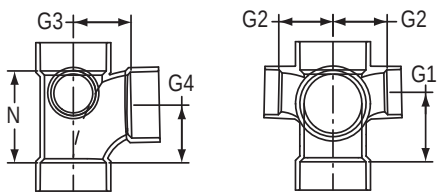
ALL HUB



Part Number	Size	G1	G2	G3	G4	N
P417-337	3x3x3x1-1/2	3-23/32	2-7/16	2-31/32	3-1/32	4-13/16
P417-338	3x3x3x2	3-3/4	2-3/4	2-31/32	3-1/32	4-13/16
P417-420	4x4x4x2	5	3-1/4	3-3/4	3-29/32	6-3/32

P418 Sanitary Tee, with R&L Side Inlets

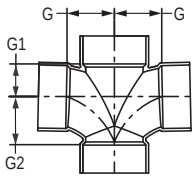
ALL HUB



Part Number	Size	G1	G2	G3	G4	N
P418-337	3x3x3x1-1/2	3-23/32	2-19/32	2-31/32	3-1/16	4-13/16
P418-338	3x3x3x2	3-3/4	2-29/32	2-31/32	3-1/16	4-13/16
P418-420	4x4x4x2	5	3-1/4	3-3/4	3-29/32	6-3/32

P428 Double Sanitary Tee

ALL HUB

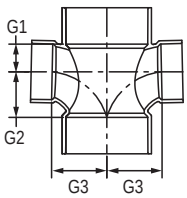


Part Number	Size	G	G1	G2
P428-015	1-1/2	1-11/16	1-5/16	1-5/16
P428-020	2	2-7/32	1-5/16	1-5/16
P428-030	3	3	1-25/32	1-25/32
P428-040	4	3-25/32	2-5/32	2-5/32
3791-060*	6	11-15/16	4-3/16	12-3/16
3791-080*	8	15-3/16	4-5/8	15-5/16
3791-100*	10	19-1/8	5-3/16	18-5/8
3791-120*	12	21-13/16	5-5/8	21-3/4
3791-140*	14	22-3/4	5-5/16	23-1/16

*Fabricated

P429 Double Sanitary Tee, Reducing

ALL HUB

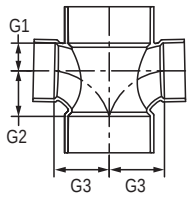


Part Number	Size	G1	G2	G3
P429-251	2x2x1-1/2x1-1/2	1-1/8	1-7/8	2-1/8
P429-337	3x3x1-1/2x1-1/2	27/32	1-11/16	2-15/32
P429-338	3x3x2x2	1-3/16	2-1/8	2-7/8
P429-419	4x4x1-1/2x1-1/2	1-1/32	2	3-7/32
P429-420	4x4x2x2	1-1/8	2	3-1/4
P429-422	4x4x3x3	1-19/32	2-13/16	3-13/32
3791-528*	6x2	3	5-3/8	7-1/16
3791-530*	6x3	3-1/4	7	9-11/16
3791-532*	6x4	3-5/16	8-7/16	10-3/16

*Fabricated

P429 Double Sanitary Tee, Reducing

ALL HUB



(continued)

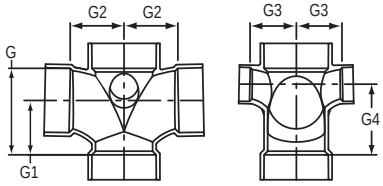
Part Number	Size	G1	G2	G3
3791-578*	8x2	3-3/4	6	8
3791-580*	8x3	3-3/4	7-1/2	10-5/8
3791-582*	8x4	3-7/8	8-7/8	11-1/8
3791-585*	8x6	3-7/8	11-3/4	12-7/8
3791-621*	10x2	3-3/4	6	9
3791-623*	10x3	4-1/16	7-11/16	11-5/8
3791-624*	10x4	4-5/16	9-5/16	12-1/8
3791-626*	10x6	4-15/16	12-13/16	13-7/8
3791-628*	10x8	5-1/4	15-3/4	16-3/16
3791-661*	12x2	4-3/16	6-5/16	10
3791-663*	12x3	4-1/4	7-3/4	12-5/8
3791-664*	12x4	4-5/16	9-3/16	13-1/8
3791-666*	12x6	4-7/8	12-5/8	14-7/8
3791-668*	12x8	5	15-1/2	17-1/8
3791-670*	12x10	5-1/16	18-7/16	20-1/16
3791-691*	14x2	4	6	10-9/16
3791-693*	14x3	4-1/2	8	13-3/16
3791-694*	14x4	4-9/16	9-7/16	13-11/16
3791-696*	14x6	4-5/8	12-3/8	15-7/16
3791-698*	14x8	4-13/16	15-3/16	17-3/4
3791-700*	14x10	4-7/8	18-1/18	20-11/16
3791-702*	14x12	6	22	22-3/8

*Fabricated

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P439 Double Sanitary Tee with R&L Side Inlets

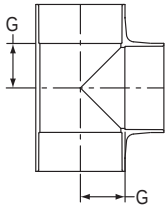
ALL HUB



Part Number	Size	G	G1	G2	G3	G4
P439-338	3x3x3x3x2x2	4-25/32	3-1/32	3-1/32	2-13/16	3-5/8
P439-420	4x4x4x4x2x2	6-1/32	3-27/32	3-7/8	3-1/4	4-15/16

P441 Vent Tee

ALL HUB

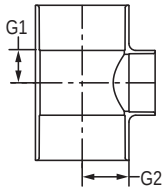


Part Number	Size	G
P441-015	1-1/2	1-3/16
P441-020	2	1-1/2
P441-030	3	1-29/32
P441-040	4	2-11/32
P441-060	6	3-5/8
P441-080	8	4-1/2
P441-100	10	5-13/16
P441-120	12	6-27/32
3701-140*	14	11

*Fabricated

P442 Vent Tee, Reducing

ALL HUB

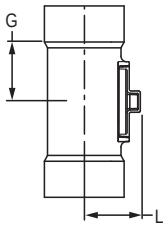


Part Number	Size	G1	G2
P442-251	2x1-1/2	1-1/2	1-3/16
P442-532	6x4	2-9/16	3-25/32
P442-582	8x4	2-17/32	5-3/32
P442-585	8x6	3-5/8	4-25/32
P442-624	10x4	3-31/32	6
P442-626	10x6	3-25/32	6-3/32
P442-628	10x8	5-25/32	7-9/32
P442-664	12x4	4-7/8	10-11/32
P442-666	12x6	4-7/8	8-31/32
P442-668	12x8	4-7/8	7-11/32
P442-670	12x10	6-13/16	7-3/8
3701-528*	6x2	3-3/8	5-5/16
3701-530*	6x3	4-5/8	6-1/16
3701-578*	8x2	4-1/16	6-1/4
3701-580*	8x3	4-9/16	7
3701-621*	10x2	4-3/8	7-1/4
3701-623*	10x3	4-7/8	8
3701-661*	12x2	4-3/4	8-1/4
3701-663*	12x3	5-1/4	9
3701-691*	14x2	4-3/8	8-13/16
3701-693*	14x3	4-7/8	9-9/16
3701-694*	14x4	5-3/8	9-7/8
3701-696*	14x6	6-3/8	9-15/16
3701-698*	14x8	7-3/8	9-7/8
3701-700*	14x10	8-1/2	10-15/16
3701-702*	14x12	9-1/2	10-3/4

*Fabricated

3701 Test Tee

SOC x FPT with Plug

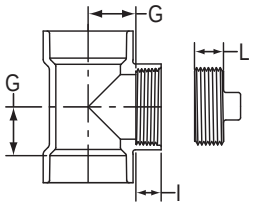


Part Number	Size	G	L
3701-060TEST*	6	5-3/8	5-5/16
3701-080TEST*	8	7-3/8	6-3/16
3701-100TEST*	10	8-5/16	6-3/4
3701-120TEST*	12	9-1/4	8-9/16

*Fabricated (10" & 12" have Flush Plugs)

P444X Cleanout Tee w/C.O. Plug

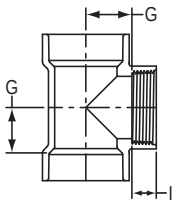
H x H



SEE PART NUMBERS - **P445** AND **P106**

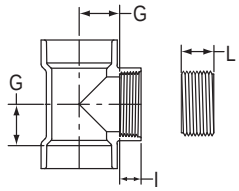
P445 Flush C.O. Tee

H x H x FPT



Part Number	Size	G	I
P445-015	1-1/2	1-1/8	5/8
P445-020	2	1-7/16	5/8
P445-030	3	1-21/32	3/4
P445-040	4	2-7/16	7/8
P445-060	6	3-1/2	1-1/32

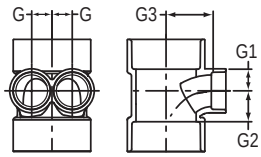
P445X Flush C.O. Tee w/C.O. Plug



SEE PART NUMBERS - **P445** AND **P110**

P447 Horizontal Twin Tee

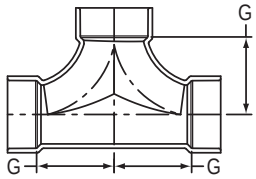
ALL HUB



Part Number	Size	G	G1	G2	G3
P447-337	3x3x1-1/2x1-1/2	1-1/32	1-1/16	1-9/16	2-9/32

P448 2-Way Cleanout

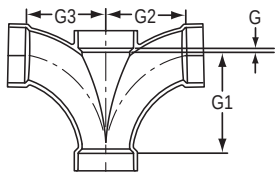
ALL HUB



Part Number	Size	G
P448-030	3	4
P448-040	4	4-13/16

P500 Double Fixture Fitting

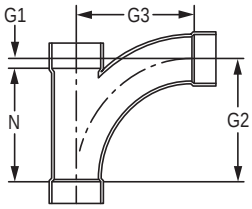
ALL HUB



Part Number	Size	G	G1	G2	G3
P500-020	2x2x2x2	9/16	3-9/16	3-5/16	3-5/16
P500-030	3x3x3x3	1/2	6-3/4	4-1/2	4-1/2
P500-241	2x1-1/2x1-1/2x1-1/2	3/8	3-9/16	2-7/16	2-7/16
P500-251	2x2x1-1/2x1-1/2	1/8	3-1/4	2-25/32	2-25/32
P500-338	3x2x3x3	1/2	6-3/4	4-1/2	4-1/2

P501 Combination Wye and 1/8 Bend (One Piece)

ALL HUB

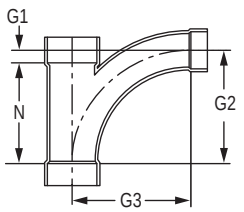


Part Number	Size	G1	G2	G3	N
P501-015	1-1/2	13/32	3-7/8	3-7/8	3-15/32
P501-020	2	11/16	5-1/8	5-1/8	4-7/16
P501-030	3	1-1/16	7-9/16	7-9/16	6-1/2
P501-040	4	1-1/2	10	10	8-1/2
3777-060*	6	15/16	15-7/16	12-9/16	16-3/8
3777-080*	8	1/8	19-13/16	16-1/8	19-15/16
3777-100*	10	3/16	23-5/8	24-1/8	23-13/16
3777-120*	12	5/16	27-11/16	27-3/4	27-3/8
3777-140*	14	1-1/4	29-5/8	29-5/16	28-3/8

*Fabricated

P502 Combination Wye and 1/8 Bend, Reducing (One Piece)

ALL HUB

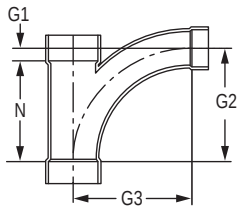


Part Number	Size	G1	G2	G3	N
P502-251	2x2x1-1/2	7/16	3-15/16	4-3/16	3-1/2
P502-337	3x3x1-1/2	7/16	3-9/16	4-3/4	3-1/2
P502-338	3x3x2	11/16	5-1/8	5-11/16	4-7/16
P502-420	4x4x2	7/32	4-1/2	6-1/8	4-3/32
P502-422	4x4x3	1-1/16	7-9/16	8-1/16	6-1/2
3777-528*	6x2	7/8	7-1/2	8-1/16	8-3/8
3777-530*	6x3	13/16	9-7/16	9-3/8	10-1/4
3777-532*	6x4	3/16	11-9/16	11-3/16	11-3/4

*Fabricated

P502 Combination Wye and 1/8 Bend, Reducing (One Piece) (continued)

ALL HUB

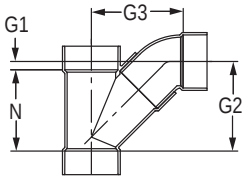


Part Number	Size	G1	G2	G3	N
3777-578*	8x2	1-5/8	8-1/8	9-1/16	9-3/4
3777-580*	8x3	1-5/16	9-15/16	10-5/16	11-1/4
3777-582*	8x4	3/4	12	12-1/8	12-3/4
3777-585*	8x6	5/8	15	13-9/16	15-5/8
3777-621*	10x2	1-11/16	8-1/16	10-1/16	9-3/4
3777-623*	10x3	1-5/8	10-1/8	11-3/8	11-3/4
3777-624*	10x4	1-1/4	12-3/8	13-1/8	13-5/8
3777-626*	10x6	1-11/16	16-1/16	14-9/16	17-3/4
3777-628*	10x8	3/4	21-1/4	17-3/16	21
3777-661*	12x2	2-1/16	8-7/16	11	10-1/2
3777-663*	12x3	1-13/16	10-3/16	12-5/16	12
3777-664*	12x4	1-3/16	12-5/16	14-1/8	13-1/2
3777-666*	12x6	1-5/8	15-7/8	15-1/2	17-1/2
3777-668*	12x8	5/16	19-11/16	18-11/16	20-1/2
3777-670*	12x10	1/16	23-7/16	23-3/8	23-1/2
3777-691*	14x2	1-7/8	8-1/8	11-5/8	10
3777-693*	14x3	2-1/16	10-7/16	12-7/8	12-1/2
3777-694*	14x4	1-1/2	12-1/2	14-11/16	14
3777-696*	14x6	1-7/16	15-9/16	16-1/8	17
3777-698*	14x8	1/16	20-1/16	19-3/4	20
3777-700*	14x10	5/8	23-5/8	24-7/16	23
3777-702*	14x12	1/16	28-1/16	27-1/4	28

*Fabricated

P503 Combination Wye and 1/8 Bend (Two Piece)

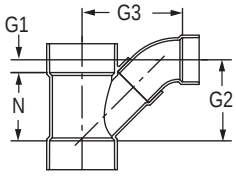
ALL HUB



Part Number	Size	G1	G2	G3	N
P503-030	3	7/8	7-3/8	7-1/2	6-15/32
P503-040	4	7/8	8-15/16	9-1/4	8-1/16
P503-060	6	31/32	10-31/32	11-11/32	9-31/32
P503-080	8	1-1/2	16	16	14-1/2

P504 Combination Wye and 1/8 Bend, Reducing (Two Piece)

ALL HUB

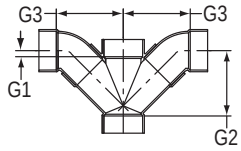


Part Number	Size	G1	G2	G3	N
P504-422	4x3	1	7-19/32	8-7/32	6-19/32
P504-530	6x3	5/8	7-9/16	9-5/16	6-29/32
P504-532	6x4	1-3/8	8-7/32	10-3/32	6-27/32
P504-580	8x3	1-1/8	9-1/8	10-3/8	8
P504-582*	8x4	9-1/4	9-1/4	11-1/8	8
P504-585	8x6	1-1/32	11-9/32	12-3/8	10-11/32
P504-623*	10x3	1-1/4	12-1/16	13-15/16	10-13/16
P504-624*	10x4	-1-7/16	12	14-1/2	10-9/16
P504-626	10x6	15/16	11-3/4	14-1/16	10-13/16
P504-628	10x8	15/16	14-1/4	15-1/2	13-9/16
P504-668	12x8	1-1/16	20-1/8	19-1/8	19-1/16
P504-670*	12x10	5/8	19-3/4	19-1/2	19-1/16

*Bushed

P507 Double Combination Wye and 1/8 Bend

ALL HUB



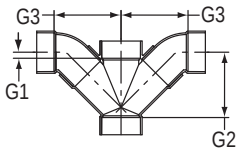
Part Number	Size	G1	G2	G3
P507-015	1-1/2	7/16	4-5/16	4-5/16
P507-020	2	9/16	5-7/16	5-5/8
P507-030	3	27/32	7-11/32	7-11/32
P507-040	4	1-5/32	9-5/32	9-11/32
P507-251	2x1-1/2	13/32	4-9/16	4-3/4
P507-338	3x3x2x2	29/32	5-11/16	6-15/32
P507-420	4x4x2x2	7/8	5-7/8	7-1/32
P507-422	4x4x3x3	1-1/16	7-1/2	8-1/8
3792-060*	6	15/16	15-7/16	12-9/16
3792-080*	8	1/8	19-13/16	16-1/8
3792-100*	10	3/16	23-5/8	24-1/8
3792-120*	12	5/16	27-11/16	27-3/4
3792-140*	14	1-1/4	29-5/8	29-5/16
3792-528*	6x2	7/8	7-1/2	8-1/16
3792-530*	6x3	13/16	9-7/16	9-3/8
3792-532*	6x4	3/16	11-9/16	11-3/16
3792-578*	8x2	1-5/8	8-1/8	9-1/16
3792-580*	8x3	1-5/16	9-15/16	10-5/16
3792-582*	8x4	3/4	12	12-1/8
3792-585*	8x6	5/8	15	13-9/16
3792-621*	10x2	1-11/16	8-1/16	10-1/16
3792-623*	10x3	1-5/8	10-1/8	11-3/8
3792-624*	10x4	1-1/4	12-3/8	13-1/8
3792-626*	10x6	1-11/16	16-1/16	14-9/16
3792-628*	10x8	3/4	20-1/4	17-3/16

*Fabricated

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Progressive Products from Spears® Innovation and Technology

P507 Double Combination Wye and 1/8 Bend (continued)

ALL HUB

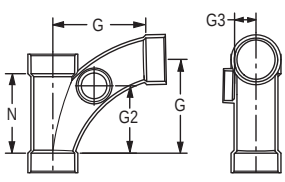


Part Number	Size	G1	G2	G3
3792-661*	12x2	2-1/16	8-7/16	11
3792-663*	12x3	1-13/16	10-3/16	12-5/16
3792-664*	12x4	1-3/16	12-5/16	14-1/8
3792-666*	12x6	1-5/8	15-7/8	15-1/2
3792-668*	12x8	1/2	20	18-1/8
3792-670*	12x10	1/16	23-7/16	25-1/8
3792-691*	14x2	1-7/8	8-1/8	11-5/8
3792-693*	14x3	2-1/16	10-7/16	12-7/8
3792-694*	14x4	1-1/2	12-1/2	14-11/16
3792-696*	14x6	1-7/16	15-9/16	16-1/8
3792-698*	14x8	5/16	19-11/16	18-11/16
3792-700*	14x10	3/16	23-3/16	25-11/16
3792-702*	14x12	0	28	28-3/8
3792-760*	16x10	3/8	23-5/8	26-5/8
3792-762*	16x12	7/16	27-7/16	29-5/16
3792-790*	18x10	13/16	23-15/16	27-9/16

*Fabricated

P515 Combination Wye and 1/8 Bend with Left Side Inlet

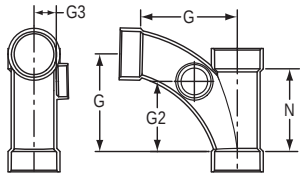
ALL HUB



Part Number	Size	G	G2	G3	N
P515-338	3x3x3x2	7-9/16	5-1/2	1-7/8	6-1/2

P516 Combination Wye and 1/8 Bend with Right Side Inlet

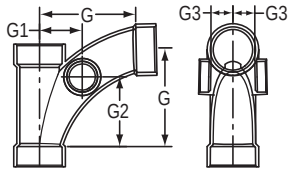
ALL HUB



Part Number	Size	G	G2	G3	N
P516-338	3x3x3x2	7-9/16	5-1/2	1-7/8	6-1/2

P517 Combination Wye and 1/8 Bend with R&L Side Inlets

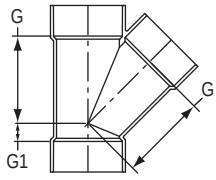
ALL HUB



Part Number	Size	G	G1	G2	G3
P517-338	3x3x3x2	7-9/16	3-5/16	5-1/2	1-7/8

P600 Wye

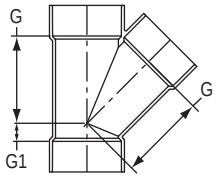
ALL HUB



Part Number	Size	G	G1
P600-015	1-1/2	2-7/8	1-1/8
P600-020	2	3-5/8	1-3/8
P600-030	3	5	1-5/8
P600-040	4	6-3/8	1-7/8
P600-060	6	8-7/16	1-3/4
P600-080	8	11-3/4	2-3/8
P600-100	10	13-15/16	2-7/16

P600 Wye (continued)

ALL HUB

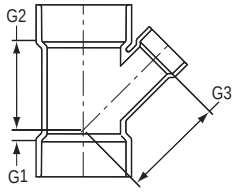


Part Number	Size	G	G1
P600-120	12	16-1/8	2-27/32
3775-140*	14	21-3/16	7-3/16

*Fabricated

P601 Wye, Reducing

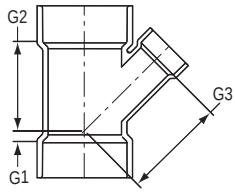
ALL HUB



Part Numbe	Size	G1	G2	G3
P601-241	2x1-1/2x1-1/2	3/4	2-15/16	2-15/16
P601-251	2x2x1-1/2	1-1/16/16	3-5/16	3-7/16
P601-257	2x1-1/2x2	3/4	4-3/4	3-7/8
P601-337	3x3x1-1/2	1/2	3-3/4	4-5/16
P601-338	3x3x2	7/8	4-1/8	4-5/8
P601-419	4x4x1-1/2	0	3-3/4	4-9/16
P601-420	4x4x2	3/8	4-11/16	5-9/16
P601-422	4x4x3	1-1/16	5-9/16	6
P601-528	6x6x2	3/16	6-15/16	8-3/8
P601-530	6x6x3	3/16	6-15/16	7-7/16
P601-532	6x6x4	3/16	6-11/16	7-7/16
P601-578	8x8x2	3/8	7-5/8	9-15/16
P601-582	8x8x4	3/8	7-5/8	8-5/8
P601-585	8x8x6	1	9-1/2	9-13/16

P601 Wye, Reducing (continued)

ALL HUB

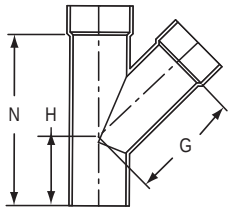


Part Number	Size	G1	G2	G3
P601-626	10x10x6	-1/4	11-1/16	11-15/16
P601-628	10x10x8	1-1/16	12-1/2	12-15/16
P601-670	12x12x10	3-1/4	16-1/8	17-5/8
3775-580*	8x3	1-5/16	9-15/16	10-7/8
3775-621*	10x2	1/2	10-1/4	11-3/16
3775-623*	10x3	1/2	11-1/4	12-5/16
3775-624*	10x4	1-7/16	12-3/16	13-5/16
3775-661*	12x2	1-1/8	11-5/8	12-9/16
3775-663*	12x3	3/8	12-3/8	13-11/16
3775-664*	12x4	3/8	13-1/8	14-11/16
3775-666*	12x6	2-3/8	15-1/8	15-5/8
3775-668*	12x8	3-7/8	16-5/8	17-1/16
3775-691*	14x2	2	12	13-7/16
3775-693*	14x3	3/4	13-1/4	14-9/16
3775-694*	14x4	0	14	15-9/16
3775-696*	14x6	1-1/2	15-1/2	16-1/2
3775-698*	14x8	3	17	17-15/16
3775-700*	14x10	4-1/2	18-1/2	19
3775-702*	14x12	7	21	20-15/16

*Fabricated

P602 Wye, Street

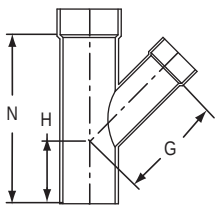
S x H x H



Part Number	Size	G	H	N
P602-015	1-1/2	2-7/8	1-7/8	4-7/16
P602-020	2	3-5/8	2-5/32	5-13/16
P602-030	3	5-1/16	3	8
P602-040	4	6-1/8	5-3/4	10-1/16

P603 Wye, Street, Reducing

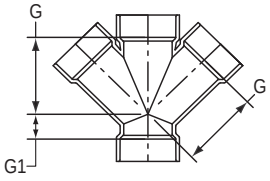
S x H x H



Part Number	Size	G	H	N
P603-251	2x2x1-1/2	3-7/16	2	5-11/32
P603-420	4x4x2	5-9/16	2-7/32	6-9/16
P603-422	4x4x3	6	2-13/16	8-1/16

P611 Double Wye

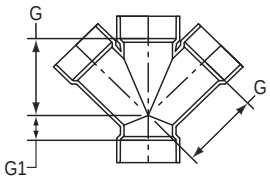
ALL HUB



Part Number	Size	G	G1
P611-015	1-1/2	2-7/8	1-1/8
P611-020	2	3-5/8	1-3/8
P611-030	3	6-1/8	1-5/8
P611-040	4	6-11/32	1-27/32

P611 Double Wye (continued)

ALL HUB

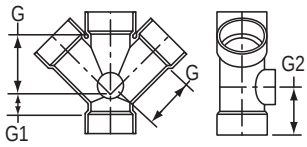


Part Number	Size	G	G1
P611-060	6	8-5/16	1-25/32
3776-080*	8	14-5/16	5-5/8
3776-100*	10	17-1/4	6-9/16
3776-120*	12	20-1/16	7-5/16
3776-140*	14	21-3/16	7-3/16

*Fabricated

P611S Double Wye, with 2" Side Inlet

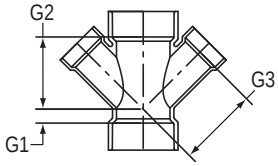
ALL HUB



Part Number	Size	G	G1	G2
P611S-030	3	5	1-5/8	2-1/4

P612 Double Wye, Reducing

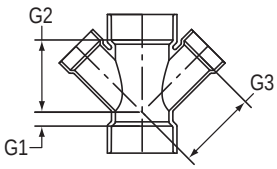
ALL HUB



Part Number	Size	G1	G2	G3
P612-251	2x2x1-1/2x1-1/2	1-1/16	3-5/16	3-7/16
P612-337	3x3x1-1/2x1-1/2	1/2	3-3/4	4-5/16
P612-338	3x3x2x2	7/8	4-1/16	4-5/8
P612-420	4x4x2x2	3/8	4-17/32	5-7/16
P612-422	4x4x3x3	1-1/16	5-13/32	5-7/8
P612-532	6x6x4x4	1-1/8	5-3/4	6-9/16

P612 Double Wye, Reducing (continued)

ALL HUB

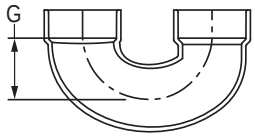


Part Number	Size	G1	G2	G3
3776-528*	6x2	7/8	7-1/2	8-7/16
3776-530*	6x3	1-13/16	8-7/16	9-9/16
3776-578*	8x2	9/16	9-3/16	9-3/4
3776-580*	8x3	1-5/16	9-15/16	10-7/8
3776-582*	8x4	2-1/16	10-11/16	11-7/8
3776-585*	8x6	3-1/2	12-1/8	12-13/16
3776-621*	10x2	1/2	10-1/4	11-3/16
3776-623*	10x3	1/2	11-1/4	12-5/16
3776-624*	10x4	1-7/16	12-3/16	13-5/16
3776-626*	10x6	3-1/2	14-1/4	14-1/4
3776-628*	10x8	5-1/8	15-7/8	15-11/16
3776-661*	12x2	1-1/8	11-5/8	12-9/16
3776-663*	12x3	3/8	12-3/8	13-11/16
3776-664*	12x4	3/8	13-1/8	14-11/16
3776-666*	12x6	2-3/8	15-1/8	15-5/8
3776-668*	12x8	3-7/8	16-5/8	17-1/16
3776-670*	12x10	5-3/8	18-1/8	18-1/8
3776-691*	14x2	2	12	13-7/16
3776-693*	14x3	3/4	13-1/4	14-9/16
3776-694*	14x4	0	14	15-9/16
3776-696*	14x6	1-1/2	15-1/2	16-1/2
3776-698*	14x8	3	17	17-15/16
3776-700*	14x10	4-1/2	18-1/2	19
3776-702*	14x12	7	21	20-15/16

*Fabricated

P700 Return Bend

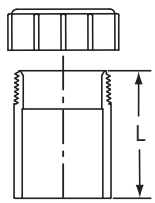
H x H



Part Number	Size	G
P700-015	1-1/2	1-11/32
P700-020	2	2-3/8
P700-030	3	3
P700-040	4	3-25/32
P700-060	6	5
P700-080	8	6-1/8

P704P Tail Piece Adapter

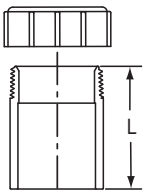
S x SLIP w/Plastic Nut & Built-in Washer



Part Number	Size	L
P704P-015	1-1/2	2-1/2

P704X Tail Piece Adapter

S x SLIP w/Chrome Nut & Washer

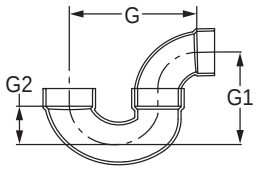


Part Number	Size	L
P704X-015	1-1/2	2-1/2

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P706X P-Trap

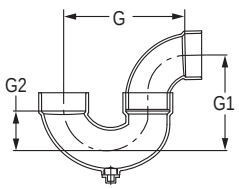
H x H



Part Number	Size	G	G1	G2
P706X-015	1-1/2	4-1/4	3-3/4	1-13/32
P706X-020	2	6-7/16	4-3/4	2-13/32
P706X-030	3	8-11/16	6-15/16	3-1/32
P706X-040	4	11-1/32	8-1/8	3-23/32
P706X-060	6	18-1/2	13-3/8	5
P706X-080	8	23-1/8	16-1/8	6-1/16
P706X-100	10	36-1/4	24-7/8	10
P706X-120	12	40-3/8	27-13/16	11

P707X P-Trap w/Cleanout

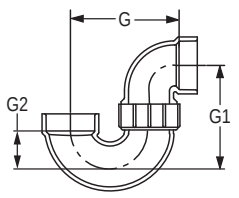
H x H



Part Number	Size	G	G1	G2
P707X-015	1-1/2	4-3/16	3-21/32	1-7/32

P708P Adjustable P-Trap w/Plastic Nut

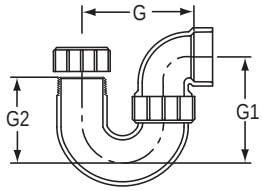
H x H



Part Number	Size	G	G1	G2
P708P-015	1-1/2	4-1/4	3-3/4	1-9/16
P708P-020	2	7-1/4	4-3/4	2-13/32

P711P L.A. Pattern P-Trap w/Plastic Nut

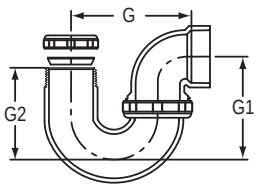
SLIP x H w/Plastic Nut & Washer



Part Number	Size	G	G1	G2
P711P-169	1-1/4x1-1/2	4-11/32	3-3/4	3-1/2
P711P-015	1-1/2	4-11/32	3-3/4	3-1/2

P711X L.A. Pattern P-Trap w/Chrome Nut

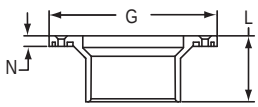
SLIP x H w/Chrome Nut & Washer



Part Number	Size	G	G1	G2
P711X-015	1-1/2	4-1/4	3-3/4	3-1/2

P800 Closet Flange

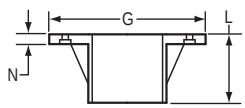
H



Part Number	Size	G	L	N
P800-422	4x3	7	2-3/4	7/16
P800-040	4x4	7-3/32	2	1/4

P800G Closet Flange with Gussets

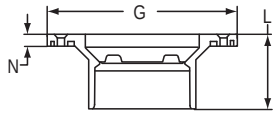
H



Part Number	Size	G	L	N
P800G-040	4	3-3/4	3-1/2	4-1/4

P800KO Closet Flange with Knockout

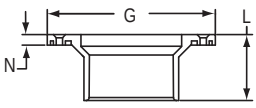
H



Part Number	Size	G	L	N
P800KO-422	4x3	7-1/32	2-25/32	7/16

P800S Closet Flange with Stop

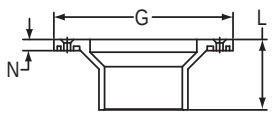
H



Part Number	Size	G	L	N
P800S-422	4x3	7	2-3/4	7/16

P801 Closet Flange, Reducing

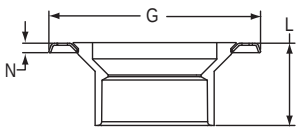
SPIGOT



Part Number	Size	G	L	N
P801-422	4x3	7	2-3/4	1/2

P811 Closet Flange, Adjustable with Metal Ring

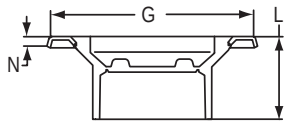
H



Part Number	Size	G	L	N
P811-422	4x3	7-1/32	2-23/32	9/32
P811-040	4x4	7-1/32	2-3/32	9/32

P811KO Closet Flange, Adjustable with Knockout

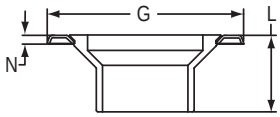
H



Part Number	Size	G	L	N
P811KO-422	4x3	7	2-13/16	1-5/16

P812 Closet Flange, Adjustable with Metal Ring

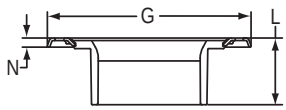
SPIGOT



Part Number	Size	G	L	N
P812-040	4	7-1/32	2-13/32	9/32
P812-422	4x3	7	2-13/16	1-5/16

P813 Closet Flange, Adjustable with Metal Ring

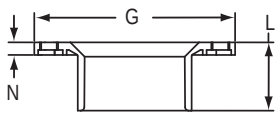
SPIGOT



Part Number	Size	G	L	N
P813-422	4x3	7-1/32	2-1/4	9/32

P815 Flush Closet Flange

Fits Over 3” Pipe or Inside 4” Pipe

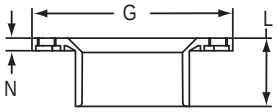


Part Number	Size	G	L	N
P815-040	4x4/4x3	7-1/32	2-3/8	15/32

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P815KO Flush Closet Flange with Knockout

Fits Over 3" Pipe or Inside 4" Pipe

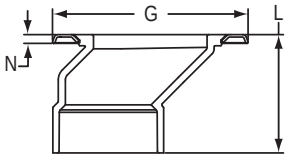


Part Number	Size	G	L	N
P815KO-040	4x4/4x3	7-1/32	2-3/8	15/32

P820 Offset Closet Flange with Adjustable Metal Ring

(1-1/2" Offset)

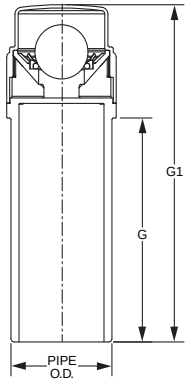
H



Part Number	Size	G	L	N
P820-422	4x3	4-7/32	4-1/4	9/32

Air Admittance Valve

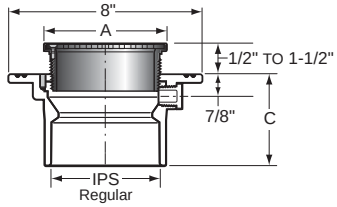
Spigot



MAX: 6DFU Drainage Fixture Units

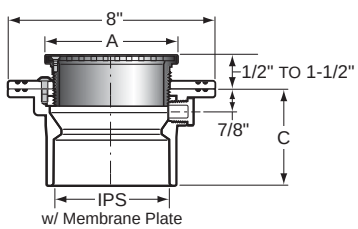
Part Number	Size	G	G1
AAV-015	1-1/2	4-1/8	6-1/4

Floor Drain with Stainless Steel Adjustable Top w/Round Grate



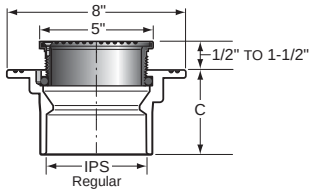
Part Number Regular	Size	A, Nom	IPS	C
P1500-015S	1-1/2x5	5	1-1/2	4-3/16
P1600-015S	1-1/2x6	6	1-1/2	4-3/16
P1700-015S	1-1/2x7	7	1-1/2	4-3/16
P1800-015S	1-1/2x8	8	1-1/2	4-3/16
P1500-020S	2x5	5	2	4
P1600-020S	2x6	6	2	4
P1700-020S	2x7	7	2	4
P1800-020S	2x8	8	2	4
P1500-030S	3x5	5	3	4
P1600-030S	3x6	6	3	4
P1700-030S	3x7	7	3	4
P1800-030S	3x8	8	3	4
P1500-040S	4x5	5	4	3-3/4
P1600-040S	4x6	6	4	3-3/4
P1700-040S	4x7	7	4	3-3/4
P1800-040S	4x8	8	4	3-3/4

Floor Drain with Stainless Steel Adjustable Top w/Round Grate & Membrane Collar



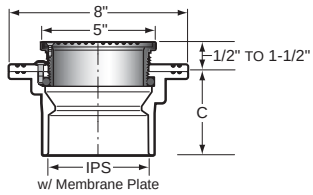
Part Number Membrane	Size	A, Nom	IPS	C
P150M-015S	1-1/2x5	5	1-1/2	4-3/16
P160M-015S	1-1/2x6	6	1-1/2	4-3/16
P170M-015S	1-1/2x7	7	1-1/2	4-3/16
P180M-015S	1-1/2x8	8	1-1/2	4-3/16
P150M-020S	2x5	5	2	4
P160M-020S	2x6	6	2	4
P170M-020S	2x7	7	2	4
P180M-020S	2x8	8	2	4
P150M-030S	3x5	5	3	4
P160M-030S	3x6	6	3	4
P170M-030S	3x7	7	3	4
P180M-030S	3x8	8	3	4
P150M-040S	4x5	5	4	3-3/4
P160M-040S	4x6	6	4	3-3/4
P170M-040S	4x7	7	4	3-3/4
P180M-040S	4x8	8	4	3-3/4

Floor Cleanout w/Stainless Steel Adjustable Round Top & Solid Access Cover



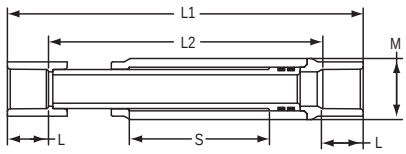
Part Number Regular	Size	IPS	C
P1510-015S	1-1/2x5	1-1/2	4-3/16
P1510-020S	2x5	2	4
P1510-030S	3x5	3	4
P1510-040S	4x5	4	3-3/4

Floor Cleanout w/Stainless Steel Adjustable Round Top, Solid Access Cover & Membrane Collar



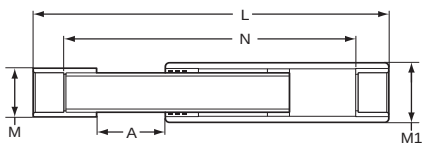
Part Number Membrane Plate	Size	IPS	C
P151M-015S	1-1/2x5	1-1/2	4-3/16
P151M-020S	2x5	2	4
P151M-030S	3x5	3	4
P151M-040S	4x5	4	3-3/4

Expansion Joint • Socket x Socket • PVC White with EPDM O-ring



Part Number	Size	L	L1	L2	M	S
S119-15	1-1/2	1-3/8	11-3/8	8-5/8	2-11/16	4
S119-20	2	1-1/2	12-1/4	9-1/4	3-3/16	4
S119-25	2-1/2	1-3/4	15-7/8	12-3/8	3-15/16	6
S119-30	3	1-7/8	16-1/8	12-3/8	4-9/16	6
S119-40	4	2-1/4	17-3/4	13-1/4	5-11/16	6
S119-60	6	3	21-5/16	15-3/16	8-1/4	6

Large Diameter Expansion Joint • Socket x Socket • PVC Gray with EPDM O-ring



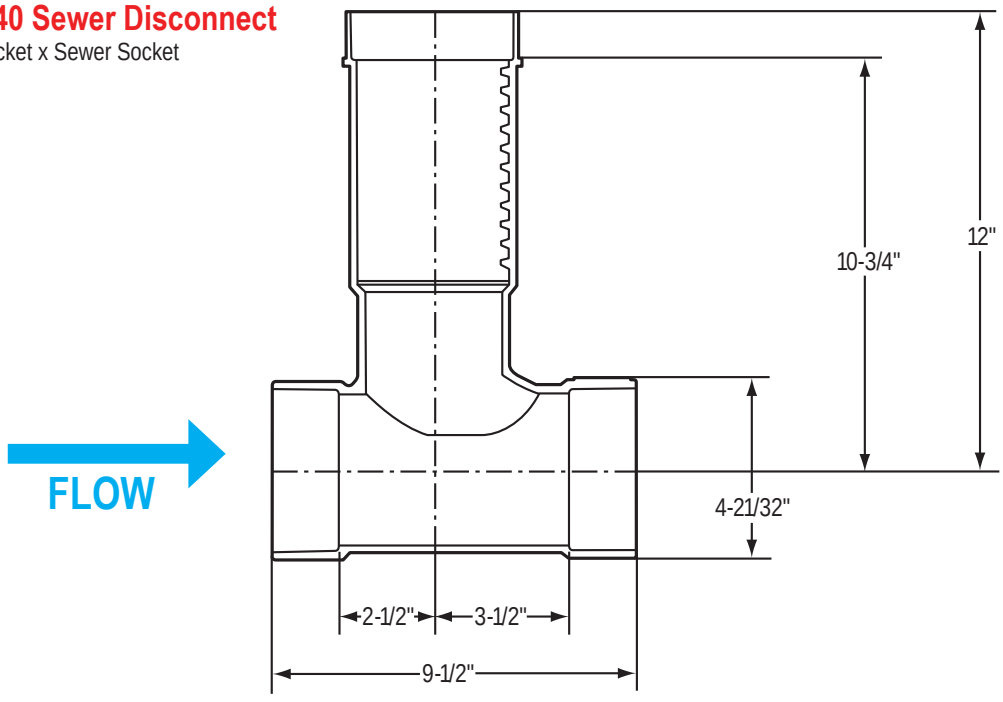
Part Number	Size	A	L	M	M1	N
826-080X6	8	3	27-1/4	9-11/16	10-3/4	19-1/4
826-100X6	10	3	35-7/8	11-13/16	12-3/4	25-7/8
826-120X6	12	3	39-1/2	14-1/8	16	27-1/2
826-140X6	14	3	49-3/4	15-5/8	16	34-7/8

Thermal Expansion Compensation

The change in length of pipe with temperature variation should always be considered when installing pipe lines and provisions made to compensate for this change in length. The table below has been prepared to assist you in determining this expansion. This represents the calculated values of pipe length change (ΔL) in inches based on pipe run lengths of 10 to 100 feet and temperature changes of 30°F to 100°F.

SDC-040 Sewer Disconnect

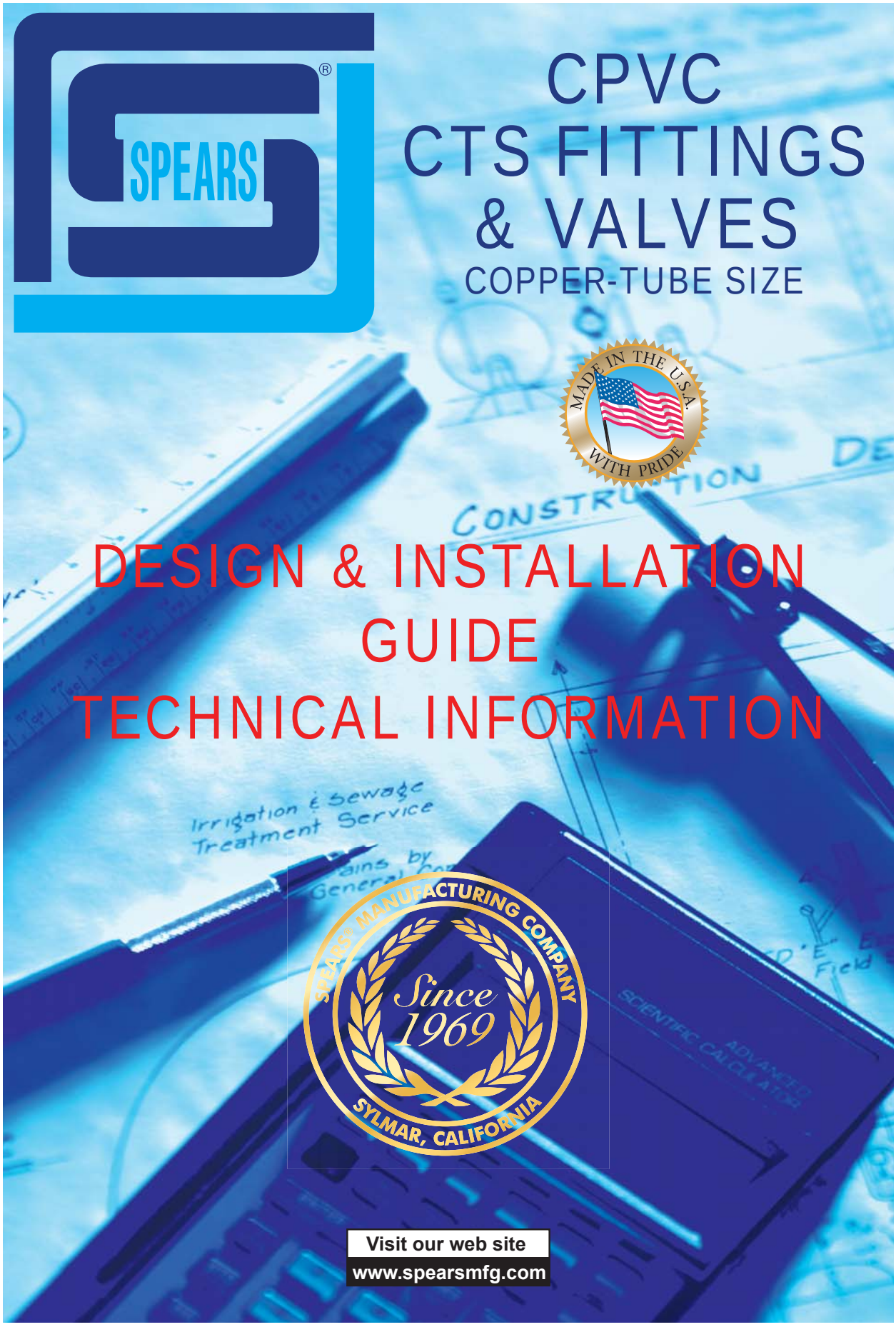
Sewer Socket x Sewer Socket



PVC Pipe Thermal Expansion (in)

TEMP. CHANGE Δ T (°F)	LENGTH OF RUN (FT)									
	10	20	30	40	50	60	70	80	90	100
30	0.11	0.22	0.32	0.43	0.54	0.65	0.76	0.86	0.97	1.08
40	0.14	0.29	0.43	0.58	0.72	0.86	1.01	1.15	1.30	1.44
50	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.40	1.62	1.80
60	0.22	0.43	0.65	0.85	1.08	1.30	1.51	1.73	1.94	2.16
70	0.25	0.50	0.76	1.01	1.26	1.51	1.76	2.02	2.27	2.52
80	0.29	0.58	0.86	1.15	1.44	1.73	2.02	2.30	2.59	3.24
90	0.32	0.65	0.97	1.30	1.62	1.94	2.27	2.59	2.92	3.24
100	0.36	0.72	1.03	1.44	1.80	2.16	2.52	2.88	3.24	3.60

Example: Highest temperature expected: 120°F
Lowest temperature expected: 50°F
Total change (ΔT): 70°F
Length of run: 40 feet
From 70° F (ΔT) row, read 1.01 inches length change


SPEARS
CPVC
CTS FITTINGS
& VALVES
COPPER-TUBE SIZE
MADE IN THE U.S.A.
WITH PRIDE
DESIGN & INSTALLATION
GUIDE
TECHNICAL INFORMATION
SPEARS® MANUFACTURING COMPANY
Since 1969
SYLMAR, CALIFORNIA
Visit our web site
www.spearsmfg.com

Certified Safe Alternative to Metal Plumbing Systems



All conventional metal plumbing systems corrode leaving their corrosive wastes for deposit into the water system. CPVC thermoplastic system components never corrode. Spears® EverTUFF® CTS CPVC systems of fittings, pipe, supply stops & valves are Certified lead-free by NSF International (NSF®) for compliance with California and Vermont low-lead plumbing requirements for safe use in drinking water systems. Approved by national, state and municipal building codes*, Spears® CTS CPVC products are ideally suited for hot and cold water distribution systems in residential and commercial structures, as well as recreational vehicles, modular homes and mobile homes.

*Check state and local codes.

Full Line of CTS CPVC Fittings, Pipe, Supply Stops & Ball Valves 1/2" Through 2" Plus Supplemental IPS CPVC in 2-1/2" & Up

EverTUFF® CPVC pipe and fittings are available for most any size project using Copper Tube Size (CTS) in sizes 1/2" through 2". EverTUFF® Schedule 40 and Schedule 80 CPVC Iron Pipe Size (IPS) are available for sizes 2-1/2" and larger for commercial applications such as multi-story installations when adequate design and installation practices have been utilized .

Exceptional Corrosion Resistance

Unlike metal systems, CPVC products never rust, scale, or pit, and will provide many years of maintenance-free service and extended system life.

Energy Savings

Low heat conductivity minimizes heat loss in hot water systems.

Higher Flow Capacity

Smooth interior walls result in lower pressure loss and higher volume than conventional metal systems.

Lower System Costs

Lower material costs than metallic systems, combined with lighter weight and ease of installation, can substantially reduce overall system cost.

Suitable for Commercial Hot Water

CTS CPVC products can handle fluids at service temperatures up to 180°F (82°C). IPS CPVC service temperatures and pressures vary according to pipe size.

CTS CPVC 1/4-Turn Angle Supply Stop



Spears® EverTUFF® lead-free Supply Stops are used at plumbing fixtures to terminate hot and cold water supply. NSF® Certified to ASTM F 1970 for use in ASTM D 2846 Hot & Cold Water Distribution Systems rated to 100 psi @ 180°F Available in 1/2" CTS Socket or Spears® patented Special Reinforced (SR) 1/2" FIPT female thread inlet x 1/2" straight male thread outlet for connection to conventional 1/2" FPT faucet or toilet supply lines with captive seals.

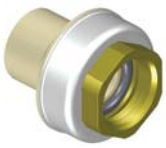
CTS CPVC Ball Valves



Spears® EverTUFF® lead-free Copper-Tube-Size Ball Valves feature one-piece design that never requires adjustment. Standard EPDM O-ring seal and PTFE Seats enable bubble-tight shut off. High impact Polypropylene handle has double stop engagement. 100 psi maximum internal pressure rating at 180°F and NSF® Certified for use in potable water systems.

Spears® EverTUFF® Exclusive Specialty Fittings…

Gasket Sealed Brass-Threaded Transition Fittings



- Eliminates Radial Stress
- Requires NO Thread Sealants
- Eliminates Sealant Incompatibility
- NSF® Certified Lead-Free

Spears® lead-free Gasket-Sealed CTS CPVC Brass-Threaded Transition Fitting design features a special molded-in-place Brass Thread Insert fitted with an elastomer gasket seal at the base of the threads. The gasket sealed design eliminates radial stress and requires no thread sealant.

Special Reinforced (SR) Plastic Threaded Transition Fittings

- Eliminates Split Threads
- Eliminates Leaks Associated with Over and Under Tightening
- Eliminates MIC, Electrolytic & Soil Chemistry Corrosion Problems



Spears® lead-free Patented CTS CPVC Special Reinforced (SR) Fittings reduce problems associated with over tightening of female plastic pipe threads. Not just an added ring, this unique precompression design compensates for expansion forces generated from tapered pipe thread joint make-up.

Anti-Stress Drop-Ear Fittings & Brackets

- Secures plumbing drops against horizontal and vertical movement
- Eliminates fitting damage during installation of plumbing drops



Drop Ear 90° Elbow



Drop Ear Bracket

Spears® EverTUFF®, The Full-Service CTS CPVC Product Line…

Application

Spears® EverTUFF® Copper-Tube-Size (CTS) products are manufactured from chlorinated polyvinyl chloride (CPVC) for use with SDR-11 piping systems of CTS outside diameter in hot and cold water distribution systems in nominal pipe size 1/2" through 2". CTS CPVC products can be used in conjunction with Spears® supplemental Schedule 40 and Schedule 80 CPVC Iron-Pipe-Size (IPS) pipe and fittings for sizes 2-1/2" through 12" in commercial multi-story installations. Check state and local codes for application and restrictions.

Working Pressure

Spears® EverTUFF® CTS CPVC fittings, pipe and valves have a continuous working pressure rating of 100 psi at 180°F.

Conformance Standards

Spears® EverTUFF® CTS CPVC fittings conform to ASTM D 2846 Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot and Cold Water Distribution Systems.

Product Certification

Spears® EverTUFF® CTS CPVC pipe and fittings are certified by NSF International (NSF®) to ASTM D 2846 for use in Hot and Cold Water Distribution Systems, to the Uniform Plumbing Code (NSF® U.P.Code) and for use in potable water service. All Spears® EverTUFF® CTS CPVC products are NSF® certified lead-free in accordance with ANSI/NSF® Standard 61, Annex G for compliance with California's Health & Safety Code Section 116875 (commonly known as AB1953) and Vermont Act 193.

Sample Engineering Specifications

All fittings, supply stops and valves shall be Copper-Tube-Size (CTS) constructed from CPVC Type IV Cell Classification 23447. All CTS CPVC products shall be produced to applicable requirements of ASTM D 2846 and rated to 100 psi at 180°F, unless specifically designated for cold water service only. All supply stops shall be 1/4 turn angle pattern CTS CPVC with male thread outlets. All ball valves shall be CTS CPVC sealed unit type with EPDM O-ring and double stop Polypropylene handle. All CTS CPVC products shall be certified lead-free for potable water use by NSF International in accordance with NSF®-61 Annex G, as manufactured by Spears® Manufacturing Company.

The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

Application

Spears® Copper Tube Size (CTS) Pipe and Fittings are manufactured from chlorinated polyvinyl chloride (CPVC) for use with SDR 11 piping systems of CTS outside diameter in hot and cold water distribution systems. Check state and local codes for application and restrictions.

Conformance Standards

Spears® CPVC CTS Pipe and Fittings conform to ASTM D 2846 Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot and Cold Water Distribution Systems.

Working Pressure

Spears® CPVC CTS Pipe and Fittings have a continuous working pressure rating of 100 psi at 180°F (400 psi at 73°F).

Product Certification

Spears® CPVC CTS Pipe, Fittings and Special Reinforced (SR) Threaded transition adapters are tested and certified by the National Sanitation Foundation (NSF®) to ASTM D 2846 for use in Hot and Cold Water Distribution Systems, and for safe use in potable water systems under NSF® Standard 14/61.

All Spears® CPVC CTS Pipe and Fittings for CPVC Plastic Hot and Cold Water Distribution Systems in this manual are certified Lead-Free by NSF International under NSF® Standard 61, Annex G. The annex certifies compliance to California California's Health & Safety Code Section 116875 (commonly known as AB1953) and Vermont Act 193. Lead free is defined by these requirements as containing no more than a weighted average lead content of <=0.25%.

Testing

Once the system has been installed and allowed to cure properly, the system shall be tested in accordance with applicable code requirements. When testing with water (hydrostatic testing), the system must be slowly filled with water and the air bled from the highest and furthest points in the system before test pressure is applied. Failure to do so can cause damage to the piping system and could be harmful to the job site personnel should a failure occur. If a leak is found, the affected product must be cut and discarded. A new section can be installed using couplings or other approved means.

PURPOSE OF THIS MANUAL

This manual is intended for use by specifiers, installers, and users in the selection, design, installation, and inspection of CPVC systems installed using Spears® CPVC products. All information contained within this manual is considered vital to obtain proper system performance and must be read and fully understood before attempting to install these products. If you have any questions about the safe and proper installation of these products, contact Spears® Manufacturing Company 15853 Olden Street, Sylmar CA 91342 USA, Telephone (818) 364-1611 • (800) 862-1499.

HAZARD IDENTIFICATION

Definitions for identifying the various hazard levels are provided below.

This safety alert symbol indicates important safety messages. When you see this symbol, be alert to the possibility of personal injury. Carefully read and fully understand the message that follows.

⚠ DANGER

The use of the word "DANGER" identifies an immediate hazard with a likelihood of severe personal injury or death if instructions, including recommended precautions, are not followed.

⚠ WARNING

The use of the word "WARNING" identifies the presence of hazards or unsafe practices that could result in severe personal injury if instructions, including recommended precautions, are not followed.

⚠ CAUTION

The use of the word "CAUTION" identifies possible hazards or unsafe practices that could result in personal injury, product damage, and/or property damage if instructions, including recommended precautions, are not followed.

NOTICE

The use of the word "NOTICE" identifies special instructions that are important but not related to hazards.

INSTALLER SAFETY INSTRUCTIONS

Read and understand this manual before proceeding with the installation and testing of the Spears® CPVC system. Education and a complete understanding of the instructions provided are requirements for the installer of the Spears® CPVC system. These instructions contain important information. If you need additional copies of this manual, or if you have any questions about the safe installation and use of this system, contact Spears® Manufacturing Company 15853 Olden Street, Sylmar CA 91342 USA, Telephone (818) 364-1611 • (800) 862-1499.

1. Inspect the product. Make sure all parts are included with the shipment and that all necessary tools are available for proper installation.
2. Wear safety glasses, hard hat, and foot protection.
3. Avoid dangerous environments. If using electrically powered tools for installation, make sure the area is free from moisture or wetness that could create unsafe working conditions. Keep work areas well lit. Allow sufficient space for measuring and dry-fitting the system.
4. Prevent back injury. Always practice safe lifting and installation techniques.
5. Use only tools specifically designed for plastic pipe and fittings.
6. Work in a well-ventilated area. Ensure that there is proper ventilation when applying primers and cements and/or soldering materials.
7. Wear protective gloves. PVA-coated protective gloves are recommended when applying solvent cement. If hands contact solvent cement, use a waterless, abrasive soap to remove all residue.
8. When solvent cementing, avoid sources of heat or open flame. **DO NOT** smoke while handling solvent cement.
9. Keep work areas clean. Cluttered areas and slippery floors can create hazardous working conditions.
10. Wear hearing protection. Protect your hearing if you are exposed to long periods of very noisy job-site operations.
11. Keep visitors away. All visitors should be kept a safe distance away from the work area.
12. Follow all manufacturers' recommended precautions when cutting or sawing pipes, or when using any heat, flame, or power tools.

MODEL CODES

Spears® CPVC products meet ASTM D 2846 requirements, as referenced in the current version of the following model codes.

Code	Organization
BOCA National Plumbing Code	Building Officials and Code Administrators International, Inc.
CABO 1- and 2-Family Dwelling Code	Council of American Building Officials
Canadian Plumbing Code	National Research Council, Canada
International Plumbing Code	BOCA, ICBO, SBCCI
National Standard Plumbing Code	National Association of Plumbing-Heating-Cooling Contractors
Standard Plumbing Code	Southern Building Code Congress International Inc.
Uniform Plumbing Code	International Association of Plumbing and Mechanical Officials

LISTING AGENCIES

Standard	Organization
Standards 14 and 61	NSF International (ANSI/NSF®)

HANDLING AND STORAGE

Spears® CPVC products resist attack from a large group of chemicals that are corrosive to metallic piping. However, care must be taken to avoid contact with chemicals that are harmful to CPVC. Specific chemicals, or chemical vapors, that contact CPVC can weaken or damage the system. Consult with Spears® before using these CPVC products with any questionable materials.

⚠ WARNING

- **DO NOT expose Spears® CPVC products to edible oils, esters, ketones, or petroleum-based products, such as: cutting oils; packing oils; traditional pipe thread paste or dopes; and certain lubricants. Consult with Spears® before using certain chemicals with these CPVC products.**

Failure to follow this instruction could cause product/system damage, resulting in serious personal injury and/or property damage.

Spears® recommends that CPVC products be stored indoors. If storing outdoors, these products must be covered with a non-transparent material to prevent extended sunlight exposure. Brief exposure to direct sunlight on the job site may result in color fade, but it will not affect the material's physical properties. Spears® CPVC fittings should be stored in their original containers to keep them free from dirt and to help reduce the possibility of damage.

⚠ WARNING

- **Spears® CPVC products must not be subjected to prolonged sunlight exposure.**
- **For outdoor storage, products must be stored in their original shipping containers, or they must be covered with a non-transparent material.**

Failure to follow this instruction could cause product/system damage, resulting in serious personal injury and/or property damage.

Reasonable care must be exercised in handling Spears® CPVC products. Do not drop these products or allow anything to drop on them. If improper handling results in scratches, splits, or gouges, the damaged fitting or section of piping must be discarded.

SYSTEM LISTINGS, USAGE, AND STANDARDS

Penetrating Fire-Rated Walls and Partitions

Spears® CPVC products can be used within fire-rated buildings, provided all penetrations of fire barriers are constructed so that the fire rating of the barrier is not compromised. Most codes accept penetration sealing systems or devices that are UL Listed or have passed the appropriate ASTM E 119 or E 814 tests. The PPFA manual, "Plastic Pipe in Fire Restrictive Construction" (NER370), provides more information and lists the applicable test reports. In addition, reference can be made to the current issue of the "Underwriters Laboratories Inc. Directories of Fire Resistance – Vol. II" or the "WHI Certification Listings." Before starting an installation, always consult the building codes and local authority having jurisdiction.

⚠ WARNING

- **Some fire-stopping systems contain chemicals that can damage CPVC products. Always consult with Spears® and the fire-stop manufacturer concerning compatibility with CPVC products.**

Failure to follow this instruction could cause product/system damage, resulting in serious personal injury and/or property damage.

Underslab Installations

Spears® CPVC products are approved for underslab installations (with joints) in all model-plumbing codes. When performing underslab installations, it is important to support the pipe evenly on a smooth surface. The bedding and backfill should be sand or clean soil that is free from sharp rocks and other debris that could damage the pipe.

Underslab installations that contain joints must be pressure tested before pouring the slab. **NOTE:** IAPMO IS 2098, "Installation Standard for CPVC Solvent Cemented Hot and Cold Water Distribution Systems," requires a test at 150 psi for 2 hours. The pipe should be sleeved where it penetrates the slab, along with construction joints within the slab.

Spears® CPVC products can be used with pipe manufactured in accordance with ASTM D 2846, which is available in coils for underslab installations. When turning coiled piping up through a slab, into walls, etc., make sure the piping does not kink. Sections of pipe that contain kinks must be cut out and replaced.

Freeze Protection/Sunlight Exposure

CPVC piping must be protected from freezing in all installation locations. Attention shall be paid to local insulating techniques and codes that require a particular method. Use only methods and materials suitable for use with CPVC piping. Where freezing is not an issue, CPVC shall not be installed so as to be subject to direct sunlight after installation and not installed on the surface of a building, unless protected by a covering or a chemically compatible paint, such as water based Latex.

Hose Bibb Installation

Hose bibbs are to be connected only to metal system components which are adequately anchored to the building structure. CPVC plastic systems must terminate in the wall.

Water Heater Connections

Before attempting to use Spears® CPVC products in water heater connections, determine if local plumbing codes contain detailed requirements for connections to gas or electric storage-type heaters. **DO NOT** use Spears® CPVC products with commercial-type, non-storage water heaters.

For areas where local plumbing codes do not have requirements, the following information can be used as a guide for water heater connections:

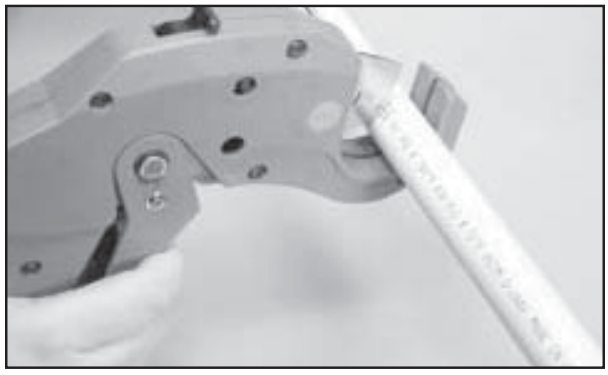
- On electric water heaters, CPVC can be joined directly to the heater, using metal-to-CPVC transition fittings.
- On high-efficiency gas water heaters that use plastic vent piping, CPVC can be joined directly to the heater in the same way as an electric water-heater connection.
- On all other gas water heaters, there should be at least 6" of clearance between the exhaust flue and any CPVC piping. A minimum of 6" metallic pipe should connect directly to the heater so that the CPVC piping cannot be damaged by the buildup of excessive, radiant heat from the flue.
- A temperature/pressure relief valve should be installed so that the sensing element contacts the water at the top of the heater.
- Spears® CPVC products are approved by all model codes for use as relief-valve drain lines. A metal-to-CPVC transition fitting should be used to connect the piping to the relief valve. Then, the piping should be continued to the outlet. Both horizontal and vertical pressure relief drain should be supported every 3 feet.
- For horizontal runs, slope the piping toward the outlet. Support the piping at 3-foot centers or closer. The piping must discharge to the atmosphere at an approved location.
- Instantaneous water heaters (i.e., under sink units) require at least 6" of metallic pipe connected to heater inlet and no CVPC installed down stream.

BASIC JOINT ASSEMBLY

Cutting the Pipe

CPVC piping can be cut easily with a ratchet cutter, wheel-type plastic piping cutter, a power saw, or any other fine-tooth saw.





Be careful not to split the pipe if using a ratchet-type cutter, especially in temperatures below 50°F. If any damage or cracking is evident, cut off at least 2" of the pipe beyond any visible crack.

It is important that the cutting tools being used are designed for plastic piping. To ensure that the pipe is cut square, use a miter box when cutting the pipe with a saw. Cutting the pipe as square as possible provides the maximum bonding surface area.

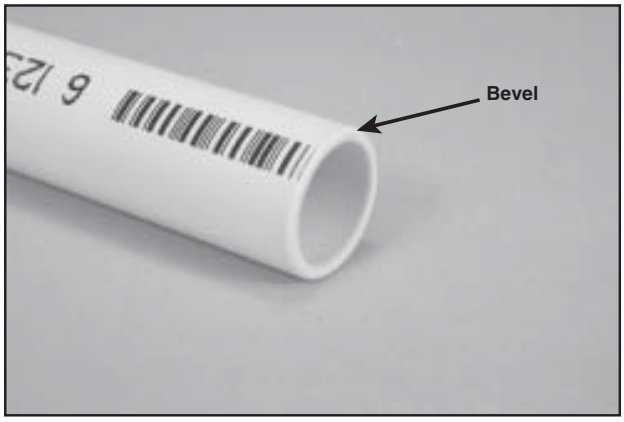
Deburring

Burrs and filings can prevent contact between the pipe and the fitting during assembly and must be removed from the outside and the inside of the pipe. A chamfering tool or file is suitable for this purpose (refer to photos below).





A slight bevel must be placed at the end of the pipe, as shown below. A slight bevel will ease the entry of the pipe into the socket and minimize the chance of cement being wiped off the fitting.



Fitting Preparation

Using a clean, dry rag, wipe any loose dirt and moisture from the fitting's socket and pipe end. Moisture can slow the cure time, and at this stage of assembly, excessive moisture can reduce joint strength.

⚠WARNING

- **Before assembling any Spears® CPVC products, inspect all components for cuts, scratches, gouges, split ends, or any other irregularities that have occurred during shipping and handling.**

Failure to follow this instruction could cause joint/system failure, resulting in serious personal injury and/or property damage.

Check all mating components to ensure that tolerances and engagements are compatible. **DO NOT** use any components that appear irregular or do not fit properly. Contact Spears® regarding any questions about usability.

Check the dry fit of the pipe and fitting. The pipe should enter the fitting's socket easily 1/4 - 3/4 of the way.

⚠WARNING

- **Always apply a second coat of cement to the pipe for joints that are 1-1/4 inch and larger.**

Failure to follow these instruction could cause joint/system failure, resulting in serious personal injury and/or property damage.

SOLVENT CEMENTING PROCEDURES

Verify the expiration date located on the solvent cement container. The cement can be used for a period of 2 years from the date stamped on the container. When cementing pipe and fittings in extremely cold temperatures, make sure the cement has not "JELLED." Jelled or expired cement must be discarded in an environmentally friendly fashion, in accordance with local regulations. To prolong the life of solvent cement, keep the containers tightly closed when not in use, and cover the container as much as possible during use. If an unopened solvent cement container is subjected to freezing temperatures, the cement may become extremely thick. Place the closed container in a room temperature area where, after a short time period, the cement will return to a usable condition. **DO NOT** attempt to heat solvent cement.

⚠WARNING

- **Before assembling any Spears® CPVC products, verify that the solvent cement is within 2 years of the date stamped on the can and that it does not have a "JELLED" appearance. Jelled or expired solvent cement will not provide the strength needed to make a proper joint.**

Failure to follow these instructions could cause joint/system failure, resulting in serious personal injury and/or property damage.

The cement must be applied when the pipes and fittings are clean and free from any moisture and debris.

USING AN APPLICATOR OR NATURAL BRISTLE BRUSH THAT IS AT LEAST 1/2 THE SIZE OF THE PIPE DIAMETER, WORK THE CEMENT INTO THE JOINING SURFACES USING A CONTINUOUS, CIRCULAR MOTION.

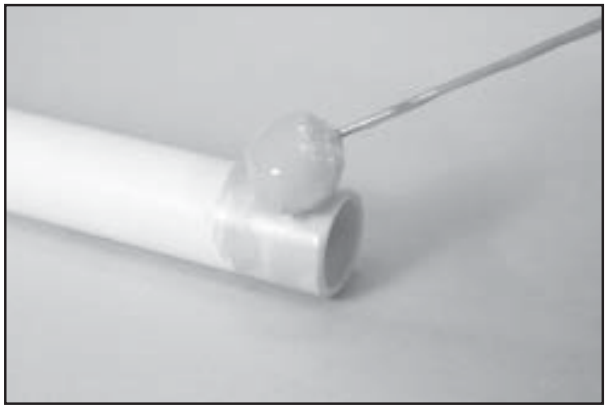
Apply the cement in the following sequence, as pictured below:

1. Apply a coat to the pipe

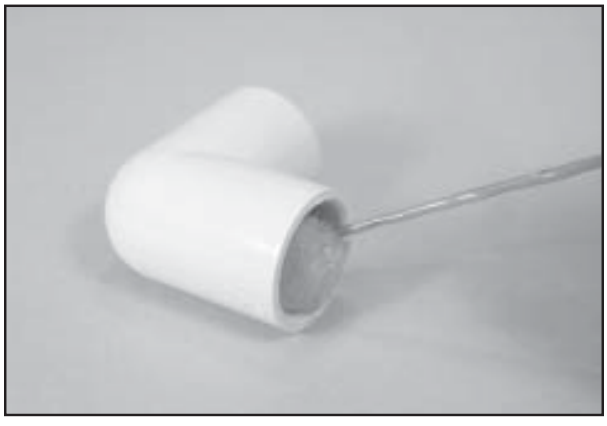
2. Apply a coat to the fitting

3. Apply a second coat to the pipe, if required

Avoid puddling the cement on or within the fitting and pipe. Puddled cement causes excess softening and damage to the CPVC material.



Apply a heavy, even coat of cement to the outside of the pipe end. Work the cement into the joining surfaces using a continuous, circular motion.



Apply a medium coat to the fitting socket. Avoid getting cement in other sockets or threaded connections.

A second application of cement must be applied to the pipe end if a 1-1/4 inch and larger joint is being prepared.

⚠ WARNING

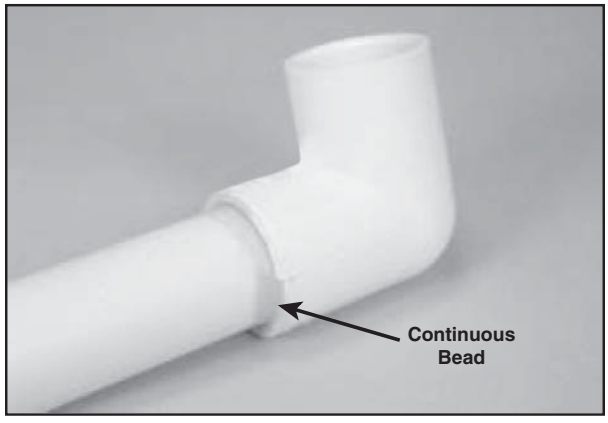
- **Always apply a second coat of cement to the pipe for joints that are 1-1/4 inch and larger.**
- **Avoid puddling the cement on the pipe or within the fitting.**
- **Avoid getting cement into other sockets or threaded connections.**

Failure to follow these instructions could cause joint/system failure, resulting in serious personal injury and/or property damage.

Joint Assembly

Immediately insert the pipe into the fitting's socket while rotating the pipe 1/4 turn. Align the fitting in the proper orientation at this time. Make sure the pipe bottoms out at the fitting's stop.

Hold the assembly for 10 to 15 seconds to ensure initial bonding occurs. A bead of cement must be present around the pipe and fitting juncture. If this bead is not continuous around the socket's shoulder, insufficient cement was applied.



If insufficient cement was applied, the joint must be cut out and discarded, and a new joint must be assembled.

Any cement, in excess of the bead, can be wiped off with a dry, clean rag.

Set and Cure Times

- The set and cure times for CPVC solvent cement depend on pipe size, temperature, relative humidity, and tightness of fit. Drying time is faster for drier environments, smaller pipe sizes, high temperatures, and tighter fits.
- Special care must be taken when assembling Spears® CPVC products in low temperatures (below 40°F) or high temperatures (above 80°F).
- Extra set and handling times must be allowed in colder temperatures. When cementing pipe and fittings in cold temperatures, make sure the cement has not "JELLED." Jelled cement must be discarded.
- In higher temperatures, make sure both surfaces to be joined are still wet with cement during assembly.
- The assembly must be allowed to set, without any stress on the joint, for 5 minutes.
- Following the initial set period, the assembly can be handled carefully by avoiding stress on the joint.

Refer to the following table for minimum cure times before pressure testing.

MINIMUM CURE TIMES FOR SOLVENT CEMENT BEFORE PRESSURE TESTING

150-psi Maximum Test Pressure

Piping Size	*Ambient Temperature During Cure (Relative Humidity 60% or Less)*		
Nominal Diameter inches	*60°F to 100°F*	*40°F to 60°F*	*0°F to 40°F*
1/2	*15 minutes*	*20 minutes*	*30 minutes*
3/4	*15 minutes*	*20 minutes*	*30 minutes*
1	*15 minutes*	*20 minutes*	*30 minutes*
1-1/4	*15 minutes*	*20 minutes*	*30 minutes*
1-1/2	*30 minutes*	*45 minutes*	*1 hour*
2	*30 minutes*	*45 minutes*	*1 hour*

⚠ WARNING

- **Make sure the cement is allowed to cure, according to the times listed in the chart, for the pipe size and ambient temperature.**

Failure to follow this instruction could cause joint/system failure, resulting in serious personal injury and/or property damage.

TRANSITION JOINTS AND FITTINGS

CPVC pipe can be connected to copper, brass, valves, and other materials using a variety of transition fittings including unions, compression fittings, specially reinforced male and female adapters, flanged joints, grooved joints and other readily available transition fittings.

Do not thread CPVC pipe and do not use regular CPVC female threaded fittings. Regular CPVC male threaded fitings shall only be used on cold water applications. Spears® Special Reinforced Male Adapters, CPVC Lined Brass-Threaded Male Adapters, Special Reinforced Female Adapters and Gasket Sealed Brass-Threaded Female Adapters are recommended for hot water applications and threaded transitions to metal pipe. All approved threaded CPVC joints must be accessible. (See also Water Heater Connections section for additional installation details.)

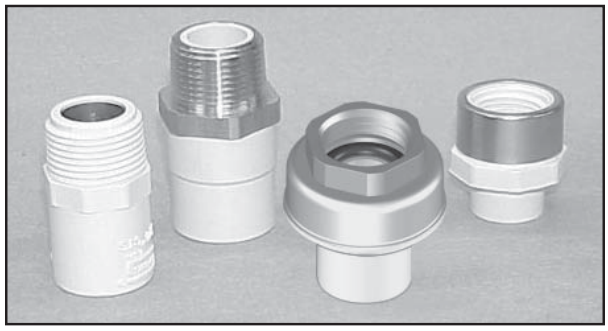
Standard compression fittings with brass ferrules can be used; however, PTFE tape must be applied over the brass ferrule to compensate for the dissimilar thermal expansion rates between the brass and CPVC. Caution must be exercised to prevent over tightening of compression fittings. Use extreme care when soldering any metal system to prevent flame contact with or heat distortion in CPVC pipe and fittings.

Assembling Gasket Sealed Brass-Threaded Female Adapter Connections

Threaded connections using Spears® Gasket Sealed Brass-Threaded Female Adapters with O-ring seal at the base of the fitting thread are designed to be assembled without thread sealants. **DO NOT** use ANY thread sealants, tape or paste, in these joints. Thread hand tight and tighten snug. This produces a leak-free, reliable seal without problems associated with incompatible thread pastes or improperly applied tape (TFE) sealants.

⚠ WARNING

- **DO NOT use ANY thread sealants on Gasket Sealed Brass-Threaded Female Adapter. Sealants, especially tape (TFE), may prevent proper joint make-up and result in leaks.**
- **DO NOT over tighten. Wrench over tightening of joints my result in fitting damage.**



Assembling Standard Threaded Connections

Threaded connections using standard tapered threads (including Spears® Special Reinforced Female Adapters, Special Reinforced Male Adapters, Brass-Threaded and Regular Male Adapters) require the application of a thread sealant that is compatible with CPVC material. Spears® recommends the use of Spears® **Blue 75** Thread Sealant. **DO NOT** use ANY thread sealants on Spears® Gasket Sealed Brass-Threaded Female Adapters (see above).

⚠ WARNING

- **Use only thread sealants recommended by Spears®. Other joint compounds or pastes may contain substances that could cause stress cracks in CPVC or brass materials.**

Failure to follow these instructions could cause joint/system failure, resulting in serious personal injury and/or property damage.

Apply sealant to the male threads only. Make sure all threads are covered. **DO NOT** clog the waterway with excess sealant.

If PTFE tape is used, Spears® recommends a thickness of at least .0025" that meets or exceeds military specification, MIL-T-27730A. **DO NOT** use a combination of tape and thread sealant on the same joint.

Apply PTFE tape in the direction of the threads by starting with the first full thread and continuing over the entire thread length. Make sure all threads are covered. Generally, 2 - 3 wraps are sufficient to produce a watertight connection.

⚠ WARNING

- **DO NOT use more than five wraps of PTFE tape. Excessive tape can cause bunching, resulting in fractures of the plastic fitting or the brass insert due to excessive hoop stress.**

Failure to follow these instructions could cause joint/system failure, resulting in serious personal injury and/or property damage.

DO NOT over-torque any threaded connections. Generally, one to two turns beyond finger-tight are required for a threaded connection. Factory testing has indicated that 10 - 25 ft-lbs of torque is adequate to obtain a leak-free seal. Use only a smooth-jawed wrench or strap wrench when installing threaded connections.

⚠ WARNING

- **Tools with teeth MUST NEVER be applied to any part of a CPVC fitting. The teeth can damage and weaken CPVC material.**

Failure to follow these instructions could cause joint/system failure, resulting in serious personal injury and/or property damage.

ENGINEERING DATA SECTION

Pipe and Fitting Specifications

CPVC pipe is produced in SDR 11 dimensions using copper tube size (CTS) outside diameters, as specified in ASTM D 2846. Spears® fittings are produced in SDR 11 dimensions, in accordance with ASTM D 2846. The combined pipe and fitting system is NSF listed for potable water. In addition, the system meets test requirements of the Uniform Building Code.

SDR 11 (Ref. ASTM D 2846)			
Size Nominal inches	*Average OD inches*	*Average ID inches*	*Weight lbs/ft*
1/2	*0.625*	*0.469*	*.090*
3/4	*0.875*	*0.695*	*.149*
1	*1.125*	*0.901*	*.240*
1-1/4	*1.375*	*1.105*	*.353*
1-1/2	*1.625*	*1.309*	*.489*
2	*2.125*	*1.716*	*.829*

Pressure Ratings

The Spears® CPVC system, including the joint, has a continuous rated working pressure of 100 psi at 180°F or 400 psi at 73°F. CPVC systems have the capability to withstand short-term temperature/pressure increases above 100 psi at 180°F, as evidenced by their ability to consistently surpass the 48 hour, 150 psi Uniform Building Code test at 210°F. CPVC pipe should not be used where temperatures will consistently exceed 180°F.

Pressure-Temperature De-Rating Factors For CTS CPVC 4120 SDR 11 Piping Systems

°F	Factor	Rating, PSI
73	1.00	400
80	1.00	400
90	0.91	360
100	0.82	325
120	0.65	260
140	0.50	200
160	0.40	160
180	0.25	100

The pressure de-rating factor is the same for all pipe sizes.

Example: Determine the maximum allowable operating pressure for a CTS CPVC piping system with an operating temperature of 140°F. Using de-rating factor of 0.50 for 140° From the above chart, the maximum allowable operating pressure = 400 x 0.50 = 200 psi.

Hydraulic Design

Friction Loss – Friction loss through CPVC pipe is most commonly obtained by the use of the Hazen-Williams equations as expressed below for water:

$$f = .2083 \times \left(\frac{100}{C}\right)^{1.852} \times \frac{G^{1.852}}{di^{4.8655}}$$

where:

f = friction head of feet of water per 100' for the specific pipe size and I.D.

C = a constant for internal pipe roughness. 150 is the commonly accepted value for CPVC pipe.

G = flow rate of gallons per minute (U.S. gallons).

di = inside diameter of pipe in inches.

Compared to other materials on construction for pipe, thermoplastic pipe smoothness remains relatively constant throughout its service life.

Flow Velocities – Velocities for water in feet per second at different GPM's and pipe inside diameters can be calculated as follows:

$$V = .3208\frac{G}{A}$$

where:

V = velocity in feet per second
G = gallons per minute
A = inside cross sectional area in square inches

While these systems can operate with flow velocities in excess of 10 feet per second, a maximum of 8 feet per second velocity is recommended to extend system life.

The following table lists Friction Loss and Flow Velocities for SDR 11 CTS CPVC Pipe at different flow rates.

FRICTION LOSS AND FLOW VELOCITY FOR SDR 11 CTS CPVC PIPE

Friction head and friction loss are per 100 feet of pipe.

Gallons Per Minute	1/2 in.		3/4 in.			1 in.			1-1/4 in.			1-1/2 in.			2 in.		
	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.
1	1.71	3.19	1.38	0.80	0.50	0.22	0.48	0.15	0.06									
2	3.42	11.53	5.00	1.60	1.82	0.79	0.96	0.53	0.23									
3	5.13	24.43	10.59	2.40	3.85	1.67	1.44	1.12	0.49									
4	6.83	41.62	18.04	3.20	6.55	2.84	1.93	1.91	0.83									
5	8.54	62.91	27.27	4.00	9.91	4.29	2.41	2.89	1.25									
6	10.25	88.12	38.23	4.79	13.89	6.02	2.89	4.05	1.76									
7	11.96	117.32	50.86	5.59	18.47	8.01	3.37	5.39	2.34									
8	13.67	150.23	65.13	6.39	23.66	10.26	3.85	6.90	2.99									
9	15.38	186.85	81.00	7.19	29.42	12.76	4.33	8.58	3.72									
10	17.08	227.11	98.45	7.99	35.76	15.50	4.82	10.43	4.52	3.23	3.94	1.71	2.31	1.75	0.76	1.35	0.49	0.21
15				11.99	75.78	32.85	7.22	22.11	9.58	4.84	8.35	3.62	3.47	3.71	1.61	2.03	1.03	0.45
20				15.98	129.11	55.97	9.63	37.67	16.33	6.46	14.23	6.17	4.63	6.33	2.74	2.70	1.76	0.76
25							12.04	56.94	24.69	8.07	21.51	9.33	5.78	9.56	4.15	3.38	2.66	1.15
30							14.45	79.82	34.60	9.68	30.15	13.07	6.94	13.40	5.81	4.05	3.73	1.62
35							16.86	106.19	46.03	11.30	40.11	17.39	8.09	17.83	7.73	4.73	4.96	2.15
40										12.91	51.37	22.27	9.25	22.83	9.90	5.40	6.35	2.75
45										14.52	63.89	27.70	10.41	28.40	12.31	6.08	7.89	3.42
50										16.14	77.66	33.66	11.56	34.52	14.96	6.75	9.60	4.16
55										17.75	92.65	40.16	12.72	41.18	17.85	7.43	11.45	4.96
60													13.88	48.38	20.97	8.10	13.45	5.83
70													16.19	64.37	27.90	9.46	17.89	7.76
80																10.61	22.91	9.93
90																12.16	28.50	12.35
100																13.51	34.64	15.02
125																16.89	52.37	22.70

Hanger/Support Spacing

Since CPVC pipe is rigid, it requires fewer supports than flexible, plastic systems.

Vertical runs should be supported at each level so that the weight of the run is not placed on a fitting or a joint.

Horizontal runs require support every 3 feet for 1/2" - 1" diameter pipe and every 4 feet for 1-1/4" and larger diameters. Support spacing should be in accordance with applicable local codes.

Horizontal runs must be braced so that the stress loads (caused by bending or snaking) will not be placed on a fitting or a joint. Hanger support spacing information is shown in Table A.

Spears® recommends that hangers, designed for supporting CPVC, be used to support CPVC piping. However, some hangers, designed for steel pipe, may be used if their suitability is clearly established. These hangers must be selected to accommodate the specific pipe size. In addition, they cannot contain rough or sharp edges that contact the pipe, and they must not bind the pipe from axial movement that is caused by expansion and contraction.

Table A - Hangers and Supports
Reference CPVC ASTM D 2846 Systems

Pipe Size (CTS) Nominal inches	Maximum Support Spacing Feet	Water-filled Weight lbs/ft
1/2	3	0.153
3/4	3	0.294
1	3	0.486
1-1/4	4	0.726
1-1/2	4	1.014
2	4	1.733

⚠ WARNING

Horizontal runs and vertical risers of CPVC piping require additional support and provision for expansion and contraction, compared to metal piping systems. Systems must be designed and installed by qualified personnel, in accordance with the properties and capabilities of the material.

Failure to follow these instructions could causes joint or system failure, resulting in serious personal injury and/or property damage.

Material Properties

Table I
Modulus of Elasticity and Stress vs. Temperature

Property	Temperature °F							
	73	80	90	100	110	120	140	150
Modulus of Elasticity "E" x 10^5 psi	3.900	3.840	3.780	3.700	3.460	3.210	3.050	2.840
Working Stress "S" psi	1900	1785	1630	1485	1345	1270	950	875

Table II
Physical and Thermal Properties

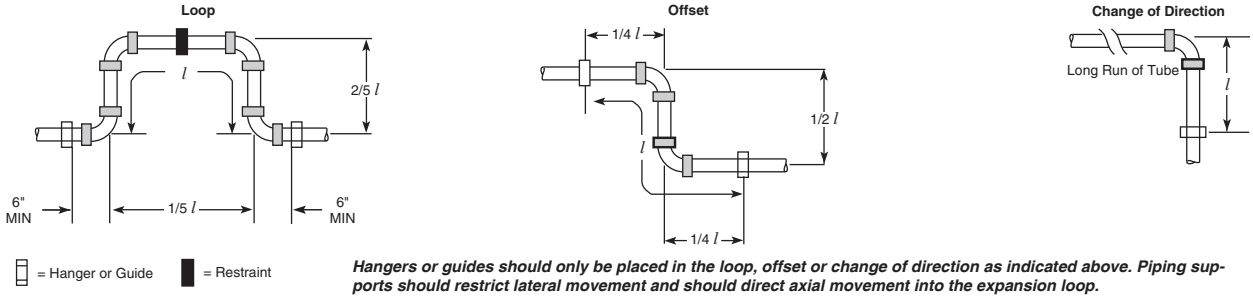
Property		CPVC	ASTM
Specific Gravity	"Sp. Gr."	1.51	D 792
IZOD Impact Strength (ft-lbs/inch of notch)		5.0	D 256A
Modulus of Elasticity, psi	"E"	3.9 x10^5	D 638
Ultimate Tensile Strength, psi		8,000	D 638
Compressive Strength, psi	"σ"	9,000	D 695
Poisson's Ration	"υ"	.35 - .38	–
Working Stress @ 73°F, psi	"S"	1,900	D 1598
Hazen-Williams "C" Factor	"C"	150	–
Coefficient of Linear Expansion in/(in °F)	"e"	3.2 x 10^{-5}	D 696
Thermal Conductivity BTU/(hr °F ft/in^2)	"k"	0.95	C 177
Upper Temperature Limit	""°F"	205	
Flammability		Flame Retardant	
Electrical Conductivity		Non-Conductor	

Expansion and Contraction

⚠ WARNING

Horizontal runs and vertical risers of CPVC piping require additional support and provision for expansion and contraction, compared to metal piping systems. Systems must be designed and installed by qualified personnel, in accordance with the properties and capabilities of the material.
Failure to follow these instructions could causes joint or system failure, resulting in serious personal injury and/or property damage.

Expansion Loop Offset Configurations



Hangers or guides should only be placed in the loop, offset or change of direction as indicated above. Piping supports should restrict lateral movement and should direct axial movement into the expansion loop.

CPVC, like all piping materials, expands and contracts with changes in temperature. The coefficient of linear expansion for CPVC is 3.2 X 10^{-5} in./in./°F. A 25°F change in temperature will cause an expansion of 1" for a 100-ft straight length. For most installation and operating conditions, expansion and contraction can be accommodated at changes of direction. Based on the following chart, an offset or loop is required on a long, straight run.

Table III: Thermal Expansion in inches

Temp Change ΔT °F	Length of Run in feet													
	5	10	15	20	25	30	35	40	45	50	70	90	120	160
	Thermal Expansion ΔL (inches)													
20	0.04	0.08	0.12	0.15	0.19	0.23	0.27	0.31	0.35	0.38	0.54	0.69	0.92	1.23
30	0.06	0.12	0.17	0.23	0.29	0.35	0.40	0.46	0.52	0.58	0.81	1.04	1.38	1.84
40	0.08	0.15	0.23	0.31	0.38	0.46	0.54	0.61	0.69	0.77	1.08	1.38	1.84	2.46
50	0.10	0.19	0.29	0.38	0.48	0.58	0.67	0.77	0.86	0.96	1.34	1.73	2.30	3.07
60	0.12	0.23	0.35	0.46	0.58	0.69	0.81	0.92	1.04	1.15	1.61	2.07	2.76	3.69
70	0.13	0.27	0.40	0.54	0.67	0.81	0.94	1.08	1.21	1.34	1.88	2.42	3.23	4.30
80	0.15	0.31	0.46	0.61	0.77	0.92	1.08	1.23	1.38	1.54	2.15	2.76	3.69	4.92
90	0.17	0.35	0.52	0.69	0.86	1.04	1.21	1.38	1.56	1.73	2.42	3.11	4.15	5.53
100	0.19	0.38	0.58	0.77	0.96	1.15	1.34	1.54	1.73	1.92	2.69	3.46	4.61	6.14

ΔL = 12 el (ΔT)
e = 3.2 X 10^{-5} in./in./°F (Coefficient of Linear Expansion – Table II)
L = Length of Run in feet
ΔT = Temperature Change in °F

Example: How much will a 40-ft run of 2" CPVC pipe expand if the expected ambient temperature will range from 45°F to 85°F?
ΔL = 12 el (ΔT)
ΔL = 12 (.000032) x 40 x 40
ΔL = .61"

Table IV: Expansion Loop Length in inches

Nominal Pipe Size	Avg. O.D.	Length of Run in feet													
		5	10	15	20	25	30	35	40	45	50	70	90	120	160
		Length of Loop (inches) Temperature Change (ΔT) = 100°F - 30°F = 70°F													
1/2	0.625	6	8	10	11	13	14	15	16	17	18	21	24	27	32
3/4	0.875	7	9	11	13	15	16	18	19	20	21	25	28	32	38
1	1.125	8	11	13	15	17	18	20	21	23	24	28	32	37	43
1-1/4	1.375	8	12	14	17	19	20	22	24	25	26	31	35	41	47
1-1/2	1.625	9	13	16	18	20	22	24	26	27	29	34	38	44	51
2	2.125	10	15	18	21	23	25	27	29	31	33	39	44	51	58

Note: Table IV is based on 70°F temperature change. Values rounded.

$$l = \sqrt{\frac{3ED(\Delta L)}{2S}}$$

l = Length of Expansion Loop in inches
E = Modulus of Elasticity at 100°F (Table I)
D = Average OD of Pipe
ΔL = Change in Length of Pipe Due to Change in Temperature (Table III)
S = Working Stress at 100°F (Table I)

Example: How much expansion can be expected in a 200-ft run of 2" CPVC pipe? How long should the expansion loop be to compensate for the expansion (the expected temperature range will be from 40°F to 110°F)?

First Find:

ΔT = (Change in Temperature)
$\Delta T = T2 - T1$
$\Delta T = 110°F - 40°F$
$\Delta T = 70°F$

To Find

ΔL = (Amount of Expansion in inches from Table III)
$\Delta L = \Delta L$ of 160 ft with a ΔT of 70°F + ΔL of 40 ft. with a ΔT of 70°F
$\Delta L = 4.30" + 1.08"$
$\Delta L = 5.38"$

— OR —

$\Delta L = 12\ eL\ (\Delta T)$
$e = 3.2 \times 10^{-5}$ (from Table II)
L = Length of Run in Feet
ΔT = Change in Temperature in °F
$\Delta L = 12 \times 0.00032 \times 200 \times 70$
$\Delta L = 5.38"$

$$l = \sqrt{\frac{3ED(\Delta L)}{2S}}$$

l = Length of Expansion Loop in inches
E = Modulus of Elasticity at 110°F (Refer to Table I)
D = Average OD of Pipe
ΔL = Change in Length of Pipe Due to Change in Temperature
S = *Working Stress at 110°F (Refer to Table I)*

To find the length of the expansion loop or offset in inches:

$$l = \sqrt{\frac{3ED(\Delta L)}{2S}}$$

l = Length of Expansion Loop in inches
E = Modulus of Elasticity at Maximum Temperature from Table I
D = Average Outside Diameter of the Pipe from Table IV
S = Working Stress at Maximum Temperature from Table I)
ΔL = Change in Length of Pipe Due to Change in Temperature from Table III

$$l = \sqrt{\frac{3 \quad 346{,}000 \quad 2.125 \times 5.38}{2 \times 1345}}$$

$$l = \sqrt{4412}$$

$l = 66.4$

CPVC Piping System Guidelines for Commercial Hot & Cold Water Distribution Applications

EverTUFF® CPVC Systems provide highly sustainable, cost effective alternatives to metal piping in commercial multi-story applications for hot and cold water distribution. EverTUFF® CPVC pipe and fittings are available for most any size project using Copper Tube Size (CTS) CPVC in sizes 1/2" through 2" and in supplemental Schedule 40 and Schedule 80 CPVC Iron Pipe Size (IPS) for sizes 2-1/2" through 12".

EverTUFF® CPVC Systems meet applicable code requirements and are fully suitable for use in multi-story installations where adequate design and installation practices have been utilized. The following overview includes, but is not limited to, general considerations that *must* be addressed in all CPVC system designs and installations.

WARNING: Failure to follow proper industry established design and installation practices and requirements for CPVC systems may result in system failure, severe personal injury and/or property damage. The following are general guidelines for issues that must be addressed with use of CPVC in commercial water distribution systems. All design criteria applicable to thermoplastics should be reviewed and approved by a licensed engineering professional.

Product Capability & Ratings

EverTUFF® CPVC CTS piping is produced in Standard Dimensional Ratio (SDR) of 11, where the ratio of wall thickness to outside diameter of the pipe is a constant of 11. This produces the same pressure rating for all sizes.

Available Sizes:	1/2", 3/4", 1", 1-1/4", 1-1/2", 2"
Pressure Rating:	100 psi @ 180°F
Applicable Standard:	ASTM D 2846 for CPVC Copper Tube Size (CTS) Hot & Cold Water Distribution Systems
Potable Water Certification:	ANSI/NSF® Standard 61

EverTUFF® Industrial CPVC IPS piping produced in Schedule 40 or Schedule 80 dimensions can be used for larger pipe sizes. Pressure ratings will vary according to diameter and water temperature. The appropriate Schedule piping (40 or 80) must be selected according to application and system requirements.

Supplemental Available Sizes: 2-1/2", 3", 4", 6", 8", 10", 12"

Pressure Ratings:	According to pipe size and temperature; specified in ASTM F 441
Applicable Standard:	Pipe - ASTM F 441 for CPVC Schedule 40 & Schedule 80 Pipe Fittings – ASTM F 439 for CPVC Schedule 80 Fittings
Potable Water Certification:	ANSI/NSF® Standard 61

Piping Support & Spacing

Hanger and support spacing for horizontal runs of Spears® EverTUFF® CPVC piping varies according to pipe diameter and water temperature. Local code requirements generally affect minimum spacing for CPVC piping and must be verified. Additional support should be provided for valves, flanges, expansion joints or other sources of load concentration. Hangers and straps designed for CPVC should be used, but some hangers designed for steel pipe can be used if suitable. Use only smooth straps or hangers that do not place rough or sharp edges against the pipe. Do not anchor CPVC piping too tight to supports in order to allow movement caused by expansion and contraction, bind or restrict movement.

Vertical runs (risers) must be properly supported to prevent excessive loading on the lower fitting or other stress concentration areas. Maintain vertical piping in straight alignment with supports at each floor level, or at 10 feet (3.05 m) intervals, whichever is less. Hangers and clamps suitable for this purpose include riser clamps or double bolt type clamps that provide a floating system which allows pipe movement due to thermal expansion and contraction when installed. Clamps and hangers must not compress, distort, cut, abrade or exert compressive stresses on the pipe; the use of riser clamps that utilize compression to support the pipe weight are not recommended.

Wall Penetration

Where Spears® EverTUFF® CPVC pipe passes through metal studs, protection must be used to prevent abrasion and reduce noise. Plastic insulators, rubber grommets, pipe insulation or similar devices may be used for this purpose.

Where penetrations of fire barriers are required, Spears® EverTUFF® CPVC piping can be used with Fire–Stop penetration sealing systems approved for use with CPVC. Most codes accept penetration sealing systems or devices that are UL Listed or have passed the appropriate ASTM E 119 or E 84 tests. Before starting an installation, always consult the building codes and local authority having jurisdiction.

Thermal Expansion & Contraction

Expansion and contraction in CPVC thermoplastic systems differs significantly from that of metal systems and can result in major problems if not adequately considered. Spears® EverTUFF® CPVC piping will expand or contract about 1 inch per 50 feet of length with a 50-degree temperature change. This movement must be accommodated in system design or else a system can literally push or pull itself apart. Thermal expansion is a primary concern in hot water lines.

Expansion and contraction expectations must be calculated according to standard industry practices. For most installation and operating conditions, movement accommodation can be made at system changes of direction, through use of use of telescoping expansion joints, an offset or loop on a long straight runs. Telescoping expansion joint needs must be properly calculated and the telescoping units properly aligned and installed. While only one properly sized expansion loop is required in any straight run, two or more properly sized smaller expansion loops can be used to conserve space as required.

Hydraulic Design

Spears® EverTUFF® CPVC piping systems must be sized based on industry standard hydraulic calculations for factors such a friction loss and flow velocity. Surge protection must also be considered.

Friction loss through CPVC pipe is typically determined by the use of the Hazen-Williams equations with a C Factor (internal roughness) of 150. Friction loss and flow velocity tables are also available for both CTS CPVC and Schedule 40 or Schedule 80 IPS CPVC piping.

While hot and cold water CTS CPVC systems can operate with flow velocities of 8 feet per second. A maximum velocity of 5 feet per second is recommended for Schedule 40 or Schedule 80 IPS CPVC systems. System flow velocity should always be maintained close to 5 feet per second in mixed CTS/IPS CPVC systems. Hydraulic designs, and value engineered changes should always be reviewed by a licensed engineering professional.

System Connections

Proper system connections are critical to maintaining system integrity and reliability. It is essential that all installation personnel be thoroughly trained in joining methods.

Solvent Cement Joints are the primary method of making connections between CPVC components. Solvent cements specifically approved to ASTM F 493 for CPVC and for use with ASTM D 2846 systems should be used on CTS CPVC installations. ASTM Standards permit the use of "One-step" (primerless) cements; however, local codes must be checked since some require use of both a primer and cement in CPVC joints. Larger Schedule 40 or Schedule 80 IPS joints should be made using an ASTM F 493 approved CPVC cement and primer. Manufacturer's instructions for cement/primer application, initial set times and applicable cure time in accordance with pipe size and temperature must be followed. Proper sized cement applicators should always be utilized (i.e., no less than 1/2 the pipe diameter). On 6" and larger IPS pipe come-alongs or other mechanical helpers are recommended to assist in joint assembly.

Threaded Transitions to metal systems must be made with appropriate fittings designed for plastic-to-metal connections. Spears® offers a variety of transition fittings including metal threaded adapter and the superior Special Reinforced (SR) Female Plastic Thread fittings for the best transition joints.

The chemical compatibility of any thread sealant, pastes, or lubricants with CPVC must be verified. Spears® recommends the use of Spears® **Blue 75™** Thread Sealant that has been tested for compatibility. If TFE sealant tape is used, it must be selected and applied correctly, according to manufacturer's instructions.

Flanged Connection can be used when properly assembled; a full-faced 1/8" thick elastomer gasket must be used. Flange alignment and system support is critical to prevent adverse stress loads. Flange bolts must **NEVER** be used to draw a flanged system connection together. Flange bolts, nuts, and washers must be properly selected and incrementally tightened in sequence to torque according to flange manufacturer's specifications. Thermoplastic flanges are typically rated at 150 psi for water at 73°F and must be de-rated for systems operating at elevated temperatures (i.e., hot water lines).

Hot Water Heater & Boiler Connections

Connection of CPVC CTS systems to hot water heaters must be made in accordance with code requirements. Typically, 6" metal nipples are required for direct connection to tanks, but approved CPVC CTS piping can be used for connection to temperature/pressure relief valves.

Schedule 80 IPS CPVC Boiler Connections generally *should not* be made directly to the boiler. Most boilers do not have suitable temperature variation control. Connections must assure that the temperature-pressure does not exceed the capability of the CPVC material.

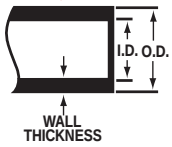
System Pressure Testing

Hydrostatic pressure testing should commence only after all set and cure times for solvent cemented joints have been satisfied. The system should be pressure tested in accordance with local code requirements following industry accepted practices for thermoplastic systems.

Under slab installations that contain joints must be pressure tested before pouring the slab. **NOTE:** IAPMO IS 2098, "Installation Standard for CPVC Solvent Cemented Hot and Cold Water Distribution Systems," requires a test at 150 psi for 2 hours.

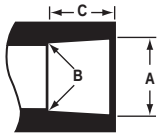
In freezing temperatures the system should be adequately purged of water after testing to avoid damage from freezing.

CPVC 41, SDR 11 PIPE DIMENSIONS (CTS) ASTM D 2846, D 2846M



Nominal Pipe Size In.	Mean Outside Diameter In.	O. D. Tolerance In.	Minimum Wall Thickness In.
1/2	0.625	± 0.003	0.068
3/4	0.875	± 0.003	0.080
1	1.125	± 0.003	0.102
1-1/4	1.375	± 0.003	0.125
1-1/2	1.625	± 0.004	0.148
2	2.125	± 0.004	0.193

CPVC 41, SDR 11 SOCKET DIMENSIONS (CTS) ASTM D 2846, D 2846M



Nominal Size In.	Diameter			Socket Length Minimum C
	Entrance A	Bottom B	Tolerance In.	
1/2	0.633	0.619	± 0.003	0.500
3/4	0.884	0.870	± 0.003	0.700
1	1.135	1.121	± 0.003	0.900
1-1/4	1.386	1.372	± 0.003	1.100
1-1/2	1.640	1.622	± 0.004	1.300
2	2.141	2.123	± 0.004	1.700

Injection Molded Dimension References:

G = (LAYING LENGTH) intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses; ± 1/32 inch.
H = Intersection of center lines to face of fitting; 90° elbows, tees, crosses; ± 1/32 inch.
J = Intersection of center lines to bottom of socket/thread; 45° elbows; ± 1/32 inch.
L = Overall length of fittings; ± 1/16 inch.
M = Outside diameter of socket/thread hub; ± 1/16 inch.
N = Socket bottom to socket bottom; couplings; ± 1/16 inch.
W = Height of cap; ± 1/16 inch.

COPPER TUBE SIZE (CTS) CPVC PIPE

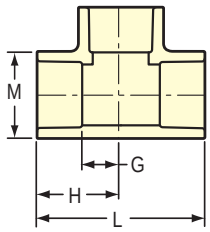
Nominal Pipe Size In.	AVG. O.D.	AVG. I.D.	MIN. Wall	MAX. W.P. P.S.I. *	LBS./FT.	Lgths./Carton
1/2	0.625	0.469	0.068	400	.090	50
3/4	0.875	0.695	0.080	400	.149	25
1	1.125	0.901	0.102	400	.240	15
1-1/4	1.375	1.105	0.125	400	.353	10
1-1/2	1.625	1.309	0.148	400	.489	6
2	2.125	1.716	0.193	400	.829	4

Standard Length - 10 Feet • All pipe is packed in boxes sold in carton quantities only.
Pipe has UL 94 V-O rating • * For water, non shock, at 73.4°F with solvent welded joints.



TEE

Socket x Socket x Socket

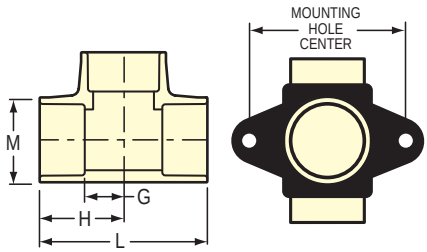


Part Number	Size	G	H	L	M	Approx. Wt. (Lbs.)
4101-005	1/2	13/32	15/16	1-27/32	27/32	.03
4101-007	3/4	17/32	1-1/4	2-1/2	1-3/32	.06
4101-010	1	21/32	1-9/16	3-5/32	1-3/8	.12
4101-012	1-1/4	25/32	1-7/8	3-25/32	1-11/16	.18
4101-015	1-1/2	29/32	2-7/32	4-15/32	1-15/16	.29
4101-020	2	1-5/32	2-7/8	5-25/32	2-9/16	.63

DROP EAR TEE

(Fitting With Bracket)

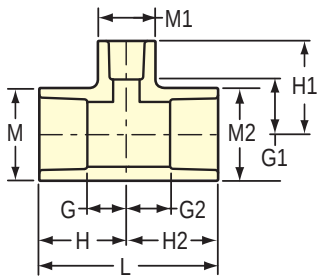
Socket x Socket x Socket



Part Number	Size	G	H	L	M	Mounting Hole Center	Approx. Wt. (Lbs.)
DE4101-005	1/2	13/32	15/16	1-7/8	27/32	1-3/4	.04

REDUCING TEE

Socket x Socket x Socket

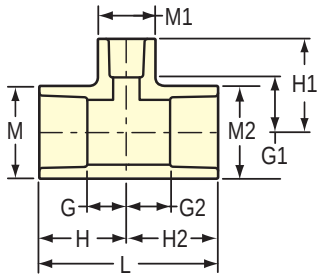


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4101-074	1/2x1/2x3/4	15/32	13/32	15/32	31/32	1-1/8	31/32	1-15/16	27/32	1-3/32	27/32	.04

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Progressive Products from Spears® Innovation and Technology

REDUCING TEE (continued)

Socket x Socket x Socket

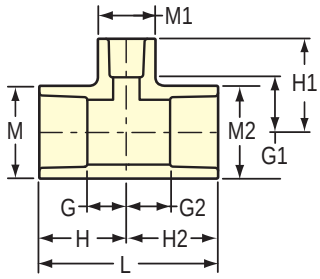


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4101-094	3/4x1/2x1/2	7/16	17/32	7/16	1-5/32	1-1/32	31/32	2-1/8	1-3/32	27/32	27/32	.05
4101-095	3/4x1/2x3/4	1/2	17/32	19/32	1-7/32	1-1/4	1-1/8	2-11/32	1-3/32	1-3/32	27/32	.06
4101-101	3/4x3/4x1/2	13/32	17/32	13/32	1-1/8	1-1/32	1-1/8	2-1/4	1-3/32	7/8	1-3/32	.05
4101-102[1]	3/4x3/4x1	1-1/8	11/16	1-13/16	1-27/32	1-19/32	1-13/16	3-21/32	1-11/32	1-11/32	1-11/32	.16
4101-120[1]	1x1/2x1/2	11/16	1-5/16	1-1/4	1-19/32	1-27/32	1-25/32	3-3/8	1-11/32	1-11/32	1-11/32	.20
4101-121[1]	1x1/2x3/4	11/16	1-1/8	1-1/4	1-19/32	1-27/32	1-25/32	3-3/8	1-11/32	1-11/32	1-11/32	.18
4101-122[1]	1x1/2x1	11/16	11/16	1-1/4	1-19/32	1-19/32	1-25/32	3-3/8	1-11/32	1-11/32	1-11/32	.15
4101-124[1]	1x3/4x1/2	11/16	1-5/16	1-1/16	1-19/32	1-27/32	1-25/32	3-3/8	1-11/32	1-11/32	1-11/32	.18
4101-125	1x3/4x3/4	17/32	11/16	17/32	1-15/32	1-13/32	1-1/4	2-23/32	1-11/32	1-3/32	1-3/32	.08
4101-126[1]	1x3/4x1	11/16	15/16	1-1/16	1-19/32	1-27/32	1-25/32	3-3/8	1-11/32	1-11/32	1-11/32	.13
4101-130	1x1x1/2	13/32	11/16	13/32	1-11/32	1-7/32	1-11/32	2-21/32	1-3/8	7/8	1-3/8	.08
4101-131	1x1x3/4	17/32	11/16	17/32	1-15/32	1-13/32	1-15/32	2-29/32	1-3/8	1-3/32	1-3/8	.09
4101-138[1]	1-1/4x1/2x1/2	13/16	1-11/16	1-21/32	1-29/32	2-7/32	2-3/16	4-3/32	1-21/32	1-21/32	1-21/32	.30
4101-139[1]	1-1/4x1/2x3/4	13/16	1-1/2	1-21/32	1-29/32	2-7/32	2-3/16	4-3/32	1-21/32	1-21/32	1-21/32	.30
4101-142[1]	1-1/4x1/2x1-1/4	13/16	27/32	1-21/32	1-29/32	1-15/16	2-3/16	4-3/32	1-21/32	1-21/32	1-21/32	.24
4101-146[1]	1-1/4x3/4x1/2	13/16	1-11/16	1-15/32	1-29/32	2-7/32	2-3/16	4-3/32	1-21/32	1-21/32	1-21/32	.30
4101-147[1]	1-1/4x3/4x3/4	13/16	1-1/2	1-15/32	1-29/32	2-7/32	2-3/16	4-3/32	1-21/32	1-21/32	1-21/32	.31
4101-148[1]	1-1/4x3/4x1	13/16	1-5/16	1-15/32	1-29/32	2-7/32	2-3/16	4-3/32	1-21/32	1-21/32	1-21/32	.29
4101-149[1]	1-1/4x3/4x1-1/4	25/32	25/32	1-7/16	1-29/32	1-29/32	2-3/16	4-3/32	1-21/32	1-21/32	1-21/32	.26
4101-156[1]	1-1/4x1x1/2	13/16	1-21/32	1-1/4	1-29/32	2-3/16	2-5/32	4-1/16	1-21/32	1-21/32	1-21/32	.30
4101-157[1]	1-1/4x1x3/4	13/16	1-1/2	1-9/32	1-29/32	2-7/32	2-3/16	4-3/32	1-21/32	1-21/32	1-21/32	.29
4101-158[1]	1-1/4x1x1	13/16	1-5/16	1-9/32	1-29/32	2-7/32	2-3/16	4-3/32	1-21/32	1-21/32	1-21/32	.27
4101-159[1]	1-1/4x1x1-1/4	13/16	27/32	1-9/32	1-29/32	1-15/16	2-3/16	4-3/32	1-21/32	1-21/32	1-21/32	.22
4101-166	1-1/4x1-1/4x1/2	11/32	27/32	13/32	1-17/32	1-11/32	1-17/32	3-9/16	1-21/32	7/8	1-21/32	.12
4101-167	1-1/4x1-1/4x3/4	17/32	13/16	17/32	1-21/32	1-17/32	1-21/32	3-5/16	1-21/32	1-1/8	1-21/32	.13
4101-168	1-1/4x1-1/4x1	11/16	13/16	11/16	1-25/32	1-3/4	1-25/32	3-19/32	1-21/32	1-3/8	1-21/32	.15
4101-169[1]	1-1/4x1-1/4x1-1/2	1-7/16	15/16	2-1/32	2-17/32	2-1/4	2-17/32	5-1/16	1-31/32	1-31/32	1-31/32	.41
4101-173[1]	1-1/2x1/2x1/2	15/16	2-1/32	2-1/32	2-1/4	2-9/16	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.49
4101-174[1]	1-1/2x1/2x3/4	15/16	1-27/32	2-1/32	2-1/4	2-9/16	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.49
4101-175[1]	1-1/2x1/2x1	11/16	1	1-13/16	2	1-29/32	2-11/32	4-11/32	1-31/32	1-3/8	1-31/32	.48

1 Outlet sized with bushing

REDUCING TEE (continued)

Socket x Socket x Socket



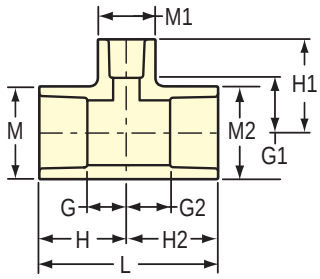
Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4101-176[1]	1-1/2x1/2x1-1/4	15/16	1-15/32	2-1/32	2-1/4	2-9/16	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.45
4101-177[1]	1-1/2x1/2x1-1/2	15/16	15/16	2-1/32	2-1/4	2-1/4	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.39
4101-182[1]	1-1/2x3/4x1/2	15/16	2-1/32	1-27/32	2-1/4	2-9/16	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.49
4101-184[1]	1-1/2x3/4x3/4	15/16	1-27/32	1-27/32	2-1/4	2-9/16	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.48
4101-185[1]	1-1/2x3/4x1	1-1/32	1-5/8	1-27/32	2-1/4	2-9/16	2-9/16	4-23/32	1-31/32	1-31/32	1-31/32	.48
4101-186[1]	1-1/2x3/4x1-1/4	3/4	1-7/16	1-5/16	2-9/16	2-9/16	2-1/4	4-13/16	1-31/32	1-31/32	1-31/32	.44
4101-188[1]	1-1/2x3/4x1-1/2	15/16	15/16	1-27/32	2-1/4	2-1/4	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.39
4101-193[1]	1-1/2x1x1/2	15/16	2-1/32	1-21/32	2-1/4	2-9/16	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.48
4101-194[1]	1-1/2x1x3/4	15/16	1-27/32	1-21/32	2-1/4	2-9/16	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.48
4101-195[1]	1-1/2x1x1	15/16	1-21/32	1-21/32	2-1/4	2-9/16	2-9/16	4-27/32	1-31/32	1-31/32	1-31/32	.48
4101-196[1]	1-1/2x1x1-1/4	15/16	1-15/32	1-11/16	2-1/4	2-9/16	2-19/32	4-27/32	1-31/32	1-31/32	1-31/32	.44
4101-197[1]	1-1/2x1x1-1/2	15/16	15/16	1-21/32	2-1/4	2-1/4	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.38
4101-199[1]	1-1/2x1-1/4x1/2	1-3/8	2-1/32	2-1/32	2-1/2	2-9/16	2-1/4	4-23/32	1-31/32	1-31/32	1-31/32	.45
4101-201[1]	1-1/2x1-1/4x3/4	15/16	1-27/32	1-15/32	2-1/4	2-9/16	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.44
4101-202[1]	1-1/2x1-1/4x1	15/16	1-21/32	1-15/32	2-1/4	2-9/16	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.44
4101-203[1]	1-1/2x1-1/4x1-1/4	15/16	1-15/32	1-15/32	2-1/4	2-9/16	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.41
4101-204[1]	1-1/2x1-1/4x1-1/2	15/16	15/16	1-15/32	2-1/4	2-1/4	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.35
4101-209	1-1/2x1-1/2x1/2	13/32	31/32	13/32	1-23/32	1-1/2	1-23/32	3-15/32	1-31/32	7/8	1-31/32	.18
4101-210[1]	1-1/2x1-1/2x3/4	11/16	1-7/16	2	2	2-5/32	2	4	1-31/32	1-3/8	1-31/32	.26
4101-211	1-1/2x1-1/2x1	11/16	31/32	11/16	2	1-29/32	1-31/32	3-31/32	1-15/16	1-3/8	1-15/16	.22
4101-212[1]	1-1/2x1-1/2x1-1/4	15/16	1-7/16	2-7/32	2-1/4	2-17/32	2-7/32	4-15/32	1-31/32	1-31/32	1-31/32	.35
4101-213[1]	1-1/2x1-1/2x2	1-29/32	1-3/16	1-29/32	3-7/32	2-7/8	3-19/32	6-13/16	2-9/16	2-9/16	2-9/16	1.01
4101-216[1]	2x1/2x1/2	1-3/16	2-11/16	2-5/8	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.02
4101-217[1]	2x1/2x3/4	1-3/16	2-1/2	2-5/8	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.03
4101-218[1]	2x1/2x1	1-3/16	2-5/16	2-5/8	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.03
4101-219[1]	2x1/2x1-1/4	1-3/16	2-1/8	2-5/8	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.02
4101-220[1]	2x1/2x1-1/2	1-3/16	1-29/32	2-5/8	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.00
4101-221[1]	2x1/2x2	1-3/16	1-5/32	2-5/8	2-29/32	2-7/8	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	.82
4101-222[1]	2x3/4x1/2	1-3/16	2-11/16	2-11/16	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.03
4101-223[1]	2x3/4x3/4	1-3/16	2-1/2	2-7/16	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.04

1 Outlet sized with bushing

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Progressive Products from Spears® Innovation and Technology

REDUCING TEE (continued)

Socket x Socket x Socket

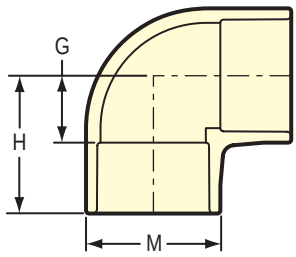


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4101-224[1]	2x3/4x1	1-3/16	2-5/16	2-7/16	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.04
4101-225[1]	2x3/4x1-1/4	1-5/32	2-1/16	2-7/16	2-7/8	3-5/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.03
4101-226[1]	2x3/4x1-1/2	1-3/16	1-29/32	2-7/16	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.01
4101-227[1]	2x3/4x2	1-3/16	1-5/32	2-7/16	2-29/32	2-7/8	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	.83
4101-228[1]	2x1x1/2	1-3/16	2-11/16	2-1/4	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.03
4101-229	2x1x3/4	1-23/32	2-1/2	2-1/4	2-7/8	3-3/16	3-7/32	6-3/32	2-9/16	2-9/16	2-9/16	1.04
4101-230[1]	2x1x1	1-3/16	2-5/16	2-1/4	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.05
4101-231[1]	2x1x1-1/4	1-3/16	2-1/8	2-1/4	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.04
4101-232[1]	2x1x1-1/2	1-3/16	1-29/32	2-1/4	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.02
4101-233[1]	2x1x2	1-3/16	1-5/32	2-1/4	2-29/32	2-7/8	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	.83
4101-234[1]	2x1-1/4x1/2	1-3/16	2-11/16	2-1/16	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.02
4101-235[1]	2x1-1/4x3/4	1-3/16	2-1/2	2-1/16	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.03
4101-236[1]	2x1-1/4x1	1-3/16	2-5/16	2-1/16	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.04
4101-237[1]	2x1-1/2x1/2	1-3/16	2-11/16	1-27/32	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.00
4101-238[1]	2x1-1/2x3/4	1-3/16	2-1/2	1-27/32	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.01
4101-239[1]	2x1-1/2x1	1-3/16	2-5/16	1-27/32	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.02
4101-240[1]	2x1-1/2x1-1/4	1-3/16	2-1/8	1-27/32	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.00
4101-241[1]	2x1-1/2x1-1/2	1-5/32	1-7/8	1-7/8	2-7/8	3-3/16	3-3/16	6-1/16	2-9/16	2-9/16	2-9/16	1.01
4101-242[1]	2x1-1/4x1-1/4	1-3/16	2-1/8	2-1/16	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.02
4101-243[1]	2x1-1/4x1-1/2	1-3/16	1-29/32	2-1/16	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.00
4101-244[1]	2x1-1/4x2	1-5/32	1-1/2	2-3/32	2-7/8	3-7/32	3-3/16	6-1/16	2-9/16	2-9/16	2-9/16	.82
4101-247	2x2x1/2	13/32	1-9/32	13/32	2-1/8	1-25/32	2-1/8	4-9/32	2-9/16	7/8	2-9/16	.37
4101-248	2x2x3/4	17/32	1-1/4	17/32	2-1/4	2	2-1/4	4-17/32	2-9/16	1-1/8	2-9/16	.40
4101-249	2x2x1	11/16	1-9/32	11/16	2-13/32	2-3/16	2-13/32	4-25/32	2-17/32	1-3/8	2-17/32	.43
4101-250[1]	2x2x1-1/4	1-5/32	2-3/8	1-5/32	2-7/8	3-7/32	2-7/8	5-25/32	2-9/16	2-9/16	2-9/16	.90
4101-251	2x2x1-1/2	31/32	1-1/4	31/32	2-11/16	2-9/16	2-11/16	5-3/8	2-17/32	1-31/32	2-17/32	.52
4101-257[1]	2x1-1/2x2	1-3/16	1-5/32	1-27/32	2-29/32	2-7/8	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	.80

1 Outlet sized with bushing

90° ELBOW

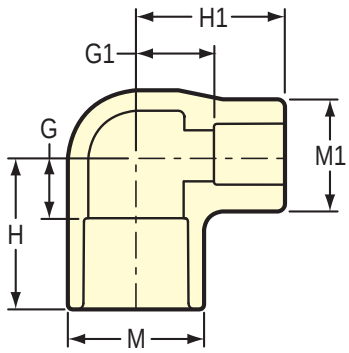
Socket x Socket



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
4106-005	1/2	13/32	15/16	27/32	.02
4106-007	3/4	17/32	1-1/4	1-1/8	.05
4106-010	1	21/32	1-9/16	1-3/8	.08
4106-012	1-1/4	3/4	1-7/8	1-11/16	.13
4106-015	1-1/2	29/32	2-7/32	2	.22
4106-020	2	1-5/32	2-7/8	2-19/32	.49

REDUCING 90° ELBOW

Socket x Socket



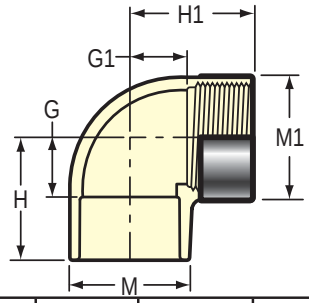
Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
4106-101	3/4x1/2	3/8	1/2	1-3/32	1-1/32	1-3/32	27/32	.04
4106-131[1]	1x3/4	21/32	1	1-9/16	1-3/8	1-3/8	1-3/8	.10
4106-167[1]	1-1/4x3/4	13/16	1-1/2	1-29/32	2-7/32	1-21/32	1-21/32	.20
4106-168[1]	1-1/4x1	13/16	1-5/16	1-29/32	2-7/32	1-21/32	1-21/32	.18
4106-209[1]	1-1/2x1/2	15/16	2-1/32	2-1/4	2-17/32	1-31/32	1-31/32	.32
4106-210[1]	1-1/2x3/4	15/16	1-27/32	2-1/4	2-9/16	1-31/32	1-31/32	.32
4106-211[1]	1-1/2x1	15/16	1-21/32	2-1/4	2-19/32	1-31/32	1-31/32	.31
4106-212[1]	1-1/2x1-1/4	15/16	1-13/32	2-1/4	2-17/32	1-31/32	1-31/32	.28
4106-247[1]	2x1/2	1-3/16	2-11/16	2-29/32	3-3/16	2-9/16	2-9/16	.67
4106-248[1]	2x3/4	1-3/16	2-7/16	2-29/32	3-5/32	2-9/16	2-9/16	.68
4106-249[1]	2x1	1-3/16	2-9/32	2-29/32	3-3/16	2-9/16	2-9/16	.68
4106-250[1]	2x1-1/4	1-3/16	2-1/16	2-29/32	3-5/32	2-9/16	2-9/16	.67
4106-251[1]	2x1-1/2	1-3/16	1-29/32	2-29/32	3-7/32	2-9/16	2-9/16	.65

1 Outlet sized with bushing

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SPECIAL REINFORCED 90° ELBOW – LEAD FREE

Socket x SR Fipt

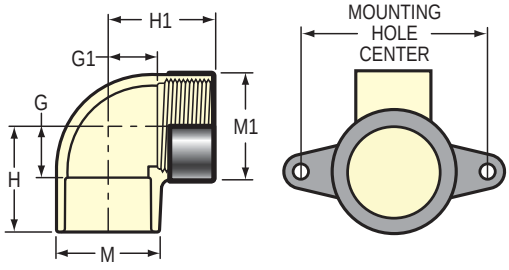


Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
4107-005SR	1/2	13/32	13/32	15/16	1-5/32	27/32	1-7/32	.06

ZINC DROP EAR SPECIAL REINFORCED 90° ELBOW – LEAD FREE

(One Piece Unit)

Socket x SR Fipt – Zinc Collar

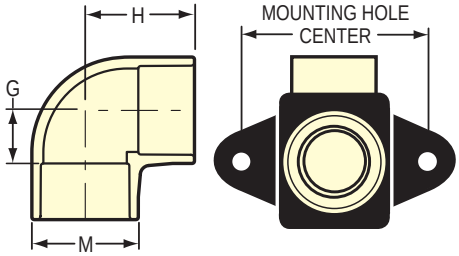


Part Number	Size	G	G1	H	H1	M	M1	Mounting Hole Center	Approx. Wt. (Lbs.)
DEZ4107-005SR	1/2	1/4	3/8	25/32	1-5/32	27/32	1-7/32	2-1/16	.15

DROP EAR 90° ELBOW

(Fitting With Bracket)

Socket x Socket

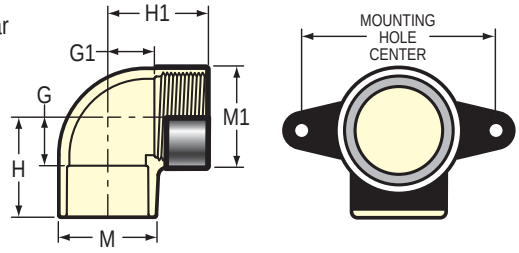


Part Number	Size	G	H	M	Mounting Hole Center	Approx Wt. (Lbs.
DE4106-005	1/2	1/4	25/32	27/32	1-3/4	.03

DROP EAR SPECIAL
REINFORCED 90° ELBOW – LEAD FREE

(Fitting With Bracket)

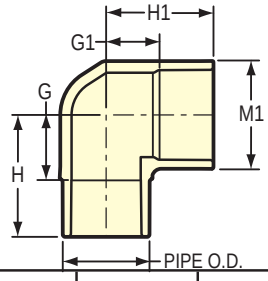
Socket x SR Fipt – Stainless Steel Collar



Part Number	Size	G	G1	H	H1	M	M1	Mounting Hole Center	Approx Wt. (Lbs.)
DE4107-005SR	1/2	13/32	15/32	15/16	1-5/32	27/32	1-7/32	2-1/32	.07

90° STREET ELBOW

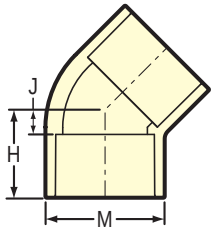
Spigot x Socket



Part Number	Size	G	G1	H	H1	M1	Pipe O.D.	Approx. Wt. (Lbs.)
4109-005	1/2	17/32	3/8	1-1/16	7/8	7/8	5/8	.02
4109-007	3/4	19/32	17/32	1-5/16	1-1/4	1-1/32	7/8	.05
4109-010	1	25/32	21/32	1-13/16	1-9/16	1-11/32	1-1/8	.09

45° ELBOW

Socket x Socket

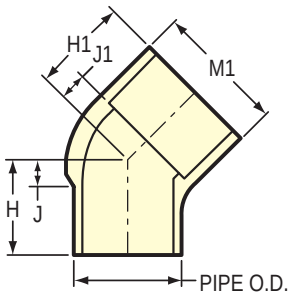


Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
4117-005	1/2	23/32	7/32	27/32	.02
4117-007	3/4	31/32	7/32	1-1/8	.04
4117-010	1	1-7/32	9/32	1-3/8	.06
4117-012	1-1/4	1-15/32	11/32	1-11/16	.11
4117-015	1-1/2	1-3/4	7/16	1-31/32	.18
4117-020	2	2-1/4	17/32	2-9/16	.37

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45° STREET ELBOW

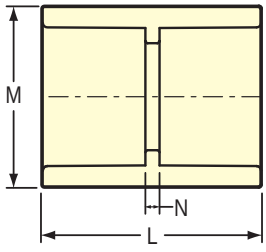
Spigot x Socket



Part Number	Size	H	H1	J	J1	M1	Pipe O.D.	Approx. Wt. (Lbs.)
4127-005	1/2	3/4	23/32	7/32	7/32	27/32	5/8	.02
4127-007	3/4	1	1	9/32	9/32	1-3/32	7/8	.04
4127-010	1	1-5/16	1-11/32	3/8	7/16	1-3/8	1-1/8	.06

COUPLING

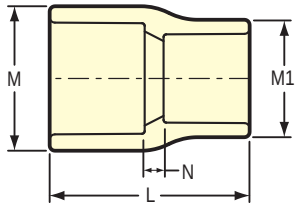
Socket x Socket



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
4129-005	1/2	1-5/32	27/32	1/8	.02
4129-007	3/4	1-9/16	1-1/16	1/8	.03
4129-010	1	1-15/16	1-3/8	1/8	.04
4129-012	1-1/4	2-3/8	1-21/32	3/32	.08
4129-015	1-1/2	2-3/4	1-31/32	1/8	.13
4129-020	2	3-9/16	2-9/16	1/8	.29

REDUCER COUPLING

Socket x Socket

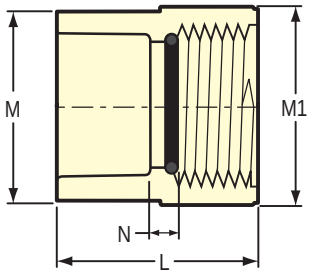


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4129-101	3/4x1/2	1-11/32	1-3/32	27/32	1/8	.02
4129-130[1]	1x1/2	2-7/32	1-11/32	1-11/32	25/32	.09
4129-131	1x3/4	1-3/4	1-11/32	1-3/32	1/8	.04
4129-166[1]	1-1/4x1/2	2-5/8	1-21/32	1-21/32	1	.14
4129-167[1]	1-1/4x3/4	2-5/8	1-21/32	1-21/32	13/16	.15
4129-168[1]	1-1/4x1	2-5/8	1-21/32	1-21/32	5/8	.13
4129-209[1]	1-1/2x1/2	3-1/16	1-31/32	1-31/32	1-7/32	.24
4129-210[1]	1-1/2x3/4	3-1/16	1-31/32	1-31/32	1-1/32	.23
4129-211[1]	1-1/2x1	3-1/16	1-31/32	1-31/32	27/32	.23
4129-212[1]	1-1/2x1-1/4	3-1/16	1-31/32	1-31/32	21/32	.19
4129-247[1]	2x1/2	3-27/32	2-9/16	2-9/16	1-19/32	.49
4129-248[1]	2x3/4	3-27/32	2-9/16	2-9/16	1-13/32	.50
4129-249[1]	2x1	3-27/32	2-9/16	2-9/16	1-7/32	.50
4129-250[1]	2x1-1/4	3-27/32	2-9/16	2-9/16	1-1/32	.49
4129-251[1]	2x1-1/2	3-27/32	2-9/16	2-9/16	13/16	.47

1 Outlet sized with bushing

FEMALE ADAPTER with GASKET

Socket x NPSC

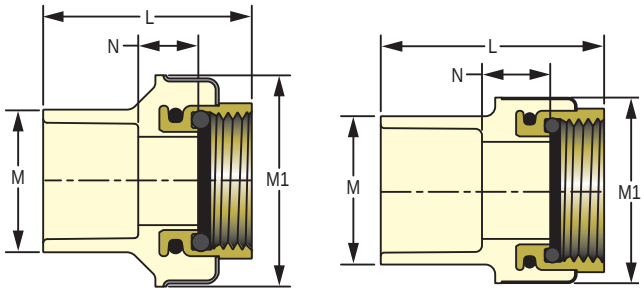


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4135-005OR	1/2	1-11/32	27/32	1-3/16	7/32	.04
4135-007OR	3/4	1-9/16	1-3/32	1-3/8	7/32	.05
4135-010OR	1	1-29/32	1-11/32	1-11/16	3/8	.09

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GASKET SEALED BRASS FEMALE ADAPTER – LEAD FREE

Socket x Gasket FIPT – Use NO Thread Sealant

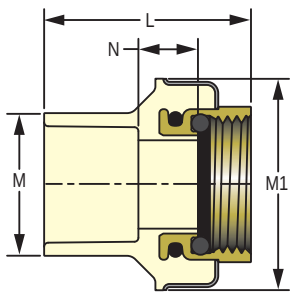


STYLE 1 STYLE 2

Part Number	Size	L	M	M1	N	Style	Approx. Wt. (Lbs.)
4135-005BRG	1/2	1-1/2	27/32	1-7/16	9/16	1	.12
4135-007BRG	3/4	1-9/16	1-3/32	1-5/8	15/32	1	.13
4135-010BRG	1	2-1/32	1-11/32	1-23/32	5/8	2	.21
4135-012BRG	1-1/4	2-7/32	1-21/32	2-1/16	19/32	2	.30
4135-015BRG	1-1/2	2-7/16	1-15/16	2-7/16	5/8	2	.41
4135-020BRG	2	2-27/32	2-17/32	3	19/32	2	.54

GASKET SEALED BRASS FEMALE ADAPTER – LEAD FREE

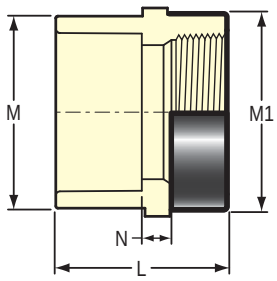
Socket x Gasket FIPT – Use NO Thread Sealant



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4135-101BRG	3/4 x 1/2	1-9/16	1-3/32	1-7/16	7/16	.12
4135-130BRG	1 x 1/2	1-3/4	1-11/32	1-7/16	13/32	.13

SPECIAL REINFORCED FEMALE ADAPTER – LEAD FREE

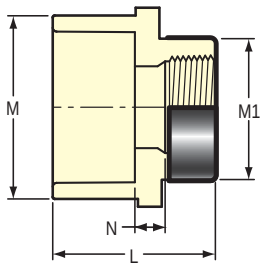
Socket x SR Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4135-005SR	1/2	1-3/8	27/32	1-7/32	3/32	.05
4135-007SR	3/4	1-19/32	1-3/32	1-3/8	1/8	.06
4135-010SR	1	1-15/16	1-3/8	1-23/32	1/8	.10

SPECIAL REINFORCED REDUCING FEMALE ADAPTER – LEAD FREE

Socket x SR Fipt

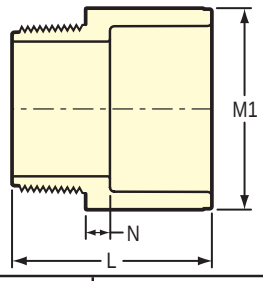


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4135-131SR	1x3/4	1-27/32	1-13/32	1-3/8	3/16	.08

MALE ADAPTER

Mipt x Socket

For Cold Water Service Only

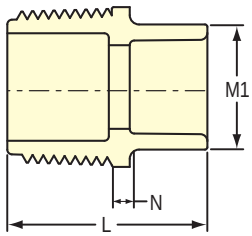


Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4136-005	1/2	1-9/32	27/32	3/16	.02
4136-007	3/4	1-17/32	1-3/32	1/8	.04
4136-010	1	1-7/8	1-11/32	7/32	.05
4136-012	1-1/4	2-9/32	1-21/32	5/16	.09
4136-015	1-1/2	2-15/32	1-31/32	5/16	.13
4136-020	2	2-31/32	2-17/32	3/8	.25

REDUCING MALE ADAPTER

Mipt x Socket

For Cold Water Service Only

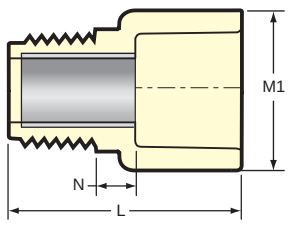


Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4136-074	1/2x3/4	1-17/32	1-3/32	5/32	.03
4136-101	3/4x1/2	1-11/32	27/32	1/8	.02

REINFORCED MALE ADAPTER – LEAD FREE

(Internal Stainless Steel Reinforced)

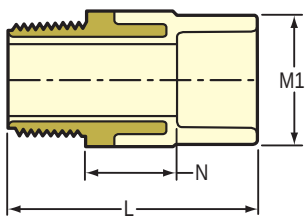
R Mipt x Socket



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4136-005R	1/2	1-23/32	27/32	17/32	.04
4136-007R	3/4	1-15/16	1-3/32	9/16	.06
4136-010R	1	2-3/8	1-11/32	11/16	.11

TRANSITION MALE ADAPTER – LEAD FREE

Brass Mipt x Socket

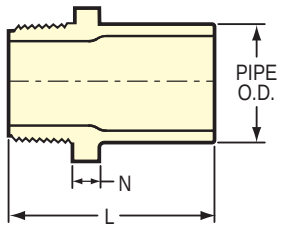


Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4136-005BR	1/2	2	27/32	25/32	.14
4136-007BR	3/4	2-1/4	1-3/16	27/32	.21
4136-010BR	1	2-11/16	1-3/8	29/32	.38
4136-012BR	1-1/4	2-31/32	1-21/32	31/32	.61
4136-015BR	1-1/2	3-3/16	1-15/16	1-1/32	.74
4136-020BR	2	3-21/32	2-17/32	31/32	.97

MALE ADAPTER

Mipt x Spigot

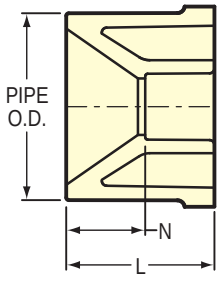
For Cold Water Service Only



Part Number	Size	L	N	Pipe O.D.	Approx. Wt. (Lbs.)
4161-005	1/2	1-5/16	3/16	5/8	.02

REDUCER BUSHING

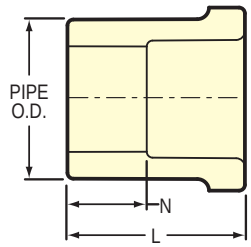
Spigot x Socket



Part Number	Size	L	N	Pipe O.D.	Approx. Wt. (Lbs.)
4137-101	3/4x1/2	27/32	1/8	7/8	.02
4137-130	1x1/2	1-1/8	5/8	1-1/8	.05
4137-131	1x3/4	1-1/16	7/16	1-1/8	.02
4137-166	1-1/4x1/2	1-13/32	7/8	1-3/8	.06
4137-167	1-1/4x3/4	1-3/8	21/32	1-3/8	.06
4137-168	1-1/4x1	1-5/16	3/8	1-3/8	.04
4137-209	1-1/2x1/2	1-21/32	1-1/8	1-5/8	.10
4137-210	1-1/2x3/4	1-5/8	29/32	1-5/8	.10
4137-211	1-1/2x1	1-19/32	21/32	1-5/8	.09
4137-212	1-1/2x1-1/4	1-19/32	7/16	1-5/8	.06
4137-247	2x1/2	2	1-15/32	2-1/8	.20
4137-248	2x3/4	2	1-9/32	2-1/8	.21
4137-249	2x1	2	1-3/32	2-1/8	.21
4137-250	2x1-1/4	1-31/32	7/8	2-1/8	.21
4137-251	2x1-1/2	2-1/32	23/32	2-1/8	.19

TRANSITION BUSHING

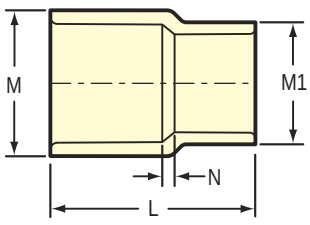
IPS Spigot x CTS Socket



Part Number	Size	L	N	Pipe O.D.	Approx. Wt. (Lbs.)
4140-005	1/2	15/16	13/32	27/32	.02
4140-007	3/4	1-1/8	1/2	1-1/16	.02
4140-010	1	1-3/8	15/32	1-5/16	.04
4140-012	1-1/4	1-17/32	3/8	1-21/32	.07
4140-015	1-1/2	1-21/32	5/16	1-29/32	.08
4140-020	2	1-27/32	1/8	2-3/8	.10

TRANSITION COUPLING

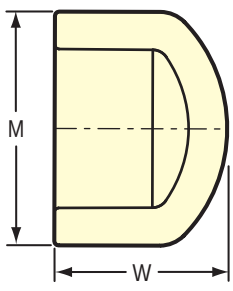
IPS Socket x CTS Socket



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4141-007	3/4	1-27/32	1-5/16	1-3/32	1/8	.04
4141-010	1	2-5/32	1-19/32	1-3/8	1/8	.07

CAP

Socket

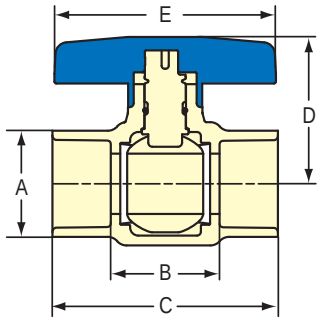


Part Number	Size	M	W	Approx. Wt. (Lbs.)
4147-005	1/2	27/32	25/32	.01
4147-007	3/4	1-1/16	1-3/32	.02
4147-010	1	1-3/8	1-9/32	.04
4147-012	1-1/4	1-21/32	1-19/32	.06
4147-015	1-1/2	1-31/32	1-29/32	.10
4147-020	2	2-9/16	2-13/32	.21

CTS BALL VALVES

w/EPDM O-ring Seals
Socket x Socket

100 psi Maximum
Internal Pressure @ 180°F

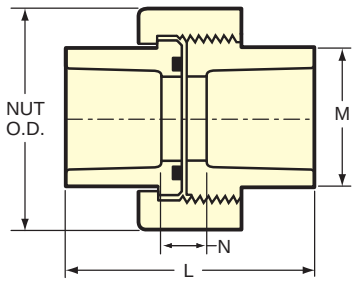


Part Number	Size	A	B	C	D	E	Approx. Wt. (Lbs.)	Cv Values
1922-005	1/2	1-7/32	1-1/16	2-3/32	1-11/32	2	.09	37
1922-007	3/4	1-9/16	1-11/32	2-25/32	1-3/4	2-23/32	.16	84
1922-010	1	1-7/8	1-9/16	3-3/8	2-3/8	3-1/2	.27	151
1922-012	1-1/4	2-13/32	1-15/16	4-3/16	2-25/32	3-3/4	.47	229
1922-015	1-1/2	2-27/32	2-3/8	5-1/32	3-5/32	4-9/32	1.05	330
1922-020	2	3-17/32	2-3/4	6-3/16	3-27/32	5	1.38	598

CTS UNION

w/EPDM O-ring Seals
Socket x Socket

Pressure Rating
100 psi @ 180°F



Part Number	Size	L	M	N	NUT O.D.	Approx. Wt. (Lbs.)
4197-005	1/2	2-3/16	1-1/32	1-5/32	1-25/32	.13
4197-007	3/4	1-3/4	1-3/32	5/16	1-23/32	.08
4197-010	1	2-13/32	1-17/32	9/16	2-1/2	.27

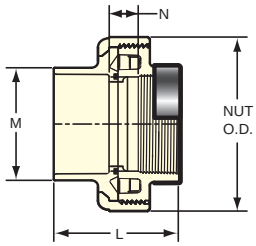
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CTS UNION

w/EPDM O-ring Seals

Socket x SR

Pressure Rating
100 psi @ 180°F



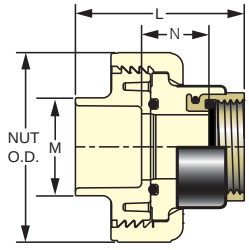
Part Number	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
4199-005SR	1/2	1-1/2	27/32	5/16	1-7/8	.14
4199-007SR	3/4	1-13/16	1-3/32	3/8	2-3/8	.25
4199-010SR	1	2-5/8	1-3/8	7/16	2-5/8	.31

GASKET SEALED BRASS ADAPTER UNION – LEAD FREE

w/EPDM O-ring Seals

Socket x Gasket FIPT With Elastomer Seal

Pressure Rating
100 psi @ 180°F



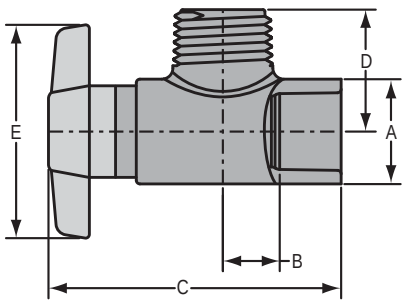
Part Number	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
4199-005BRG	1/2	1-5/8	2-1/8	3/4	2-1/8	.23
4199-007BRG	3/4	1-7/8	2-5/16	3/4	2-5/16	.25
4199-010BRG	1	2-3/8	1-3/8	15/16	2-5/8	.27

1/4 -TURN ANGLE SUPPLY STOP

w/EPDM O-ring Seals

Socket x NPT

Pressure Rating
100 psi @ 180°F

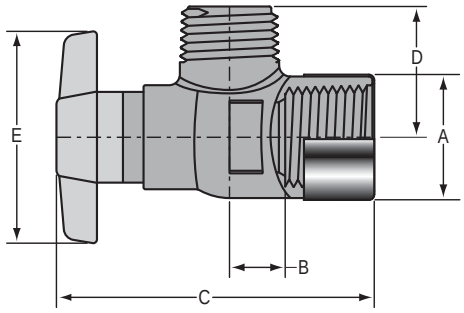


Part Number	Size	A	B	C	D	E	Approx. Wt. (Lbs.)
7722-005	1/2	27/32	7/16	2-13/32	1	1-3/4	.06

1/4 -TURN ANGLE SUPPLY STOP

w/EPDM O-ring Seals
SR Fipt x NPT

Pressure Rating
100 psi @ 180°F

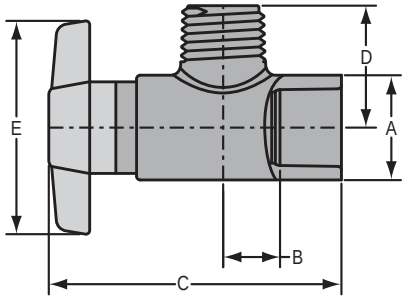


Part Number	Size	A	B	C	D	E	Approx. Wt. (Lbs.)
7721-005SR	1/2	1	15/32	2-21/32	1	1-3/4	.10

1/4 -TURN ANGLE SUPPLY STOP

w/EPDM O-ring Seals
Socket x 3/8" O.D. Comp. For Flex Tube Only

Pressure Rating
100 psi @ 180°F

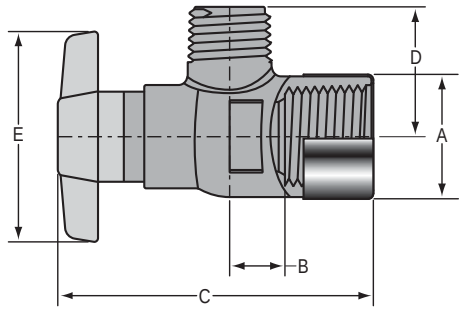


Part Number	Size	A	B	C	D	E	Approx. Wt. (Lbs.)
7722-073	1/2 x 3/8	7/8	7/16	2-3/8	7/8	1-3/4	.05

1/4 -TURN ANGLE SUPPLY STOP

w/EPDM O-ring Seals
SR Fipt x 3/8" O.D. Comp. For Flex Tube Only

Pressure Rating
100 psi @ 180°F



Part Number	Size	A	B	C	D	E	Approx. Wt. (Lbs.)
7721-073SR	1/2 x 3/8	1-1/32	15/32	2-5/8	31/32	1-3/4	.09

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For Ultra-pure Water Systems

MADE IN THE U.S.A. WITH PRIDE

TECHNICAL INFORMATION
WEIGHTS & DIMENSIONS



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Low-extractable piping for ultra-pure water systems

Spears® low-extractable piping systems provide a cost-effective alternative to other piping materials typically used for ultra-pure water applications in the semiconductor, electronics, biotechnology and other industries. Lower material costs combined with fast, reliable installation greatly reduce installation costs – resulting in significant savings without jeopardizing water quality.

In addition to significant cost savings, these piping systems offer several other advantages for ultra-pure water applications. These include: non-contaminating material with extremely low-extractable contaminants (particularly Total Oxidizable Carbon and trace metals), ultra-smooth interior walls, strong Schedule 80 dimensions, specialty one-step solvent-cement joining system that cures fast, and unique translucency for visual inspection of joint integrity.

Spears® low-extractable Piping Systems offer unique advantages for many ultra-pure water applications

- Complete line of pipe, fittings and valves IPS Sizes 1/2" – 6" diameters
- Strong Schedule 80 dimensions for pressure service
- Advanced low-extractable material significantly reduces leachable contamination compared to conventional PVC and other piping materials.
- Exceptionally smooth interior walls reduce particle contaminants
- Fast, reliable installation with simple, inexpensive joining methods
- Proprietary one-step fast setting joining method reduces TOC contamination and rinses up quickly
- Good chemical/corrosion resistance, high-impact strength, low thermal conductivity
- Bagged, sealed and boxed on-line for use in high-purity environments
- High Quality
- Low Maintenance
- Cost Effective

Low-Extractable Piping

Materials

Spears® low-extractable piping is produced from an innovative PVC compound that has been specifically formulated to reduce leachable contamination when exposed to ultra-pure water environments. Minor ingredients necessary for processing have been scrupulously selected to address their potential for contamination, and are then carefully blended in precise ratios. This results in a much cleaner material than conventional PVC compounds, and compares favorably to alternate materials typically used for UPW piping applications. This has been validated with extensive static and dynamic leach studies during exposure to 18.2 megohm ultra-pure water conducted by a reputable third party. Refer to testing data on the following pages for comparative evaluation of leachable contaminants obtained from common UPW piping materials.

Spears® low-extractable material meets the toxicological requirements of NSF International Standard 61 as being safe for use in potable water applications, and also complies with the provisions of Title 21 of the United States FDA Code of Federal Regulations as being safe for use in food contact applications.

Processing

Processing conditions for converting this material into pipe form are as critical as the selection of the material itself to ensure that the physical properties of the finished product are optimized. Correct processing techniques ensure proper dispersion and fusion of the compound, resulting in a homogenous melt with uniform properties. Great care is also taken during this process using proprietary techniques to address surface finish characteristics. Optimizing processing conditions and providing smooth internal surfaces greatly reduce the potential for extractable and particle contaminant.

Spears® low-extractable pipe is cut square, purged to remove shavings, sealed in polybags and boxed on-line at time of manufacture to minimize contamination. Contact Spears® for availability of additional cleaning options.

Joining

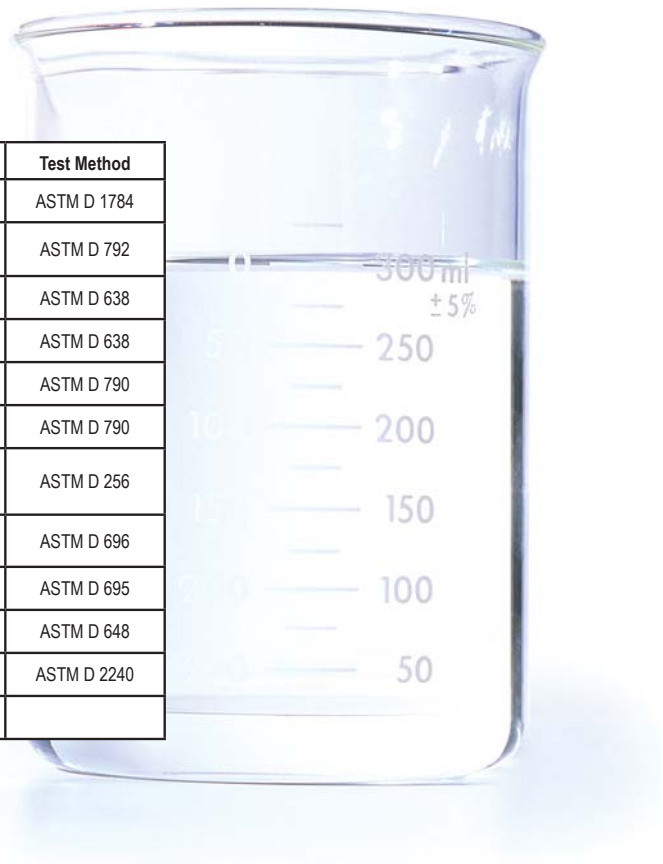
The Spears® low-extractable system utilizes a one-step solvent-cementing system specifically formulated for use with this product. Unlike conventional PVC solvent cements, this system contains fewer contaminants and cures quickly, reducing the potential for TOC contamination. Joining is accomplished quickly and efficiently utilizing inexpensive tools, thereby greatly reducing labor and installation costs.

Physical Properties

Although the extractable contaminants of this Spears® piping are much lower than those of conventional PVC piping, the physical properties are very similar. As a result, these products exhibit the well-known physical characteristics and other benefits of conventional PVC piping, such as good chemical and corrosion resistance, low thermal conductivity, high strength-to-weight ratio, good impact resistance, and ease of installation.

Physical Properties

Property	Value	Test Method
Cell Classification	12343	ASTM D 1784
Specific Gravity	1.327 g/cu. Cm @ 73°F	ASTM D 792
Tensile Strength @ yield	6720 psi	ASTM D 638
Tensile Modulus of Elasticity	384,200 psi	ASTM D 638
Flexural Strength @ yield	11,440 psi	ASTM D 790
Flexural Modulus of Elasticity	378,000 psi	ASTM D 790
Izod Impact (avg of 2 complete breaks) (avg of 3 partial & 2 complete breaks)	1.3 ft-lbs / inch 10.9 ft-lbs / inch	ASTM D 256
Coefficient of Linear Thermal Expansion	3.89 x 10^{-5} in / in °F	ASTM D 696
Compressive Strength	8732	ASTM D 695
Heat Distortion Temperature	152°F	ASTM D 648
Hardness, Shore D	82.2 ± 3	ASTM D 2240
Maximum Temp Use	140°F	



Testing

Spears® low-extractable piping has been subjected to extensive low-level defection testing during exposure to UPW by a reputable independent laboratory. Tests under both static and on-line dynamic (flowing) conditions analyze leachable micro contamination (TOC, anions, cations and trace metals) as well as resistivity and particles.

Static Leach Analysis

Detailed extractable analysis is conducted on piping samples after seven-day static leach utilizing 18.2 megohm ultra-pure water at ambient temperature. Static leach of large pipe samples (120-square-inch wet surface area) is representative of a piping system "off-line" for an extended period of time. Under these conditions the effects of UPW can be extremely aggressive, severely affecting the amount of leachable contaminants present within the piping material.

	Pipe Material						
Element	DL (Detection Limit) ppb	Spears®	High Purity PVDF	High Purity PP	Brand X Clean PVC	Conv. PVC	CPVC
TOC	5	59	90	94	1176	•	50
Fluoride	2	•	77	•	•	•	•
Chloride	0.25	2.33	1.0	0.66	2.45	0.84	49.54
Aluminum	0.05	0.30	2.3	0.68	0.54	3.10	1.16
Barium	0.01	0.04	0.24	0.09	0.01	0.22	0.05
Calcium	3	7	•	12	206	2787	15
Magnesium	0.02	0.81	0.66	1.0	2.15	11.15	2.17
Sodium	0.06	0.83	0.51	0.18	0.49	1.23	23.22
Tin	0.02	0.93	•	•	0.15	0.51	1.19
Zinc	0.06	0.49	0.47	0.96	•	0.51	1.19

• = Below Detection Limit

- All samples pre-rinsed identically with UPW prior to test.
- Independent Laboratory Extractable Analysis (Balazs Analytical Laboratory)
- Seven-Day Static Leach @ ambient temperature
- 450ml 18.2 megohm ultra-pure water
- 120-square-inch wet surface contact area
- Based on 1" diameter pipe without solvent-cemented joint
- Concentration units expressed as ug/L of Leachate (ppb)

Dynamic Leach Analysis

Spears® low-extractable piping was subjected to on-line dynamic flow analysis with 18.2 megohm UPW to evaluate particles, TOC, resistivity, anions, cations, and trace metals. This testing utilized solvent-cemented flange assemblies (spool piece) to see the effect that the cement had on TOC, resistivity and particle generation in a freshly assembled pipe section. Grab samples were also pulled periodically (at start-up, five minutes, 50 minutes and five hours) to analyze anions, cations and trace metals under flowing conditions. Flanges were assembled utilizing specially formulated one-step cement and allowed to cure 24 hours prior to testing. Dynamic testing revealed that piping assemblies did not contribute significantly to particle generation or leachable contamination under flowing conditions throughout the test duration.

Dynamic Test Description

Ambient temperature dynamic leach utilizing 18.2 megohm UPW flowing at 9.35 GPM (turbulent flow). 1" diameter pipe 30" long, solvent-cemented flanges each end (approximately 82-square-inch wet surface contact area). Approximately 1-1/2 grams of specially formulated one-step cement used in assembly of components. Solvent-cemented assembly was allowed to cure 24 hours prior to start-up. Dynamic test was conducted for a period of five hours.

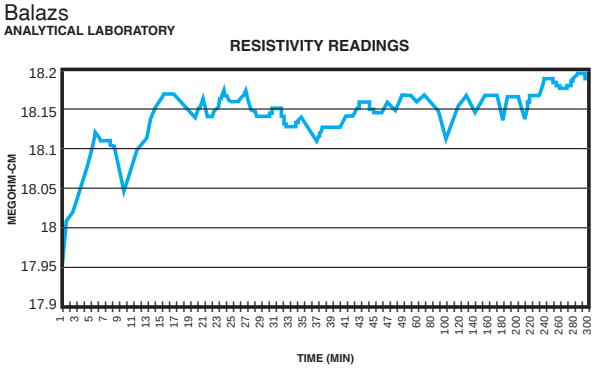
Leachable Contamination

Anions/Cations – IC grab sample analysis revealed low levels of sulfate (0.15 ppb) five minutes into the test, and low levels of ammonium at 50 minutes (0.05 ppb) and five hours (0.07ppb) into the test. All other IC contaminants were below the limit of detection.

Trace Metals – Of the 68 trace metal contaminants evaluated, all were below the limit of detection with the exception of aluminum, detected at 0.012 ppb at the five-minute interval. This element remained below the limit of detection throughout the remainder of the leach.

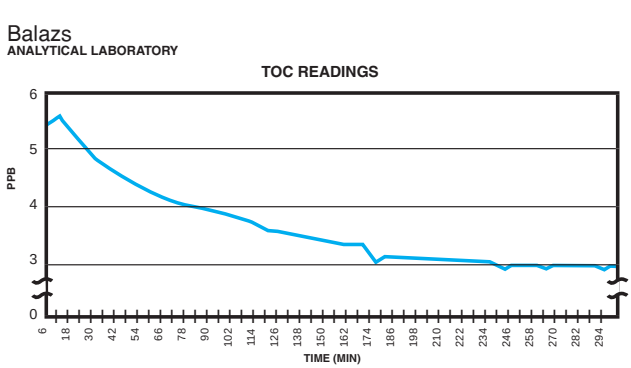
Resistivity

Resistivity measured 17.95 megohms at the start of the leach and rose quickly to 18.12 megohms during the first 6 minutes. Resistivity readings continued to rise until reaching the background level of 18.2 megohms after five hours of leaching.



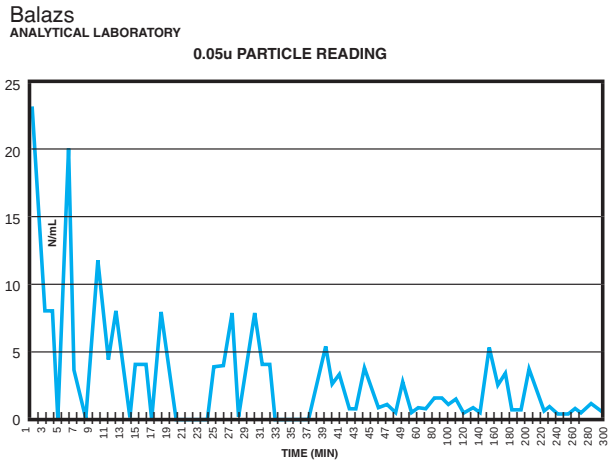
Total Oxidizable Carbon (TOC)

Dynamic testing revealed that after four hours of leaching, TOC readings reached and maintained the background levels throughout the test duration. This data confirmed the fast cure time of specially formulated one-step cement. Conventional solvent cements and primers used for joining typically effect TOC contamination as a result of the leach.



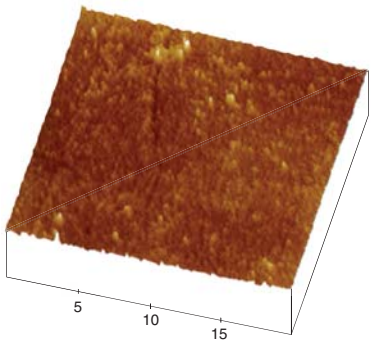
Particles

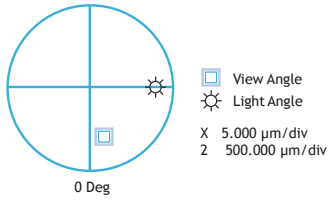
Dynamic testing revealed that average particle counts decreased rapidly during the first six minutes of the leach. After 12 minutes of leaching the average smallest particles measured (0.05 size range) were representative of the background levels.



Surface Analysis

Digital Instruments Nanoscope	
Scan Size	20.00µm
Scan Rate	1.001HZ
Number of Samples	512
Image Data	Height
Data Scale	500.0µm



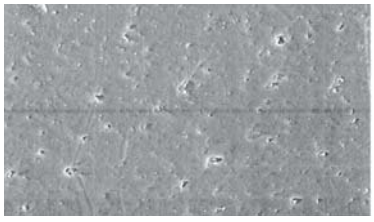


Spears® low-extractable piping has a non-porous, exceptionally smooth interior surface that greatly reduces the potential for extractable and particle contamination while impeding bacterial growth. The components (pipe and fittings) exhibit an average Roughness Analysis value of: **Ra≤ 0.25 µm (≤ 10µ inch)**

Internal Roughness Comparison

Spears® low-extractable piping has been evaluated side- by-side with other common piping materials at various magnifications for surface roughness comparison.

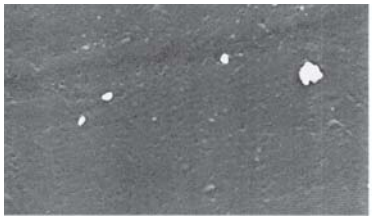
Conventional PVC 300x



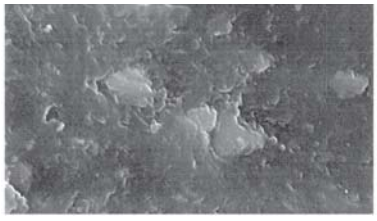
Spears® Low-extractable 300x



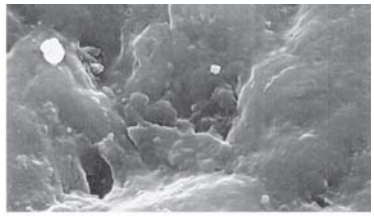
Spears® Low-extractable 5000x



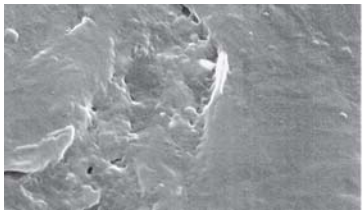
Conventional PVC 5000x



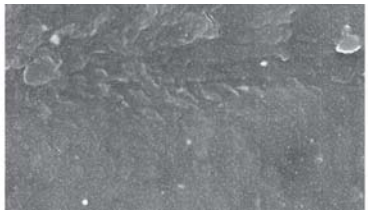
CPVC 5000x



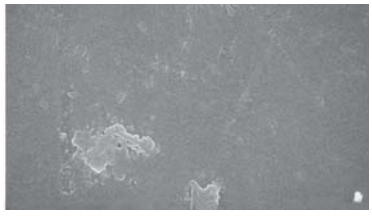
Polypropylene 5000x



Brand X Clean PVC 5000x



PVDF 5000x



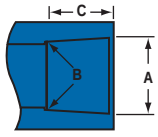
System Components

Spears® fitting and valve components are manufactured from the same low-extractable material. This provides entire system consistency and compatibility, while ensuring that extractable contamination is kept to a minimum. Leading-edge stress analysis technology is applied in the design of fitting and valve components to optimize strength and performance in critical applications.

Fittings

High-quality Spears® low-extractable components are designed to yield optimum performance for each fitting. Material reinforcement is uniformly placed in stress-concentration areas for substantially improved pressure-handling capability. Specialty transition fittings incorporate a stainless steel retaining ring that provides a strong, leak-tight seal for plastic-to-metal transitions while reducing problems associated with overtightening. The reinforced design reduces radial stress encountered with typical threaded connections, thereby eliminating the need for system pressure de-rating traditionally associated with non-reinforced plastic threaded joints.

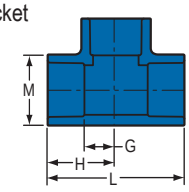
STANDARD SCHEDULE 80 SOCKET DIMENSIONS ASTM D 2467



Size (in.)	Entrance A	Bottom B	Minimum Socket Length C	Tolerance (In.)
1/2	.848	.836	.875	± .004
3/4	1.058	1.046	1.000	± .004
1	1.325	1.310	1.125	± .005
1-1/4	1.670	1.655	1.250	± .005
1-1/2	1.912	1.894	1.375	± .006
2	2.387	2.369	1.500	± .006
3	3.516	3.492	1.875	± .008
4	4.518	4.491	2.250	± .009
6	6.647	6.614	3.000	± .011

Tee

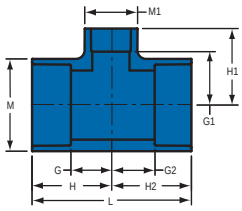
Socket x Socket x Socket



Part #	Size (in.)	G	H	L	M	Weight (lbs.)
801-005BL	1/2	9/16	1-15/32	2-15/16	1-3/16	.10
801-007BL	3/4	11/16	1-11/16	3-3/8	1-13/32	.17
801-010BL	1	27/32	2	4	1-11/16	.28
801-012BL	1-1/4	7/8	2-1/8	4-1/4	2-3/32	.39
801-015BL	1-1/2	1-5/32	2-9/16	5-1/8	2-5/16	.55
801-020BL	2	1-7/16	2-15/16	5-7/8	2-7/8	.90
801-030BL	3	2-1/16	3-31/32	7-15/16	4-7/32	2.38
801-040BL	4	2-5/8	4-7/8	9-3/4	5-1/4	3.43
801-060BL	6	3-13/16	6-13/16	13-5/8	7-5/8	10.79

Reducing Tee

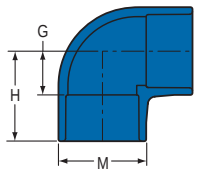
Socket x Socket x Socket



Part #	Size (in.)	G	G1	G2	H	H1	H2	L	M	M1	Weight (lbs.)
801-131BL	1x1x3/4	23/32	27/32	23/32	1-27/32	1-27/32	1-27/32	3-11/16	1-11/16	1-3/8	.23
801-211BL	1-1/2x1-1/2 1	7/8	1-3/16	7/8	2-1/4	2-5/16	2-1/4	4-1/2	2-3/8	1-11/16	.46
801-249BL	2x2x1	7/8	1-7/16	7/8	2-3/8	2-9/16	2-3/8	4-3/4	2-7/8	1-3/4	.58
801-251BL	2x2x1-1/2	1-3/16	1-7/16	1-3/16	2-11/16	2-13/16	2-11/16	5-3/8	2-7/8	2-3/8	.80
801-338BL	3x3x2	1-1/2	1-15/32	1-1/2	3-5/16	3-11/32	3-5/16	6-5/8	4-3/16	2-7/8	1.56
801-422BL	4x4x3	2-1/16	2-21/32	2-1/16	4-11/32	4-15/32	4-11/32	8-11/16	5-7/32	4-3/16	3.09
801-530BL	6x6x3	2-11/16	4-9/16	2-11/16	5-9/16	6-3/8	5-9/16	11-1/8	7-1/2	5-3/16	6.34
801-532BL	6x6x4	2-11/16	3-3/4	2-11/16	5-9/16	5-15/16	5-9/16	11-1/8	7-1/2	5-1/4	7.43

90° Elbow

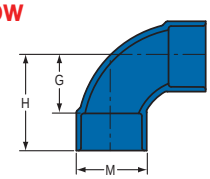
Socket x Socket



Part #	Size (in.)	G	H	M	Weight (lbs.)
806-005BL	1/2	9/16	1-15/32	1-3/16	.08
806-007BL	3/4	11/16	1-11/16	1-7/16	.12
806-010BL	1	13/16	1-31/32	1-23/32	.19
806-012BL	1-1/4	1-1/32	2-5/16	1-31/32	.33
806-015BL	1-1/2	1-3/32	2-15/32	2-11/32	.54
806-020BL	2	1-7/16	2-15/16	2-7/8	.61
806-030BL	3	2-1/16	3-31/32	4-5/32	1.57
806-040BL	4	2-19/32	4-27/32	5-1/4	2.80
806-060BL	6	3-23/32	6-3/4	7-19/32	8.59

Sweep Elbow

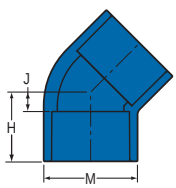
Socket x Socket



Part #	Size (in.)	G	H	M	Weight (lbs.)
806-005SBL	1/2	27/32	1-23/32	1-3/16	.07
806-007SBL	3/4	1-1/32	2-1/32	1-13/32	.11
806-010SBL	1	1-5/16	2-7/16	1-23/32	.19
806-012SBL	1-1/4	1-9/16	2-13/16	2-3/32	.28
806-015SBL	1-1/2	1-3/4	3-1/8	2-11/32	.37
806-020SBL	2	2-5/16	3-13/16	2-7/8	.61

45° Elbow

Socket x Socket



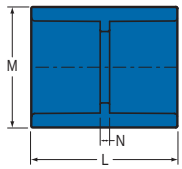
Part #	Size (in.)	H	J	M	Weight (lbs.)
817-005BL	1/2	1-1/8	1/4	1-3/16	.06
817-007BL	3/4	1-11/32	11/32	1-13/32	.09
817-010BL	1	1-7/16	11/32	1-23/32	.15
817-012BL	1-1/4	1-11/16	13/32	2-3/32	.21
817-015BL	1-1/2	1-27/32	7/16	2-3/8	.30
817-020BL	2	2-5/32	21/32	2-7/8	.48
817-030BL	3	2-27/32	31/32	4-1/8	1.13
817-040BL	4	3-3/8	1-3/32	5-1/4	2.24
817-060BL	6	4-7/8	1-7/8	7-9/16	5.37

All Spears® low-extractable fittings are produced in strict dimensional compliance with ASTM D 2467 to Schedule 80 dimensions. Spears® components produced to these dimensions ensure that strong, leak-tight connections with exceptional pressure-bearing capability can be assembled quickly using inexpensive joining tools. Refer to charts below for dimensional and weight data of available fittings.

NOTE: The information contained in this publication is based on current data and product design at time of publication and may be subject to change Additional components and configurations may be added periodically due to our continued commitment to product-line improvements.

Coupling

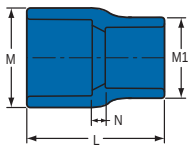
Socket x Socket



Part #	Size (in.)	L	M	N	Weight (lbs.)
829-005BL	1/2	1-7/8	1-3/16	1/8	.07
829-007BL	3/4	2-1/8	1-13/32	1/8	.10
829-010BL	1	2-3/8	1-23/32	1/8	.12
829-012BL	1-1/4	2-23/32	2-7/32	7/32	.22
829-015BL	1-1/2	2-7/8	2-11/32	3/32	.31
829-020BL	2	3-1/8	2-7/8	1/16	.31
829-030BL	3	4	4-3/16	3/16	.82
829-040BL	4	4-3/4	5-5/16	1/4	1.51
829-060BL	6	6-1/4	7-11/16	1/4	3.45

Reducer Coupling

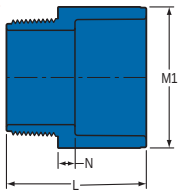
Socket x Socket



Part #	Size (in.)	L	M	M1	N	Weight (lbs.)
829-101BL	3/4 x 1/2	1-13/32	1-13/32	1-3/16	7/32	.06
829-131BL	1 x 3/4	2-13/32	1-23/32	1-13/32	1/4	.10
829-168BL	1-1/4 x 1	2-23/32	2-3/32	1-23/32	3/8	.17
829-211BL	1-1/2 x 1	2-7/8	2-11/32	1-15/16	3/8	.23
829-212BL	1-1/2 x 1-1/4	2-13/16	2-3/8	2-3/32	5/32	.21
829-249BL	2 x 1	3-1/8	2-7/8	1-23/32	17/32	.28
829-251BL	2 x 1-1/2	3-7/32	2-27/32	2-11/32	7/32	.30
829-338BL	3 x 2	4	4-5/32	2-27/32	11/16	.68
829-420BL	4 x 2	4-5/8	5-9/32	2-7/8	13/16	1.20
829-422BL	4 x 3	4-5/8	5-1/4	4-1/8	1/2	1.25
829-532BL	6 x 4	6-5/8	7-5/8	5-5/16	1-7/16	3.20

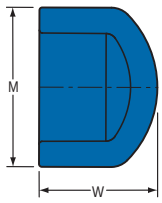
Fittings

Male Adapter
Mipt x Socket



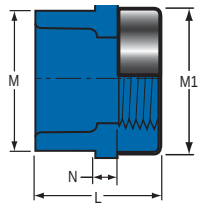
Part #	Size (in.)	L	M	N	Weight (lbs.)
836-005BL	1/2	1-13/16	1-3/16	3/16	.04
836-007BL	3/4	1-29/32	1-13/32	1/4	.06
836-010BL	1	2-1/4	1-3/4	7/32	.10
836-012BL	1-1/4	2-1/2	2-1/8	9/32	.15
836-015BL	1-1/2	2-9/16	2-13/32	1/4	.19
836-020BL	2	2-23/32	2-29/32	9/32	.27
836-030BL	3	3-23/32	4-7/32	3/8	.75
836-040BL	4	4-3/8	5-3/16	1/2	1.13

Cap
Socket



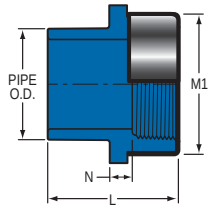
Part #	Size (in.)	M	W	Weight (lbs.)
847-005BL	1/2	1-3/16	1-7/32	.03
847-007BL	3/4	1-3/8	1-13/32	.05
847-010BL	1	1-11/16	1-19/32	.08
847-012BL	1-1/4	2-3/32	1-27/32	.16
847-015BL	1-1/2	2-11/32	2	.16
847-020BL	2	2-27/32	2-9/32	.35
847-030BL	3	4-5/32	3-1/32	.84
847-040BL	4	5-7/32	3-9/16	1.43
847-060BL	6	7-1/2	4-7/8	3.17

Special Reinforced Female Adapter
Socket x SR Fipt



Part #	Size (in.)	L	M	M1	N	Weight (lbs.)
835-005SRBL	1/2	1-3/4	1-5/32	1-3/16	3/16	.07
835-007SRBL	3/4	1-7/8	1-13/32	1-3/8	1/8	.08
835-010SRBL	1	2-5/32	1-23/32	1-23/32	3/32	.12
835-012SRBL	1-1/4	2-5/16	2-1/8	2-1/16	3/16	.19
835-015SRBL	1-1/2	2-7/16	2-13/32	2-7/16	7/32	.26
835-020SRBL	2	2-11/16	3	3-3/32	9/32	.43
835-030SRBL	3	3-1/2	4-1/4	4-9/32	7/32	.89
835-040SRBL	4	3-31/32	5-7/32	5-7/32	1/4	1.29

Special Reinforced Reducing Female Adapter
Spigot x SR Fipt

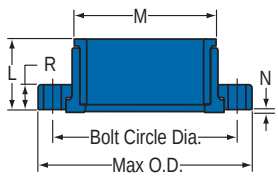


Part #	Size (in.)	L	M1	N	Weight (lbs.)
878-072SRBL	1/2 x 1/4	1-13/32	27/32	3/16	.03
878-098SRBL	3/4 x 1/4	1-27/32	27/32	9/32	.05
878-128SRBL	1 x 1/4	2-3/8	27/32	21/32	.08

Threaded Connections

Use only quality grade PTFE tape as a thread sealant for Spears® low-extractable applications. **Warning:** some pipe joint compounds or PTFE pastes may contain substances that could cause stress cracking to plastics and increase the potential for system contamination. 1 to 2 full turns beyond finger tight is generally all that is required to make a sound plastic threaded connection. Unnecessary over-tightening will cause damage to both pipe and fitting.

Flange Van Stone Style
(Two Piece)
Socket



Part #	Size (in.)	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Max O.D.	Weight (lbs.)
854-005BL	1/2	1-1/32	1-7/32	5/32	17/32	2-3/8	4	1/2	3-1/2	.19
854-007BL	3/4	1-1/8	1-7/16	5/32	9/16	2-3/4	4	1/2	3-7/8	.26
854-010BL	1	1-9/32	1-3/4	5/32	5/8	3-1/8	4	1/2	4-1/4	.36
854-012BL	1-1/4	1-13/32	2-5/32	5/32	11/16	3-1/2	4	1/2	4-5/8	.46
854-015BL	1-1/2	1-17/32	2-7/16	3/16	3/4	3-7/8	4	1/2	5	.56
854-020BL	2	1-11/16	2-15/16	3/16	13/16	4-3/4	4	5/8	6	.85
854-030BL	3	2-1/8	4-1/4	1/4	1-1/16	6	4	5/8	7-1/2	1.66
854-040BL	4	2-1/2	5-1/4	1/4	1-1/8	7-1/2	8	5/8	9	2.68
854-060BL	6	3-3/8	7-9/16	7/16	1-9/32	9-1/2	8	3/4	11	4.54

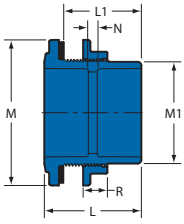
NOTE: Spears® low-extractable flanges maximum working pressure 150 psi non-shock @ 73° F

Flanges

Spears® low-extractable Van Stone-style flanges are also available for transition to alternate materials or where disassembly may be required. This unique two-piece design incorporates a rotating flange ring that greatly simplifies bolt hole alignment during installation.

Tank Adapter

Socket x Socket



Part #	Size (in.)	Hole Size (in.)	L	L1	M	M1	N	R	Weight (lbs.)
8170E-005BL	1/2	1.31	2-15/16	2-3/16	2	1-3/16	1-1/8	5/8	.20
8170E-007BL	3/4	1.69	2-15/16	2-3/16	2-1/4	1-5/8	15/16	5/8	.24
8170E-010BL	1	1.94	3-5/16	2-9/16	2-5/8	2	1-1/16	5/8	.35
8170E-012BL	1-1/4	2.39	3-7/16	2-5/8	3-1/8	2-5/16	15/16	5/8	.42
8170E-015BL	1-1/2	2.39	3-5/8	2-13/16	3-5/8	2-11/16	13/16	5/8	.93
8170E-020BL	2	3.51	4-1/8	3-1/4	4-7/8	3-1/4	1-1/16	3/4	1.30
8170E-030BL	3	4.49	5-1/2	4-1/2	6	4-9/16	1-11/16	1	2.50
8170E-040BL	4	5.50	5	4	7-1/2	5-1/2	7/16	1-1/4	3.40

EPDM Gasket – 150 psi maximum working pressure @73°F. For FKM Gasket, replace the E with V.

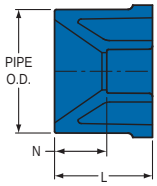
Gauge Guards

Spears® low-extractable gauge guards isolate process pressure or vacuum gauges from corrosive or potentially damaging process media by use of a thin PTFE diaphragm (optional FKM or EPDM available). This flexible membrane accurately transmits system pressure to the gauge connection chamber when properly assembled with gauge and liquid filled. A variety of optional gauges are available, factory assembled to the gauge guard and pre-filled. All gauge guards have 1/4" NPT gauge outlet connections. Inlet connectionsare either 1/4" or 1/2" NPT, featuring Spears® patented Special Reinforced (SR) female plastic thread.

Reducer Bushing

Flush Style

Spigot x Socket

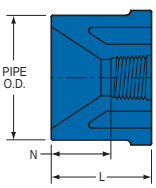


Part #	Size (in.)	L	N	Weight (lbs.)
837-101BL	3/4 x 1/2	1-7/32	11/32	.03
837-130BL	1 x 1/2	1-5/8	13/32	.06
837-131BL	1 x 3/4	1-11/32	5/16	.04
837-166BL	1-1/4 x 1/2	1-1/2	5/8	.12
837-168BL	1-1/4 x 1	1-19/32	15/32	.08
837-210BL	1-1/2 x 3/4	1-3/4	11/16	.19
837-211BL	1-1/2 x 1	1-17/32	13/32	.14
837-212BL	1-1/2 x 1-1/4	1-9/16	5/16	.07
837-249BL	2 x 1	1-29/32	13/16	.26
837-251BL	2 x 1-1/2	1-3/4	11/32	.17
837-338BL	3 x 2	2-27/32	9/16	.62
837-422BL	4 x 3	2-21/32	25/32	.82
837-532BL	6 x 4	4	1-23/32	2.86

Reducer Bushing

Flush Style

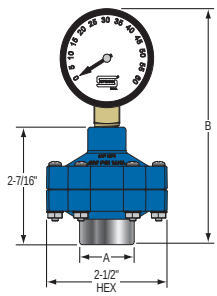
Spigot x Fipt



Part #	Size (in.)	L	N	Weight (lbs.)
838-072BL	1/2 x 1/4	1	7/8	.02
838-073BL	1/2 x 3/8	1-3/32	17/32	.02
838-098BL	3/4 x 1/4	1-7/32	5/8	.04
838-101BL	3/4 x 1/2	1-1/4	7/16	.03
838-129BL	1 x 3/8	1-13/32	19/32	.07
838-130BL	1 x 1/2	1-5/32	21/32	.06
838-131BL	1 x 3/4	1-3/8	21/32	.05
838-210BL	1-1/2 x 3/4	1-3/4	31/32	.15

Gauge Guard

PTFE Diaphragm



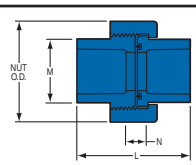
Gauge Configuration	1/4" Inlet	A	B	1/2" Inlet	A	B
No Gauge	G0004-002BL	7/8	—	G0004-005BL	1-3/16	—
0-30 in-Hg	G30V4-002BL	7/8	4-13/16	G30V4-005BL	1-3/16	4-7/8
0-15 psi	G0154-002BL	7/8	4-13/16	G0154-005BL	1-3/16	4-7/8
0-30 psi	G0304-002BL	7/8	4-13/16	G0304-005BL	1-3/16	4-7/8
0-60 psi	G0604-002BL	7/8	4-13/16	G0604-005BL	1-3/16	4-7/8
0-100 psi	G1004-002BL	7/8	4-13/16	G1004-005BL	1-3/16	4-7/8
0-160 psi	G1604-002BL	7/8	4-13/16	G1604-005BL	1-3/16	4-7/8
0-200 psi	G2004-002BL	7/8	4-13/16	G2004-005BL	1-3/16	4-7/8
0-300 psi	G3004-002BL	7/8	4-13/16	G3004-005BL	1-3/16	4-7/8

NOTE: Spears® low-extractable Gauge Guards carry a maximum pressure rating of 235 psi, non-shock, @73°F; vacuum gauges suitable for full vacuum service. All gauge guards have 1/4" NPT gauge outlet connections. Gauges are a standard 1/4" NPT brass bottom mount, epoxy enamel steel case, black marking on white face, black dial.

Union

(Old Style)

Socket x Socket



Part # *EPDM O-ring Seal	Size (in.)	L	M	N	Nut O.D.	Weight (lbs.)
897-005BL	1/2	2-3/32	1-9/32	11/32	1-31/32	.12
897-007BL	3/4	2-3/8	1-17/32	11/32	2-1/2	.17
897-010BL	1	2-9/16	1-27/32	3/8	2-7/8	.28
897-012BL	1-1/4	2-7/8	2-7/32	3/8	3-5/16	.36
897-015BL	1-1/2	3-3/32	2-9/16	15/32	3-9/16	.50
897-020BL	2	3-5/8	3-1/32	9/16	4-3/16	.86
8097-030BL	3	4-1/4	4-3/16	1/2	6-5/32	2.16
8097-040BL	4	5-1/8	5-1/4	5/8	7-3/4	3.43

*For (Socket X Socket) Unions equipped with FKM O-Ring, replace the 897 with an 857 before the dash.

Valves

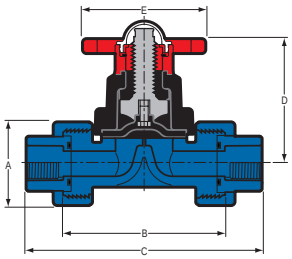
Spears® low-extractable valves are available in two styles: True Union Diaphragm configurations sizes 1/2" – 2" and True Union 2000 ball valve configurations sizes 1/2" – 4". Spears® low-extractable diaphragm valves (sizes 1/2" – 2") carry a maximum pressure rating of 150 psi for water, non-shock, @ 73°F. Spears® low-extractable ball valves sizes 1/2" – 4" carry a maximum pressure rating of 235 psi for water, non-shock, @ 73°F.

Diaphragm Valves

Spears® low-extractable diaphragm valves are engineered to provide accurate throttling control and shut-off, utilizing a positive-stop, non-rising stem. The Weir-type design incorporates a PTFE diaphragm for maintaining purity, and uses EPDM O-ring seals on the union connections. Low-profile True Union design minimizes space while allowing for ease of installation and maintenance. Valves are supplied with both socket and threaded-end connectors for versatility. They incorporate a built-in position indicator, and are operated with a high-impact, hand-wheel-style handle for easy operation.

Ball Valves

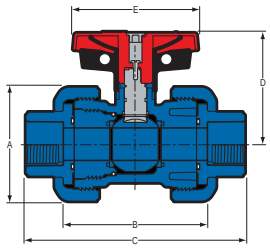
Spears® low-extractable quarter-turn True Union ball valves incorporate the same high degree of unique engineering design characteristics. Among these characteristics are heavy-bodied construction with strong buttress threads, full Schedule 80 bore to minimize pressure drop, PTFE floating seat design to minimize seat wear, EPDM or FKM O-ring seals, Safe-T-Shear® stem, socket and threaded-end connectors, and True Union design for ease of installation and maintenance.



True Union Diaphragm Valves

Part #	Size (in.)	A	B	C	D	E	Weight (lbs.)
2729T-005BL	1/2	1-15/16	3-7/8	5-3/16	3-11/32	2-7/8	.8
2729T-007BL	3/4	2-1/2	4-1/2	5-15/16	3-3/4	3-1/8	1.3
2729T-010BL	1	2-9/16	4-15/16	6-13/16	4-7/16	3-3/8	2.2
2729T-012BL	1-1/4	3-5/16	5-1/2	8-1/4	5-5/8	3-7/8	2.8
2729T-015BL	1-1/2	3-17/32	6-5/16	8-7/16	5-5/8	4-5/8	3.7
2729T-020BL	2	4-7/32	7-1/2	9-1/2	7	6-5/8	6.7

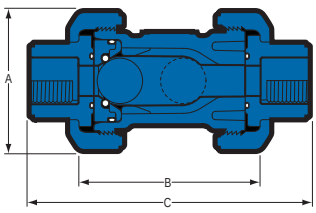
NOTE: Spears® low-extractable True Union Diaphragm valves sizes 1/2" – 2" carry a maximum pressure rating of 150 psi for water, non-shock, @ 73°F.



True Union 2000 Industrial Ball Valves

Part # *EPDM O-rings	Size (in.)	A	B	C	D	E	Weight (lbs.)
1829-005BL	1/2	1-7/8	2-3/8	4-3/16	2-9/16	2-13/16	.36
1829-007BL	3/4	2-1/4	2-3/4	4-3/4	2-7/8	3-3/8	.56
1829-010BL	1	2-1/2	2-7/8	5-1/8	3-1/8	3-7/16	.74
1829-012BL	1-1/4	3-1/16	3-1/4	5-3/4	3-5/8	3-7/8	1.13
1829-015BL	1-1/2	3-1/2	3-1/2	6-1/4	4	4-3/16	1.54
1829-020BL	2	4-1/4	4-3/4	7-3/4	4-1/2	5-1/8	2.72
1822-030BL	3	6-3/16	7	10-11/16	5-7/8	7-5/8	7.46
1822-040BL	4	7-5/8	7-5/16	11-7/8	6-3/4	9-3/16	12.35

NOTE: Spears® low-extractable True Union ball valves sizes 1/2" - 4" carry a maximum pressure rating of 235 psi for water, non-shock, @ 73°F.
*For True Union 2000 ball valves equipped with FKM O-ring seals, replace the **1829** with **1839** in the Part Number.



True Union 2000 Industrial Ball Check Valves

Part # *EPDM O-rings	Size (in.)	Dimension Reference (inches + 1/16)			Approx. Wt. (Lbs.)	Cv^2	Horizontal Closing	
		A	B	C	PVC	Soc/Thd	Feet of Head (water)	GPM (minimum)
4529-005BL	1/2	1-7/8	2-7/16	4-3/16	0.72	6.3	1.6	.30
4529-007BL	3/4	2-1/4	2-3/4	4-3/4	1.19	17	1.6	.46
4529-010BL	1	2-1/2	2-7/8	5-1/8	1.53	25	1.6	.70
4529-012BL	1-1/4	3-1/16	3-1/4	5-3/4	1.85	65	1.6	1.04
4529-015BL	1-1/2	3-1/2	3-1/2	6-1/4	2.97	86	1.6	1.37
4529-020BL	2	4-1/4	4-3/4	7-3/4	4.55	130	1.6	2.47
4522-030BL	3	6-3/16	6-7/8	10-11/16	11.15	275	1.0	6.98
4522-040BL	4	7-1/2	7-1/4	11-13/16	16.58	500	1.0	12.13

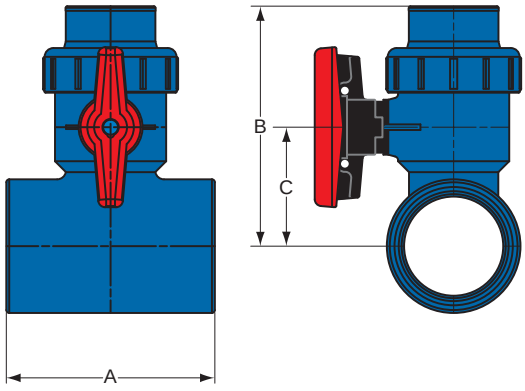
1: Valve Lay Length
2: Gallons per minute at 1 psi pressure drop. Values based on independent testing by California State Polytechnic University.
NOTE: Spears® low-extractable True Union ball check valves sizes 1/2" - 4" carry a maximum pressure rating of 235 psi for water, non-shock, @ 73°F.
*For True Union 2000 ball check valves equipped with FKM O-ring seals, replace the **4529** with **4539** in the Part Number.

Needle Valves

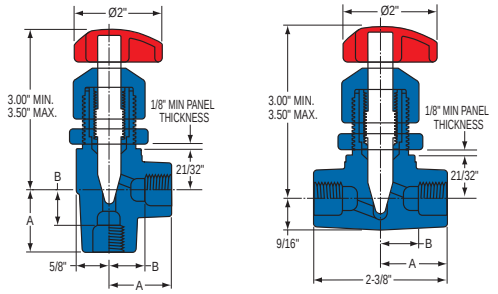
Spears® low-extractable needle valves provide proportional opening to needle travel for more accurate metering and other fine-adjustment flow-control applications. Replaceable PTFE seat eliminates all elastomer seals. Available in Globe and Angle pattern configurations with socket or threaded end connections. Valves include built-in panel mounting nut and easy-grip polypropylene handles.

Lab Fixtures (not shown)

See Part I of this catalog, High Purity PVC System for additional information.



Needle Valves



Angle Pattern | Globe Pattern

Globe Pattern Part #	Angle Pattern Part #	End Connection	Size (in.)	A	B
5592-002BL	5692-002BL	Socket	1/4	1-3/16	9/16
5592-003BL	5692-003BL	Socket	3/8	1-3/16	7/16
5592-005BL	5692-005BL	Socket	1/2	1-3/8	1/2
5591-002BL	5691-002BL	Threaded	1/4	1-3/16	21/32
5591-003BL	5691-003BL	Threaded	3/8	1-3/16	9/16
5591-005BLSR	5691-005BLSR	SR Threaded	1/2	1-3/8	21/32

NOTE: Spears® low-extractable Needle Valves carry a maximum pressure rating of 235 psi, non-shock, @ 73°F. Threaded 1/2" valve only available with Special Reinforced (SR) female threads.

True Union 2000 Industrial Tee-Style Ball Check Valves

Part # *EPDM O-rings	Nominal Size	Dimension Reference (inches + 1/16)				Weight (lbs.)
		A	B		C	
			Socket	Threaded		
182901-005BL	1/2	2-5/16	3-3/4	3-9/16	1-5/8	.48
182901-007BL	3/4	3-7/16	4-1/4	4	1-7/8	.70
182901-010BL	1	4	4-11/16	4-7/16	2-1/16	1.10
182901-012BL	1-1/4	4-1/4	5-5/16	5	2-7/16	1.64
182901-015BL	1-1/2	5-1/8	6-1/8	5-11/16	3	2.26
182901-020BL	2	5-7/8	7-5/16	6-13/16	3-7/16	3.72
182901-101BL	3/4x1/2	3-3/16	3-7/8	3-11/16	1-3/4	.51
182901-130BL	1x1/2	3-7/16	4	3-13/16	1-7/8	.58
182901-131BL	1x3/4	3-11/16	4-3/8	4-1/2	2	.78
182901-166BL	1-1/4x1/2	4-1/4	4	3-13/16	1-7/8	.77
182901-167BL	1-1/4x3/4	4-1/4	4-1/4	4	1-7/8	.90
182901-168BL	1-1/4x1	4-1/4	4-13/16	4-5/8	2-3/16	1.78
182901-209BL	1-1/2x1/2	4-3/8	4-1/4	4-1/16	2-1/8	.86
182901-210BL	1-1/2x3/4	4-1/8	4-5/8	4-3/8	2-3/16	.91
182901-211BL	1-1/2x1	4-1/2	5	4-13/16	2-3/8	1.37
182901-247BL	2x1/2	4-3/16	4-9/16	4-3/8	2-7/16	1.06
182901-248BL	2x3/4	4-3/8	4-15/16	4-11/16	2-9/16	1.23
182901-249BL	2x1	4-3/4	5-1/4	5-1/16	2-5/8	1.38
182901-251BL	2x1-1/2	5-7/8	6-1/16	5-7/8	2-15/16	2.33
182901-333BL	3x1/2	5-1/2	5-1/8	4-15/16	3	1.60
182901-335BL	3x1	5-1/2	5-7/8	5-11/16	3-1/4	2.19
182901-337BL	3x1-1/2	7-1/4	6-9/16	6-3/8	3-7/16	3.66
182901-338BL	3x2	6-11/16	7-11/16	7-3/16	3-13/16	4.61
182901-417BL	4x1	7-7/16	6-5/16	6-1/8	3-11/16	3.25
182901-419BL	4x1-1/2	7-3/8	7-5/16	7-1/8	4-3/16	4.01
182901-420BL	4x2	7-3/4	8-5/16	7-3/4	4-7/16	5.20
182901-528BL	6x2	10-3/16	9-5/8	9-1/8	5-3/4	9.26
182901-578BL	8x2	15-5/8	12-5/8	12-1/8	8-3/4	17.42

*For True Union 2000 Industrial Tee-Style ball valves equipped with FKM O-ring seals, replace the **182901** with **183901** in the Part Number.

Tee-Style Ball Valves

Spears® low-extractable True Union Tee-Style Ball Valve design integrates valve and Tee-fitting for direct branch take-off laterals. The close proximity of the valve to mainline emulates a "zero deadleg" design to minimize any areas of fluid stagnation. Custom produced to specified Tee and Valve connection sizes.

System Design & Installation

Product Ratings and Capability

Spears® low-extractable piping is produced to Schedule 80 dimensions in strict accordance with ASTM D 1785, and exhibits a Type II pressure rating. Fittings are produced to Schedule 80 dimensions per ASTM D 2467. Joining of product produced to the dimensional requirements of these standards ensures that strong connections with good pressure-bearing capability can be made up quickly and consistently using common, inexpensive tools. Utilizing these dimensions provides a higher pressure-bearing capacity compared to other "clean" systems on the market, and permits the use of standard socket dimensions.

Dimensions

Nominal Pipe Size (in.)	Average O.D.	Average I.D.	Minimum Walll	Nominal Weight Lbs./ft.	Max.W.P. PSI*
1/2	.840	.528	.147	.202	420
3/4	1.050	.724	.154	.273	340
1	1.315	.935	.179	.402	320
1-1/4	1.660	1.256	.191	.554	260
1-1/2	1.900	1.476	.200	.673	240
2	2.375	1.913	.218	.932	200
3	3.500	2.864	.300	1.903	190
4	4.500	3.786	.337	2.782	160
6	6.625	5.709	.432	5.313	140

*PSI water, non-shock @ 73°F with solvent-welded connections. System pressure rating dependent on component pressure ratings (i.e., flanges all sizes = 150 psi max @ 73° F)

Temperature De-rating Factor

Operating Temprature (°F)	De-rating Factor
73	1.00
80	0.88
90	0.75
100	0.62
110	0.51
120	0.40
130	0.31
140	0.22

As with all schedules of thermoplastic pipe, pressure rating is dependent on the pipe diameter as well as the operating temperature of the system. As temperatures rise, the pressure rating of the system decreases. The maximum temperature rating of Spears® low-extractable piping is 140°F. However, **DO NOT** use with "hot" Deionized (DI) water as this may have a detrimental effect on the system. Spears® recommends that Low Extractable PVC systems used with deionized water should be limited operating temperatures of no more than 80°F. Smaller-diameter piping can withstand higher pressure than large-diameter piping at elevated temperatures. Use appropriate temperature de-rating factors to determine maximum allowable pressure at elevated temperatures.

Hangers and Supports

Proper support spacing is critical to ensure that deflection is kept to a minimum. Support location and spacing is dependent on the pipe diameter, operating temperature of the system, and the location of any concentrated stress loads (i.e., valves, flanges, test equipment and any other heavy system components). Hangers used must have an adequate load-bearing surface free of any rough or sharp edges that could damage the pipe during use. Hangers also must not restrict linear movement of the system due to the effects of thermal expansion and contraction as a result of temperature changes; overtightening must be avoided.

Hanger Support Spacing

Pipe Size (in.)	Maximum Support Spacing in Feet				
	73°F	80°F	100°F	120°F	140°F
1/2	5	4-1/2	4-1/2	3	2-1/2
3/4	5-1/2	5	4-1/2	3	2-1/2
1	6	5-1/2	5	3-1/2	3
1-1/4	6	6	5-1/2	3-1/2	3
1-1/2	6-1/2	6	5-1/2	3-1/2	3-1/2
2	7	6-1/2	6	4	3-1/2
3	8	7-1/2	7	4-1/2	4
4	9	8-1/2	7-1/2	5	4-1/2
6	10	9-1/2	9	6	5

Thermal Expansion and Contraction

As with all thermoplastic piping materials, consideration must be given during the design of the system to the effects of thermal expansion and contraction. The coefficient of linear expansion for Spears® low-extractable pipe is 3.89 x 10^{-5} in./in./°F. The rate of expansion or contraction can be calculated as follows:

$$\Delta L = 12\ y L\ (T)$$

Where:

ΔL = amount of expansion or contraction in inches

y =3.89 x 10^{-5}

L =length of piping run in feet

ΔT = temperature change °F

(T max. – T @ time of installation or lowest system temperature or maximum system temperature, whichever is greater.)

Storage and Handling

Reasonable care and common sense should be used when handling and storing Spears® low-extractable piping products. These products are tough and corrosion resistant, but they should not be dropped or have objects dropped on them. Care should be used when transporting and storing the product to prevent physical damage. Spears® low-extractable products should not be stored or installed close to heat-producing sources, subjected to external loads or over stacked when stored. The product should be inspected for any scratches, splits or gouges. Damaged sections must be cut out and discarded.



Joining Techniques

Spears® low-extractable piping products are easily joined by the solvent-cementing process. Unlike conventional PVC solvent-cementing techniques, this product utilizes a **one-step solvent-cement system specifically formulated for "clean" applications**. This solvent cement exhibits extremely fast set and cure times. When properly used, this system results in very short cure times prior to pressure testing, and produces a solvent-cemented assembly with an exceptionally low percentage of chemical additives, reducing the potential for system contamination.

A thorough understanding of the solvent cement joining process and proper assembly techniques must be used during assembly of these products to ensure the highest system integrity. Installers must become familiar with this process prior to use.

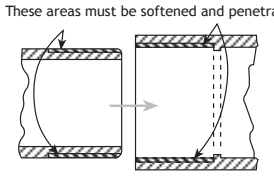
Basic Principles of Solvent Cementing

Spears® low-extractable components are manufactured to the dimensional tolerances for Schedule 80 pipe per ASTM D 1785, and Schedule 80 socket-type fittings per ASTM D 2467. When fittings are produced to these dimensions, the ID of the fitting at the entrance of the socket is larger than the ID of the fitting at the socket bottom. The taper created by fitting socket dimensions provides an interference fit during assembly of the components. This provides a proven means for proper mating of components, ensuring adequate joint strength when properly assembled.



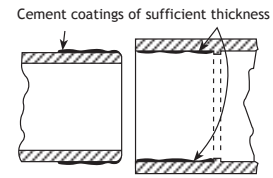
The following points must be clearly understood to ensure satisfactory joints are obtained consistently.

1. The joining surfaces must be softened and made semifluid.
2. Sufficient cement must be applied to fill the gap between the pipe and fitting.
3. Assembly of pipe and fitting must be made immediately while the surfaces are still wet and the cement is fluid.
4. Joint strength develops quickly as the cement dries. In the tight part of the joint, the surfaces will tend to fuse together; in the loose part of the joint the cement will bond to both surfaces.



Softening and Penetration

These areas must be softened and penetrated. (This can be achieved by the cement itself.)

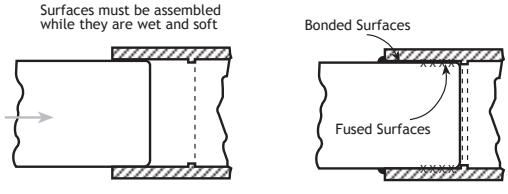


Sufficient Application of Cement

More than sufficient cement to fill the gap in the loose part of the joint must be applied. In addition to filling the gap, adequate cement layers will penetrate the joining surfaces and remain fluid until the joint is assembled.

Joint Integrity

When the cement coating on the pipe and fittings are fluid during assembly, they will tend to flow together and become one cement layer. In addition, the surfaces beneath the cement coating will be soft from surface penetration of the cement. The softened surface areas in the tight part of the joint will tend to fuse together. As the solvent dissipates, the cement layer and the softened surfaces will harden with a corresponding increase in joint strength. The dissipation of the solvent from specially formulated one-step cement occurs very quickly due to its high evaporation rate. Joint strength develops more quickly in the tight (fused) part of the joint than in the looser (bonded) part of the joint. A properly assembled joint will take the required working pressure before the joint is fully dry and final joint strength is obtained.



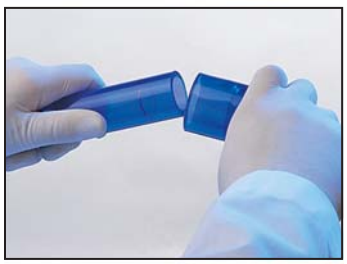
Specially Formulated One-Step Cement

Use only specially formulated one-step cement for Spears® low-extractable applications using the appropriate size applicator. Carefully read and follow the label on the cement can, and application and cure time instructions thoroughly. **NOTE:** Dauber is supplied in pint-can lid (suitable for pipe sizes 1/2" - 1-1/4"). Dauber is supplied in quart-can lid (suitable for pipe sizes 1-1/2" - 3"). For pipe sizes 4" thru 6" use a roller equal in size to 1/2 the pipe diameter.

Specially formulated one-step cement is listed by NSF International and conforms to the requirements of ASTM D 2564.

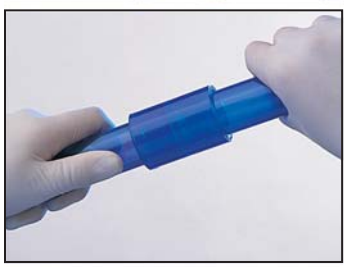












Safety Precautions:

Before applying cement, appropriate safety precautions should be taken. Solvent cement should be stored in the shade between 40°F and 110°F. Eliminate all ignition sources. Avoid breathing of vapors. Use only with adequate ventilation; mechanical ventilation or local exhaust is recommended to maintain vapor concentrations below exposure limits. In confined or partially enclosed areas an organic vapor respirator is recommended. Containers should be kept tightly closed when not in use, and covered as much as possible when in use. Avoid frequent contact with skin. Wear clean rubber gloves; do not perform work with bare hands.

Component Preparation:

All pipe, fittings and tools used for joining must be clean and free of dirt, moisture, grease or other contamination prior to and during the joining process.

1. Cutting:

Cutting the pipe as squarely as possible (90°) is required, as it maximizes the bonding area of the joint. Only sharp wheel-type cutters with blades specifically designed for cutting plastic shall be used. Cutters should be rotated slowly to provide optimum cut. Cutting speeds should be further reduced at lower temperatures. The use of a saw is *not* recommended as filings and shavings will cause particulate contamination.

2. Deburring:

All pipe ends shall be properly chamfered by providing a 10° to 15° bevel (1/16" to 3/32" in width). A chamfering tool designed for this purpose shall be used. A proper bevel will aid in assembly and prevent solvent cement being pushed from the wall of the fitting during assembly. Burrs and filings can prevent contact between the pipe and fitting and must be removed from the outside and inside of the pipe during this process. A common practice is to place sterile gauze in the pipe end to prevent shavings from entering the pipe. The gauze is then removed prior to cement application.

3. Joining Preparation:

A. Prior to assembly, all components shall be inspected for any damage or irregularities. Mating components shall be checked to assure that tolerances and engagements are compatible. Do not use components that appear irregular or do not fit properly.

B. Check the dry fit – The pipe should enter the fitting socket easily one-quarter to three-quarters of the way. If the pipe bottoms in the fitting with little interference, use extra solvent cement in making the joint.

C. Measure the socket depth of the fitting and mark this distance on the pipe end. This reference mark can be used when joining to ensure the pipe is completely bottomed into the fitting during assembly.

4. Solvent Cement Application:

Specially formulated one-step cement shall be applied to the joining surfaces using a dauber or natural-bristle brush approximately half the diameter of the pipes being joined. Working quickly, apply a heavy, even coat of solvent cement to the pipe end on the surface equal to the depth of the fitting socket. Apply a light coat to the fitting socket. If there was little interference during the dry fit, apply a second coat of cement to the pipe end at this time. Great care must be used to prevent cement from coming into contact with the interior waterway of the fitting or pipe.

5. Assembly:

Immediately insert the pipe into the fitting socket while rotating one-quarter turn. Properly align the fitting for the installation at this time. The pipe must bottom completely to the fitting stop. Hold the assembly for approximately 30 seconds to ensure initial bonding. Due to the taper on the interference fit, the pipe can back off the fitting stop if steady pressure is not held on the joint during initial bonding. A bead of cement should be evident around the pipe and fitting juncture. If the bead is not continuous, it may indicate that insufficient cement was applied. *Due to the unique translucency of Spears® low-extractable products, visual inspection of the cemented joint can be conducted utilizing a flashlight or alternate light source. Joint integrity can be readily verified by visually inspecting the cemented surfaces for uniformity.* If insufficient cement is applied, the joint must be cut out, discarded and begun again. Excess cement must be wiped off from the pipe OD using a clean rag at this time.

Assembly Instructions

Set and Cure Times:

Set and cure times are a function of pipe size, temperature, pressure, humidity and tightness of fit. The initial *set time* is the recommended waiting period prior to handling a newly assembled joint. After the initial set time, the joints will withstand the stresses of normal installation. (Misalignment of components during assembly will cause excessive stress in the joint, which can affect joint integrity). The *cure time* is the recommended waiting period prior to pressurizing newly assembled joints. Minimum cure time prior to pressure testing is dependent on pipe size, temperature, humidity, tightness of fit and test pressure required. Longer cure times must be allowed when working at higher humidity and colder temperatures.

Refer to the following tables for minimum set and cure times:

Initial Set Time

Temp.	Pipe Size 1/2 - 1-1/4	Pipe Size 1-1/2 - 2	Pipe Size 2-1/2 - 6
60° - 100°F	2 minutes	3 minutes	30 minutes
40° - 60°F	5 minutes	8 minutes	2 hours
0° - 40°F	10 minutes	15 minutes	12 hours

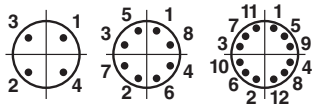
Joint Cure Schedule

Relative Humidity 60% or less*	Pipe Size 1/2 - 1-1/4		Pipe Size 1-1/2 - 2		Pipe Size 2-1/2 - 6
Temp range during assembly and cure periods	up to 160 psi	160 to 360 psi	up to 160 psi	160 to 315 psi	up to 160 psi
60° - 100°F	15 min	6 hrs	25 min	12 hrs	1-1/2 hrs
40° - 60°F	20 min	12 hrs	30 min	24 hrs	4 hrs
0° - 40°F	30 min	48 hrs	45 min	96 hrs	72 hrs

* If damp or humid weather allow 50 percent longer cure time.

Flange Installation:

1. Solvent cement flange to pipe.
2. Piping runs joined must be installed in straight-line position to the flange and supported to avoid stress and damage.
3. Rotate ring into position with gasket in place to align holes.
4. Insert all bolts, washers and nuts.
5. Mating surfaces of flanges must be flush against gasket prior to bolting.
6. Tighten by hand until snug. Tighten bolts in 5 ft.-lb. increments according to opposing sequence shown below.
7. Do not use bolts to bring improperly mated flanges together.



Bolt Torque Sequence

Flange Size (in)	Recommended Torque
1/2 - 1-1/2	12 ft-pounds
2 - 4	25 ft-pounds
6	40 ft-pounds

Installation Notes:

Installers should verify for themselves that they can make satisfactory joints under varying conditions.

Use the appropriate size applicator. Avoid puddling of solvent cement on or within fittings and pipe. This will cause excessive softening of materials, resulting in damage to the product and excessive system contamination.

Spears® low-extractable solvent-cemented assemblies cure very quickly when properly constructed, enabling pressure-bearing capability in a short time. This is a positive attribute of the system for scheduling pressure tests and repair work. However, Spears® Manufacturing Company recommends that newly assembled systems be allowed to cure for a minimum period of 24 hours prior to system rinsing/activation procedures. This reduces the potential for TOC contamination.

Spears® low-extractable piping products should not be connected directly to UV light sources that would expose system components to ultraviolet radiation.

Other Design Considerations

Proper system engineering, design, construction practices and operation are the responsibility of the design authority. Consideration must be given to ensure the Spears® low-extractable system is not exposed to any conditions that will exceed the product limitations regarding temperature, pressure, chemical compatibility, and mechanical strength. Detailed chemical resistance and other design information is available from Spears® Manufacturing Company.

DO NOT use with "hot" Deionized (DI) water as this may have a detrimental effect on the system. Spears® recommends that Low Extractable PVC systems used with deionized water should be limited operating temperatures of no more than 80°F.

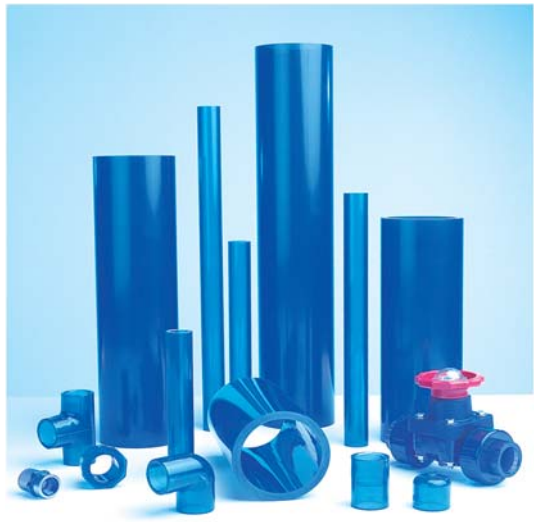
Spears® Manufacturing Company does not recommend the use of this product for the transportation or storage of compressed air or gases, nor the testing of these systems using compressed air or gases.

Excessive surge pressure must be avoided. The system must be designed to ensure that surge potentials generated by pump operation, entrapped air, flow velocity, and valve closure are kept to a minimum. Spears® does not recommend flow velocities in excess of five feet per second.

Spears® low-extractable piping systems are not formulated for outdoor use. Prolonged exposure to ultraviolet radiation (UVR) will affect physical properties.

Spears® Manufacturing Company recommends that newly installed systems be allowed to cure for a minimum period of 24 hours prior to rinsing procedures to reduce the potential for TOC contamination. Rinsing procedures, chemical rinse and other cleanup/disinfection procedures to be used are at the discretion of the system design authority. Note: Spears® low-extractable piping is compatible with hydrogen peroxide at concentrations up to 30% at 73°F. Contact Spears® for additional chemical compatibility information concerning the use of these products with various substances prior to use.

Sample Specifications



UPW process piping and fittings shall be manufactured from a specialty low-extractable, Polyvinyl Chloride (PVC) compound with a Cell Classification of 12343 per ASTM D 1784. All pipe and fittings shall be produced to Schedule 80 dimensions, manufactured in strict compliance to ASTM D 1785 (pipe), and ASTM D 2467 (fittings). These products shall carry a Type II pressure rating and consistently meet or exceed the applicable Quality Assurance test requirements of these standards with regard to dimensions, workmanship, burst pressure, flattening resistance and end-product quality. All UPW process valves shall be True Union-style diaphragm or True Union-style quarter-turn ball valves produced from the same low-extractable PVC compound. All valve diaphragms and seats shall be PTFE; valve O-rings shall be EPDM or FKM as applicable. All valve union nuts shall have buttress-style threads. All valve components shall be replaceable. System components shall be joined utilizing specially formulated one-step cement for joining the system. All system components shall be manufactured in the USA by an ISO-certified manufacturer. All UPW piping shall be bagged and sealed immediately after manufacture to maintain cleanliness, and boxed and stored indoors at the manufacturing facility until shipped from the factory. UPW process pipe and UPW piping components shall be those as provided by Spears® Manufacturing Company.

The data furnished herein is provided as a courtesy and is based on past experience, limited testing, and other information believed to be reliable. This information may be considered as a basis for recommendation only. No guarantee is made as to its accuracy, suitability for particular applications, or the results to be obtained therefrom. Materials should be tested under actual service conditions to determine suitability for a particular purpose.

"Lead Free" low lead certification – unless otherwise specified, all Spears® Low-Extractable piping and fittings specified here-in are certified by NSF International to ANSI/NSF® Standard 61, Annex G and is in compliance with California's Health & Safety Code Section 116825 (commonly known as AB1953) and Vermont Act 193. Weighted average lead content <=0.25%.

LabWaste™

CPVC Corrosive Waste Drainage Systems



DESIGN & INSTALLATION GUIDE

TECHNICAL INFORMATION

U.S. Patent No. 7,178,557
Manufactured to ASTM F 2618
NSF® cw Certified For Corrosive Waste



Visit our web site
www.spearsmfg.com

LabWaste™ CPVC Technical Information & Installation Guide

Proven Solvent Cement Joining Eliminates Troublesome Fusion Equipment, Mechanical Joints & Elastomer Problems

NSF® Certified for Corrosive Waste Use & Listed to ASTM F 2618
Specification For CPVC Pipe & Fittings for Chemical Waste Drainage Systems
Meets IAPMO IGC 210 and ICC-ES PMG-1018 For CPVC Chemical Waste Systems
U.S. Patent No. 7,178,557



- **Complete System of Pipe, Fittings & Adapters**
- **Meets 25/50 Flame & Smoke Requirement for use in Return Air Plenums**
- **Non-Pressure Drainage Service to 220º F**
- **All CPVC Construction in a Full Assortment of Standard DWV Patterns**
- **Accessories including Drains, Neutralization Tanks, and Dilution Traps**
- **Specially Formulated One-Step Solvent Cement Provides Chemical Resistance Equal to System Pipe & Fittings – Now in Special Yellow Color**

Chemical & Corrosion Resistant CPVC

One of the key advantages of Spears® **LabWaste™** CPVC System is its excellent resistance to a broad range of corrosive environments. CPVC is inert to most mineral acids, bases, salts and aliphatic hydrocarbons, and compares favorably to other plastics in these chemical environments.

General Chemical Resistance Overview:

Weak Acids	Excellent	Salts	Excellent
Strong Acids	Excellent	Aliphatic Solutions	Good
Weak Bases	Excellent	Halogens	Good-Fair
Strong Bases	Excellent	Strong Oxidants	Good-Fair

The **LabWaste™** CPVC System has been developed for use in Academic, Research, and Institutional Laboratory chemical waste drainage applications. These plumbing systems are characterized by the routine disposal of a wide variety of hot and cold chemical wastes in accordance with prudent laboratory practices for drainage disposal.

Manufactured to ASTM F 2618 in Full Line of Drainage Pattern Fitting Configurations

Spears® broad line of **LabWaste™** CPVC pipe & fittings are manufactured to ASTM F 2618 Specifications for CPVC Pipe & Fittings for Chemical Waste Drainage Systems and produced in ASTM D 3311 drainage patterns or to manufacturer's specifications. Standard configurations are available in nominal sizes of 1-1/2" through 24" with many specialty fittings and accessories, like dilution traps, (water dilution being critical in the prevention of exothermic chemical interactions within all plumbing systems).

NSF® Certified For Corrosive Waste

Spears® **LabWaste™** Corrosive Water Drainage System of pipe, fittings, and cement is tested and certified for use in corrosive waste systems by NSF International to ASTM F 2618, tested to IAPMO IGC 210, Certified to the Uniform Plumbing Code and ICC-ES listed to PMG-1018 for CPVC Chemical Waste Systems.

Cost Saving Solvent Weld Joining Eliminates the need for Electro-Fusion Joints and for Mechanical Joint Connections in Concealed Spaces

A proven joining method reliably used for over 50 years, Solvent Cement Welding requires no special tools, no costly fusion easy installation, repairs or alterations. Most importantly, solvent cement joints end problems typical of polypropylene system installation, such as mechanical connector pullout, maintaining mechanically sealed joints, leaks from fusion wire corrosion, and cumbersome fusion joining methods. Saves time, saves cost, saves worry!

A Flame & Smoke Rated Piping System

Spears® **LabWaste™** system components have been evaluated and Listed by Underwriters Laboratories of Canada (ULC®) as finished products for surface burning characteristics under CAN/ULC S102.2 and tested to UL 723/ASTM E 84, for Surface Burning Characteristics of Building Materials (NFPA 255, ANSI/UL 723 and UBC 8-1), and showed a flame spread of < 25 and a smoke developed index of < 50.

Industrial & Commercial Special Waste Applications

Spears® **LabWaste**™ CPVC products can be used in a very broad variety of dedicated waste applications with proper evaluation of waste medium and service conditions. **DO NOT** follow Chemical Resistance Tables recommendations in this manual for these applications. For non-laboratory applications, refer to CPVC pressure system resistance data for appropriate chemical resistance guidelines. Please contact Spears® Technical Services for additional information.

American Bureau of Shipping (ABS) Type Approval

Spears® **LabWaste**™ CPVC Corrosive Waste Drainage System pipe and fittings are ABS Type Approved for marine and offshore applications in nominal pipe sizes through 12". Type Approval details and restrictions are specified in ABS Certificate # 10-HS539421-2-PDA available on the ABS website at www.eagle.org.

Applicable Conformance Standards & Certifications

Spears® **LabWaste**™ CPVC Corrosive Waste Drainage System is a complete system of pipe, fittings and solvent cement independently (3rd party) tested, evaluated and certified by the following laboratories and agencies. Each of these approvals is routinely monitored through an ongoing program of periodic inspection and testing by the certifying agency.

• **ASTM F 2618** - Certified for corrosive waste and use by NSF International (NSF®-cw) in accordance with ASTM F 2618, *Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Fittings for Chemical Waste Drainage Systems.*

• **Uniform Plumbing Code** - Certified for use in accordance with the Uniform Plumbing Code (UPC®) by NSF International as specified in IAPMO IGC 210, *Interim Guide Criteria for Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Fittings for Limited Chemical Waste Drainage System.* (NSF®-U.P.Code).

• **International Plumbing Code** - Spears® **LabWaste**™ CPVC system has been approved for use in accordance with the International Plumbing Code (IPC®) by the International Codes Council Evaluation Services (ICC-ES) in accordance with ICC-ES PMG Listing PMG-1018 for Spears® **LabWaste**™ CPVC Corrosive Waste Drainage System (See ICC-ES PMG Listing PMG-1018 at www.icc-es-pmg.org).

System Integrity – Limited Lifetime Warranty

Spears® **LabWaste**™ products have been developed and designed to be used as a total system consisting of pipe, fittings, accessories, solvent cement and thread sealant. All Spears® **LabWaste**™ components must be used in order to ensure a sound piping system. Substitution of other products for Spears® **LabWaste**™ pipe, fittings, or solvent cement may be detrimental to system integrity and is not recommended. The Spears® Limited Lifetime Warranty (located at the end of the manual) does not cover problems occurring as the direct result of the use of products other than Spears® **LabWaste**™ system products, or products and materials not compatible with CPVC materials.

The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

Typical Physical Properties of Spears® LabWaste™ CPVC Material

Property	Test Method	Typical Value
Mechanical Properties @ 73°F		
Specific Gravity		1.49
Tensile Strength, psi	ASTM D 792	9000
Tensile Modulus, psi	ASTM D 638	420,000
Flexural Strength	ASTM D 638	12,000
Izod Impact (notched @73°F)	ASTM D 790	
Fittings	ASTM D 256	3.0
Pipe		5.5
Thermal Properties		
Heat Deflection Temperature 264 psi	ASTM D 648	
Fitting		214°F
Pipe		230°F
Thermal Conductivity, BTU/hr/sq ft/°F/in	ASTM C 177	.95
Coefficient of Linear Expansion, in/in/°F	ASTM D 696	3.2 x 10^{-5}
Flammability		
Limiting Oxygen Index	ASTM D 2863	60
UL 94 Rating	UL 94	V-0, 5VB
Flame & Smoke Rating[1]		
Flame Spread	CAN/ULC S 102.2	<25
Smoke Developed	UL 723/ASTM E 84	<50
Solvent Cement	ASTM F 2618/ASTM F 493	Heavy Body; Mustard Yellow Color

Typical Physical Properties data is based on information from material suppliers. It is provided as a guideline for service and is not to be considered a warranty of performance.
1- Based on test of physical product, including solvent cement welded pipe and fittings assemblies, as opposed to test of material only.

Fire Resistance

Material used in Spears® **LabWaste**™ CPVC systems has a UL 94 flammability rating of V-0, 5VB. Pipe and fittings have been Listed and rated based on *finished product* tests, as opposed to a material test only, for surface burning characteristics of flame spread and smoke density developed by Underwriters Laboratories of Canada under standard test method CAN/ULC S102.2. Additional test of **LabWaste**™ pipe with dry fit caps was conducted by Southwest Research Institute (SwRI) Department of Fire Technology under UL 723/ASTM E 84 (modified to test finished product). Pipe and fitting components ratings are below the 25 maximum flame spread and 50 maximum smoke density developed typically required for exposed air plenum installation. Check local codes for acceptability. Use of approved plenum wrap or transition connectors to other material may be used if required.

Pipe & Fittings

Spears® **LabWaste**™ CPVC pipe and fittings are produced to the dimensional and performance requirements of ASTM F 2618, *Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Fittings for Chemical Waste Drainage Systems*. **LabWaste**™ CPVC fitting configurations are produced to applicable DWV patterns of ASTM D 3311, *Standard Specification for Drain, Waste, and Vent (DWV) Plastic Fittings Patterns,* plus various specialty patterns and manufactured specified configurations not included in D 3311. All drainage fittings with 90° angles (sanitary tees, elbows, etc.) have socket pitch to maintain approximately 1/4" per foot drainage. **LabWaste**™ CPVC pipe is produced to dimensions specified in ASTM F 2618 with sizes greater than 12" produced to Schedule 40 dimensions of ASTM F 441, *Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe, Schedule 40 and 80.*

Schedule 40 CPVC Pipe Dimensions (inch)

Pipe Diameter	1-1/2	2	3	4	6	8	10	12	14	16	18	20	24
Avg. O.D.	1.900	2.375	3.500	4.500	6.625	8.625	10.750	12.750	14.000	16.000	18.000	20.000	24.000
Avg. I.D.	1.592	2.049	3.042	3.998	6.031	7.943	9.976	11.889	13.073	14.940	16.809	18.743	22.544
Min. Wall	.145	.154	.216	.237	.280	.322	.365	.406	.437	.500	.562	.593	.687

Expansion & Contraction

Spears® **LabWaste**™ CPVC products, like all piping materials, expand and contract with changes in temperature. If the coefficient of linear expansion is 3.2 x 10^{-5} in./in. °F, a 25°F change in temperature will cause an expansion of 1 inch for a 100-foot straight length. For most operating and installation conditions, expansion and contraction can be accommodated at changes of direction, or simple expansion loops can be used. For underground installations, snaking the pipe in the trench can be used where necessary to accommodate expansion and contraction.

Thermal expansion change in length is calculated from Length of Run in feet, expected Change in Temperature and given Coefficient of Linear Thermal Expansion of 3.2 x 10^{-5} in./in. °F for CPVC:

$\Delta L = 12eL (\Delta T)$
Where:
e = 3.2 x 10^{-5} in./in. °F
L = Length of Run in feet
ΔT = Temperature Change in °F

Example:
How much will a 50 ft. run Spears® **LabWaste**™ pipe expand if the expected ambient temperature will range from 45°F to 85°F?
$\Delta L = 12eL (\Delta T)$
$\Delta L = 12 \times .000032 \times 50 \times 40$
$\Delta L = .768$ inches

The following table provides quick reference in identifying expansion length change for different run lengths of pipe at various anticipated temperature changes.

Thermal Expansion Table

Length of Run (L) in feet	Length Change in Inches (ΔL) for Specified Change in Temperature (ΔT)								
	20°F	30°F	40°F	50°F	60°F	70°F	80°F	90°F	100°F
10	.08	.12	.15	.19	.23	.27	.31	.35	.38
20	.15	.23	.31	.38	.46	.54	.61	.69	.77
40	.31	.46	.61	.77	.92	1.08	1.23	1.38	1.54
50	.38	.58	.77	.96	1.15	1.34	1.54	1.73	1.92
70	.54	.81	1.08	1.34	1.61	1.88	2.15	2.42	2.69
90	.69	1.04	1.38	1.73	2.07	2.42	2.76	3.11	3.46
120	.92	1.38	1.84	2.30	2.76	3.23	3.69	4.15	4.61

Joining Methods

Spears® **LabWaste**™ CPVC pipe and fittings are easily joined using Spears® LW-5 One-Step Solvent Cement that has been specially formulated for corrosive/acid waste applications and manufactured in accordance with ASTM F 493, *Standard Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings,* as specified in ASTM F 2618. When cured, this cement provides a fused joint that maintains the same physical and chemical resistance properties as the CPVC components in the system. Spears® LW-5 is a "one-step" cement and does not require the use of primer. Spears® **LabWaste**™ CPVC systems may be additionally joined using threaded (NPT) or flanged connections where removal or connection to supplementary equipment is required. Special transition couplings are available for joining to Polypropylene, PVDF, glass or Duriron systems.

Solvent Cement Joints – Store below 90°F (33°C). Stir and use as is. If jelled, replace. Use within 2 years of date stamped on can. This cement is designed for use without a Primer. Check local code requirements before using Spears® LW - 5 cement.

1. Cut pipe square, deburr and chamfer (bevel 10° to 15°). Clean and dry joining surfaces.
2. Check dry fit. For interference fit, pipe should push 1/4 to 3/4 way into fitting snugly.
3. Use a suitable applicator at least 1/2 size of pipe diameter; for larger sizes use brush or roller.
4. Apply a full even layer of cement on the pipe equal to the socket depth. Coat the fitting socket with a medium layer. Avoid excess and puddling. If necessary, apply a second full layer on pipe.

5. Assemble while cement is wet. If not wet, recoat all parts before assembly. Assure pipe bottoms into fitting socket using a 1/8 to 1/4 turns twist. To avoid push out and allow for initial set, hold for about 30 seconds. Wipe off excess. Handle newly assembled joints carefully.

An Initial Set time is recommended to provide good handling strength after which the joint will handle normal stresses of installation. Cure Time is the recommended waiting period prior to placing the joint into service and before any pressure testing of the system. Set and cure times are relative to temperature at time of installation. Best results are obtained at temperatures between 40° and 110°F. Due to the many field variables, these should be used as a general guide only.

Recommended Set & Cure Times

Temperature	Initial Set	Cure
60°F - 100°F	30 min.	1 hr.
40°F - 60°F	1 hr.	2 hrs.
0°F	2 hrs.	4 hrs.

In moist or humid conditions (relative humidity above 60%) allow 50% more cure time.

Average Number of Joints per Quart of LW-5 One-step Cement

Pipe Diameter	1-1/2	2	3	4	6	8	10	12	14	16
No. of Joints	90	60	40	30	10	5	2-3	1-2	3/4	1/2-3/4

Estimate based on laboratory tests. Due to many field variables, these figures should be used as a general guide only.

Threaded Joints - Spears® Manufacturing Company highly recommends the use of Spears® **BLUE 75™** thread sealant, which has been tested for compatibility with Spears® products. Please follow the sealant Manufacturer's Application/Installation instructions. Choice of another appropriate thread sealant is at the discretion of the installer.

WARNING: Some pipe joint compounds or pastes may contain substances that could cause stress cracks in CPVC. For transitions to metal threaded systems, all cutting oils must be removed and the metal pipe thoroughly flushed and degreased prior to assembly with CPVC systems.

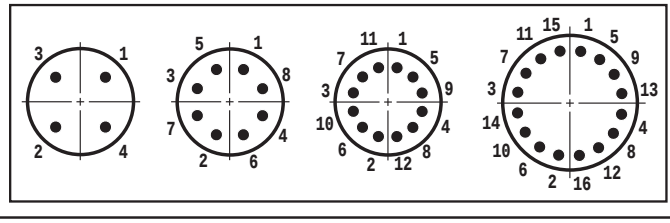
1. Apply joint sealant to the male pipe threads ONLY.
2. Thread joint hand tight for initial assembly.
3. Using commercial strap wrenches tighten 1 to 2 turns beyond hand tight; avoid over tightening. **DO NOT** use conventional pipe wrenches that can damage plastic fittings.

If a tape sealant is used:
1. Use TFE tape no less than 25 mil thick.
2. Initial wrap must fully cover the thread end.
3. Wrap clockwise with standard pipe threads.
4. Use only 2-3 wraps of tape.

DO NOT use combination of paste and tape sealants.



Flanged Connections - Solvent cement flange hub to pipe according to preceding instructions. Use full faced, 1/8" thick gaskets of a material suitable for the intended application having a Shore "A" durometer of approximately 60. Use of well lubricated bolts and flat washers is required. Bolts must be tightened in a 180° opposing pattern to the recommended torque values.

Flange Size (in.)	Bolt Torque (ft.-lb.)	Torque Sequence
1-1/2	12	
2-4	25	
6-8	40	
10	64	
12	95	
14-16	110	

LabWaste™ Transitions To Other Systems – Spears® **LabWaste™** Corrosive Waste Drainage System provides a complete line of transition fittings for use with other corrosive waste piping materials for system additions and retrofits.

P099 Transition Coupling: Hub X Compression. Allows connection of **LabWaste**™ to Polypropylene or PVDF pipe and solvent cement socket connection to CPVC system. A safety groove must be cut into the Polypropylene or PVDF pipe to resist pull out. A groove cutting tool is available from Spears®

P093 Elastomer Transitions Coupling For Glass: IPS Clamp Joint X Glass Clamp Joint. Allows mechanical connection of **LabWaste**™ CPVC pipe to plain end Kimax® glass pipe. Consists of high performance fluoroelastomer (FKM) sleeve, an outer stainless steel shear ring and two AISI 301 stainless steel clamping bands.

P098 Glass Transition Coupling: Spigot X Bead Clamp. Allows mechanical connection of **LabWaste**™ to beaded-end glass drainage pipe. Coupling consists of a CPVC beaded-end matching glass pipe bead and CPVC pipe diameter spigot end for solvent cement connection. This requires a glass system's mechanical connector, available from Schott Scientific Glass, part# 6650-XXXX Bead-to-Bead end.

P094 Elastomer Transitions Coupling For Duriron®: IPS Clamp Joint X Duriron® Clamp Joint. Allows mechanical connection of **LabWaste**™ CPVC pipe to plain end Duriron® pipe. Consists of high performance fluoroelastomer (FKM) sleeve, an outer stainless steel shear ring and two AISI 301 stainless steel clamping bands.

P095 Duriron® Mechanical Transition Fitting: Mechanical Joint X CPVC Pipe Size. Allows mechanical connection of **LabWaste**™ to Duriron (siliconized iron) pipe. Fitting consists of Duriron pipe diameter spigot (male pipe end) and CPVC pipe diameter spigot end for solvent cement connection. Requires use of Duriron Mechanical Joint Coupling that consists of an inner sleeve of PTFE surrounded by an outer sleeve of Neoprene rubber held in place by a stainless steel coupling. Duriron® Mechanical Joint Coupling available through Flowserve.

P097 Duriron® Caulk Transition Coupling: Spigot x Caulk Joint. Allows caulk-joint connection of **LabWaste**™ pipe to Duriron borosilicate systems. Coupling consists of Duriron pipe diameter male end for mating to Duriron belled pipe end and CPVC pipe diameter spigot end for solvent cement connection. This requires use of special chemical acid-resistant oakum packing available from Flowserve (Red Stripe Sealite A312 Rope) and plastic lead/caulk purchased from others. **DO NOT** use hot lead or oiled Oakum for this type of caulk-joint.

P096 Grooved Coupling Adapter: Groove X Socket. Allows connection of the **LabWaste**™ to grooved metal piping systems. Requires use of a Metal Grooved Coupling with gasket. A flexible style grooved coupling must be used for plastic only. **Do not use rigid style couplings.** Use either Victaulic Flexible Grooved Couplings Part# 75 & 77 or Gruvlok Flexible Grooved Couplings Part# 7001 & 7000.

Please contact Spears® for special construction of any system transition connection needs not specified.

Support Spacing

Spears® **LabWaste**™ CPVC systems should be properly supported to avoid stress caused by sagging and system component loads. Support should be given to concentrated system loads, such a flanges and where changes in direction occur. Such support should be made as close to fittings as possible, yet allow for movement due to expansion and contraction.

Conventional pipe hangers and brackets can be used. However, hangers must **NOT** be used to pull the piping system into position or over tightened to either restrict necessary movement or cut into pipe. Hangers should be smooth, free of burrs and provide as much load-bearing surface as possible.

Systems should be supported in accordance with applicable plumbing codes. Check local codes for additional requirements. The following chart shows recommended horizontal support spacing for un-insulated continuous spans with no concentrated loads. This information is provided as a general guideline. Local codes, engineering specifications, and system installation conditions may require significant variations.

Recommended Hanger Spacing (feet)

Pipe Diameter	1-1/2	2	3	4	6	8	10	12	14	16
Hanger Spacing	6	6	7	7-1/2	8	9	10	10-1/2	11	12

Underground Installation

Spears® **LabWaste**™ CPVC systems may be installed underground in a smooth, uniform trench bottom that supports the pipe over its entire length, free of rocks and debris. Subsoil should be stable to provide physical protection for the pipe and fittings. Where large boulders are not removed, trench should be padded with sand or fine-grained soil. Trench should be wide enough to provide room for joining pipe in the trench and to allow snaking from side-to-side to provide slack for future expansion-contraction. Install a larger size pipe as a sleeve where piping must pass through masonry walls. Use only solvent cement connection in underground piping. System should be tested in accordance with local plumbing codes prior to back filling. Pipe should be surrounded with an initial backfill material having a particle size of 1/2" or less, free of sharp rock or debris and uniformly compacted in layers. Refer to ASTM D 2321, *Underground Installation of Thermoplastic Pipe for Sewer and Other Gravity-Flow Applications*, for additional information on underground installations.

Acid Neutralization/Dilution Tanks for Use With LabWaste™ CPVC Systems

Neutralization or dilution tanks are required by codes for the purpose of neutralizing corrosive wastes. Corrosive liquids, spent acids or other harmful chemicals that destroy or injure a drain, sewer, soil or waste pipe, or create noxious or toxic fumes or interfere with sewage treatment processes are prohibited from discharge into the plumbing system without being neutralized or treated. A variety of system designs and treatment methods can be used for neutralization and dilution. For proper performance, Spears® recommends use of professional assistance in analysis of the application, neutralization system design, equipment selection, and specific maintenance requirements.

Spears® offers a standard selection of HDPE in 5 gallon to 3000 gallon capacities and CPVC tanks in 5 gallon to 55 gallon capacities with a variety of connection and vent options, plus convenient 1-gallon Dilution Tank designed for under-sink installation. Tanks can also be custom produced in virtually any size, shape, or connection configuration, including custom double-containment tanks. Contact Spears® Technical Services with desired specifications for custom quotation. See **SSB-1 Part 1 List Price Catalog – LabWaste™ *CPVC Waste Drainage Systems***, for pricing, additional information, selection detail and available options such as venting, tank extensions, manhole ports, pedestrian and traffic covers.

Installation Considerations - Except for under-sink installations, tank should be located on the lowest floor or basement room. It is recommended that the tank be in a concrete vault on a smooth flat surface. Where necessary, tanks may be installed on sturdy sheeting or directly into the ground. In all cases, the surface must be capable of uniformly supporting the tank weight, including effluent and neutralization medium.

Neutralization tanks and tank extensions are not warranted for direct burial applications. Tanks must be properly placed and secured with no applied stresses, within a dry concrete vault. However, if direct burial is used without warranty, custom centerlines must be furnished from top of cover down to fitting centerline instead of specified tank bottom to fittings centerline since tank heights can vary. The top of the tank must remain accessible for servicing and clean out either directly or by manhole cover. Tanks may be installed under foot or light vehicle traffic with use of appropriate covers and support. Tanks themselves are not to be used to support traffic loading.

Avoid strain when installing the pipe to tank fitting connections. Tanks must **NOT** be supported by the inlet, outlet, or vent piping.

The following recommendation from the American Society of Plumbing Engineers (ASPE) may be used as a guideline for sizing tanks according to the number of lab sinks.

Neutralization Tank Sizing Table

Number of Lab Sinks	Tank Size	
	Gallons	Liters
2	5	18.9
4	15	56.8
8	30	113.6
16	55	208.2
22	75	283.9
27	90	340.7
30	108	408.8
40	150	567.8
50	175	662.4

Number of Lab Sinks	Tank Size	
	Gallons	Liters
60	200	757
75	275	1040.9
110	360	1362.6
150	500	1898.5
175	550	2081.8
200	650	2460.3
300	1200	4542
500	2000	7570
600	3000	11355

Limestone Chips for Acid Neutralization Tanks - Most state and local codes require the addition of a neutralization medium in acid waste tanks with the addition of water for dilution prior to discharge into a sanitary sewer system. Limestone must be 1" to 3" in diameter with a calcium carbonate content of at least 90%. Spears® offers high grade Limestone Chips having a calcium carbonate content of approximately 95%. The use of Limestone Chips is generally one of the best and least expensive means of acid neutralization, but may be used in conjunction with more sophisticated chemical treatments if necessary.

How Much Limestone to Use - The following is a guideline for pounds of Limestone Chips to use for one (1) tank filling (charge). It is recommended that sufficient quantity be ordered for more than one filling.

Tank Size Gallons	Approx. Pounds
5	50
15	100
30	200
55	500
100	1,000
150	1,750
175	1,900
200	2,500
275	3,200

Tank Size Gallons	Approx. Pounds
300	3,200
350	4,000
500	5,000
550	7,500
650	9,000
1200	11,000
2000	16,000
3000	25,000

General Tank Maintenance Guidelines - Tanks should be inspected routinely for accumulation of precipitated sludge and debris that must be cleaned out (usually scooped out) and for periodic addition of limestone and water if necessary. While once every one to three months may be sufficient, professional assistance should be sought to establish a proper schedule based on actual use. **Note:** Tank must be filled with water prior to carefully adding Limestone Chips to charge the system. Request instruction sheet.

System Pressure Testing

Spears® **LabWaste**™ CPVC systems should be tested with water as follows, or according to local plumbing codes. Test only after sufficient joint cure (see "Recommended Set & Cure Time"). The system may be tested in its entirety or isolated at each floor or in sections for testing.

Close all openings tight except the highest opening and fill the system to the point of overflow. Fill the system slowly, being sure to allow all air to escape. A minimum of ten (10) foot (3048 mm) head should be used for entire system or section tested. Allow the system/section under test to set 15 minutes before inspection for leaks.

Drain each section after inspection. Any leaking solvent cement joints should be cut from the system, replaced and retested after proper joint cure. Check any leaking mechanical joints for proper installation, applicable tightening, and presence of any debris in the joint. Reassemble and retest.

Supplemental Equipment Not Specified in this Manual

A variety of supplemental equipment including, pump stations, laboratory workstations, and fume hoods are built to customer specifications. Standard Laboratory fixtures, floor drains, wall drains and traps plus manual or actuated valves are also available. Spears® can custom fabricate virtually any **LabWaste**™ system component. Contact Spears® for additional needs or a custom quotation.

System Integrity

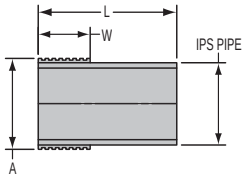
Spears® **LabWaste**™ products have been developed and designed to be used as a total system consisting of pipe, fittings, accessories, solvent cement and thread sealant. All-Spears® **LabWaste**™ components should be used in order to insure a sound piping system. Substitution of other products for Spears® **LabWaste**™ pipe, fittings, or solvent cement may be detrimental to system integrity and is not recommended. The Spears® Limited Lifetime Warranty (located on the back cover of this manual) does not cover problems occurring within the piping system as the direct result of non-use of Spears® **LabWaste**™ system products.

Sample Engineering Specification

Special drainage systems for corrosive chemical or acid waste shall be manufactured from CPVC Type IV, ASTM Cell Classification 23447 per ASTM D 1784. All pipe, fittings and solvent cement shall be manufactured in accordance with ASTM F 2618 and certified by NSF International for corrosive waste end use (NSF® cw). All pipe and molded fittings shall be CAN/ULC S102.2 Listed for Surface Burning Characteristics with a flame spread of less than 25 and a smoke development of less than 50 as designated on the original package labeling for fittings and on the pipe print string marking. All pipe markings shall be accompanied by a yellow stripe for identification of CPVC chemical waste system. All fittings shall be CPVC drainage patterns meeting the requirements of ASTM D 3311 and specialty patterns according to the manufacturer's specifications. Joining method for pipe and fittings shall be solvent cement welding. Solvent cement shall be a "one-step" primerless type CPVC cement designated by the system manufacturer, specially formulated for resistance to corrosive chemicals and manufactured in accordance with ASTM F 493, as specified in ASTM F 2618. Mechanical connections for special equipment connection or transition to other system materials shall be as specified by the CPVC system manufacturer. All pipe, fittings, and cement shall be supplied together as a complete system. Installation shall be in accordance with the manufacturer's instructions and all applicable codes. Special drainage system to be Spears® **LabWaste**™ CPVC Corrosive Waste Drainage Systems manufactured by Spears® Manufacturing Company.

P095 Duriron Transition Fitting

Mechanical Joint x Pipe Size

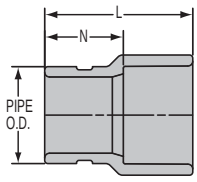


For connection to Duriron system. Requires duriron mechanical joint coupling.

Part Number	Size	A	L	W
P095-015C	1-1/2	1-3/16	4	1-3/8
P095-020C	2	2-5/8	4	1-1/2
P095-030C	3	3-3/4	4	1-7/8
P095-040C	4	4-3/4	4	2-5/16

P096 Grooved Coupling

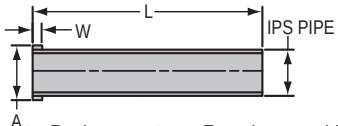
Grv x Soc



Part Number	Size	L	N
P096-015C	1-1/2	2-15/16	1-1/2
P096-020C	2	3-1/16	1-9/16
P096-030C	3	3-9/16	1-11/16
P096-040C	4	4-1/2	2-1/4
P096-060C	6	5-3/8	2-3/8

P097 Duriron Transition Coupling

Spig x Caulk Joint

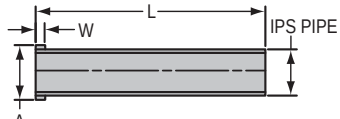


For connection to Duriron system. Requires packing and plastic lead. **Warning:** Do not use hot lead or oiled Oakum.

Part Number	Size	A	L	W
P097-015C	1-1/2	2-1/4	12	1/2
P097-020C	2	2-7/8	12	1/2
P097-030C	3	4-3/16	12	1/2
P097-040C	4	5-1/4	12	1/2

P097 Duriron Transition Coupling (continued)

Spig x Caulk Joint

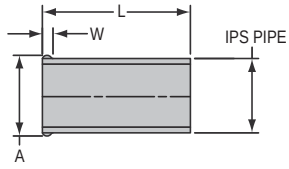


For connection to Duriron system. Requires packing and plastic lead. **Warning:** Do not use hot lead or oiled Oakum.

Part Number	Size	A	L	W
P097-060C	6	7-9/16	12	1/2
P097-080C	8	9-11/16	12	1/2

P098 Glass Transition Coupling

Spig x Clamp

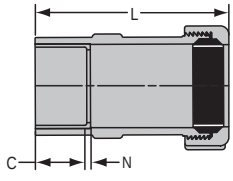


For connection to glass system. Requires use of clamp from glass system manufacturer.

Part Number	Size	A	L	W
P098-015C	1-1/2	2-1/16	4	1/4
P098-020C	2	2-1/16	5	1/4
P098-030C	3	3-11/16	6	5/16
P098-040C	4	4-27/32	6	5/16
P098-060C	6	7-1/8	6	1/2

P099 Transition Coupling

H x Compression

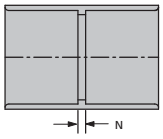


For connection to PP or PVDF systems. Requires Safety Retaining Groove Tool. Contact Spears®.

Part Number	Size	C	L	N
P099-015C	1-1/2	1-3/8	5-1/8	3/32
P099-020C	2	1-1/2	5-3/4	1/8
P099-030C	3	1-7/8	10-5/16	3/16
P099-040C	4	2-1/4	11-5/32	7/32
P099-060C	6	3	13-3/8	9/32

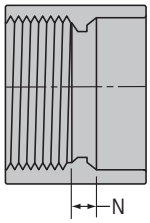
NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
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P100 Coupling
H x H



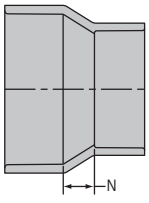
Part Number	Size	N
P100-015C	1-1/2	1/8
P100-020C	2	1/8
P100-030C	3	3/16
P100-040C	4	1/4
P100-060C	6	1/4
P100-080C	8	1/4
P100-100C	10	3/8
P100-120C	12	3/8
P100-140C	14	3/8

P101 Female Adapter
FPT x H



Part Number	Size	N
P101-015C	1-1/2	1/4
P101-020C	2	1/4
P101-030C	3	5/16
P101-040C	4	3/8
P101-060C	6	15/32

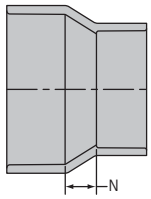
P102 Increaser Reducer
H x H



Part Number	Size	N
P102-251C	2x1-1/2	11/16
P102-337C	3x1-1/2	1-3/32
P102-338C	3x2	15/16
P102-420C	4x2	1-3/4
P102-422C	4x3	15/16
P102-530C	6x3	1-15/16
P102-532C	6x4	1-7/16
P102-582C	8x4	2-11/32
P102-585C	8x6	1-11/32

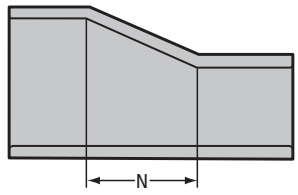
(continued)

P102 Increaser Reducer
H x H



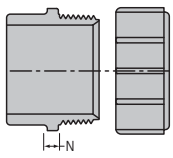
Part Number	Size	N
P102-624C	10x4	3-3/8
P102-626C	10x6	2-3/16
P102-628C	10x8	1-9/32
P102-666C	12x6	3-9/32
P102-668C	12x8	2-1/4

Pipe Increaser - Eccentric Reducer
H x H



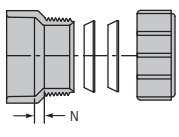
Part Number	Size	N
P102-338EC	3x2	2-15/32

P103P Trap Adapter - Male
Spig x Slip with Plastic Nut



Part Number	Size	N
P103P-015C	1-1/2	3/16
P103P-020C	2	3/16

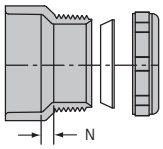
P104R Trap Adapter - Female w/1-1/2 Plastic Nut & Washer and 1-1/2x1-1/4 Washer
H x Slip w/Plastic Nut



Part Number	Size	N
P104R-015C	1-1/2	3/16

P104X Trap Adapter - Female

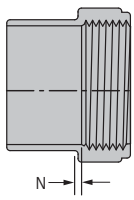
H x Slip w/ Chrome Nut & Washer



Part Number	Size	N
P104X-015C	1-1/2	3/16

P105 Cleanout Adapter

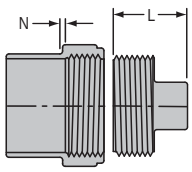
Spig x FPT



Part Number	Size	N
P105-015C	1-1/2	5/32
P105-020C	2	1/4
P105-030C	3	11/32
P105-040C	4	1/4
P105-060C	6	11/32
P105-080C	8	13/32

P105X Cleanout Adapter with Square Head Plug

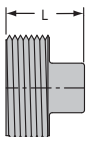
Spig x FPT



SEE PART NO. P105 AND P106

P106 Square Head Cleanout Plug

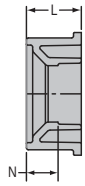
MPT



Part Number	Size	L
P106-015C	1-1/2	1-3/8
P106-020C	2	1-5/16
P106-030C	3	1-25/32
P106-040C	4	1-7/8
P106-060C	6	1-15/16
P106-080C	8	2-1/8

P107 Flush Bushing

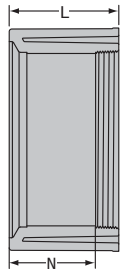
Spig x H



Part Number	Size	L	N
P107-251C	2x1-1/2	1-1/16	7/32
P107-337C	3x1-1/2	1-3/4	1
P107-338C	3x2	1-25/32	1
P107-420C	4x2	2	1-3/16
P107-422C	4x3	2	1/2
P107-530C	6x3	3-23/32	2-11/32
P107-532C	6x4	3-7/16	1-11/16
P107-582C	8x4	4-9/16	2-13/16
P107-585C	8x6	4-19/32	1-9/16
P107-628C	10x8	5-15/32	15/32

P108 Flush Bushing (Cleanout Adapter)

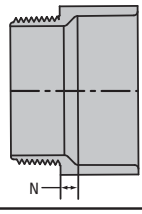
S x FPT



Part Number	Size	L	N
P108-212C	1-1/2x1-1/4	7/8	3/16

P109 Male Adapter

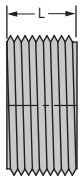
MPT x H



Part Number	Size	N
P109-169C	1-1/4x1-1/2	3/16
P109-015C	1-1/2	3/16
P109-020C	2	3/16
P109-030C	3	3/8
P109-040C	4	3/8
P109-060C	6	11/16

P110 Counter Sunk Cleanout Plug

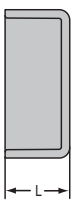
MPT



Part Number	Size	L
P110-015C	1-1/2	5/8
P110-020C	2	5/8
P110-030C	3	3/4
P110-040C	4	7/8
P110-060C	6	31/32

P116 Cap

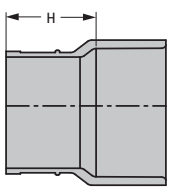
Socket



Part Number	Size	L
P116-015C	1-1/2	15/16
P116-020C	2	1
P116-030C	3	1-3/4
P116-040C	4	2
P116-060C	6	3-9/32
P116-080C	8	6-3/8

P119 No-Hub Adapter

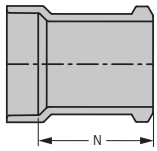
S x H



Part Number	Size	H
P119-015C	1-1/2	1-9/16
P119-020C	2	1-5/8
P119-030C	3	1-13/16
P119-040C	4	1-7/8

P123 Hub Adapter

H x S

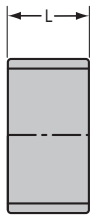


For connection to Cast Iron system. Requires packing and plastic lead. **Warning:** Do not use hot lead or oiled Oakum.

Part Number	Size	N
P123-020C	2	4-5/8
P123-030C	3	5-5/8

P130 Repair Coupling

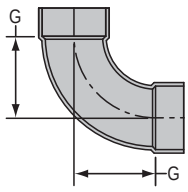
H x H



Part Number	Size	L
P130-030C	3	3-7/32
P130-040C	4	3-13/16

P300 1/4 Bend (90° Ell)

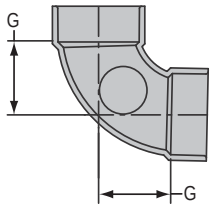
H x H



Part Number	Size	G
P300-015C	1-1/2	1-11/16
P300-020C	2	2-9/32
P300-030C	3	3
P300-040C	4	3-29/32
P300-060C	6	5
P300-080C	8	6
P300-100C	10	9-29/32
P300-120C	12	10-29/32

P300S 1/4 Bend w/Side Inlet (90° Ell)

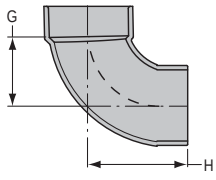
All Hub



Part Number	Size	G
P300S-338C	3x3x2	3-1/8

P302 1/4 Bend, Street (90° Street Ell)

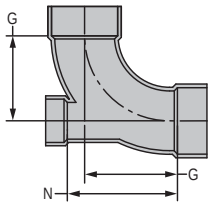
H x Spig



Part Number	Size	G	H
P302-015C	1-1/2	1-9/16	2-13/32
P302-020C	2	2-7/32	3-5/32
P302-030C	3	3-3/16	4-9/16
P302-040C	4	3-7/8	5-5/8
P302-060C	6	5	8-11/32
P302-080C	8	6	10-1/2
P302-100C	10	9-29/32	15-3/8
P302-120C	12	10-15/16	17-3/8

P303 1/4 Bend with Low Heel Inlet

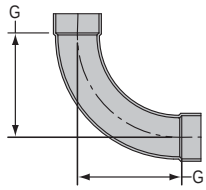
H x H x H



Part Number	Size	G	N
P303-338C	3x3x2	2-27/32	4-5/32
P303-420C	4x4x2	3-5/16	5

P304 1/4 Bend, Long Sweep (90° LS Ell)

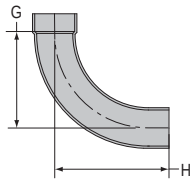
H x H



Part Number	Size	G
P304-015C	1-1/2	2-3/4
P304-020C	2	3-3/32
P304-030C	3	4-5/32
P304-040C	4	5-25/32
P304-060C	6	8-29/32

P309 Long Sweep 1/4 Bend, Street (90° LS Street Ell)

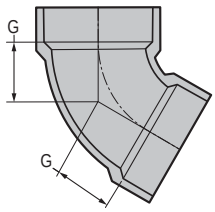
H x Spig



Part Number	Size	G	H
P309-015C	1-1/2	2-3/4	3-11/32
P309-020C	2	3-9/32	4-3/32
P309-030C	3	4-1/8	5-23/32
P309-040C	4	5-1/32	6-7/16
P309-060C	6	8-31/32	11-29/32

P319 1/6 Bend (60° Ell)

H x H

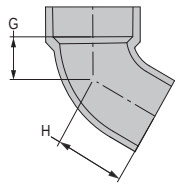


Part Number	Size	G
P319-015C	1-1/2	1-1/16
P319-020C	2	1-3/8
P319-030C	3	1-11/16
P319-040C	4	2-5/32
P319-060CF	6	4-9/16

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P320 1/6 Bend, Street (60° Street Ell)

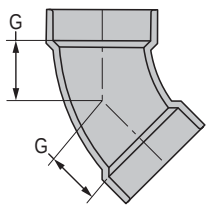
H x Spig



Part Number	Size	G	H
P320-015C	1-1/2	1-1/16	1-3/4
P320-020C	2	1-5/8	2-1/4
P320-030C	3	1-11/16	3-1/16
P320-040C	4	2-5/32	3-19/32

P321 1/8 Bend (45° Ell)

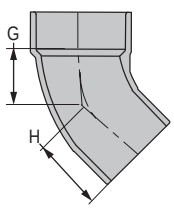
H x H



Part Number	Size	G
P321-015C	1-1/2	1-1/8
P321-020C	2	1-7/16
P321-030C	3	1-23/32
P321-040C	4	2-1/8
P321-060C	6	2-1/16
P321-080C	8	2
P321-100C	10	2-5/8
P321-120C	12	3-1/8

P323 1/8 Bend, Street (45° Street Ell)

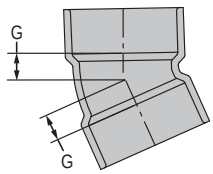
H x Spig



Part Number	Size	G	H
P323-015C	1-1/2	31/32	1-13/16
P323-020C	2	1-7/16	2-7/32
P323-030C	3	1-7/8	3-1/8
P323-040C	4	2-3/16	3-15/16
P323-060C	6	1-29/32	5-1/16
P323-080C	8	3-1/8	6-1/2

P324 1/16 Bend (22-1/2 Ell)

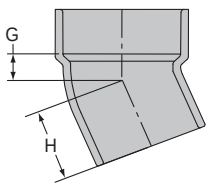
H x H



Part Number	Size	G
P324-015C	1-1/2	1/2
P324-020C	2	11/16
P324-030C	3	13/16
P324-040C	4	1
P324-060C	6	1-5/16
P324-080C	8	1-11/32

P326 1/16 Bend, Street (22-1/2° Street Ell)

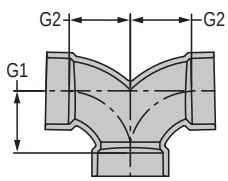
H x Spig



Part Number	Size	G	H
P326-015C	1-1/2	1/2	1-1/4
P326-020C	2	11/16	1-1/2
P326-030C	3	13/16	2-5/16
P326-040C	4	3/16	2-1/4
P326-060C	6	1-3/8	4-1/2
P326-080C	8	1-3/4	5-5/8

P327 Double 1/4 Bend (3 Way Ell)

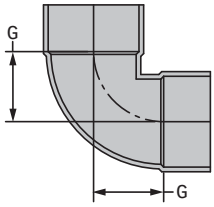
All Hub



Part Number	Size	G1	G2
P327-015C	1-1/2	1-3/4	1-3/4
P327-020C	2	2-5/16	2-5/16
P327-030C	3	3-1/16	3-1/16
P327-040C	4	3-29/32	3-29/32
P327-241C	2x1-1/2x1-1/2	1-3/8	4-1/2

P331 Vent Ell

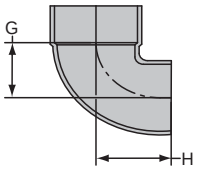
H x H



Part Number	Size	G
P331-015C	1-1/2	1-3/16
P331-020C	2	1-1/2
P331-030C	3	1-7/8
P331-040C	4	2-5/16
P331-060C	6	3-15/32

P333 Vent Ell, Street

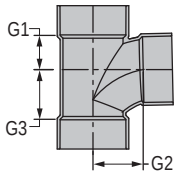
H x Spig



Part Number	Size	G	H
P333-015C	1-1/2	1-3/16	2
P333-020C	2	1-1/2	2-1/8
P333-030C	3	1-7/8	3-5/8
P333-040C	4	4-3/16	4-7/16

P400 Sanitary Tee

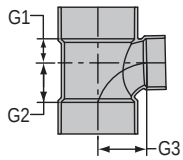
All Hub



Part Number	Size	G1	G2	G3
P400-015C	1-1/2	25/32	1-9/16	1-9/16
P400-020C	2	1-11/32	2-5/16	2-5/16
P400-030C	3	1-13/16	2-7/8	2-7/8
P400-040C	4	2-1/32	3-11/16	3-11/16
P400-060C	6	3-7/16	5-1/32	5-1/32
P400-080C	8	4-13/32	6-1/16	6-1/16
P400-100C	10	5-17/32	9-31/32	9-29/32
P400-120C	12	6-1/2	10-31/32	11-1/32

P401 Sanitary Tee, Reducing

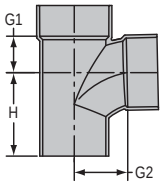
All Hub



Part Number	Size	G1	G2	G3
P401-241C	2x1-1/2x1-1/2	1-3/16	1-15/16	2-3/16
P401-251C	2x2x1-1/2	1-1/4	1-27/32	2-3/16
P401-257C	2x1-1/2x2	1-3/8	2-5/16	2-5/16
P401-337C	3x3x1-1/2	15/16	1-3/4	2-1/2
P401-338C	3x3x2	31/32	1-29/32	2-13/16
P401-420C	4x4x2	7/8	1-27/32	3-5/32
P401-422C	4x4x3	1-11/16	3	3-1/2
P401-532C	6x6x4	2-1/8	3-19/32	4-11/16
P401-582C	8x8x4	4-17/32	5-7/8	8-7/8

P403 Sanitary Tee, Street

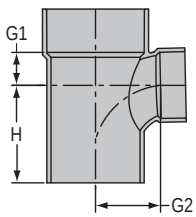
S x H x H



Part Number	Size	G1	G2	H
P403-015C	1-1/2	13/16	1-17/32	2-7/16
P403-030C	3	1-7/8	2-15/16	4-3/8
P403-040C	4	2-1/4	3-7/8	5-5/8
P403-080C	8	4-3/8	5-31/32	9-13/32
P403-100C	10	5-19/32	9-1/2	14-19/32
P403-120C	12	6-15/32	11-1/32	16-9/32

P404 Sanitary Tee, Street, Reducing

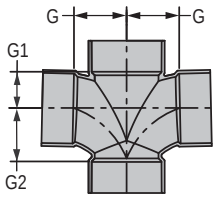
S x H x H



Part Number	Size	G1	G2	H
P404-241C	2x1-1/2x1-1/2	1-7/32	2-7/32	2-9/16
P404-251C	2x2x1-1/2	1-9/32	2-3/16	2-1/2
P404-337C	3x3x1-1/2	13/16	2-15/32	2-15/16
P404-338C	3x3x2	1-1/16	2-3/4	3-7/32

P428 Double Sanitary Tee

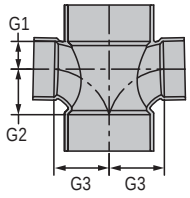
All HUB



Part Number	Size	G	G1	G2
P428-015C	1-1/2	1-3/4	1	1
P428-020C	2	2-7/8	1-25/32	1-25/32
P428-030C	3	3-1/16	1-13/16	1-13/16
P428-040C	4	3-7/8	2-1/4	2-1/4

P429 Double Sanitary Tee, Reducing

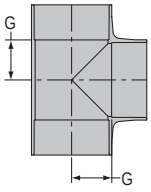
All Hub



Part Number	Size	G1	G2	G3
P429-241C	2x1-1/2x1-1/2x1-1/2	1-3/16	1-7/8	2-1/16
P429-251C	2x2x1-1/2x1-1/2	1-1/8	1-7/8	2-1/8
P429-337C	3x3x1-1/2x1-1/2	15/16	1-3/4	4
P429-338C	3x3x2x2	1-3/16	2-1/8	2-7/8
P429-419C	4x4x1-1/2x1-1/2	1-1/16	2	5-1/16
P429-420C	4x4x2x2	1-1/8	2-1/16	5-1/16
P429-422C	4x4x3x3	1-3/4	3	5-1/16

P441 Vent Tee

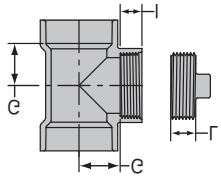
All Hub



Part Number	Size	G
P441-015C	1-1/2	1-5/32
P441-030C	3	1-29/32
P441-040C	4	2-3/8
P441-060C	6	3-5/8

P444X Cleanout Tee w/Plug

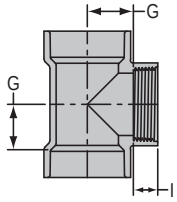
H x H x FPT



SEE PART NO. P445 AND P106

P445 Cleanout Tee

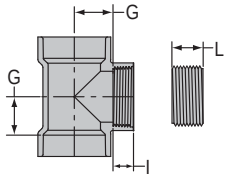
H x H x FPT



Part Number	Size	G	I
P445-015C	1-1/2	1-1/8	5/8
P445-020C	2	1-13/32	5/8
P445-030C	3	1-7/8	3/4
P445-040C	4	2-7/16	7/8
P445-060C	6	3-1/2	1

P445X Cleanout Tee with Counter Sunk Plug

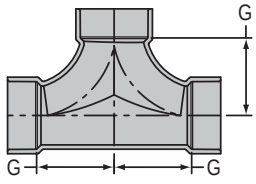
H x H x FPT



SEE PART NO. P445 AND P110

P448 2-Way Cleanout

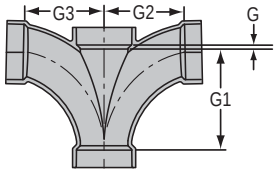
ALL HUB



Part Number	Size	G
P448-030C	3	4
P448-040C	4	4-13/16

P500 Double Fixture Fitting

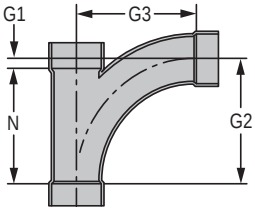
All Hub



Part Number	Size	G	G1	G2	G3
P500-020C	2x2x2x2	9/16	3-9/16	3-5/16	3-5/16
P500-241C	2x1-1/2x1-1/2x1-1/2	3/8	3-1/8	2-7/8	2-7/8
P500-251C	2x2x1-1/2x1-1/2	1/8	3-1/4	2-25/32	2-25/32
P500-338C	3x2x3x3	1/2	6-9/32	4-7/8	4-7/8
P500-030C	3x3x3x3	1/2	6-9/32	4-29/32	4-29/32

P501 Combination Wye and 1/8 Bend (Long Turn Tee Wye)

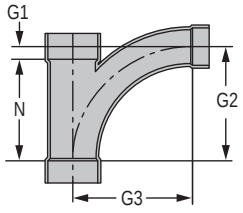
All Hub



Part Number	Size	G1	G2	G3	N
P501-015C	1-1/2	13/32	3-7/8	3-7/8	3-15/32
P501-020C	2	11/16	5-1/8	5-1/8	4-7/16
P501-030C	3	1-1/16	7-9/16	7-9/16	6-1/2
P501-040C	4	1-1/2	10	10	8-1/2

P502 Combination Wye and 1/8 Bend, Reducing (Long Turn Tee Wye)

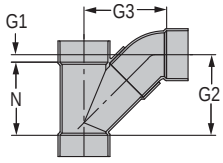
All Hub



Part Number	Size	G1	G2	G3	N
P502-251C	2x2x1-1/2	7/16	3-15/16	4-3/16	3-1/2
P502-337C	3x3x1-1/2	7/16	3-15/16	4-3/4	3-1/2
P502-338C	3x3x2	11/16	5-1/8	5-11/16	4-7/16
P502-420C	4x4x2	7/32	4-1/2	6-1/8	4-3/32
P502-422C	4x4x3	1-1/16	7-9/16	8-1/16	6-1/2

P503 Combination Wye and 1/8 Bend (Two Piece)

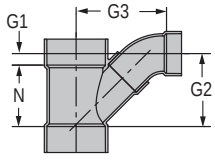
All Hub



Part Number	Size	G1	G2	G3	N
P503-060C	6	31/32	10-31/32	11-11/32	10
P503-080C	8	1-1/2	16	16	14-1/2
P503-100C	10	2-1/2	21-7/8	17-15/16	16-9/16

P504 Combination Wye and 1/8 Bend, Reducing (Two Piece)

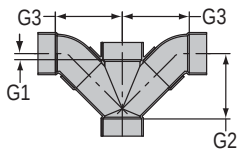
All Hub



Part Number	Size	G1	G2	G3	N
P504-241C	2x1-1/2	3/32	4-7/16	4-15/32	4-5/16
P504-528C	6x2	15/32	7-9/16	8-27/32	7-3/32
P504-530C	6x3	5/8	7-1/4	8-29/32	7-3/32
P504-532C	6x4	1-5/16	8-3/32	10-3/32	6-27/32
P504-582C	8x4	1-1/4	9-1/4	11-1/8	8
P504-585C	8x6	1	11-5/16	12-7/16	10-7/16
P504-623C	10x3	2-3/8	11-1/16	13-15/16	11-1/16
P504-624C	10x4	1-3/8	12-3/16	14-5/8	10-13/16
P504-626C	10x6	2-1/2	11-3/4	14-1/16	10-13/16
P504-628C	10x8	2-1/2	14-1/2	15-1/2	13-9/16
P504-668C	12x8	3	20-1/8	19-1/8	19-1/8
P504-670C	12x10	3	19-13/16	19-1/2	19-1/8

P507 Double Combination Wye and 1/8 Bend

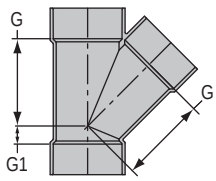
All Hub



Part Number	Size	G1	G2	G3
P507-020C	2	11/16	5-9/16	5-13/16
P507-030C	3	27/32	7-11/32	7-11/32
P507-040C	4	1-1/8	8-31/32	9-7/32
P507-060C	6	1	11-1/32	11-13/32
P507-338C	3x3x2x2	29/32	5-3/4	6-1/2
P507-422C	4x4x3x3	1-1/16	7-1/2	8-1/8
P507-530C	6x6x3x3	1-1/32	10-7/8	10-7/8
P507-532C	6x6x4x4	1-23/32	11-5/8	12-5/32

P600 45° Wye

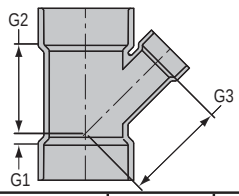
All Hub



Part Number	Size	G	G1
P600-015C	1-1/2	2-7/8	1-3/32
P600-020C	2	3-5/8	7/8
P600-030C	3	5	1-5/8
P600-040C	4	6-1/4	1-7/8
P600-060C	6	8	1-3/8
P600-080C	8	11-5/16	2
P600-100C	10	14-1/32	2-7/16
P600-120C	12	16-7/16	2-5/32

P601 45° Wye, Reducing

All Hub

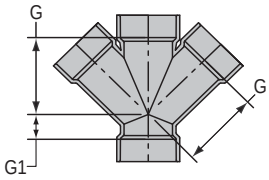


Part Number	Size	G1	G2	G3
P601-241C	2x1-1/2x1-1/2	3/4	2-15/16	2-15/16
P601-251C	2x2x1-1/2	13/16	3-15/32	3-17/32
P601-337C	3x3x1-1/2	1/2	3-25/32	4-3/8
P601-338C	3x3x2	7/8	4-3/32	4-17/32
P601-419C	4x4x1-1/2	3/8	3-9/32	4-3/8
P601-420C	4x4x2	9/32	4-1/4	5-5/16
P601-422C	4x4x3	21/32	5-1/2	5-29/32
P601-528C	6x6x2	7/32	6-7/8	8-3/8
P601-530C	6x6x3	1-1/8	6	6-7/8
P601-532C	6x6x4	23/32	6-3/16	7-1/8
P601-578C	8x8x2	3/8	7-5/8	9-13/16
P601-580C	8x8x3	7/32	9-1/8	7-11/32
P601-582C	8x8x4	3/8	6-31/32	8-5/16
P601-585C	8x8x6	1	9-1/2	9-13/16
P601-626C	10x10x6	9/32	10-31/32	11-31/32
P601-628C	10x10x8	1-1/16	12-3/8	11-27/32
P601-661C[1]	12x12x2	3	16-3/16	23-1/2
P601-663C[1]	12x12x3	3	16-3/16	22-7/8
P601-664C[1]	12x12x4	3	16-3/16	22-3/8
P601-666C[1]	12x12x6	3	16-3/16	21-1/8
P601-670C[1]	12x12x10	2-15/16	16-3/16	17-3/16

[1] Sized with Bushing

P611 Double Wye

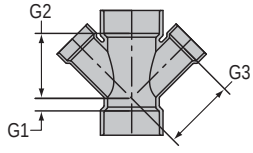
All Hub



Part Number	Size	G	G1
P611-015C	1-1/2	2-7/8	1-1/8
P611-020C	2	3-9/16	1-3/8
P611-030C	3	4-15/16	1-5/8
P611-040C	4	6-11/32	1-27/32
P611-060C	6	8-5/16	1-25/32

P612 Double Wye, Reducing

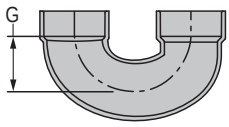
All Hub



Part Number	Size	G1	G2	G3
P612-241C	2x1-1/2x1-1/2x1-1/2	25/32	3-3/8	4-3/16
P612-251C	2x2x1-1/2x1-1/2	1-1/16	3-5-16	3-7/16
P612-337C	3x3x1-1/2x1-1/2	1/2	3-3/4	4-5/16
P612-338C	3x3x2x2	7/8	4-1/16	4-5/8
P612-420C	4x4x2x2	3/8	4-5/8	5-17/32
P612-422C	4x4x3x3	1-1/2	5-1/32	5-9/32
P612-532C	6x6x4x4	3/16	6-11/16	7-7/16

P700 Return Bend

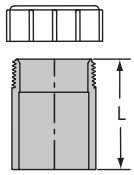
H x H



Part Number	Size	G
P700-015C	1-1/2	1-13/32
P700-020C	2	2-3/8
P700-030C	3	3
P700-040C	4	3-7/16
P700-060C	6	5

P704P Tail Piece Adapter

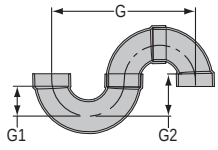
Spig x Slip w/Plastic Nut



Part Number	Size	L
P704P-015C	1-1/2	2-1/2

P705 S-Trap

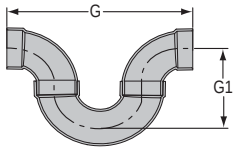
H x H



Part Number	Size	G	G1	G2
P705-015C	1-1/2	7-1/2	1-3/4	2-3/8
P705-020C	2	14-1/2	2-3/8	3-13/32
P705-030C	3	15-1/2	3-3/16	4-7/16
P705-040C	4	19-1/16	3-7/8	5-9/16

P705R Running Trap

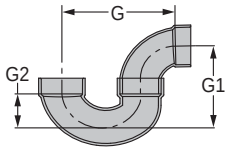
H x H



Part Number	Size	G	G1
P705R-015C	1-1/2	8	3-3/4
P705R-020C	2	12-1/2	5-7/16
P705R-030C	3	17-1/8	7-21/32
P705R-040C	4	20-7/8	9-9/32

P706X P-Trap

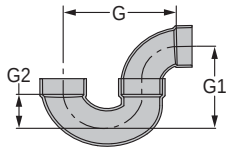
H x H



Part Number	Size	G	G1	G2
P706X-015C	1-1/2	4-3/16	3-29/32	1-13/32
P706X-020C	2	6-7/16	4-21/32	2-11/32

P706X P-Trap (continued)

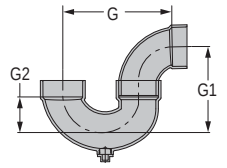
H x H



Part Number	Size	G	G1	G2
P706X-030C	3	8-11/16	6-15/16	3-1/32
P706X-040C	4	11-1/32	8-1/8	3-23/32
P706X-060C	6	18-25/32	14-3/4	5-13/16
P706X-080C	8	22	17	6-3/4

P707X P-Trap w/Cleanout

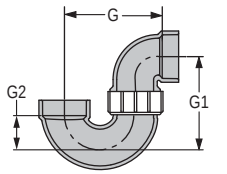
H x H



Part Number	Size	G	G1	G2
P707X-015C	1-1/2	4-3/16	3-21/32	1-7/32

P708P P-Trap w/Plastic Nut (Union Connection)

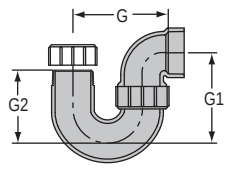
H x H



Part Number	Size	G	G1	G2
P708P-015C	1-1/2	4-1/4	3-3/4	1-9/16
P708P-020C	2	7-1/4	4-3/8	2-13/32

P711P L.A. Pattern P-Trap w/Plastic Nut (Union Connection w/Slip Joint)

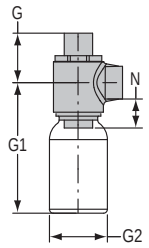
Slip x H w/Plastic Nut



Part Number	Size	G	G1	G2
P711P-015C	1-1/2	4-11/32	3-3/4	3-1/2

P712 Jar Trap

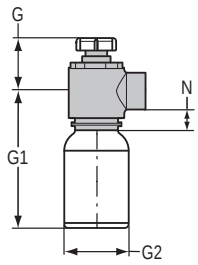
Spig x H



Part Number	Size	G	G1	G2	N
P712-015C	1-1/2	3-3/16	8-1/4	3-29/32	1-7/8

P712P Jar Trap w/Tail Piece Adapter

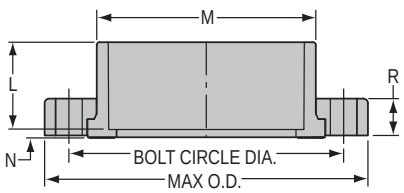
Slip x H



Part Number	Size	G	G1	G2	N
P712P-015C	1-1/2	3-5/16	8-1/4	3-7/8	1-3/4

Flange - Van Stone Style

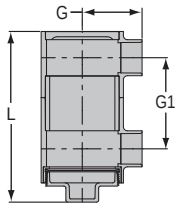
Soc



Part Number	Size	L	M	N	R	No. of Bolt Holes	Bolt Circle Dia.	Bolt Size	Min. Bolt Length	Max O.D.
854-015C	1-1/2	1-17/32	2-7/16	3/16	3/4	4	3-7/8	1/2	2-1/2	5
854-020C	2	1-11/16	2-15/16	3/16	13/16	4	4-3/4	5/8	3	6
854-030C	3	2-1/8	4-1/4	1/4	1-1/16	4	6	5/8	3-1/4	7-1/2
854-040C	4	2-1/2	5-1/4	1/4	1-1/8	8	7-1/2	5/8	3-1/2	9
854-060C	6	3-3/8	7-9/16	7/16	1-9/32	8	9-1/2	3/4	4	11
854-080C	8	4-3/8	9-5/16	9/32	1-3/8	8	11-3/4	3/4	4-1/2	13-1/2
854-100C	10	5-11/16	11-3/4	21/32	1-5/8	12	14-1/4	7/8	5	16
854-120C	12	7-1/4	13-3/4	5/8	1-1/2	12	17	7/8	5	19
854-140C	14	7-1/2	15-1/2	1/2	2	12	18-3/4	1	5-1/2	21
854-160C	16	8-3/4	17-3/4	3/4	2-3/8	16	21-1/4	1	6-1/2	23-1/2

P720 Drum Trap

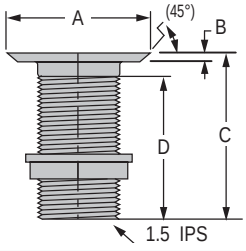
H x H



Part Number	Size	G	G1	L
P720-015C	1-1/2	3-5/8	5-11/16	10-5/8
P720-020C	2	3-7/8	5	10-3/8
P720-030C	3	4-1/2	6-3/4	13-7/16
P720-040C	4	4-3/8	8-1/4	15-11/16

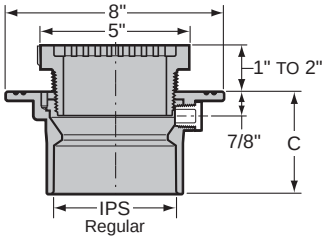
Waste Assembly

Sink Oultet



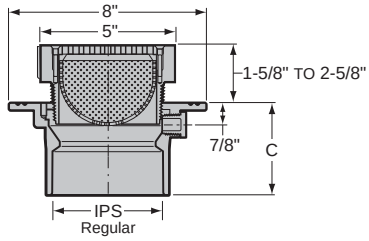
Part Number	Size	A	B	C	D
LWWA-1	1-1/2	2-7/16	9/32	4-9/32	3-27/32

LW1500 Floor Drain with CPVC Adjustable Top w/5" Round Grate



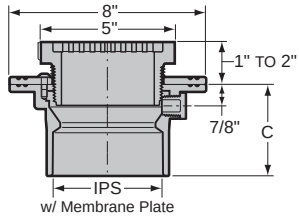
Part Number Regular	Size	IPS	C
LW1500-015C	1-1/2x5	1-1/2	4-3/16
LW1500-020C	2x5	2	4
LW1500-030C	3x5	3	4
LW1500-040C	4x5	4	3-3/4

LW1520 Floor Drain with CPVC Adjustable Top w/5" Round Grate & Strainer



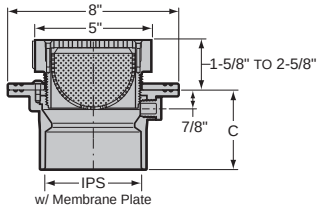
Part Number	Size	IPS	C
LW1520-015C	1-1/2x5	1-1/2	4-3/16
LW1520-020C	2x5	2	4
LW1520-030C	3x5	3	4
LW1520-040C	4x5	4	3-3/4

LW150M Floor Drain with CPVC Adjustable Top w/5" Round Grate & Membrane Collar



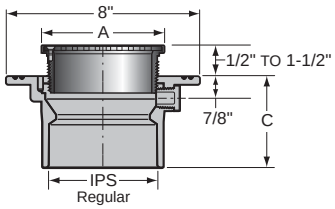
Part Number Membrane Plate	Size	C
LW150M-015C	1-1/2x5	4-3/16
LW150M-020C	2x5	4
LW150M-030C	3x5	4
LW150M-040C	4x5	3-3/4

LW152M Floor Drain with CPVC Adjustable Top w/5" Round Grate, Strainer & Membrane Collar



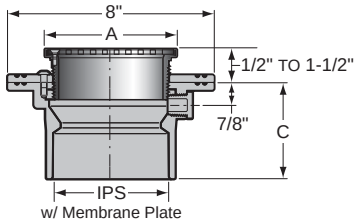
Part Number Regular	Size	IPS	C
LW152M-015C	1-1/2x5	1-1/2	4-3/16
LW152M-020C	2x5	2	4
LW152M-030C	3x5	3	4
LW152M-040C	4x5	4	3-3/4

Floor Drain with Stainless Steel Adjustable Top w/Round Grate



Part Number Regular	Size	A, Nom	IPS	C
LW1500-015S	1-1/2x5	5	1-1/2	4-3/16
LW1600-015S	1-1/2x6	6	1-1/2	4-3/16
LW1700-015S	1-1/2x7	7	1-1/2	4-3/16
LW1800-015S	1-1/2x8	8	1-1/2	4-3/16
LW1500-020S	2x5	5	2	4
LW1600-020S	2x6	6	2	4
LW1700-020S	2x7	7	2	4
LW1800-020S	2x8	8	2	4
LW1500-030S	3x5	5	3	4
LW1600-030S	3x6	6	3	4
LW1700-030S	3x7	7	3	4
LW1800-030S	3x8	8	3	4
LW1500-040S	4x5	5	4	3-3/4
LW1600-040S	4x6	6	4	3-3/4
LW1700-040S	4x7	7	4	3-3/4
LW1800-040S	4x8	8	4	3-3/4

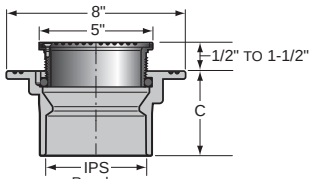
Floor Drain with Stainless Steel Adjustable Top w/Round Grate & Membrane Collar



Part Number Membrane	Size	A, Nom	IPS	C
LW150M-015S	1-1/2x5	5	1-1/2	4-3/16
LW160M-015S	1-1/2x6	6	1-1/2	4-3/16
LW170M-015S	1-1/2x7	7	1-1/2	4-3/16
LW180M-015S	1-1/2x8	8	1-1/2	4-3/16
LW150M-020S	2x5	5	2	4
LW160M-020S	2x6	6	2	4
LW170M-020S	2x7	7	2	4
LW180M-020S	2x8	8	2	4
LW150M-030S	3x5	5	3	4
LW160M-030S	3x6	6	3	4
LW170M-030S	3x7	7	3	4
LW180M-030S	3x8	8	3	4
LW150M-040S	4x5	5	4	3-3/4
LW160M-040S	4x6	6	4	3-3/4
LW170M-040S	4x7	7	4	3-3/4
LW180M-040S	4x8	8	4	3-3/4

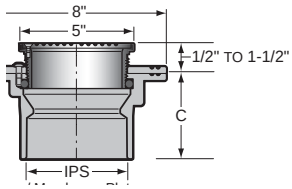


LW1510 Floor Cleanout w/Stainless Steel Adjustable Round Top & Solid Access Cover



Part Number Regular	Size	IPS	C
LW1510-015S	1-1/2x5	1-1/2	4-3/16
LW1510-020S	2x5	2	4
LW1510-030S	3x5	3	4
LW1510-040S	4x5	4	3-3/4

LW151M Floor Cleanout w/Stainless Steel Adjustable Round Top, Solid Access Cover & Membrane Collar



Part Number Membrane Plate	Size	IPS	C
LW151M-015S	1-1/2x5	1-1/2	4-3/16
LW151M-020S	2x5	2	4
LW151M-030S	3x5	3	4
LW151M-040S	4x5	4	3-3/4

LW LabWaste™ Pipe

10' Lengths



Part Number	Pipe Dia. (inches)	Avg. O.D.	Avg. I.D.	Min. Wall
LW-015	1-1/2	1.900	1.592	.145
LW-020	2	2.375	2.049	.154
LW-030	3	3.500	3.042	.216
LW-040	4	4.500	3.998	.237
LW-060	6	6.625	6.031	.280
LW-080	8	8.625	7.943	.322
LW-100	10	10.750	9.976	.365
LW-120	12	12.750	11.890	.406

One-Step CPVC Cement Yellow-Heavy Bodied



Part Number	Size
LW5-030	Quart
LW5-040	Gallon

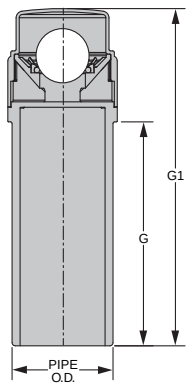
Average Number of Joints per Quart of Solvent Cement

Pipe Diameter	Number of Joints
1-1/2"	90
2"	60
3"	40
4"	30
6"	10
8"	5
10"	2 - 3
12"	1 - 2

Note: These figures are based on laboratory tests. Due to many field variations, these should be used as a general guide only.

LabWaste™ Air Admittance Valve

Spigot



MAX: 6DFU Drainage Fixture Units

Part Number	Size	G	G1
AAV-015C	1-1/2	4-1/8	6-1/4

Standard HDPE Round Neutralization/Dilution Tanks

Construction: HDPE – High Density Polyethylene

Tank Capacity US Gallions	Approx. Useable Capacity, US Gallons		Inside Dimension Dia x Ht. (in.)	Wall Thickness (in.)	Approx. Weight (lbs.)	Standard Inlet & Outlet Connection Size (in.)	Standard Fitting Connection	LabWaste™ Transition Connection Fitting	Optional Vent Connection Size (in.)	Approx. Centerline Height (in.)		
	Without Liimestone	With Limestone								Inlet	Outlet	Vent
5	3	1	11 x 14	3/16	10	1-1/2 or 2	Mipt	P101	1-1/2 or 2	11	8	12
15	7	2	18 x 15	3/16	20	1-1/2 or 2	Mipt	P101	1-1/2 or 2	11	8	12
30	19	6	18 x 29	3/16	35	3	Mipt	P101	2 or 3	23	19	25
55	35	12	22 x 36	3/16	50	4	Mipt	P101	3 or 4	27	23	31
100	77	26	28 x 42	1/4	85	4	Mipt	P101	3 or 4	35	31	37
150	105	35	31 x 48	1/4	100	4	Mipt	P101	3 or 4	38	34	42
175	135	45	30 x 60	1/4	125	4	Mipt	P101	3 or 4	51	47	54
200	137	46	36 x 48	1/4	125	4 or 6	Mipt/Flange	P101/854	4 or 6	38	34	42
275	186	62	42 x 48	1/4	160	4 or 6	Mipt/Flange	P101/854	4 or 6	38	34	42
300	230	76	36 x 74	5/16	175	4 or 6	Mipt/Flange	P101/854	4 or 6	61	56	65
350	243	81	48 x 48	5/16	200	4 or 6	Mipt/Flange	P101/854	4 or 6	38	34	42
500	395	132	52 x 60	3/8	225	4 or 6	Mipt/Flange	P101/854	4 or 6	51	47	54
550	447	149	48 x 72	3/8	275	4 or 6	Mipt/Flange	P101/854	4 or 6	64	60	67
650	548	183	48 x 84	3/8	375	4 or 6	Mipt/Flange	P101/854	4 or 6	75	71	76
1200	1052	351	69 x 84	3/8	600	4 or 6	Mipt/Flange	P101/854	4 or 6	74	68	76
2000[1]	1559	521	84 x 84	1/2	850	4 or 6	Mipt/Flange	P101/854	4 or 6	74	68	76
3000[1]	2203	735	95 x 97	1/2	1350	4 or 6	Mipt/Flange	P101/854	4 or 6	87	83	91

Standard CPVC Round Neutralization/Dilution Tanks

Construction: Chlorinated Polyvinyl Chloride (CPVC)

Tank Capacity US Gallions	Approx. Useable Capacity, US Gallons		Inside Dimension Dia. x Ht. (in.)	Wall Thickness (in.)	Approx. Weight (lbs.)	Standard[2] Inlet & Outlet Connection Size (in.)	Standard Fitting Connection	LabWaste™ Transition Connection Fitting[3]	Optional[4] Vent Connection Size (in.)	Approx. Centerline Height (in.)[5]		
	Without Limestone	With Limestone								Inlet	Outlet	Vent
5	5	3	12-3/8 x 14-11/16	3/16	20	1-1/2 or 2	Socket	Direct	1-1/2 or 2	11	8	12
15	15	7	17-11/16 x 17-1/4	3/16	35	1-1/2 or 2	Socket	Direct	1-1/2 or 2	11	8	12
30	30	18	17-5/8 x 33	3/16	54	3	Socket	Direct	2 or 3	23	18	25
55	55	35	23-1/2 x 38-1/2	1/4	70	4	Socket	Direct	3 or 4	27	23	31

Important Notes

1 Larger HDPE tanks may include exterior steel banding or fiberglass reinforcement for additional strength. Special ordered optional inspection manhole ports are recommended for larger tanks (includes cover with neoprene gasket, stainless steel nuts, bolts, and washers).

2 All tanks can be special ordered with Mipt, Flanged (CL150), and Fipt connections or varying combinations other than standard connections specified. Inlets or vents may also be custom ordered for installation in covers instead of tank sides.

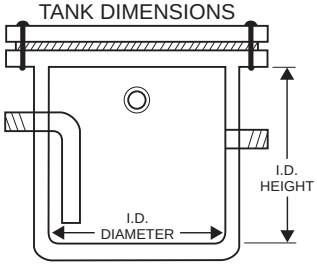
3 For transitions from Mipt HDPE tank connections to **LabWaste™** piping use part numbers P101-xxxC, Female Adapter. CPVC tank sockets can be cemented directly to **LabWaste™** piping. For transitions from ALL flanged connections to **LabWaste™** piping use part numbers 854-xxxC, Flange (xxx = size code).

4 Venting is required by codes but may be accomplished either at the tank or in-line.

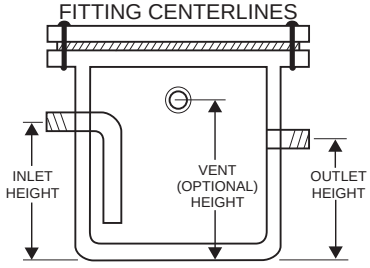
5 Neutralization tanks and tank extensions are not warranted for direct burial applications. Tanks must be properly placed and secured with no applied stresses, within a dry concrete vault with use of a protective traffic cover as deemed appropriate. However, if direct burial is used without warranty, custom centerlines must be furnished from top of cover down to fitting centerline instead of specified tank bottom to fitting centerline since tank heights can vary.

HDPE Tanks

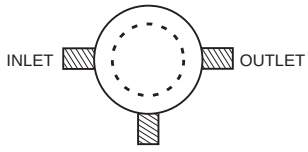
TANK DIMENSIONS



FITTING CENTERLINES



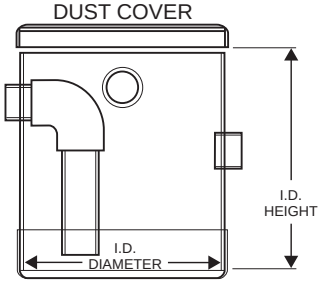
TOP VIEW
STANDARD FITTING LOCATIONS



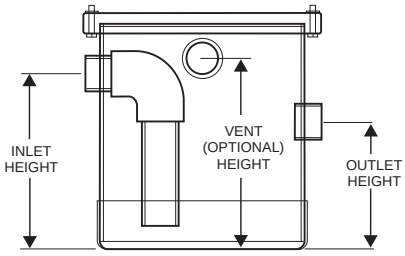
(Advise If You Want Standard Locations Changed)

CPVC Tanks

SLIP-ON
DUST COVER

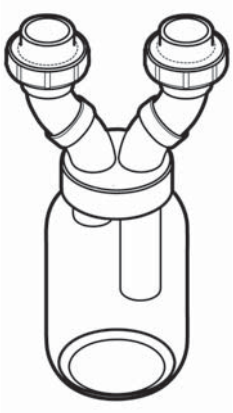


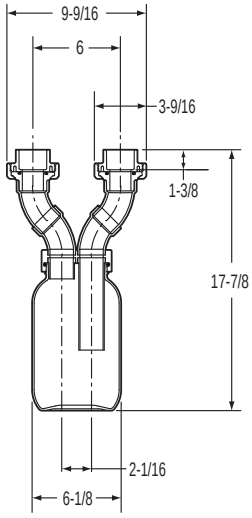
BOLTED COVER



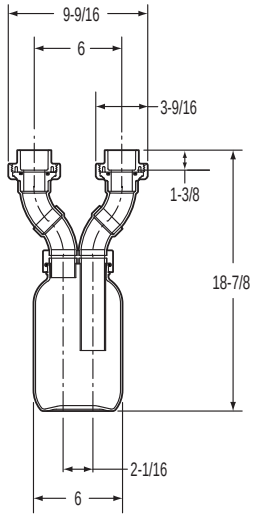
1-Gallon CPVC Dilution Tanks

Provides chemical dilution from water rinse during use. Designed for under-sink installations.
CPVC construction with Glass or PP Jar type tank.





Glass



Polypropylene

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Progressive Products from Spears® Innovation and Technology

Chemical Resistance Information

CPVC is inert to most acids, bases, salts, plus a wide variety of organic compounds. Application conditions including chemical concentration and temperature must be taken into consideration. Due to the many variables involved, final suitability often must be based on in-service testing.

The following Chemical Resistance Table recommendations apply only to non-pressure, laboratory drainage applications, which are those characterized as the routine disposal of a wide variety of hot and cold chemicals in relatively small quantities accompanied by water for the purpose of dilution and flushing. For use of **LabWaste**™ CPVC products in continuous or dedicated chemical waste drainage systems, chemical resistance data for pressure applications must be followed. Contact Spears® Technical Services for additional information.

In many cases compatibility or solubility data is not available. While specific data may not be available, please note that virtually all aqueous solutions of chemicals used in a laboratory can be safely used with proper dilution and flushing. This includes chemicals that readily disperse in water (such as many fat-soluble vitamins and oils) that can be flushed during disposal.

This information is compiled from commercially available industry sources. It is offered in good faith and believed to be accurate at the time of its preparation, but is offered without any warranty, expressed or implied, by information sources or Spears® Manufacturing Company. These recommendations are guidelines for use and the final decision regarding material suitability must rest with the end-user.

Noted Caution Areas for CPVC

- Disposed chemicals must be properly diluted. Chemicals that individually have no affect may have an affect when used in combination. Due to the wide variety of potential chemical concentrations and combinations, testing under actual service conditions is highly recommended.

- CPVC is not recommended for use with chlorinated solvents. Most solvents are prohibited by law from disposal in drainage systems.

- Chemicals that do not normally affect CPVC may cause cracking when excessive stress is applied. Tests under applied adverse stress conditions indicate that environmental stress cracking may occur when exposed to surfactants, certain oils, or grease. Such stresses include external stresses from expansion/contraction and installation. Special consideration should be taken during design and installation to avoid unusual stresses in the piping system.

- Chemical resistance of plastics tends to decrease with an increase in chemical concentration and/or temperature. As a result, various chemicals may be safely handled in limited concentrations or within certain temperature limits. Most all aqueous solutions of water-soluble chemical not specified in the Chemical Resistance Tables can be used in CPVC drainage systems.

- While **LabWaste**™ CPVC products are suitable for many continuous commercial and industrial chemical waste applications, the following Chemical Resistance Tables should **NOT** be used for these applications. Consult chemical resistance data for CPVC pressure piping to determine suitability for continuous chemical waste drainage applications.

WARNING: Hazardous material (including certain solvents and high concentrations of certain acids), are typically not discharged into lab waste piping. Laboratories routinely have specialized collection equipment and contracted disposal services for waste considered “hazardous”. Proper laboratory protocols on handling materials identified by OSHA and EPA as “hazardous” must be established and followed. Such requirements typically specify special storage and disposal apart from drainage disposal via dilution or neutralization. Even improper handling and disposal of HAZARDOUS materials by accident are subject to heavy fines by Federal, State and Local Authorities.

Chemical Resistance Tables

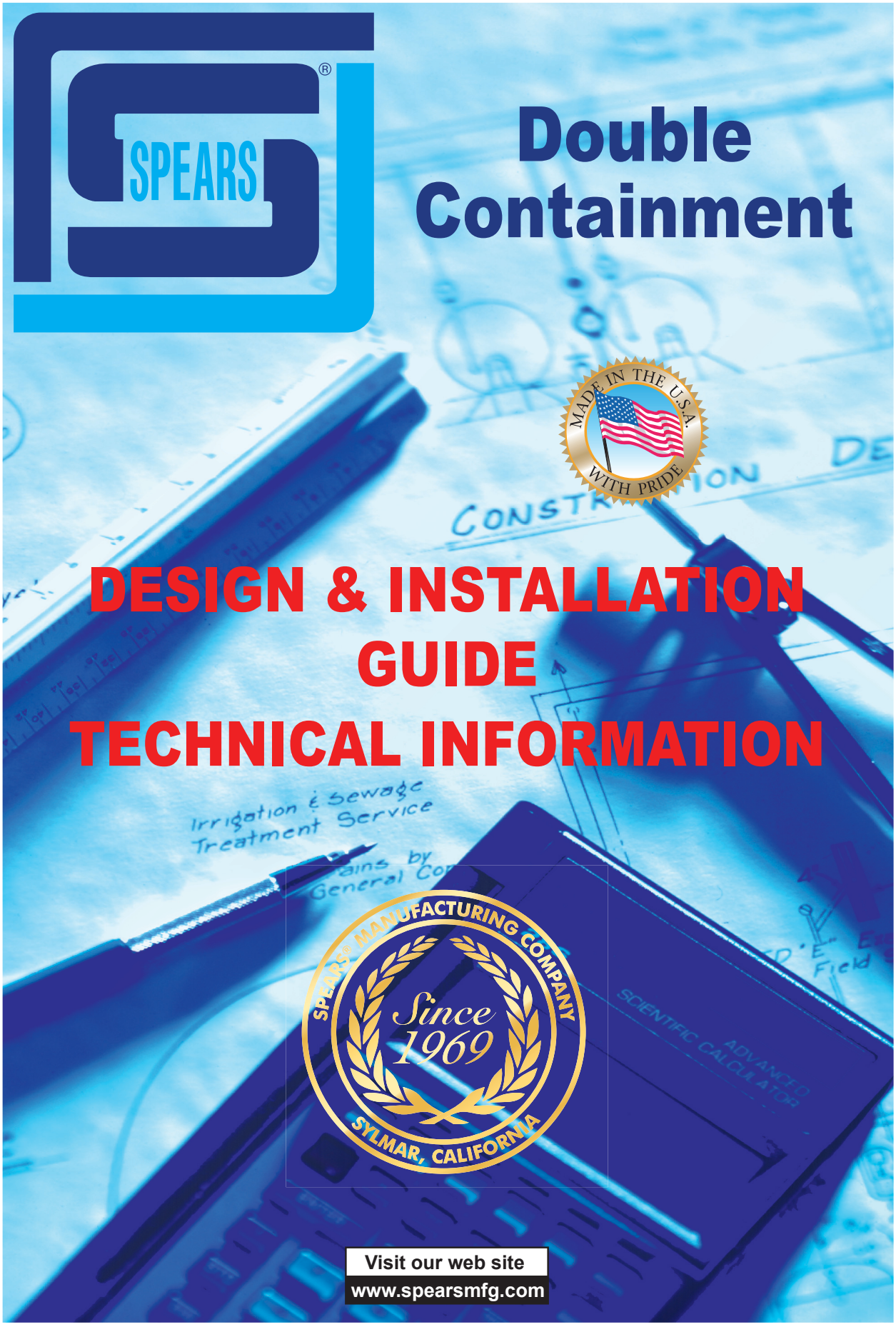
Resistance Rating Codes
R = Recommended
C = Use with Caution.
N = Not Recommended.
--- = No data available

IMPORTANT NOTE: Chemical Resistance data is provide for material compatibility information purposes only and in no way addresses the legal discharge of chemicals into any waste system, some of which may be prohibited by law. Nor does the data address the compatibility of chemical mixtures, issues of hazardous decomposition, or other potentially dangerous circumstances that might be involved. Data is applicable to laboratory drainage systems only and may not be suitable for continuous service or pressure applications.

CHEMICAL	RATING
A	
Acacia, Gum Arabic	R
Acetaldehyde	R
Acetamide	R
Acetic Acid Vapor 25%	R
Acetic Acid 60%	R
Acetic Acid 85%	R
Acectic Acid Glacial	R
Acetic Anhydride	R
Acetone	R
Acetophenone	C
Acetyl Chloride	R
Acetylene	N
Acetylnitrile	R
Acetylsalicylic acid, aspirin	R
Acrylic Acid	R
Acrylonitrile	R
Adenine, 6-aminopurine	R
Adenosine Triphosphate	R
Adipic Acid	R
Agarose	R
Alizarin stain Mordant Red 11	R
Alizarin Red S Mordant Red 3	R
Alizarin Yellow R Mordant Orange 1	R
Allyl Alcohol	R
Allyl Chloride	N
Aluminum Acetate	R
Aluminum Ammonium	R
Aluminum Chloride	R
Aluminum Fluoride	R
Aluminum Hydroxide	R
Aluminum Nitrate	R
Aluminum Oxychloride	R
Aluminum Potassium	R
Aluminum Potassium Sulfate, Alum	R
Aluminum Sulfate	R
Ammonia Anhydrous	R
Ammonia Gas	R
Ammonia Liquid	R
Ammonia Acetate	R
Ammonium Bicarbonate	R
Ammonium Biflouride	R
Ammonium Bisulfide	R
Ammonium Bromide	R
Ammonium Carbonate	R
Ammonium Chloride	R
Ammonium Citrate	R
Ammonium Dichromate	R
Ammonium Dihydrogen Phosphate	R
Ammonium Ferric Sulfate	R
Ammonium Ferrous Sulfate	R
Ammonium Fluoride 10%	R
Ammonium Fluoride 25%	R
Ammonium Hydroxide 10% - 28%	R
Ammonium Hydroxide 100%	R
Ammonium Iodide	R
Ammonium Nitrate	R
Ammonium Persulfate	R
Ammonium Phosphate Monbasic/Dibasic	R
Ammonium Sulfate	R
Ammonium Sulfide	R
Ammonium Sulfite	R
Ammonium Thiocyanate	R
Amyl Acetate	C
Amyl Alcohol 1%	R
Amyl Alcohol >1%	C
n-Amyl Chloride	C
Aniline	C
Aniline Chlorohydrate	C
Aniline Hydrochloride	C
Anthraquinone	R
Anthraquinone Sulfonic Acid	R
Antimony Trichloride	R
Aqua Regia	R
Argon	---
Arsenic Acid	R
Aryl Sulfonic Acid	R
Asorbic Acid	R
L-Asparagine	R
Asphalt	N
B	
Barium Acetate	R
Barium Carbonate	R
Barium Chloride	R
Barium Hydroxide	R
Barium Nitrate	R
Barium Sulfate	R
Barium Sulfide	R
Beer	R
Beer Sugar Liquors	R
Benzaldehyde	R
Benzene	C
Benzene Sulfonic Acid	R
Benzoic Acid	R
Benzyl Alcohol	R
Bismuth Carbonate	R
Biuret	R
Black Liquor	R
Bleach 5%	R
Bleach 12%	R
Blood	R
Borax	R
Boric Acid	R
Brake Fluid	---
Brine	R
Brilliant Blue G-250	R
Brilliant Blue R-250	R
Brilliant Cresyl Blue	R
Brilliant Green	R
Bromcresal Green	R
Bromcresal purple	R
Bromic Acid	R
Bromine Liquid	R
Bromine Vapor	R
Bromine Water	R
Bromotoluene	---
Bromphenol Blue	R
Bromthymol Blue	R
Butadiene	R
Butane	R
Butyl Acetate	C
Butyl Alcohol	C
Butyl Cellosolve	R
n-Butyl Chloride	---
Butylene (C)	---
Butyl Phenol	C
Butyl Phthalate	---
Butyl Stearate	---
Butynediol	---
Butyric Acid	R
C	
Cadium Cyanide	R
Calcium Acetate	R
Calcium Bisulfide	R
Calcium Bisulfate	R
Calcium Carbonate	R
Calcium Chlorate	R
Calcium Chloride	R
Calcium Fluoride	R
Calcium Hydroxide	R
Calcium Hypochlorite	R
Calcium Nitrate	R
Calcium Oxide	R
Calcium Sulfate	R
Camphor	---
Cane Sugar Liquors	R
Caprylic Acid	---
Carbitol	---
Carbolic Acid	R
Carbon Dioxide Dry	R
Carbon Dioxide Wet	R
Carbon Disulfide	C
Carbon Monoxide	R
Carbon Tetrachloride	N
Carbonic Acid	R
Castor Oil	C
Caustic Potash	R
Caustic Soda	R
Cellosolve	C
Cellosolve Acetate	R
Chloral Hydrate	R
Chloramine	R
Chloric Acid	R
Chloric Acid 20%	R
Chlorine, Aqueous	R
Chlorinated Water 10 PPM	R
Chlorinated Water Sat'd	R
Chloroacetic Acid	R
Chloroacetyl Chloride	---
Chlorobenzene	N
Chlorobenzyl Chloride	N
Chloroform	N
Chlorophenol Red	R
Chloropicrin	---
Chlorosulfonic Acid	R
Chromic Acid 10%	R
Chromic Acid 30%	R
Chromic Acid 40%	R
Chromic Acid 50%	C
Chromium	R
Chromium Tetroxide	R
Citric Acid	R
Clayton Yellow	R
Coconut Oil	C
Coffee	R
Congo Red solution	R
Copper Acetate	R
Copper Carbonate	R
Copper Chloride	R
Copper Cyanide	R
Copper Fluoride	R
Copper Nitrate	R
Copper Sulfate	R
Corn Oil	C
Corn Syrup	R
Cottonseed Oil	C
m-Cresal Purple	R
Cresal Red	R
Creosote	N
Cresol	N
Cresylic Acid	R
Croton Aldehyde	R
Crude Oil	R
Cumene	C
Cupric Chloride	R
Cupric Fluoride	R
Cupric Nitrate	R
Cupric Sulfate	R
Cuprous Chloride	R
Cyclohexane	R
Cyclohexanol	R
Cyclohexanone	R
D	
Decahydronapthalene	R
Detergents	R
Dexrin	R
Dextrose	R
Diacetone Alcohol	R
Diastase of malt	R
Dibutoxyethyl Phthalate	N
Dibutyl Ether	R
Dibutyl Phthalate	N
Dibutyl Sebacate	N
Dichlorobenzene	R
Dichloroethylene	N
2,6 – Dichloroindophenal	R
Diesel Fuels	R

CHEMICAL	RATING
Diethylamine	R
Diethyl Cellosolve	R
Diethyl Ether	R
Diglycolic Acid	R
Dimethylamine	R
Dimethyl Formamide	R
Dimethylhydrazine	R
Dimethyl Phthalate	N
Dimethyl Sulfoxide	R
Dioctyl Phthalate	N
Dodecyl Alcohol	R
Dodecyl Sulfate	R
Dioxane	R
Diphenyl Oxide	---
Disodium Phosphate	R
Drierite	R
E	
Eosin Y	R
Eriochrome Black T	R
Ether	R
Ethyl Acetate	R
Ethyl Acetoacetate	R
Ethyl Acrylate	R
Ethyl Alcohol	R
Ethyl Benzene	C
Ethyl Chloride	N
Ethyl Chloroacetate	N
Ethylene Bromide	N
Ethylene Chloride	N
Ethylene Chlorohydrin	N
Ethylenediamine	R
Ethylene Dichloride	N
Ethylene Glycol	C
Ethylene Oxide	R
Ethyl Ether	R
Ethyl Formate	R
Ethylene Glycol	R
2- Ethylhexanol	R
Ethyl Mercaptan	R
Ethyl Oxalate	R
F	
Fast Green FCF	R
Fatty Acids	R
Fehlings solution A	R
Fehlings solution B	R
Ferric Ammonium Sulfate	R
Ferric Chloride	R
Ferric Hydroxide	R
Ferric Nitrate	R
Ferric Sulfate	R
Ferrous Chloride	R
Ferrous Hydroxide	R
Ferrous Nitrate	R
Ferrous Sulfate	R
Fish Oil	R
Fluoboric Acid	R
Fluorine Gas (Dry)	R
Fluorine Gas (Wet)	R
Fluosilicic Acid 30%	R
Fluosilicic Acid 50%	R
Flormaldehyde Dilute	R
Flormaldehyde 35%	R
Flormaldehyde 37%	R
Flormaldehyde 50%	C
Formic Acid	R
Freon	R
Freon 12	R
Freon 21	---
Freon 22	R
Freon 113	C
Freon 114	---
Fructose	R
Furfural	R
G	
Gallic Acid	R
Gasoline	R
Gasohol	R
Gelatin	R
Glauber's Salt	---
Glucose	R
Glue, PVA	R
Glutathione	R
Glycerine	R
Glycine	R
Glycogen	R
Glycol	C
Glycol Amine	---
Glycolic Acid	R
Glyoxal	R
Grape Sugar	R
Grease	---
Green Liquor	R
H	
Heptane (Type 1)	R
n-Hexane	R
Hexamethylenediamine	R
Hexanol, Tertiary	R
Hydraulic Oil	---
Hydrazine	R
Hydrobromic Acid 20%	R
Hydrobromic Acid 50%	R
Hydrochloric Acid 10%	R
Hydrochloric Acid 30%	R
Hydrocyanic Acid	R
Hydrofluoric Acid Dilute	R
Hydrofluoric Acid 30%	R
Hydrofluoric Acid 50%	R
Hydrofluoric Acid 100%	R
Hydrofluosilic Acid 50%	R
Hydrogen	R
Hydrogen Cyanide	R
Hydrogen Fluoride	C
Hydrogen Peroxide 50%	R
Hydrogen Peroxide 90%	R
Hydrogen Phosphide	R
Hydrogen Sulfide Dry	R
Hydrogen Sulfide Wet	R
Hydrogen Sulfide, aqueous	R
Hydroquinone, aqueous	R
Hydroxylamine Hyrochloride	R
Hydroxylamine Sulfate	R
Hypochlorous Acid	R
I	
Indigo Carmine	R
Inks	R
Iodine	R
Iodine solution, Lugol's	R
Iron Phosphate	---
Isobutane	C
Isobutyl Alcohol	R
Isooctane	R
Isopropyl Acetate	R
Isopropyl Alcohol	R
Isopropyl Chloride	N
Isopropyl Ether	R
Isophorone	R
J	
Janus Green	R
JP-3 Fuel	R
JP-4 Fuel	R
JP-5 Fuel	R
JP-6 Fuel	R
K	
Kerosene	R
Ketchup	R
Kraft Liquors	R
L	
Lactic Acid 25%	R
Lactic Acid 80%	R
Lactose	R
Lard Oil	C
Latex	---
Lauric Acid	R
Lauryl Chloride	R
Lead Acetate	R
Lead Chloride	R
Lead Nitrate	R
Lead Sulfate	R
Lemon Oil	R
Ligroin	R
Limonene	R
Lime Slurry	R
Lime Sulfur	R
Linoleic Acid	C
Linoleic Oil	---
Linseed Oil	C
Liqueurs	R
Lithium Bromide	R
Lithium Carbonate	R
Lithium Chloride	R
Lithium Hyrdroxide 50%	R
Lithium Nitrate	R
Lithium Sulfate	R
Lubricating Oil #1	R
Lubricating Oil #2	R
Lubricating Oil #3	R
Ludox	---
Luminol 3-amino Phthalhydrazide	R
DL-lysine Hydrochloride	R
Lysozyme	R
M	
Magnesium Acetate	R
Magnesium Bromide	R
Magensium Carbonate	R
Magnesium Chloride	R
Magnesium Citrate	R
Magnesium Fluoride	---
Magnesium Hydroxide	R
Magnesium Nitrate	R
Magnesium Oxide	---
Magnesium Sulfate	R
Malachite Green	R
Maleic Acid	R
Malic Acid	R
Maltose	R
Manganese Chloride	R
Manganese Nitrate	R
Manganese Sulfate	R
Menthol	R
Mercuric Chloride	R
Mercuric Cyanide	R
Mercuric Sulfate	R
Mercurous Nitrate	R
Mercury	R
Methane	R
Methanol	R
DL-methionine	R
Methoxyethyl Oleate	---
Methyl Acetate	R
Methyl Acetone	R
Methyl Acrylate	---
Methyl Amine	R
Methyl Bromide	N
Methyl Cellosolve	R
Methyl cellulose	R
Methyl Chloride	N
Methyl Chloroform	N
Methyl Ethyl Ketone	R
Methyl Formate	R\
Methyl Green	R
Methyl Isobutyl Carbinol	R
Methyl Isobutyl Ketone	R
Methyl Isopropyl Ketone	R
Methyl Methacrylate	R
Methyl Red	R
Methyl Sulfate	R
Methyl Violet-2B	R
Methyl Violet-6B	R
Methylene Blue	R
Methylene Bromide	N
Methylene Chloride	N
Methylene Chlorobromide	N
Methylene Iodine	N
Methysulfuric Acid	R
Milk	R
Mineral Oil	R
Molasses	R
Monochloroacetic Acid	R
Monochlorobenzene	N
Monoethanolamine	R
Monosodium Glutamate	R
Motor Oil	R
Morpholine	R
N	
Naphtha	R
Naphthalene	C
Natural Gas	R
Neutral Red	R
Nickel Acetate	R
Nickel Ammonium Sulfate	---
Nickel Chloride	R
Nickel Nitrate	R
Nickel Sulfate	R
Nicotine	R
Nicotinic Acid	R
Nitric Acid 10%	R
Nitric Acid 30%	R
Nitric Acid 40%	R
Nitric Acid 50%	R
Nitric Acid 70%	R
Nitric Acid 100%	R
Nitrobenzene	N
Nitroethane	C
Nitrogen Gas	---
Nitroglycerine	C
Nitroglycol	---
Nitromethane	C
Nitrous Acid	R
Nitrous Oxide	R
O	
n-Octane	C
Octanol	R
Oleic Acid	R
Oleum	R
Olive Oil	C
Orange G - acid orange 10	R
Orange IV - acid orange 5	R
Orcinol	R
Osmium Tetroxide	R

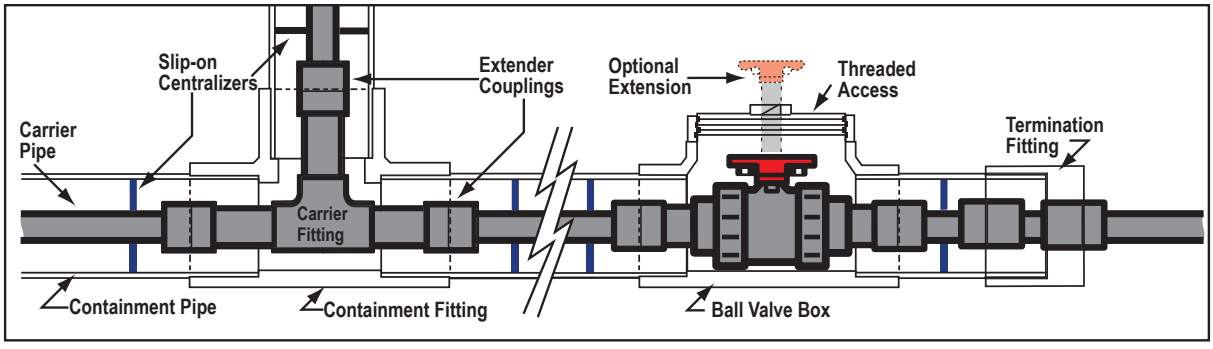
CHEMICAL	RATING
Oxalic Acid	R
Oxygen Gas	R
Ozone	R
Ozonized Water	R
P	
Palm Oil	R
Palmitic Acid 10%	R
Palmitic Acid 70%	R
Pancreatin	R
Papain	R
Paraffin	R
Peanut Oil	C
Pectin	R
n-Pentane	C
Pepsin	R
Peracetic Acid	R
Perchloric Acid 15%	R
Perchloric Acid 70%	R
Perchloroethylene	C
Periodic Acid	R
Perphosphate	R
Phenol	R
Phenolphthalein	R
Phenyl Salicylate	R
Phenylhydrazine	C
Phosphate Esters	---
Phosphoric Acid 10%	R
Phosphoric Acid 50%	R
Phosphoric Acid 85%	R
Phosphoric Anhydride	R
Phosphorous (Red)	C
Phosphorous (Yellow)	C
Phosphorous Pentoxide	R
Phosphorous Trichloride	R
Photographic Solutions	R
Phthalic Acid	R
Picric Acid	R
Pine Oil	C
Plating Solutions Brass	R
Plating Solutions Cadium	R
Plating Solutions Chrome	R
Plating Solutions Copper	R
Plating Solutions Gold	R
Plating Solutions Lead	R
Plating Solutions Nickel	R
Plating Solutions Rhodium	R
Plating Solutions Silver	R
Plating Solutions Tin	R
Plating Solutions Zinc	R
Polyvinyl Acetate	---
Polyvinyl Alcohol	R
Potash	R
Potassium Acetate	R
Potassium Alum	R
Potassium Aluminum	R
Potassium Bicacbonate	R
Potassium Bichromate	R
Potassium Bisulfate	R
Potassium Bitartrate	R
Potassium Borate	R
Potassium Bromate	R
Potassium Bromide	R
Potassium Carbonate	R
Potassium Chlorate	R
Potassium Chloride	R
Potassium Chromate	R
Potassium Citrate	R
Potassium Cyanide	R
Potassium Dichromate	R
Potassium Ethyl Xanthate	---
Potassium Ferricyanide	R
Potassium Ferroycanide	R
Potassium Fluoride	R
Potassium Hydrogen Phosphate	R
Potassium Hydrogen Phthalate	R
Potassium Hydroxide	R
Potassium Hyprochlorite	R
Potassium Iodate	R
Potassium Iodide	R
Potassium Nitrate	R
Potassium Nitrite	R
Potassium Perborate	R
Potassium Perchlorate	R
Potassium Permanganate 10%	R
Potassium Permanganate 25%	R
Potassium Persulfate	R
Potassium Phosphate	R
Potassium Sodium Tartrate	R
Potassium Sulfate	R
Potassium Sulfide	R
Potassium Sulfite	R
Potassium Thiocyanate	R
Propane	R
Propargyl Alcohol	R
Propionic Acid	R
Propyl Acetate	---
Propyl Alcohol	R
N-Propyl Bromide	---
Propylene Dichloride	N
Propylene Glycol	R
Propylene Oxide	R
Pyridine	R
Pyrogallic Acid	R
Pyrrole	R
Q	
Quinine Sulfate	R
Quinine Chloride Dihydrate	R
Quinone	---
R	
Rayon Coagulating Bath	R
Rennin	R
Resazurin	R
Ringers Solution	R
Rose Bengal Acid Red 94	R
S	
Safranin O	R
Salicylaldehyde	N
Salicylic Acid	R
Selenic Acid, Aq.	R
Silicic Acid	R
Silicone Oil	R
Silver Acetate	R
Silver Chloride	R
Silver Cyanide	R
Silver Nitrate	R
Silver Sulfate	R
Soaps	R
Sodium Acetate	R
Sodium Alum	R
Sodium Aluminate	R
Sodium Arsenate	R
Sodium Benzoate	R
Sodium Bicarbonate	R
Sodium Bichromate	R
Sodium Bisulfate	R
Sodium Bisulfite	R
Sodium Borate	R
Sodium Bromide	R
Sodium Carbonate	R
Sodium Chlorate	R
Sodium Chloride	R
Sodium Chlorite	R
Sodium Chromate	R
Sodium Citrate	R
Sodium Cyanide	R
Sodium Dichromate	R
Sodium Diphenylamine Sulfonate	R
Sodium Dithionite	R
Sodium Ferricyanide	R
Sodium Ferrocyanide	R
Sodium Fluoride	R
Sodium Hexametaphosphate	R
Sodium Hydroxide 15%	R
Sodium Hydroxide 30%	R
Sodium Hydroxide 50%	R
Sodium Hydroxide 70%	R
Sodium Hypochlorite	R
Sodium Iodate	R
Sodium Iodide	R
Sodium Metabisulfite	R
Sodium Metaphosphate	R
Sodium Nitrate	R
Sodium Nitrite	R
Sodium Palmitrate	R
Sodium Perborate	R
Sodium Perchlorate	R
Sodium Periodate	R
Sodium Peroxide	R
Sodium Phosphate Acid	R
Sodium Phosphate Alkaline	R
Sodium Phosphate Neutral	R
Sodium Propionate	R
Sodium Silicate	R
Sodium Sulfate	R
Sodium Sulfide	R
Sodium Sulfite	R
Sodium Thiousulphate	R
Sour Crude Oil	R
Soybean Oil	C
Stannic Chloride	R
Stannous Chloride	R
Stannous Sulfate	R
Starch	R
Stearic Acid	R
Streptomycin Sulfate	R
Strontium Bromide	R
Strontium Chloride	R
Styrene	N
Succinic Acid	R
Sugar	R
Sulfamic Acid	R
Sulfate Liquors	R
Sulfite Liquors	R
Sulfur	R
Sulfur Chloride	R
Sulfur Dioxide Gas Dry	R
Sulfur Dioxide Gas Wet	R
Sulfur Trioxide Gas Dry	---
Sulfur Trioxide Gas Wet	N
Sulfuric Acid Up to 30%	R
Sulfuric Acid 50%	R
Sulfuric Acid 60%	R
Sulfuric Acid 70%	R
Sulfuric Acid 80%	R
Sulfuric Acid 90%	R
Sulfuric Acid 93%	R
Sulfuric Acid 94%	R
Sulfuric Acid 95%	R
Sulfuric Acid 96%	R
Sulfuric Acid 98%	R
Sulfuric Acid 100%	R
Sulfurous Acid	R
T	
Tall Oil	R
Tannic Acid	R
Tanning Liquors	R
Tar	C
Tartaric Acid	R
Terpineol	---
Tetrachloroethane	N
Tetrachloroethylene	N
Tetracycline hydrochloride	
Tetraethyl Lead	R
Tetrahydrofuran	R
Tetralin	N
Thiamine Hydrochloride	R
Thionin	R
Thionyl Chloride	R
Thymol	R
Titanium Dioxide	R
Titanium Tetrachloride	R
Toluene	C
Tomato Juice	R
Transformer Oil	R
Transformer Oil DTE/30	R
Tributyl Citrate	---
Tributyl Phosphate	R
Trichloroacetic Acid	R
Trichloroethylene	N
Triethanolamine	R
Triethylamine	R
Trimethylpropane	R
Trisodium Phosphate	R
Trypsin	R
Tung Oil	C
Turpentine	C
U	
Urea	R
Urease	R
Urine	R
V	
Varnish	---
Vaseline	C
Vegetable Oil	C
Vinegar	R
Vinyl Acetate	R
W	
Water, Acid Mine	R
Water, Deionized	R
Water, Distilled	R
Water, Potable	R
Water, Salt	R
Water, Sea	R
Water, Soft	R
Water, Waste	R
Whiskey	R
White Liquor	R
Wine	R
X	
Xylene	C
Z	
Zinc Acetate	R
Zinc Carbonate	R
Zinc Chloride	R
Zinc Nitrate	R
Zinc Stearate	R
Zinc Sulfate	R


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DOUBLE CONTAINMENT DESIGN & INSTALLATION GUIDE

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Spears® Double Containment Systems are engineered for ease of installation and lower associated installation costs. Complete systems include all necessary components - carrier pipe, containment pipe, centralizer brackets, valves and valve boxes, plus a full assortment of simplified double containment configurations including elbows, tees, closure and termination fittings. Typical user-supplied components include leak detection cable and sensors, air relief valves, and solvent cement for assembly.



Successful installation requires proper design and planning of system layout, a basic understanding of how Spears® double containment fitting design works, and specific attention to a proper sequence of general assembly. This manual is designed as a general guide and may not address all situations encountered. Due to the variety of selected Carrier/ Containment combinations some design variations may occur.

PLEASE READ ALL INSTRUCTIONS PRIOR TO SYSTEM ASSEMBLY

I. SYSTEM PLANNING & LAYOUT

The following issues need to be addressed in the planning stage of System Layout:

- **Carrier/Containment Combinations:** System primary carrier and secondary containment size, and material and pipe Schedule must be determined based on system temperature, pressure, and volume requirements. Standard Carrier x Containment sizes and material/Schedule combinations are shown in the table below. Double containment systems can be custom produced to virtually any standard pipe size, material, or material combinations not shown, including multiple carriers in a single containment system. Contact Spears® Technical Services.

STANDARD CARRIER X CONTAINMENT COMBINATIONS

Carrier x Containment Size	PVC Sch 40 x PVC Sch 40	PVC Sch 40 x PVC Sch 40 Clear	PVC Sch 80 x PVC Sch 40	PVC Sch 80 x PVC Sch 40 Clear	PVC Sch 80 x PVC Sch 80	CPVC Sch 80 x PVC Sch 40	CPVC Sch 80 x CPVC Sch 80	CPVC Sch 80 x PVC Sch 40 Clear
1/2 x 2	•	•	•	•	•	•	•	•
3/4 x 3	•	•	•	•	•	•	•	•
1 x 3	•	•	•	•	•	•	•	•
1-1/2 x 4	•	•	•	•	•	•	•	•
2 x 4	•	•	•	•	•	•	•	•
3 x 6	•	•	•	•	•	•	•	•
4 x 8	•	•	•	•	•	•	•	•
6 x 10	•	N/A	•	N/A	•	•	•	N/A
8 x 12	•	N/A	•	N/A	•	•	•	N/A

N/A = Not available in specified size and material

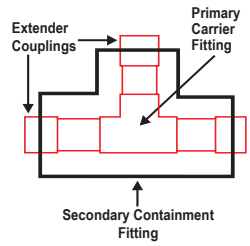
System Support: The system must be supported according to standard pipe support methods and criteria for installation of the Containment-size pipe. Where practical, system support should align with internal carrier support (centralizers) to reduce concentrated point loads.

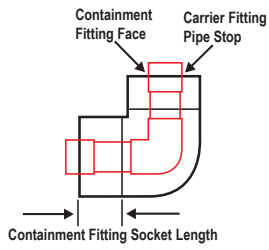
- **Caution:** System must be designed so that if carrier fails (leaks), the Containment pipe must not be pressurized beyond 10 psi pressure. An extremely hazardous condition can result from the air in the containment pipe becoming compressed. An air relief valve can be used or a vent to a containment vessel can be installed.
- **Thermal Expansion & Contraction:** Both Containment and Carrier system expansion and contraction must be determined, just like any other system. This is especially important where significantly different fluid temperatures are anticipated between the Carrier system and the Containment system. The primary line must be designed to allow for expansion & contraction due to process media temperature. The secondary line must be designed to accommodate temperature changes, especially in above ground installation where environmental factors will affect the temperature of the pipe.
- **Containment Thrust Blocking:** Adequate thrust blocking must be determined for the system and related loads.
- **Termination Points:** Must be determined for both start and end of Containment portion of the system.
- **Leak Detection Sensors, Drains, Valve Box, etc.:** Location and type must be determined (i.e. ball valve, gate valve, etc.)

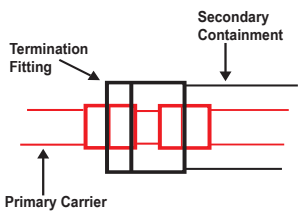
II. DOUBLE CONTAINMENT FITTING & COMPONENT DESIGN OVERVIEW

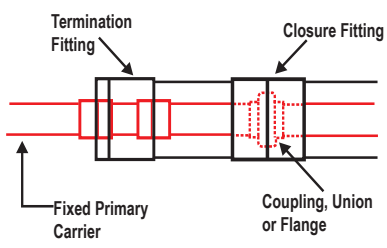
A basic understanding of Spears® double containment fitting and component design will make assembly much easier. Additional details of their application is found in each specific installation section.

- General configurations (elbows, tees, etc.) of Spears® double containment fittings consist of separate internal Carrier and external Containment fittings of the same configuration. Carrier fittings (except standard couplings) are equipped with extenders to facilitate cement assembly. Centralizers are used inside the Containment piping system, but not inside fittings in order to; 1) allow movement of the Carrier assembly inside the Containment system during expansion and contraction; and 2) allow the Carrier assembly to be more easily cemented before cementing the Containment assembly. **NOTE:** Certain configurations may require oversized containment fittings bushed to specified containment pipe size in order to accommodate specified carrier fitting configurations.
- Most double containment fitting configurations (where practical) are designed with dimensions that bring the pipe stop of the Carrier fitting flush to the face of the socket of the Containment fitting. This facilitates solvent cementing and determination of Carrier and Containment pipe cut lengths. On each pipe run, the Carrier pipe cut length is equal to the face-to-face distance between Containment fittings. The Containment pipe cut length is equal to the Carrier pipe length plus two (2) Containment pipe socket lengths.
- Termination Fittings are a special configuration for starting or stopping the containment portion of a system. Termination fittings will consist of a reducer coupling to accept the Containment pipe that is pre-fabricated to an internal extender coupling for connection to existing carrier system, thereby terminating (start or stop) the secondary containment portion of the system.
- System installation is best accomplished by consecutive assembly from a starting point to the end of the system. In situations where runs of Carrier and Containment system must meet, the Closure Fitting is a special coupling configuration for joining both Carrier and Containment piping. Closure Fittings are frequently used at the end of a system where the final Termination Fitting must connect to a fixed point in the system.

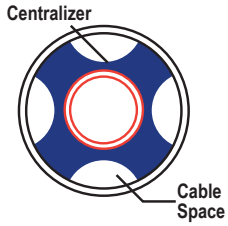






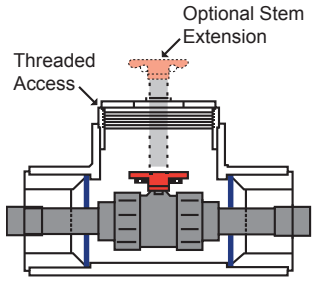


- Centralizers are a simple slip-on design which are positioned and held in place by a few wraps of Clean-room adhesive on each side. Centralizers hold the Carrier piping centrally located within the Containment piping and are designed with an annular space for routing of leak detection cable, if used.

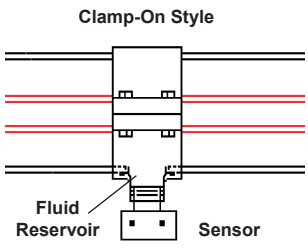


- In-Line Ball Valve Boxes are a pre-assembled "Tee-style" configuration with a valve installed for connection to Carrier and Containment piping. A threaded access is provided through the tee-box branch. Valve handle extensions through the cap are available as an option.

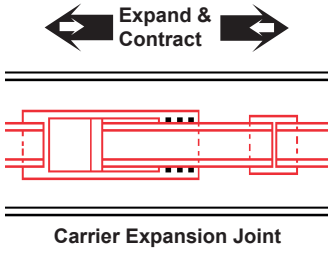
  NOTE: Tee-style valve boxes are normally over specified containment pipe size and bushed down in order to accommodate carrier valve.



- Sensor Saddles are special devices which can be installed on the Containment system where a "low-point" is desired for leak-detection apparatus. Saddles may also be used in Containment piping high points for air relief or for connection of Containment drainage valves.



- Expansion Joints are designed to accommodate linear thermal expansion and contraction in thermoplastic systems using an O-ring sealed internal piston. These units can be used on either primary Carrier or secondary Containment portions of the system, especially where a significant temperature differential exists between the two. Expansion Joints also double as an adjustable coupling or repair coupling for making pipe connections.
- Additional specialty configurations can be custom produced according to user requirements.



III. PRODUCT RECEIVED

Carrier and Containment pipe are sold and shipped separate from each other in standard stock 20-foot lengths. Finished cut lengths are prepared by the user at time of installation.

Likewise, each configuration of a double containment fitting is shipped with Carrier and Containment fittings separately, except special configurations that require factory pre-assembly. Upon receipt, each double containment configuration (Carrier fitting and Containment fitting) should be matched up in preparation for installation.

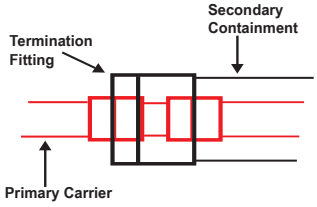
NOTE: ASSEMBLED CARRIER/CONTAINMENTS PIPE AVAILABLE ON REQUEST

IV. GENERAL INSTALLATION ASSEMBLY

Important: Proper solvent cementing procedures must be followed. See Appendix A

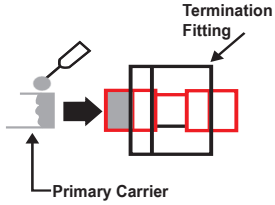
Termination Fitting - The Proper Starting Point

Where practical, it is easiest to start using a Termination fitting. This special fitting terminates (start/stop) the secondary Containment portion of the system. The Termination fitting is assembled to the existing primary piping system which continues as the Carrier in the double containment portion of the system and provides a connection for starting (or ending) the Containment piping.



Step 1: Install Termination Fitting to Primary Carrier Pipe

Using proper dauber size, cement Termination Fitting to the primary carrier piping.



Step 2: Cut Carrier & Containment Pipe Lengths

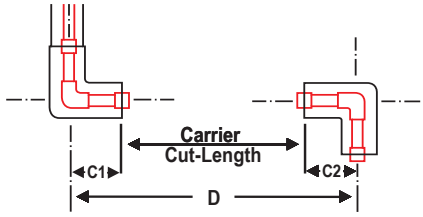
Important: All pipe MUST be cut square and properly deburred and beveled.

1. ***Carrier Pipe Cut Length:*** Determine the distance between the Containment socket end face of the first fitting to the socket end face of the next Containment fitting and cut Carrier pipe to that length.

Note: This dimension can be calculated from system centerlines as follows:

$$Lcar = D - (C1 + C2)$$

Where: Lcar = Carrier Pipe Cut Length
D = Centerline to Centerline distance between Containment fittings
C1 = Centerline to socket end of first Containment fitting
C2 = Centerline to socket end of second Containment fitting

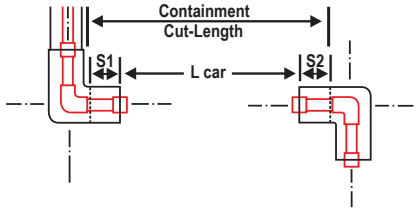


2. ***Containment Pipe Cut Length:*** Add the socket lengths for each of the two (2) connecting Containment fittings to the Carrier pipe cut length and cut the Containment pipe to that length.

Note: This dimension can be calculated as follows:

$$Lcon = Lcar + S1 + S2$$

Where: Lcon = Containment Pipe Cut Length
Lcar = Carrier Pipe Cut Length
S1 = Socket Length of first Containment fitting
S2 = Socket Length of second Containment fitting



COUPLING NOTE: Regular couplings do not come with extenders. Where a continuation of a straight pipe run is made with a coupling on carrier or containment pipe, use the overall coupled length in the above calculations. Special allowances should also be made for Closure Fittings and Expansion Joints in determining cut lengths.

Step 3: Assemble Slip-On Centralizers

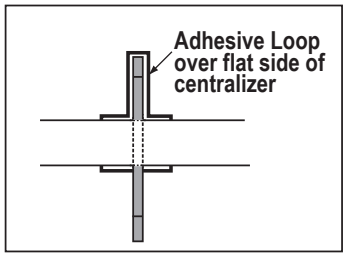
The chart below shows recommended Centralizer support spacing according to Carrier pipe size, material and Schedule at specified operating temperature for liquids up to 1.00 specific gravity, but does not include concentrated loads (see chart note on double containment system support).

RECOMMENDED MINIMUM CENTRALIZER SUPPORT SPACING (ft.) *

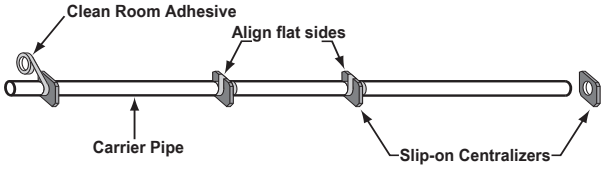
Carrier Size (in.)	PVC SCHEDULE 40 CARRIER Temperature °F					PVC SCHEDULE 80 CARRIER Temperature °F					CPVC SCHEDULE 80 CARRIER Temperature °F					
	60°	80°	100°	120°	140°	60°	80°	100°	120°	140°	73°	100°	120°	140°	160°	180°
1/2	4-1/2	4-1/2	4	2-1/2	2-1/2	5	4-1/2	4-1/2	3	2-1/2	5-1/2	5	4-1/2	4-1/2	3	2-1/2
3/4	5	4-1/2	4	2-1/2	2-1/2	5-1/2	5	4-1/2	3	2-1/2	5-1/2	5-1/2	5	4-1/2	3	2-1/2
1	5-1/2	5	4-1/2	3	2-1/2	6	5-1/2	5	3-1/2	3	6	6	5-1/2	5	3-1/2	3
1-1/2	6	5-1/2	5	3-1/2	3	6-1/2	6	5-1/2	3-1/2	3-1/2	7	6-1/2	6	5-1/2	3-1/2	3-1/2
2	6	5-1/2	5	3-1/2	3	7	6-1/2	6	4	3-1/2	7	7	6-1/2	6	4	3-1/2
3	7	7	6	4	3-1/2	8	7-1/2	7	4-1/2	4	8	8	7-1/2	7	4-1/2	4
4	7-1/2	7	6-1/2	4-1/2	4	9	8-1/2	7-1/2	5	4-1/2	9	8-1/2	8	7-1/2	5	4-1/2
6	8-1/2	8	7-1/2	5	4-1/2	10	9-1/2	9	6	5	10	9-1/2	9	8	5-1/2	5
8	9	8-1/2	8	5	4-1/2	11	10-1/2	9-1/2	6-1/2	5-1/2	11	10-1/2	10	9	6	5-1/2
10	10	9	8-1/2	5-1/2	5	12	11	10	7	6	11-1/2	11	10-1/2	9-1/2	6-1/2	6
12	11-1/2	10-1/2	9-1/2	6-1/2	5-1/2	13	12	10-1/2	7-1/2	6-1/2	12-1/2	12	11-1/2	10-1/2	7-1/2	6-1/2

Note: Specified minimum spacing can also be used for system support according to the secondary Containment pipe size and Schedule used. Where practical, system support should correspond to internal Carrier support (Centralizers) to minimize concentrated point loads.

*** Note:** Data furnished is based on raw material manufacturer's information. This information can be considered a reliable recommendation, but not a guarantee. Actual service conditions and system parameters should be evaluated by qualified personnel.

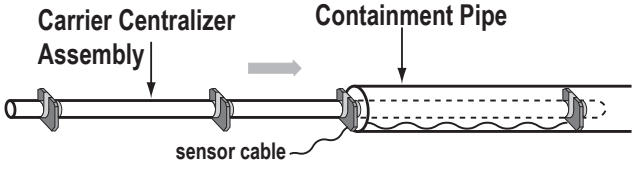


Assemble Centralizers to Carrier pipe as required (see chart above) holding in place with a loop of Clean-room adhesive over one flat side of each Centralizer followed by 3-wraps of adhesive around Carrier pipe on each side of Centralizer to hold loop. Orient so that the flat sides of all Centralizers align. On horizontal runs, the flat side should also lay parallel to the ground to accommodate any sensor wire used.



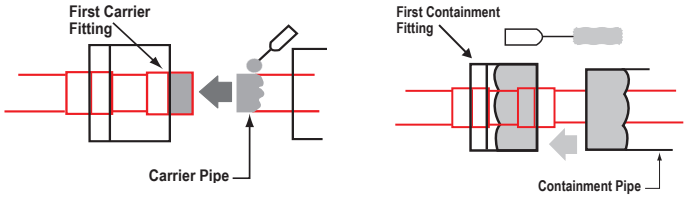
Step 4: Assemble Carrier Pipe Run Into Containment Pipe Run

Insert Carrier pipe run with Centralizers into Containment pipe run while feeding sensor wire through and under Centralizers as required.



Step 5: Solvent Cement Start of Carrier & Containment Run

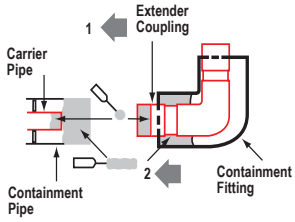
Position double containment pipe assembly and pull Carrier pipe out enough to allow joint make-up. Using proper dauber size, cement Carrier pipe to first Carrier (or Termination) fitting being sure to properly orient Centralizers. Using a different size dauber if necessary, cement Containment pipe and slide into first Containment (or Termination) fitting.



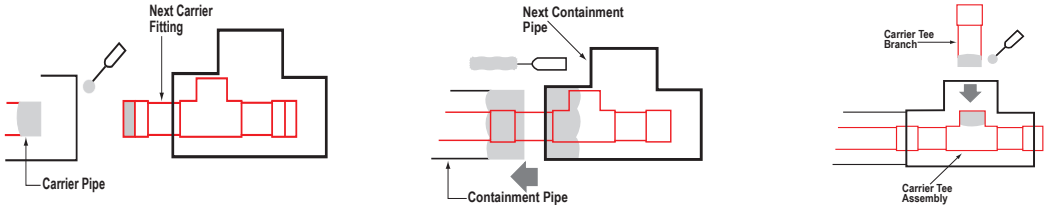
Step 6: Solvent Cement Next Carrier & Containment Run

At the opposite end of the run, install the next carrier and containment fitting assembly. **Important Note:** Certain carrier x containment sizes and configurations (such as elbows) may require cementing and installation of both fittings at the same time. A dry fit check of both fittings should be made to verify that there is clearance to slide the Containment fitting over the Carrier fitting once the Carrier fitting has been cemented to the carrier pipe. In such cases, slide the Containment fitting back as much as possible and apply cement to both Carrier pipe and extender coupling and to both Containment pipe and Containment fitting using appropriate size daubers. Immediately assemble next Carrier fitting to Carrier pipe and Containment fitting to Containment pipe being sure to align properly. Note: This process must be done quickly to prevent cement from drying out before assembly.

Other size and configuration combinations allow Containment fitting to be installed after Carrier fitting is in place. In such cases, slide Containment fitting away from Carrier fitting and cement Carrier pipe to next Carrier fitting, using proper dauber size. Slide next Containment fitting back over Carrier assembly and cement Containment pipe to next Containment fitting, using a different size dauber if necessary. For tees or crosses, where possible, always cement the run double containment assembly before the branch.



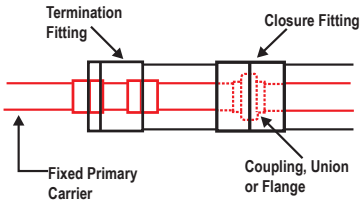
Important Note: Some Tees are shipped with the Carrier Tee branch socket extension separated from the Carrier Tee assembly to allow easy movement of the Carrier fitting to facilitate assembly, as shown below. The Carrier Tee branch extension must be **cemented in place** after the run Carrier Tee assembly is completed.



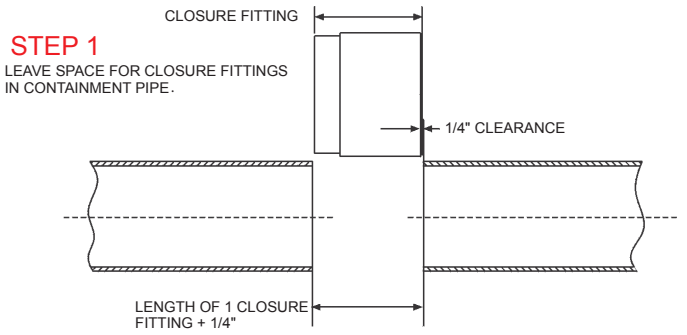
Repeat Step 2 through 6 above to consecutively assemble each additional section of the Double Containment System. Finish with installation of an additional Termination Fitting. See following instructions on Closure Fittings or on Expansion Joints for joining Double Containment system sections which must meet.

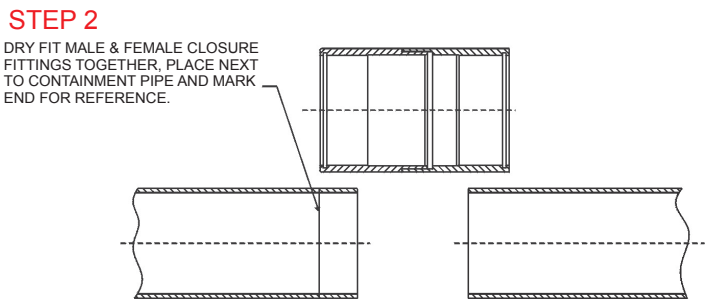
V. SPECIAL CLOSURE FITTING INSTALLATION

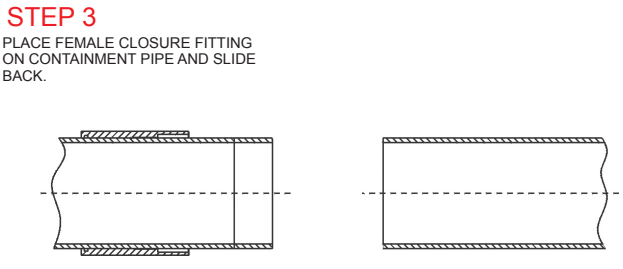
Closure Fittings are a special split coupling for joining meeting runs of Containment piping such as before the final Termination Fitting. Closure Fittings consists of 1 male Closure Fitting and 1 female Closure Fitting. An internal O-ring on each component serves as a "cement-wiper" during installation to assure a proper joint. A "One-step" type cement should be used to facilitate rapid assembly.



Typical Closure Fitting Use

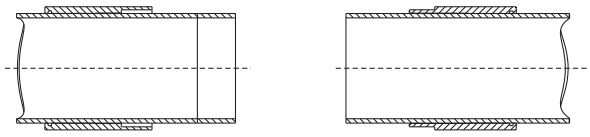






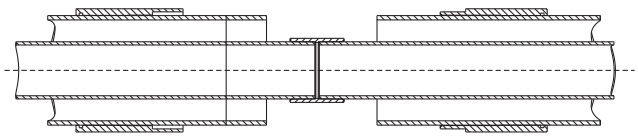
STEP 4

PLACE MALE CLOSURE FITTING ON CONTAINMENT PIPE AND SLIDE BACK.



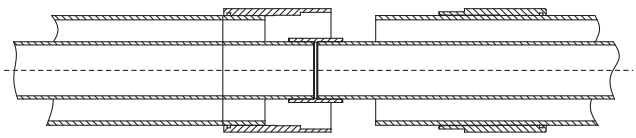
STEP 5

COMPLETE CARRIER PIPE. IF SUFFICIENT MOVEMENT FOR A SOCKET JOINT CANNOT BE MADE, A UNION, FLANGE OR EXPANSION JOINT MAY BE REQUIRED.



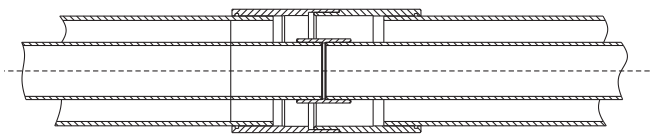
STEP 6

USE ONE-STEP CEMENT ON FEMALE CONTAINMENT PIPE. APPLY WELL PAST MARK ON PIPE. O-RING WILL WIPE OFF EXCESS. SLIDE CLOSURE FITTING FORWARD TO MARK ON PIPE MADE IN (STEP 2) LET CEMENT CURE BEFORE CONTINUING TO NEXT STEP.



STEP 7

USE ONE-STEP CEMENT ON CONTAINMENT PIPE. APPLY WELL PAST WHERE THE END OF CLOSURE FITTING WILL BE INSTALLED. ALSO CEMENT MALE PORTION OF CLOSURE FITTING AND INSIDE THE MATING FEMALE JOINT. SLIDE MALE FITTING INTO FEMALE FITTING AND CLAMP WITH A BAR OR PIPE-TYPE CLAMP.

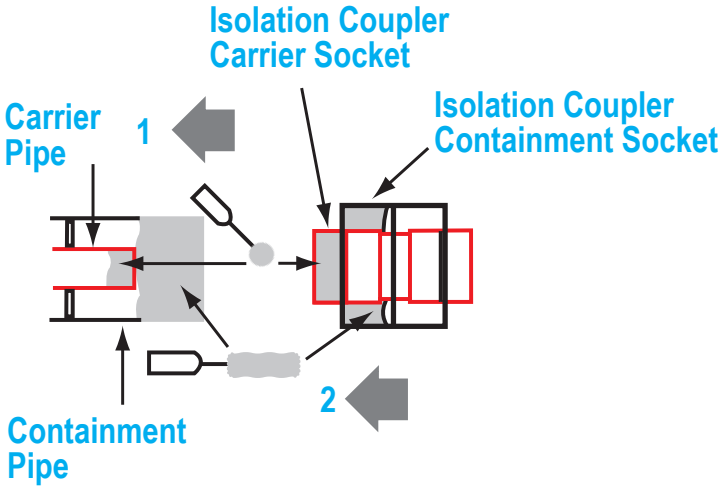


VI. ISOLATION COUPLER INSTALLATION

The purpose of the Isolation Coupler is to isolate a containment section for improved location identification if a leak is detected. To accomplish this, the Isolation Coupler has a partition in the Containment section fixed to the Carrier section.

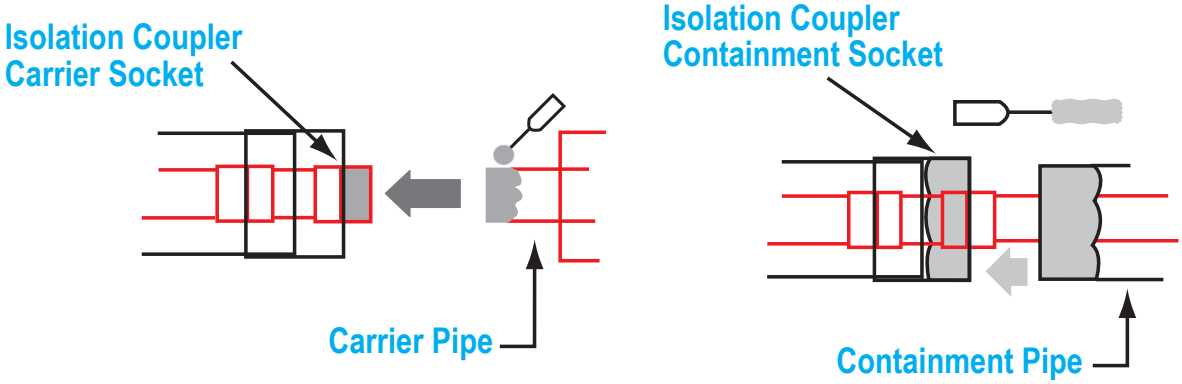
Step 1: Solvent Cement Isolation Coupler on Carrier and Containment Pipe Run

This coupler requires cementing of both primary Carrier and Containment joints at the same time. Using the right size dauber, cement both sockets on one end of the Isolation Coupler and both pipe ends of the Carrier and Containment pipe run. Assemble both joints immediately. **Note:** This process must be done quickly to prevent cement from drying out before assembly.



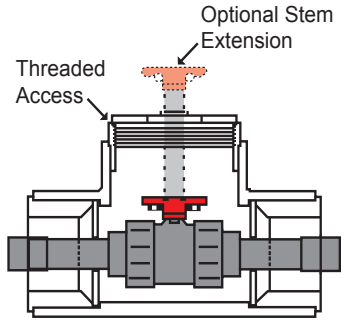
Step 2: Solvent Cement Start of Next Carrier & Containment Run

Position the next double containment pipe and centralizer assembly and pull Carrier pipe out enough to allow joint make-up. Using proper dauber size, cement Carrier pipe to Carrier socket of Isolation Coupler being sure to properly orient Centralizers. Using a different size dauber if necessary, cement Containment pipe and slide into Containment socket of the Isolation Coupler.



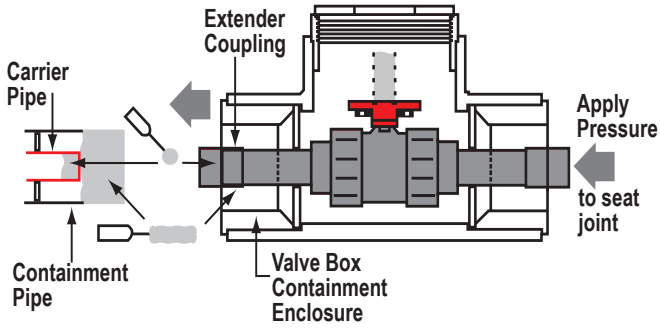
VII. IN-LINE VALVE BOX INSTALLATION

Tee-style valve boxes come with Spears® True Union 2000 style ball valves or ball check valves installed. Centralizers are pre-installed in box to give support to the valve. In-Line Valve Boxes are constructed in a larger diameter than the secondary containment system in order to accommodate the appropriate valve for the carrier system. These are fitted with reducers for connection to the containment system. Valve boxes can be ordered with stem extensions for exterior operation of valve. Ball and Ball Check Valves are available for use with Carrier pipe sizes 1/2" through 4", PVC or CPVC using EPDM or FKM seals. Other valve types available on request.



Using appropriate size daubers, apply cement to both Carrier pipe and extender coupling and to both Containment pipe and Valve Box Containment enclosure. Assemble immediately being sure to apply pressure to the opposite end extender coupling to seat Carrier connection.

Note: This process must be done quickly to prevent cement from drying out before assembly. A one-step type cement is recommended for this installation.

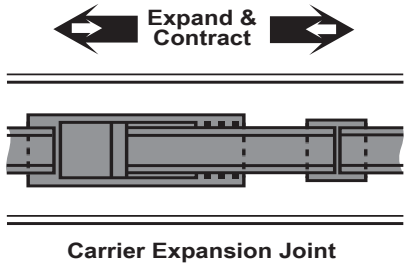


VIII. EXPANSION JOINT INSTALLATION

Expansion Joints can be used to compensate for linear thermal expansion in Carrier or Containment portions of the system. Expansion Joints are available in either 6" or 12" extension lengths.

Step 1: Determine Travel Length Needed

General Rule: For PVC systems, allow 3/8" expansion for every 10°F change in temperature per 100 feet of pipe (all diameters). For CPVC systems, allow 1/2" expansion for every 10°F change in temperature per 100 feet of pipe (all diameters). For example, a 6" travel expansion joint will accommodate approximately 160°F temperature change in 100 ft. of PVC pipe (16 x 3/8" = 6") or approximately 120°F temperature change in 100 ft. of CPVC pipe (12 x 1/2" = 6").



Carrier Expansion Joint

Step 2: Support & Thrust Block

ON SECONDARY CONTAINMENT PIPING: For proper operation, the outer tube of the Expansion Joint should be firmly anchored to allow free movement of the inner tube or "piston." Alignment is critical. Support and thrust block the system to direct movement squarely into the Expansion Joint. Alignment is critical and axial guides should be installed to ensure straight movement into Expansion Joint. Provisions should be made to protect the cylinder shaft from scratches, damage and debris in order to prevent leaks.

ON PRIMARY CARRIER PIPING: A Centralizer bracket should be located at each end of the Expansion Joint to serve as an axial guide to ensure straight movement into Expansion Joint. Protect the cylinder shaft from scratches, damage and debris during installation.

Step 3: Install Expansion Joint in Line

Determine installed extension length and solvent cement unit in system. Expansion Joints can be installed at the travel range midpoint for most general installations and are shipped from the factory in this position. If desired, the extended position for installation may be additionally adjusted to specific system and installation parameters using the following calculation:

$$\frac{T-A}{T-F} \times E = P$$

T = Maximum Temperature of Pipe Exposure
A = Temperature of Pipe at time of Installation
E = Maximum Expansion Joint Travel (6" or 12")
P = Piston Extension for Installation Position (inches)
F = Minimum Temperature of Pipe Exposure

Example: A straight run of pipe will operate at temperatures between 60°F and 110°F. Temperature at time of installation is 75°F using a 6" travel Expansion Joint.

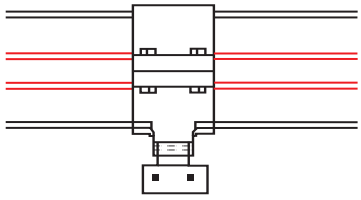
$$\frac{110-75}{110-60} \times 6 = 4.2 \text{ inches extended at installation}$$

Supplemental Information Notes:

Maximum operating temperature:	PVC = 140°F CPVC = 180°F
Coefficient of Linear Thermal Expansion:	PVC 1120 = 2.8×10^{-5} in/in/°F CPVC 4120 = 3.4×10^{-5} in/in/°F

XI. SENSOR SADDLE INSTALLATION

PVC and CPVC Sensor Saddles are available in Clamp-On type with O-ring seal for Containment pipe sizes 2" through 6" or in Glue-On style for Containment pipe sizes 1/2" and larger. Specify branch outlet size in thread or socket connection. Sensor Saddles should be installed in a low point along a Containment pipe run for collection of any fluid leakage. Install user-supplied sensor device. Saddles may also be used in Containment piping high points for air relief or for connection of Containment drainage valves.



Clamp-On Style Sensor Saddle

Clamp-On style Saddle Installation

1. Using a standard industrial-grade hole saw, cut specified hole in desired position on pipe according to recommended hole saw size engraved on saddle. Note: Care must be taken to deburr hole and remove all residue from hole area to assure tight fit and avoid leakage.
2. Fully seat O-ring in groove on underside of saddle outlet component. Position over hole and fully seat saddle onto pipe. Note: Saddle outlets are piloted. Be sure pilot lip fully engages with hole in pipe.
3. Place strap component opposite outlet and secure with bolts (4), nuts (4), and washers (8). Washers MUST be placed under each bolt head and nut to avoid damage to saddle.
4. Tighten bolts to specified torque.
5. Saddle is now ready for user-supplied sensor device installation.

Glue-On style Saddle Installation

1. Using a standard industrial-grade hole saw, cut specified hole in desired position on pipe according to recommended hole saw size. Note: Care must be taken to deburr hole and remove all residue from hole and cement area to assure proper fit.
2. Dry fit saddle over hole and mark perimeter on pipe.
3. Clean pipe and saddle glue surface, apply solvent cement to saddle and to pipe, fully covering marked area.
4. Immediately press saddle onto pipe while rotating the saddle on the pipe slightly to distribute the cement. Secure each end of saddle with gear-type clamp or strap to maintain compression until solvent cement fully cures.
5. Saddle is now ready for user-supplied sensor device installation.

X. PRESSURE TESTING SYSTEM

After all joints have properly cured, the Secondary Containment system may be air tested at 5 to 8 psig regulated pressure. **WARNING: System must NOT be tested with direct connection of air-line, nitrogen bottle, or similar unregulated pressure device. Test apparatus must be equipped with both a pressure limiting device at the source to assure that 8 psig pressure is not exceeded and an air relief device at the far end of the system set at a maximum pressure of 8 psig. FAILURE TO FOLLOW THIS PROCEDURE CAN RESULT IN SERIOUS OR FATAL BODILY INJURY.** Use a spray bottle of soap and water solution to check for leaks at joints. The Primary Carrier system should be hydrostatically tested. Flush the system to remove any debris and slowly fill to remove all entrapped air.

General Solvent Cement Welding Procedures

For best results, installation should be made at temperatures between 40°F and 110°F. All joint components should be inspected for any breaking, chipping, gouging or other visible damage before proceeding. All pipe, fittings and valves should be removed from packaging or containers and exposed to the installation environment for a minimum of one hour in order to thermally balance all components. All joining components must be clean and dry.

Important: TAKE EXTRA CARE THAT NO PRIMER OR SOLVENT CEMENT IS ALLOWED TO COME IN CONTACT WITH THE BALL OR OTHER INTERNAL COMPONENTS OF VALVES, EXPANSION JOINTS, OR UNIONS.

Step 1: Cut Pipe Square

Pipe ends must be cut square, using a wheel-type cutter or saw & miter box. A fine-toothed hand saw (16-18 teeth/inch) with little or no set is recommended. A power cut-off saw with carbide blade is recommended for high volume cutting.

Step 2: Deburr & Bevel Pipe

Regardless of cutting method used in Step 1, burrs are created which must be removed from both the pipe I.D. and O.D. before joining. All pipe ends should be beveled 10° to 15°. Commercially available deburring & beveling tool is recommended, or a mill file may be used.

Step 3: Clean Joint Components

Wipe away all loose dirt and moisture from the pipe O.D. and fitting I.D. with a clean, dry cotton rag. **DO NOT** ATTEMPT TO JOIN WET SURFACES.

Step 4: Check Joint Interference Fit

An interference between pipe and fitting socket is necessary for proper fusion of the joint. To check, lightly insert pipe into fitting socket. **DO NOT FORCE**. Interference between pipe and fitting must occur between ½ of the socket depth (full interference fit) and the socket bottom (net fit). Do not use components which improperly mate.

Step 5: Apply Primer

NOTE: Certain Double Containment solvent cement connections should be made using a "one-step" type cement specifically designed for use without primer. Go to Step 6 if using a one-step type of solvent cement.

Primer is necessary to penetrate and soften both pipe and fitting socket surfaces in order for the solvent cement to properly bond. THE MOST FREQUENT CAUSE OF JOINT FAILURES IS INADEQUATE SOLVENT PENETRATION AND SOFTENING OF BONDING SURFACES DURING THE WELDING OPERATION.

1. Using a brush or applicator size not less than ½ the pipe diameter, apply a liberal coat of primer with a scrubbing motion to the fitting socket until the surface is softened and semi-fluid. This may take 5 to 15 seconds depending on size and temperature (larger diameters and lower temperatures will increase required time).
2. Apply primer to pipe in the same manner, extending application area to slightly more than the insertion depth into the fitting socket.
3. Apply a second coat to both the fitting socket and the pipe.
4. Check penetration and softening by scraping the primed surfaces. A few thousandths of the semi-fluid surface should be easily removed. Repeat primer application if necessary.

Step 6: Apply Solvent Cement

Solvent cement must be applied IMMEDIATELY to primed surfaces before the primer dries, in an alternating 3-coat application. Using a brush or applicator size no less than 1/2 the pipe diameter, apply a liberal coat of solvent cement to the primed pipe surface, then apply a light to medium coat to the primed fitting socket. If a "net fit" was experienced during dry fit check (Step 4), apply an additional coat again to the pipe surface. BE SURE TO USE A VERY LIBERAL AMOUNT OF SOLVENT CEMENT ON PIPE.

Step 7: Join Components

IMMEDIATELY following application of cement and before it starts to set, insert the pipe into the socket with a 1/4-turn twisting motion to evenly distribute cement within the joint. A full bead of cement should form around the circumference of the joint. Hold joint together for approximately 30 seconds to make sure the pipe does not move or back out of the socket.

Step 8: Remove Excess Cement

Using a cloth, wipe clean all excess cement from the exterior juncture of the pipe and fitting.

Step 9: Initial Set & Cure Time

Initial Set & Cure Time must be followed in accordance with the solvent cement manufacturer's instructions.

Sample Engineering Specification

1.0 System Design and Manufacturer

1.1 Thermoplastic Double Containment System shall be a floating carrier design constructed from conventional pipe and fittings meeting applicable ASTM requirements for all standard configurations of primary carrier and secondary containment. System shall include all pipe, fittings, centralizers, valves and valve boxes to be supplied by Spears® Manufacturing Company.

1.2 Standard configurations (tees, elbows, crosses, etc.) of primary carrier fitting shall be equipped with extender couplings for installation in secondary containment pipe and fittings.

1.3 Primary carrier system shall be supported by polypropylene slide-on centralizer brackets positioned with clean room adhesive. Centralizers shall provide annular space suitable for drainage or installation of user-supplied leak detection cable.

1.4 Specialty fittings shall be according to manufacturer's specifications and suitable for use with specified primary carrier and secondary containment system. Specialty fittings include the following:

Termination Fitting for start and stop of secondary containment.

Closure Fitting for joining two (2) secondary containment lines that meet.

Expansion Joint/Coupling for thermal expansion/contraction compensation or joining of pipe lines.

Sensor Saddles for connection of user-supplied leak detection apparatus.

Any other custom fitting configuration designed for the system.

1.5 Double Containment System shall be air-vented in the secondary containment to prohibit pressurization in excess of 10 psi.

1.6 Valve Box enclosure for ball and ball check valves shall be Tee-Style with specified valve installed and [option: external stem extension].

2.0 Size & Materials

2.1 Double Containment system shall be [specify size, material & schedule *] primary carrier pipe and fittings and [specify size, material & schedule] secondary containment pipe and fittings.

2.2 All primary carrier and secondary containment pipe and fittings shall be manufactured from [specify: PVC, cell class 12454 or CPVC, cell class 23447] materials, according to ASTM D 1784.

2.3 All primary carrier and secondary containment pipe shall meet the requirements of [specify: ASTM D 1785 for PVC or ASTM F 441 for CPVC].

2.4 All standard configuration primary carrier and secondary containment fittings shall meet the requirements of [specify: ASTM D 2466 for PVC Schedule 40, D 2467 for PVC Schedule 80 or F 439 for Schedule 80 CPVC]. All special configuration fittings shall meet the manufacturer's design requirements and be suitable for use with the designated pipe.

3.0 Installation

3.1 Double Containment System shall be installed in accordance with Spears® Double Containment Design & Installation Guide.

3.2 Installation shall be made by qualified personnel trained in making solvent cement joints per ASTM practice D 2855, and flanged joint assembly according to manufacturer's instructions.

3.3 Primary carrier and secondary containment pipe and fitting connections shall be made by conventional solvent cement welding. Flanged assembly connections may be used where required for disassembly or as a design necessity. Solvent cement shall be user supplied and medium to heavy bodied as required. Solvent cement shall be IPS Weld-On or equal.

* = See standard size, material and pipe Schedule combinations. Custom size, material and Schedule combinations by request.

Plastic Pipe



ENGINEERING GUIDE

SPEARS® MANUFACTURING COMPANY
Since 1969
SYLMAR, CALIFORNIA

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www.spearsmfg.com

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Purpose of this Section

This section is intended as resource for use by specification engineers, installers, and users in the selection, design and installation of PVC and CPVC systems installed using Spears® or other pipe products. All information contained within this section is considered vital to obtain proper system performance and must be read and fully understood before attempting to install these products. If you have any questions about the safe and proper installation of these products, contact Spears® Manufacturing Company, 15853 Olden Street, Sylmar CA 91342 USA, Telephone (818) 364-1611.

Spears® PVC and CPVC Materials

PVC

Polyvinyl Chlorides (PVC) is one of the most widely used plastic piping materials. PVC is environmentally sound, provides long service life, is light weight and easy to install, has superior corrosion resistance, is cost effective, and widely accepted by codes. PVC pipe is manufactured by extrusion and PVC fittings are manufactured by injection molding or fabrication. PVC is an amorphous thermoplastic material with physical properties that make it suitable for a wide variety of pressure and non-pressure applications and can be compounded for optimum performance. PVC pipe and fittings are used for drain-waste-vent (DWV), sewers, water mains, water service lines, irrigation, conduit, and various industrial installations.

Spears® high quality PVC compounds give optimum chemical and corrosion resistance with a full range of pressure handling capabilities. Spears® PVC materials are certified by NSF International to applicable standards, including NSF® Standard 61 for use in potable water service, certified lead-free, and to ASTM STD D1784, Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds that specifies Cell Classification for minimum physical property requirements. These include resin type, impact strength, tensile strength, modulus of elasticity in tension, heat deflection temperature and flammability. Spears® minimum PVC Cell Classification is 12454 for rigid (unplasticized) PVC.

The ASTM Type and Grade is PVC Type I, Grade I and the typical long and short term strength designation of material for pressure piping is PVC 1120.

See Industry Standards and Test Methods, Physical Properties and Chemical Resistance sections for additional information.

Spears® PVC Pipe & Systems Product Lines

EverTUFF® Industrial Schedule 80 Pressure Pipe & Fittings

Spears® Clear PVC Schedule 40 & Schedule 80 Pipe & Fittings

Spears® Low Extractable Ultra Pure Water Piping & Fittings

Spears® PVC Duct & Fittings

Spears® PVC Double Containment Pipe & Fittings

Spears® Supplemental PVC Fittings, Valves & Accessories

CPVC

Chlorinated polyvinyl chloride (CPVC) is created by post chlorination of the PVC polymer. This produces up to a 60°F higher heat handling capability than PVC and greater fire resistance, plus a broad range of chemical resistance. CPVC is excellent for use in process piping, hot and cold water service, corrosive waste drainage and other elevated temperature applications. CPVC provides relatively low cost compared to alternative materials for similar use. CPVC pipe is manufactured by extrusion and CPVC fittings are manufactured by injection molding or fabrication. Spears® produces a variety of CPVC pipe, fittings, valves, system accessories and specialty systems.

Spears® high quality CPVC compounds give optimum chemical and corrosion resistance with a full range of pressure handling capabilities. Spears® CPVC materials are certified by NSF International to applicable standards, including NSF® Standard 61 for use in potable water service, certified lead-free, and to ASTM STD D1784, Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds that specifies Cell Classification for minimum physical property requirements. These include resin type, impact strength, tensile strength, modulus of elasticity in tension, heat deflection temperature and flammability. Spears® minimum CPVC Cell Classification is 23447 for rigid (unplasticized) CPVC.

The ASTM Type and Grade is CPVC Type IV Grade I and the typical long and short term strength designation of material for pressure piping is CPVC 4120.

See Industry Standards and Test Methods, Physical Properties and Chemical Resistance sections for additional information.

Spears® CPVC Pipe & Systems Product Lines

EverTUFF® Industrial Schedule 40 & Schedule 80 CPVC Pressure Pipe & Fittings

EverTUFF® CTS CPVC Hot and Cold Water Plumbing Distribution Pipe & Fittings

LabWaste™ CPVC Corrosive Waste Drainage System Pipe & Fittings

FlameGuard® CPVC Fire Sprinkler Products Pipe & Fittings

Spears® CPVC Duct & Fittings

Spears® CPVC Double Containment Pipe & Fittings

Spears® Supplemental CPVC Fittings, Valves & Accessories

"Lead Free" low lead certification – unless otherwise specified, all Spears® Plastic Piping specified here-in are certified by NSF International to ANSI/NSF® Standard 61, Annex G and is in compliance with California's Health & Safety Code Section 116825 (commonly known as AB1953) and Vermont Act 193. Weighted average lead content <=0.25%.

Physical Properties of PVC & CPVC Pipe

GENERAL	PVC Value	CPVC Value	Test Method
Cell Classification	12454	23447	ASTM D 1784
Maximum Service Temp.	140°F	200°F	
Color	White, Dark Gray	Medium Gray	
Specific Gravity, (g/cu.cm @ 73°F)	1.41	1.51	ASTM D 792
Water Absorption % increase 24 hrs @ 25°C	0.05	0.03	ASTM D 570
Hardness, Rockwell	110 - 120	117 - 119	ASTM D 785
Poisson's Ratio @ 73°F	0.410	0.370	
MECHANICAL			
Tensile Strength, psi @ 73°F	7,450	7,900	ASTM D 638
Tensile Modulus of Elasticity, psi @ 73°F	420,000	426,000	ASTM D 638
Flexural Strength, psi @ 73°F	14,450	15,000	ASTM D 790
Flexural Modulus, psi @ 73°F	360,000	360,000	ASTM D 790
Compressive Strength, psi @ 73°F	9,600	10,000	ASTM D 695
Izod Impact, notched, ft-lb/in @ 73°F	0.75	2.9	ASTM D 256
THERMAL			
Coefficient of Linear Expansion (in/in/°F)	2.9×10^{-5}	3.2×10^{-5}	ASTM D 696
Coefficient of Thermal Conductivity			ASTM C 177
Calories • cm/second • cm2 • °C	3.5×10^{-4}	3.27×10^{-4}	
BTU • inches/hour • Ft.2 • °F	1.02	0.95	
Watt/m/K	0.147	0.137	
Heat Deflection Temperature			
Under Load (264 psi, annealed)	170	235	ASTM D 648
ELECTRICAL			
Dielectric Strength, volts/mil	1,413	1,250	ASTM D 149
Dielectric Constant, 60Hz, 30°F	3.70	3.70	ASTM D 150
Volume Resistivity, ohm/cm @ 95°C	1.2 x 1012	3.4 x 1012	ASTM D 257
Spears® PVC & CPVC Pipe is non-electrolytic			
FIRE PERFORMANCE			
Flammability Rating	V-0	V-0, 5VB, 5VA	UL-94
Flame Spread Index	<10	<10	
Flame Spread	0-25	<25	ULC
Smoke Generation	80-225	<50	ULC
Flash Ignition Temp.	730°F	900°F	
Average Time of Burning (sec.)	<5	<5	ASTM D 635
Average Extent of Burning (mm)	<10	<10	
Burning Rate (in/min)	Self Extinguishing	Self Extinguishing	
Softening Starts (approx.)	250°F	295°F	
Material Becomes Viscous	350°F	395°F	
Material Carbonizes	425°F	450°F	
Limiting Oxygen Index (LOI)	43	60	ASTM D 2863

NOTE: The physical properties shown above are considered general for PVC and CPVC. Contact Spears® Technical Services for additional information if necessary.

PVC & CPVC pipe is produced in several different outside diameters, sizes and dimensions for different applications. Different classifications based on outside diameter are not interchangeable, but can often be connected with specialty adapter fittings.

Basic Pipe Sizing Classifications Based on Outside Diameter

• Iron Pipe Size (IPS) - PVC & CPVC Pressure Pipe and Drainage Waste & Vent DWV pipe, forms one of the most widely used sizing classifications including Schedule 40, 80 & 120 pipe and Class pipe in various Standard Dimension Ratios (SDR); plus several specialty piping products such as Spears® **FlameGuard®** CPVC Fire Sprinkler Systems, **LabWaste™** CPVC Corrosive Waste Drainage Systems, and Low Extractable PVC Systems for Ultra Pure Water.

• Plastic Irrigation Pipe (PIP) – PVC for agricultural irrigation

• Copper Tube Size (CTS) – CPVC for Hot & Cold Waste Distribution

• Plastic Sewer Main (Type PSM) – PVC for gravity sewer mains

• AWWA C900/905 – PVC with Cast Iron O.D. for municipal water systems

The following Pipe Dimension Reference chart is for quick reference to some of the commonly used sizing classifications and nominal sizes. The following pages give additional detail for widely used PVC & CPVC pipe in IPS and CTS sizes.

Pipe Dimension Reference Chart

Pipe Type O.D. Size SDR		LH PIP 91	80 PIP 51	100 PIP 41	125 PIP 32.5	CL 63 IPS 64	CL 100 IPS 41	SEWER PSM 35	CL 125 IPS 32.5	CL 160 IPS 26	CL 200 IPS 21	40 DWV IPS —	80 DWV IPS —	SCH 40 IPS —	SCH 80 IPS —	C-900 CI DR 18
4"	O.D.	4.130	4.130	4.130	4.130	4.500	4.500	4.215	4.500	4.500	4.500	4.500	4.500	4.500	4.500	4.800
	I.D.	4.000	3.968	3.928	3.876	4.360	4.280	3.89	4.224	4.154	4.072	3.998	3.786	3.998	3.786	4.22
	Wall	.065	.081	.101	.127	.070	.110	0.125	.138	.173	.214	.237	.337	.237	.337	.267
	PSI	43	80	100	125	63	100	117.5	125	160	200	100	100	220	320	150
6"	O.D.	6.140	6.140	6.140	6.140	6.625	6.625	6.275	6.625	6.625	6.625	6.625	6.625	6.625	6.625	6.900
	I.D.	6.000	5.898	5.840	5.762	6.417	6.301	5.742	6.217	6.115	5.993	6.031	5.709	6.031	5.709	6.08
	Wall	.070	.121	.150	.189	.104	.162	0.18	.204	.255	.316	.280	.432	.280	.432	.383
	PSI	43	80	100	125	63	100	117.5	125	160	200	100	100	180	280	150
8"	O.D.	8.160	8.160	8.160	8.160	8.625	8.625	8.4	8.625	8.625	8.625	8.625	8.625	8.625	8.625	9.050
	I.D.	7.984	7.840	7.762	7.658	8.355	8.205	7.665	8.095	7.961	7.805	7.943	7.565	7.943	7.565	7.97
	Wall	.088	.160	.199	.251	.135	.210	.024	.265	.332	.410	.322	.500	.322	.500	.503
	PSI	43	80	100	125	63	100	117.5	125	160	200	100	100	160	250	150
10"	O.D.	10.200	10.200	10.200	10.200	10.750	10.750	10.5	10.750	10.750	10.750	10.750	10.750	10.750	10.750	11.100
	I.D.	9.980	9.800	9.702	9.572	10.414	10.226	9.563	10.088	9.924	9.748	9.976	9.492	9.976	9.492	9.78
	Wall	.110	.200	.249	.314	.168	.262	0.3	.331	.413	.511	.365	.593	.365	.593	.617
	PSI	43	80	100	125	63	100	117.5	125	160	200	100	100	140	230	150
12"	O.D.	12.240	12.240	12.240	12.240	12.750	12.750	12.5	12.750	12.750	12.750	12.750	12.750	12.750	12.750	13.200
	I.D.	11.975	11.760	11.642	11.486	12.352	12.128	11.361	11.966	11.770	11.538	11.890	11.294	11.890	11.294	11.63
	Wall	.132	.240	.299	.377	.199	.311	0.36	.392	.490	.606	.406	.687	.406	.687	.733
	PSI	43	80	100	125	63	100	117.5	125	160	200	100	100	130	230	150
14"	O.D.	14.280	14.280	14.280	14.280	*	*	*	*	14	*	14.000	14.000	14.000	14.000	15.3
	I.D.	14.000	13.720	13.584	13.402					12.86		13.072	12.410	13.072	12.410	13.48
	Wall	.140	.280	.348	.439					0.538		.438	.750	.438	.750	0.85
	PSI	43	80	100	125					160		100	100	130	220	235
15"	O.D.	15.300	15.300	15.300	15.300	*	*	15.3	*	*	*	*	*	*	*	*
	I.D.	14.970	14.700	14.550	14.358			13.898								
	Wall	.165	.300	.375	.471			0.44								
	PSI	43	80	100	125			117.5								
16"	O.D.	*	*	*	*	*	*	*	*	16	*	16.000	16.000	16.000	16.000	17.4
	I.D.									14.696		14.940	14.214	14.940	14.214	15.33
	Wall									0.615		.500	.843	.500	.843	0.967
	PSI									160		100	100	130	220	235
18"	O.D.	18.360	18.701	18.701	18.701	*	18.000	18.701	*	18.000	*	18	18.000	18	18.000	19.5
	I.D.	17.964	17.967	17.789	17.551		17.122	17.629		16.616		16.808	16.014	16.808	16.014	17.83
	Wall	.198	.367	.456	.575		.439	0.536		.692		0.562	.937	0.582	.937	1.083
	PSI	43	80	100	125		100	117.5		160		100	100	120	220	235
20"	O.D.	20.400	*	*	*	*	20.000	*	*	20.000	*	20	20	20	20	21.6
	I.D.	19.962					19.026			18.462		18.863	17.814	18.863	17.614	19.03
	Wall	.219					.487			.769		0.533	1.031	0.533	1.031	1.2
	PSI	43					100			160		100	100	120	220	235
21"	O.D.	*	22.047	22.047	22.047	*	*	22.047	*	*	*	*	*	*	*	*
	I.D.		21.183	20.971	20.691			20.783								
	Wall		.432	.538	.678			0.632								
	PSI		80	100	125			117.5								
24"	O.D.	*	24.803	24.803	24.803	*	24.000	24.8	*	24	*	24	24	24	24	25.800
	I.D.		23.831	23.593	23.277		22.748	23.381		22.043		22.54	21.418	22.54	21.418	23.73
	Wall		.486	.605	.763		.585	0.711		0.923		0.687	1.218	0.687	1.218	1.200
	PSI		80	100	125		100	117.5		160		100	100	120	210	235

* Information Not Available

PVC PIPE

Schedule 40

Nom. Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.	Maximum W.P. PSI*
1/8	0.405	0.249	0.068	0.051	810
1/4	0.540	0.344	0.088	0.086	780
3/8	0.675	0.473	0.091	0.115	620
1/2	0.840	0.602	0.109	0.170	600
3/4	1.050	0.804	0.113	0.226	480
1	1.315	1.029	0.133	0.333	450
1-1/4	1.660	1.360	0.140	0.450	370
1-1/2	1.900	1.590	0.145	0.537	330
2	2.375	2.047	0.154	0.720	280
2-1/2	2.875	2.445	0.203	1.136	300
3	3.500	3.042	0.216	1.488	260
3-1/2	4.000	3.521	0.226	1.789	240
4	4.500	3.998	0.237	2.118	220
5	5.563	5.016	0.258	2.874	190
6	6.625	6.031	0.280	3.733	180
8	8.625	7.942	0.322	5.619	160
10	10.750	9.976	0.365	7.966	140
12	12.750	11.889	0.406	10.534	130
14	14.000	13.073	0.437	12.462	130
16	16.000	14.940	0.500	16.286	130
18	18.000	16.809	0.562	20.587	130
20	20.000	18.743	0.593	24.183	120
24	24.000	22.544	0.687	33.652	120

SDR 13.5 - Class 315

Maximum W.P. 315 PSI* (all sizes)

Nominal Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./ft.
1/2	0.840	0.716	.062	0.096
3/4	1.050	0.874	.078	0.168
1	1.315	1.101	.097	0.257
1-1/4	1.660	1.394	.123	0.403
1-1/2	1.900	1.598	.141	0.525
2	2.375	2.003	.176	0.809
2-1/2	2.875	2.423	.213	1.189
3	3.500	2.950	.259	1.762
4	4.500	3.794	.333	2.908
6	6.625	5.584	.491	6.313

SDR 21 - Class 200

Maximum W.P. 200 PSI* (all sizes)

Nominal Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.
3/4	1.050	0.910	0.060	0.136
1	1.315	1.169	0.063	0.180
1-1/4	1.660	1.482	0.079	0.278
1-1/2	1.900	1.700	0.090	0.358
2	2.375	2.129	0.113	0.550
2-1/2	2.875	2.581	0.137	0.797
3	3.500	3.146	0.167	1.169
4	4.500	4.046	0.214	1.927
6	6.625	5.955	0.316	4.186
8	8.625	7.756	0.410	7.070
10	10.750	9.667	0.511	10.983
12	12.750	11.465	0.606	15.455
14	14.000	12.588	0.666	18.647
16	16.000	14.385	0.762	24.373
18	18.000	16.183	0.857	30.849
20	20.000	17.982	0.952	38.070
24	24.000	21.577	1.143	54.850

Schedule 80

Nom. Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.	Maximum. W.P. PSI*
1/4	.540	.282	0.119	0.117	1130
3/8	.675	.403	0.126	0.162	920
1/2	.840	.526	0.147	0.231	850
3/4	1.050	.722	0.154	0.314	690
1	1.315	.936	0.179	0.462	630
1-1/4	1.660	1.255	0.191	0.654	520
1-1/2	1.900	1.476	0.200	0.793	470
2	2.375	1.913	0.218	1.097	400
2-1/2	2.875	2.290	0.276	1.674	420
3	3.500	2.864	0.300	2.242	370
3-1/2	4.000	3.326	0.318	2.735	350
4	4.500	3.786	0.337	3.277	320
5	5.563	4.768	0.375	4.078	290
6	6.625	5.709	0.432	6.258	280
8	8.625	7.565	0.500	9.506	250
10	10.750	9.493	0.593	14.095	230
12	12.750	11.294	0.687	19.392	230
14	14.000	12.410	0.750	23.261	220
16	16.000	14.213	0.843	29.891	220
18	18.000	16.014	0.937	35.419	220
20	20.000	17.814	1.031	45.879	220
24	24.000	21.418	1.218	64.959	210

SDR 26 - Class 160

Maximum W.P. 160 PSI* (all sizes)

Nominal Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.
1	1.315	1.175	0.060	0.173
1-1/4	1.660	1.512	0.064	0.233
1-1/2	1.900	1.734	0.073	0.300
2	2.375	2.173	0.091	0.456
2-1/2	2.875	2.635	0.110	0.657
3	3.500	3.210	0.135	0.967
4	4.500	4.134	0.173	1.570
6	6.625	6.084	0.255	3.415
8	8.625	7.921	0.332	5.786
10	10.750	9.874	0.413	8.973
12	12.750	11.711	0.490	12.623
14	14.000	12.860	0.538	15.209
16	16.000	14.696	0.615	19.881
18	18.000	16.533	0.692	25.162
20	20.000	18.370	0.769	31.064
24	24.000	22.043	0.923	44.754

SDR 41 - Class 100

Maximum W.P. 100 PSI* (all sizes)

Nominal Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.
2-1/2	2.875	2.715	0.070	0.444
3	3.500	3.310	0.085	0.643
4	4.500	4.260	0.110	1.044
6	6.625	6.281	0.162	2.205
8	8.625	8.180	0.210	3.714
10	10.750	10.195	0.262	5.774
12	12.750	12.421	0.311	4.113
14	14.000	13.270	0.341	9.888
16	16.000	15.165	0.390	12.925
18	18.000	17.061	0.439	16.352
20	20.000	18.956	0.488	20.200
24	24.000	22.748	0.585	29.070

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Progressive Products from Spears® Innovation and Technology

SDR 32.5 - Class 125
Maximum W.P. 125 PSI* (all sizes)

Nom. Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.
1/2	.840	.750	.045	.071
3/4	1.050	0.950	0.050	0.099
1	1.315	1.215	0.051	0.126
1-1/4	1.660	1.520	0.060	0.221
1-1/2	1.900	1.760	0.060	0.255
2	2.375	2.209	0.073	0.378
2-1/2	2.875	2.679	0.088	0.541
3	3.500	3.264	0.108	0.793
4	4.500	4.204	0.138	1.280

SDR 32.5 - Class 125
Maximum W.P. 125 PSI* (all sizes)

Nom. Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.
6	6.625	6.196	0.204	2.732
8	8.625	8.063	0.265	4.658
10	10.750	10.048	0.331	7.252
12	12.750	11.919	0.392	10.182
14	14.000	13.088	0.430	12.270
16	16.000	14.957	0.492	16.037
18	18.000	16.826	0.554	20.307
20	20.000	18.696	0.615	25.063
24	24.000	22.436	0.738	36.072

Schedule 120

Nom. Pipe Size (in)	O.D.	Average I.D.	Minimum Wall	Nominal Wt./Ft.	Maximum W.P. PSI*
1/2	.840	.480	0.170	0.236	1010
3/4	1.050	.690	0.170	0.311	770
1	1.315	.891	0.200	0.464	720
1-1/4	1.660	1.204	0.215	0.649	600
1-1/2	1.900	1.423	0.225	0.787	540
2	2.375	1.845	0.250	1.111	470

Schedule 120

Nom. Pipe Size (in)	O.D.	Average I.D.	Minimum Wall	Nominal Wt./Ft.	Maximum W.P. PSI*
2-1/2"	2.875	2.239	0.300	1.615	470
3"	3.500	2.758	0.350	2.306	440
4"	4.500	3.574	0.437	3.713	430
6"	6.625	5.434	0.562	7.132	370
8"	8.625	7.189	0.718	11.277	380

CPVC INDUSTRIAL PIPE

Schedule 40

Nominal Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./ft.	Maximum W.P. PSI*
1/8	0.405	0.249	0.095	0.055	910
1/4	0.540	0.344	0.119	0.093	780
3/8	0.675	0.473	0.126	0.125	620
1/2	0.840	0.602	0.147	0.184	600
3/4	1.050	0.804	0.154	0.245	480
1	1.315	1.029	0.179	0.360	450
1-1/4	1.660	1.360	0.191	0.487	370
1-1/2	1.900	1.590	0.200	0.581	330
2	2.375	2.047	0.218	0.779	280
2-1/2	2.875	2.445	0.276	1.229	300
3	3.500	3.042	0.300	1.610	260
4	4.500	3.998	0.337	2.292	220
6	6.625	6.031	0.432	4.039	180
8	8.625	7.942	0.500	6.079	160
10	10.750	9.976	0.593	8.618	140
12	12.750	11.889	0.687	11.397	130
14	14.000	13.073	0.750	13.482	130
16	16.000	14.940	0.843	17.619	130
18	18.000	16.809	0.937	22.271	130
20	20.000	18.743	1.031	26.162	120
24	24.000	22.544	1.218	36.406	120

Schedule 80

Nominal Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./ft.	Maximum W.P. PSI*
1/8	0.405	0.195	0.095	0.068	1230
1/4	0.540	0.282	0.119	0.115	1130
3/8	0.675	0.403	0.126	0.158	920
1/2	0.840	0.526	0.147	0.232	850
3/4	1.050	0.722	0.154	0.314	690
1	1.315	0.936	0.179	0.461	630
1-1/4	1.660	1.255	0.191	0.638	520
1-1/2	1.900	1.476	0.200	0.773	470
2	2.375	1.913	0.218	1.070	400
2-1/2	2.875	2.29	0.276	1.632	420
3	3.500	2.864	0.300	2.186	370
4	4.500	3.786	0.337	3.196	320
6	6.625	5.709	0.432	6.102	280
8	8.625	7.565	0.500	9.269	250
10	10.750	9.493	0.593	13.744	230
12	12.750	11.294	0.687	18.909	230
14	14.000	12.41	0.750	22.681	220
16	16.000	14.213	0.843	29.162	220
18	18.000	16.014	0.937	36.487	220
20	20.000	17.814	1.031	44.648	220
24	24.000	21.418	1.218	63.341	210

SDR 11 - Copper Tube Size (CTS)
Maximum W.P. 400 PSI* (all sizes)

Nominal Pipe Size (in)	Average O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.
1/2	0.625	0.469	0.068	1.393
3/4	0.875	0.695	0.080	0.149
1	1.125	0.901	0.102	0.240
1 1/4	1.375	1.105	0.125	0.353
1 1/2	1.625	1.309	0.148	0.489
2	2.125	1.716	0.193	0.829

SDR13.5 - Class 315
Maximum Working Pressure 315 psi (all sizes)

Nominal Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./ft.
3/4	1.050	0.874	0.078	0.182
1	1.315	1.101	0.097	0.278
1-1/4	1.660	1.394	0.123	0.436
1-1/2	1.900	1.598	0.141	0.568
2	2.375	2.003	0.176	0.875
2-1/2	2.875	2.423	0.213	1.286
3	3.500	2.950	0.259	1.906
4	4.500	3.794	.333	3.146
6	6.625	5.584	.491	6.828

Note: *Pressure ratings are for water, non-shock, @73°F. Threaded pipe requires a 50% reduction in the pressure ratings stated for plain-end pipe @ 73°F. Threading recommended for Schedule 80 or heavier walls only. Maximum service temperature for PVC is 140°F. Maximum service temperature for CPVC is 200°F. The pressure rating of the pipe must be de-rated when working at elevated temperatures.
Chemical resistance data should be referenced for proper material selection and possible de-rating when working with fluids other than water.

Temperature De-rating

The pressure ratings given are for water, non-shock, @ 73°F. The specified derating factors for PVC or for CPVC are suitable for pipe conveying water at elevated temperatures. To determine elevated temperature rating, multiply 73°F [23°C] pressure rating by appropriate factor shown in the tables.

When working near maximum specified temperature, solvent cement joints are recommended in place of threaded connections. Where disassembly is required at elevated temperatures use Spears® Special reinforced (SR) adapters, flanges, unions or grooved coupling connections.

Only Schedule 80 or heavier wall thickness pipe (PVC or CPVC) should be threaded. Do NOT thread Schedule 40 pipe or other thinner-walled pipe such as SDR 13.5, SDR 21, SDR 26, etc. Threading requires a 50% reduction in the pipe's specified pressure rating @ 73°F.

See Chemical Resistance Data for Pressure Piping information for both chemical compatibility and potential temperature limitations when using certain chemicals.

PVC Pipe

Operating Temp (°F)	De-Rating Factor
73	1.00
80	0.88
90	0.75
100	0.62
110	0.51
120	0.40
130	0.31
140	0.22

EX: 2" PVC SCHEDULE 80 @ 120°F = 400 psi x 0.40 = 160 psi max. @ 120°F.

CPVC Pipe

Operating Temp (°F)	De-Rating Factor
73-80	1.00
90	0.91
100	0.82
110	0.72
120	0.65
130	0.57
140	0.50
150	0.42
160	0.40
170	0.29
180	0.25
200	0.20

EX: 2" CPVC SCHEDULE 80 @ 120°F = 400 psi x 0.65 = 260 psi max. @ 120°F

FLOW VELOCITY & FRICTION LOSS

Friction Loss Through Pipe

The Hazen-Williams equation below is widely used to calculate friction loss for water through PVC and CPVC pipe

$$f = .2083 \times \left(\frac{100}{C}\right)^{1.852} \times \frac{G^{1.852}}{di^{4.8655}}$$

Where: f = friction head of feet of water per 100' for the specific pipe size and I.D.
C = a constant for internal pipe roughness. 150 is the commonly accepted value for PVC and CPVC pipe.
G = flow rate of gallons per minute (U.S. gallons).
di = inside diameter of pipe in inches.

Friction Loss Through Fittings

Friction loss through fittings is expressed in equivalent feet of the same pipe size and schedule for the system flow rate. Schedule 40 head loss per 100' values are usually used for other wall thicknesses and standard iron pipe size O.D.'s.

Average Friction Loss for PVC and CPVC Fittings in Equivalent Feet of Straight Run Pipe

Item	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6	8	10	12	14	16	18	20	24
Tee Run	1.0	1.4	1.7	2.3	2.7	4.0	4.9	6.1	7.9	12.3	14.0	17.5	20.0	25.0	27.0	32.0	35.0	42.0
Tee Branch	3.8	4.9	6.0	7.3	8.4	12.0	14.7	16.4	22.0	32.7	49.0	57.0	67.0	78.0	88.0	107.0	118.0	137.0
90° Ell	1.5	2.0	2.5	3.8	4.0	5.7	6.9	7.9	11.4	16.7	21.0	26.0	32.0	37.0	43.0	53.0	58.0	67.0
45° Ell	.8	1.1	1.4	1.8	2.1	2.6	3.1	4.0	5.1	8.0	10.6	13.5	15.5	18.0	20.0	23.0	25.0	30.0

Note: *Values 10"-24": Approximate values from Nomograph.*

Pressure Drop In Valves & Strainers

Pressure drop calculations can be made for valves and strainers for different fluids, flow rates, and sizes using the CV values and the following equation:

Where:

$$P = \frac{(G)^2\,(Sg)}{(C_V)^2}$$

P = Pressure drop in PSI; feet of water = $\frac{PSI}{.4332}$

G = Gallons per minute

C_V = Gallons per minute water per 1 PSI pressure drop

Sg = Specific gravity of liquid (water = 1)

C_V Valves for Select Spears® Valves and Strainers

Nominal Size ⇨	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6	8	10	12
True Union 2000 Ball Valve[1]	29	63	120	243	357	599	856	1416	2865	1952	--	--	--
Single Entry Ball Valve[1]	38	76	146	292	412	720	--	1660	3104	--	--	--	--
True Union 2000 Ball Check Valve	6.3	17	25	65	86	130	200	275	500	800	--	--	--
Butterfly Valve (90° - Full Open)	--	--	--	--	81	109	192	345	411	1125	2249	4440	6309
Y-Check Valve	6.7	12.6	22.9	33.8	50.7	79.2	--	235	387	--	--	--	--
Y-Strainer (12 Mesh-Clean)	5.4	7.8	13.9	32.9	41.6	50.0	--	74.6	169.0	--	--	--	--
Basket Strainer (Clean)	4.5	10	15	30	46	72	110	172	270	630	750	893	1063

1- Full Port Ball Valve Cv based on equivalent length of Schedule 80 pipe

Water Velocities

Velocities for water in feet per second at different GPM's and pipe inside diameters can be calculated as follows:

$$V = .3208\,\frac{G}{A}$$

Where:

V = velocity in feet per second

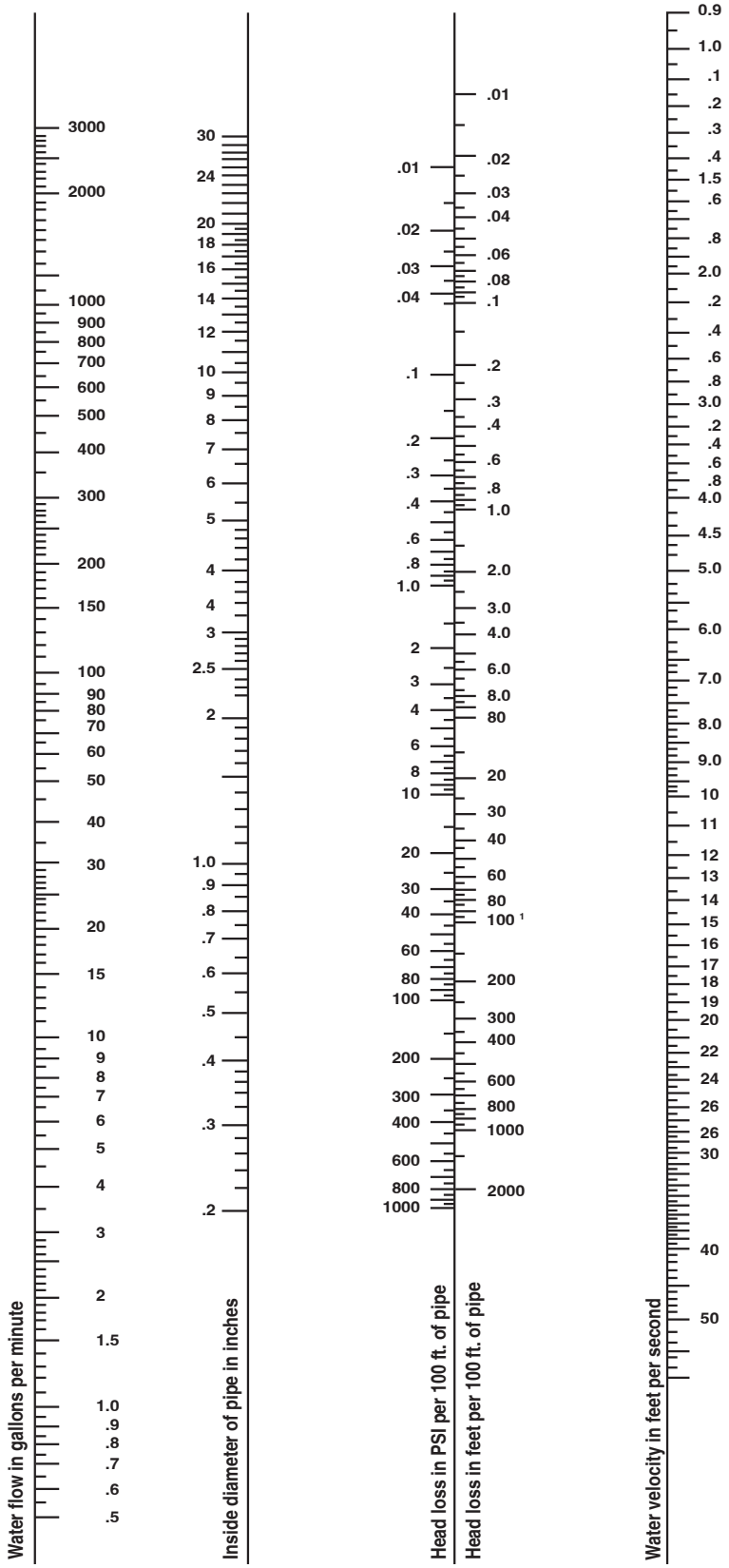
G = gallons per minute

A = inside cross sectional area in square inches

CAUTION: Flow velocities in excess of 5.0 feet per second are not recommended for closed-end systems. Contact Spears® Technical Services for additional information.

Head Loss Characteristics of Water Flow Through Rigid Plastic Pipe – Nomograph

The nomograph provides approximate values for water flow, head loss and water velocity for a wide range of plastic pipe sizes. Two known variables must be used to obtain the other variables by lining up the values on the scales using a ruler or straight edge. Flow velocities in excess of 5.0 feet per second are not recommended.



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FLOW VELOCITY & FRICTION LOSS

SCHEDULE 40

Flow Rate (Gallons/ Minute)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Rate (Gallons/ Minute)
GPM	1/8"			1/4"			3/8"			1/2"			3/4"			1"			1-1/4"			GPM
0.25	1.64	6.54	2.83	0.86	1.36	0.59	0.46	0.29	0.12													0.25
0.50	3.27	23.60	10.23	1.72	4.90	2.12	0.91	1.04	0.45													0.50
0.75	4.91	50.00	21.68	2.59	10.38	4.50		1.37	2.20	0.96												0.75
1	6.55	85.18	36.93	3.45	17.68	7.66	1.82	3.75	1.63	1.13	1.16	0.50	0.63	0.28	0.12	0.39	0.09	0.04	0.22	0.02	0.01	1
2	13.09	307.52	133.31	6.90	63.82	27.67	3.65	13.55	5.88	2.25	4.19	1.82	1.26	1.03	0.44	0.77	0.31	0.13	0.44	0.08	0.03	2
5				17.25	348.29	150.98	9.11	73.96	32.06	5.63	22.88	9.92	3.16	5.60	2.43	1.93	1.69	0.73	1.10	0.43	0.19	5
7							12.76	137.93	59.79	7.88	42.66	18.49	4.42	10.44	4.53	2.70	3.14	1.36	1.55	0.81	0.35	7
10										11.26	82.59	35.80	6.31	20.21	8.76	3.86	6.08	2.64	2.21	1.57	0.68	10
15													9.47	42.82	18.56	5.78	12.89	5.59		3.31	3.32	1.44	15
20													12.63	72.95	31.63	7.71	21.96	9.52	4.42	5.65	2.45		20
25																9.64	33.20	14.39	5.52	8.55	3.71	25
30																11.57	46.54	20.17	6.62	11.98	5.19	30
35																			7.73	15.94	6.91	35
40																			8.83	20.41	8.85	40
45																			9.94	25.39	11.00	45
50																			11.04	30.86	13.38	50

GPM	1-1/2"			2"			2-1/2"			3"			4"			5"			6"			GPM
2	0.32	0.04	0.02																			2
5	0.81	0.20	0.09	0.49	0.06	0.03																5
7	1.13	0.38	0.16	0.68			0.11	0.05	0.48	0.05	0.02											7
10	1.62	0.73	0.32	0.97	0.21	0.09	0.68	0.09	0.04	0.44	0.03	0.01										10
15	2.42	1.55	0.67	1.46	0.45	0.20	1.02	0.19	0.08	0.66	0.07	0.03										15
20	3.23	2.64	1.15	1.95	0.77	0.34	1.37	0.33	0.14	0.88				0.11	0.05	0.51	0.03	0.01				20
25	4.04	4.00	1.73	2.44	1.17	0.51	1.71	0.49	0.21	1.10	0.17	0.07	0.64	0.05	0.02							25
30	4.85	5.60	2.43	2.92	1.64	0.71	2.05	0.69	0.30	1.32	0.24	0.10	0.77	0.06	0.03	0.49	0.02	0.01				30
35	5.65	7.45	3.23	3.41	2.18	0.94	2.39	0.92	0.40	1.54	0.32	0.14	0.89	0.08	0.04	0.57	0.03	0.01				35
40	6.46	9.54	4.14	3.90	2.79	1.21	2.73	1.18	0.51	1.76	0.41	0.18	1.02						0.11	0.05	0.65	0.04	0.02	40
45	7.27	11.87	5.15	4.39	3.47	1.51	3.07	1.46	0.63	1.99	0.51	0.22	1.15	0.13	0.06	0.73	0.04	0.02				45
50	8.08	14.43	6.25	4.87	4.22	1.83	3.41	1.78	0.77	2.21	0.61	0.27	1.28	0.16	0.07	0.81	0.05	0.02	0.56	0.02	0.01	50
60	9.69	20.22	8.77	5.85	5.92	2.56	4.10	2.49	1.08	2.65	0.86	0.37	1.53	0.23	0.10	0.97	0.08	0.03	0.67	0.03	0.01	60
70				6.82	7.87	3.41	4.78	3.32	1.44	3.09	1.15	0.50	1.79	0.30	0.13	1.14	0.10	0.04	0.79	0.04	0.02	70
75				7.31	8.94	3.88	5.12	3.77	1.63	3.31	1.30	0.56	1.92	0.34	0.15	1.22				0.11	0.05	0.84	0.05	0.02	75
80				7.80	10.08	4.37	5.46	4.25	1.84	3.53	1.47	0.64	2.04	0.39	0.17	1.30	0.13	0.06	0.90	0.05	0.02	80
90				8.77	12.53	5.43	6.15	5.28	2.29	3.97	1.82	0.79	2.30	0.48	0.21	1.46	0.16	0.07	1.01	0.07	0.03	90
100				9.74	15.23	6.60	6.83	6.42	2.78	4.41	2.22	0.96	2.55	0.59	0.25	1.62	0.19	0.08	1.12	0.08	0.03	100
125				12.18	23.03	9.98	8.54	9.70	4.21	5.52	3.35	1.45	3.19	0.89	0.38	2.03	0.29	0.13	1.40	0.12	0.05	125
150							10.24	13.60	5.90	6.62	4.70	2.04	3.83	1.24	0.54	2.43	0.41	0.18	1.68	0.17	0.07	150
175										7.72	6.25	2.71	4.47	1.65	0.72	2.84	0.55	0.24	1.96	0.22	0.10	175
200										8.82	8.00	3.47		5.11	2.12	0.92	3.25	0.70	0.30	2.25	0.29	0.12	200
250										11.03	12.10	5.24		6.39	3.20	1.39	4.06	1.06	0.46	2.81	0.43	0.19	250
300														7.66	4.49	1.95	4.87	1.49	0.65	3.37	0.61	0.26	300
350														8.94	5.97	2.59	5.68	1.98	0.86	3.93	0.81	0.35	350
400														10.22	7.64	3.31	6.49	2.54	1.10	4.49	1.03	0.45	400
450																			7.30	3.15	1.37	5.05	1.29	0.56	450
500																			8.11	3.83	1.66	5.61	1.56	0.68	500

NOTE: Spears® recommends that Flow Velocities be maintained at or below 5 feet per second in large diameter piping systems (i.e. 6" diameter and larger) to minimize the potential for hydraulic shock. Refer to Spears® engineering section entitled "Hydraulic Shock" for additional information. Friction loss data based on utilizing mean wall dimensions to determine average ID; actual ID may vary.

FLOW VELOCITY & FRICTION LOSS

SCHEDULE 40

Flow Rate (Gallons/ Minute)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Rate (Gallons/ Minute)
GPM	8"			10"			12"			14"			16"			18"			20"			24"			GPM
100	0.65	0.02	0.01																						100
125	0.81	0.03	0.01																						125
150	0.97	0.04	0.02																						150
175	1.13	0.06	0.03																						175
200	1.29	0.08	0.03	0.82	0.02	0.01																			200
250	1.62	0.11	0.05	1.03	0.04	0.02																			250
300	1.94	0.16	0.07	1.23	0.05	0.02																			300
350	2.27	0.21	0.09	1.44	0.07	0.03	1.01	0.03	0.01																350
400	2.59	0.27	0.12	1.64	0.09	0.04	1.16	0.04	0.02	0.96	0.02	0.01	0.73	0.01	0.01										400
450	2.91	0.34	0.15	1.85		0.11		0.05		1.30	0.05	0.02	1.08	0.03		0.01	0.82	0.02	0.01							450
500	3.24	0.41	0.18	2.05	0.14	0.06	1.44	0.06	0.02	1.19	0.04	0.02	0.91	0.02	0.01										500
750	4.85	0.87	0.38	3.08	0.29	0.12	2.17	0.12	0.05	1.79	0.08	0.03	1.37	0.04	0.02	1.08	0.02	0.01							750
1000	6.47	1.48	0.64	4.10	0.49	0.21	2.89	0.21	0.09	2.39	0.13	0.06	1.83	0.07	0.03	1.45	0.04	0.02	1.16	0.02	0.01				1000
1250				5.13		0.74	0.32	3.61	0.31	0.14	2.99	0.20	0.09	2.29	0.10	0.04	1.81	0.06	0.03	1.45	0.03	0.01			1250
1500				6.15		1.03	0.45	4.33	0.44	0.19	3.58	0.28	0.12	2.74	0.14	0.06	2.17	0.08	0.04	1.74	0.05	0.02	1.21	0.02	0.01	1500
2000									5.78		0.75	0.33	4.78	0.47	0.20	3.66	0.25						0.11		2.89	0.14	0.06	2.32	0.08	0.04	1.61	0.03	0.01	2000
2500									7.22		1.13	0.49	5.97	0.71	0.31	4.57	0.37	0.16	3.61	0.21	0.09	2.91	0.12	0.05	2.01	0.05	0.02							2500
3000														7.17		1.00	0.43	5.49	0.52	0.23	4.34	0.29	0.13	3.49	0.17	0.08	2.41	0.07	0.03						3000
3500																			6.40		0.70	0.30	5.06	0.39	0.17	4.07	0.23	0.10	2.81	0.09	0.04				3500
4000																									5.78		0.50	0.22	4.65	0.30	0.13	3.21	0.12	0.05	4000
4500																									6.50		0.62	0.27	5.23	0.37	0.16	3.62	0.15	0.06	4500
5000																														5.81		0.45	0.19	4.02	0.18	0.08	5000
5500																														6.39		0.53	0.23	4.42	0.22	0.09	5500
6000																														6.97		0.63	0.27	4.82	0.25		0.11	6000
7000																																			5.62	0.34	0.15	7000
7500																																			6.03	0.39	0.17	7500
8000																																			6.43	0.43	0.19	8000
8500																																			6.83	0.49	0.21	8500

NOTE: Spears® recommends that Flow Velocities be maintained at or below 5 feet per second in large diameter piping systems (i.e. 6" diameter and larger) to minimize the potential for hydraulic shock. Refer to Spears® engineering section entitled "Hydraulic Shock" for additional information. Friction loss data based on utilizing mean wall dimensions to determine average ID; actual ID may vary.

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FLOW VELOCITY & FRICTION LOSS

SCHEDULE 80

Flow Rate (Gallons/ Minute)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Rate (Gallons/ Minute)
GPM	1/8"			1/4"			3/8"			1/2"			3/4"			1"			1-1/4"			GPM
0.25	2.67	21.47	9.31	1.29	3.57	1.55	0.63	0.63	0.27													0.25
0.50	5.35	77.52	33.60	2.59	12.88	5.58		1.25	2.27	0.98												0.50
0.75	8.02	164.25	71.20	3.88	27.29		11.83	1.88	4.80	2.08												0.75
1	10.69	279.84	121.31	5.17	46.49		20.15	2.51	8.18	3.55	1.48	2.24	0.97	0.78	0.48	0.21				0.47	0.14	0.06	0.26	0.03	0.01			1
2	21.39	1010.21	437.93	10.35	167.84		72.76	5.01	29.54		12.81	2.96		8.08	3.50	1.56	1.73	0.75	0.93	0.49	0.21	0.52	0.12	0.05				2
5				25.87	915.95		397.07	12.53	161.23		69.89	7.39		44.12		19.12	3.91		9.45	4.10	2.33	2.67	1.16	1.30	0.64	0.28			5
7								17.54	300.66		130.34	10.35		82.27		35.66	5.48		17.62		7.64	3.26	4.98	2.16	1.81	1.20	0.52			7
10												14.78		159.26		69.04	7.82		34.11		14.79	4.66		9.65	4.18	2.59	2.32	1.00			10
15																	11.74		72.27		31.33	6.99	20.44	8.86			3.89		4.91		2.13	15
20																	15.65		123.13		53.38	9.33		34.82		15.09	5.18		8.36		3.62	20
25																						11.66		52.64		22.82	6.48	12.64		5.48		25
30																						13.99		73.78		31.98	7.77		17.71		7.68	30
35																						16.32		98.16		42.55	9.07		23.56		10.21	35
40																						18.65		125.70		54.49	10.37	30.17		13.08		40
45																											11.66		37.53		16.27	45
50																											12.96		45.62		19.77	50
60																											15.55		63.94		27.72	60
70																											18.14		85.06		36.87	70
75																											19.43		96.66		41.90	75
80																											20.73		108.93		47.22	80

GPM	1-1/2"			2"			2-1/2"			3"			4"			5"			6"			GPM
1	0.19	0.01	0.01	0.11	0.00	0.00	0.08	0.00	0.00	0.05	0.00	0.00										1
2	0.38	0.05	0.02	0.22	0.02	0.01	0.16	0.01	0.00	0.10	0.00	0.00										2
5	0.96	0.29	0.13	0.56	0.08	0.04	0.39	0.03	0.01	0.25	0.01	0.01										5
7	1.34	0.54	0.24	0.78	0.15	0.07	0.55	0.06	0.03	0.35	0.02	0.01										7
10	1.92	1.05	0.46	1.12	0.30	0.13	0.78	0.12	0.05	0.50	0.04	0.02										10
15	2.87	2.23	0.97	1.67	0.63	0.27	1.17	0.26				0.11	0.75		0.09	0.04							15
20	3.83	3.80	1.65	2.23	1.07	0.47	1.56	0.45	0.19	1.00	0.15	0.07	0.57	0.04	0.02								20
25	4.79	5.74	2.49	2.79	1.63	0.70	1.95	0.68	0.29	1.24	0.23	0.10	0.71	0.06	0.03								25
30	5.75	8.04	3.49	3.35	2.28	0.99	2.34	0.95	0.41	1.49	0.32	0.14	0.85	0.08	0.04	0.54	0.03	0.01														30
35	6.71	10.70	4.64	3.91	3.03	1.31	2.73	1.26	0.55	1.74	0.43	0.18	1.00							0.11	0.05	0.63	0.04	0.02							35
40	7.66	13.71	5.94	4.46	3.88	1.68		3.11	1.62		0.70	1.99	0.54	0.24	1.14	0.14	0.06	0.72	0.05	0.02										40
45	8.62	17.05	7.39	5.02	4.83	2.09	3.50	2.01	0.87	2.24	0.68	0.29	1.28	0.17	0.08	0.81	0.06	0.02														45
50	9.58	20.72	8.98	5.58	5.87	2.54	3.89	2.45	1.06	2.49	0.82	0.36	1.42	0.21	0.09	0.90	0.07	0.03	0.63	0.03	0.01											50
60	11.50	29.04	12.59	6.69	8.22	3.56	4.67	3.43	1.49	2.99	1.15	0.50	1.71	0.30	0.13	1.08	0.10	0.04	0.75	0.04	0.02											60
70	13.41	38.64	16.75	7.81	10.94	4.74		5.45	4.56	1.98	3.48	1.54	0.67	1.99	0.39	0.17	1.26	0.13	0.06	0.88	0.05	0.02										70
75	14.37	43.90	19.03	8.37	12.43	5.39		5.84	5.18	2.25	3.73	1.74	0.76	2.14	0.45	0.19	1.35	0.15	0.06	0.94	0.06	0.03										75
80	15.33	49.48	21.45	8.93	14.01	6.07		6.23	5.84	2.53	3.98	1.97	0.85	2.28	0.51	0.22	1.44	0.16	0.07	1.00	0.07	0.03										80
90	17.24	61.54	26.68	10.04	17.42	7.55		7.01	7.26	3.15	4.48	2.45	1.06	2.56	0.63	0.27	1.62	0.20	0.09	1.13	0.09	0.04										90
100	19.16	74.80	32.42	11.16	21.18	9.18		7.79	8.83	3.83	4.98	2.97	1.29	2.85	0.76	0.33	1.80	0.25							0.11	1.25		0.10	0.04			100
125	23.95	113.07	49.02	13.95	32.02	13.88		9.73	13.34		5.78	6.22	4.49	1.95	3.56	1.16	0.50	2.24	0.38	0.16	1.57	0.16	0.07										125
150	28.74	158.49	68.71	16.74	44.88	19.45		11.68	18.70		8.11	7.47		6.30	2.73	4.27	1.62	0.70	2.69	0.53	0.23	1.88	0.22	0.10										150
175				19.53	59.70	25.88		13.63	24.88		10.79	8.71		8.38	3.63	4.98	2.16	0.93	3.14	0.70	0.30	2.19	0.29	0.13										175
200				22.32	76.45	33.14		15.57	31.86		13.81	9.96		10.73		4.65	5.70	2.76	1.20	3.59	0.90	0.39	2.51	0.37	0.16										200
250				27.90	115.58	50.10		19.47	48.17		20.88	12.44		16.22		7.03	7.12	4.17	1.81	4.49	1.36	0.59	3.13	0.57	0.25										250
300								23.36	67.52		29.27	14.93		22.74		9.86	8.55	5.85	2.54	5.39	1.90	0.83	3.76	0.79	0.34										300
350																	9.97		7.78	3.37	6.29	2.53	1.10	4.38	1.05	0.46									350
400																	11.39		9.96		4.32	7.18	3.24	1.41	5.01	1.35	0.59								400
450																	12.82		12.39		5.37	8.08	4.04	1.75	5.64	1.68	0.73								450
500																						8.98		4.90	2.13	6.26	2.04	0.89							500

NOTE: Spears® recommends that Flow Velocities be maintained at or below 5 feet per second in large diameter piping systems (i.e. 6" diameter and larger) to minimize the potential for hydraulic shock. Refer to Spears® engineering section entitled "Hydraulic Shock" for additional information. Friction loss data based on utilizing mean wall dimensions to determine average ID; actual ID may vary.

FLOW VELOCITY & FRICTION LOSS

SCHEDULE 80

Flow Rate (Gallons/ Minute)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Rate (Gallons/ Minute)
GPM	8"			10"				12"			14"			16"			18"			20"			24"			GPM
125	0.89	0.04	0.02																							125
150	1.07	0.06	0.02																							150
175	1.25	0.07	0.03																							175
200	1.43	0.10	0.04	0.91	0.03	0.01																				200
250	1.78	0.14	0.06	1.13	0.05	0.02																				250
300	2.14	0.20	0.09	1.36	0.07	0.03																				300
350	2.50	0.27	0.12	1.59	0.09	0.04	1.12	0.04	0.02																	350
400	2.85	0.34	0.15	1.81			0.11		0.05	1.28	0.05	0.02	1.06	0.03	0.01	0.81	0.02	0.01								400
450	3.21	0.43	0.19	2.04	0.14	0.06	1.44	0.06	0.03	1.19	0.04	0.02	0.91	0.02	0.01											450
500	3.57	0.52	0.23	2.27	0.17	0.07	1.60	0.07	0.03	1.33	0.05	0.02	1.01	0.02	0.01											500
750	5.35	1.10	0.48	3.40	0.36	0.16	2.40	0.16	0.07	1.99	0.10	0.04	1.52	0.05	0.02	1.19	0.03	0.01								750
1000	7.13	1.87	0.81	4.53	0.62	0.27	3.20	0.27	0.12	2.65	0.17	0.07	2.02	0.09	0.04	1.59	0.05	0.02	1.29	0.03	0.01					1000
1250				5.66		0.94	0.41	4.00	0.40	0.17	3.31	0.25						0.11	2.53		0.13	0.06	1.99	0.07	0.03	1.61	0.04	0.02	1250
1500				6.80		1.32	0.57	4.80	0.57	0.24	3.98	0.36	0.15	3.03	0.18	0.08	2.39	0.10	0.04	1.93	0.06	0.03	1.34	0.03	0.01				1500
2000							6.40			0.96	0.42	5.30	0.61	0.26	4.04	0.31	0.14	3.18	0.18	0.08	2.57	0.10	0.05	1.78	0.04	0.02			2000
2500													6.63		0.92	0.40	5.05	0.48	0.21	3.98	0.27	0.12	3.22	0.16	0.07	2.23	0.06	0.03	2500
3000													7.95		1.29	0.56	6.06	0.67	0.29	4.78	0.37	0.16	3.86	0.22	0.10	2.67	0.09	0.04	3000
3500																		7.07		0.89	0.38	5.57	0.50	0.22	4.50	0.30	0.13	3.12	0.12	0.05	3500
4000																							6.37		0.64	0.28	5.15	0.38	0.16	3.56	0.15	0.07	4000
4500																							7.16		0.79	0.34	5.79	0.47	0.20	4.01	0.19	0.08	4500
5000																												6.43		0.57	0.25	4.45	0.23	0.10	5000
5500																												7.08		0.68	0.30	4.90	0.28	0.12	5500
6000																												7.72		0.80	0.35	5.34	0.33	0.14	6000
7000																																	6.23		0.44	0.19	7000
7500																																	6.68		0.49	0.21	7500
8000																																	7.12		0.56	0.24	8000
8500																																	7.57		0.62	0.27	8500



NOTE: Spears® recommends that Flow Velocities be maintained at or below 5 feet per second in large diameter piping systems (i.e. 6" diameter and larger) to minimize the potential for hydraulic shock. Refer to Spears® engineering section entitled "Hydraulic Shock" for additional information. Friction loss data based on utilizing mean wall dimensions to determine average ID; actual ID may vary.

FLOW VELOCITY & FRICTION LOSS

SCHEDULE 120

Flow Rate (Gallons/ Minute)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Rate (Gallons/ Minute)
GPM	1/2"			3/4"			1"			1-1/4"			1-1/2"			2"			2-1/2"				3"			GPM
1	1.77	3.50	1.52	0.86	0.60	0.26	0.51	0.17	0.07	0.28	0.04	0.02	0.20	0.02	0.01	0.12	0.00	0.00	0.08	0.00	0.00	0.05	0.00	0.00							1
2	3.54	12.62	5.47		1.72	2.16	0.94	1.03	0.62	0.27	0.56	0.14	0.06	0.40	0.06	0.03	0.24	0.02	0.01	0.16	0.01	0.00							0.11	0.00	0.00	2
5	8.86	68.86	29.85		4.29		11.78		5.11	2.57		3.40	1.47	1.41	0.78	0.34	1.01	0.35	0.15	0.60	0.10	0.04	0.41	0.04	0.02	0.27	0.01	0.01							5
7	12.41	128.41	55.67		6.00		21.97		9.52	3.60	6.33	2.75		1.97	1.46	0.63	1.41	0.65	0.28	0.84	0.18	0.08	0.57	0.07	0.03	0.38	0.03	0.01							7
10	17.72	248.59	107.76		8.58		42.53		18.43	5.15		12.26		5.31	2.82	2.83	1.23	2.02	1.26	0.54	1.20	0.36	0.15	0.82	0.14	0.06	0.54	0.05	0.02						10
15	4"				12.87		90.11		39.06	7.72		25.98		11.26	4.23		6.00	2.60	3.03	2.66	1.15	1.80	0.75	0.33	1.22	0.29	0.13	0.81						0.11	0.05	15
20	0.64	0.05	0.02		17.16		153.52		66.55	10.30		44.25		19.18	5.64		10.23		4.43	4.04	4.54	1.97	2.40	1.28	0.56	1.63	0.50	0.22	1.07	0.18	0.08					20
25	0.80	0.08	0.03							12.87		66.90		29.00	7.05		15.46		6.70	5.04	6.86	2.97	3.00	1.94	0.84	2.04	0.76	0.33	1.34	0.27	0.12					25
30	0.96	0.11	0.05							15.45		93.77		40.65	8.46		21.67		9.39	6.05	9.61	4.17	3.60	2.72	1.18	2.45	1.06	0.46	1.61	0.38	0.17					30
35	1.12	0.14	0.06							18.02		124.75		54.08	9.87		28.83		12.50	7.06		12.79		5.54	4.20	3.61	1.57	2.85	1.41	0.61	1.88	0.51	0.22			35
40	1.28	0.19	0.08							20.60		159.75		69.25	11.28		36.92		16.01	8.07		16.37		7.10	4.80	4.63	2.01	3.26	1.80	0.78	2.15	0.65	0.28			40
45	1.44	0.23	0.10		5"										12.69		45.92		19.91	9.08		20.37		8.83	5.40	5.76	2.50	3.67	2.24	0.97	2.42	0.81	0.35			45
50	1.60	0.28	0.12	0.69	0.04	0.02									14.09		55.82		24.20	10.09		24.75		10.73	6.00		7.00	3.03	4.08	2.73	1.18	2.69	0.99	0.43			50
60	1.92	0.39	0.17	0.83	0.05	0.02									16.91		78.24		33.92	12.11		34.70		15.04	7.20		9.81	4.25	4.89	3.82	1.66	3.22	1.39	0.60			60
70	2.24	0.52	0.23	0.97	0.07	0.03									19.73		104.09		45.12	14.12		46.16		20.01	8.40		13.05		5.66	5.71	5.09	2.21	3.76	1.84	0.80			70
75	2.40	0.59	0.26	1.04	0.08	0.03									21.14		118.27		51.27	15.13		52.45		22.74	9.00		14.82		6.43	6.11		5.78		2.51	4.03	2.10	0.91		75
80	2.56	0.67	0.29		1.11		0.09		0.04						22.55		133.29		57.78	16.14		59.11		25.62	9.60		16.71		7.24	6.52	6.51	2.82	4.30	2.36	1.02			80
90	2.88	0.83	0.36	1.25			0.11		0.05						25.37		165.78		71.87	18.16		73.52		31.87	10.81		20.78		9.01	7.34	8.10	3.51	4.84	2.94	1.27			90
100	3.20	1.01	0.44	1.38	0.13	0.06				6"										20.18		89.36	38.74	12.01	25.26		10.95		8.15		9.85		4.27		5.37		3.57		1.55	100
125	4.00	1.53	0.66	1.73	0.20	0.09	0.99	0.05	0.02											25.22		135.09		58.56	15.01		38.18		16.55	10.19		14.89		6.45	6.72	5.40	2.34		125
150	4.80	2.14	0.93	2.08	0.28	0.12	1.19	0.07	0.03											30.26		189.35		82.08	18.01		53.52		23.20	12.23		20.87		9.05	8.06	7.57	3.28		150
175	5.60	2.85	1.24	2.42	0.37	0.16	1.38	0.10	0.04																21.01		71.20		30.86	14.27		27.76		12.04	9.40		10.07		4.36	175
200	6.40	3.65	1.58	2.77	0.48	0.21	1.58	0.12	0.05																24.01		91.17		39.52	16.30		35.55		15.41	10.75		12.89		5.59	200
250	8.00	5.52	2.39	3.46	0.72	0.31	1.98	0.18	0.08																30.01		137.83		59.75	20.38		53.75		23.30	13.43		19.49		8.45	250
300	9.60	7.74	3.36	4.15	1.01	0.44	2.37	0.26						0.11																									300
350	11.20	10.30	4.46		4.84	1.34	0.58	2.77	0.34	0.15																													350
400	12.80	13.19	5.72		5.54	1.72	0.74	3.16	0.44	0.19																													400
450	14.40	16.40	7.11		6.23		2.14	0.93	3.56	0.55	0.24																													450
500					6.92		2.60	1.13	3.95	0.67	0.29																													500
750					10.38		5.50		2.38	5.93	1.14	0.61																													750
1,000					13.84		9.37		4.06	7.91	2.40	1.04																													1,000
1,250										9.88		3.63	1.57																											1,250
1,500										11.86		5.09		2.21																											1,500
2,000										15.81		8.67		3.76																											2,000

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FLOW VELOCITY & FRICTION LOSS

SDR 11

Flow Rate (Gallons/ Minute)	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.	Flow Rate (Gallons/ Minute)
GPM	1/2"			3/4"			1"			1-1/4"			1-1/2"			2"			GPM
1	1.71	3.19	1.38	0.80	0.50	0.22	0.48	0.15	0.06										1
2	3.42	11.53	5.00	1.60	1.82	0.79	0.96	0.53	0.23										2
3	5.13	24.43	10.59	2.40	3.85	1.67	1.44	1.12	0.49										3
4	6.83	41.62	18.04	3.20	6.55	2.84	1.93	1.91	0.83										4
5	8.54	62.91	27.27	4.00	9.91	4.29	2.41	2.89	1.25										5
6	10.25	88.18	38.23	4.79	13.89	6.02			2.89	4.05	1.76								6
7	11.96	117.32	50.86	5.59	18.47	8.01			3.37	5.39	2.34								7
8	13.67	150.23	65.13	6.39	23.66		10.26		3.85	6.90	2.99								8
9	15.38	186.85	81.00	7.19	29.42		12.76		4.33	8.58	3.72								9
10	17.08	227.11	98.45	7.99	35.76		15.50		4.82	10.43	4.52	3.23	3.94		1.71	2.31	1.75	0.76	10
15				11.99	75.78		32.85		7.22	22.11	9.58	4.84	8.35		3.62	3.47	3.71	1.61	15
20				15.98	129.11		55.97		9.63	37.67	16.33	6.46	14.23		6.17	4.63	6.33	2.74	20
25									12.04	56.94	24.69	8.07	21.51		9.33	5.78	9.56	4.15	25
30									14.45	79.82	34.60	9.68	30.15		13.07	6.94	13.40	5.81	30
35									16.86	106.19	46.03	11.30	40.11		17.39	8.09	17.83	7.73	35
40												12.91	51.37		22.27	9.25	22.83	9.90	40
45												14.52	63.89		27.70	10.41	28.40	12.31	45
50												16.14	77.66		33.66	11.56	34.52	14.96	50
55												17.75	92.65		40.16	12.72	41.18	17.85	55
60																13.88	48.38	20.97	60
70																16.19	64.37	27.90	70
80																			80
90																			90
100																			100
125																			125

Flow Rate (Gallons/ Minute)	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.	Flow Rate (Gallons/ Minute)
GPM	2"			GPM
10	0.21			10
15	0.45			15
20	0.76			20
25	1.15			25
30	4.05	3.73	1.62	30
35	4.73	4.96	2.15	35
40	5.40	6.35	2.75	40
45	6.08	7.89	3.42	45
50	6.75	9.60	4.16	50
55	7.43	11.45	4.96	55
60	8.10	13.45	5.83	60
70	9.46	17.89	7.76	70
80	10.61	22.91	9.93	80
90	12.16	28.50	12.35	90
100	13.51	34.64	15.02	100
125	16.89	52.37	22.70	125

NOTE: Spears® recommends that Flow Velocities be maintained at or below 5 feet per second in large diameter piping systems (i.e. 6" diameter and larger) to minimize the potential for hydraulic shock. Refer to Spears® engineering section entitled "Hydraulic Shock" for additional information. Friction loss data based on utilizing mean wall dimensions to determine average ID; actual ID may vary.

FLOW VELOCITY & FRICTION LOSS

SDR 13.5

Flow Rate (Gallons/ Minute)	cubic ft/sec	Velocity (ft/s)	Friction Head Loss (ft water/ 100ft)	Friction Pressure (psi/ 100ft)	Velocity (ft/s)	Friction Head Loss (ft water/ 100ft)	Friction Pressure (psi/ 100ft)	Velocity (ft/s)	Friction Head Loss (ft water/ 100ft)	Friction Pressure (psi/ 100ft)	Velocity (ft/s)	Friction Head Loss (ft water/ 100ft)	Friction Pressure (psi/ 100ft)	Velocity (ft/s)	Friction Head Loss (ft water/ 100ft)	Friction Pressure (psi/ 100ft)	Velocity (ft/s)	Friction Head Loss (ft water/ 100ft)	Friction Pressure (psi/ 100ft)	Velocity (ft/s)	Friction Head Loss (ft water/ 100ft)	Friction Pressure (psi/ 100ft)	Velocity (ft/s)	Friction Head Loss (ft water/ 100ft)	Friction Pressure (psi/ 100ft)	Flow Rate (Gallons/ Minute)
GPM		1/2"			3/4"			1"			1-1/4"			1-1/2"			2"			2-1/2"			3"			GPM
1	0.002	0.85	1.03	0.45	0.54	0.34	0.15																				1
2	0.004	1.69	2.05	0.89	1.07	0.68	0.29	0.68	0.40	0.17	0.42	0.13	0.06	0.32					0.065	0.028	0.20	0.03	0.013				2
5	0.011	4.22	11.58	5.01	2.68	3.82	1.65	1.69	1.24	0.54	1.05	0.39	0.17	0.80	0.20					0.088	0.51	0.075	0.033	0.35	0.038	0.016	0.24	0.02	0.009	5
7	0.016	5.91	21.24	9.20	3.75	7.01	3.03	2.36	2.28	0.99	1.47	0.72	0.31	1.12	0.37	0.16	0.72					0.125	0.054	0.49	0.53	0.023	0.33	0.03	0.012	7
10	0.022	8.44	40.46	17.52	5.35	13.34	5.78	3.37	4.33	1.87	2.10	1.37	0.59	1.60	0.71	0.31	1.02	0.24	0.10	0.70	0.09					0.039	0.47	0.04	0.017	10
15	0.033	4"			8.03	28.27	12.24	5.06	9.18	3.97	3.15	2.91	1.26	2.40	1.50	0.65	1.53	0.50	0.22	1.04	0.20					0.087	0.70	0.08	0.035	15
20	0.045	0.57	0.04	0.017	10.70	48.17	20.86	6.74	15.64	6.77	4.21	4.96	2.91	3.20	2.55	1.10	2.04	0.85	0.37	1.39	0.34	0.15					0.94	0.13	0.056	20
25	0.056	0.71	0.06	0.026	5"			8.43	23.65	10.24	5.26	7.49	3.24	4.00	3.85	1.67	2.55	1.29	0.56	1.74	0.51	0.22					1.17	0.19	0.082	25
30	0.067	0.85	0.08	0.035	0.56	0.03	0.013	10.11	33.15	14.35	6.31	10.50	4.55	4.80	5.40	2.34	3.05	1.80	0.78	2.09	0.71	0.31					1.41	0.27	0.12	30
35	0.078	0.99	0.11	0.048	0.65	0.04	0.017				7.36	13.97	6.05	5.60	7.19	3.11	3.57	2.40	1.04	2.44	0.95	0.41					1.64	0.36	0.16	35
40	0.089	1.14	0.14	0.060	0.74	0.05	0.022				8.41	17.90	7.75	6.40	9.20	3.98	4.08	3.07	1.33	2.78	1.21	0.52					1.88	0.46	0.20	40
45	0.100	1.28	0.17	0.074	0.84	0.06	0.026	6"			9.46	22.26	9.64	7.20	11.44	4.95	4.59	3.82	1.65	3.13	1.51	0.65					2.11	0.58	0.25	45
50	0.111	1.42	0.21	0.091	0.93	0.07	0.030	0.66	0.03	0.013	10.52	27.05	11.71	8.00	13.91	6.02	5.10	4.64	2.01	3.48	1.83	0.79					2.35	0.70	0.30	50
60	0.134	1.70	0.29	0.13	1.12	0.10		0.79	0.04	0.017				9.60	19.50	8.44	6.12	6.50	2.81	4.18	2.57			1.11	2.82	0.98	0.42	60
70	0.156	1.99	0.38	0.16	1.30	0.14		0.92	0.06	0.026							7.14	8.65	3.75	4.87	3.42	1.48			3.29	1.31	0.57	70
75	0.167	2.13	0.44	0.19	1.40	0.16		0.98	0.07	0.030							7.65	9.83	4.26	5.22	3.88	1.68			3.52	1.49	0.65	75
80	0.178	2.27	0.49	0.21	1.49	0.18		1.05	0.08	0.035							8.16	11.08	4.80	5.57	4.37	1.89			3.76	1.68	0.73	80
90	0.201	2.56	0.61	0.26	1.67	0.22		1.18	0.09	0.039							9.18	13.78	5.97	6.27	5.44	2.36			4.23	2.09	0.90	90
100	0.223	2.84	0.74	0.32	1.86	0.27	0.12	1.31			0.11	0.048					10.20	16.75	7.25	6.96	6.61	2.86			4.70	2.54	1.10	100
125	0.279	3.55	1.13	0.49	2.33	0.40	0.18	1.64	0.17			0.074								8.70	10.01	4.33	5.88	3.84	1.66	125
150	0.334	4.26	1.58	0.68	2.79	0.56	0.24	1.97	0.24	0.10										10.44	14.01	6.07	7.04	5.37	2.33	150
175	0.390	4.97	2.10	0.91	3.26	0.75	0.33	2.30	0.32	0.14													8.22	7.15	3.10	175
200	0.446	5.68	2.69	1.16	3.72	0.96	0.42	2.62	0.41	0.18													9.39	9.15	3.96	200
250	0.557	7.10	4.07	1.76	4.66	1.46	0.63	3.28	0.62	0.27													11.74	13.86	6.00	250
300	0.668	8.52	5.69	2.46	5.58	2.03	0.88	3.93	0.87	0.38																300
350	0.780	9.94	7.58	3.29	6.52	2.70	1.17	4.59	1.16	0.50																350
400	0.891	11.36	9.70	4.20	7.44	3.46	1.50	5.24	1.48	0.64																400
450	1.003				8.37	4.31	1.87	5.90	1.84	0.80																450
500	1.114				9.30	5.24	2.27	6.56	2.23	0.97																500
750								9.83	4.73	2.05																750
1000	2.228							13.11	8.06	3.49																1000

NOTE: Spears® recommends that Flow Velocities be maintained at or below 5 feet per second in large diameter piping systems (i.e. 6" diameter and larger) to minimize the potential for hydraulic shock. Refer to Spears® engineering section entitled "Hydraulic Shock" for additional information. Friction loss data based on utilizing mean wall dimensions to determine average ID; actual ID may vary.

FLOW VELOCITY & FRICTION LOSS

SDR 21

Flow Rate (Gallons per Minute)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Rate (Gallons per Minute)
GPM	1/2"			3/4"			1"			1-1/4"			1-1/2"			2"			2-1/2"			3"			GPM
1				0.49	0.16	0.07	0.30	0.05	0.02	0.19	0.01	0.01				0.14	0.01	0.00	0.09	0.00	0.00	0.06	0.00	0.00	0.04	0.00	0.00	1
2				0.99	0.56	0.24	0.60	0.17	0.07	0.37	0.05	0.02				0.28	0.03	0.01	0.18	0.01	0.00	0.12	0.00	0.00	0.08	0.00	0.00	2
5				2.46	3.06	1.33	1.49	0.91	0.39	0.93	0.29	0.12				0.71	0.15	0.06	0.45	0.05	0.02	0.31	0.02	0.01	0.21	0.01	0.00	5
7				3.45	5.71	2.48	2.09	1.69	0.73	1.30	0.53	0.23				0.99	0.27	0.12	0.63	0.09	0.04	0.43	0.04	0.02	0.29	0.01	0.01	7
10				4.93	11.06	4.80		2.99		3.27	1.42		1.86	1.03	0.45	1.41	0.53	0.23	0.90	0.18	0.08	0.61			0.07	0.03	0.41	0.03	0.01	10
15	4"			7.39	23.44	10.16		4.48		6.93	3.00		2.79	2.18	0.95	2.12	1.12	0.49	1.35	0.37	0.16	0.92			0.15	0.06	0.62	0.06	0.02	15
20	0.50	0.03	0.01	9.86	39.94	17.31		5.97		11.81	5.12		3.72	3.72	1.61	2.83	1.91	0.83	1.80	0.64	0.28	1.23			0.25	0.11	0.83	0.10	0.04	20
25	0.62	0.04	0.02	5"				7.47		17.85	7.74		4.65	5.63	2.44	3.53	2.89	1.25	2.25	0.97	0.42	1.53			0.38	0.16	1.03	0.14	0.06	25
30	0.75	0.06	0.03	0.49	0.02	0.01	8.96			25.02	10.85		5.58	7.89	3.42	4.24	4.05	1.75	2.70	1.35	0.59	1.84	0.53	0.23	1.24	0.20	0.09	30
35	0.87	0.08	0.03	0.57	0.03	0.01		10.45		33.28	14.43		6.51	10.49	4.55	4.94	5.38	2.33	3.15	1.80	0.78	2.15			0.71	0.31	1.44	0.27	0.12	35
40	1.00	0.10	0.04	0.65	0.04	0.02							7.43	13.44	5.83	5.65	6.89	2.99	3.60	2.31	1.00	2.45			0.90	0.39	1.65	0.34	0.15	40
45	1.12	0.13	0.05	0.73	0.04	0.02			6"				8.36	16.71	7.25	6.36	8.57	3.72	4.05	2.87	1.24	2.76			1.12	0.49	1.86	0.43	0.19	45
50	1.25	0.15	0.07	0.82	0.05	0.02	0.58	0.02	0.01	9.29				20.31	8.81	7.06	10.42	4.52	4.50	3.49	1.51	3.06	1.37	0.59	2.06	0.52	0.23	50
60	1.50	0.21	0.09	0.98	0.08	0.03	0.69	0.03	0.01							8.48	14.60	6.33	5.41	4.89	2.12	3.68	1.91	0.83	2.48	0.73	0.32	60
70	1.75	0.29	0.12	1.14	0.10	0.04	0.81	0.04	0.02							9.89	19.43	8.42	6.31	6.50	2.82	4.29	2.55	1.10	2.89	0.97	0.42	70
75	1.87	0.32	0.14	1.22	0.12	0.05	0.86	0.05	0.02							10.59	22.08	9.57	6.76	7.39	3.20	4.60	2.89	1.25	3.09	1.10	0.48	75
80	2.00	0.37	0.16	1.31	0.13	0.06	0.92	0.06	0.02										7.21	8.32	3.61	4.90	3.26	1.41	3.30	1.25	0.54	80
90	2.24	0.46	0.20	1.47	0.16	0.07	1.04	0.07	0.03				8"						8.11	10.35	4.49	5.52	4.06	1.76	3.71	1.55	0.67	90
100	2.49	0.55	0.24	1.63	0.20	0.09	1.15	0.08	0.04	0.68	0.02	0.01							9.01	12.58	5.46	6.13	4.93	2.14	4.13	1.88	0.82	100
125	3.12	0.84	0.36	2.04	0.30	0.13	1.44	0.13	0.06	0.85	0.04	0.02										7.66	7.46	3.23	5.16	2.85	1.23	125
150	3.74	1.17	0.51	2.45	0.42	0.18	1.73	0.18	0.08	1.02	0.05	0.02										9.19	10.45	4.53	6.19	3.99	1.73	150
175	4.36	1.56	0.68	2.86	0.56	0.24	2.01	0.24	0.10	1.19	0.07	0.03										10.73	13.90	6.03	7.22	5.31	2.30	175
200	4.99	2.00	0.87	3.26	0.71	0.31	2.30	0.30	0.13	1.36	0.08	0.04													8.25	6.80	2.95	200
250	6.24	3.02	1.31	4.08	1.08	0.47	2.88	0.46	0.20	1.70	0.13	0.06													10.31	10.27	4.45	250
300	7.48	4.23	1.84	4.90	1.51	0.65	3.45	0.65	0.28	2.04	0.18	0.08																300
350	8.73	5.63	2.44	5.71	2.01	0.87	4.03	0.86	0.37	2.38	0.24	0.10																350
400	9.98	7.21	3.13	6.53	2.57	1.12	4.61	1.10	0.48	2.71	0.30	0.13																400
450	11.22	8.97	3.89	7.35	3.20	1.39	5.18	1.37	0.59	3.05	0.38	0.16																450
500				8.16	3.89	1.69	5.76	1.66	0.72	3.39	0.46	0.20																500
750								8.64		3.52	1.53	5.09	0.97	0.42														750
1000													6.79	1.66	0.72													1000
1250													8.48	2.51	1.09													1250

NOTE: Spears® recommends that Flow Velocities be maintained at or below 5 feet per second in large diameter piping systems (i.e. 6" diameter and larger) to minimize the potential for hydraulic shock. Refer to Spears® engineering section entitled "Hydraulic Shock" for additional information. Friction loss data based on utilizing mean wall dimensions to determine average ID; actual ID may vary.

FLOW VELOCITY & FRICTION LOSS

SDR 26

Flow Rate (Gallons per Minute)	1"			1-1/4"			1-1/2"			2"			2-1/2"			3"			4"			5"			6"			Flow Rate (Gallons per Minute)
	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	
GPM	1"			1-1/4"			1-1/2"			2"			2-1/2"			3"			4"			5"			6"			GPM
1	0.30	0.04	0.02	0.18	0.01	0.01	0.14	0.01	0.00	0.09	0.00	0.00	0.06	0.00	0.00	0.04	0.00	0.00											1
2	0.59	0.16	0.07	0.36	0.05	0.02	0.27	0.02	0.01	0.17	0.01	0.00	0.12	0.00	0.00	0.08	0.00	0.00											2
5	1.48	0.88	0.38	0.89	0.26			0.11		0.68	0.13	0.06	0.43	0.04	0.02	0.29	0.02	0.01	0.20	0.01	0.00								5
7	2.07	1.65	0.71	1.25	0.48	0.21	0.95	0.25				0.11	0.61	0.08	0.04	0.41	0.03	0.01	0.28	0.01	0.01								7
10	2.96	3.19	1.38	1.79	0.94	0.41	1.36	0.48	0.21	0.86	0.16	0.07	0.59	0.06	0.03	0.40	0.02	0.01											10
15	4.44	6.76	2.93	2.68	1.98	0.86	2.04	1.02	0.44	1.30	0.34	0.15	0.88	0.13	0.06	0.59	0.05	0.02											15
20	5.91	11.52	4.99		3.57	3.38	1.46	2.72	1.73	0.75	1.73	0.58	0.25	1.18	0.23	0.10	0.79	0.09	0.04	0.48	0.03	0.01							20
25	7.39	17.41	7.55		4.47	5.10	2.21	3.40	2.62	1.14	2.16	0.87	0.38	1.47	0.34	0.15	0.99	0.13	0.06	0.60	0.04	0.02							25
30	8.87	24.40	10.58		5.36		7.15	3.10	4.07	3.67	1.59	2.59	1.23	0.53	1.76	0.48	0.21	1.19	0.18	0.08	0.72	0.05	0.02	0.47	0.02	0.01			30
35	10.35	32.46	14.07		6.25		9.52	4.13	4.75	4.89	2.12	3.03	1.63	0.71	2.06	0.64	0.28	1.39	0.24						0.11	0.84	0.07	0.03	0.55	0.03	0.01				35
40	11.83	41.57	18.02		7.14		12.19		5.28	5.43	6.26	2.71	3.46	2.09	0.90	2.35	0.82	0.35	1.58	0.31		0.14	0.96	0.09	0.04	0.63	0.03	0.01								40
45					8.04		15.16		6.57	6.11		7.78		3.37	3.89	2.60	1.13	2.65	1.02	0.44	1.78	0.39	0.17	1.08					0.11	0.05	0.70	0.04	0.02				45
50					8.93		18.43		7.99	6.79	9.46	4.10	4.32	3.16	1.37	2.94	1.24	0.54	1.98	0.47		0.20	1.19	0.14	0.06	0.78	0.05	0.02	0.55	0.02	0.01							50
60					10.72		25.83		11.20	8.15		13.26		5.75	5.19	4.42	1.92	3.53	1.73	0.75	2.38	0.66	0.29	1.43	0.19	0.08	0.94	0.07	0.03	0.66	0.03	0.01						60
70										9.51		17.64		7.65	6.05	5.88	2.55	4.12	2.30	1.00	2.77	0.88	0.38	1.67	0.26						0.11	1.10		0.09	0.04	0.77	0.04	0.02		70
75										10.19		20.05		8.69	6.49	6.69	2.90	4.41	2.62	1.13	2.97	1.00	0.43	1.79	0.29	0.13	1.17	0.10	0.05	0.83	0.04	0.02						75
80										10.87		22.59		9.79	6.92	7.54	3.27	4.70	2.95	1.28	3.17	1.13	0.49	1.91	0.33	0.14	1.25	0.12	0.05	0.88	0.05	0.02						80
90	8"									12.22		28.10		12.18	7.78		9.37	4.06	5.29	3.67	1.59	3.57	1.40	0.61	2.15	0.41	0.18	1.41	0.15	0.06	0.99	0.06	0.03						90
100	0.65	0.02	0.01							13.58		34.16		14.81	8.65		11.39	4.94	5.88	4.46	1.93	3.96	1.71	0.74	2.39	0.50	0.22	1.56	0.18	0.08	1.10	0.08	0.03						100
125	0.81	0.03	0.01												10.81		17.22	7.47	7.35	6.74	2.92	4.95	2.58	1.12	2.99	0.75	0.33	1.96	0.27	0.12	1.38					0.11	0.05	125
150	0.98	0.04	0.02																8.82		9.45	4.10	5.94	3.62	1.57	3.58	1.06	0.46	2.35	0.38	0.16	1.65	0.16	0.07					150
175	1.14	0.06	0.03		10"														10.29		12.57	5.45		6.93	4.81	2.09	4.18	1.41	0.61	2.74	0.50	0.22	1.93	0.21	0.09				175
200	1.30	0.08	0.03	0.84	0.03	0.01																		7.92		6.16	2.67	4.78	1.80	0.78	3.13	0.64	0.28	2.21	0.27	0.12				200
250	1.63	0.11	0.05		1.05	0.04	0.02																	9.91		9.31	4.04	5.97	2.72	1.18	3.91	0.97	0.42	2.76	0.42	0.18				250
300	1.95	0.16	0.07	1.26	0.06	0.02				12"														11.89		13.06	5.66		7.17	3.81	1.65	4.69	1.36	0.59	3.31	0.58	0.25			300
350	2.28	0.21	0.09	1.47	0.07	0.03	1.04	0.03	0.01						14"				16"										8.36		5.07	2.20	5.48	1.81	0.79	3.86	0.77	0.34			350
400	2.60	0.27	0.12	1.68	0.09	0.04	1.19	0.04	0.02	0.99	0.03	0.01	0.76	0.01	0.01														9.56		6.50	2.82	6.26	2.32	1.01	4.41	0.99	0.43			400
450	2.93	0.34	0.15	1.88	0.12	0.05	1.34	0.05	0.02						1.11		0.03		0.01	0.85	0.02	0.01							10.75		8.08		3.50	7.04	2.89	1.25	4.96	1.23	0.53			450
500	3.25	0.41	0.18	2.09	0.14	0.06	1.49	0.06	0.03	1.23	0.04	0.02	0.95	0.02	0.01										18"								7.82		3.51	1.52	5.52	1.50	0.65		500
750	4.88	0.88	0.38	3.14	0.30	0.13	2.23	0.13	0.06	1.85	0.08	0.04	1.42	0.04	0.02	1.12	0.02	0.01										20"								8.27		3.17	1.38	750
1000	6.51	1.50	0.65	4.19	0.51	0.22	2.98	0.22	0.10	2.47	0.14	0.06	1.89	0.07	0.03	1.49	0.04	0.02	1.21	0.08	0.01															11.03		5.41	2.34	1000
1250	8.13	2.26	0.98	5.23	0.78	0.34	3.72	0.34	0.15	3.09	0.21	0.09	2.36							0.11		0.05		1.87	0.06	0.03	1.51	0.04	0.02				24"						1250
1500	9.76	3.17	1.38	6.28	1.09	0.47	4.47	0.47	0.21	3.70	0.30	0.13	2.84	0.16	0.07	2.24	0.09	0.04	1.81	0.05	0.02	1.26	0.02	0.01														1500
2000					8.38		1.85	0.80	5.95	0.81	0.35	4.94	0.51	0.22	3.78	0.27	0.12	2.99	0.15	0.07	2.42	0.09	0.04	1.68	0.04	0.02												2000
2500										7.44		1.22	0.53	6.17	0.77	0.34	4.73	0.40	0.18	3.73	0.23	0.10	3.02	0.14	0.06	2.10	0.06	0.02										2500
3000															7.41		1.08	0.47	5.67	0.57	0.25	4.48	0.32	0.14	3.63	0.19	0.08	2.52	0.08	0.03								3000
3500																			6.62		0.75	0.33	5.23	0.42	0.18	4.23	0.25				0.11	2.94		0.10	0.05				3500
4000																								5.97		0.54	0.24	4.84	0.33	0.14	3.36	0.13	0.06					4000
4500																								6.72		0.68	0.29	5.44	0.41	0.18	3.78	0.17	0.07					4500
5000																													6.05		0.49	0.21	4.20	0.20	0.09			5000
5500																													6.65		0.59	0.25	4.62	0.24	0.10			5500
6000																													7.26		0.69	0.30	5.04	0.28	0.12			6000
7000																																		5.88		0.38	0.16	7000
7500																																		6.30		0.43	0.19	7500
8000																																		6.72		0.48	0.21	8000
8500																																		7.14		0.54	0.24	8500

NOTE: Spears® recommends that Flow Velocities be maintained at or below 5 feet per second in large diameter piping systems (i.e. 6" diameter and larger) to minimize the potential for hydraulic shock. Refer to Spears® engineering section entitled "Hydraulic Shock" for additional information. Friction loss data based on utilizing mean wall dimensions to determine average ID; actual ID may vary.

FLOW VELOCITY & FRICTION LOSS

SDR 32.5

Flow Rate (Gallons per Minute)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/100ft)	Friction Loss (psi/100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/100ft)	Friction Loss (psi/100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/100ft)	Friction Loss (psi/100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/100ft)	Friction Loss (psi/100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/100ft)	Friction Loss (psi/100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/100ft)	Friction Loss (psi/100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/100ft)	Friction Loss (psi/100ft)	Flow Rate (Gallons per Minute)
GPM		6"			8"			10"			12"			14"			16"			18"			GPM
20	0.21	0.00	0.00	0.13	0.00	0.00	0.08	0.00	0.00	0.06	0.00	0.00	0.05	0.00	0.00	0.04	0.00	0.00	0.03	0.00	0.00	20
40	0.43	0.02	0.01	0.25	0.00	0.00	0.16	0.00	0.00	0.11	0.00	0.00	0.10	0.00	0.00	0.07	0.00	0.00	0.06	0.00	0.00	40
60	0.64	0.02	0.01	0.38	0.00	0.00	0.24	0.00	0.00	0.17	0.00	0.00	0.14	0.00	0.00	0.11	0.00	0.00	0.09	0.00	0.00	60
80	0.85	0.05	0.02	0.50	0.02	0.01	0.32	0.00	0.00	0.23	0.00	0.00	0.19	0.00	0.00	0.15	0.00	0.00	0.12	0.00	0.00	80
100	1.06	0.07	0.03	0.63	0.02	0.01	0.40	0.00	0.00	0.29	0.00	0.00	0.24	0.00	0.00	0.18	0.00	0.00	0.14	0.00	0.00	100
150	1.60	0.14	0.06	0.94	0.05	0.02	0.61	0.02	0.01	0.43	0.00	0.00	0.36	0.00	0.00	0.27	0.00	0.00	0.22	0.00	0.00	150
200	2.13	0.25	0.11	1.26	0.07	0.03	0.81	0.02	0.01	0.57	0.00	0.00	0.48	0.00	0.00	0.36	0.00	0.00	0.29	0.00	0.00	200
250	2.66	0.37	0.16	1.57	0.12	0.05	1.01	0.05	0.02	0.72	0.02	0.01	0.60	0.00	0.00	0.46	0.00	0.00	0.36	0.00	0.00	250
300	3.19	0.53	0.23	1.88	0.14	0.06	1.21	0.05	0.02	0.86	0.02	0.01	0.71	0.02	0.01	0.55	0.00	0.00	0.43	0.00	0.00	300
350	3.72	0.72	0.31	2.20	0.21	0.09	1.41	0.07	0.03	1.01	0.02	0.01	0.83	0.02	0.01	0.64	0.00	0.00	0.50	0.00	0.00	350
400	4.26	0.90	0.39	2.51	0.25	0.11	1.62	0.09	0.04	1.15	0.05	0.02	0.95	0.02	0.01	0.73	0.02	0.01	0.58	0.00	0.00	400
450	4.79	1.13	0.49	2.82	0.32	0.14	1.82	0.12	0.05	1.29	0.05	0.02	1.07	0.02	0.01	0.82	0.02	0.01	0.65	0.00	0.00	450
500	5.32	1.36	0.59	3.14	0.37	0.16	2.02	0.14	0.06	1.44	0.05	0.02	1.19	0.05	0.02	0.91	0.02	0.01	0.72	0.00	0.00	500
550	5.85	1.64	0.71	3.45	0.46	0.20	2.22	0.16	0.07	1.58	0.07	0.03	1.31	0.05	0.02	1.00	0.02	0.01	0.79	0.02	0.01	550
600	6.38	1.91	0.83	3.77	0.53	0.23	2.42	0.18	0.08	1.72	0.07	0.03	1.43	0.05	0.02	1.09	0.02	0.01	0.86	0.02	0.01	600
650	6.91	2.24	0.97	4.08	0.62	0.27	2.63	0.21	0.09	1.87	0.09	0.04	1.55	0.07	0.03	1.19	0.02	0.01	0.94	0.02	0.01	650
700	7.45	2.56	1.11	4.39	0.72	0.31	2.83	0.25	0.11	2.01	0.12	0.05	1.67	0.07	0.03	1.28	0.05	0.02	1.01	0.02	0.01	700
750	7.98	2.91	1.26	4.71	0.81	0.35	3.03	0.28	0.12	2.15	0.12	0.05	1.79	0.07	0.03	1.37	0.05	0.02	1.08	0.02	0.01	750
800	8.51	3.28	1.42	5.02	0.90	0.39	3.23	0.30	0.13	2.30	0.14	0.06	1.91	0.09	0.04	1.46	0.05	0.02	1.15	0.02	0.01	800
850	9.04	3.67	1.59	5.33	1.01	0.44	3.43	0.35	0.15	2.44	0.16	0.07	2.02	0.09	0.04	1.55	0.05	0.02	1.22	0.02	0.01	850
900				5.65	1.13	0.49	3.64	0.39	0.17	2.59	0.16	0.07	2.14	0.12	0.05	1.64	0.05	0.02	1.30	0.02	0.01	900
950				5.96	1.25	0.54	3.84	0.44	0.19	2.73	0.18	0.08	2.26	0.12	0.05	1.73	0.07	0.03	1.37	0.05	0.02	950
1000				6.28	1.36	0.59	4.04	0.46	0.20	2.87	0.21	0.09	2.38	0.14	0.06	1.82	0.07	0.03	1.44	0.05	0.02	1000
1050				6.59	1.50	0.65	4.24	0.51	0.22	3.02	0.23	0.10	2.50	0.14	0.06	1.92	0.07	0.03	`1.51	0.05	0.02	1050
1100				6.90	1.64	0.71	4.45	0.55	0.24	3.16	0.25	0.11	2.62	0.16	0.07	2.01	0.09	0.04	1.59	0.05	0.02	1100
1150							4.65	0.60	0.26	3.30	0.25	0.11	2.74	0.16	0.07	2.10	0.09	0.04	1.66	0.05	0.02	1150
1200							4.85	0.67	0.29	3.45	0.28	0.12	2.86	0.18	0.08	2.19	0.09	0.04	1.73	0.05	0.02	1200
1250							5.05	0.72	0.31	3.59	0.30	0.13	2.98	0.21	0.09	2.28	0.09	0.04	1.80	0.07	0.03	1250
1300							5.25	0.76	0.33	3.73	0.32	0.14	3.10	0.21	0.09	2.37	0.12	0.05	1.87	0.07	0.03	1300
1350							5.46	0.83	0.36	3.88	0.35	0.15	3.22	0.23	0.10	2.46	0.12	0.05	1.95	0.07	0.03	1350
1400							5.66	0.88	0.38	4.02	0.39	0.17	3.33	0.23	0.10	2.55	0.12	0.05	2.02	0.07	0.03	1400
1450							5.86	0.95	0.41	4.17	0.42	0.18	3.45	0.25	0.11	2.64	0.14	0.06	2.09	0.07	0.03	1450
1500							6.06	0.99	0.43	4.31	0.44	0.19	3.57	0.28	0.12	2.74	0.14	0.06	2.16	0.09	0.04	1500
1600							6.47	1.13	0.49	4.60	0.48	0.21	3.81	0.30	0.13	2.92	0.16	0.07	2.31	0.09	0.04	1600
1700							6.87	1.25	0.54	4.88	0.55	0.24	4.05	0.35	0.15	3.10	0.18	0.08	2.45	0.09	0.04	1700
1800										5.17	0.60	0.26	4.29	0.39	0.17	3.28	0.21	0.09	2.59	0.12	0.05	1800
1900										5.46	0.67	0.29	4.53	0.42	0.18	3.47	0.23	0.10	2.74	0.12	0.05	1900
2000										5.74	0.74	0.32	4.76	0.46	0.20	3.65	0.25	0.11	2.88	0.14	0.06	2000
2100										6.03	0.81	0.35	5.00	0.51	0.22	3.83	0.28	0.12	3.03	0.16	0.07	2100
2200										6.32	0.88	0.38	5.24	0.55	0.24	4.01	0.30	0.13	3.17	0.16	0.07	2200
2300										6.61	0.97	0.42	5.48	0.60	0.26	4.20	0.32	0.14	3.31	0.18	0.08	2300
2400										6.89	1.04	0.45	5.72	0.65	0.28	4.38	0.35	0.15	3.46	0.18	0.08	2400
2500										7.18	1.11	0.48	5.95	0.72	0.31	4.56	0.37	0.16	3.60	0.21	0.09	2500
2600										7.47	1.20	0.52	6.19	0.76	0.33	4.74	0.39	0.17	3.75	0.23	0.10	2600
2700										7.76	1.29	0.56	6.43	0.81	0.35	4.92	0.44	0.19	3.89	0.23	0.10	2700
2800										8.04	1.38	0.60	6.67	0.88	0.38	5.11	0.46	0.20	4.04	0.25	0.11	2800
2900										8.33	1.48	0.64	6.91	0.92	0.40	5.29	0.48	0.21	4.18	0.28	0.12	2900
3000										8.62	1.57	0.68	7.15	0.99	0.43	5.47	0.51	0.22	4.32	0.30	0.13	3000
3100										8.90	1.66	0.72	7.38	1.06	0.46	5.65	0.55	0.24	4.47	0.30	0.13	3100
3200										9.19	1.78	0.77	7.62	1.13	0.49	5.84	0.58	0.25	4.61	0.32	0.14	3200
3300													7.86	1.18	0.51	6.02	0.62	0.27	4.76	0.35	0.15	3300
3400													8.10	1.25	0.54	6.20	0.65	0.28	4.90	0.37	0.16	3400
3500													8.34	1.31	0.57	6.38	0.69	0.30	5.04	0.39	0.17	3500
3600													8.57	1.38	0.60	6.57	0.74	0.32	5.19	0.42	0.18	3600
3700													8.81	1.45	0.63	6.75	0.76	0.33	5.33	0.44	0.19	3700
3800																6.93	0.81	0.35	5.48	0.46	0.20	3800
3900																7.11	0.85	0.37	5.62	0.48	0.21	3900
4000																7.30	0.88	0.38	5.76	0.51	0.22	4000
4100																7.48	0.92	0.40	5.91	0.53	0.23	4100
4200																7.66	0.97	0.42	6.05	0.55	0.24	4200
4300																			6.20	0.58	0.25	4300
4400																			6.34	0.60	0.26	4400
4500																			6.49	0.62	0.27	4500
4600																			6.63	0.65	0.28	4600
4700																			6.77	0.67	0.29	4700

NOTE: Spears® recommends that Flow Velocities be maintained at or below 5 feet per second in large diameter piping systems (i.e. 6" diameter and larger) to minimize the potential for hydraulic shock. Refer to Spears® engineering section entitled "Hydraulic Shock" for additional information. Friction loss data based on utilizing mean wall dimensions to determine average ID; actual ID may vary.

FLOW VELOCITY & FRICTION LOSS

SDR 41										
Flow Rate (Gallons per Minute)	Flow Velocity (ft/ sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/ sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/ sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Rate (Gallons per Minute)
GPM	18"									GPM
750	1.05	0.02	0.01							750
1000	1.40	0.04	0.02	20"						1000
1250	1.75	0.05	0.02	1.42	0.03	0.01	24"			1250
1500	2.10	0.08	0.03	1.70	0.05	0.02	1.18	0.02	0.01	1500
2000	2.81	0.13	0.06	2.27	0.08	0.03	1.58	0.03	0.01	2000
2500	3.51	0.20	0.08	2.84	0.12	0.05	1.97	0.05	0.02	2500
3000	4.21	0.27	0.12	3.41	0.16	0.07	2.37	0.07	0.03	3000
3500	4.91	0.36	0.16	3.98	0.22	0.09	2.76	0.09	0.04	3500
4000	5.61	0.47	0.20	4.55	0.28	0.12	3.16	0.12	0.05	4000
4500	6.31	0.58	0.25	5.11	0.35	0.15	3.55	0.14	0.06	4500
5000				5.68	0.42	0.18	3.95	0.17	0.08	5000
5500				6.25	0.50	0.22	4.34	0.21	0.09	5500
6000				6.82	0.59	0.26	4.73	0.24	0.11	6000
7000							5.52	0.32	0.14	7000
7500							5.92	0.37	0.16	7500
8000							6.31	0.42	0.18	8000
8500							6.71	0.47	0.20	8500

NOTE: Spears® recommends that Flow Velocities be maintained at or below 5 feet per second in large diameter piping systems (i.e. 6" diameter and larger) to minimize the potential for hydraulic shock. Refer to Spears® engineering section entitled "Hydraulic Shock" for additional information. Friction loss data based on utilizing mean wall dimensions to determine average ID; actual ID may vary.

Hydraulic Shock

Hydraulic shock is the rapid increase in pressure due to a shock wave produced by a sudden change in system fluid velocity. If uncontrolled or insufficient pressure rated piping is used, these pressure surges can easily burst pipe and break valves or fittings. The term "water hammer" commonly used is derived from the sounds produced, but it is the hydraulic shock vibrations that can be damaging to piping systems. This is typically the result of sudden starting or stopping of a flowing column of liquid, such as water. Energy from the momentum of water in motion is converted to pressure when the flow is abruptly halted. A shock wave is produced that travels through the piping until it is stopped and bounces back to the original obstruction. This instantaneous shock to the system can lead to excessively high pressures. Hydraulic shock is frequently produced by rapid valve opening and closing, pumps starting and stopping, or even from a high speed wall of water hitting a change of direction fitting, such as an elbow. The effect is greater as piping systems is longer, the velocity change is greater and closing time is shorter.

Evaluating Hydraulic Shock Pressure Surges

An indication of the maximum surge pressure relative to velocity changes is essential in estimating the pressure rating requirements in designing a piping system. The following chart gives the maximum surge pressure at velocities of 1, 5 and 10 feet per second for different sizes of pipe, based on instantaneous valve closure in a PVC system. While listed, 10 feet per second is not recommended and is shown for comparative purposes. Velocity is best held to a maximum of 5 feet per second in plastic systems.

Schedule 40 Pipe Pressure Surge (psi) at Different Velocities

Size ⇨	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6	8	10	12
1 ft/sec	27.3	24.6	23.8	21.6	20.5	18.8	19.7	18.4	16.9	15.1	14.2	13.5	13.0
5 ft/Sec	136.3	123.2	119.1	108.1	102.6	94.2	98.5	91.8	84.5	75.4	70.8	67.4	65.2
10 ft/sec	272.7	246.3	238.2	216.3	205.1	188.3	196.9	183.5	169.0	150.9	141.6	134.8	130.5

Schedule 80 Pipe Pressure Surge (psi) at Different Velocities

Size ⇨	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6	8	10	12
1 ft/sec	32.2	29.2	28.0	25.5	24.3	22.6	23.2	21.8	20.3	18.9	17.8	17.3	17.1
5 ft/Sec	161	145.8	139.9	127.7	121.7	113.1	115.8	109.1	101.6	94.4	88.8	86.6	85.5
10 ft/sec	322	291.7	279.9	255.4	243.4	226.2	231.7	218.1	203.1	188.9	177.6	173.1	171.0

SDR Pipe Pressure Surge (psi) at Different Velocities

SDR ⇨	13.5	14	17	18	21	25	26	32.5	41
1 ft/sec	20.2	19.8	17.9	17.4	16.0	14.7	14.4	12.8	11.4
5 ft/Sec	101.0	99.1	89.5	86.9	80.2	---	71.9	64.1	57.0
10 ft/sec	201.9	198.1	179.0	173.8	160.4	146.7	143.7	128.2	113.9

Controlling Hydraulic Shock in System Design & Operation

Since hydraulic shock is a function of speed, mass and time, there are several ways to prevent, minimize or eliminate system damage by limiting or controlling the magnitude of pressure surges.

• **Limit Fluid Velocity –** one of the safest surge control techniques in plastic systems is to limit fluid velocities to a maximum of 5 ft./second. Attempt to balance system operation flow demands and the magnitude of velocity variations.

• **Control Valve Closing Time –** avoid rapid opening and closing. Pneumatic or electric actuation may be considered for greater control. Use of multi-turn or gear operated valves may also be beneficial in slowing valve opening and closing. When all valves and controls are properly sized and adjusted, surges generated by changes in pump flows and demands can be reduced to non-harmful levels.

• **Control Pump Operation –** operate the system to maintain uniform pump flow rates. Use slow starting pumps where long runs and larger diameters are downstream. Where possible, partially close discharge valves to minimize volume when starting pumps, until lines are completely filled. Air chambers or surge relief tanks in conjunction with pressure regulating and surge relief valves can be used at pumping stations.

• **Check Valves –** installing a check valve in pump discharge lines will aid in keeping the line full. Be careful in selecting check valves. Check valves operate on flow reversal and can be rapid closing. Spring or lever assisted swing check valves can reduce hydraulic shock by avoiding "slamming" the valve closed.

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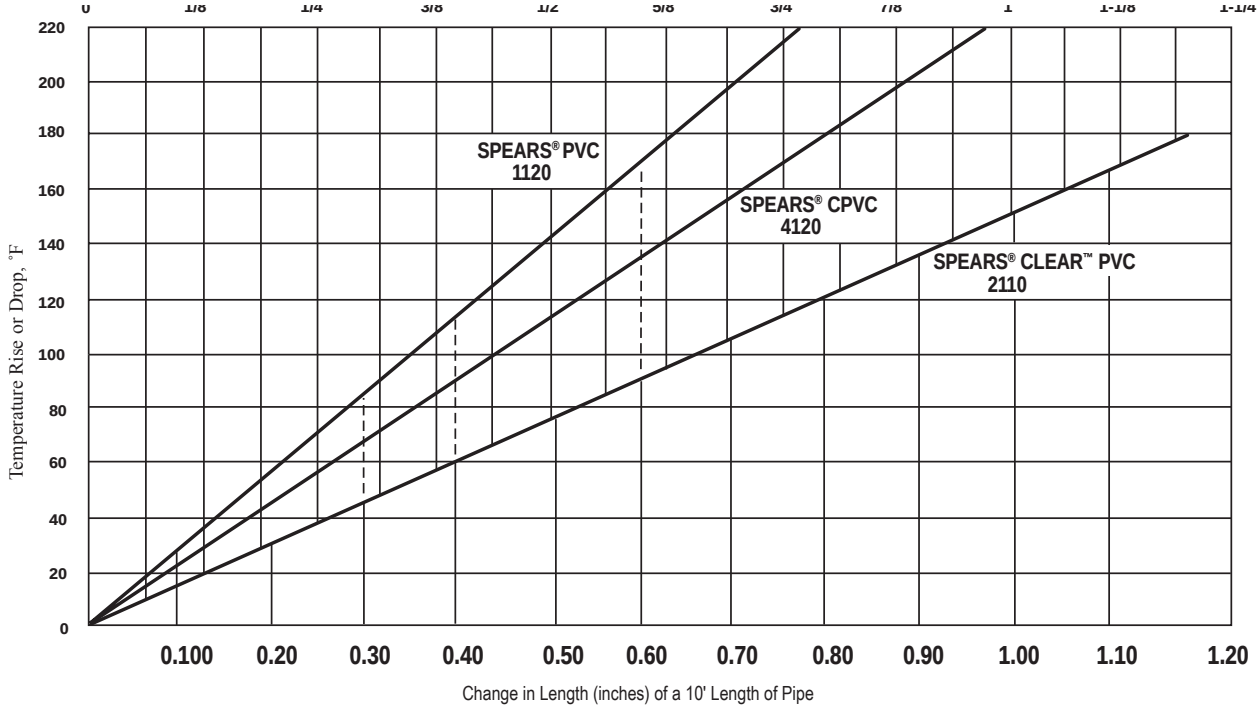
Thermal Expansion & Contraction

Piping systems expand and contract with changes in temperature. Thermoplastic piping expands and contracts more than metallic piping when subjected to temperature changes – as much as ten times that of steel. The effects of thermal expansion and contraction must be considered during the design phase, particularly for systems involving long runs, hot water lines, hot drain lines, and piping systems exposed to environmental temperature extremes. Installation versus working temperature or summer to winter extremes must be considered and addressed with appropriate system design to prevent damage to the piping system.

The degree of movement (change in length) generated as the result of temperature changes, must be calculated based on the type of piping material and the anticipated temperature changes of the system. The rate of expansion does not vary with pipe size. This movement must then be compensated for by the construction of appropriate sized expansion loops, offsets, bends or the installation of expansion joints. This absorbs the stresses generated, minimizing damage to the piping.

The following chart depicts the amount of linear movement (change in length, inches) experienced in a 10 ft length of pipe when exposed to various temperature changes.

Highly important is the change in length of plastic pipe with temperature variation. This fact should always be considered when installing pipe lines and allowances made accordingly.



The data furnished herein is based on information furnished by manufacturers of the raw material. This information may be considered as a basis for recommendation, but not as a guarantee. Materials should be tested under actual service to determine suitability for a particular purpose.

Calculating Linear Movement Caused by Thermal Expansion

The change in length caused by thermal expansion or contraction can be calculated as follows:

$\Delta L = 12\ y\ l\ (\Delta T)$

Where:

ΔL = expansion or contraction in inches
y = Coefficient of linear expansion of piping material selected
l = length of piping run in feet
ΔT = (T1 - T2) temperature change °F

Where:

T1 = maximum system temperature of system and
T2 = system temperature

Coefficient of Linear Expansion (y) of Various Spears® Piping Products (in/in/°F) per ASTM D 696

Pipe Material	y
PVC Pressure Pipe (all schedules & SDR's) and PVC Duct	2.9×10^{-5}
CPVC Schedule 40 & Schedule 80 Pressure Pipe	3.2×10^{-5}
CPVC Duct	3.2×10^{-5}
CTS CPVC Plumbing Pipe	3.2×10^{-5}
Clear PVC Schedule 40 & Schedule 80 Pipe	4.1×10^{-5}
Spears® Low Extractable UPW Pipe	3.9×10^{-5}

Example 1: Calculate the change in length for a 100 foot straight run of 2" Schedule 80 PVC pipe operating at a temperature of 73°F; installed at 32°F.

$\Delta L = 12\ y\ l\ (\Delta T)$

Where:

ΔL = linear expansion or contraction in inches y = 2.9×10^{-5} in/in/°F

l = 100ft

ΔT = 41°F (73°F – 32°F)

ΔL = 12 in/ft x 0.000029 in/in/ft x 100 ft x 41°F

ΔL = 1.43"

In this example the piping would expand approximately 1-1/2" in length over a 100 ft straight run once the operating temperature of 73°F was obtained.

Example 2: 100 foot straight run of 2" Schedule 80 CPVC pipe operating temperature 180°F; installed at 80°F

$\Delta L = 12\ y\ l\ (\Delta T)$

Where:

ΔL = linear expansion or contraction in inches

y = 3.2×10^{-5} in/in/°F

l = 100 ft

ΔT = 100°F (180°F - 80°F)

ΔL = 12 in/ft x 0.000032 in/in/ft x 100ft x 100°F

ΔL = 3.84"

In this example the piping would expand approximately 4" in length over a 100 ft straight run once the operating temperature of 180°F was obtained.

Compensating for Movement Caused by Thermal Expansion/Contraction

Thermal expansion/ contraction are usually absorbed by the system at changes of direction. Long, straight runs are more susceptible to measurable movement with changes in temperature and the installation of an expansion joints, expansion loops or offsets is required. This will allow the system to absorb expansion/contraction forces without damage.

Once the change in length (ΔL) has been determined, the length of an offset, expansion loop, or bend can be calculated as follows:

$$\ell = \frac{\sqrt{3ED\ (\Delta L)}}{2S}$$

Where:

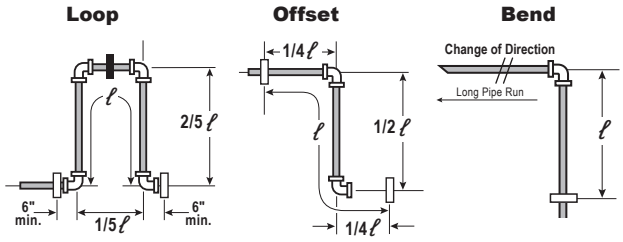
ℓ = Length of expansion loop in inches

E = Modulus of elasticity

D = Average outside diameter of pipe

ΔL = Change in length of pipe due to temperature change

S = Working stress at max. temperature



Hangers or guides should only be placed in the loop, offset, or change of direction as indicated above, and must not compress or restrict the pipe from axial movement. Piping supports should restrict lateral movement and should direct axial movement into the expansion loop configuration. Do not restrain "change in direction" configurations by butting up against joists, studs, walls or other structures. Use only solvent-cemented connections on straight pipe lengths in combination with 90° elbows to construct the expansion loop, offset or bend. The use of threaded components to construct the loop configuration is not recommended. Expansion loops, offsets, and bends should be installed as nearly as possible at the midpoint between anchors. Concentrated loads such as valves should not be installed in the developed length. Calculated support guide spacing distances for offsets and bends must not exceed recommended hanger support pacing for the maximum anticipated temperature. If that occurs, the distance between anchors will have to be reduced until the support guide spacing distance is equal to or less than the maximum recommended support spacing distance for the appropriate pipe size at the temperature used.

Example: 2" Schedule 80 CPVC pipe operating temperature 180°F; installed at 80°F where ΔL = 4.08"

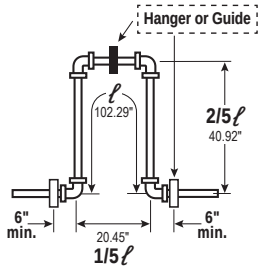
$$\ell = \sqrt{\frac{3ED\,(\Delta L)}{2S}}$$

$$\ell = \sqrt{\frac{3 \times 360{,}000 \times 2.375 \times 4.08}{2 \times 500}}$$

ℓ = 102.29"

2/5 ℓ = 40.92"

1/5 ℓ = 20.46"



Thermal Stress

Compressive stress in piping restrained from expanding can damage the piping system and in some cases damage hangers and supports. The amount of stress generated is dependent on the pipe material's coefficient of thermal expansion and its tensile modulus using the following equation:

S = EyΔT

Where:

S = stress induced in the pipe

E = Modulus of Elasticity at maximum system temperature y = Coefficient of thermal expansion

ΔT = total temperature change of the system

The stress induced must not exceed the pipe material maximum allowable working stress (fiber stress). Increases in temperature will reduce the allowable stress as shown the table.

Example: 100 foot straight run of 2" Schedule 80 CPVC pipe operating temperature 180°F; installed at 80°F:

ΔL = 12 yl (ΔT) Where:

ΔL = linear expansion or contraction in inches

y = 3.2 x 10^{-5} in/in/°F

l = 100ft

ΔT = 100°F (180°F - 80°F)

ΔL = 12 in/ft x 0.000032 in/in/ft x 100 ft x 100°F

ΔL = 3.84"

The piping would expand approximately 4" in length in a 100 ft straight run

The equation for determining induced stress can then be used:

S = EyΔT

Where:

S = stress induced in the pipe

E = Modulus of Elasticity at 180°F = 214,000

y = Coefficient of thermal expansion = 3.2 x 10^{-5} in./in./°F

ΔT = total temperature change of the system = 100°F

S = 214,000 x .000032 x 100

S = 685 psi

From chart, maximum allowable stress for CPVC at 180°F is 500 psi; Stress generated from this expansion in a restrained piping system exceeds the maximum allowable stress and will result in failure of the piping, unless compensation is made for thermal expansion.

Maximum Allowable Working (Fiber) Stress and Tensile Modulus at Various Temperatures

Temp (°F)		Maximum Allowable Working (Fiber) Stress, psi	Tensile Modulus of Elasticity, psi
PVC	73	2,000	400,000
	80	1,760	396,000
	90	1,500	375,000
	100	1,240	354,000
	110	1,020	333,000
	120	800	312,000
	130	620	291,000
	140	440	270,000
CPVC	73	2,000	364,000
	90	1,820	349,000
	100	1,640	339,000
	110	1,500	328,000
	120	1,300	316,000
	140	1,000	290,000
	160	750	262,000
	180	500	214,000
	200	400	135,000

Thrust Blocking

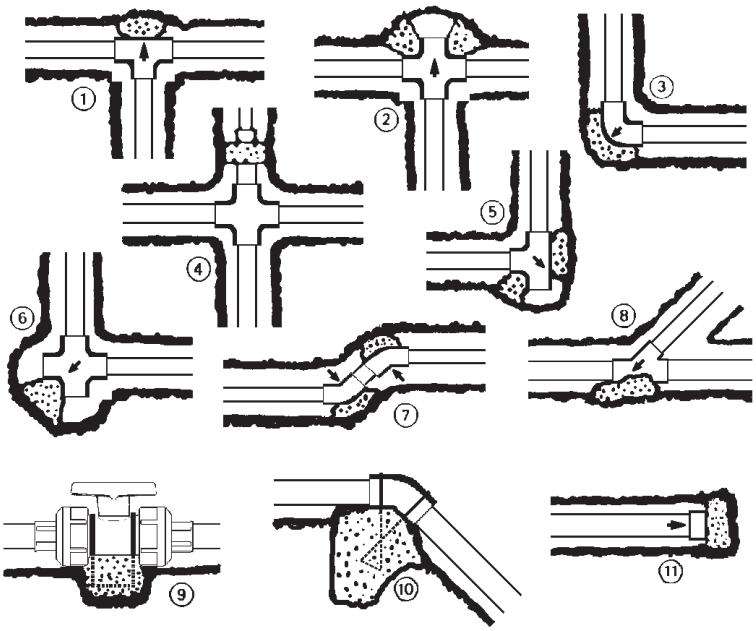
Thrust blocking prevents pipe movement when a pressure system is activated and pressurized. Thrust blocking is required at all points of change of direction in the pipe line. Most blocking is done where a fitting, valve, or hydrant is installed. There may be times when side blocking is necessary because of curvature occurring without the use of fittings. Usually good compacted backfill will provide the necessary anchor for side thrust. Concrete blocking is the most commonly recommended method of blocking. Concrete is placed directly on the fitting against the line of thrust. The concrete must also pour against undisturbed earth. The size of the blocking will vary with the size of pipe, working pressure exerted, type of fitting, degree of flow direction change, and the soil conditions. PVC and CPVC pipe are flexible and may pulsate under pressure variations. This does not harm the pipe or that part which is enclosed in concrete. It may cause wear at the interface of the concrete block and the backfill. For this reason, pipe and fittings should be wrapped with a one mill or heavier plastic sheeting prior to being embedded in concrete to prevent any possible damage.

THRUST BLOCKING – Water under pressure exerts thrust forces in piping systems. Thrust blocking should be provided, as necessary, to prevent movement of pipe or appurtenances in response to thrust.

Types Of Thrust Blocking:

If thrusts due to high pressure are expected, anchor valves as below. At vertical bends anchor to resist outward thrusts.

1. Thru line connection, tee
2. Thru line connection, cross used as tee
3. Direction change, elbow
4. Change line size, reducer
5. Direction change, tee used as elbow
6. Direction change, cross used as elbow
7. Direction change
8. Thru line connection, wye
9. Valve anchor
10. Direction change vertical, bend anchor
11. End Caps (above or below ground)



Thrust Blocking Is Required Wherever The Pipeline:

* Changes direction (e.g., tees, bends, elbows and crosses)
* Changes size at its reducers
* Stops, as at dead ends
* Valves and hydrants, at which thrust develops when closed.

Size And Type Of Thrust Blocking Depends On:

* Maximum system pressure
* Pipe size
* Type and size of fittings or appurtenance
* Line profile (horizontal or vertical bends)
* Soil type

See additional information under Installation Gasketed Pipe

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Critical Collapse Pressures

The Critical Collapse Pressure is directly related to the pipe wall thickness and represents the maximum allowable external load. External loads can result from conditions such as buried pipe soil loads; underwater applications; vacuum service; and pipe installed on pump suction lines. The actual external load being applied to the pipe is the difference between the external pressure and the internal pressure. As a result, a pressurized pipe can withstand a greater external load than an empty pipe.

Critical Collapse Pressure Rating of Various PVC and CPVC Pipe & Duct @ 73°F with No Safety Factor in PSI (Inches of Water)

Size(in.)	Duct	SDR 41	SDR 26	SDR 21	SCH 40	SCH 80	SCH 120
2	N/A	17* (470)	74* (2,048)	126* (3,487)	316 (8,746)	939 (25,989)	1309 (36,230)
2-1/2	N/A	17* (470)	74* (2,048)	126* (3,487)	451 (12,483)	975 (26,986)	1309 (36,230)
3	N/A	17* (470)	74* (2,048)	126* (3,487)	307 (8,497)	722 (19,983)	1128 (31,221)
3-1/2	N/A	17* (470)	74* (2,048)	126* (3,487)	217 (6,006)	578 (15,998)	N/A
4	N/A	17* (470)	74* (2,048)	126* (3,487)	190 (5,259)	451 (12,482)	1128 (31,221)
5	N/A	17* (470)	74* (2,048)	126* (3,487)	117 (3,238)	361 (10,000)	N/A
6	N/A (470)	17* (2,048)	74* (3,487)	126* (2,491)	90 (9,493)	343 (19,983)	722
6 x 1/8	5.2 (144)	N/A	N/A	N/A	N/A	N/A	N/A
6 x 3/16	0.7 (426)	N/A	N/A	N/A	N/A	N/A	N/A
8	10.0 (193)	17* (470)	74* (2,048)	126* (3,487)	58 (1,605)	235 (6,504)	N/A
10	5.4 (100)	17* (470)	74* (2,048)	126* (3,487)	49 (1,605)	217 (6,504)	N/A
12	3.0 (60)	17* (470)	74* (2,048)	126* (3,487)	42 (1,162)	199 (5,508)	N/A
14	2.5 (45)	17* (470)	74* (2,048)	126* (3,487)	40 (1,107)	194 (5,369)	N/A
16	1.6 (30)	17* (470)	74* (2,048)	126* (3,487)	40 (1,107)	181 (5,010)	N/A
18	1.0 (26)	17* (470)	74* (2,048)	126* (3,487)	33 (913)	162 (4,484)	N/A
20	1.3 (28)	17* (470)	74* (2,048)	126* (3,487)	28 (775)	157 (4,346)	N/A
24	1.0 (20)	17* (470)	74* (2,048)	126* (3,487)	25 (692)	150 (4,152)	N/A

1 psi = 2.036 inches of mercury

* SDR Pipe carries the same collapse ratings for all sizes due to the wall thickness/O.D. ratio

Standard temperature de-rating factors must be applied for use at elevated temperatures (see following Temperature Limitations section). Multiply the collapse pressure rating @ 73°F from the chart by the appropriate material de-rating factor.

Solvent-cemented connections are preferred over threaded or flanged joining in vacuum applications to reduce potential for leaks.

Temperature Limitations

PVC & CPVC

The maximum operating temperature for PVC pipe is 140°F and the maximum operating pressure for CPVC pipe is 200°F. As temperatures increase, impact strength typically increases while tensile strength and pipe stiffness decrease resulting in reduced applicable pressure ratings. Physical properties of PVC and CPVC pipe are generally specified at 73°F per applicable ASTM material test standards. The maximum allowable pressure at elevated temperatures is determined by multiplying the 73°F pressure rating by the applicable material de-rating factor for the elevated use temperature shown in the following chart:

De-Rating Factors

PVC Pipe		CPVC Pipe	
Temp (°F)	Working De-Rating Factor	Temp (°F)	Working De-Rating Factor
73	1.00	73-80	1.00
80	0.88	90	0.91
90	0.75	100	0.82
100	0.62	110	0.72
110	0.51	120	0.65
120	0.40	130	0.57
130	0.31	140	0.50
140	0.22	150	0.42
---	---	160	0.40
---	---	170	0.29
---	---	180	0.25
---	---	200	0.20

Appropriate temperature de-rating factors must be applied at temperatures other than 73°F based on the material selected.

Multiply the collapse pressure rating of the selected pipe at 73°F, by the appropriate de-rating factor to determine the collapse pressure rating of the pipe at the elevated temperature chosen.

Weatherability

When standard rigid PVC or CPVC pipe is exposed to UV radiation from sunlight the following conditions have been noted:

- A color change, slight increase in tensile strength, slight increase in modulus of tensile elasticity, and a slight decrease in impact strength may occur.
- Material directly exposed to UV radiation results in extremely shallow penetration depths (frequently less than 0.001 inch).
- The effects of UV exposure do not continue when exposure to UV is terminated.
- The effects of UV exposure do not penetrate even thin shields such as paint coatings, or wrapping.

It is recommended that PVC and CPVC piping products exposed to the direct affects of sunlight be painted with a light colored acrylic or latex paint that is chemically compatible with the PVC/CPVC products. Check with paint manufacture for compatibility. Oil-based paints should **NOT** be used.

Additional consideration should be given to the affects of expansion/contraction caused by heat absorption from sunlight in outdoor applications.

Plastic piping systems must be engineered, installed, operated and maintained in accordance with accepted standards and procedures. It is absolutely necessary that all design, installation, operation and maintenance personnel be trained in proper handling, installation requirements and precautions for installation and use of plastic piping systems before starting.

Handling & Storage

Spears® products are packaged and shipped with care to avoid damage. Pipe and fittings should be stored and protected from direct exposure to sunlight. All pipe and accessories should be stored above ground and fully supported so as not to bend or excessively deflect under its own weight. Proper stacking techniques are necessary. Improper stacking can result in instability that may result in pipe damage or personnel injury.

Use care when transporting and storing the product to prevent damage. Piping products should not be dropped or have objects dropped on them. Do not drag pipe over articles or across the ground and do not subject pipe to external loads or over stacking. If extended storage in direct sunlight is expected, pipe should be covered with an opaque material while permitting adequate air circulation above and around the pipe as required to prevent excessive heat accumulation.

Spears® products should not be stored or installed close to heat-producing sources. PVC storage should not exceed 150°F and CPVC storage should not exceed 210°F. Handling techniques for PVC and CPVC pipe considered acceptable at warm temperatures may be unacceptable at very cold temperatures. When handling pipe in cold weather, consideration must be given to its lower impact strength. In subfreezing temperatures, extra caution in handling must be taken to prevent impact damage.

All pipe should be inspected for any scratches, splits or gouges before use. Damaged sections must be cut out and discarded.

Plastic Piping Tools

Basic tools used with Plastic Piping

Use tools that have been specifically designed for use with thermoplastic pipe and fittings when installing. A variety of tools that are designed for cutting, beveling, and assembling plastic pipe and fittings, are readily available through local wholesale supply houses dealing in plastic pipe and fittings.

⚠ **Warning** Tools normally used with metal piping systems, such as hacksaws, water pump pliers, pipe wrenches, etc., can cause damage to plastic pipe and fittings. Visible and hidden fractures, scoring or gouging of material, and over tightening of plastic threaded connections are some of the common problems resulting from the use of incorrect tools and procedures.

Pipe Cutters

Pipe must be square-cut to allow for the proper joining of pipe end and the fitting socket bottom. Wheel type pipe cutters designed for plastic pipe provides easy and clean cuts on smaller pipe sizes. Care should be used with similar ratchet-type cutters to avoid damage to pipe. A slightly raised edge left on the outside of the pipe end after cutting with either device must be removed.

Pipe Cutters for Large Diameter Pipe

Blade cutters made for use with large diameter plastic pipe are easy to adjust and operate for square, burr-less cuts. Blades with carbide edges will provide longer life. With one style blade cutter, pipe ends may also be beveled for solvent joints while being cut by using an optional bevel tool in place of one cutter blade.

Hand Saws

A miter box or similar guide can be used with a fine-toothed saw blades (16 to 18 teeth per inch) having little or no set (maximum 0.025 inch).

Power Saws

Power saws are quite useful in operations where a large quantity of pipe is being cut. Blades designed for plastic pipe MUST be used. A cutting speed of 6,000 RPM, using ordinary hand pressure is recommended.

Pipe Beveling Tools

Power beveling tools, as well as hand beveling tools designed for use with plastic pipe are available. Pipe ends must be beveled (chamfered) to allow easy insertion of the pipe into the fitting and to help spread solvent cement and to prevent scraping cement from the inside of the fitting socket. A recommended bevel of 1/16" to 3/32" at a 10° to 15° angle can be achieved using a plastic pipe beveling tool, but can also be accomplished using a file designed for use on plastic.

Deburring Tools

Special plastic pipe deburring tools remove burs from pipe ends quickly and efficiently. All burrs must be removed from the inside, as well as the outside, of the pipe ends to properly spread solvent cement when joining pipe and fitting.

Strap Wrenches

Strap wrenches with nylon straps treated for slip resistance and designed for use with plastic pipe provide gripping power for turning without scratching or deforming the pipe.

Chain Vises

Chain vises can be used to hold pipe. Vises made with jaws engineered for use with plastic pipe provide holding power without damage to the pipe.

Pullers & Joining Devices

Pipe and fitting pullers are available for joining large diameter plastic pipe and fittings. These tools are designed to allow the pipe to be inserted to the proper insertion depth, maintain proper alignment during assembly, and hold freshly solvent-cemented connections to prevent the fitting from backing-off until the initial set time is achieved.

Joining Methods –Solvent Cement Welding

Solvent cement welding is the most widely used joining method for PVC and CPVC pipe and fittings. Other methods such as threads, flanges and groove adapters can also be used. These are specifically useful where it is anticipated that the joint will have to be disassembled in the future.

Solvent Cement Safety Precautions

Solvent cement products are flammable and contain chemical solvents. Appropriate safety precautions must be taken BEFORE APPLYING PRIMER AND CEMENT. Read the cement can label!

⚠ **CAUTION**

Virtually all solvent cements and primers for plastic pipe are flammable and should not be used or stored near heat, spark or open flames. Do not smoke during use. Eliminate all ignition sources. Primer and PVC cement should be stored in closed containers in the shade at temperatures between 40°F and 110°F; CPVC cement at temperatures between 40°F and 90°F. Use of a can with applicator attached to its lid is recommended. ***Verify expiration dates stamped on cements and primers prior to use.***

Avoid breathing vapors. *They should be used only with adequate ventilation. Explosion-proof general mechanical ventilation is recommended. In confined or partially enclosed areas, a ventilating device should be used. Containers should be kept tightly closed when not in use, and covered as much as possible when in use.*

Avoid contact with skin and eyes. *May be absorbed through the skin; wearing PVA coated protective gloves and an impervious apron are recommended. May cause eye injury. Use Eye protection and avoid eye contact. In case of contact flush with plenty of water for 15 minutes. If irritation persists, get medical attention. If swallowed, call a physician immediately and follow precautionary statement given on side panel of cement container. Keep out of reach of children.*

Refer to Solvent Cement Material Safety Data Sheet (MSDS)

Use Caution with Welding Torches or other equipment where sparks might be involved at construction sites where plastic pipe has recently been solvent welded. Flammable vapors from cemented joints can stay within a piping system for some time. In all cases, lines should be flushed and purged to remove solvent vapors before welding.

Use Caution with Calcium Hypochlorite. Do not use a dry granular calcium hypochlorite as a disinfecting material for water purification in potable water piping systems. Granules or pellets of calcium hypochlorite (including their vapors) may react violently with solvent cements and primers if a water solution is not used. Chlorinated water solutions are nonvolatile and may be pumped into the piping system. Dry granular calcium hypochlorite should not be stored or used near solvent cements or primers.

Actually, solvent cementing is no more dangerous than putting gasoline in your automobile.

Solvent Cement and Primer Spills

Protect work areas prior to starting by using drop cloths in the event of a spill. Accidental spills should be wiped up immediately before the cement sets. Cement and/or primer spills can cause irreparable damage depending on the type of surface affected. Consult the manufacturer of the affected surface for possible suggestions.

Basic Solvent Cement Joints

The following is a general description of basic techniques used to make solvent cement joints. Adjustments will need to be made to method and tools used according to size of piping, but the same principles apply. Additional guidance can be found in ASTM D 2855, Standard Practice for Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings. **Important:** Installers should verify that they can make satisfactory joints under varying conditions and should receive training in installation and safety procedures.

To consistently make good joints in PVC and CPVC piping products, the following should be carefully understood:

1. The joining surfaces of pipe and fitting must be softened and made semi-fluid.

2. Sufficient cement must be applied to fill the gap between pipe and fitting.

3. Assembly of pipe and fittings must be made while the surfaces are still wet and fluid.

4. Joint strength develops as the cement dries (cures). In the tight part of the joint (interference area) the surfaces will fuse together, in the loose part the cement will bond to both surfaces.

Cutting the Pipe

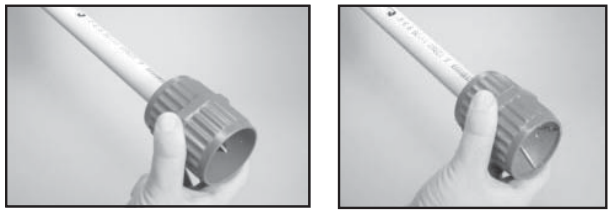
PVC or CPVC pipe can be cut easily with a ratchet cutter, wheel-type plastic pipe cutter (NOTE: be sure to remove any raised ridge produced by wheel cutters), a power saw, or any other fine-tooth saw. It is important that the cutting tools being used are designed for plastic pipe. To ensure that the pipe is cut square, use a miter box when cutting with a saw. Cutting pipe as square as possible provides the maximum bonding surface area.



Be careful not to split the tube if using a ratchet-type cutter, especially in temperatures below 50°F. If any damage or cracking is evident, cut off at least 2" of the pipe beyond any visible crack.

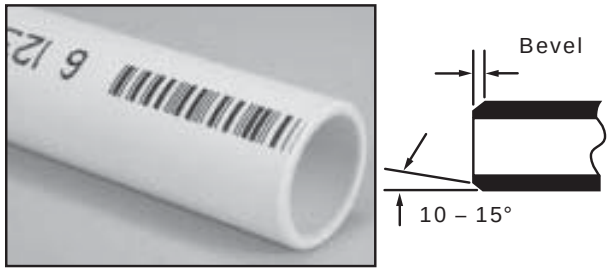
Deburring & Beveling

Burrs and filings can prevent contact between the tube and the fitting during assembly and must be removed from the outside and the inside of the pipe. A deburring/chamfering tool (or file) is suitable for this purpose:



Burrs Being Removed from Outside & Inside

A slight bevel (chamfer) must be placed at the outsided end of the pipe to ease the entry of the tube into the socket and minimize the chance of cement being wiped off the fitting:



Bevel Outside End

Fitting & Joining Preparation

1. Using a clean, dry rag, wipe any loose dirt and moisture from the fitting's socket and pipe end. Moisture can slow the cure time, and at this stage of assembly, excessive moisture can reduce joint strength.

2. Check the dry fit of the pipe and fitting. The pipe should enter the fitting's socket easily 1/4 - 3/4 of the way (interference fit) , or at least have interference between pipe and fitting bottom (net fit). DO NOT use any components that appear irregular or do not fit properly. Contact Spears® regarding any questions about usability.

3. Measure socket depth and mark on pipe for reference during cement application.

4. It is advisable to additionally mark pipe and fitting for alignment orientation position, especially with larger fittings.

Solvent Cementing Assembly

Verify the expiration date located on the solvent cement can. The cement can be used for a period of 2 years from the date stamped on the can. When cementing pipe and fittings in extremely cold temperatures, make sure the cement has not "JELLED." Jelled or expired cement must be discarded in an environmentally friendly fashion, in accordance with local regulations. To prolong the life of solvent cement, keep the containers tightly closed when not in use, and cover the container as much as possible during use. If an unopened solvent cement container is subjected to freezing temperatures, the cement may become extremely thick. Place the closed container in a room temperature area where, after a short time period, the cement will return to a usable condition. DO NOT attempt to heat solvent cement. The cement must be applied when the pipe and fittings are clean and free from any moisture and debris.

Primer Use - Softening of pipe and fitting joining surfaces can be achieved by the cement itself or by using a suitable primer. A primer will usually penetrate and soften the surfaces more quickly than the cement alone. However, special "one-step" cements formulated for use without primers are available. Check local codes (where required) for acceptable applications.

Apply Primer - USING AN APPLICATOR THAT IS AT LEAST 1/2 THE SIZE OF THE PIPE DIAMETER, vigorously scrub joining surface of fitting, of pipe and then again of fitting. Work quickly to apply 2-3 coats in this manner. SOLVENT CEMENT SHOULD THEN BE APPLIED WHILE PRIMER IS STILL WET.

Apply Solvent Cement - USING AN APPLICATOR THAT IS AT LEAST 1/2 THE SIZE OF THE PIPE DIAMETER, WORK THE CEMENT INTO THE JOINING SURFACES USING A CONTINUOUS, CIRCULAR MOTION.

Use sufficient cement, but avoid puddling the cement on or within the fitting and pipe. Puddled cement causes excess softening and damage to the PVC or CPVC material. If interference fit was at the bottom of the socket, use extra cement and make a 2nd application to pipe. WORK QUICKLY SO THAT PIPE AND FITTING CAN BE JOINED WHILE CEMENT IS STILL WET.

Apply the cement in the sequence pictured below:



1. Apply a coat to the pipe to depth of fitting socket
Work the cement into the joining surfaces using a continuous, circular motion.

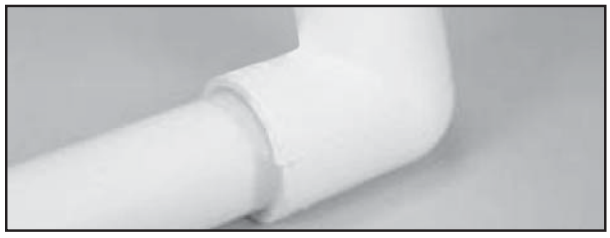


2. Apply a medium coat to the fitting socket
Avoid puddling the cement in the sockets and avoid getting cement in other sockets or threaded connections.

3. Apply a second coat to the pipe end for sizes 1-1/4 inch and larger joints, or if interference fit was at socket bottom during dry-fit.

Assemble Joint

Immediately insert pipe into the fitting socket while rotating the pipe 1/4 turn. Align the fitting in the proper orientation at this time. Make sure the pipe bottoms out at the fitting's stop. Hold the assembly for at least 30 seconds to ensure initial bonding. Tapered pipe sockets can result in pipe backing out of the joint if not held under constant pressure A bead of cement must be present around the pipe and fitting juncture. If this bead is not continuous around the socket's shoulder, insufficient cement was applied and the joint must be disassembled or cut out and replaced.



Any cement, in excess of the bead, can be wiped off with a dry, clean rag.

Set and Cure Times

SET TIME: The initial set time is the recommended waiting period before handling newly assembled joints. After initial set, the joints will withstand the stresses of normal installation. However, a badly misaligned installation will cause excessive stresses in the joint, pipe and fittings.

CURE TIME: The cure time is the recommended waiting period before pressurizing newly assembled joints.

The following basic guidelines should be used:

• The set and cure times for solvent cement depend on pipe size, temperature, relative humidity, and tightness of fit. Drying time is faster for drier environments, smaller pipe sizes, high temperatures, and tighter fits.

• Special care must be taken when assembling products in low temperatures (below 40°F) or high temperatures (above 80°F).

• Extra set and handling times must be allowed in colder temperatures. When cementing pipe and fittings in cold temperatures, make sure the cement has not "JELLED." Jelled cement must be discarded.

• In higher temperatures, make sure both surfaces to be joined are still wet with cement during assembly.

• The assembly must be allowed an initial set, without any stress on the joint

• Following the initial set period, the assembly can be handled carefully by avoiding stress on the joint.

Average Set Times

Temp. Range	Pipe Sizes 1/2" – 1-1/4"	Pipe Sizes 1-1/2" – 2"	Pipe Sizes 2-1/2" – 8"	Pipe Sizes 10" – 15"	Pipe Sizes 16" – 24"
60° - 100°F	2 Min.	5 Min.	30 Min.	2 Hrs.	4 Hrs.
40° - 60°F	5 Min.	10 Min.	2 Hrs.	8 Hrs.	16 Hrs.
0° - 40°F	10 Min.	15 Min.	12 Hrs.	24 Hrs.	48 Hrs.

Average Cure Times

Relative Humidity 60% or Less*	Pipe Sizes 1/2" – 1-1/4"		Pipe Sizes 1-1/2" – 2"		Pipe Sizes 2-1/2" – 8"		Pipe Sizes 10" – 15"	Pipe Sizes 16" – 24"
Temperature Range During Assembly and Cure Periods	Up to 160 psi	Above 160 to 370 psi	Up to 160 psi	Above 160 to 315 psi	Up to 160 psi	Above 160 to 315 psi	Up to 100 psi	Up to 100 psi
60° - 100°F	15 Min.	6 Hrs.	30 Min.	12 Hrs.	1-1/2 Hrs.	24 Hrs.	48 Hrs.	72 Hrs
40° - 60°F	20 Min.	12 Hrs.	45 Min.	24 Hrs.	4 Hrs.	48 Hrs.	96 Hrs.	6 Days
0° - 40°F	30 Min.	48 Hrs.	1 Hr.	96 Hrs.	72 Hrs.	8 Days	8 days	14 Days

NOTE In damp or humid weather allow 50%, more cure time. The cure schedules shown are suggested as guides only. They are based on laboratory test data, and should not be taken to be the recommendations of all cement manufacturers. Individual solvent cement manufacturer's recommendations for the particular cement being used should be followed.

Special Considerations for Working with Solvent Cement Welding

Handling of Cement

Keep cement containers covered while not in use. Cement with the lid left off can become thick and viscous, or gel like. This condition is typically a result of tetrahydrofuran (THF) solvent evaporation and the cement is useless. Do not try to restore the cement by stirring in a thinner. Smaller containers of cement are recommended to be used, especially in warm or hot weather. Prior to opening cans of cement, shake vigorously to properly mix resin and solvents. Solvents contained in PVC and CPVC cements are highly flammable and should not be used near an open flame. The area in which the cement is being used should be well ventilated, and prolonged breathing of the fumes should be avoided, as well as contact with the skin or eyes. Verify the expiration dates stamped on the cements and primers prior to use.

CEMENT AND PRIMER SHELF LIFE

Spears® Products	Shelf Life	Spears® Products	Shelf Life
Primers / Cleaners	3 years	CPVC Solvent Cement	2 years
PVC Solvent Cement	3 years	ABS Solvent Cement	3 years

Hot Weather Use

Problems can be avoided when solvent cementing in 95°F or higher temperatures by taking a few special precautions. Solvent cements evaporate faster at elevated temperatures and can dry out prematurely. This is especially true when there is a hot wind blowing. Dry cement on pipe or fitting socket prior to assembly will not bond. If the pipe has been in direct sunlight for any length of time, surface temperatures may be 20°F to 30°F above air temperature. Solvents attack these hot surfaces faster, deeper and dry out quicker. As a result, it is very important to avoid puddling inside sockets, assemble immediately while wet and to wipe off excess cement at the joint exterior.

Tips for Solvent Cementing in High Temperatures:

1. Store solvent cements in a cool or shaded area prior to use.
2. If possible, store the fittings and pipe, or at least the ends to be solvent welded, in a shady area before cementing.
3. Cool surfaces to be joined by wiping with a damp rag. HOWEVER, be sure that surfaces are dry prior to applying solvent cement.
4. Try to do the solvent cementing in cooler morning hours.
5. Make sure that both surfaces to be joined are still wet with cement when putting them together.

Cold Weather Use

Solvent Cements and primers have excellent cold weather stability and are formulated to have well balanced drying characteristics even in subfreezing temperatures. Good solvent cemented joints can be made in very cold conditions provided proper care and a little common sense are used. In cold weather, solvents penetrate and soften surfaces more slowly than in warm weather. The plastic is also more resistant to solvent penetration, therefore, it becomes more important to pre-soften surfaces. A longer cure time is necessary due to slower evaporation.

Tips for Solvent Cementing in Cold Temperatures:

1. Prefabricate as much of the system as possible in a heated work area.
2. Store cements in a warmer area when not in use and make sure they remain fluid.
3. Take special care to remove moisture, including ice and snow.
4. Use special care to ensure joining surfaces are adequately softened; more than one application may be necessary.
5. Allow a longer cure period before the system is used.

Effects of Tolerances and Fits

PVC pipe and fittings are manufactured to applicable ASTM Standards to produce an interference fit when assembled. However, minimum and maximum allowable tolerances permitted for pipe and fittings can result in variations. For example, fitting with the maximum diameter and the pipe with the minimum diameter, may result in a loose fit. Applying two coats of solvent cement will help assure a good joint. Conversely, if the pipe diameter is on the maximum side and the fitting on the minimum side, the interference may be too great and sanding of the pipe O.D. may be necessary to permit entrance.

Always check dry fits prior to making a joint. If fit is loose, multiple coats and use of an extra heavy bodied cement may be required. Mating components should be checked to assure that tolerances and engagements are compatible (see preceding Basic Solvent Cement Joints instructions). Inspect all pipe and fittings for damage or irregularities. Do not use any components that appear irregular or do not fit properly. Contact the appropriate manufacturer of the product in question to determine usability.

Large Diameter Pipe

Basic Solvent Cement Joint instructions apply to all sizes of pipe, but when making joints larger than 4", the use of two persons is recommended to properly apply cement and immediately assemble the joint while the cemented surfaces are still wet. Alignment of large diameter pipe and fittings during joining is critical since there is a greater potential for movement in the upper portion of a tapered socket that can result in misalignment. Special tools are commercially available for joining large diameter pipe.

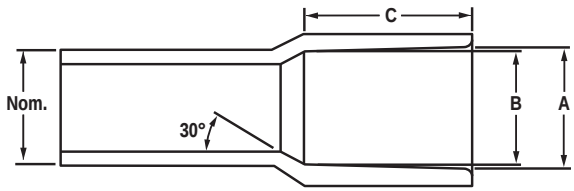
Be sure to use an appropriate size roller applicator with large diameter pipe, along with a heavy or extra heavy bodied cement that is medium to slow setting. These have increased gap filling capability and allow somewhat longer assembly time. However, applications of heavy coats of solvent cement and speed in making the joint is important. Under a damp or wet condition, solvent cement may absorb some moisture. Excessive moisture can slow down the cure and reduce joint strength. Spears® CPVC-24 heavy body or PVC-19 extra-heavy body solvent cements are excellent for joining large diameter pipe (see Solvent Cement Selection Guide in following sections).

Belled End Pipe

Commercially available belled end pipe can be used to eliminate the need for couplings. Where belled end pipe is used, it is suggested that the interior surface of the bell be penetrated exceptionally well with the primer.

NOTE some manufacturers use a silicone release agent on the belling plug, and a residue of this agent can remain inside the bell. Silicone will contaminate the joint and not allow proper solvent cement welding. All silicone residue must be removed in the cleaning process prior to solvent cementing.

Belled-End Pipe Dimensions



Nominal Size (in.)	A		B		C·
	Min.	Max.	Min.	Max·	Min.
1-1/4	1.675	1.680	1.648	1.658	1.870
1-1/2	1.905	1.914	1.880	1.888	2.000
2	2.381	2.393	2.363	2.375	2.250
2-1/2	2.882	2.896	2.861	2.875	2.500
3	3.508	3.524	3.484	3.500	3.250
4	4.509	4.527	4.482	4.500	4.000
5	5.573	5.593	5.543	5.563	4.000
6	6.636	6.658	6.603	6.625	6.000
8	8.640	8.670	8.595	8.625	6.000
10	10.761	10.791	10.722	10.752	8.000
12	12.763	12.793	12.721	12.751	8.500
14	14.030	14.045	13.985	14.000	9.000
16	16.037	16.052	15.985	16.000	10.000
18	18.041	18.056	17.985	18.000	12.000
20	20.045	20.060	19.985	20.000	12.000
24	24.060	24.075	24.000	24.015	14.000

Estimated Quantities of Solvent Cement

A variety of conditions can affect the amount of solvent cement required for making reliable joints. These include pipe size, tolerances, socket depths as well as installation conditions and type of cement used. Fitting sockets are tapered for proper assembly, which produces a slight gap at the socket entrance when installed with pipe. As pipe sizes increase, heavier bodied cements should be used for increase gap filling capabilities. It is best to use liberal amounts of solvent cement since insufficient cement use is one of the most common reasons for joint failure. The following information on cement usage is a recommendation only and other factors or unanticipated conditions may be encountered. Quantities are based on use with average socket lengths of Spears® molded and fabricated fittings.

Standard Pipe Joints

Fitting Size (in.)	Joints per Pint	Joints per Quart	Joints per Gallon
1/2	150	300	1200
3/4	100	200	800
1	63	125	500
1-1/4	70	140	560
1-1/2	45	90	360
2	30	60	240
2-1/2	25	50	200
3	20	40	160
4	15	30	120
6	5	10	40
8	3	5	20
10	---	2-3	4-6
12	---	1-2	2-4

Large Diameter Pipe Joints

Fitting Size (in.)	Quarts per Joint	Joints per Gallon
14	0.75	5.33
16	1.25	3.20
18	1.50	2.67
20	2.00	2.00
24	2.75	1.45

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Progressive Products from Spears® Innovation and Technology

Supplemental Information on Solvent Cementing

Applicators

A wide variety of daubers, brushes, and rollers are available. For proper solvent cement welding of pipe and fittings, the cement applicator must be no less than half the size of the pipe. Sufficient cement cannot be applied using daubers attached to the cement can lid on large diameter products (> 3"dia.) The following chart shows a variety of Spears® applicator sizes for use on different pipe diameters

SPEARS® APPLICATOR SELECTION GUIDE

For proper solvent cement welding of pipe and f ttings, the cement applicator must be no less than half the size of the pipe

DAUBERS	Pipe Diameters						
	1/4"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2
3/8" Dauber	•	•	•				
1/2" Dauber			•	•			
3/4" Dauber					•	•	
1-1/4" Dauber							•

ROLLERS & SWABS	SIZE	FOR PIPE DIAMETERS
3020	3" Roller	3" - 6"
6020	4" Roller	3" - 8"
7020	7" Roller	6" +
5520	4" Roller	6" +
6520	6" Roller	6" +
4020	4" Swab	6" +
5020	4" Swab	3" - 8"
4520	4" Swab	6" +

Cleaners

Cleaners can be used to remove dirt, oil and grease from the bonding surfaces of PVC, CPVC, ABS and Styrene pipe and fittings. Use of a cleaner is recommended before priming of pipe and fittings.

Primers

The use of Primer is necessary to penetrate and dissolve the surface of the pipe and fitting prior to the application of cement. Special "one-step" cements formulated for use without primers are available. Check cement instructions and local codes (where required) for acceptable applications. Primer must be applied to both the pipe and fittings. Apply multiple coats of primer to the fitting socket and to the outside of the pipe ensuring that the entire surface is wet. Solvent cement must be applied immediately after primer while the surfaces are still tacky.

Solvent Cements

Solvent cements are produced for joining a variety of commercially available pipe and fitting materials, including PVC, CPVC and ABS plastics. Solvent cements are typically formulated using tetra hydro furan (THF). When properly applied, this solvent dissolves the mating surfaces of the pipe and fittings. Cyclohexanone is a typical retardant used to slow the rate of solvent evaporation. Immediate joining of the wet mating surfaces in one minute or less is essential to eliminate dry spots that will not bond. The bond interface is strongest at the area of interference fit where the softened semi-fluid surfaces of the pipe and fitting chemically fuse. Plastic resin fillers (dissolved PVC or CPVC) in the cement fill the gaps between pipe and fitting. Cements are available in clear, white, gray and other colors to match the pipe or for specific application. **Inert pigments are used for coloration.** For example, white cements are made from titanium dioxide while gray cements are made from titanium dioxide and carbon black. As the solvent evaporates, pipe and fitting joint "cures", except for some residual solvent that dissipates over time. The resulting fused area is why this method is called "solvent cement welding" although no heat is applied to melt and fuse the bonded areas as in metal welding.

Solvent cements are formulated in regular bodied, medium bodied, heavy bodied, extra heavy bodied and specialty cements. Different types of cements have different set and cure times. Low VOC products - with lesser VOC emissions - will contribute to cleaner air and better workplace conditions. All Spears® solvent cement and primer products are certified as Low VOC.

1. Regular Bodied – Cements for smaller diameters (i.e.<4") and thin-wall classes and Schedule 40 piping with interference fits. Generally referred to as "regular body" such as Spears® PVC-00 and PVC-02 cements, these cements are fast setting.

2. Medium Bodied – Cements for smaller diameters (i.e. <4") for all classes, Schedule 40 and Schedule 80 pipe with interference fits such as Spears® PVC-05 and PVC-21 cements. These cements have better gap filling capability than regular bodied cement and are also considered fast setting

3. Heavy Bodied & Extra Heavy Bodied – Cements for both small and large diameters of heavier-wall Schedule 80 and Schedule 120 products. Heavy-body such as Spears® PVC-11 and CPVC-24 cements are classified as medium setting and extra heavy-body such as Spears® PVC-19 cement is classified as slow setting. These cements are formulated to fill larger gaps, dry slower and typically take longer to dry in order to provide more time to assemble joints.

4. Specialty Cements – Specialty cements formulated for use with specific products and applications, but can also be used with other applications of similar products . Examples include special cements such as Spears® PVC-25 Wet-N-Dry; transition cements such as Spears® MULTIPURPOSE-90 and Spears® ABS TO PVC-94; product specific cements such as Spears® ABS-71 and ABS-73; and one-step specialty cements. One-step cements do not require the use of primer prior to the application of the cement. Examples include Spears® FS-5 one-step cement for use with FlameGuard® CPVC Fire Sprinkler Products, Spears® LW-4 one-step cement for use with **LabWaste™** CPVC Chemical Drainage Systems; Spears® **EverTUFF®** CTS-5 for use with CPVC hot and cold water plumbing systems, and Spears® LX-5 Low Extractable PVC cement for use in high purity applications (i.e. Spears® LOW EXTRACTABLE PVC products). In addition, special application cements such as Spears® CPVC-24 is formulated for improved chemical resistance to caustics and chemical applications with both PVC and CPVC products. In fact, CPVC-24 is one of the most versatile solvent cements on the market today!

Selecting the appropriate solvent cement and primer for the type of products being joined is important. The following selection guide can be used in selecting the right Spears® solvent cement and primer for your application.

Spears® Solvent Cement & Primer Selection Guide

Type	Body	Product	Color	Relative Set	Capacity	Features
PVC	Regular	PVC-00	Clear	Fast	Schedule 40 - 4"	
		PVC-02	Clear	Fast	Schedule 40 - 4"	Dries Clearest, slightly thicker than PVC-00
	Medium	PVC-05	Clear	Fast	All Classes & Schedules - 6" Schedule 80 - 4"	*Industrial Duty* Primerless Capability[1]
		PVC-21	Blue	Fast	Schedule 40 - 6" Schedule 80 - 4"	Primerless Capability[1]
	Heavy	PVC-11	Gray	Medium	All Classes & Schedules - 12"	*Industrial Duty*
		PVC-17	Clear/ Gray	Medium	All Classes & Schedules - 12" Non-pressure - 18"	*Industrial Duty*
	Extra Heavy	PVC-19	White/ Gray	Slow	All Classes & Schedules Requiring High Gap Filling - 30"	*Industrial Duty*
	Specialty Cements	PVC-25	Aqua Blue	Very Fast	All Classes & Schedules - 6" Schedule 80 - 4"	Wet-N-Dry Formulation Primerless Capability[1]
		PVC-26	Blue	Very Fast	All Classes & Schedules - 6" Schedule 80 - 4"	POOL-PRO™ Formulation for Pool & Spa Primerless Capability[1]
		PVC-27	Clear	Very Fast	All Classes & Schedules - 6" Schedule 80 - 4"	Cold-N-Hot Formulation -15°F to 110°F Primerless Capability[1]
		PVC-50	Blue	Very Fast	Schedule 40 - 6" Schedule 80 - 4"	HOT PVC Formulation Primerless Capability[1]
		PVC-95	Clear/ Blue	Fast	All Classes & Schedules - 6" Schedule 80 - 3"	Flexible PVC for Flex-Flex, Flex-Rigid Joints
		LX-5	Clear	Fast	Low Extractable PVC Systems - 6"	One Step[2] Low Extractable, High Purity Cement
CPVC	Heavy	CPVC-24	Gray/ Orange	Medium	All Classes & Schedules PVC or CPVC - All Sizes	**Most Versatile, Chemically Resistant Cement for both CPVC & PVC Systems - including Duct -** *Industrial Duty*
	Specialty Cements	LW-5	Mustard	Medium	LabWaste™ CPVC Drainage Systems - 24"	One Step[2] Cement -Only **LabWaste™** System Chemically Approved Cement
		FS-5	Red	Fast	CPVC Fire Sprinkler Systems - 3"	One-Step[2] Cement for all CPVC Fire Sprinkler Systems - FlameGuard® & BlazeMaster®
		CTS-5	Yellow	Fast	CTS CPVC Systems - 2"	One-Step[2] Cement for all CTS CPVC Systems - EverTUFF® & FlowGuard Gold®
ABS	Medium	ABS-71	Yellow/ Milky	Fast	All ABS Classes & Schedules - 8"	
		ABS-73	Black	Fast	All ABS Classes & Schedules - 8"	
Transition & Multipurpose	Medium	ABS TO PVC-94	Green	Fast	All Classes & Schedules - 6" (Except Schedule 80)	For ABS-to-PVC Transition Joints
		MULTIPUPOSE-90	Clear	Fast	All Classes & Schedules - 6" Schedule 80 - 4"	For PVC and CPVC pressure ABS and Styrene low-pressure systems
Primers & Cleaners		Primer-70	Purple/ Clear		All Classes & Schedules PVC & CPVC - 30"	*Industrial Duty*
		Primer-68	Purple/ Clear		All Classes & Schedules PVC & CPVC - 30"	
		Cleaner-65	Clear		All Classes & Schedules -All Sizes	For PVC, CPVC, ABS or Styrene

Notes

1= Primerless Capability indicates a cement can be used without primer in certain applications if local code permits. See specif c cement information for further restrictions.

2 = One Step designates a cement specif cally designed for use without primer. CTS One Step acceptability depends on local code requirements.

CTS = Copper Tube Size, ASTM D2846 Hot and Cold Water Distribution Systems.

Joining Method - Threaded Connections

Threaded connections require the application of a thread sealant that is compatible with PVC and CPVC material. Spears® recommends the use of Spears® **Blue 75™** Thread Sealant.

CAUTION - Use only thread sealants recommended for PVC or CPVC plastic. Other joint compounds or pastes may contain substances that could cause stress cracks in PVC or CPVC materials.

Apply sealant to the male threads only. Make sure all threads are covered. **DO NOT** clog the waterway with excess sealant. If PTFE tape must be used, Spears® recommends a thickness of at least.0025" that meets or exceeds military specification, MIL-T-27730A. **DO NOT** use a combination of tape and thread sealant on the same joint. Apply PTFE tape in the direction of the threads by starting with the first full thread and continuing over the entire thread length. Make sure all threads are covered. Generally, 2 – 3 wraps are sufficient to produce a watertight connection

DO NOT over-torque any threaded connections. Generally, one to two turns beyond finger-tight are required for a threaded connection. Use a smooth-jawed wrench or strap wrench when installing threaded connections.

Threading Pipe

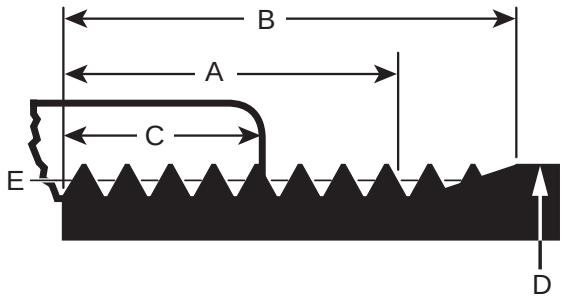
PVC and CPVC pipe can be threaded using either standard hand pipe stocks or power-operated equipment. Since rigid PVC plastic pipe has the same outside diameter as standard steel pipe in comparable sizes, standard steel pipe taps and dies can be used. A cut thread or deep scratch results in a stress concentration point. As a result, only Schedule 80 and Schedule 120 pipe should be threaded. A 50% pressure de-rating is applied to threaded pipe to compensate for this. **DO NOT** thread Schedule 40 pipe. For optimum results in threading, use new taps and dies; but in any case, they should be cleaned and sharpened and in good condition. Power threading machines should be fitted with dies having a 5° negative front rake and ground especially for this type of pipe; tapered guide sleeves are not required. For hand stocks the dies should have a negative front rake of 5° to 10°. Dies which have been designed for use on brass or copper pipes may be used successfully. Carboloy dies give longer service. (Taps should be ground with a 0° to 10° negative rake, depending upon the size and pitch of the thread. Die chasers should have a 33° chamfer on the lead; a 10° front or negative rake; and a 5° rake on the back or relief edge.). Self-opening die heads and collapsible taps, power threading machines and a slight chamfer to lead the tap or dies will speed production; however, taps and dies should not be driven at high speeds or with heavy pressure.

A tapered plug should be inserted into the pipe when threading, to hold the pipe round and to prevent the die from distorting and digging into the pipe wall. This insures uniform thread depth all the way around. Pipe for threading should be held in a suitable pipe vise, but saw-tooth jaws should not be used. Flanges and close nipples should be threaded in jigs or tapping fixtures. To prevent crushing or scoring the pipe, some type of protective wrap, such as canvas, emery paper, or a light metal sleeve should be used; rounding of chuck jaws will also be helpful. Rigid PVC or CPVC plastic pipe should be threaded without use of lubricants. Standard cutting oils can cause stress cracking in plastics and should not be used. Water-soluble oil or plain water is recommended. Degreasing with any solvents is not recommended, nor should solvents be used in any cleanup. Always clear cuttings from the die.

DO NOT OVER THREAD - To obtain a tight, leak proof joint, the thread dimensions shown in the table should be used. If pipe is over threaded, fittings cannot be run on far enough to make a tight seal.

American National Standards Institute Code B1.20.1 covers dimensions and tolerances for tapered pipe threads. **Only Schedule 80 or heavier wall pipe should be threaded.**

Angle between sides of thread is 60 degrees. Taper of thread, on diameter, is 3/4 inch per foot. The basic thread depth is 0.8 x pitch of thread and the crest and root are truncated an amount equal to 0.033 x pitch, excepting 8 threads per inch which have a basic depth of 0.788 x pitch and are truncated 0.045 x pitch at the crest and 0.033 x pitch at the root.



PIPE THREADS

Nominal Size (in.) (Max.) (In.)	Outside Diameter (in.) D	Number of Threads Per Inch	Normal Engagement By Hand (in.) C	Length of Effective Thread (in.) A	Total Length: End of pipe to vanish point (in.) B	Pitch Diameter at end of Internal Thread (in.) E	Depth of Thread (Max.) (in.)
1/8	0.405	27	0.180	0.2639	0.3924	0.37476	0.02963
1/4	0.540	18	0.228	0.4018	0.5946	0.49163	0.04444
3/8	0.675	18	0.240	0.4078	0.6006	0.62701	0.04444
1/2	0.840	14	0.320	0.5337	0.7815	0.77843	0.05714
3/4	1.050	14	0.339	0.5457	0.7935	0.98887	0.05714
1	1.315	11-1/2	0.400	0.6828	0.9845	1.23863	0.06957
1-1/4	1.660	11-1/2	0.420	0.7068	1.0085	1.58338	0.06957
1-1/2	1.900	11-1/2	0.420	0.7235	1.0252	1.82234	0.06957
2	2.375	11-1/2	0.436	0.7565	1.0582	2.29627	0.06957
2-1/2	2.875	8	0.682	1.1375	1.5712	2.76216	0.10000
3	3.500	8	0.766	1.2000	1.6337	3.38850	0.10000
4	4.500	8	0.844	1.3000	1.7337	4.38713	0.10000
5	5.563	8	0.937	1.4063	1.8400	5.44929	0.10000
6	6.625	8	0.958	1.5125	1.9462	6.50597	0.10000

Joining Method - Flanged Connections

PVC and CPVC flanges are available in several designs, including solid one-piece flanges, two piece Van Stone style flanges featuring a moveable ring for bolt alignment, and blind flanges for capping off a piping run. Flanges are available in socket, spigot and threaded configurations and are coupling devices designed for joining IPS (Iron Pipe Size) plastic piping systems where frequent disassembly may be required, can be used as a transitional fitting for joining plastic to metal piping systems, and for connection to other flanged type valves and equipment. A gasket is used between flanges to form a water-tight seal. Proper gasket material should be selected for fluids compatibility. Most plastic flanges carry a maximum working pressure rating of 150 psi non-shock for water at 73°F. Pressure ratings may vary according to size and construction of the flange. Consult flange manufacturer.

Gaskets

Select appropriate size and bolt pattern gasket. Full faced, 1/8" thick elastomer gaskets with a Shore "A" Durometer of approximately 70 are recommended. Verify that the gasket material is suitable for use with the application fluids.

Bolt Patterns & Selection

Most PVC and CPVC flanges are produced with ANSI B16.5 Bolt Patterns for Class 125/150 flanges. Optional Class 300 bolt patterns (NOT a 300 psi rating), certain ANSI/Metric dual pattern flanges, and metric bolt patterns can be produced. Proper bolt size, number and length should be selected for the specific flanges and equipment being assembled. Bolt length requirements will vary according to the flange or equipment manufacturer. Always use 2-wide flat washers for each bolt, one under the bolt head and one under the nut (do not use thin "fender" washers).

Bolt Torque

Threads should be cleaned and well lubricated (WARNING: Use only bolt lubricants compatible with PVC or CPVC material). Actual field conditions may require variations in these recommendations. UNNECESSARY OVER TORQUING WILL DAMAGE THE FLANGE. Torque should always be applied in approximately 5 ft-lb. increments using a 180° opposing sequence.

Flange Make-up

Follow proper solvent cementing and/or threaded component procedures as applicable to join the flange to the pipe. Once a flange is joined to pipe, the method for joining two flanges is as follows:

1. Piping runs joined to the flanges must be installed in a straight line position to the flange to avoid stress at the flange due to misalignment. Piping must also be secured and supported to prevent lateral movement which can create stress and damage the flange.
2. With gasket in place, align the bolt holes of the mating flanges by rotating the ring into position.
3. Insert all bolts, washers (two standard flat washers per bolt), and nuts.
4. Make sure the faces of the mating surfaces are flush against gasket prior to bolting down the flanges.
5. Tighten the nuts by hand until they are snug. Establish uniform pressure over the flange face by tightening the bolts in 5 ft.-lb. increments according to the sequence shown in the following table using a 180° opposing sequence.
6. Care must be taken to avoid "bending" the flange when joining a Spears® flange to a "raised face" flange, or a wafer-style valve. Do not use bolts to bring together improperly mated flanges.

Recommended Flange Bolt Torque for Plastic Flanges

Flange Size (in.)	No. of Bolt Holes	Bolt Dia. (in.)	Min. Bolt Length (in.)	Torque ft.-lb.
1/2	4	1/2	2	12
3/4	4	1/2	2	12
1	4	1/2	2-1/4	12
1-1/4	4	1/2	2-1/4	12
1-1/2	4	1/2	2-1/2	25
2	4	5/8	3	25
2-1/2	4	5/8	3-1/4	25
3	4	5/8	3-1/4	25
4	8	5/8	3-1/2	25
6	8	3/4 4		40
8	8	3/4	4-1/2	40
10	12	7/8	5	64
12	12	7/8	5	95
14	12	1	5-1/2	110
16	16	1	6-1/2	110
18	16	1-1/8	4-1/8	110
20	20	1-1/8	5-1/2	110
24	20	1-1/4	5-1/2	110

Note: Minimum bolt length is based on connecting two (2) Spears ® f anges, two f at washers, gasket and nut. Adjustments will need to be made to accommodate valves and other equipment.

Joining Method – Mechanical Grooved Couplings

In many installations where transition to metal pipe, or where disassembly is a prime factor, metallic grooved style couplings with gasket seal can be used to join PVC and CPVC pipe to alternate IPS size piping materials. In addition to the ease of disassembly, this type of connection also allows for a certain degree of angular adjustment and expansion/contraction. Special rolled-groove pipe can be joined, but easy to use molded Grooved Coupling Adapters then can be solvent cemented to plain end pipe are available for use with metallic grooved couplings.

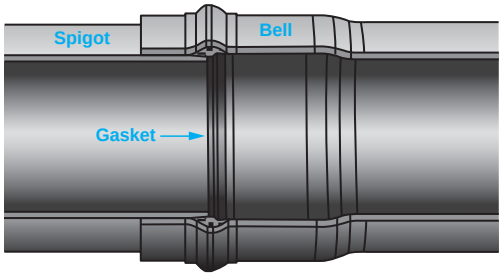
Only flexible style metallic grooved couplings are recommended for use with plastic pipe. Rigid style couplings should not be used as these can provide a compressive/shear load to plastic pipe resulting in failure. Always check the compatibility of the grooved coupling gasket material with the intended application fluids.

NOTE A gasket/joint lubricant is recommended to prevent pinching the gasket and to assist the seating and alignment processes during assembly of grooved couplings. Certain lubricants may contain a petroleum base or other chemicals, which will cause damage to the plastic pipe, gasket and adapter. Always verify the suitability for use of the selected lubricant with the lubricant manufacturer.

Joining Method - Gasketed Pipe

Standards and Specifications

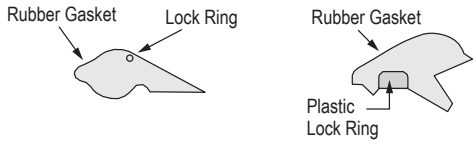
Since integral gasket bells are commercially available on a variety of pipe dimensions, applicable standards are dependent on the pipe dimension chosen. PVC pipe is manufactured from a Type I, Grade I PVC material per ASTM D 1784. Gasket pipe utilizes flexible elastomeric seals for pressure pipe. When properly assembled these joints meet the requirements of push-on joints per ASTM D 3139. The gaskets used should be manufactured in strict compliance with ASTM F477 requirements. SDR Series gasketed pipe is manufactured to ASTM D 2241. PVC Schedule 40, 80 and 120 gasketed pipe is manufactured to ASTM D 1785.



Typical Gasket Joint

Gasket Design

Gasketed pipe utilizes either gaskets that are locked in place at the factory as part of the manufacturing process, or insertable elastomer gaskets. Two styles of factory- installed gaskets are typically used. The Rieber style gasket with internally molded-in metal ring, and the Retained Ring style gasket. This technique also prevents fish mouthing or dislocation of the seal during assembly. The standard gasket material typically used for both factory-installed gasket systems is Styrene Butadiene Rubber (SBR) which offers excellent physical properties and good chemical resistance. Other gasket materials are commercially available to meet demanding chemical resistance requirements.



Rieber gasket – 2" - 8"
Laying length 19'6" ± 2"

Retained Ring gasket – 10" - 24"
Laying length 19' ± 2"

Gasketed pipe offers low assembly force; flexibility to allow for variations in line pressure and changing working conditions; compensation for movement due to thermal expansion and contraction; a certain amount of allowable joint deflection; and positive, leak-free seals for both high- and low-pressure applications as well as vacuum service.

Field Assembly of Gasketed Joint

PVC pipes are assembled in the field by following a few simple steps, as outlined below:

Step 1: Pipe end should have 15° bevel. Field cut pipe must be cut square and a 15° bevel applied to the cut spigot end. Factory pipe ends may have an insertion depth guide mark. If not, or if field cut, measure bell depth and mark on spigot end for insertion reference.

Step 2: Check that gasket is properly positioned in the bell groove. Clean the beveled end of the spigot and the gasket in the bell groove to be sure they are free of any particles or debris



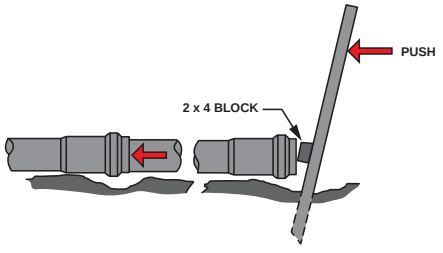
Step 3: Apply a lubricant recommended for PVC to the spigot end. Avoid applying lubricant directly on the gasket in the bell instead of the spigot.

WARNING: Some lubricants, oils or greases may not be compatible with PVC and can cause stress cracking. Verify PVC compatibility with the lubricant manufacturer.



Step 4: Insert and push lubricated spigot past the gasket into the bell until the guide mark on the spigot is meets the end of the bell. It it is usually possible to manually insert the spigot into the bell on pipe sizes 3" and smaller. Mechanical assistance may be needed for insertion on larger sizes. The "bar and block method" can be used, which allows the installer to feel the amount of force being used and whether the joint goes together smoothly.





"Bar and Block" Method for Mechanical Insertion of Spigot Into Bell

Deflection

Gasketed joints permit an angular deflection of 2° at the joint. Adequate deflection can usually be achieved for gentle curves by using the inherent flexibility of the pipe itself, without using joint deflection.

Thrust Blocking Gasket Joints

All gasket-joint piping requires adequate thrust restraints to prevent movement from forces generated by changes in direction, valve operation, dead ends, reduction in pipe size, and other areas where thrusts can be developed. The size and type of thrust restraint depends on the pipe size, type of fitting, soil properties, and water-hammer possibilities. Keeping flow velocities at or below 5 ft/sec will help minimize surge pressures. Fittings and valves used to make vertical changes in direction should be anchored to the thrust restraint to prevent outward and upward thrusts at the fitting junctures. In pressure lines, valves 3" in diameter and larger should be anchored to the thrust restraint to prevent movement when operated. Consideration should also be given for the proper support, anchoring, and thrust restraint for lines installed on slopes.

The size of thrust block required (in square feet) can be determined by dividing the total thrust developed (in psi) by the capacity of the soil (in pounds/square foot).

The most common method of thrust blocking involves the pouring of concrete (to the size of block required) between the pipe fitting and the bearing wall of the trench. Mechanical thrust restraint with PVC pipe.

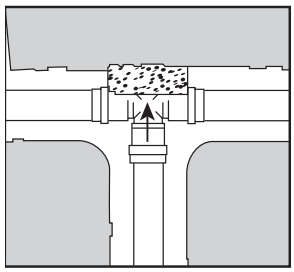
Thrust in lb. @ 100 psi Operating Pressure

Pipe Size (in.)	90° Bend	45° Bend	22.5° Bend	Tee, Cap Plug, 60° Bend
2	645	350	180	455
2-1/2	935	510	260	660
3	1,395	755	385	985
4	2,295	1,245	635	1,620
6	4,950	2.680	1,370	3,500
8	8,375	4,540	2,320	5,930
10	13,040	7,060	3,600	9,230
12	18,340	10,000	5,240	13,000
14	21,780	11,770	6,010	15,400
16	28,440	15,370	7,850	20,110
18	35,990	19,450	9,930	25,450
20	44,430	24,010	12,260	31,420
24	63,970	34,570	17,650	45,240

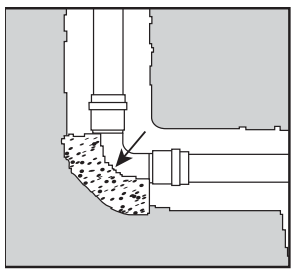
Safe Bearing Capacity

Soil	Capacity (lb./sq. ft.)
Muck, peat, etc.	0
Soft clay	1,000
Sand	2,000
Sand and gravel	3,000
Sand and gravel cemented with clay	4,000
Hard shale	10,000

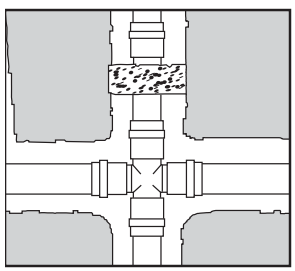
Thrust Blocks



Thru Line connection, tee

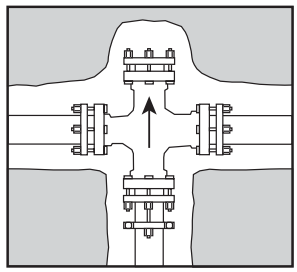


Direction change, elbow

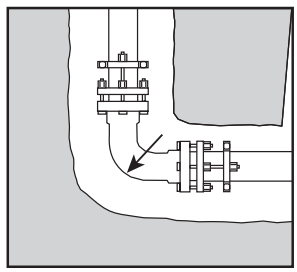


Change line size, reducer

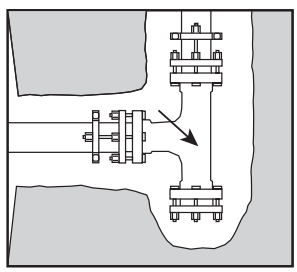
Thrust Retainers



Thru Line connection, cross used as tee



Direction change, elbow



Direction change, tee used as elbow

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Progressive Products from Spears® Innovation and Technology

Assembly Instructions

Step One: Make certain pipe ends and gasket areas are free of dirt and debris. Support spigot end of pipe above ground to prevent dirt contamination when lubricant is applied.

Step Two: Apply a light coating of recommended lubricant to spigot end and sealing section of gasket.

WARNING – Use only lubricants specifically designated for use with PVC pipe. Certain greases, oils and vegetable oils will cause stress cracking in PVC materials.

Step Three: Align pipe ends. Push spigot end into gasket bell so that the reference mark is even with the entrance of the gasket bell.

Pounds of Force Required to Assemble Gasket Pipe

Rieber		Retaining Ring	
Pipe Size (in.)	ft.-lb.	Pipe Size (in.)	ft.-lb.
2	113	10	250
2-1/2	124	12 300	
3	137	14 385	
4	157	16 360	
6	284	18 450	
8	352	20 520	
		24	600

Estimated Gasket Pipe Lubricant Use

Nominal Pipe Size (in.)	Avg. Number of Joints Per Pint (1 lb.) Container of lubricant
2	70
2-1/2	60
3	50
4	35
6	20
8	14
10	10
12	7
14	5
16	3
18	2
20	1.5
24	1

Trenching: Initial Backfill

Trench depth is determined by the intended service and local conditions. Gasket pipe should be buried a minimum of 12" below frost line in areas subject to freezing, or a minimum depth of 18" - 24" where there is no frost. Permanent lines subjected to heavy traffic should have a minimum cover of 24". In areas not subject to freezing, a minimum cover of 12" to 18" is usually sufficient for small-diameter piping subjected to light traffic. Bearing stresses must be calculated to determine the amount of cover required. Reference to applicable local, state, or national codes is also recommended.

The trench bottom should be continuous, relatively smooth, and free of rocks and debris. Adequate backfill should be in place immediately after installation, prior to filling or testing the line, to help distribute the effects of expansion/contraction evenly over each pipe length. The initial backfill material should consist of particles of 1/2" in size or less, and properly tamped. Generally a minimum of 6" - 12" of backfill is desirable for the initial phase. Where hardpan, ledge rock, or large boulders are encountered, the trench bottom should be padded with sand or compacted fine-grain soils to provide adequate protection. Joints should be left exposed for visual inspection during testing. Testing should be done before final backfill.

Testing

If separate tests are to be conducted for pressure and leakage, pressure testing should be conducted first.

WARNING: Air must be completely vented from the line prior to pressure testing; entrapped air can generate excessive surge pressures that are potentially damaging and can cause bodily injury or death. Air relief valves should be provided.

Section of pipe should be tested as it is installed to verify proper installation and joint assembly. Make certain the section of piping to be tested is backfilled sufficiently to prevent movement under test pressure. If concrete thrust blocks are utilized, allow sufficient time for concrete to set up prior to testing. Test ends must be capped and braced properly to withstand thrusts developed during testing. The following table provides the water volume requirements of various sizes of schedule and SDR series pipe.

Water Volume Gallons / 100'

Pipe Size (in.)	Sch. 40	Sch. 80	Sch. 120	SDR. 21	SDR. 26	SDR. 41
2	17	15 14 19 20				–
3	38	34 32 41 43				–
4	66	60	54	68	70	–
6	150	135 123 146 152				–
8	260	237	–	248	258	–
10	409	373	–	–	401	–
12	582	528	–	–	565	–
14	703	637	–	–	681	–
16	917	836	–	–	889	–
18	–	1060	–	–	1125	1195
20	–	–	–	–	1390	1475
24	–	–	–	–	2000	2125

Final Backfill

Backfilling should be conducted in layers; each layer must be compacted sufficiently so that lateral soil forces are developed uniformly. Under certain conditions it may be desirable to pressurize line during the backfill operation. Vibratory methods are recommended when compacting sand or gravel. Sand and gravel containing a significant proportion of fine-grained materials (silt, clay, etc.) should be compacted by mechanical tampers. When water flooding is used, sufficient cover must be provided by the initial backfill to ensure complete coverage of the pipe; precautions must be taken to prevent "floating" the pipe in the trench. Additional layers of backfill should not be applied until the water flooded backfill is firm enough to walk on. In all cases, the backfill should be placed and spread in uniform layers to eliminate voids. Large rocks, frozen dirt clods, and other debris larger than 3" should be removed to prevent damage to the pipe. Rolling equipment or heavy tampers should only be used to consolidate the final backfill. Additional information pertaining to underground installation is contained in ASTM D 2774 (Underground Installation of Thermoplastic Pressure Pipe), and ASTM D 2321 (Underground Installation of Flexible Thermoplastic Sewer Pipe).

Transition Joints & Specialty Fittings

PVC and CPVC pipe can be connected to steel, copper, brass, other metals and other plastic materials using a variety of transition fittings including unions, compression fittings, special reinforced adapters, flanged joints and grooved mechanical coupling joints.

Do not use regular PVC or CPVC female threaded fittings for connection to metal male threads. Spears® Special Reinforced (SR) female plastic threaded fittings are excellent for plastic to metal transitions. Unlike conventional plastic female adapters, these fittings incorporate the use of a stainless steel restraining collar located on the exterior of the FIPT threads of the adapter. This design allows direct connection to male metal threads without the need for pressure de-rating normally associated with conventional FIPT adapters, as the radial stress generated by thread engagement is contained. Other PVC/CPVC adapter fittings with brass or steel threads can also be used for transition to metal male threads.

If regular non-reinforced plastic threads must be transitioned to metal threads, the recommended joint is to use male plastic threads into female metal threads.

Underground Installation

Underground piping must be installed in accordance with any applicable codes. Attention should be given to local pipe laying techniques applicable to area subsoil. This may provide insights to particular pipe bedding issues. The following information is applicable to solvent cement joining of PVC and CPVC piping as a general guide. Refer to Gasketed Pipe section for additional information on installation of gasketed pipe.

Inspection: Before installation, PVC and CPVC piping products should be inspected for cuts, scratches, gouges or split ends. Damaged sections found must be cut-out and discarded.

Trenching: The trench should be as narrow as possible while providing adequate width to allow convenient installation. Minimum trench widths may be utilized by joining pipe outside of the trench and lowering it into the trench after adequate joint strength has been achieved. Refer to solvent cement instructions for recommended joint set and cure time.

Trench widths will have to be wider where pipe is joined in the trench or where thermal expansion and contraction is a factor.

Thermoplastic pipe should ALWAYS be installed below the frost level according to local conditions. Pipe for conveying liquids susceptible to freezing should be buried no less than 12" below the maximum frost level. Permanent lines subjected to heavy traffic should have a minimum cover of 24". For light traffic 12" to 18" is normally sufficient for small diameter pipe (typically < 3" diameter). With larger sizes, bearing stresses should be calculated to determine cover required.

When it is installed beneath surfaces that are subject to heavy weight or constant traffic such as roadways and railroad tracks, thermoplastic piping should be run within a metal or concrete casing. Refer to Critical Collapse Pressure Ratings for additional information.

The trench bottom should be continuous, relatively smooth and free of rocks. Where ledge rock, hardpan or boulders are encountered, it is necessary to pad the trench bottom using a minimum of four (4) inches of tamped earth or sand beneath the pipe as a cushion and for protection of the pipe from damage.

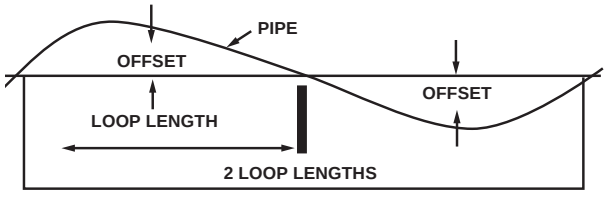
Sufficient cover must be maintained to keep external stress levels below acceptable design stress. Reliability and safety of service is of major importance in determining minimum cover. Local, state and national codes may also govern.

Snaking of Pipe may be used for small diameter piping systems (typically < 3"), but may also apply to larger diameter piping under specific applications and site conditions. Snaking of pipe is used to compensate for thermal expansion and contraction due to temperature changes. Snaking is particularly necessary on piping solvent welded during the late afternoon or a hot summer's day where drying time will extend through the cool of the night where thermal contraction could result in joint pull out. This snaking is also especially necessary with pipe that is laid in its and is backfilled with cool earth before the joints are thoroughly dry.

After the pipe has been solvent welded and allowed to set properly, snake the pipe beside the trench during its required cure time. **BE ESPECIALLY CAREFUL NOT TO APPLY ANY STRESS THAT WILL DISTURB THE UNCURED JOINT.**

For Pipe Diameters < 3" diameter

Loop Offset in Inches for Contraction:



Maximum Temperature Variation, °F, Between Time of Solvent Welding and Final Use

Loop Length	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°
LOOP OFFSET										
20	3"	4"	5"	5"	6"	6"	7"	7"	8"	8"
50	7"	9"	11"	13"	14"	16"	17"	18"	19"	20"
100	13"	18"	22"	26"	29"	32"	35"	37"	40"	42"

Expansion and contraction can be excessive in systems operating at near or at the maximum allowable temperature ranges with intermittent flow and buried lines. In these cases the lines should not be snaked. The use of properly installed expansion joints within a suitable concrete enclosure can be used. A section of larger diameter PVC pipe or other suitable sleeve should be used over the carrier pipe to pass through the wall of the concrete to minimize the potential for damage (scratching & scarring) as the result of movement caused by thermal expansion/contraction. Expansion joints should be suitably anchored independently of the carrier line. Axial guides should be used to direct movement into the expansion joint.

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Backfilling: Underground pipe should be inspected and tested for leaks prior to backfilling. In hot weather, it is best to backfill early in the morning when the line is fully contracted and there is reduced chance of insufficiently dried joints being subject to contraction stresses.

The pipe should be uniformly and continuously supported over its entire length on firm, stable material. Blocking should not be used to change pipe grade or to intermittently support pipe across excavated sections.

Pipe is installed in a wide range of subsoils that must be stable and applied so as to physically shield the pipe from damage. Follow local pipe laying experience that may indicate particular pipe bedding problems.

Surround the pipe with 6" or 8" of backfill materials free of rocks and having a particle size of 1/2" or less. It should be placed in layers. Each soil layer should be sufficiently compacted to uniformly develop lateral passive soil forces during the backfill operation. It may be advisable to pressurize the pipe to 15 - 25 psi during the backfilling.

Vibratory methods are preferred when compacting sand or gravels. Best results are obtained when the soils are in a nearly saturated condition. Where water flooding is used, the initial backfill should be sufficient to insure complete coverage of the pipe. Additional material should not be added until the water flooded backfill is firm enough to walk on. Care should be taken to avoid floating the pipe.

Sand and gravel containing a significant proportion of fine-grained material, such as silt and clay, should be compacted by hand or, preferably by mechanical tamper.

The remainder of the backfill should be placed and spread in uniform layers to fill the trench completely so that there will be no unfilled spaces under or around rocks or lumps of earth in the backfill. Remove large or sharp rocks, frozen clods and other debris greater than 3" in diameter. Rolling equipment or heavy tampers should only be used to consolidate the final backfill.

Avoid threaded connections in underground applications. Where transition to alternate materials is required the use of a flange component with suitable gasket is recommended. At vertical transitions from below ground systems to connections above ground, follow above ground installation procedures with regard to compensating for thermal expansion/contraction, weatherability, and proper support recommendations. Valves and other concentrated weight loads should be independently supported. Avoid excessive bending of pipe; excessive deflection of pipe and joints can reduce pressure bearing capability and cause failure.

Additional information on underground installations is contained in ASTM D 2774 “Underground Installation of Thermoplastic Pressure Piping”, ASTM F 645, Standard Guide For “Selection Design and Installation of Thermoplastic Water Pressure Piping Systems”, and ASTM D 2321 “Underground Installation of Flexible Thermoplastic Sewer Pipe.”

Above Ground Installation

Thermal Expansion & Contraction

Attention must be given to above ground installations where ambient temperature swings can be cause thermoplastic systems to expand and contract both indoors and out. For example, a system installed in an unheated building during the winter months will expand considerably when temperatures rise. Conversely, systems installed at higher ambient temperatures will contract as temperatures fall. Refer to Thermal Expansion & Contraction section for additional information.

Outdoor Applications & Protection

PVC and CPVC piping system must be protected from freezing. Many standard cold weather piping design and installation practices can be used to protect the system from freezing such as use of pipe insulation, anti-freeze solutions, and heat trace tapes. The suitability and compatibility of these products for use with PVC and CPVC should be verified with product manufacturers prior to use.

Caution should be exercised in installing PVC and CPVC piping products in metal boxes or enclosures exposed to direct sunlight. Such enclosures can act as “ovens” that significantly increase the environmental temperature over ambient air conditions, resulting in product damage and failure.

PVC and CPVC piping exposed to the direct sunlight (UV radiation) should be painted with a reflective, light colored acrylic or latex paint. Avoid dark colors, especially black. Heat absorption can exceed the heat handling capacity of the pipe and fitting material. Compatibility information regarding use with PVC/CPVC products should be confirmed with the paint manufacturer. Oil-based paints should not be used.

Hangers and Supports

Hanger Support Spacing

Support location and spacing depends on the pipe diameter, system operating temperature, and the location of any concentrated stress loads (i.e., valves, flanges, test equipment and any other heavy system components). Hangers must have an adequate load-bearing surface free of any rough or sharp edges that could damage the pipe during use. Hangers also must not restrict linear movement of the system in order to allow thermal expansion and contraction from temperature changes.

Proper support spacing can be calculated similarly to that of metal systems by using simple and continuous beam calculations. This can be achieved using the maximum fiber stress of the material, or deflection based on the long term modulus of the material at the temperature selected as the limiting factors.

Hanger Selection

Hangers designed for metallic pipe can be used if they provide an adequate load-bearing surface, which is smooth and free of rough or sharp edges that could damage the pipe. Improper supports can generate excessive sag resulting in failure. Movement caused by thermal expansion/contraction and pressure fluctuations must be considered. Hangers and supports used must permit axial movement of the system, but not compress the pipe. Supplemental, guides may be required in addition to hangers in order to maintain alignment and direct movement into in-line Expansion Joints.

Placement

Hangers should be installed within two feet of each side of a pipe joint; while changes in direction should be supported as close as possible to the fitting to reduce stress. Heavy system components such as valves, flanged assemblies, tees and other concentrated stress loads must be independently supported. Valves should additionally be adequately braced to prevent movement/stress loads from operational torque. Support of potential solids accumulation loads within the line should also be considered.

Precautions

Protective sleeves or pads used between the pipe and the hanger will distribute stress loads over a greater surface area, especially when using U-bolt or roller type hangers. Protective sleeves or pads should also be used when horizontal pipe is resting on concrete or other abrasive support structures. Do not allow piping to contact abrasive surfaces that could cause damage during axial movement. Avoid contact with heat producing sources. Do not install plastic piping in close proximity to steam lines or other high temperature equipment without providing appropriate protection to prevent damage from distortion or expansion/contraction.

Care should be taken to avoid over tightening of anchors, clamps or other support devices. This can distort or even fracture the piping.

Vertical lines must be supported properly at intervals that will prevent excessive loading on the fitting at the lower end. Hangers and clamps suitable for this purpose include riser clamps or double bolt type clamps installed in such a manner that will allow for movement of the pipe due to thermal expansion and contraction. Clamps and hangers used must not compress, distort, cut or abrade the piping. Common practice is to install clamps just below a coupling so that the shoulder of the coupling rests on the clamp. Fittings can be modified in the field to achieve this by cutting a coupling in two, just above the stop at the socket bottom, and then cutting this piece in half lengthwise to provide two halves which do not contain the stop. The two halves are then solvent cemented to the pipe at the proper location so that the shoulder of the modified coupling rests on the clamp. Riser clamps that utilize compression to support the pipe weight should not be used.

Anchor Guides

Anchors direct movement of the piping by providing restraint at key points such as long straight runs, at changes in direction of the system, and where expansion joints and other methods of thermal compensation are utilized. They may be used to control forces caused by expansion and contraction, generated by pressure surges, vibration, and other transient conditions. Guides are necessary to help direct this movement between anchors by allowing longitudinal movement while restricting lateral movement. Depending on the application and type, guides may or may not act as supports. Support guides should have the same load bearing surface and other requirements of hangers designed for the system. Guides must be rigidly attached to the structure to prevent lateral movement, but should not restrict longitudinal movement of the pipe through the guide. Anchors and guides must be engineered and installed without point loading the system.

Recommended Pipe Support Spacing

The following hanger support spacing recommendations are according to size, schedule, and operating temperatures. Do not clamp supports tightly – this restricts axial movement of the pipe. If short spacing is necessary, continuous supports may be more economical. These are considered conservative in nature and are based on straight runs of un-insulated lines with fluids with a specific gravity of 1.00 or less. These values do not consider concentrated weight loads or aggressive reagents.

PVC PIPE SUPPORT SPACING (ft.)

PIPE SIZE (in.)	SCHEDULE 40					SCHEDULE 80					SCHEDULE 120				
	60°F	80°F	100°F	120°F	140°F	60°F	80°F	100°F	120°F	140°F	60°F	80°F	100°F	120°F	140°F
1/4	4	3-1/2	3-1/2	2	2	4	4	3-1/2	2-1/2	2	---	---	---	---	---
3/8	4	4	3-1/2	2-1/2	2	4-1/2	4-1/2	4	2-1/2	2-1/2	---	---	---	---	---
1/2	4-1/2	4-1/2	4	2-1/2	2-1/2	5	4-1/2	4-1/2	3	2-1/2	5	5	4-1/2	3	2-1/2
3/4	5	1/2	4	2-1/2	2-1/2	5-1/2	5	4-1/2	3	2-1/2	5-1/2	5	4-1/2	3	3
1	5-1/2	5	4-1/2	3	2-1/2	6	5-1/2	5	3-1/2	3	6	5-1/2	5	3-1/2	3
1-1/4	5-1/2	5-1/2	5	3	3	6	6	5-1/2	3-1/2	3	6-1/2	6	5-1/2	3-1/2	3-1/2
1-1/2	6	5-1/2	5	3-1/2	3	6-1/2	6	5-1/2	3-1/2	3-1/2	6-1/2	6-1/2	6	4	3-1/2
2	6	5-1/2	5	3-1/2	3	7	6-1/2	6	4	3-1/2	7-1/2	7	6-1/2	4	3-1/2
2-1/2	7	6-1/2	6	4	3-1/2	7-1/2	7-1/2	6-1/2	4-1/2	4	8	7-1/2	7	7-1/2	4
3	7	7	6	4	3-1/2	8	7-1/2	7	4-1/2	4	8-1/2	8	7-1/2	5	4-1/2
3-1/2	7-1/2	7	6-1/2	4	4	8-1/2	8	7-1/2	5	4-1/2	9	8-1/2	7-1/2	5	4-1/2
4	7-1/2	7	6-1/2	4-1/2	4	9	8-1/2	7-1/2	5	4-1/2	9-1/2	9	8-1/2	5-1/2	5
5	8	7-1/2	7	4-1/2	4	9-1/2	9	8	5-1/2	5	10-1/2	10	9	6	5-1/2
6	8-1/2	8	7-1/2	5	4-1/2	10	9-1/2	9	6	5	11-1/2	10-1/2	9-1/2	6-1/2	6
8	9	8-1/2	8	5	4-1/2	11	10-1/2	9-1/2	6-1/2	5-1/2	---	---	---	---	---
10	10	9	8-1/2	5-1/2	5	12	11	10	7	6	---	---	---	---	---
12	11-1/2	10-1/2	9-1/2	6-1/2	5-1/2	13	12	10-1/2	7-1/2	6-1/2	---	---	---	---	---
14	12	11	10	7	6	13-1/2	13	11	8	7	---	---	---	---	---
16	12-1/2	11-1/2	10-1/2	7-1/2	6-1/2	14	13-1/2	11-1/2	8-1/2	7-1/2	---	---	---	---	---
18	13	12	11	8	7	14-1/2	14	12	11	9	---	---	---	---	---
20	14	12-1/2	11-1/2	10	8-1/2	15-1/2	14-1/2	12-1/2	9-1/2		---	---	---	---	---
24	15	13	12-1/2	11	9-1/2	17	15	14	12-1/2	10-1/2	---	---	---	---	---
	SDR 41					SDR 26									
18	13	12	11	8	7	14-1/2	14	12	9	8	---	---	---	---	---
20	13-1/2	12-1/2	11-1/2	8-1/2	7-1/2	15	14-1/2	12-1/2	9-1/2	8-1/2	---	---	---	---	---
24	14	13	12	9	8	15-1/2	15	13	10	9	---	---	---	---	---

NOTE Although support spacing is shown at 140°F for PVC, consideration should be given to the use of CPVC or continuous support above 120°F. The possibility of temperature overrides beyond regular working temperatures and cost may make either of the alternatives more desirable. This chart based on continuous spans and for un-insulated line carrying fluids of specific gravity up to 1.00.

CPVC PIPE SUPPORT SPACING (ft.)

PIPE SIZE (in.)	SCHEDULE 40						SCHEDULE 80					
	73°F	100°F	120°F	140°F	160°F	180°F	73°F	100°F	120°F	140°F	160°F	180°F
1/2	5	4-1/2	4-1/2	4	2-1/2	2-1/2	5-1/2	5	4-1/2	4-1/2	3	2-1/2
3/4	5	5	4-1/2	4	2-1/2	2-1/2	5-1/2	5-1/2	5	4-1/2	3	2-1/2
1	5-1/2	5-1/2	5	4-1/2	3	2-1/2	6	6	5-1/2	5	31/2	3
1-1/4	5-1/2	5-1/2	5-1/2	5	3	3	6-1/2	6	6	5-1/2	31/2	3
1-1/2	6	6	5-1/2	5	3-1/2	3	7	6-1/2	6	5-1/2	31/2	3-1/2
2	6	6	5-1/2	5	3-1/2	3	7	7	6-1/2	6	4	3-1/2
2-1/2	7	7	6-1/2	6	4	3-1/2	8	7-1/2	7-1/2	6-1/2	41/2	4
3	7	7	7	6	4	3-1/2	8	8	7-1/2	7	41/2	4
3-1/2	7-1/2	7-1/2	7	6-1/2	4	4	8-1/2	8-1/2	8	7-1/2	5	4-1/2
4	7-1/2	7-1/2	7	6-1/2	4-1/2	4	8-1/2	9	8-1/2	7-1/2	5	4-1/2
6	8-1/2	8	7-1/2	7	5	4-1/2	10	9-1/2	9	8	51/2	5
8	9-1/2	9	8-1/2	7-1/2	5-1/2	5	11	10-1/2	10	9	6	5-1/2
10	10-1/2	10	9-1/2	8	6	5-1/2	11-1/2	11	10-1/2	9-1/2	61/2	6
12	11-1/2	10-1/2	10	8-1/2	6-1/2	6	12-1/2	12	11-1/2	10-1/2	71/2	6-1/2
14	12	11	10	9	8	6	15	13-1/2	12-1/2	11	91/2	8
16	13	12	11	9-1/2	8-1/2	7	16	15	13-1/2	12	10	8-1/2

NOTE This chart based on continuous spans and for un-insulated line carrying fluids of specific gravity up to 1.00.

PVC PIPE SUPPORT SPACING (FT) AT °F (°C)

NOMINAL PIPE SIZE (in.)	SCHEDULE 40					
	20°F (-7°C)	60°F (16°C)	80°F (27°C)	100°F (38°C)	120°F (49°C)	140°F (60°C)
1/4	4.5	4.0	3.5	3.5	2.0	2.0
3/8	4.5	4.0	4.0	3.5	2.5	2.0
1/2	5.0	4.5	4.5	4.0	2.5	2.5
3/4	5.5	5.0	4.5	4.0	2.5	2.5
1	6.0	5.5	5.0	4.5	3.0	2.5
1 1/4	6.0	5.5	5.5	5.0	3.0	3.0
1 1/2	6.5	6.0	5.5	5.0	3.5	3.0
2	6.5	6.0	5.5	5.0	3.5	3.0
2 1/2	7.5	7.0	6.5	6.0	4.0	3.5
3	8.0	7.0	7.0	6.0	4.0	3.5
4	8.5	7.5	7.0	6.5	4.5	4.0
6	9.5	8.5	8.0	7.5	5.0	4.5
8	10.0	9.0	8.5	8.0	5.0	4.5
10	11.0	10.0	9.0	8.5	5.5	5.0
12	12.0	11.5	10.5	9.5	6.5	5.5
14	13.0	12.0	11.0	10.0	7.0	5.0
16	14.0	13.0	12.0	11.0	8.0	6.0

PVC PIPE SUPPORT SPACING (FT) AT °F (°C)

NOMINAL PIPE SIZE (in.)	SCHEDULE 80					
	20°F (-7°C)	60°F (16°C)	80°F (27°C)	100°F (38°C)	120°F (49°C)	140°F (60°C)
1/4	4.5	4.0	4.0	3.5	2.5	2.0
3/8	5.0	4.5	4.0	4.0	2.5	2.5
1/2	5.5	5.0	4.5	4.5	3.0	2.5
3/4	6.0	5.5	5.0	4.5	3.0	2.5
1	6.5	6.0	5.5	5.0	3.5	3.0
1 1/4	7.0	6.0	6.0	5.5	3.5	3.0
1 1/2	7.0	6.5	6.0	5.5	3.5	3.5
2	7.5	7.0	6.5	6.0	4.0	3.5
2 1/2	8.5	7.5	7.5	6.5	4.5	4.0
3	9.0	8.0	7.5	7.0	4.5	4.0
4	10.0	9.0	8.5	7.5	5.0	4.5
6	11.0	10.0	9.5	9.0	6.0	5.0
8	12.5	11.0	10.5	9.5	6.5	5.5
10	13.5	12.0	11.5	10.0	7.0	6.0
12	14.5	13.0	12.0	10.5	7.5	6.5

PVC PIPE SUPPORT SPACING (FT) AT °F (°C)

NOMINAL PIPE SIZE (in.)	SDR 13.5					
	20°F (-7°C)	60°F (16°C)	80°F (27°C)	100°F (38°C)	120°F (49°C)	140°F (60°C)
1/4	4.5	4.0	4.0	3.5	C	C
3/4	5.0	4.5	4.0	3.5	C	C
1	5.5	5.0	4.5	4.0	2.5	C
1 1/4	5.5	5.0	5.0	4.5	2.5	2.5
1 1/2	6.5	6.0	5.5	5.0	3.5	3.0
2	7.0	6.5	6.0	5.5	3.5	3.0
2 1/2	8.0	7.0	7.0	6.0	4.0	3.5
3	8.5	7.5	7.0	6.5	4.0	3.5
4	9.5	8.5	8.0	7.0	5.0	4.5

PVC PIPE SUPPORT SPACING (FT) AT °F (°C)

NOMINAL PIPE SIZE (in.)	SDR-26					
	20°F (-7°C)	60°F (16°C)	80°F (27°C)	100°F (38°C)	120°F (49°C)	140°F (60°C)
1	3.0	2.5	2.5	2.5	C	C
1 1/4	3.0	2.5	2.5	2.5	C	C
1 1/2	3.0	3.0	2.5	2.5	C	C
2	3.0	3.0	2.5	2.5	C	C
2 1/2	3.5	3.5	3.0	2.5	2.0	C
3	5.0	4.0	4.0	3.5	2.5	2.0
4	6.0	5.5	4.5	4.0	3.0	2.0
5	6.0	5.5	5.0	4.5	3.0	2.5
6	6.5	6.0	5.5	5.0	3.5	3.0
8	7.0	6.0	6.0	5.5	3.5	3.0
10	7.5	7.0	6.0	6.0	4.0	3.5
12	8.5	8.0	7.5	6.5	4.5	4.0
14	9.0	8.5	7.5	7.0	5.0	2.5
16	10.0	9.0	8.5	7.5	5.5	4.0
18	11.0	9.5	9.0	8.0	6.0	4.5
20	12.0	10.0	9.5	8.5	6.5	5.0
24	13.0	11.0	10.0	9.0	7.0	5.5

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PVC PIPE SUPPORT SPACING (FT) AT °F (°C)

NOMINAL PIPE SIZE (in.)	SDR-21					
	20°F (-7°C)	60°F (16°C)	80°F (27°C)	100°F (38°C)	120°F (49°C)	140°F (60°C)
1/4	2.5	2.0	2.0	C	C	C
1	3.0	2.5	2.5	2.0	C	C
1 1/4	3.5	3.0	3.0	2.5	C	C
1 1/2	4.0	3.5	3.0	2.5	2.0	C
2	4.0	3.5	3.0	3.0	2.0	2.0
2 1/2	4.5	4.0	4.0	3.5	2.0	2.0
3	5.0	4.0	3.5	3.5	2.5	2.0
4	8.0	7.0	6.5	6.0	4.0	3.5
5	7.0	6.5	4.0	4.0	2.0	1.5
6	6.0	5.5	5.0	5.0	3.0	2.5
8	6.5	6.0	5.5	5.0	3.5	3.0
10	7.0	6.5	6.0	5.5	3.5	3.0
12	7.5	7.0	6.5	5.5	4.0	3.5

PVC PIPE SUPPORT SPACING (FT) AT °F (°C)

NOMINAL PIPE SIZE (in.)	SDR-41					
	20°F (-7°C)	60°F (16°C)	80°F (27°C)	100°F (38°C)	120°F (49°C)	140°F (60°C)
4	3.5	3.0	2.5	2.5	C	C
6	4.0	3.5	3.0	3.0	2.0	C
8	4.0	3.5	3.5	3.0	2.0	C
10	4.5	4.0	3.5	3.5	2.5	2.0
12	5.0	5.0	4.5	4.0	2.5	2.5
14	5.5	5.0	4.5	4.0	3.0	2.0
16	6.0	5.0	5.0	4.5	3.0	2.5
18	6.5	6.0	5.5	5.0	3.5	2.5
20	7.5	6.0	6.0	5.0	4.0	3.0
24	8.0	6.5	6.5	5.5	4.0	3.0

CPVC PIPE SUPPORT SPACING (FT) AT °F (°C)

NOMINAL PIPE SIZE (in.)	SCHEDULE 40						
	60°F (16°C)	100°F (38°C)	120°F (49°C)	140°F (60°C)	160°F (71°C)	180°F (82°C)	200°F (93°C)
1/4	4.5	4.0	3.5	3.5	2.0	2.0	C
3/8	4.5	4.0	4.0	3.5	2.5	2.0	C
1/2	5.0	4.5	4.5	4.0	2.5	2.5	C
3/4	5.5	5.0	4.5	4.0	2.5	2.5	C
1	6.0	5.5	5.0	4.5	3.0	2.5	C
1 1/4	6.0	5.5	5.5	5.0	3.0	3.0	1.5
1 1/2	6.5	6.0	5.5	5.0	3.5	3.0	1.5
2	6.5	6.0	5.5	5.0	3.5	3.0	1.5
2 1/2	7.5	7.0	6.5	6.0	4.0	3.5	1.5
3	8.0	7.0	7.0	6.0	4.0	3.5	2.0
4	8.5	7.5	7.0	6.5	4.5	4.0	2.0
5	9.5	8.5	8.0	7.5	5.0	4.5	2.0
6	9.5	8.5	8.0	7.5	5.0	4.5	2.0
8	10.0	9.0	8.5	8.0	5.0	4.5	2.0
10	10.5	9.5	9.0	8.5	5.5	5.0	2.0
12	11.0	10.0	9.5	9.0	6.0	5.5	2.5

CPVC PIPE SUPPORT SPACING (FT) AT °F (°C)

NOMINAL PIPE SIZE (in.)	SCHEDULE 80						
	60°F (16°C)	100°F (38°C)	120°F (49°C)	140°F (60°C)	160°F (71°C)	180°F (82°C)	200°F (93°C)
1/4	4.5	4.0	4.0	3.5	2.5	2.0	C
3/8	5.0	4.5	4.5	4.0	2.5	2.5	C
1/2	5.5	5.0	4.5	4.5	3.0	2.5	C
3/4	5.5	5.5	5.0	4.5	3.0	2.5	C
1	6.0	6.0	5.5	5.0	3.5	3.0	1.5
1 1/4	6.5	6.0	6.0	5.5	3.5	3.0	1.5
1 1/2	7.0	6.5	6.0	5.5	3.5	3.5	2.0
2	7.0	7.0	6.5	6.0	4.0	3.5	2.0
2 1/2	8.0	7.5	7.5	6.5	4.5	4.0	2.5
3	8.0	8.0	7.5	7.0	4.5	4.0	2.5
4	8.5	9.0	8.5	7.5	5.0	4.5	2.5
5	10.0	9.5	9.0	8.0	5.5	5.0	3.0
6	10.0	9.5	9.0	8.0	5.5	5.0	3.0
8	11.0	10.5	10.0	9.0	6.0	5.5	3.5
10	11.5	11.0	10.5	9.5	6.5	6.0	4.0
12	12.5	12.0	11.5	10.5	7.5	6.5	4.5

Spears® PVC clear Schedule 40 or Schedule 80 piping provides optimum clarity for critical visual monitoring of processes fluids. Joined using standard solvent cement welding with clear cement, clear systems provide the many benefits of regular PVC, such as excellent corrosion resistance, smooth interior walls, non-contaminating, non-conductive, light weight, good pressure handling capacity, superior impact strength and does not support bacterial growth.

A supplemental line of 1/4" through 12" Spears® PVC clear fittings are available. Socket-style fittings are manufactured in strict dimensional compliance with ASTM D 2466 to Schedule 40 requirements. Spears® Special Reinforced Plastic Thread (SR) female threaded transition fittings, incorporating a stainless steel retaining ring, reduce problems associated with over tightening and provide a strong, leak-tight seal for plastic-to-metal transitions. Specialty transition fittings are manufactured to Schedule 80 dimensions per the applicable requirements of ASTM D 2467. See Spears® Schedule 40 or Schedule 80 fitting weight and dimension publications for available sizes and configurations. Spears® PVC clear can be easily installed with systems of regular PVC pipe, fittings and valves. In addition, an endless selection of fully compatible PVC components and accessories are readily available.

Material

Spears® PVC clear piping is produced from a rigid, lead-free virgin Polyvinyl Chloride (PVC) compound with superior impact resistance and a maximum service temperature of 140°F when appropriate temperature/pressure de-rating factors are applied. Spears® PVC clear materials are certified by the NSF International for use with potable water under ANSI/NSF® Standard 61 and acceptable for food contact under the provisions of Title 21 of the United States FDA Code of Federal Regulations. Spears® PVC clear piping also exhibits excellent flammability characteristics and will not sustain combustion when flame source is removed.

Spears® PVC clear provides the excellent chemical resistance properties of PVC piping. It is resistant to most acids, bases, salts and oxidants. PVC chemical resistance data should be referenced for proper application. Although this material maintains its physical properties when exposed to many substances, exposure to certain chemicals can affect the clarity of the product over time. Certain nitrogen containing organics, bleaches, oxidative agents and acids may result in discoloration. Testing under actual use conditions is recommended. Exposure to sunlight (Ultra Violet Radiation) will also affect clarity. Clear products do not contain UV stabilizers and are not recommended for outdoor use unless adequate protection is applied.

Clear PVC Pipe Physical Properties		
GENERAL	**Value**	**Test Method**
Cell Classification	12454	ASTM D 1784
Maximum Service Temp.	140°F	
Color	Transparent	
Specific Gravity, (g/cu.cm @ 73°F)	1.33	ASTM D 792
Hardness, Shore D	84	ASTM D 2240
Hazen-Williams Factor	C = 150	
MECHANICAL		
Tensile Strength, psi @ 73°F	7,260	ASTM D 638
Tensile Modulus of Elasticity, psi @ 73°F	392,000	ASTM D 638
Flexural Strength, psi @ 75°F	12,000	ASTM D 790
Flexural Modulus, psi @ 75°F	389,000	ASTM D 790
Compressive Strength, psi @ 75°F	8,300	ASTM D 695
Compressive Modulus, psi @ 75°F	307,000	ASTM D 695
Notched Izod Impact - .125" Injection Molded	23 ft-lbs./in.	ASTM D 256
Notched Izod Impact - .125" With Flow-Comp. Molded	8.0 ft-lbs./in.	ASTM D 256
Notched Izod Impact - .125" Cross Flow-Comp. Molded	2.0 ft-lbs./in	ASTM D 256
THERMAL		
Coefficient of Linear Expansion (in/in/°F)	4.1×10^{-5}	ASTM D 696
Heat Distortion Temp., 264 psi, .125 in. Bars	154°F	ASTM D 648
Glass Transition Temp.	176°F	
FIRE PERFORMANCE		
Flammability Rating	V-0	UL-94



Schedule 40 Dimensions

Nom. Pipe Size (in.)	O.D.	Average I.D.	Min. Wall	Nom. Wt./Ft.	Max. W.P. PSI
1/4	0.540	0.344	0.088	0.086	390
3/8	0.675	0.473	0.091	0.115	310
1/2	0.840	0.602	0.109	0.170	300
3/4	1.050	0.804	0.113	0.226	240
1	1.315	1.029	0.133	0.333	220
1-1/4	1.660	1.360	0.140	0.450	180
1-1/2	1.900	1.590	0.145	0.537	170
2	2.375	2.047	0.154	0.720	140
2-1/2	2.875	2.445	0.203	1.136	150
3	3.500	3.042	0.216	1.488	130
3-1/2	4.000	3.521	0.226	1.789	120
4	4.500	3.998	0.237	2.118	110
6	6.625	6.031	0.280	3.73	90
6-1/2	6.625	6.335	0.110	1.64	45
8	8.625	7.942	0.322	5.619	80
10	10.750	9.976	0.365	7.966	70
12	12.750	11.889	0.406	10.534	70

Schedule 80 Dimensions

Nom. Pipe Size (in.)	O.D.	Average I.D.	Min. Wall	Nom. Wt./Ft.	Max. W.P. PSI
1/4	0.540	0.282	0.119	0.105	570
3/8	0.675	0.403	0.126	0.146	460
1/2	0.840	0.526	0.147	0.213	420
3/4	1.050	0.722	0.154	0.289	340
1	1.315	0.936	0.179	0.424	320
1-1/4	1.660	1.255	0.191	0.586	260
1-1/2	1.900	1.476	0.200	0.711	240
2	2.375	1.913	0.218	0.984	200
3	3.500	2.864	0.300	2.010	190
4	4.500	3.786	0.337	2.938	160
6	6.625	5.709	0.432	5.610	140

De-Rating Factor

Operating Temp (°F)	De-Rating Factor
73	1.00
80	0.88
90	0.75
100	0.62
110	0.51
120	0.40
130	0.31
140	0.22

EX: 4" PVC SCHEDULE 40
CLEAR @ 120°F = ?
110 psi x 0.40 = 44 psi max.
@ 120°F

Critical Collapse Pressure PSI @ 73°F

Pipe Size (in.)	SCH 40	SCH 80
1/4	7,504	22,172
3/8	3,714	11,869
1/2	3,255	9,370
3/4	1,722	4,985
1	1,399	3,841
1-1/4	767	2,158
1-1/2	554	1,599
2	327	1,014
2-1/2	431	1,176
3	279	809
3-1/2	211	632
4	169	521
6	84	333
8	57	-
10	43	-
12	35	-

THE MAXIMUM SERVICE TEMPERATURE FOR PVC CLEAR IS 140°F.

Threading of Schedule 40 PVC Clear pipe is not a recommended practice due to insufficient wall thickness.

Joining Methods

Spears® PVC Clear pipe is easily joined by standard solvent cementing process, threaded connections and flanges, To maintain system clarity, Spears® recommends the use of a clear, medium-bodied, fast-setting cement in conjunction with a clear primer for optimum joint integrity. See Installation section for industrial pressure pipe for guidelines.

Thermal Expansion and Contraction

Standard calculations for thermal expansion and contraction may be applied to Spears® PVC clear. The coefficient of linear expansion for Spears® Clear pipe is 4.1 x 10^{-5} in./in./°F. The rate of expansion or contraction can be calculated as follows:

$\Delta L = 12\ yL\ (\Delta T)$

Where:

ΔL = expansion or contraction in inches

y = 4.1 x 10-5 (coefficient of linear expansion)

L = length of piping run in feet

T = temperature change °F (T max. - T @ installation)

Hangers and Supports

Spears® PVC clear piping should be mounted and supported in the same manner as PVC industrial piping. Support location and spacing are based on the pipe diameter, operating temperature of the system, and the location of any concentrated stress loads (i.e., valves, flanges, and any other heavy system components). As with regular PVC piping, hangers used must have an adequate load-bearing surface free of any rough or sharp edges that could damage the piping during use. They must also not restrict linear movement of the system due to the effects of expansion and contraction; over tightening must be avoided. See Hangers and Supports section for industrial pressure pipe for additional information.

UV Resistant Clear Pipe Dimensions & Pressure Ratings

Thin Walled UVR Pipe

Pipe Size	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.	Max. W.P. PSI*
2	2.375	2.173	0.091	0.456	80
3	3.500	3.210	0.135	0.966	80
4	4.500	4.134	0.172	1.569	80
6	6.625	6.251	0.172	2.391	70
8	8.625	8.251	0.172	3.134	53
10	10.750	10.376	0.172	3.923	43
12	12.750	12.376	0.172	4.666	36

De-rating Factors @ Elevated Temperature	
Operating Temp °F	De-rating Factor
73	1.00
80	0.88
90	0.75
100	0.62
110	0.51
120	0.40
130	0.31
140	0.22

Schedule 40 UVR Pipe

Pipe Size	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.	Max. W.P. PSI*
1/2	0.840	0.602	0.109	0.170	300
3/4	1.050	0.804	0.113	0.226	240
1	1.315	1.029	0.133	0.333	220
1-1/4	1.660	1.360	0.140	0.450	180
1-1/2	1.900	1.590	0.145	0.537	170
2	2.375	2.047	0.154	0.720	140
2-1/2	2.875	2.445	0.203	1.136	150
3	3.500	3.042	0.216	1.488	130
3-1/2	4.000	3.521	0.226	1.789	120
4	4.500	3.998	0.237	2.118	110
6	6.625	6.031	0.280	3.733	90

Maximum Service Temperature = 140°F

The temperature de-rating factors shown in table at left can be multiplied by the pressure ratings listed for each pipe size to determine the maximum pressure rating of the pipe at the specified elevated Operating temperatures.

*Pressure Rating @ 73 °F

Developed to Promote Algae Growth in Bioreactor, Biofuel, Bioremediation, Research and Aquaculture Applications

Spears® Clear UV Resistant (UVR) PVC piping is suitable for use where exposure to sunlight is desired. The modified clear PVC material allows light in but blocks the harmful wavelengths that damage the plastic pipe

Produced in both Thin Walled UVR pipe down to 0.135" and Schedule 40 UVR pipe to allow rapid growth of algae and provide pressure ratings needed for circulation. Commercial use has found that UV blocking PVC provides excellent Photosynthetically Available Radiation (PAR) for algae growth. Using specialty clear PVC piping is beneficial in construction of photobioreactors since clarity is critical in allowing as optimum light into the process to allow the algae to grow and feed. The Thin Walled version of Spears® Clear Ultraviolet Resistant (UVR) PVC pipe has been found to optimize light transmission while maintaining the necessary rigidity for durable construction. The advantages of Clear UVR PVC include corrosion resistance, durability, non-conductivity, light weight construction and can be easily joined using Spears® PVC Clear solvent cements and primers using standard solvent cement welding practices.

Material

Spears® Clear UV Resistant (UVR) PVC piping material has been specially developed for optimum UV resistance. Independent testing has shown high stability of clarity and color in Spears® Clear UVR piping material from actual one year weather exposure tests in Arizona, Florida, and Ohio.

Spears® Clear UVR chemical resistance is similar to conventional clear PVC, and is generally resistant to most acids, bases, salts, and oxidants. However, exposure to chemicals may result in discoloration over time, especially certain bleaches, oxidizing agents, and nitrogen containing organics, As a result, in service testing under actual conditions is recommended.

THE MAXIMUM SERVICE TEMPERATURE FOR PVC UVR CLEAR IS 140°F

SPEARS® CLEAR UVR PIPE MUST BE PROTECTED FROM FREEZING

PVC Physical Properties

GENERAL	Value	Test Method
Specific Gravity, (g/cu.cm @ 73°F)	1.38	ASTM D792
Cell Classification	11553	ASTM D1784
Maximum Service Temperature	140°F	
Color	Transparent / slight blue tint	
Hardness, Shore D	85	ASTM D2240
Hazen-Williams Factor	C=150	
MECHANICAL		
Tensile Modulus of Elasticity, psi @ 73°F	416,000	ASTM D638
Tensile Strength, psi @ 73°F	8,250	ASTM D638
Flexural Modulus, psi @ 75°F	423,000	ASTM D790
Flexural Strength, psi @ 75°F	13,600	ASTM D790
Izod Impact notched – injection molded, .125 in. bars, 73°F	3.9 ft-lbs./in.	ASTM D256
THERMAL		
Coefficient of Linear Expansion (in/in/°F)	3.9 x 10-5	ASTM D696
Deflection Temperature Under Load, Annealed, 264 psi, .125 in. Bars	142°F	ASTM D648
FLAMMABILITY		
Flame Rating	V-0	UL-94

Joining Methods

Spears® PVC Clear pipe is easily joined by standard solvent cementing process, threaded connections and flanges, To maintain system clarity, Spears® recommends the use of a clear, medium-bodied, fast-setting cement in conjunction with a clear primer for optimum joint integrity. See Installation section for industrial pressure pipe for guidelines. Threading of Thin Walled or Schedule 40 Clear UVR PVC pipe is not a recommended practice due to insufficient wall thickness.

Thermal Expansion and Contraction

Standard calculations for thermal expansion and contraction may be applied to Spears® Clear UVR PVC. The coefficient of linear expansion for Spears® Clear UVR pipe is 3.9 x 10-5 in./in./°F. The rate of expansion or contraction can be calculated as follows:

$\Delta L = 12\ yL\ (\Delta T)$

Where:

ΔL = expansion or contraction in inches

y = 4.1 x 10-5 (coefficient of linear expansion)

L = length of piping run in feet

T = temperature change °F (T max.-T @ installation)

Hangers and Supports

Spears® Clear UVR PVC piping should be mounted and supported in the same manner as PVC industrial piping. However heat deformation and mechanical loads need additional consideration with Clear UVR piping and should not be deflected more than 3% of the outside diameter. Thin Walled pipe must be supported properly to avoid buckling and provide circumferential support to maintain roundness. Support location and spacing are based on the pipe diameter, operating temperature of the system, and the location of any concentrated stress loads (i.e., valves, flanges, and any other heavy system components). Hangers used must have an adequate load-bearing surface free of any rough or sharp edges that could damage the piping during use. They must also not restrict linear movement of the system due to the effects of expansion and contraction; over tightening must be avoided.

Thin Walled UVR Support Spacing

Pipe Size (inches)	Maximum Support Spacing in Feet				
	60°F	80°F	100°F	120°F	140°F
2	4-1/2	4-1/2	4	3-1/2	3
3	5-1/2	5-1/2	5	4-1/2	3-1/2
4	6-1/2	6	5-1/2	5	4
6	6-1/2	6	5-1/2	5	4
8	6	5-1/2	5	4-1/2	4
10	5-1/2	5-1/2	5	4-1/2	3-1/2
12	5	5	4-1/2	4	3-1/2

Schedule 40 UVR Support Spacing

Pipe Size (inches)	Maximum Support Spacing in Feet				
	60°F	80°F	100°F	120°F	140°F
½	4½	4½	4	2½	2½
¾	4½	4½	4	2½	2½
1	5½	5	4½	3	2½
1-1/4	5½	5½	5	3	3
1-1/2	6	5½	5	3½	3
2	6	5½	5	3½	3
2-1/2	7	6½	6	4	3½
3	7	7	6	4	3½
3-1/2	7½	7	6½	4	4
4	7½	7	6½	4½	4
6	8½	8	7½	5	4½

Developed for Ultra-pure Water

Spears® Low Extractable piping is produced from a non-contaminating PVC material specially developed for ultra-pure water (UPW) systems in semiconductor, electronics, university research laboratories, hospital dialysis, industrial laboratories, Federal and state police forensic laboratories and biotechnology applications. Spears® Low Extractable PVC material has been subjected to independent laboratory leach studies during both static and dynamic exposure to 18.2 meg-ohm deionized water. Tests have shown relatively low TOC, Anion/Cation and trace metal contamination levels in comparison to conventional high purity piping system materials including PVDF and Natural Polypropylenes

Spears® Low Extractable Piping Systems offer unique advantages for many ultra-pure water applications:

• Complete line of pipe, fittings and valves IPS Sizes 1/2" – 6" diameters

• Strong Schedule 80 dimensions for pressure service

• Advanced Spears® Low Extractable material significantly reduces leachable contamination compared to conventional PVC and other piping materials.

• Exceptionally smooth interior walls minimize particle generation and reduce potential for bacterial growth.

• Fast, reliable installation with simple, inexpensive joining methods

• Proprietary one-step fast-setting joining method reduces

TOC contamination and rinses up quickly

• Unique blue translucency enables visual inspection of joint integrity

• Good chemical/corrosion resistance, high-impact strength, low thermal conductivity

• Bagged, sealed and boxed on-line for use in high-purity environments

• High Quality

• Low Maintenance

• Cost Effective

Material

Spears® Low Extractable piping is produced from an innovative PVC compound that has been specifically formulated to reduce leachable contamination when exposed to ultra-pure water environments. Minor ingredients necessary for processing have been scrupulously selected to address their potential for contamination, and are then carefully blended in precise ratios. This results in a much cleaner material than conventional PVC compounds, and compares favorably to alternate materials typically used for UPW piping applications. This has been validated with extensive static and dynamic leach studies during exposure to 18.2 megohm ultra-pure water conducted by a reputable third party.

Spears® Low Extractable material meets the toxicological requirements of NSF International Standard 61 as being safe for use in potable water applications, and also complies with the provisions of Title 21 of the United States FDA Code of Federal Regulations as being safe for use in food contact applications.

Physical Properties

Although the extractable contaminants of Spears® Low Extractable are much lower than common PVC piping, Spears® Low Extractable has physical properties very similar to those of conventional PVC piping. As a result, Spears® Low Extractable products exhibit the well-known physical characteristics and other benefits of conventional PVC piping, such as good chemical and corrosion resistance, low thermal conductivity, high strength-to-weight ratio, good impact resistance, and ease of installation.

Physical Properties	Value	Test Method
Cell Classification	12343	ASTM D 1784
Specific Gravity	1.327	ASTM D 792
	(g/cu.Cm @ 73°F)	
Tensile Strength, @ yield	6720 psi	ASTM D 638
Tensile Modulus of Elasticity	384,200 psi	ASTM D 638
Flexural Strength, @ yield	11,440 psi	ASTM D 790
Flexural Modulus of Elasticity	378,000 psi	ASTM D 790
Izod Impact (avg 2 complete breaks) (avg 3 partial & 2 complete breaks)	 1.3 ft-lbs /inch 10.9 ft-lbs /inch	 ASTM D 256
Coefficient of Linear Expansion	3.89 x 10^{-5} in/in°F	ASTM D 696
Compressive Strength	8732 psi	ASTM D 695
Heat Distortion Temperature	152°F	ASTM D 648
Hardness, Shore D	82.2 ± 3	ASTM D 2240
Maximum Temperature Use	140°F	



Design and Dimensions

Spears® Low Extractable piping is produced to Schedule 80 dimensions in strict accordance with ASTM D 1785, and exhibits a Type II pressure rating. Spears® Low Extractable fittings are produced to Schedule 80 dimensions per ASTM D 2467. Joining of product produced to the dimensional requirements of these standards ensures that strong connections with good pressure-bearing capability can be made up quickly and consistently using common, inexpensive tools. See Spears® Low Extractable fitting weight & dimension and price list publication for fitting information and selection.

SCHEDULE 80

Nom. Pipe Size (in.)	O.D.	Average I.D.	Min. Wall	Nom. Wt./Ft.	Max. W.P.
1/2	0.840	0.526	0.147	0.213	420
3/4	1.050	0.722	0.154	0.289	340
1	1.315	0.936	0.179	0.424	320
1-1/4	1.660	1.255	0.191	0.586	260
1-1/2	1.900	1.476	0.200	0.711	240
2	2.375	1.913	0.218	0.984	200
3	3.500	2.864	0.300	2.010	190
4	4.500	3.786	0.337	2.938	160
6	6.625	5.709	0.432	5.610	140

The pressure ratings given are for water, non-shock, @ 73°F. The following temperature de-rating factors are to be applied to the working pressure ratings (WP) listed when operating at elevated temperatures.

Multiply the working pressure rating of the selected pipe at 73°F, by the appropriate de-rating factor to determine the maximum working pressure rating of the pipe at the elevated temperature chosen.

De-Rating Factors

Operating Temp (°F)	De-Rating Factor
73	1.00
80	0.88
90	0.75
100	0.62
110	0.51
120	0.40
130	0.31
140	0.22

Processing & Packaging

Correct processing techniques ensure proper dispersion and fusion of the compound, resulting in uniform properties of this special materials. Optimizing processing conditions and providing smooth internal surfaces greatly reduce the potential for extractable and particle contaminants.

Spears® Low Extractable pipe and fittings are specially handled to minimize contamination, sealed in anti-static polybags and boxed on-line at time of manufacture.

Solvent Cement Joining

The Spears® Low Extractable system is primarily joined with standard solvent cementing using a special one-step solvent-cement specifically formulated for use with this product in UPW application. When properly used, this system results in very short cure times prior to pressure testing, and produces a solvent-cemented assembly with an exceptionally low percentage of chemical additives, reducing the potential for system contamination. The use of solvent cements and/or primers other than Low Extractable One-Step is not acceptable. Installers must become familiar with solvent cementing procedures prior to assembly. See Installation section for basic guidelines to solvent cement welding. All solvent cemented connections must be allowed to set and cure properly prior to pressure testing or rinsing.

Low Extractable UPW Solvent Cement Set and Cure Times

Set and cure times are a function of pipe size, temperature, pressure, humidity and tightness of fit. The initial set time is the recommended waiting period prior to handling a newly assembled joint. After the initial set time, the joints will withstand the stresses of normal installation. The cure time is the recommended waiting period prior to pressurizing newly assembled joints. Minimum cure time prior to pressure testing is dependent on pipe size, temperature, humidity, tightness of fit and test pressure required. Longer cure times must be allowed when working at higher humidity and colder temperatures. Refer to the following tables for minimum set and cure times.

Initial Set Time

Temp	Pipe Size 1/2" – 1-1/4"	Pipe Size 1-1/2" – 2"	Pipe Size 3" – 6"
60° - 100°F	2 min	3 min	30 min
40° - 60°F	5 min	8 min	2 hrs
0° - 40°F	10 min	15 min	12 hrs

Joint Cure Schedule

Relative Humidity 60% or less*	Pipe Size 1/2" – 1-1/4"		Pipe Size 1-1/2" – 2"		Pipe Size 3" – 6"
Temp Range during assembly and cure periods	up to 160 psi	160 to 370 psi	up to 160 psi	160 to 315 psi	up to 160 psi
60° - 100°F	15 min	6 hrs	25 min	12 hrs	1-1/2 hrs
40° - 60°F	20 min	12 hrs	30 min	24 hrs	4 hrs
0° - 40°F	30 min	48 hrs	45 min	96 hrs	72 hrs

If damp or humid weather allow 50 percent longer cure times.

Additional Joining Methods

Additional joining devices include flanges, unions, and threaded adapters produced from this special material. See Installation section for basic guidelines to flange and threaded joint make up. UPW applications typically require use of PTFE envelope gaskets for flanges and TFE tap sealant on threaded joints.

Hangers and Supports

As with standard PVC piping, support location and spacing is dependent on the pipe diameter, operating temperature of the system, and the location of any concentrated stress loads (i.e., valves, flanges, test equipment and any other heavy system components). Hangers used must have an adequate load-bearing surface free of any rough or sharp edges that could damage the pipe during use, must not restrict linear movement due to thermal expansion and contraction. See Installation section specified spacing and guideline applicable to Schedule 80 PVC pipe.

Thermal Expansion and Contraction

As with all thermoplastic piping materials, consideration must be given during the design of the system to the effects of thermal expansion and contraction. The coefficient of linear expansion for Spears® Low Extractable pipe is 3.89 x 10^{-5} in./in./°F. The rate of expansion or contraction can be calculated as follows:

$\Delta L = 12\ yL\ (T)$

Where:

ΔL = amount of expansion or contraction in inches y = 3.89 x 10^{-5}

L = length of piping run in feet

ΔT = temperature change °F

(T max. - T @ time of installation or lowest system temperature or maximum system temperature, whichever is greater.)

Additional Considerations

Proper system engineering, design, construction practices and operation are the responsibility of the design authority. Consideration must be given to ensure the Spears® Low Extractable system is not exposed to any conditions that will exceed the product limitations regarding temperature, pressure, chemical compatibility, and mechanical strength.

Spears® does not recommend the use of this product for the distribution of compressed air or gases.

Excessive surge pressure must be avoided. The system must be designed to ensure that surge potentials generated by pump operation, entrapped air, flow velocity, and valve closure are kept to a minimum. Spears® does not recommend flow velocities in excess of five feet per second.

Spears® Low Extractable piping systems are not formulated for outdoor use. Prolonged exposure to ultraviolet radiation (UVR) will affect physical properties.

Spears® recommends that newly installed systems be allowed to cure for a minimum period of 24 hours prior to rinsing procedures to reduce the potential for TOC contamination. Rinsing procedures, chemical rinse and other cleanup/disinfection procedures to be used are at the discretion of the system design authority.

Spears® Low Extractable piping is compatible with hydrogen peroxide at concentrations up to 30% at 73°F. Contact Spears® for additional chemical compatibility information concerning the use of Spears® Low Extractable products.

Application Qualification Testing

Static Leach Analysis

Detailed extractable analysis is conducted on piping samples after seven-day static leach utilizing 18.2 megohm ultra-pure water at ambient temperature. Static leach of large pipe samples (120-square-inch wet surface area) is representative of a piping system "off-line" for an extended period of time. Under these conditions the effects of UPW can be extremely aggressive, severely affecting the amount of leachable contaminants present within the piping material.

Pipe Material

Element	DL *(Detection Limit)* ppb	Spears® Low Extractable	High Purity PVDF	High Purity PP	Brand X Clean PVC	Conv. PVC	CPVC
TO C	5	59	90	94	1176	*	50
Fluoride	2	*	77	*	*	*	*
Chloride	0.25	2.33	1.0	0.66	2.45	0.84	49.54
Aluminum	0.05	0.30	2.3	0.68	0.54	3.10	1.16
Barium	0.01	0.04	0.24	0.09	0.01	0.22	0.05
Calcium	3	7	*	12	206	2787	15
Magnesium	0.02	0.81	0.66	1.0	2.15	11.15	2.17
Sodium	0.06	0.83	0.51	0.18	0.49	1.23	23.22
Tin	0.02	0.93	*	*	0.15	0.51	1.19
Zinc	0.06	0.49	0.47	0.96	*	0.51	1.19

*** = Below Detection Limit**

- All samples pre-rinsed identically with UPW prior to test.
- Independent Laboratory Extractable Analysis (Balazs Analytical Laboratory)
- Seven-Day Static Leach @ ambient temperature
- 450mL 18.2 megohm ultra-pure water
- 120-square-inch wet surface contact area
- Based on 1" diameter pipe without solvent-cemented joint
- Concentration units expressed as ug/L of Leachate (ppb)

Dynamic Leach Analysis

Spears® Low Extractable piping has been subjected to on-line dynamic flow analysis with 18.2 megohm UPW to evaluate particles, TOC, resistivity, anions, cations, and trace metals. This testing utilized solvent-cemented flange assemblies (spool piece) to see the effect that the cement had on TOC, resistivity and particle generation in a freshly assembled pipe section. Grab samples were also pulled periodically (at start-up, five minutes, 50 minutes and five hours) to analyze anions, cations and trace metals under flowing conditions. Spears® Low Extractable Flanges were assembled utilizing Low Extractable One-Step Cement and allowed to cure 24 hours prior to testing. Dynamic testing revealed that Spears® Low Extractable piping assemblies did not contribute significantly to particle generation or leachable contamination under flowing conditions throughout the test duration. Additional detailed information is available from Spears®.

Dynamic Test Description

Ambient temperature dynamic leach utilizing 18.2 megohm UPW flowing at 9.35 GPM (turbulent flow). 1" diameter pipe 30" long, solvent-cemented flanges each end (approximately 82-square-inch wet surface contact area). Approximately 1-1/2 grams of Low Extractable solvent cement used in assembly of components. Solvent-cemented assembly was allowed to cure 24 hours prior to start-up. Dynamic test was conducted for a period of five hours.

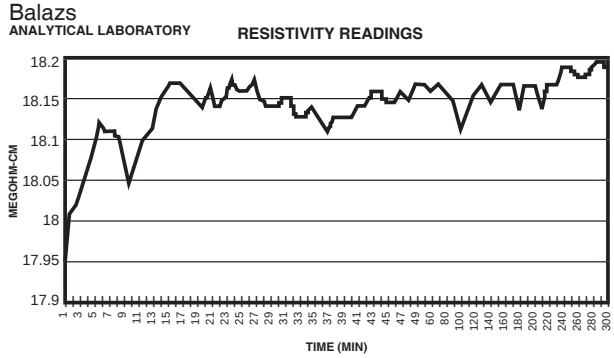
Leachable Contamination

Anions/Cations – IC grab sample analysis revealed low levels of sulfate (0.15 ppb) five minutes into the test, and low levels of ammonium at 50 minutes (0.05 ppb) and five hours (0.07 ppb) into the test. All other IC contaminants were below the limit of detection.

Trace Metals – Of the 68 trace metal contaminants evaluated, all were below the limit of detection with the exception of aluminum, detected at 0.012 ppb at the five-minute interval. This element remained below the limit of detection throughout the remainder of the leach.

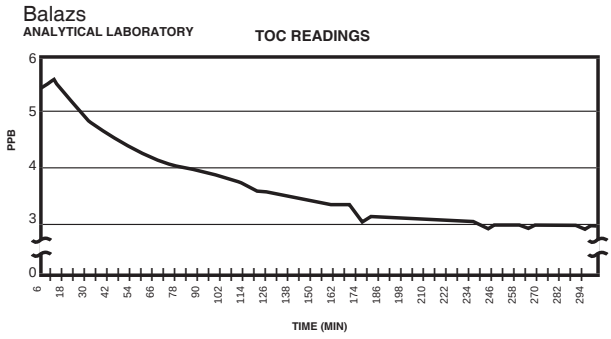
Resistivity

Resistivity measured 17.95 megohms at the start of the leach and rose quickly to 18.12 megohms during the first 6 minutes. Resistivity readings continued to rise until reaching the background level of 18.2 megohms after five hours of leaching.



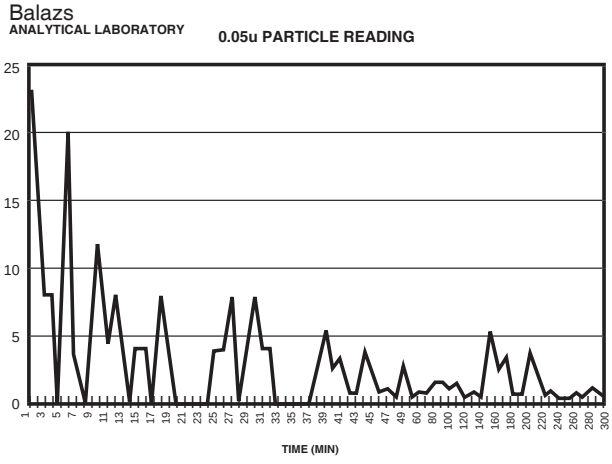
Total Oxidizable Carbon (TOC)

Dynamic testing revealed that after four hours of leaching, TOC readings reached and maintained the background levels throughout the test duration. This data confirmed the fast cure time of Low Extractable One-Step Cement. Conventional solvent cements and primers used for joining typically effect TOC contamination as a result of the leach.



Particles

Dynamic testing revealed that average particle counts decreased rapidly during the first six minutes of the leach. After 12 minutes of leaching the average smallest particles measured (0.05 micron size range) were representative of the background levels.



Surface Analysis

Spears® Low Extractable piping has a non-porous, exceptionally smooth interior surface that greatly reduces the potential for extractable and particle contamination while impeding bacterial growth. Spears® Low Extractable components (pipe and fittings) exhibit an average Roughness Analysis value of: ≤ .25 µm (≤ 10 µ inch) and has been evaluated side-by-side with other common piping materials at various magnifications for surface roughness comparison.

Patented

Spears® **LabWaste™** CPVC Drainage System is a Complete system of pipe, fittings & solvent cement featuring excellent chemical resistance, fire performance properties, light weight and ease of installation. Designed and specifically tested for use in commercial, industrial, and institutional drainage system applications involving corrosive /acid wastes, this unique product developed by Spears® has been awarded a U.S. Patent, No. 7,178,557. Available in nominal 1-1/2" through 24" Iron Pipe Size (IPS) diameters..

IMPORTANT – The information in this section is introductory only. Please refer to Spears® publication, **LabWaste™ CPVC Technical Information & Installation Guide,** for additional details and technical information.

Laboratory Applications

Its broad range of resistance to chemical and corrosive wastes make Spears® **LabWaste™** CPVC systems very well suited for commercial, institutional and academic laboratory drainage installations. These applications are best characterized as the routine disposal of a wide variety of hot and cold chemicals in relatively small quantities accompanied by water for the purpose of dilution and flushing. Due to the interactions potentially encountered in multi-chemical laboratory drainage disposal, Spears® recommends routine flushing of the system with water during disposal as a part of prudent laboratory practices. A properly designed and installed **LabWaste™** CPVC system provides total dilution and disposal need for years of dependable service.

Industrial & Commercial Special Waste Applications

Spears® **LabWaste™** CPVC products can be used in a very broad variety of dedicated waste applications with proper evaluation of waste medium and service conditions. For non-laboratory applications, refer to CPVC pressure system resistance data in this manual for appropriate chemical resistance guidelines. DO NOT follow **LabWaste™** Chemical Resistance Table recommendations for laboratory use in Spears® technical information guide. Please contact Spears® Technical Services for additional information.

Listings & Approvals

Spears® **LabWaste™** CPVC Drainage System is manufactured in strict compliance to ASTM F 2618, is listed by IC-ES-PMG for conformance to both the Uniform Plumbing Code and the International Plumbing for chemical waste systems under PMG-1018, and is certified by NSF International both to IAPMO IGC 210 and for use in corrosive waste systems (NSF$_{®}$-cw).

Fire Resistance

Material used in Spears® **LabWaste™** CPVC systems has a UL 94 flammability rating of V-0, 5VB. Pipe and fittings have been Listed and rated based on *finished product* tests, as opposed to a material test only, for surface burning characteristics of flame spread and smoke density developed by Underwriters Laboratories of Canada under standard test method CAN/ULC S102.2-M88. Additional test of **LabWaste™** pipe with dry fit caps was conducted by Southwest Research Institute (SwRI) Department of Fire Technology under UL 723/ ASTM E 84 (modified to test finished product). Pipe and fitting components ratings are below the 25 maximum flame spread and 50 maximum smoke density developed typically required for exposed air plenum installation. Check local codes for acceptability. Use of approved plenum wrap or transition connectors to other material may be used if required.

Pipe Dimensions

Spears® **LabWaste™** CPVC Drainage System products produced to ASTM F 2618 have the same dimensional specifications for pipe as for Schedule 40 CPVC through 24" nominal IPS diameters. See corresponding pipe dimensions section in this manual.

Fittings Configurations

Spears® a wide variety of **LabWaste™** CPVC drainage pattern fittings produced to ASTM F 2618. See Spears® publication, **LabWaste™** CPVC Technical Information & Installation Guide for fitting details.

Joining Methods

Solvent Cement Welding

Spears® **LabWaste™** CPVC Drainage System piping is joined using a special one-step solvent cement specifically listed and approved for use in CPVC corrosive waste applications. Follow basic solvent cementing guideline under the Installation section using only **LabWaste™** CPVC one-step solvent cement.

Transitions & Other Connections

Standard threaded and flanged connections can be made using system components. A variety of special connectors are produced for transition to polypropylene, Duriron and glass systems waste piping systems.

Please refer to Spears® publication, **LabWaste™ CPVC Technical Information & Installation Guide,** for Physical Properties, Engineering Data, and **LabWaste™** Chemical Resistance Guide for laboratory applications. **DO NOT** use Chemical Resistance Guide for Pressure Piping contained in this manual.

Spears® **FlameGuard®** CPVC Fire Sprinkler Products are manufactured from high quality, Post-Chlorinated Poly Vinyl Chloride (CPVC), a specialty thermoplastic material tested and approved by certifying agencies for use in CPVC fire sprinkler systems. Spears® FlameGuard® CPVC Fire Sprinkler Products provide unique advantages over traditional metal fire sprinkler systems through superior hydraulics, ease of installation and handling.

IMPORTANT – The information in this section is introductory only. **Spears® publication FG-3, FlameGuard® CPVC Fire Sprinkler Products, must be used and followed.** National Fire Protection Association (NFPA) Standards 13, 13R, and 13D must be referenced for design and installation requirements in conjunction with the FG-3 manual and all local codes. Details of product listings, requirements and limitations are beyond the scope of this publication.

Listings & Approvals

Spears® FlameGuard® CPVC Fire Sprinkler Products are fully tested and approved for use in wet pipe fire sprinkler systems by Underwriters Laboratories Inc., FM Global, and the Loss Prevention Certification Board. Spears® FlameGuard® CPVC Fire Sprinkler Products are approved for use in low pressure dry pipe or pre-action systems by Underwriters Laboratories Inc. and for use in Light Hazard Occupancies (NFPA 13), and Residential Occupancies (NFPA 13R & 13D). The Listing also includes use in Return Air Plenums (NFPA 90A), use in Underground Service Mains (NFPA 24), and use in exposed systems with certain restrictions when installed in accordance with Spears® FG-3 installation instructions. Spears® FlameGuard® CPVC Fire Sprinkler Products are listed by NSF International for use in potable water systems.

Product Ratings

Spears® FlameGuard® CPVC fire sprinkler pipe is produced to SDR 13.5 dimensions in strict accordance with ASTM F 442 and Listed for a rated working pressure of 175 psi @150°

Dimensions

Nom. Pipe Size (in.)	O.D.	Average I.D.	Min. Wall	Nom. Nom. Wt./Ft.
3/4	1.050	0.874	0.078	0.168
1	1.315	1.101	0.097	0.262
1-1/4	1.660	1.394	0.123	0.418
1-1/2	1.900	1.598	0.141	0.548
2	2.375	2.003	0.176	0.859
2-1/2	2.875	2.423	0.213	1.257
3	3.500	2.950	0.259	1.867

Joining Method

Spears® **FlameGuard®** CPVC piping is joined using a special one-step solvent cement specifically listed and approved for use in CPVC fire sprinkler systems. See Spears® FG-3 installation instructions for use, applicable set and cure times and additional information.



Hot & Cold Water Distribution Systems

Spears® **EverTUFF**® Copper Tube Size (CTS) CPVC is a complete hot and cold water plumbing system consisting of pipe, fittings and solvent cement for plumbing applications. Spears® **EverTUFF**® CTS CPVC pipe is easily joined using solvent cement welding, is light weight, thermally efficient and code approved to provide cost-effective long-term system service.

Product Standards

Spears® **EverTUFF**® CTS pipe and fittings are manufactured in strict compliance to ASTM D 2846, Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot and Cold-Water Distribution Systems. This standard defines requirements for materials, workmanship, dimensions, tolerances, pressure-bearing capability, and thermocycling resistance. Spears® **EverTUFF**® CTS SDR 11 plumbing pipe and fittings are manufactured to specifications in accordance with this standard. SDR series pipe is based on an outside-diameter-to-wall- thickness ratio. This is a constant regardless of pipe diameter, therefore all sizes of pipe carry the same pressure rating of 100 psi @ 180°F and is suitable for use with commercial hot water.

Performance Testing

Spears® **EverTUFF**® CTS CPVC pipe is tested and independently certified by NSF International to the requirements of ASTM D 2846 under NSF® Standard 14 and for use in potable (drinking) water service under NSF® Standard 61.

Code Approvals

Major building codes have approved the use of CPVC piping as an acceptable material for plumbing systems, provided that the piping conforms to applicable industry standards and has been listed by a third party for conformance to NSF® Standard 14 and/or NSF® Standard 61 requirements. Code bodies that accept the use of CPVC include BOCA National Plumbing Code, National Standard Plumbing Code, SBCCI Standard Plumbing Code, International Plumbing Code, and the Uniform Plumbing Code to name a few. The user should determine approval and installation requirements according to local code having jurisdiction prior to use.

Dimensions

CPVC CTS Series pipe shall be manufactured in strict accordance to the requirements of ASTM D 2846 to SDR 11 dimensions and tolerances. Each production run of pipe manufactured in compliance to this standard, shall also meet or exceed the test requirements for materials, workmanship, burst pressure, flattening resistance, and extrusion quality and dimensions as defined in ASTM D 2846. This pipe shall be produced in CTS diameters (1/2" through 2" sizes) to SDR 11 specifications.

Nominal Pipe Size (in.)	Average O.D.	O.D. TOL	Average I.D.	Min. Wall	Rating @ Wt./ft.	PSI Pressure Rating @	
						73°F	180°F
1/2	0.625	±.003	0.469	0.068	0.090	400	100
3/4	0.875	±.003	0.695	0.080	0.149	400	100
1	1.125	±.003	0.901	0.102	0.240	400	100
1-1/4	1.375	±.003	1.105	0.125	0.353	400	100
1-1/2	1.625	±.004	1.309	0.148	0.489	400	100
2	2.125	±.004	1.716	0.193	0.829	400	100

PIPE SIZES SHOWN ARE MANUFACTURED IN STRICT COMPLIANCE WITH ASTM D 2846 ASTM STANDARD D 1784 MATERIAL EQUIVALENTS: Cell Classification 23447 = PVC Type IV Grade I CPVC = CPVC 4120

Pressure Ratings

The Spears® CPVC system, including the joint, has a continuous rated working pressure of 100 psi at 180°F or 400 psi at 73°F. CPVC systems have the capability to withstand short term temperature/pressure increases above 100 psi at 180°F, as evidenced by their ability to consistently surpass the 48-hour, 150-psi Uniform Building Code test at 210°F. CPVC pipe should not be used where temperatures will consistently exceed 180°F.

Pressure-Temperature De-Rating Factors For CTS CPVC 4120 SDR 11 Piping Systems

°F	Factor	Rating, PSI
73	1.00	400
80	1.00	400
90	0.91	360
100	0.82	325
120	0.65	260
140	0.50	200
160	0.40	160
180	0.25	100

The pressure de-rating factor is the same for all pipe sizes. Example: Determine the maximum allowable operating pressure for a CTS CPVC piping system with an operating temperature of 140°F. Using de-rating factor of 0.50 for 140° from the above chart, the maximum allowable operating pressure = 400 x 0.50 = 200 psi.

Installation

Installation shall be in accordance with the requirements of the local code having jurisdiction, the solvent cement manufacturer recommendations, and Spears® publication CTS-3, CPVC CTS Products Design and Installation Manual.

Joining Methods

Spears® **EverTUFF**® CTS CPVC pipe is easily joined by standard solvent cementing process, threaded connections and flanges Solvent Cement Welding.

Solvent Cement Welding

This is the most common joining method used with CTS CPVC See Installation section for industrial pressure pipe for basic solvent cementing guidelines.

CTS Solvent Cement Selection

Codes require use of solvent cement conforming ASTM F 493 and designated specifically for use with CTS CPVC products in accordance with ASTM D 2846. Spears® **EverTUFF**® CTS-5 CTS CPVC "One-step" (primerless) cements may be used without primer if codes permit, or may be used with a primer where required by code - always CHECK LOCAL CODES.

Set and Cure Times

Pipe and fitting joint assembly must be allowed to set without any stress on the joint for one to five minutes depending on the pipe size and temperature. Following the initial set period, the assembly can be handled carefully.

FOLLOW THE CEMENT MANUFACTURER'S RECOMMENDED CURE TIMES PRIOR TO PRESSURE TESTING – FAILURE TO DO SO WILL RESULT IN JOINT FAILURE.

Minimum Cure Time Prior to Testing at 150 psi with Cold Water (based on use of one-step CPVC cement or two-step cement systems)

Pipe Size (in.)	Ambient Temperature During Cure Time		
	>60°F	40°F - 60°F	<40°F
3/8	1 hr	2 hrs	4 hrs
1/2	1 hr	2 hrs	4 hrs
3/4	1 hr	2 hrs	4 hrs
1	1 hr	2 hrs	4 hrs
1-1/4	2 hrs	4 hrs	8 hrs
1-1/2	2 hrs	4 hrs	8 hrs
2	2 hrs	4 hrs	8 hrs

NOTE Wait 24 hours prior to putting system into hot water service when installed at cure temperatures above 60°F; wait 48 hours prior to putting system into hot water service when installed at cure temperatures below 40°F Solvent Cement Joining

Wall Penetration

Building codes require that a fire-rated wall or floor must be sealed back to its original integrity when penetrated. Several sealants and materials are suitable for use with Spears® **EverTUFF**® CTS CPVC pipe to construct an appropriate UL Classified fire-rated penetration system. (When installed properly, these systems will provide a two-hour fire rating. Consult local building code requirements.

NOTE Caution: Certain fire-stopping sealants and components contain stress cracking agents and other chemicals which may cause damage to CPVC piping; contact the appropriate manufacturer for compatibility with CPVC prior to use.

NOTE When installing CPVC in areas where the system must be drained to protect it from freezing, the lines must be sloped to drain.

Underslab Installations

Spears® **EverTUFF**® CTS CPVC products are approved for underslab installations (with joints) in all model-plumbing codes. When performing underslab installations, it is important to support the tube evenly on a smooth surface. The bedding and backfill should be sand or clean soil that is free from sharp rocks and other debris that could damage the pipe.

Underslab installations that contain joints must be pressure tested before pouring the slab. **NOTE:** IAPMO IS 2098, "Installation Standard for CPVC Solvent Cemented Hot and Cold Water Distribution Systems," requires a test at 150 psi for 2 hours. The pipe should be sleeved where it penetrates the slab, along with construction joints within the slab. Spears® **EverTUFF**® CTS pipe is also manufactured in coils for underslab installations to eliminate joints. When turning coiled pipe up through a slab, into walls, etc., make sure the pipe does not kink. Sections of pipe that contain kinks must be cut out and replaced.

Freeze Protection/Sunlight Exposure

CPVC piping must be protected from freezing in all installation locations. Attention shall be paid to local insulating techniques and codes that require a particular method. Use only methods and materials suitable for use with CPVC piping. Where freezing is not an issue, CPVC shall not be installed so as to be subject to direct sunlight after installation and not installed on the surface of a building, unless protected by a covering or a chemically compatible paint, such as water based Latex.

Hose Bibb Installation

Hose bibbs are to be connected only to metal system components which are adequately anchored to the building structure. CPVC plastic systems must terminate in the wall.

Water Heater Connections

Before attempting to use Spears® **EverTUFF**® CTS CPVC in water heater connections, determine if local plumbing codes contain detailed requirements for connections to gas or electric storage-type heaters.

DO NOT use Spears® **EverTUFF**® CTS CPVC products with commercial-type, non-storage water heaters.

For areas where local plumbing codes do not have requirements, the following information can be used as a guide for water heater connections:

• On electric water heaters, CPVC can be joined directly to the heater, using metal-to-CPVC transition fittings.

• On high-efficiency gas water heaters that use plastic vent piping, CPVC can be joined directly to the heater in the same way as an electric water-heater connection.

• On all other gas water heaters, there should be at least 6" of clearance between the exhaust flue and any CPVC tubing. A minimum of 6" metallic pipe should connect directly to the heater so that the CPVC tubing cannot be damaged by the buildup of excessive, radiant heat from the flue.

• A temperature/pressure relief valve should be installed so that the sensing element contacts the water at the top of the heater.

• Spears® **EverTUFF**® CTS CPVC products are approved by all model codes for use as relief-valve drain lines. A metal-to-CPVC transition fitting should be used to connect the tubing to the relief valve, with the tubing continued to the outlet. Both horizontal and vertical pressure relief drain should be supported every 3 feet. For horizontal runs, slope the tubing toward the outlet. Pipe must discharge to the atmosphere at an approved location.

• Instantaneous water heaters (i.e., under sink units) require at least 6" of metallic pipe connected to heater inlet and no CVPC installed down stream.

TRANSITION JOINTS AND FITTINGS

Spears® **EverTUFF**® CTS CPVC pipe can be connected to copper, brass, valves, and other materials using a variety of transition fittings including unions, compression fittings, specially reinforced male and female adapters, flanged joints, grooved joints and other readily available transition fittings.

Do not thread CPVC pipe and do not use regular CPVC female threaded fittings. Regular CPVC male threaded fittings shall only be used on cold water applications. Special reinforced male adapters, female adapters and other fittings with brass threads are recommended for hot water applications and threaded transitions to metal pipe. All approved threaded CPVC joints must be accessible. (See also Water Heater Connections section for additional installation details).

Standard compression fittings with brass ferrules can be used; however, TFE tape must be applied over the brass ferrule to compensate for the dissimilar thermal expansion rates between the brass and CPVC. Caution must be exercised to prevent over tightening of compression fittings. Use extreme care when soldering any metal system to prevent flame contact with or heat distortion in CPVC pipe and fittings .

Assembling Threaded Connections

Threaded connections require the application of a thread sealant that is compatible with CPVC material. Spears® recommends the use of Spears® **Blue 75™** Thread Sealant. Apply sealant to the male threads only. Make sure all threads are covered. DO NOT clog the waterway with excess sealant. If TFE tape is used, Spears® recommends a thickness of at least .0025" that meets or exceeds military specification, MIL-T-27730A. DO NOT use a combination of tape and thread sealant on the same joint. Apply TFE tape in the direction of the threads by starting with the first full thread and continuing over the entire thread length. Make sure all threads are covered. Generally, 2 - 3 wraps are sufficient to produce a watertight connection.

DO NOT over-torque any threaded connections. Generally, one to two turns beyond finger-tight are required for a threaded connection. Factory testing has indicated that 10 - 25 ft-lbs of torque is adequate to obtain a leak-free seal. Spears® recommends the use of a strap wrench when installing threaded connections.

Hanger/Support Spacing

Spears® **EverTUFF**® CTS CPVC pipe is rigid, it requires fewer supports than flexible, plastic systems.

Vertical runs should be supported at each level so that the weight of the run is not placed on a fitting or a joint. Horizontal runs require support every 3 feet for 1/2" - 1" diameter pipe and every 4 feet for 1-1/4" and larger diameters. Support spacing should be in accordance with applicable local codes. Horizontal runs must be braced so that the stress loads (caused by bending or snaking) will not be placed on a fitting or a joint. Hanger support spacing information is shown in Table A.

Spears® recommends that hangers, designed for supporting CPVC, be used to support CPVC piping. However, some hangers, designed for steel pipe, may be used if their suitability is clearly established. These hangers must be selected to accommodate the specific pipe size. In addition, they cannot contain rough or sharp edges that contact the pipe, and they must not bind the pipe from axial movement that is caused by expansion and contraction.

Pipe Size (in.)	Maximum Hanger Support Spacing
3/8	3 ft
1/2	3 ft
3/4	3 ft
1	3 ft
1-1/4	4 ft
1-1/2	4 ft
2	4 ft

Thermal Expansion

All piping systems expand and contract with changes in temperature. This issue must be addressed with appropriate system design to prevent damage to the system. Spears® **EverTUFF**® CTS CPVC pipe will expand or contract approximately 3.8 inches per 100 feet of pipe with every 100°F of temperature rise or fall. The effects of expansion/contraction are usually absorbed by the system at changes of direction in the piping. In other words, long, straight runs of piping are more susceptible to experiencing measurable movement with changes in temperature. As with other piping materials, the installation of an expansion loop or offset is required on long, straight runs which will allow the piping system to absorb the forces generated by expansion/contraction without damage. The rate of expansion does not vary with pipe size. The effects of expansion/contraction are more pronounced on hot water lines. See Thermal Expansion & Contraction section under Engineering and Design Data for Industrial Piping in this manual for information on calculating movement and expansion loops.

System Testing

Once the system has been installed and allowed to cure properly the system shall be tested in accordance with applicable code requirements. When testing with water (hydrostatic testing), the system must be slowly filled with water and the air bled from the highest and furthest points in the system before test pressure is applied. Air must be removed from piping systems to prevent it from being locked in the system when pressure is applied. Failure to do so could be harmful to job site personnel should a failure occur. If a leak is found, the affected product must be cut out and discarded. A new section can be installed using couplings or other approved means.

PVC & CPVC Corrosion Resistant Duct

PVC & CPVC DUCT

Spears® PVC and CPVC seamless round extruded duct is available in 6" through 24" diameters with cold-rolled fabricated duct available in 26" through 48". Excellent for industrial and institutional corrosive fume exhaust.

Physical Properties

Spears® PVC and CPVC Duct Systems exhibit high tensile strength, various temperature ranges, low thermal conductivity, good electrical properties and excellent chemical/corrosion resistance to a variety of aggressive substances. Its physical properties allow it to perform great in aggressive environments that are not suitable for other types of materials, plus its lightweight provides construction advantages, ease of fabrication and at a lower cost.

PVC & CPVC Duct Physical Properties

	VALUE		TEST METHOD
GENERAL	**PVC Duct**	**CPVC Duct**	
Cell Classification	12454	23447	ASTM D 1784
Maximum Service Temp.	140°F	200°F	---
Color	Dark Gray	Medium Gray	---
Specific Gravity (g/cu.cm @ 73°F)	1.40 +/-0.02	1.53 +/-0.02	ASTM D 792
Water Absorption % increase 24 hrs @ 25°C	0.05	0.03	ASTM D 570
Hardness: Rockwell	110 - 120	117	ASTM D 785
Poisson's Ratio @ 73°F	0.410	0.386	---
Hazen-Williams Factor	C = 150	C = 150	---
MECHANICAL			
Tensile Strength, psi @ 73°F	7,450	7,600	ASTM D 638
Tensile Modulus of Elasticity, psi @ 73°F	420,000	370,000	ASTM D 638
Flexural Strength, psi @ 73°F	14,450	12,500	ASTM D 790
Flexural Modulus, psi @ 73°F	360,000	360,000	ASTM D 790
Compressive Strength, psi @ 73°F	9,600	10,000	ASTM D 695
Compressive Modulus, psi @ 73°F	---	196,000	ASTM D 695
Izod Impact, notched ft-lb/in @ 73°F	0.75	2.6	ASTM D 256
THERMAL			
Coefficient of Linear Expansion (in/in/°F)	2.9×10^{-5}	3.9×10^{-5}	ASTM D 696
Coefficient of Thermal Conductivity	3.5×10^{-4}	3.27×10^{-4}	ASTM C 177
BTU • inches/hour • $Ft.^2$	1.02	0.95	---
Watt/m/K	0.147	0.137	---
Heat Deflection Temperature Under Load (264psi - annealed)	170	228°	ASTM D 648
ELECTRICAL			
Dielectric Strength, volts/mil	1,413	1,250	ASTM D 149
Dielectric Constant, 60Hz @ 30°F	3.70	3.70	ASTM D 150
Volume Resistivity, ohm/cm @ 95°C	1.2×10^{12}	3.4×10^{15}	ASTM D 257
Power Factor	---	0.007%	ASTM D 150
PVC & CPVC Pipe is non-electrolytic			
FIRE PERFORMANCE			
Flammability Rating	V-0	V-0, 5VB, 5VA	UL-94
Flame Spread Index	<10	<10	ASTM E 162
Flame Spread	---	<25	ASTM E-84/UR 723
	0-25	<25	ULC S102.2
Smoke Generation	---	≤50	ASTM E-84/UR 723
	80-225	<50	ULC S102.2
Flash Ignition Temp.	730°F	900°F	---
Average Time of Burning (sec.)	<5	<5	ASTM D 635
Average Extent of Burning (mm)	<10	<10	ASTM D 635
Burning Rate (in/min)	Self Extinguishing	Self Extinguishing	---
Softening Starts (approx.)	250°F	295°F	---
Material Becomes Viscous	350°F	395°F	---
Material Carbonizes	425°F	450°F	---
Limiting Oxygen Index (LOI)	---	60	ASTM D 2863
Clean Room Materials	---	FPI= 1.20	---
Flammability Test	N/A	SDI= 0.09	FM 4910

PVC & CPVC Corrosion Resistant Duct

Materials

PVC

Spears® PVC duct is extruded seamless round or cold-rolled fabricated from dark-gray-colored Type I, Grade I PVC material having a Cell Classification of 12454 per ASTM D 1784 (PVC 1120), and has a maximum service temperature of 140°F. Spears® PVC duct is chemically resistant to most acids, bases, salts, aliphatic solutions, oxidants, and halogens. Unlike metallic materials, vapor phase or liquid-vapor phase corrosion is generally less aggressive with thermoplastics than the liquid phase corrosion. When in question, testing must be conducted under actual use conditions to verify compatibility. Detailed chemical resistance data should be referenced for proper material selection.

CPVC

Spears® CPVC Duct is extruded seamless round or cold-rolled fabricated from a light-gray-colored CPVC material with a Cell Classification of 23437 per ASTM D 1784 and has a maximum service temperature of 200°F for hot fumes. In addition, CPVC duct also has excellent fire performance properties. It has been subjected to large-scale testing having a flame spread rating of <25, and a smoke development rating of <50 making it ideal for use in critical areas (such as air plenums) where fire performance issues are of a concern. Spears® CPVC Duct is chemically resistant to most acids, bases, salts, aliphatic solutions, oxidants, and halogens. Although the chemical resistance of PVC and CPVC are similar they are not the same. Detailed chemical resistance data should be referenced for proper material selection.

Flammability

Spears® duct has excellent flammability properties and will not independently support combustion - it will not burn unless a flame is constantly applied and will stop burning once the flame is removed. Spears® CPVC duct has improved fire performance properties over PVC with low flame-spread and smoke-generation properties. Refer to the Fire Performance section of the PVC & CPVC Duct Physical Properties table.

Dimensions

Spears® seamless round duct is extruded in Iron Pipe Size (IPS) dimensions with large internal flow areas that can easily be adapted to other common IPS fittings, reducing fabrication and installation time.

PVC Extruded Round Duct Dimensions

Size (in.)	AVG. O.D.	AVG. O.D.TOL.	O of R TOL.	MIN. Wall	AVG. Wall	MAX. Wall	WT(lbs.) Per Ft.
6 x 1/8	6.625	+/- .020	+/- .050	0.105	0.122	0.140	1.530
6	6.625	+/- .020	+/- .050	0.172	0.187	0.202	2.275
7	7.375	+/- .020	+/- .050	0.172	0.187	0.202	2.534
8	8.625	+/- .020	+/- .075	0.172	0.187	0.202	2.982
9	9.375	+/- .025	+/- .075	0.172	0.187	0.202	3.239
10	10.750	+/- .025	+/- .075	0.172	0.187	0.202	3.733
11	11.375	+/- .025	+/- .075	0.172	0.187	0.202	3.944
12	12.750	+/- .025	+/- .075	0.172	0.187	0.202	4.440
14	14.000	+/- .030	+/- .075	0.172	0.187	0.202	4.884
16	16.000	+/- .030	+/- .075	0.172	0.187	0.202	5.586
18	18.000	+/- .040	+/- .080	0.172	0.187	0.202	6.750
20	20.000	+/- .070	+/- .140	0.199	0.219	0.239	8.144
24	24.000	+/- .090	+/- .180	0.230	0.250	0.270	11.163

O of R = Out of Roundness Factor at time of extrusion *I.D. Sizes

CPVC Extruded Round Duct Dimensions

Size (in.)	AVG. O.D.	AVG. O.D.TOL.	O of R TOL.	MIN. Wall	AVG. Wall	MAX. Wall	WT(lbs.) Per Ft.
6	6.625	+/- .020	+/- .050	0.172	0.187	0.202	2.555
8	8.625	+/- .020	+/- .075	0.172	0.187	0.202	3.349
10	10.750	+/- .025	+/- .075	0.172	0.187	0.202	4.192
12	12.750	+/- .025	+/- .075	0.172	0.187	0.202	4.986
14	14.000	+/- .030	+/- .075	0.172	0.187	0.202	5.485
16	16.000	+/- .030	+/- .075	0.172	0.187	0.202	6.273
18	18.000	+/- .040	+/- .080	0.172	0.187	0.202	7.580
20	20.000	+/- .070	+/- .140	0.199	0.219	0.239	9.146
24	24.000	+/- .090	+/- .180	0.230	0.250	0.270	12.536

O of R = Out of Roundness Factor at time of extrusion

Large Diameter Duct

Spears® fabricated round duct (26" & larger diameter) is cold rolled from extruded PVC or CPVC sheet material. The seam is thermal fused utilizing computerized welding. The sheet edges are heated and pressed together pneumatically achieving 100% weld strength using no filler rod. Wall thickness is 3/16" for sizes up to 32" diameter. Above 32" diameter, 1/4" material will be used, unless otherwise specified. Cold rolled duct is produced in 4' lengths. Large duct fittings can be fabricated to order. Contact Spears® with requirements for additional information.

System Components

Fittings fabricated from Spears® duct are available in most configurations. All duct fittings, fume hoods, fume scrubbers, fans, blast gates and other system components should be fabricated from PVC/CPVC sheet or duct of the same wall thickness and from materials that conform to ASTM D 1784.

Storage and Handling

Although Spears® duct is tough and corrosion resistant, it should not be dropped nor have objects dropped on it. Reasonable care and common sense should be used, including during transport and storage to prevent distortion. Duct should not be stored close to heat-producing sources, subjected to external loads (i.e., heavy objects, over strapping, etc.) or over stacked when stored. When stored outdoors, Spears® duct must be covered with an opaque material to reduce the risk of heat absorption and discoloration. Prior to use, inspect duct for scratches, splits or gouges. If found, these sections must be cut out and discarded.

Product Ratings and Capability

Spears® PVC and CPVC duct is excellent for harsh environments and has been used at various negative and positive pressure conditions in diverse laboratory and industrial applications Product ratings will vary according to size and temperature. The ratings in the following tables are based on a 1.5:1 safety factor.

Positive Pressure

PVC and CPVC duct can endure greater levels of positive internal pressure than negative internal pressure. The following tables show the maximum recommended internal positive pressure rating in PSI for PVC and CPVC duct at various temperatures.

Negative Pressure Ratings

PVC MAX. Internal Negative Pressure Rating

Inches of Water @ Various Temperatures °F

Size (in.)	TEMPERATURE °F							
	73	80	90	100	110	120	130	140
6 x 1/8	115	101	86	71	59	46	36	25
6	415	365	311	257	212	166	129	91
7	301	265	226	187	153	120	93	66
8	188	166	141	117	96	75	58	41
9	146	129	110	91	75	59	45	32
10	97	85	73	6	50	39	30	21
11	82	72	61	51	42	33	25	18
12	58	51	44	36	30	23	18	13
14	44	39	33	27	22	18	14	10
16	29	26	22	18	15	12	9	6
18	21	18	16	13	11	8	6	4
20	24	21	18	15	12	10	7	5
24	21	18	16	13	11	8	6	4

PSI = Inches of Water x .0361; Inches of Mercury = Inches of Water x .07355 MAX. Internal Positive Pressure Rating

CPVC MAX. Internal Negative Pressure Rating

Inches of Water @ Various Temperatures °F

Size (in.)	TEMPERATURE °F						
	73	100	120	140	160	180	200
6	426	371	316	263	208	153	98
8	193	168	143	118	93	70	45
10	100	86	73	60	48	35	23
12	60	51	43	36	28	20	13
14	45	38	33	26	21	15	10
16	30	26	21	18	13	10	6
18	26	23	20	16	13	10	6
20	28	25	21	16	13	10	6
24	20	18	15	13	10	6	3

PSI = Inches of Water x .0361; Inches of Mercury = Inches of Water x .07355

Positive Pressure Ratings

PVC MAX. Internal Positive Pressure Rating

PSI @ Various Temperatures °F

Size (in.)	TEMPERATURE °F							
	73	80	90	100	110	120	130	140
6 x 1/8	42	37	31	26	21	17	13	9
6	70	62	52	43	35	28	22	15
7	64	56	48	40	32	25	20	14
8	53	47	40	33	27	21	16	12
9	74	65	55	46	38	29	23	16
10	43	39	32	27	22	17	13	9
11	61	53	46	38	31	24	19	13
12	36	32	27	22	18	14	11	8
14	33	29	25	20	17	13	10	7
16	28	25	21	17	14	11	9	6
18	25	22	19	15	13	10	8	5
20	26	23	20	16	13	10	8	6
24	25	22	19	15	13	10	8	5

CPVC MAX. Internal Positive Pressure Rating

PSI @ Various Temperatures °F

Size (in.)	TEMPERATURE °F						
	73	100	120	140	160	180	200
6	70	56	45	35	26	16	13
8	53	43	33	26	20	13	10
10	43	35	28	21	16	10	8
12	36	30	23	18	15	8	6
14	33	26	21	16	13	8	6
16	28	23	18	13	11	6	5
18	25	20	15	11	10	5	5
20	26	21	16	13	10	6	5
24	25	20	15	11	10	5	5

NOTE: Maximum values stated are for extruded duct pipe only, and incorporate a 1.5:1 safety factor. Consideration should be given to system design, method of fabrication, and joining which may require additional system de-rating. Spears® PVC/CPVC Duct piping are not designed for distribution of compressed air or gases.

Duct System Installation

Joining Techniques

Spears® duct can be easily assembled in the field using standard thermoplastic pipe-joining techniques. The most common methods are solvent-cementing or thermal hot air welding, fusion welding and butt-welding can also be used. Retaining duct and fittings with suitable drilled holes and sheet metal screws may also be used, depending on application requirements.

Solvent Cementing

Typical duct fittings are fabricated from duct and with belled-end sockets that can be joined using solvent-cementing. This is the same basic process used for over 50 years in pressure pipe installation using the application of a primer and solvent cement to join system components. Properly made solvent cement joints are chemically fused together providing a leak-tight seal when cured. A minimum socket depth of 3" (all sizes) is necessary to provide sufficient surface-to-surface contact of the parts being joined. The use of extra-heavy-bodied solvent is recommended to handle the gap-filling required due to larger dimensional tolerances in duct piping. Use extra care when solvent cementing duct diameters 18" and larger to ensure tight fit of mating components. Do not use solvent cement for any type of end-to-end joining. See Installation section for industrial pressure pipe for guidelines on solvent cement welding.

Thermal Welding

Thermal welding requires the use of a hot-air welder and PVC or CPVC welding rod. Clean hot air from the welder preheats the duct material and welding rod while pressure is applied to the weld area as the rod is guided. This results in the surfaces of the parts being thermally fused together at the weld seam. Only welding rod produced from the same material being joined (same Cell Classification) should be used. Due to the significantly different thermal properties of the plastics, hot-air welding of CPVC is generally more difficult than PVC. Only personnel specifically trained in hot-air welding of PVC or CPVC should conduct all welding.

Hangers and Supports

As with all piping systems, proper support spacing is critical to minimize deflection and sagging. Additional support consideration must be given to concentrated loads, additional weight of accumulated solids, and independent support at fans, flexible connections, hoods, scrubbers, tanks, and other system components for potential stresses on the system.

Drains must be installed where accumulation of moisture is expected and at low points in the system (these locations should be specified on system specification drawings). Proper system inspection, cleaning and maintenance should be enforced to prevent the formation of additional weight loads. Refer to the following tables for maximum support spacing of horizontal air-filled duct with an allowable 1/8" deflection at various temperatures.

Hangers and supports shall be securely fastened to the building structure to avoid vibration, and should be installed in such a manner as to prevent conditions of stress on the system (properly aligned). Seismic design and construction practices for hangers and supports shall be followed where applicable.

Hangers selected must have an adequate load-bearing surface free of rough or sharp edges to prevent damage to the duct during use. Use corrosive-resistant material for hangers and hanger hardware that is suitable for the system environment. Hangers must not restrict linear movement due to expansion and contraction. Avoid over tightening to prevent duct deformation and restriction of movement. Refer to the following illustration for examples of typical hangers.

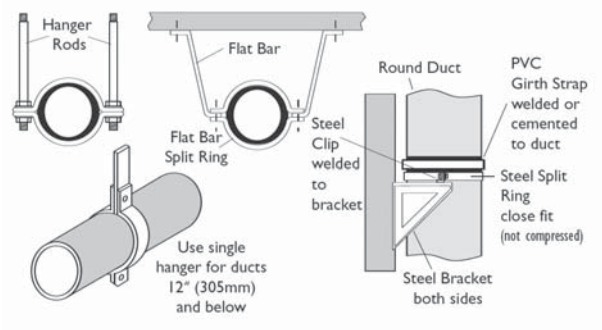
Hanger Support Spacing

PVC Duct Maximum Hanger Support Spacing In Feet

Size (in.)	TEMPERATURE °F							
	73	80	90	100	110	120	130	140
6 x 1/8	9.5	9	9	8.5	8	7.5	7	6.5
6	10	10	9.5	9	8.5	8	7.5	6.5
7	10	10	9.5	9	8.5	8	7.5	7
8	10	10	10	10	9	9	8	7.5
9	10	10	10	10	10	9	8.5	8
10	10	10	10	10	10	10	9	8.5
11	10	10	10	10	10	10	9.5	9
12	12	12	12	12	10	10	10	9.5
14	12	12	12	12	11.5	11.5	11	10
16	12	12	12	12	12	12	11	10
18	12	12	12	12	12	12	11.5	11
20	12	12	12	12	12	12	12	11.5
24	12	12	12	12	12	12	12	12

CPVC Duct Maximum Hanger Support Spacing In Feet

Size (in.)	TEMPERATURE °F						
	73	100	120	140	160	180	200
6	10	10	10	10	10	8	8
8	10	10	10	10	10	8	8
10	10	10	10	10	10	10	10
12	10	10	10	10	10	10	10
14	12	12	12	12	10	10	10
16	12	12	12	12	12	10	10
18	12	12	12	12	12	12	12
20	12	12	12	12	12	12	12
24	12	12	12	12	12	12	12



Thermal Expansion and Contraction

The coefficient of linear expansion (y) for Spears® duct can be found in the physical properties table (PVC = 2.9 x 10^{-5} in/in/°F; CPVC = 3.9 x 10^{-5} in/in/°F). As with all piping products, thermal expansion and contraction of the system must be considered and properly addressed during the design and installation of the system. The expansion or contraction rate of Spears® duct can be calculated as follows:

Thermal Expansion and Contraction for PVC Duct

$\Delta L = 12\ y L\ (\Delta T)$

Where:

ΔL = expansion or contraction of duct in inches

y = 2.9 x 10^{-5} in/in/°F (PVC duct material Coefficient of thermal expansion)

L = Length of duct run in feet

ΔT = Temperature change °F (T max. - T in.)

T max. = Maximum change in operating temperature (F)

T in. = temperature at time of installation (F)

Thermal Expansion and Contraction for CPVC Duct

$\Delta L = 12\ y L\ (\Delta T)$

Where:

ΔL = expansion or contraction of duct in inches

y = 3.9 x 10^{-5} in/in/°F (CPVC duct material Coefficient of thermal expansion)

L = Length of duct run in feet

ΔT = Temperature change °F (T max. - T in.)

T max. = Maximum change in operating temperature (F)

T in. = temperature at time of installation (F)

In-line expansion joints, either flexible sleeve type or O-ring piston type are the most common means of accommodating thermal expansion and contraction in duct systems. Using expansion loops and offsets where required can also be used, but require significantly more space.

Other Design Considerations

The duct system must not exposed to conditions that will exceed product limitations regarding temperature, pressure, chemical compatibility and mechanical strength. Care must be taken to ensure that fume hood design, capture velocities, flow velocities, and flow volumes are adequate to properly convey the corrosive fumes being extracted while maintaining safety to personnel and protection of other equipment from corrosive attack. An optimum velocity for most systems is 1,500 feet per minute (FPM), which allows for future expansion of the system by increasing the fan size. With the exception of some heavy metals extraction, velocities exceeding 3,000 FPM are generally not recommended. This is especially true in system carrying solid particles where excessive static electricity can be generated. Minimum exhaust volume requirements in cubic feet per minute (CFM), must be calculated according to type and concentration of fumes being transported. Sufficient access for inspection and equipment maintenance must be provided. Size transition sections in mains and sub mains should be appropriately tapered for optimum flow conditions. A minimum taper of 5" in length for each 1" change in duct diameter is recommended. Branches should enter the main at the large end at angles no greater than 45° and not directly opposite each other. The designing engineer is responsible for ensuring that the system is in compliance with any applicable pollution control and building codes.



Chemical Resistance

This section is to provide information on the transport of various chemicals using PVC and CPVC thermoplastic piping materials. This information is compiled from commercially available industry sources. These recommendations are guidelines for use and the final decision regarding material suitability must rest with the end-user.

Please note that Spears® CPVC piping products can be classified into two basic applications, pressure systems and corrosive waste drainage systems. The chemical resistance tables in this section are for Pressure Piping. See chemical resistance tables in **LabWaste™** CPVC Corrosive Waste Drainage Systems section of this catalog for chemical resistance of drainage systems. **IMPORTANT:** Corrosive waste drainage system data should not be used for pressure system or dedicated service applications.

PVC and CPVC thermoplastic piping products are resistant to corrosion typically encountered with metal systems and the effects of galvanic and electrochemical corrosion are non-existent since both of these materials are non-conductors.

Types of Chemical Attack on Plastics

In general, chemicals that affect plastics do so in one of two ways. One effect is chemical solvation or permeation; the other is direct chemical attack. In the case of solvation or permeation, physical properties may be affected, but the polymer molecule structure itself is not chemically changed, degraded or destroyed. In solvation or permeation, gas, vapor or liquid molecules pass through the polymer, typically without damaging the plastic material itself. If the chemical can be removed completely, the plastic is generally restored to its original condition. Direct chemical attack occurs when exposure to a chemical causes a chemical alteration of the polymer molecules. Direct chemical attack may cause profound, irreversible changes that cannot be restored by removal of the chemical.

Other Consideration

While the effect of each individual chemical is specific, some chemicals can be grouped into general categories based on similarities in chemical characteristics. PVC and CPVC are inert to most mineral acids, bases, salts and paraffinic hydrocarbons, and compares favorably to other non-metals in these chemical environments.

Generally, the resistance of a particular plastic to a specific chemical decreases with an increase in concentration. Also, the resistance of a particular plastic to a specific chemical generally decreases as temperature increases, generally decreases with increasing applied stress, and generally decreases where temperature or applied stress are varied or cycled. These effects can be greater overall in combination.

In some cases, combinations of chemicals may have a synergistic effect on a thermoplastic material where the individual chemicals do not. It cannot be assumed that an individual chemical's lack of effect would apply for combinations that include several chemicals. When the possible combined effect of several chemicals is unknown, the material should be tested in the complete chemical mixture(s) in question.

Caution Areas

- Chlorinated and aromatic hydrocarbons, esters, or ketones are not recommended for use with PVC or CPVC thermoplastic piping materials. Although the chemical resistance of PVC and CPVC compounds is similar, they are not always the same.
- Chemical compatibility of a piping system must also take into consideration the compatibility of all system components. This includes elastomers (gaskets, O-rings, etc), valves and valve components, as well as thread pastes, lubricants, cleaning and wetting agents (surfactants).
- Applications involving certain oils, surfactants, and greases may result in environmental stress cracking. Environmental stress cracking occurs when system components are subjected to an incompatible chemical in the presence of stress.
- Certain substances called out on the following pages reference chemicals in a gaseous state. These substances are not recommended for pressure service. They are shown to provide the chemical resistance of PVC and CPVC when coming into contact with these substances. (i.e. exposure to or immersion in these substances).
- PVC Clear piping has the same basic chemical resistance as regular PVC. However certain nitrogen-containing organics, bleaches, oxidizing agents and acids will result in discoloration. Testing under actual use conditions is recommended.
- The following chemical resistance data is based primarily on plastic material test specimens that have been immersed in the chemical, and to a lesser degree, on field-experience. In most cases, detailed information on the test conditions (such as exposure time), and on test results (such as change in weight, change in volume, and change in strength) is not available.

While some chemicals may be acceptable with certain temperature limitations, the use of PVC and CPVC piping with liquid hydrocarbons such as gasoline and jet fuels should be limited to short-term exposure such as secondary containment systems. This piping is not recommended for long-term exposure to liquid hydrocarbons.

PVC and CPVC have also been used successfully in contaminated water recovery systems where very low levels (PPM/PPB range) of certain incompatible substances are present. However, since most remediation projects involve low pressure/vacuum type applications for a limited period of time, the use of PVC and CPVC can be used in these types of applications.

DISCLAIMER OF LIABILITY

There are many variables beyond our control in the application of thermoplastic piping in chemical service. All statements made herein are offered in good faith and believed to be accurate at the time of its preparation, but are offered without any warranty, expressed or implied, by information sources or Spears® Manufacturing Company. Compliance with all applicable federal, state and local laws and regulations remains the responsibility of the user.

CHEMICAL RESISTANCE DATA FOR PRESSURE PIPING

R = Recommended NR = Not Recommended
C = Caution, actual testing suggested; suspect @ certain stress levels ? = Incomplete Data; actual testing required

CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC Type IV, Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Acetaldehyde	NR	NR	NR	NR	NR	NR	NR
Acetamide	NR	NR	NR	NR	NR	NR	NR
Acetic Acid, 10%	R	R	R	R	R	R	R
Acetic Acid, 20%	R	R	R	NR	NR	NR	NR
Acetic Acid, Glacial	R	NR	NR	NR	NR	NR	NR
Acetic Acid, pure	NR	NR	NR	NR	NR	NR	NR
Acetic Anhydride	NR	NR	NR	NR	NR	NR	NR
Acetone, < 5%	?	?	NR	NR	R	R	R
Acetone, > 5%	NR	NR	NR	NR	NR	NR	NR
Acetyl Nitrile	NR	NR	NR	NR	NR	NR	NR
Acetylene	R	R	R	R	C	C	C
Acrylic Acid	NR	NR	NR	NR	NR	NR	NR
Adipic Acid; sat. in water	R	R	R	R	R	R	R
Allyl Alcohol, 96%	R	NR	NR	NR	C	C	C
Allyl Chloride	NR	NR	NR	NR	NR	NR	NR
Alum, all varieties	R	R	R	R	R	R	R
Aluminum Acetate	R	R	R	R	R	R	R
Aluminum Alum	R	R	R	R	R	R	R
Aluminum Chloride	R	R	R	R	R	R	R
Aluminum Fluoride	R	R	R	R	R	R	R
Aluminum HydroxideR		R	R	R	R	R	R
Aluminum Nitrate	R	R	R	R	R	R	R
Aluminum Oxylchloride	R	R	R	R	?	?	?
Aluminum Sulfate	R	R	R	R	R	R	R
Amines	NR	NR	NR	NR	NR	NR	NR
Ammonia (gas;dry)	R	R	R	R	NR	NR	NR
Ammonia (liquid)	NR	NR	NR	NR	NR	NR	NR
Ammonium Acetate	R	R	R	R	R	R	R
Ammonium Alum	R	R	R	R	R	R	R
Ammonium Bisulfate	R	R	?	?	R	R	R
Ammonium Carbonate	R	R	R	R	R	R	R
Ammonium Chloride	R	R	R	R	R	R	R
Ammonium Dichromate	R	?	?	?	R	R	R
Ammonium Fluoride, < 25%	R	NR	NR	NR	R	R	R
Ammonium Fluoride, > 25%	?	NR	NR	NR	R	R	R
Ammonium Hydroxide	R	R	R	R	NR	NR	NR
Ammonium Metaphosphate	R	R	R	R	R	R	R
Ammonium Nitrate	R	R	R	R	R	R	R
Ammonium Persulfate	R	R	R	R	R	?	?
Ammonium Phosphate	R	R	R	R	R	R	C
Ammonium Sulfate	R	R	R	R	R	R	R
Ammonium Sulfide	R	R	R	R	R	R	R
Ammonium Tartrate	R	R	R	R	R	R	R
Ammonium Thiocyanate	R	R	R	R	R	R	R
Amyl Acetate	NR	NR	NR	NR	NR	NR	NR
Amyl Alcohol	R	NR	NR	NR	C	C	NR
Amyl Chloride	NR	NR	NR	NR	NR	NR	NR
Aniline	NR	NR	NR	NR	NR	NR	NR

CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC Type IV, Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Aniline Chlorohydrate	NR	NR	NR	NR	NR	NR	NR
Aniline Hydrochloride	NR	NR	NR	NR	NR	NR	NR
Anthraquinone	?	?	?	?	?	?	?
Anthraquinone Sulfonic Acid	R	R	R	R	?	?	?
Antimony Trichloride	R	R	R	R	R	R	R
Aqua Regia	NR	NR	NR	NR	R	NR	NR
Aromatic Hydrocarbons	NR	NR	NR	NR	NR	NR	NR
Arsenic Acid 80%	R	R	R	R	R	R	R
Arsenic Trioxide (powder)	R	?	?	?	R	NR	NR
Arylsulfonic Acid	R	R	R	NR	?	?	?
Barium Carbonate	R	R	R	R	R	R	R
Barium Chloride	R	R	R	R	R	R	R
Barium Hydroxide 10%	R	R	R	R	R	R	R
Barium Nitrate	R	?	?	?	R	R	R
Barium Sulfate	R	R	R	R	R	R	R
Barium Sulfide	R	R	R	R	R	R	R
Beer	R	R	R	R	R	R	R
Beet Sugar Liquors	R	R	R	R	R	R	R
Benzaldehyde; 10%	R	NR	NR	NR	NR	NR	NR
Benzaldehyde; > 10%	NR	NR	NR	NR	NR	NR	NR
Benzalkonium Chloride	R	?	?	?	NR	NR	NR
Benzene	NR	NR	NR	NR	NR	NR	NR
Benzoic Acid	R	R	R	R	R	C	NR
Benzyl Alcohol	NR	NR	NR	NR	NR	NR	NR
Benzyl Chloride	NR	NR	NR	NR	NR	NR	NR
Bismuth Carbonate	R	R	R	R	R	R	R
Black Liquor	R	R	R	R	R	R	R
Bleach (15% CL)	R	R	R	R	R	R	R
Borax	R	R	R	R	R	R	R
Boric Acid	R	R	R	R	R	R	R
Brine (acid)	R	?	?	?	R	R	R
Bromic Acid	R	R	R	R	R	R	R
Bromine Liquid	NR	NR	NR	NR	NR	NR	NR
Bromine Vapor 25%	R	R	R	R	NR	NR	NR
Bromine Water	R	R	NR	NR	?	?	?
Bromobenzene	NR	NR	NR	NR	NR	NR	NR
Bromotoluene	NR	NR	NR	NR	NR	NR	NR
Butadiene	R	R	NR	NR	C	C	C
Butane	R	R	NR	NR	C	C	C
Butanol: primary	R	R	NR	NR	C	C	C
Butanol: secondary	R	NR	NR	NR	C	C	C
Butyl Acetate	R	NR	NR	NR	NR	NR	NR
Butyl Carbitol	?	?	?	?	NR	NR	NR
Butyl Mercaptan	NR	NR	NR	NR	NR	NR	NR
Butyl Phenol	R	NR	R	NR	NR	NR	NR
Butyl Stearate	R	?	?	?	NR	NR	NR
ButylCellosolve	R	?	?	?	NR	NR	NR
Butyne Diol	R	?	?	?	?	?	?

CHEMICAL RESISTANCE DATA FOR PRESSURE PIPING

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CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC Type IV, Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Butyric Acid < 1%	R	NR	NR	NR	R	R	R
Butyric Acid > 1%	R	NR	NR	NR	NR	NR	NR
Cadmium Acetate	R	R	?	?	R	R	R
Cadmium Chloride	R	R	?	?	R	R	R
Cadmium Cyanide	R	R	R	R	R	R	R
Cadmium Sulfate	?	?	?	?	R	R	R
Caffeine Citrate	R	?	?	?	R	R	R
Calcium Acetate	R	R	R	R	R	R	R
Calcium Bisulfide	R	R	R	R	R	R	R
Calcium Bisulfite	R	R	R	R	R	R	R
Calcium Bisulfite Bleach Liquor	R	?	?	?	R	R	R
Calcium Carbonate	R	R	R	R	R	R	R
Calcium Chlorate	R	R	?	?	R	R	R
Calcium Chloride	R	R	R	R	R	R	R
Calcium Hydroxide	R	R	R	R	R	R	R
Calcium Hypochlorite	R	R	R	R	R	R	R
Calcium Nitrate	R	R	R	R	R	R	R
Calcium Oxide	R	R	?	?	R	R	R
Calcium Sulfate	R	R	R	R	R	R	R
Camphor (crystals)	R	?	?	?	NR	NR	NR
Cane Sugar Liquors	R	R	R	R	R	R	R
Caprolactam	?	?	?	?	NR	NR	NR
Caprolactone	?	?	?	?	NR	NR	NR
Carbitol	R	?	?	?	NR	NR	NR
Carbon Dioxide	R	R	R	R	R	R	R
Carbon Dioxide (aqueous solution)	R	R	?	?	R	R	R
Carbon Disulfide	NR	NR	NR	NR	NR	NR	NR
Carbon Monoxide	R	R	R	R	R	R	R
Carbon Tetrachloride	R	NR	NR	NR	NR	NR	NR
Carbonic Acid	R	R	R	R	R	R	R
Carene 500	R	?	NR	NR	?	?	?
Castor oil	R	R	R	R	C	C	C
Caustic Potash	R	R	R	R	R	R	R
Caustic Soda	R	R	R	R	R	R	R
Cellosolve	R	NR	R	NR	NR	NR	NR
Cellosolve Acetate	R	?	R	?	NR	NR	NR
Chloral Hydrate	R	R	R	R	NR	NR	NR
Chloramine	R	?	?	?	R	R	R
Chloric Acid up to 20%	R	R	R	R	R	R	R
Chloride Water	R	R	R	R	R	R	R
Chlorinated Solvents	NR	NR	NR	NR	NR	NR	NR
Chlorinated Water (Hypochlorite)	R	R	R	R	R	R	R
Chlorine (dry liquid)	NR	NR	NR	NR	NR	NR	NR
Chlorine (liquid under pressure)	NR	NR	NR	NR	NR	NR	NR
Chlorine Dioxide aqueous (sat'd 0.1%)	?	?	?	?	R	?	?

CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC Type IV, Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Chlorine Gas (dry)	NR	NR	NR	NR	NR	NR	NR
Chlorine Gas (wet)	NR	NR	NR	NR	NR	NR	NR
Chlorine Water (sat'd 0.3%)	R	R	R	R	R	R	R
Chlorine(trace in air)	R	?	R	?	R	R	R
Chloroacetic Acid	R	R	R	NR	NR	NR	NR
Chloroacety Chloride	R	?	R	?	NR	NR	NR
Chlorobenzene	NR	NR	NR	NR	NR	NR	NR
Chloroform	NR	NR	NR	NR	NR	NR	NR
Chloropicrin	NR	NR	NR	NR	NR	NR	NR
Chlorosulfonic Acid	R	NR	R	NR	NR	NR	NR
Chlorox Bleach Solution	R	?	?	?	C	C	C
Chrome Alum	R	R	R	R	R	R	R
Chromic Acid 10%	R	R	R	R	R	R	R
Chromic Acid 40%	?	?	?	?	R	R	R
Chromic Acid 50%	NR	NR	NR	NR	?	?	?
Chromic Acid/Sulfuric Acid/ water-50%/15%/35%	R	NR	?	?	?	?	?
Chromic/Nitric Acid (15%/35%)	R	R	?	?	R	C	NR
ChromiumNitrate	R	?	?	?	R	R	R
Citric Acid	R	R	R	R	R	R	R
Citrus Oils	?	?	?	?	NR	NR	NR
Coconut Oil	R	R	?	?	NR	NR	NR
Copper Acetate	R	R	R	R	R	R	R
Copper Carbonate	R	R	R	R	R	R	R
Copper Chloride	R	R	R	R	R	R	R
Copper Cyanide	R	R	R	R	R	R	R
Copper Fluoride	R	R	R	R	R	R	R
Copper Nitrate	R	R	R	R	R	R	R
Copper Sulfate	R	R	R	R	R	R	R
Corn Oil	R	?	R	?	NR	NR	NR
Corn Syrup	R	R	R	R	R	R	R
Cottonseed Oil	R	R	R	R	NR	NR	NR
Creosote	NR	NR	NR	NR	NR	NR	NR
Cresylic Acid,50%	R	R	R	NR	NR	NR	NR
Crotonaldehyde	NR	NR	NR	NR	NR	NR	NR
Crude Oil	R	R	R	NR	NR	NR	NR
Cumene	?	?	?	?	NR	NR	NR
Cupric Fluoride	R	R	R	R	R	R	R
Cupric Sulfate	R	R	R	R	R	R	R
Cuprous Chloride	R	R	R	R	R	R	R
Cyclanones	R	R	?	?	?	?	?
Cyclohexane	NR	NR	NR	NR	NR	NR	NR
Cyclohexanol	NR	NR	NR	NR	NR	NR	NR
Cyclohexanone	NR	NR	NR	NR	NR	NR	NR
D.D.T. (Xylene Base)	NR	NR	NR	NR	NR	NR	NR
Desocyephedrine Hydrochloride	R	?	R	?	?	?	?
Detergents	R	R	R	R	C	C	C
Dextrin	R	R	R	R	R	R	R

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	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Dextrose	R	R	R	R	R	R	R
Diacetone Alcohol	R	?	?	?	C	?	?
Diazo Salts	R	R	R	R	?	?	?
Dibutoxy Ethyl Phthalate	NR	NR	NR	NR	NR	NR	NR
Dibutyl Phthalate	NR	NR	NR	NR	NR	NR	NR
Dibutyl Sebacate	R	NR	?	?	NR	NR	NR
Dichlorobenzene	NR	NR	NR	NR	NR	NR	NR
Dichloroethylene	NR	NR	NR	NR	NR	NR	NR
Diesel Fuels	R	R	R	R	NR	NR	NR
Diethyl Ether	R	?	R	?	NR	NR	NR
Diethylamine	NR	NR	NR	NR	NR	NR	NR
Diglycolic Acid	R	R	R	R	NR	NR	NR
Dill Oil	?	?	?	?	NR	NR	NR
Dimethyl Hydrazine	NR	NR	NR	NR	NR	NR	NR
Dimethylamine	R	R	NR	NR	NR	NR	NR
Dimethylformamide	NR	NR	NR	NR	NR	NR	NR
Dioctylphthalate	NR	NR	NR	NR	NR	NR	NR
Dioxane (1, 4)	NR	NR	NR	NR	NR	NR	NR
Disodium Phosphate	R	R	R	R	R	R	R
Distilled Water	R	R	R	R	R	R	R
EDTA Tetrasodium	?	?	?	?	R	R	R
Ethyl Ester (ethyl acrylate)	NR	NR	NR	NR	NR	NR	NR
Epsom Salt	R	?	R	?	R	R	R
Esters	NR	NR	NR	NR	NR	NR	NR
Ethanol > 5%	R	R	R	NR	C	C	C
Ethanol up to 5%	R	R	R	NR	R	R	R
Ethers	NR	NR	NR	NR	NR	NR	NR
Ethyl Acetate	NR	NR	NR	NR	NR	NR	NR
Ethyl Acrylate	NR	NR	NR	NR	NR	NR	NR
Ethyl Alcohol	R	R	R	NR	C	C	C
Ethyl Chloride	NR	NR	NR	NR	NR	NR	NR
Ethyl Chloroacetate	NR	NR	NR	NR	NR	NR	NR
Ethyl Ether	NR	NR	NR	NR	NR	NR	NR
Ethylene Bromide	NR	NR	NR	NR	NR	NR	NR
Ethylene Chlorohydrin	NR	NR	NR	NR	NR	NR	NR
Ethylene Diamine	NR	NR	NR	NR	NR	NR	NR
Ethylene Dichloride	NR	NR	NR	NR	NR	NR	NR
Ethylene Glycol	R	R	R	R	C	C	C
Ethylene Oxide	NR	NR	NR	NR	NR	NR	NR
Fatty Acids	R	R	R	R	C	C	C
Ferric Acetate	R	NR	?	?	R	R	R
Ferric Chloride	R	R	R	R	R	R	R
Ferric Hydroxide	R	R	R	R	R	R	R
Ferric Nitrate	R	R	R	R	R	R	R
Ferric Sulfate	R	R	R	R	R	R	R
Ferrous Chloride	R	R	R	R	R	R	R
Ferrous Hydroxide	R	?	R	?	R	R	R
Ferrous Nitrate	R	?	R	?	R	R	R

CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC Type IV Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Ferrous Sulfate	R	R	R	R	R	R	R
Fish Solubles	R	R	R	R	?	?	?
Fluorine Gas	R	NR	NR	NR	NR	NR	NR
Fluorine Gas (wet)	R	NR	R	NR	NR	NR	NR
Fluoroboric Acid	R	R	R	R	?	?	?
Fluorosilisic Acid 25%	R	R	R	R	R	C	C
Formaldehyde	R	R	NR	NR	NR	NR	NR
Formic Acid < 25%	R	NR	R	NR	R	R	R
Formic Acid > 25%	?	?	?	?	C	?	NR
Freon 11	R	R	NR	NR	NR	NR	NR
Freon 113	R	?	R	?	NR	NR	NR
Freon 114	R	?	R	?	NR	NR	NR
Freon 12	R	R	R	R	NR	NR	NR
Freon 21	NR	NR	NR	NR	NR	NR	NR
Freon 22	NR	NR	NR	NR	NR	NR	NR
Fructcose	R	R	R	R	R	R	R
Fruit juices & pulp	R	R	R	R	R	R	R
Furfural	NR	NR	NR	NR	NR	NR	NR
Gallic Acid	R	R	R	R	?	?	?
Gas (Coke Oven)	NR	NR	NR	NR	?	?	?
Gasoline	NR	NR	NR	NR	NR	NR	NR
Gasoline, HighOctane	NR	NR	NR	NR	NR	NR	NR
Gasoline Jet Fuel	NR	NR	NR	NR	NR	NR	NR
Glucose	R	R	R	R	R	R	R
Glycerine	R	R	R	R	R	R	R
Glycol	R	R	R	R	C	C	C
Glycol Ethers	?	?	?	?	NR	NR	NR
Glycolic Acid	R	R	R	R	?	?	?
Grape Sugar	R	R	R	R	R	R	R
Green Liquor	R	R	?	?	R	R	R
Halocarbon Oils	?	?	?	?	NR	NR	NR
Heptane	R	R	R	NR	C	?	?
Hercolyn	R	?	?	?	?	?	?
Hexane	R	NR	NR	NR	C	C	C
Hexanol,Tertiary	R	R	R	NR	C	C	C
Hydrazine	NR	NR	NR	NR	NR	NR	NR
Hydrobromic Acid 20%	R	R	R	R	?	?	?
Hydrochloric Acid 10%	R	R	R	R	R	R	R
Hydrochloric Acid 30%	R	R	R	R	R	R	R
Hydrochloric Acid 36%	R	R	R	R	R	R	C
Hydrochloric Acid Concentrated	R	R	R	NR	?	?	?
Hydrochloric Acid pickling	R	R	R	R	R	R	R
Hydrocyanic Acid	R	R	R	R	?	?	?
Hydrofluoric Acid 3%	R	R	R	R	R	?	?
Hydrofluoric Acid 48%	R	NR	R	NR	NR	NR	NR
Hydrofluoric Acid 50%	R	NR	NR	NR	NR	NR	NR
Hydrofluoric Acid 70%	NR	NR	NR	NR	NR	NR	NR
Hydrofluorsilicic Acid 30%	R	R	R	R	R	?	C

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	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Hydrogen	R	R	R	R	C	C	C
Hydrogen Peroxide 30%	R	R	R	R	R	?	?
Hydrogen Peroxide 90%	R	R	R	R	?	?	?
Hydrogen Phosphide	R	R	NR	NR	?	?	?
Hydrogen Sulfide	R	R	R	R	R	R	R
Hydroquinone	R	R	R	R	R	R	R
Hydroxylamine Sulfate	R	R	R	R	?	?	?
Hypochlorite (Potassium & Sodium)	R	?	R	?	R	R	R
Hypochlorous Acid	R	R	R	R	R	R	R
Iodine	NR	NR	NR	NR	R	R	R
Iodine Solution 10%	NR	NR	NR	NR	?	?	?
Isopropanol	?	?	?	?	C	C	C
Kerosene	R	R	R	R	C	C	C
Ketones	NR	NR	NR	NR	NR	NR	NR
Kraft Liquors	R	R	R	R	R	R	R
Lactic Acid 25%	R	R	R	R	R	R	R
Lactic Acid 80%	R	?	?	?	R	C	C
Lard Oil	R	R	R	R	C	C	C
Lauric Acid	R	R	R	R	C	C	C
Lauryl Chloride	R	?	R	NR	NR	NR	NR
Lead Acetate	R	R	R	R	R	R	R
Lead Chloride	R	R	R	R	R	R	R
Lead Nitrate	R	R	R	R	R	R	R
Lead Sulfate	R	R	R	R	R	R	R
Lemon Oil	?	?	?	?	NR	NR	NR
Limonene	?	?	?	?	NR	NR	NR
Linoleic Acid	R	R	R	R	C	C	C
Linoleic Oil	R	R	R	NR	C	C	C
Linseed Oil	R	R	R	R	NR	NR	NR
Liquors	R	R	?	?	?	?	?
Lithium Bromide	R	R	R	R	R	R	R
Lithium Sulfate	R	R	R	R	R	R	R
Lubricating Oils, ASTM#1	R	R	R	R	?	?	?
Lubricating Oils, ASTM#2	R	R	R	R	?	?	?
Lubricating Oils, ASTM#3	R	R	R	NR	?	?	?
Lux Liquid	R	NR	R	NR	?	?	?
Machine Oil	R	R	R	R	C	C	C
Magnesium Carbonate	R	R	R	R	R	R	R
Magnesium Chloride	R	R	R	R	R	R	R
Magnesium Citrate	R	R	?	?	R	R	R
Magnesium Fluoride R	R	R	R	R	R	R	
Magnesium Hydroxide	R	R	R	R	R	R	R
Magnesium Nitrate	R	R	R	R	R	R	R
Magnesium Oxide	R	R	R	R	R	R	R
Magnesium Salts	R	R	R	R	R	R	R
Magnesium Sulfate	R	R	R	R	R	R	R
Maleic Acid 50%	R	R	R	R	R	R	R
Manganese Chloride	R	R	R	R	R	R	R

CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC Type IV, Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Manganese Sulfate	R	R	R	R	R	R	R
Mercural Ointment Blue 5%	R	?	R	?	?	?	?
Mercuric Chloride	R	R	R	R	R	R	R
Mercuric Cyanide	R	R	R	R	R	R	R
Mercuric Sulfate	R	R	R	R	R	R	R
Mercurous Nitrate	R	R	R	R	R	R	R
Mercury	R	R	R	R	R	R	R
Mercury Ointment Ammoniated	R	?	R	?	?	?	?
Methanol <10%	R	R	R	R	R	R	R
Methanol >10%	R	R	R	R	NR	NR	NR
Methoxyethyl Oleate	R	?	R	?	NR	NR	NR
Methyl Cellosolve	NR	NR	NR	NR	NR	NR	NR
Methyl Chloride	NR	NR	NR	NR	NR	NR	NR
Methyl Ethyl Ketone	NR	NR	NR	NR	NR	NR	NR
Methyl Formate	?	?	?	?	NR	NR	NR
Methyl Iso-Butyl Ketone	NR	NR	NR	NR	NR	NR	NR
Methyl Methacrylate	R	?	R	?	NR	NR	NR
Methyl Salicylate	R	?	R	?	NR	NR	NR
Methyl Sulfate	R	NR	R	NR	?	?	?
Methyl Sulfuric Acid	R	R	R	R	?	?	?
Methylamine	NR	NR	NR	NR	NR	NR	NR
Methylene Bromide	NR	NR	NR	NR	NR	NR	NR
Petroleum Liquifier	R	R	R	R	?	?	?
Petroleum Oils (Sour)	R	NR	R	NR	C	C	C
Phenol	NR	NR	NR	NR	R	R	R
Phenylhydrazine	NR	NR	NR	NR	NR	NR	NR
Phenylhydrazine Hydrochloride	NR	NR	NR	NR	NR	NR	NR
Phosgene, Gas	R	?	R	?	NR	NR	NR
Phosgene, Liquid	NR	NR	NR	NR	NR	NR	NR
Phosphoric Acid, up to 85%	R	R	R	R	R	R	R
Phosphorous Pentoxide	R	NR	R	NR	R	R	R
Phosphorous Trichloride	NR	NR	NR	NR	NR	NR	NR
Phosphorous, (Yellow)	R	NR	R	NR	R	R	R
Photographic Solutions: Dektal Developer	R	R	R	R	?	?	?
Photographic Solutions: DK #3	R	R	R	R	?	?	?
Photographic Solutions: Kodak Fixer	R	R	R	R	?	?	?
Photographic Solutions: Kodak Short Stop	R	R	R	R	?	?	?
Picric Acid	NR	NR	NR	NR	NR	NR	NR
Plating Solutions: Brass	R	R	R	R	R	R	R
Plating Solutions: Cadmium	R	R	R	R	R	R	R
Plating Solutions: Copper	R	R	R	R	R	R	R
Plating Solutions: Gold	R	R	R	R	R	R	R
Plating Solutions: Indium	R	R	R	R	R	R	R
Plating Solutions: Lead	R	R	R	R	R	R	R
Plating Solutions: Nickel	R	R	R	R	R	R	R

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	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Plating Solutions: Rhodium	R	R	R	R	R	R	R
Plating Solutions: Silver	R	R	R	R	R	R	R
Plating Solutions: Tin	R	R	R	R	R	R	R
Plating Solutions: Zinc	R	R	R	R	R	R	R
Polyethylene Glycol	?	?	?	?	NR	NR	NR
Potash (Sat.Aq.)	R	R	?	?	R	R	R
Potassium Acetate	R	R	R	R	R	R	R
Potassium Alum	R	R	R	R	R	R	R
Potassium Amyl Xanthate	R	NR	NR	NR	?	?	?
Potassium Bicarbonate	R	R	R	R	R	R	R
Potassium Bichromate	R	R	R	R	R	R	R
Potassium Bisulfate	R	R	R	R	R	R	R
Potassium Borate	R	R	R	R	R	R	R
Potassium Bromate	R	R	R	R	R	R	R
Potassium Bromide	R	R	R	R	R	R	R
Potassium Carbonate	R	R	R	R	R	R	R
Potassium Chlorate	R	R	R	R	R	R	R
Potassium Chloride	R	R	R	R	R	R	R
Potassium Chromate	R	R	R	R	R	R	R
Potassium Cyanate	R	R	R	R	R	R	R
Potassium Cyanide	R	R	R	R	R	R	R
Potassium Dichromate	R	R	R	R	R	R	R
Potassium Ethyl Xanthate	R	NR	NR	NR	?	?	?
Potassium Ferricyanide	R	R	R	R	R	R	R
Potassium Ferrocyanide	R	R	R	R	R	R	R
Potassium Fluoride	R	R	R	R	R	R	R
Potassium Hydroxide	R	R	R	R	R	R	R
Potassium Hypochlorite	R	R	R	R	R	R	R
Potassium Iodide	R	R	R	R	R	R	R
Potassium Nitrate	R	R	R	R	R	R	R
Potassium Perborate	R	R	R	R	R	R	R
Potassium Perchlorate	R	R	R	R	R	R	R
Potassium Permanganate 10%	R	R	R	R	R	R	R
Potassium Permanganate 25%	R	NR	R	NR	R	R	C
Potassium Persulfate	R	R	R	R	R	?	?
Potassium Phosphate	R	R	R	R	R	R	R
Potassium Sulfate	R	R	R	R	R	R	R
Potassium Sulfide	R	R	R	R	R	R	R
Potassium Sulfite	R	R	R	R	R	R	R
Potassium Tripolyphosphate	R	R	R	R	R	R	R
Propane	R	R	R	R	C	C	C
Propane Gas	R	R	R	R	C	C	C
Propanol 0.5%	R	R	R	?	R	?	R
Propanol > 0.5%	R	R	R	NR	C	C	C
Propargyl Alcohol	R	R	R	NR	C	C	C
Propionic Acid 2%	?	?	?	?	R	R	R
Propionic Acid > 2%	?	?	?	?	NR	NR	NR
Propylene Dichloride	NR	NR	NR	NR	NR	NR	NR
Propylene Glycol 25%	?	?	?	?	C	C	C

CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC Type IV Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Propylene Glycol > 25%	?	?	?	?	NR	NR	NR
Propylene Oxide	NR	NR	NR	NR	NR	NR	NR
Pyridine	NR	NR	NR	NR	NR	NR	NR
Pyrogallic Acid	R	NR	R	NR	?	?	?
Rayon Coagulating Bath	R	R	R	R	?	?	?
Refinery Crudes	R	R	?	?	C	C	C
Rochelle Salts	R	R	?	?	R	R	R
Salicylic Acid	R	R	R	R	R	R	R
Santicizer	NR	NR	NR	NR	?	?	?
Sea Water	R	R	R	R	R	R	R
Selenic Acid	R	R	R	?	?	?	?
Sewage	R	R	R	R	R	R	R
Silicic Acid	R	R	R	R	R	?	?
Silicone Oil	?	?	?	?	R	?	?
Silver Chloride	R	R	R	R	R	R	R
Silver Cyanide	R	R	R	R	R	R	R
Silver Nitrate	R	R	R	R	R	R	R
Silver Sulfate	R	R	R	R	R	R	R
Soaps	R	R	R	R	R	R	R
Sodium Acetate	R	R	R	R	R	R	R
Sodium Alum	R	R	R	R	R	R	R
Sodium Arsenate	R	R	R	R	R	?	?
Sodium Benzoate	R	R	R	R	R	R	R
Sodium Bicarbonate	R	R	R	R	R	R	R
Sodium Bichromate	R	R	R	R	R	R	R
Sodium Bisulfate	R	R	R	R	R	R	R
Sodium Bisulfite	R	R	R	R	R	R	R
Sodium Borate	R	R	R	R	R	R	R
Sodium Bromide	R	R	R	R	R	R	R
Sodium Carbonate	R	R	R	R	R	R	R
Sodium Chlorate	R	NR	R	NR	R	R	R
Sodium Chloride	R	R	R	R	R	R	R
Sodium Chlorite	NR	NR	NR	NR	R	R	R
Sodium Chromate	R	R	R	R	R	R	R
Sodium Cyanide	R	R	R	R	R	R	R
Sodium Dichromate	R	R	R	R	R	R	R
Sodium Ferricyanide	R	R	R	R	R	R	R
Sodium Ferrocyanide	R	R	R	R	R	R	R
Sodium Fluoride	R	R	R	R	R	R	R
Sodium Formate	?	?	?	?	R	R	R
Sodium Hydroxide 50%	R	R	R	R	R	R	R
Sodium Hypobromite	R	R	R	R	R	R	R
Sodium Hypochlorite	R	R	R	R	R	R	R
Sodium Iodide	R	R	R	R	R	R	R
Sodium Metaphosphate	R	R	R	R	R	R	R
Sodium Nitrate	R	R	R	R	R	R	R
Sodium Nitrite	R	R	R	R	R	R	R
Sodium Perchlorate	R	R	R	R	R	R	R
Sodium Peroxide	R	R	R	R	R	R	R

R = Recommended NR = Not Recommended
C = Caution, actual testing suggested; suspect @ certain stress levels ? = Incomplete Data; actual testing required

CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC Type IV Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Sodium Silicate	R	NR	R	NR	R	R	R
Sodium Sulfate	R	R	R	R	R	R	R
Sodium Sulfide	R	R	R	R	R	R	R
Sodium Sulfite	R	R	R	R	R	R	R
Sodium Thiosulfate	R	R	R	R	R	R	R
Sodium Tripolyphosphate	?	?	?	?	R	R	R
Sour Crude Oil	R	R	R	R	C	C	C
Soybean Oil	R	R	R	R	NR	NR	NR
Stannic Chloride	R	R	R	R	R	R	R
Stannous Chloride	R	R	R	R	R	R	R
Stannous Sulfate	R	R	R	R	R	R	R
Starch	R	R	R	R	R	R	R
Stearic Acid	R	R	R	R	R	?	?
Stoddards Solvent	NR	NR	NR	NR	C	C	C
Styrene	NR	NR	NR	NR	NR	NR	NR
Succinic Acid	R	R	R	R	R	R	R
Sugar	R	R	R	R	R	R	R
Sulfamic Acid	NR	NR	NR	NR	R	R	R
Sulfite Liquor	R	R	R	R	?	?	?
Sulfur	R	R	R	R	R	?	?
Sulfur Dioxide dry	R	R	R	R	R	R	R
Sulfur Dioxide wet	R	NR	NR	NR	R	R	R
Sulfur Trioxide	R	R	R	R	R	R	R
Sulfuric Acid 70%	R	R	R	R	R	R	R
Sulfuric Acid 80%	R	R	NR	NR	R	R	R
Sulfuric Acid 85%	R	R	NR	NR	R	C	NR
Sulfuric Acid 90%	R	NR	NR	NR	R	C	NR
Sulfuric Acid 98%	?	NR	NR	NR	R	NR	NR
Sulfuric Acid Fuming	NR	NR	NR	NR	NR	NR	NR
Sulfuric Acid Pickling	R	R	?	?	R	R	R
Sulfurous Acid	R	R	R	R	?	?	?
Tall Oil	R	R	R	R	C	C	C
Tan Oil	R	R	R	R	?	?	?
Tannic Acid 30%	R	R	R	R	R	?	?
Tanning Liquors	R	R	R	R	?	?	?
Tartaric Acid	R	R	R	R	R	?	?
Terpenes	?	?	?	?	NR	NR	NR
Terpineol	R	?	R	?	NR	NR	NR
Tetraethyl Lead	R	?	R	NR	?	?	?
Texanol	?	?	?	?	NR	NR	NR
Thionyl Chloride	NR	NR	NR	NR	NR	NR	NR
Thread Cutting Oil	R	?	R	?	C	C	C
Titanium Tetrachloride	R	NR	R	NR	?	?	?
Toluol or Toluene	NR	NR	NR	NR	NR	NR	NR
Transformer Oil	R	R	R	R	C	C	C
Tributyl Citrate	R	?	R	?	NR	NR	NR
Tributyl Phosphate	NR	NR	NR	NR	NR	NR	NR
Trichloroacetic Acid	R	?	R	?	NR	NR	NR
Trichloroethylene	NR	NR	NR	NR	NR	NR	NR

CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC TypeIV Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Triethanolamine	R	NR	R	NR	NR	NR	NR
Trilones	NR	NR	NR	NR	?	?	?
Trimethyl Propane	R	R	R	NR	?	?	?
Trimethylamine	R	NR	R	NR	?	?	?
Trisodium Phosphate	R	R	R	R	R	R	R
Turpentine	R	R	NR	NR	NR	NR	NR
Urea	R	R	R	R	R	R	R
Urine	R	R	R	R	R	R	R
Vaseline	NR	NR	NR	NR	?	?	?
Vegetable Oils	R	?	R	?	NR	NR	NR
Vinegar	R	R	R	R	R	R	R
Vinyl Acetate	NR	NR	NR	NR	NR	NR	NR
Water: Acid Mine	R	R	R	R	R	R	R
Water: Deionized	R	R	R	R	R	R	R
Water: Demineralized	R	R	R	R	R	R	R
Water: Distilled	R	R	R	R	R	R	R
Water: Fresh & Salt	R	R	R	R	R	R	R
Water: Swimming Pool	R	R	R	R	R	R	R
WD-40	?	?	?	?	C	C	C
Whiskey	R	R	R	R	R	R	R
White Liquor	R	R	R	R	R	R	R
Wines	R	R	R	R	R	R	R
Xylene or Xylol	NR	NR	NR	NR	NR	NR	NR
Zinc Acetate	R	R	R	R	R	R	R
Zinc Carbonate	R	R	R	R	R	R	R
Zinc Chloride	R	R	R	R	R	R	R
Zinc Nitrate	R	R	R	R	R	R	R
Zinc Sulfate	R	R	R	R	R	R	R

INDUSTRY STANDARDS & TEST METHODS

Spears'® products are manufactured in strict compliance with applicable industry standards and specifications to ensure strength, durability and safety. Although not inclusive, the following list of internationally recognized standards, specifications, test methods and practices relate to PVC and CPVC thermoplastic piping products and related components.

ASTM STANDARD SPECIFICATIONS

ASTM D 1784	Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds
ASTM D 1785	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe- Schedules 40- 80 and 120
ASTM D 6263	Standard Specification for Extruded Bars Made From Rigid Poly (Vinyl Chloride) (PVC) and Chlorinated Poly (Vinyl Chloride) (CPVC)
ASTM D 2464	Standard Specification for Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings- Schedule 80
ASTM D 2467	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings- Schedule 80
ASTM D 2241	Standard Specification for Poly (Vinyl Chloride) (PVC) Pressure Rated Pipe (SDR Series)
ASTM F 441	Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe- Schedules 40 and 80
ASTM F 442	Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR)
ASTM D 2672	Standard Specification for Joints for IPS PVC Pipe Using Solvent Cement
ASTM D 2846	Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot- and Cold-Water Distribution Systems
ASTM D 2466	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings- Schedule 40
ASTM D 3139	Standard Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals
ASTM D 2665	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Drain-Waste- and Vent Pipe and Fittings
ASTM F 437	Standard Specification for Threaded Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings- Schedule 80
ASTM F 438	Standard Specification for Socket-Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings- Schedule 40
ASTM F 439	Standard Specification for Socket-Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings- Schedule 80
ASTM F 477	Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe
ASTM F 480	Standard Specification for Thermoplastic Well Casing Pipe and Couplings Made in Standard Dimension Ratios (SDR)- Schedule 40 and Schedule 80
ASTM F 493	Standard Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings
ASTM F 656	Standard Specification for Primers for Use in Solvent Cement Joints of Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings
ASTM F 913	Standard Specification for Thermoplastic Elastomeric Seals (Gaskets) for Joining Plastic Pipe
ASTM D 1866	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Schedule 40 Drainage and DWV Fabricated Fittings

ASTM STANDARD TEST METHODS

ASTM D 1598	Standard Test Method for Time-to-Failure of Plastic Pipe Under Constant Internal Pressure
ASTM D 1599	Standard Test Method for Resistance to Short-Time Hydraulic Pressure of Plastic Pipe & Fittings
ASTM D 2837	Standard Test Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials
ASTM D 2412	Standard Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading
ASTM D 2444	Standard Test Method for Determination of the Impact Resistance of Thermoplastic Pipe and Fittings by Means of a Tup (Falling Weight)
ASTM D 2564	Standard Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems
ASTM D 2152	Standard Test Method for Adequacy of Fusion by Acetone Immersion
ASTM D 2122	Standard Test Method for Determining Dimensions of Thermoplastic Pipe & Fittings
ASTM F 610	Standard Test Method for Evaluating the Quality of Molded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings by the Heat Reversion Technique

ASTM STANDARD PRACTICES

ASTM D 2855	Standard Practice for Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings
ASTM D 2774	Standard Practice for Underground Installation of Thermoplastic Pressure Piping
ASTM D 2321	Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications
ASTM F 402	Standard Practice for Safe Handling of Solvent Cements- Primers- and Cleaners Used for Joining Thermoplastics Pipe and Fittings
ASTM F 690	Standard Practice for Underground Installation of Thermoplastic Pressure Piping Irrigation System
ASTM F 1057	Standard Practice for Evaluating the Quality of Extruded Poly (Vinyl Chloride) (PVC) Pipe by the Heat Reversion Technique
ASTM F 645	Standard Guide for Selection- Design- and Installation of Thermoplastic Water Pressure Systems

CSA STANDARD

CSA B137.3-99	Rigid Polyvinyl Chloride (PVC) Pipe for Pressure Applications

FIRE PERFORMANCE

ULC-S102.2-M88	Standard Method of Test for Surface Burning Characteristics of Flooring- Floor Covering- and Miscellaneous Materials and Assemblies
UL 723	Test for Surface Burning Characteristics of Building Materials
UL1821	Thermoplastic Sprinkler Pipe and Fittings for Fire Protection Service
UL 1887	Standard for Safety for Fire Test of Plastic Sprinkler Pipe for Flame and Smoke Characteristics
UL 94	Test for Flammability of Plastic Materials for Parts in Devices and Appliances
FM1635	Plastic Pipe & Fittings for Automatic Sprinkler Systems
FM4910	Clean Room Materials Flammability Test Protocol
ASTM E 84	Standard Test Method for Surface Burning Characteristics of Building Materials
ASTM D 635	Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Manufacturing in a Horizontal Position
ASTM E 162	Standard Test Method for Surface Flammability of Materials Using a Radiant Heat Energy Source
ASTM D 2863	Standard Test Method for Measuring the Minimum Oxygen Concentration to Support Candle-Like Combustion of Manufacturing (Oxygen Index)

TOXICOLOGY

NSF® Standard 61	Drinking Water System Components - Health Effects
NSF® Standard 14	Manufacturing Piping System Components and Related Materials

United States FDA Code of Federal Regulations	**Title 21**

Pressure Rating

$P = \frac{2St}{D-t}$ $S = \frac{P(D-t)}{2t}$

P is the pressure rating in psi.
S is the Hydrostatic Design Basis (usually 4000 psi) divided by the safety factor (which is 2 for the three standards).
DR is the Dimension Ratio for D2241 and C905 but is OD/t for D1785

Where:
P = pressure, psi
S = circumferential stress, psi
D = outside diameter of pipe, inches
d = inside diameter of pipe, inches (average based on mean wall)
t = average wall thickness, inches

Volume capacity-gallons per ft. length = VG = V x 0.004329

Volume capacity-cubic inches per ft. length = V = 0.7854 x d^2 x12

Outside pipe surface, sq. ft per ft. length = AO = $\frac{D^2 \pi}{12}$

Inside pipe surface, sq. ft. per ft. length = $A_I = \frac{d \pi}{12}$

Cross-sectional plastic area, sq. in. = A= $\frac{(D^2 - d^2) \pi}{4}$

Cross sectional flow area, sq. in. = $A_F = \frac{d^2 \pi}{4}$

Weight of PVC pipe, lb. per ft. length = W_{PVC} = .632 x A

Weight of CPVC pipe, lb. per ft. length = W_{CPVC} = .705 x A

Weight of water in pipe, lb. per ft. length = $W_W = 0.433\ A_F$

Weight of water filled pipe, lb. per ft. length = $W_{WFP} = W_{PVC}$ (or W_{CPVC}) + W_W

Radius of gyration, inches = $r_g = \sqrt{\frac{D^2 + d^2}{4}}$

Moment of inertia, inches fourth = $I = Ar_g^2\ .0491\ (D^4 - d^4)$

Section modulus, inches cube = $Z = \frac{2_I}{D} / = 0.0982 \times \frac{(D^4 - d^4)}{D}$

Thermal Expansion and Contraction

$\Delta L = 12\ yL\ (\Delta T)$
Where:
ΔL = expansion or contraction of pipe in inches
y = Coefficient of thermal expansion
(see PVC or CPVC material Thermal properties)
L = Length of pipe run in feet
ΔT = Temperature change °F (Maximum temperature – Temperature @ Installation or maximum system temperature – lowest system temperature, whichever is greater)

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Friction Loss (Hazen-Williams equations)

$$f = .2083 \times (100/C)^{1.852} \times \frac{G^{1.852}}{d^{4.8655}}$$

Where:
f = friction head of feet of water per 100' for the specific pipe size and I.D.
C = a constant for internal pipe roughness (=150 for thermoplastic pipe)
G = flow rate of U.S. gallons per minute
d = inside diameter of pipe in inches

Water Velocities

$$V = .3208 \times \frac{G}{A}$$

Where:
V = velocity in feet per second
G = gallons per minute
A = inside cross sectional area in square inches

Gallons Per Minute Through Pipe

GPM = 0.0408 x Pipe Diameter Inches2 x Feet Per Minute Velocity

Pressure Drop in Valves

$$P = \frac{G^2 \times S_g}{CV^2}$$

Where:
P = Pressure drop in PSI; feet of water = PSI/.4332
G = Gallons per minute
Sg = Specific gravity of liquid
C_V = Gallons per minute per 1 PSI pressure drop (see Valve product Cv from manufacturer)

Water Conversions

1 foot of head = 0.434 PSI
1 gallon = 231 cubic inch = 8.333 pounds
1 pound water = 27.7 cubic inches
1 cubic foot water = 7.5 gallon = 62.5 pounds (salt water = 64.3 pounds)
1 miner's inch = 9 to 12 gallons per minute

$$\text{Horsepower to Raise Water} = \frac{\text{Gallons Per Minute} \times \text{Total Head in Feet}}{3960}$$

VOLUME

Convert From	Into	Multiply By
Acre-feet	Cu feet	43560
	Cu meters	1233.482
	Cu yards	1613.33
	Gallons (US)	3.259×10^{5}
Cu Centimeters	Cu feet	3.5315×10^{-5}
	Cu inches	0.06102
	Cu meters	1×10^{-6}
	Cu yards	1.308×10^{-6}
	Gallons (US liq)	0.00026
	Liters	0.00099
	Ounces (US liq)	0.03381
	Pints (US liq)	0.00211
	Quarts (US liq)	0.00106
Cu Feet	Acre-feet	2.296×10^{-5}
	Cu centimeters	28316.8
	Cu inches	1728.0
	Cu meters	0.02832
	Cu yards	0.03704
	Gallons (US liq)	7.48052
	Liters	28.316
	Ounces (US liq)	957.506
	Pints (US liq)	59.8442
	Quarts (US liq)	29.922
Cu Inches	Acre-feet	1.329×10^{-8}
	Cu centimeters	16.3871
	Cu feet	0.000579
	Cu meters	1.639×10^{-5}
	Cu yards	2.143×10^{-5}
	Gallons (US liq)	0.00433
	Liters	0.01639
	Ounces (US liq)	0.55411
	Pints (US liq)	0.03463
	Quarts (US liq)	0.01732
Cu Meters	Acre-feet	0.00081
	Cu centimeters	1 x 106
	Cu feet	35.147
	Cu inches	61023.7
	Cu yards	1.30795
	Gallons (US liq)	264.172
	Liters	999.97
	Pints (US liq)	2113.38
	Quarts (US liq)	1056.69
Cu Yards	Acre-feet	6.198×10^{-4}
	Cu centimeters	764554.9
	Cu feet	27
	Cu inches	46656
	Cu meters	0.76455
	Gallons (US liq)	201.974
	Liters	764.553
	Quarts (US liq)	807.896
Gallons (US liq)	Acre-feet	3.068×10^{-6}
	Cu centimeters	3785.41
	Cu feet	0.13368
	Cu inches	231
	Cu meters	0.00378
	Cu yards	0.00495
	Liters	3.7853
	Ounces (US liq)	128
	Pints (US liq)	8
	Quarts (US liq)	4
Liters	Acre-feet	8.106×10^{-7}
	Cu centimeters	1.000.03
	Cu feet	0.03532

VOLUME - continued

Convert From	Into	Multiply By
	Cu inches	61.002
	Cu meters	0.00100003
	Cu yards	0.00131
	Gallons (US liq)	0.26148
	Ounces (US liq)	33.81497
	Pints (US liq)	2.1134
	Quarts (US liq)	1.0567
Ounces (US liq)	Cu Centimeters	29.5737
	Cu inches	1.80469
	Cu meters	2.957×10^{-5}
	Gallons (US liq)	0.00781
	Liters	0.02957
	Pints (US liq)	0.0625
	Quarts (US liq)	0.0312
Pints (US liq)	Cu Centimeters	473.176
	Cu feet	0.01671
	Cu inches	28.875
	Cu yards	0.000619
	Gallons (US liq)	0.125
	Liters	0.47316
	Quarts (US liq)	0.5

PRESSURE

Convert From	Into	Multiply By
Atmospheres	BAR	1.01325
	Ft H_2O @ 68°F	33.96
	Grams/sq cm	1033.23
	In Hg @ 32°F	29.9213
	In H_2O @ 68°F	407.5
	Kg/sq cm	1.03322
	Kg/sq meter	10332
	kilo Pascals	101.3
	mm Hg @ 32°F	760
	Pounds/sq ft	2116
	Pounds/sq in	14.6960
BAR	Atmospheres	0.98692
	Ft H_2O @ 68°F	33.51
	Grams/sq cm	1019.72
	In Hg @ 32°F	29.530
	In H_2O @ 68°F	407.5
	Kg/sq cm	1.01972
	Kg/sq meter	10197
	kilo Pascals	100
	mm Hg @ 32°F	0.1333
	Pounds/sq ft	2089.0
	Pounds/sq in	14.5038
Ft H_2O @ 68°F	Atmospheres	0.98692
	BAR	2.984×10^{-2}
	In Hg @ 32°F	0.8812
	In H_2O @ 68°F	12
	Kg/sq cm	3.043×10^{-2}
	Kg/sq meter	304.3
	kilo Pascals	2.984
	mm Hg @ 32°F	22.38
	Pounds/sq ft	62.32
	Pounds/sq in	0.4328
Grams/sq cm	Atmospheres	0.00097
	BAR	0.00098
	In Hg @ 32°F	0.02896
	Kg/sq cm	1.01972
	Kg/sq meter	1000
	kilo Pascals	100
	mm Hg @ 32°F	0.73556

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PRESSURE - continued

Convert From	Into	Multiply By
	Pounds/sq ft	2.0481
	Pounds/sq in	0.01422
In Hg @32°F	Atmospheres	0.03342
	BAR	0.03386
	Ft H_2O @ 68°F	1.135
	Grams/sq cm	34.532
	In H2O @ 68°F	13.62
	Kg/sq cm	3.453×10^{-2}
	Kg/sq meter	345.3
	kilo Pascals	3.386
	mm Hg @ 32°F	25.4
	Pounds/sq ft	70.73
	Pounds/sq in	0.4912
In H_2O @ 68°F	Atmospheres	2.454×10^{-3}
	BAR	2.49×10^{-3}
	Ft H_2O @ 68°F	8.333×10^{-2}
	In Hg @ 32°F	7.343×10^{-2}
	Kg/sq cm	2.53×10^{-3}
	Kg/sq meter	25.38
	kilo Pascals	0.249
	mm Hg @ 32°F	1.865
	Pounds/sq ft	5.197
	Pounds/sq in	3.609×10^{-2}
Kg/sq cm	Atmospheres	0.9678
	BAR	0.98066
	Ft H2O@68°F	32.87
	In Hg @32°F	28.959
	In H2O @ 68°F	394.4
	Kg/sq meter	1×10^{4}
	kilo Pascals	98.07
	mm Hg @32°F	735.6
	Pounds/sq ft	2048
	Pounds/sq in	14.22
Kg/sq meter	Atmospheres	9.678×10^{-5}
	BAR	9.807×10^{-5}
	Ft H2O@68°F	3.287×10^{-3}
	Grams/sq cm	0.1
	In Hg @32°F	0.0029
	In H2O @ 68°F	3.944×10^{-2}
	Kg/sq cm	0.001
	kilo Pascals	9.807×10^{-3}
	mm Hg @32°F	0.07356
	Pounds/sq ft	0.20482
	Pounds/sq in	1.422×10^{-3}
kilo Pascals	Atmospheres	9.869×10^{-3}
	BAR	0.01
	Ft H2O@68°F	0.3351
	In Hg @32°F	0.2953
	In H2O @ 68°F	4.022
	Kg/sq cm	1.02×10^{-2}
	Kg/sq meter	102
	mm Hg @32°F	7.501
	Pounds/sq ft	20.89
	Pounds/sq in	0.145
mm Hg @32°F	Atmospheres	1.316×10^{-3}
	BAR	1.333×10^{-3}
	Ft H2O@68°F	4.468×10^{-2}
	Grams/sq cm	1.3595
	In Hg @32°F	3.937×10^{-2}
	In H2O @ 68°F	0.5362
	Kg/sq cm	1.36 X 10-3
	Kg/sq meter	13.595
	kilo Pascals	0.1333

PRESSURE - continued

Convert From	Into	Multiply By
	Pounds/sq ft	2.7845
	Pounds/sq in	0.0193
Pounds/sq ft	Atmospheres	4.73×10^{-4}
	BAR	4.79×10^{-4}
	Ft H2O@68°F	1.605×10^{-2}
	Grams/sq cm	0.48824
	In Hg @32°F	2.036
	In H2O @ 68°F	0.1926
	Kg/sq cm	4.88×10^{-4}
	Kg/sq meter	4.882
	kilo Pascals	4.79×10^{-2}
	mm Hg @32°F	0.3591
	Pounds/sq in	6.945×10^{-3}
Pounds/sq in	Atmospheres	6.805×10^{-2}
	BAR	6.895×10^{-2}
	Ft H_2O @ 68°F	1.605 X 10-2
	Grams/sq cm	70.307
	In Hg @ 32°F	2.036
	In H_2O @ 68°F	27.73
	Kg/sq cm	7.031×10^{-2}
	Kg/sq meter	703.1
	kilo Pascals	6.895
	mm Hg @ 32°F	51.72
	Pounds/sq ft	144

VELOCITY (Distance-time)

Convert From	Into	Multiply By
Feet/day	Feet/ second	1.157×10^{-5}
	Kilometers/hour	1.27×10^{-5}
	Meters/second	3.528×10^{-6}
	Miles/hour	7.891×10^{-6}
Feet/ second	Feet/ day	8.64×10^{4}
	Kilometers/hour	1.097
	Meters/second	0.3048
	Miles/hour	0.6818
Kilometers/hour	Feet/day	7.874×10^{4}
	Feet/ second	0.9113
	Meters/second	0.2778
	Miles/hour	0.6214
Meters/second	Feet/day	2.835×10^{5}
	Feet/ second	3.281
	Kilometers/hour	3.6
	Miles/hour	2.237
Miles/hour	Feet/day	1.267×10^{5}
	Feet/ second	1.467
	Kilometers/hour	1.609
	Meters/second	0.447

DISCHARGE RATES (Volume-time)

Convert From	Into	Multiply By
Acre-feet/day	Cu feet/second	0.5042
	Cu meters/day	1234
	Gallons/minute	226.3
	Liters/second	14.28
Cu feet/second	Acre-feet/day	1.983
	Cu meters/day	2447
	Gallons/minute	448.8
	Liters/second	28.32
Cu meters/day	Acre-feet/day	6.051×10^{6}
	Cu feet/second	3.051×10^{6}
	Gallons/minute	1.369×10^{9}
	Liters/second	8.64×10^{7}

DISCHARGE RATES - continued

Convert From	Into	Multiply By
Gallons/minute	Acre-feet/day	4.419×10^{-3}
	Cu feet/second	2.228×10^{-3}
	Cu meters/day	5.45
	Liters/second	6.309×10^{-2}
Liters/second	Acre-feet/day	7.005×10^{-2}
	Cu feet/second	3.531×10^{-2}
	Cu meters/day	86.4
	Gallons/minute	15.85

TORQUE

Convert From	Into	Multiply By
Foot-pounds	Inch-pounds	12
	KF force-meters	1382.552×10^{-4}
	Newton-meters	1.356
Inch-pounds	Foot-pounds	0.8333
	KF force-meters	11547.344×10^{-6}
	Newton-meters	11559.357×10^{-5}
KF force-meters	Foot-pounds	7.233
	Inch-pounds	86.8
	Newton-meters	9.807
Newton-meters	Foot-pounds	7374.631×10^{-4}
	Inch-pounds	8.651
	KF force-meters	10196.798×10^{-5}

DENSITY

Convert From	Into	Multiply By
Pounds/Cu inch	Pounds/Cu feet	1728
	Pounds/gallon	231
	Grams/Cu cm	27.68
	Grams/liter	2.768×10^{4}
Pounds/Cu feet	Pounds/Cu inch	5.787×10^{-4}
	Pounds/gallon	0.1337
	Grams/Cu cm	1.6×10^{-2}
	Grams/liter	16.02
Pounds/gallon	Pounds/Cu inch	4.33×10^{-3}
	Pounds/Cu feet	7.481
	Grams/Cu cm	0.1198
	Grams/liter	119.8
Grams/Cu cm	Pounds/Cu inch	3.61×10^{-2}
	Pounds/Cu feet	62.43
	Pounds/gallon	8.345
	Grams/liter	1000
Grams/liter	Pounds/Cu inch	3.61×10^{-5}
	Pounds/Cu feet	6.24×10^{-2}
	Pounds/gallon	8.35×10^{-3}
	Grams/Cu cm	0.001

ENERGY

Convert From	Into	Multiply By
British Thermal Unit (BTU)	Foot-pound	777.9
	Horsepower-hr	3.929×10^{-4}
	Joules	1055
	Calorie	252
	Kilowatt-hr	2.93×10^{-4}
Foot-pound	BTU	1.285×10^{-3}
	Horsepower-hr	5.051×10^{-7}
	Joules	1.356
	Calorie	0.3239
	Kilowatt-hr	3.766×10^{-7}
Horsepower-hr	BTU	2545
	Foot-pound	1.98×10^{6}
	Joules	2.685×10^{6}
	Calorie	6.414×10^{5}

ENERGY - continued

Convert From	Into	Multiply By
	Kilowatt-hr	0.7457
Joules	BTU	9.481×10^{-4}
	Foot-pound	0.7376
	Horsepower-hr	3.725×10^{-7}
	Calorie	0.2389
	Kilowatt-hr	2.778×10^{-7}
Calorie	BTU	3.968×10^{-3}
	Foot-pound	3.087
	Horsepower-hr	1.559×10^{-6}
	Joules	4.186
	Kilowatt-hour	1.163×10^{-6}
Kilowatt-hr	BTU	3413
	Foot-pound	2.655×10^{6}
	Horsepower-hr	1.341
	Joules	3.6×10^{6}
	Calorie	8.601×10^{5}

MASS

Convert From	Into	Multiply By
Ounce	Pound	0.0625
	Kilogram	0.02834952
	Short ton	3.125×10^{-5}
	Long ton	2.79×10^{-5}
	Metric ton	2.835×10^{-5}
Pound	Ounce	16
	Kilogram	0.4536
	Short ton	0.0005
	Long ton	0.0004464
	Metric ton	0.0004536
Kilogram	Ounce	35.27396
	Pound	2.20462
	Short ton	0.001102
	Long ton	0.00098
	Metric ton	0.091
Short ton	Ounce	32000
	Pound	2000
	Kilogram	907.18
	Long ton	0.89266
	Metric ton	0.90718
Long ton	Ounce	35840
	Pound	2240
	Kilogram	1016.05
	Short ton	1.12
	Metric ton	1.10605

MASS - continued

Convert From	Into	Multiply By
Metric ton	Ounce	35273.98
	Pound	2204.62
	Kilogram	1000
	Short ton	1.1023
	Long ton	0.98421

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Words, Terms, & Phrases Used in the Plastic Industry

ABRASION RESISTANCE: Ability to withstand the effects of repeated wearing, rubbing, scraping, etc.

ACCEPTANCE TESTING: Testing performed on a product to determine whether or not an individual lot of the product conforms with specified requirements.

ACIDS: One of a class of substances compounded of hydrogen and one or more other elements, capable of uniting with a base to form a salt, and in aqueous solution, turning blue litmus paper red.

ACRYLATE RESINS: A class of thermoplastic resins produced by polymerization of acrylic acid derivatives.

ACRYLONITRILE-BUTADIENE-STYRENE (ABS) PIPE AND FITTING PLASTICS: Plastics containing polymers or blends of polymers containing butadiene, acrylonitrile, and styrene or substituted styrene plus lubricants, stabilizers, and colorants.

ADHESIVE: A substance capable of holding materials together by surface attachment.

AGING: The effect of time on plastics exposed indoors at ordinary conditions of temperature and relatively clean air.

ALKALIES: Compounds capable of neutralizing acids and usually characterized by an acrid taste. Can be mild like baking soda or highly caustic like lye.

ALIPHATIC: Derived from or related to fats and other derivatives of the paraffin hydrocarbons, including unsaturated compounds of the ethylene and acetylene series.

ALKYD RESINS: A class of resins produced by condensation of a polybasic acid or anhydride and a polyhydric alcohol.

ALLYL RESINS: A class of resins produced from an ester or other derivative of allyl alcohol by polymerization.

ANIONS: Atoms or group of atoms carrying a negative charge. The charge results because there are more electrons than protons in the anion. Anions can be a source of micro contamination in high purity water applications.

ANNEAL: To prevent the formation of or remove stresses in plastics parts by controlled cooling from a suitable temperature.

APPARENT DENSITY: The weight per unit volume of a material including voids inherent in the material as tested.

AROMATIC: A large class of cyclic organic compounds derived from, or characterized by the presence of the benzene ring and its homologs.

AUTHORITY HAVING JURISDICTION (AHJ): the individual official, board, department, or agency established and authorized by a state, county, city, or other political subdivision, created by law to administer and enforce specified requirements.

BACKFILL: All material used to fill the trench from bedding to finished surface.

BACKFILL, FINAL: Material used to fill the trench from initial backfill to finished surface.

BACKFILL, INITIAL: Material used to fill the trench from top of bedding to a designated height over the pipe.

BACKFILL, UNCONSOLIDATED: Non-compacted material in place in trench.

BEAM LOADING: The application of a load to a pipe between two points of support, usually expressed in newtons (or pounds force) and the distance between the centers of the supports.

BEDDING, n: Materials placed in the bottom of the trench on top of the foundation soil which provides stable bottom support for buried pipe including the trench bottom groove support angle or select material placed around the pipe, and envelope or filter materials where used during insulation.

BEDDING, v: Placement of support materials for buried pipe.

BELL END: The enlarged portion of a pipe that resembles the socket portion of a fitting and that is intended to be used to make a joint.

BEVELED PIPE: A pipe with an end chamfered to assist in assembly into a socket connection.

BLISTER: Undesirable rounded elevation of the surface of a plastic, whose boundaries may be either more or less sharply defined, somewhat resembling in shape a blister on the human skin. A blister may burst and become flattened.

BOND: To attach by means of an adhesive.

BRITTLE FAILURE: A pipe failure mode which exhibits no visible (to the naked eye) permanent material deformation (stretching, elongation, or necking down) in the area of the break.

BUILDING SANITARY SEWER: That part of the horizontal piping of a sanitary drainage system which extends from the building sanitary drain, receives the discharge of the building sanitary drain, and conveys it to a public sewer, private sewer, individual sewage disposal system, or other point of disposal.

BUILDING STORM SEWER: That part of the horizontal piping of a storm drainage system which extends from the building storm drain, receives the discharge of the building storm drain, and conveys it to a public storm sewer, private storm sewer, or other point of disposal.

BURNED: Showing evidence of thermal decomposition through some discoloration, distortion, or destruction of the surface of the plastic.

CALENDERING: A process by which a heated rubber plastic product is squeezed between heavy rollers into a thin sheet or film. The film may be frictioned into the interstices of cloth, or it may be coated onto cloth or paper.

CAST RESIN: A resinous product prepared by pouring liquid resins into a mold and heat treating the mass to harden it.

CATALYSIS: The acceleration (or retardation) of the speed of a chemical reaction by the presence of a comparatively small amount of a foreign substance called a catalyst.

CATIONS: Atoms or group of atoms carrying a positive charge. The charge results because there are more protons than electrons in the cation. Cations can be a source of micro contamination in high purity water applications.

CELLULOSE: Inert substance, chemically a carbohydrate, which is the chief component of the solid structure of plants, wood, cotton, linen, etc.

CELLULOSE ACETATE: A class of resins made from a cellulose base, either cotton linters or purified wood pulp, by the action of acetic anhydride and acetic acid.

CEMENT: A dispersion of "solution" of unvulcanized rubber or a plastic in a volatile solvent. This meaning is peculiar to the plastics and rubber industries and may or may not be an adhesive composition (See also Solvent Cement).

CHLORINATED POLY VINYL CHLORIDE PLASTICS (CPVC): Plastics based on chlorinated poly (vinyl chloride) in which the chlorinated poly (vinyl chloride) is in the greatest amount by weight.

COALESCENCE: The union or fusing together of fluid globules or particles to form larger drops or a continuous mass.

COEXTRUSION: A process whereby two or more heated or unheated plastic material streams forced through one or more shaping orifice(s) become one continuously formed piece.

COLD FLOW: Change in dimensions or shape of some materials when subjected to external weight or pressure at room temperature.

COMPACTION, SOIL: Act of packing soil with mechanical force to increase its density.

COMPOSITE PIPE: Pipe consisting of two or more different materials arranged with specific functional purpose to serve as pipe.

COMPOUND: A combination of ingredients before being processed or made into a finished product. Sometimes used as a synonym for material, formulation.

CONDENSATION: A chemical reaction in which two or more molecules combine, usually with the separation of water or some other simple substance.

CONDUCTIVITY: Inverse of resistivity, used to assess ionic concentration by measuring conductance of flow of electric current.

CONDUIT: A tubular raceway for carrying electric wires, cables, or other conductors.

COPOLYMER: The product of simultaneous polymerization of two or more polymerizeable chemicals, commonly known as monomers.

CRAZING: Fine cracks at or under the surface of a plastic.

CREEP: The unit elongation of a particular dimension under load for a specific time following the initial elastic elongation caused by load application. It is expressed usually in inches per inch per unit of time.

CROSS LINKING: The formation of a three dimensional polymer by means of interchain reactions resulting in changes in physical properties.

CURE TIME (Solvent Cement): The necessary waiting period before pressurizing newly assembled joints in which the solvents in the cement must evaporate to produce joint strength.

DEGRADATION: A deleterious change in the chemical structure of a plastic.

DEIONIZED RESINS (DI RESINS): Electrically charged synthetic resin beads (typically produced from polystyrene resins) used to remove ionic contaminants as a means of purifying water through the ion exchange process.

DEIONIZED WATER (DI WATER): Water that has been purified by removing dissolved solids through an ion exchange process where ionic contaminants are removed.

DELAMINATION: The separation of the layers of material in a laminate.

DETECTION LIMIT (DL): With regard to micro contaminant analysis, it is the lowest measurable quantity of a particular element that is detectable by the analytical detection method used.

DETERIORATION: A permanent change in the physical properties of a plastic evidenced by impairment of these properties.

DIELECTRIC CONSTANT: Specific inductive capacity. The dielectric constant of a material is the ratio of the capacitance of a condenser having that material as dielectric to the capacity of the same condenser having a vacuum as dielectric.

DIELECTRIC STRENGTH: This is the force required to drive an electric current through a definite thickness of the material; the voltage required to break down a specified thickness of insulation.

DIFFUSION: The migration or wandering of the particles or molecules of a body of fluid matter away from the main body through a medium or into another medium.

DIMENSIONAL STABILITY: Ability of a plastic part to maintain its original proportions under conditions of use.

DIMENSION RATIO (DR): The average specified diameter of a pipe or tubing divided by the minimum specified wall thickness. The DR values shall be rounded to the nearest 0.5 unless otherwise specified (See also Standard Dimensional Ratio).

DUCTILE FAILURE: A pipe failure mode which exhibits material deformation (stretching, elongation, or necking down) in the area of the break.

DUROMETER: Trade name of the Shore Instrument Company for an instrument that measures hardness. The rubber or plastics durometer determines the "hardness" of rubber or plastics by measuring the depth of penetration (without puncturing) of blunt needle compressed on the surface for a short period of time.

DYNAMIC LEACH ANALYSIS: Relates to analytical testing of piping materials that are tested during exposure to UPW under flowing conditions. Under flowing conditions (dynamic), grab samples of high purity water are periodically pulled from the water flowing through the pipe and are subjected to leach analysis to quantify TOC, anions, cations & trace metals and other leachable contaminants that may be present under flowing conditions. Dynamic leach analysis also enables “on-line” testing of other potential contamination by continually monitoring resistivity, particles, and TOC overtime.

ELASTIC LIMIT: The load at which a material will no longer return to its original form when the load is released.

ELASTOMER: The name applied to substances having rubber like properties.

ELECTRICAL PROPERTIES: Primarily the resistance of a plastic to the passage of electricity, e.g. dielectric strength.

ELONGATION: The capacity to take deformation before failure in tension and is expressed as a percentage of the original length.

EMBEDMENT: The placement of materials completely around the pipe to provide support.

EMULSION: A dispersion of one liquid in another possible only when they are mutually insoluble.

ENVIRONMENTAL STRESS CRACKING (ESC): The development of cracks in a material that is subjected to stress or strain in the presence of specific chemicals.

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ESTER: A compound formed by the elimination of waste during the reaction between an alcohol and an acid; many esters are liquids. They are frequently used as plasticizers in rubber and plastic compounds.

ETHYL CELLULOSE: A thermoplastic material prepared by the ethylation of cellulose by diethyl sulfate or ethyl halides and alkali.

EXTRUSION: A process in which heated or unheated plastic is forced through a shaping orifice (a die) in one continuously formed shape as film, sheet, rod, or tubing.

EXTENDER: A material added to a plastic composition to reduce its cost.

FABRICATE: Method of forming a plastic into a finished article by machining, drawing, and similar operations.

FILLER: A material added to a plastic composition to impart certain qualities in the finished article.

FITTING: A piping component used to join or terminate sections of pipe or to provide changes of direction or branching in a pipe system.

FLEXURAL STRENGTH: The outer fiber stress, which must be attained in order to produce a given deformation under a beam load.

FORMULATION: A combination of ingredients before being processed or made into a finished product. Sometimes used as a synonym for material, compound.

FUSE: To join two plastic parts by softening the material by heat or solvents.

GATE: In an injection mold, a constriction in the flow channel between the runner and the mold cavity.

GENERIC: Common names for types of plastic materials. They may be either chemical terms or coined names. They contrast with trademarks, which are the property of one company.

GRAVITY FLOW: Liquefied medium conveyance that is induced by a positive elevation head such as a downward pipeline slope or a higher elevation reservoir.

GRAY WATER: The waste water of a system that may be a combination of the liquid and water-carried wastes except human wastes.

HARDNESS: A comparative gauge of resistance to indentation, not of surface hardness or abrasion resistance.

HEAT RESISTANCE: The ability to withstand the effects of exposure to high temperature. Care must be exercised in defining precisely what is meant when this term is used. Descriptions pertaining to heat resistance properties include: boilable, washable, cigarette proof, sterilizable, etc.

HIGH-DENSITY POLYETHYLENE PLASTICS (HDPE): *n*—those linear polyethylene plastics, g.v., having a standard density of 0.941 g/cm^3 or greater.

HOOP STRESS: The circumferential stress imposed on a cylindrical wall by internal pressure loading.

IONIC CONTAMINATION: Electrically charged atoms or groups of atoms that can be a source of micro contamination in high purity water applications. Ionic contaminants are typically removed by the ion exchange (deionization) process (i.e. deionized water).

IMPACT STRENGTH: Resistance or mechanical energy absorbed by a plastic part to such shocks as dropping and hard blows.

IMPERMEABILITY: Permitting no passage into or through a material.

INJECTION MOLDING: Method of forming a plastic to the desired shape by forcing heat softened plastic into a relatively cool cavity where it rapidly solidifies.

KETONES: Compounds containing the carbonyl group (CO) to which is attached two alkyl groups. Ketones, such as methyl ethyl Ketone, are commonly used as solvents for resins and plastics.

LIGHT STABILITY: Ability of a plastic to retain its original color and physical properties upon exposure to sun or artificial light.

LIGHT TRANSMISSION: The amount of light that a plastic will pass.

LONGITUDINAL STRESS: The stress imposed on the long axis of any shape. It can be either a compressive or tensile stress.

LOW-DENSITY POLYETHYLENE PLASTICS (LDPE): *n*—those branched polyethylene plastics, q.v., having a standard density of 0.910 to 0.925 g/cm3.

LUBRICANT: A substance used to decrease the friction between solid faces, and sometimes used to improve processing characteristics of plastic compositions.

MODULUS: The load in pounds per square inch or kilos per square centimeter of initial cross sectional area necessary to produce a stated percentage elongation which is used in the physical testing of plastics.

MOISTURE RESISTANCE: Ability to resist absorption of water.

MONOMER: The simplest repeating structural unit of a polymer; for addition polymers this represents the original unpolymerized compound.

NON FLAMMABLE: Will not support combustion.

NON-PRESSURE RATED PIPE (NPR): Pipe designed for gravity-conveyed medium which must resist only intermittent static pressures and does not have a pressure rating.

NONRIGID PLASTIC: A plastic which has a stiffness or apparent modulus of elasticity of not over 10,000 psi at 23°C which is determined in accordance with the Standard Method of Test for Stiffness in Flexure of Plastics.

NON TOXIC: Non poisonous.

ORANGE PEEL: Uneven surface somewhat resembling an orange peel.

ORGANIC CHEMICAL: Originally applied to chemicals derived from living organisms, as distinguished from "inorganic" chemicals found in minerals and inanimate substances; modern chemists define organic chemicals more exactly as those, which contain the element carbon.

PHENOLIC RESINS: Resins made by reaction of a phenol compound or tar acid with an aldehyde; more commonly applied to thermosetting resins made from pure phenol.

PLASTIC: A material that contains as an essential ingredient an organic substance of large molecular weight, is solid in its finished state, and, at some stage in its manufacture or in its processing into finished articles, can be shaped by flow.

PLASTICITY: A property of plastics and resins which allows the material to be deformed continuously and permanently without rupture upon the application of a force that exceeds the yield value of the material.

PLASTICIZER: A liquid or solid incorporated in natural and synthetic resins and related substances to develop such properties as resiliency, elasticity, and flexibility.

POLYETHYLENES: A class of resins formed by polymerizing ethylene, a gas obtained from petroleum hydrocarbons.

POLYMER: A product resulting from a chemical change involving the successive addition of a large number of relatively small molecules (monomer) to form the polymer, and whose molecular weight is usually a multiple of that of the original substance.

POLYMERIZATION: Chemical change resulting in the formation of a new compound whose molecular weight is usually a multiple of that of the original substance.

POLYPROPYLENE (PP): *n*—a polymer prepared by the polymerization of propylene as the sole monomer.

POLYVINYL CHLORIDE (PVC): Polymerized vinyl chloride, a synthetic resin, which when plasticized or softened with other chemicals has some rubber like properties. It is derived from acetylene and anhydrous hydrochloric acid.

POROSITY: Presence of numerous visible voids.

POWER FACTOR: The ratio of the power in watts delivered in an alternating current circuit (real power) to the volt-ampere input (apparent power). The power factor of insulation indicates the amount of the power input, which is consumed as a result of the impressed voltage forcing a small leakage current through the material.

PRESSURE RATING (PR): The estimated maximum water pressure the pipe is capable of withstanding continuously with a high degree of certainty that failure of the pipe will not occur.

PRIMER: An organic solvent or a blend of solvents, which enhances adhesion, applied to plastic pipe and fittings prior to application of a solvent cement.

QUICK BURST TEST: An internal pressure test designed to produce failure of a piping component over a relatively short period of time, usually measured in seconds. Quick Burst tests are typically specified as a 60 to 70 second test in applicable ASTM Standards for pipe and fittings.

RECYCLED PLASTIC: A thermoplastic material recovered from usually melt processed scrap of varying sources, sometimes completely different in form from their original state.

RESILIENCE: Usually regarded as another name for elasticity. While both terms are fundamentally related, there is a distinction in meaning. Elasticity is a general term used to describe the property of recovering original shape after a deformation. Resilience refers more to the energy of recovery; that is, a body may be elastic but not highly resilient.

RESIN: An organic substance, generally synthetic, which is used as a base material for the manufacture of some plastics.

RESISTIVITY: As related to high purity water systems, it is used to asses ionic contaminant concentrations by measuring opposition to the flow of electric current in the water, and is typically measured in meg-ohms (expressed as meg-ohm resistivity of the water) to quantify the water purity.

REWORK PLASTIC: A thermoplastic plastic from a manufacturer's own production that has been reground or pelletized for reuse by that same manufacturer.

RO WATER (REVERSE OSMOSIS): Water that has been stripped of contaminants (purified) through the reverse osmosis purification process. Reverse osmosis is a filtration process whereby pressurized feed water flows across a membrane. The filtered water is known as permeate because it has penetrated the membrane. The RO process removes most organic compounds, up to 99% of all ions, and is more efficient than many alternate water purification methods.

RIGID PLASTIC: A plastic which has a stiffness or apparent modulus of elasticity greater than 100,000 psi at 23°C when determined in accordance with the Standard Method of Test for Stiffness in Flexure of Plastics.

SIMULATED WEATHERING: The exposure of plastics to cyclic laboratory conditions of high and low temperatures, high and low relative humidities, and ultraviolet radiant energy in an attempt to produce changes in their properties similar to those observed on long time continuous exposure outdoors. The laboratory exposure conditions are usually intensified beyond those encountered in actual outdoor exposure in an attempt to achieve an accelerated effect.

SIMULATED AGING: The exposure of plastics to cyclic laboratory conditions of high and low temperatures, and high and low relative humidities in an attempt to produce changes in their properties similar to those observed on long time continuous exposure to conditions of temperature and relative humidity commonly encountered indoors or to obtain an acceleration of the effects of ordinary indoor exposure. The laboratory exposure conditions are usually intensified beyond those actually encountered in an attempt to achieve an accelerated effect.

SOLVENT: The medium within which a substance is dissolved; most commonly applied to liquids used to bring particular solids into solution, e.g., acetone is a solvent for PVC.

SOLVENT CEMENT: Dissolved plastic resin or compound in a suitable solvent or mixture of solvents. The solvent cement dissolves the surfaces of the pipe and fittings to form a bond (weld) between the mating surfaces provided the proper cement is used for the particular materials and proper techniques are followed.

SOLVENT CLEANER: An organic solvent used to remove foreign matter from the surface of plastic pipe and fittings.

SPECIFIC GRAVITY: Ratio of the mass of a body to the mass of an equal volume of water at 4°C, or some other specified temperature.

SPECIFIC HEAT: Ratio of the thermal capacity of a substance to that of water at 15°C.

STABILIZER: A chemical substance, which is frequently added to plastic compounds to inhibit undesirable changes in the material, such as discoloration due to heat or light.

STANDARD DIMENSION RATIOS (SDR): A specific ratio of the average specified outside diameter to the minimum specified wall thickness (D0/t) for outside diameter-controlled plastic pipe.

STATIC LEACH ANALYSIS: Relates to analytical testing of materials that are tested during exposure to UPW (or other test medium) under static or non-flowing conditions (soak). Test method is used to quantify the degree of micro contaminants that are extracted or "leached" from the material being immersed. Various test methods are utilized to quantify any leachates detected.

STRAIN: The change per unit of length in a linear dimension of a body, that accompanies a stress. Strain is a dimensionless quantity which may be measured conveniently in percent, in inches per inch, in millimeters per millimeter, etc.

STRENGTH: The mechanical properties of a plastic, such as a load or weight carrying ability, and ability to withstand sharp blows. Strength properties include tensile, flexural, and tear strength, toughness, flexibility, etc.

STRESS CRACK: External or internal cracks in a plastic caused by tensile stresses less than that of its short time mechanical strength.

STYRENE PLASTICS: Plastics based on polymers of styrene or copolymers of styrene with other monomers, the styrene being the greatest amount by mass.

SUSTAINED PRESSURE TEST: A constant internal pressure test for an extended period of time. One thousand hours is a commonly used period of time in pipe and fitting tests.

TEAR STRENGTH: Resistance of a material to tearing (strength).

TENSILE STRENGTH: The capacity of a material to resist a force tending to stretch it. Ordinarily the term is used to denote the force required to stretch a material to rupture, and is known variously as “breaking load”, “breaking stress”, “ultimate tensile strength", and sometimes erroneously as “breaking strain”. In plastics testing, it is the load in pounds per square inch or kilos per square centimeter of original cross-sectional area, supported at the moment of rupture by a piece of test sample on being elongated.

THERMAL CONDUCTIVITY: Capacity of a plastic material to conduct heat.

THERMAL EXPANSION: The increase in length of a dimension under the influence of a change in temperature.

THERMOPLASTIC MATERIALS: Plastic materials that repeatedly can be softened by heating and hardened by cooling through a temperature range characteristic of the plastic, and that in the softened state can be shaped by flow into articles by molding or extrusion.

THERMOSET MATERIALS: Plastic materials, which undergo a chemical change and harden permanently when heated in processing. Further heating will not soften these materials.

TOTAL ORGANIC CARBON (TOC): A measurement of total organic carbon (synonymous with total oxidizable carbon and total organic chemicals) that is used to quantify organic contamination present in water. Organic matter plays a major role in water systems, as it affects biogeochemical processes, nutrient cycling, biological availability, chemical transport and interactions. It also has direct implications in the planning of water treatment and equipment. Organic matter content is typically measured as total organic carbon and dissolved organic carbon. Organic matter in water consists of thousands of components, including macroscopic particles, colloids, dissolved macromolecules, and specific compounds. As a result, the concentration of TOC’s present within the water can be of a concern in high purity water as it is a form of micro contamination.

TRANSLUCENT: Permitting the passage of light, but diffusing it so that objects beyond cannot be clearly distinguished.

VINYL CHLORIDE PLASTICS: Plastics based on resins made by the polymerization of vinyl chloride or co polymerization of vinyl chloride with minor amounts (not over 50 per cent) of other unsaturated compounds.

ULTRAPURE WATER (UPW): Water that has been purified by various methods and/or combination of methods (i.e. Reverse Osmosis, deionization etc.). The produced water is extremely pure and contains no to very low concentration of salts, organic/pyrogene components, oxygen, suspended solids and bacteria. Water quality standards are used to define the purity requirements of the UPW based on the intended application. Ultrapure water is a very aggressive cleaning agent and is used in a variety of industries (semiconductor, pharmaceutical, health care, electronics etc.) where maintaining high purity is a requirement.

VINYL PLASTICS: Plastics based on resins made from vinyl monomers, except those specifically covered by other classifications, such as acrylic and styrene plastics. Typical vinyl plastics are polyvinyl chloride, polyvinyl acetate, polyvinyl alcohol, and polyvinyl butyral, and copolymers of vinyl monomers with unsaturated compounds.

VIRGIN PLASTIC: A plastic material in the form of pellets, granules, powder, or liquid that has not been subjected to use or processing other than that required for its initial manufacture.

VISCOSITY: The property of resistance to flow exhibited within the body of a material.

VOLATILE: Property of liquids to pass away by evaporation.

VOLUME RESISTIVITY: The electrical resistance of a 1 centimeter cube of the material expressed in ohm centimeters.

WATER ABSORPTION: The percentages by weight of water absorbed by a sample immersed in water. Dependent upon area exposed.

WATER VAPOR TRANSMISSION: The penetration of a plastic by moisture in the air.

WEATHER RESISTANCE: The ability of a plastic to retain its original physical properties and appearance under prolonged exposure to outdoor weather.

WELDING: The joining of two or more pieces of plastic by fusion of the material in the pieces at adjoining or nearby areas either with or without the addition of plastic from another source.

YIELD POINT: The point at which a material will continue to elongate at no substantial increase in load during a short test period.

YIELD STRESS: The force, which must be applied to a plastic to initiate flow.


SPEARS
SOLVENT CEMENT &
ACCESSORIES
MADE IN THE U.S.A.
WITH PRIDE
TECHNICAL INFORMATION
SPEARS® MANUFACTURING COMPANY
Since 1969
SYLMAR, CALIFORNIA
Visit our web site
www.spearsmfg.com

Spears® Low VOC Solvent Cements, Primers & Accessories



Professional grade solvent cements developed for contractors' essential needs in joining PVC, CPVC and ABS pipe and fittings. Available in 1/4 pints, 1/2 pints, pints, quarts, gallons, and 5 gallons according to cement type. Plus full assortment of daubers, swabs, rollers, brushes, cans and accessories.

All Low VOC for LEED® Credit

Environmentally friendly. LEED® Compliant (Leadership in Energy and Environmental Design). Credit can be gained through the use of Spears® Low VOC products. This program, developed by the US Green Building Council, uses SCAQMD Rule 1168 as a benchmark to qualify one credit toward LEED® certification for green building.

NSF® Certified & Listed

Listed for use in piping applications such as potable water, turf, irrigation, pool & spa, industrial, plumbing, DWV, and/or sewer plus special applications including fire protection, chemical waste, and ultra-pure water. Certified as applicable to the Uniform Plumbing Code (NSF® U.P.Code) and CSA B181.2 B137.3 requirements – see specific listings

Certified to ASTM Standards

Certified by NSF International to ASTM D 2564 for PVC Solvent Cements, F 493 for CPVC Solvent Cements, D 2235 for ABS Solvent Cements, D 3138 for ABS To PVC Solvent Cements and F 656 for Primers.

Cements for Specialty Systems

Specialty Cements formulated for special systems such as Copper Tube Size (CTS) Hot & Cold Water Distribution Systems, LabWaste™ CPVC Corrosive Waste Drainage Systems, FlameGuard® CPVC Fire Sprinkler Systems, and Low Extractable PVC Ultra High Purity Water Systems.

Cements for Special Applications

Solvent cements specially formulated for a variety of environmental applications, such as POOL-PRO™ for PVC Pool & Spa applications, Wet-N-Dry for other PVC high moisture conditions, CPVC-24 the most Chemically Resistant cement available for both CPVC & PVC chemical applications, Transition cement for ABS to PVC, Multi-Purpose cement for use on PVC, CPVC, ABS & Styrene, and Hot Blue cement for PVC installation in challenging conditions including wet, damp or cold temperatures requiring rapid set and fast drying.

Progressive Products From Spears® Innovation & Technology

QUICK VIEW SELECTION GUIIDE

Type	Body	Product	Color	Relative Set	Capacity	Features
PVC	Regular	PVC-00	Clear	Fast	Schedule 40 - 4"	
		PVC-02	Clear	Fast	Schedule 40 - 4"	Dries Clearest, slightly thicker than PVC-00
	Medium	PVC-05	Clear	Fast	All Classes & Schedules - 6" Schedule 80 - 4"	*Industrial Duty* Primerless Capability[1]
		PVC-21	Blue	Fast	Schedule 40 - 6" Schedule 80 - 4"	Primerless Capability[1]
	Heavy	PVC-11	Gray	Medium	All Classes & Schedules - 12"	*Industrial Duty*
		PVC-17	Clear/ Gray	Medium	All Classes & Schedules - 12" Non-pressure - 18"	*Industrial Duty*
	Extra Heavy	PVC-19	White/ Gray	Slow	All Classes & Schedules Requiring High Gap Filling - 30"	*Industrial Duty*
	Specialty Cements	PVC-25	Aqua Blue	Very Fast	All Classes & Schedules - 6" Schedule 80 - 4"	Wet-N-Dry Formulation Primerless Capability[1]
		PVC-26	Blue	Very Fast	All Classes & Schedules - 6" Schedule 80 - 4"	POOL-PRO™ Formulation for Pool & Spa Primerless Capability.[1] Fades to clears as it cures.
		PVC-27	Clear	Very Fast	All Classes & Schedules - 6" Schedule 80 - 4"	Cold-N-Hot Formulation -15°F to 110°F Primerless Capability[1]
		PVC-50	Blue	Very Fast	Schedule 40 - 6" Schedule 80 - 4"	HOT PVC Formulation Primerless Capability[1]
		PVC-95	Clear/ Blue	Fast	All Classes & Schedules - 6" Schedule 80 - 3"	Flexible PVC for Flex-Flex, Flex-Rigid Joints
		LX-5	Clear	Fast	Low Extractable PVC Systems - 6"	One Step[2] Low Extractable, High Purity Cement
CPVC	Heavy	CPVC-24	Gray/ Orange	Medium	All Classes & Schedules PVC or CPVC - All Sizes	**Most Versatile, Chemically Resistant Cement for both CPVC & PVC Systems - including Duct -** *Industrial Duty*
	Specialty Cements	LW-5	Mustard	Medium	LabWaste™ CPVC Drainage Systems - 24"	One Step[2] Cement -Only **LabWaste™** System Chemically Approved Cement
		FS-5	Red	Fast	CPVC Fire Sprinkler Systems - 3"	One-Step[2] Cement for all CPVC Fire Sprinkler Systems - FlameGuard® & BlazeMaster®
		CTS-5	Yellow	Fast	CTS CPVC Systems - 2"	One-Step[2] Cement for all CTS CPVC Systems - EverTUFF® & FlowGuard Gold®
ABS	Medium	ABS-71	Yellow/ Milky	Fast	All ABS Classes & Schedules - 8"	
		ABS-73	Black	Fast	All ABS Classes & Schedules - 8"	
Transition & Multipurpose	Medium	ABS TO PVC-94	Green	Fast	All Classes & Schedules - 6" (Except Schedule 80)	For ABS-to-PVC Transition Joints
		MULTIPUPOSE-90	Clear	Fast	All Classes & Schedules - 6" Schedule 80 - 4"	For PVC and CPVC pressure ABS and Styrene low-pressure systems
Primers & Cleaners		Primer-70	Purple/ Clear		All Classes & Schedules PVC & CPVC - 30"	*Industrial Duty*
		Primer-68	Purple/ Clear		All Classes & Schedules PVC & CPVC - 30"	
		Cleaner-65	Clear		All Classes & Schedules -All Sizes	For PVC, CPVC, ABS or Styrene

Notes

1= Primerless Capability indicates a cement can be used without primer in certain applications if local code permits. See specific cement information for further restrictions.

2 = One Step designates a cement specifically designed for use without primer. CTS One Step acceptability depends on local code requirements.

CTS = Copper Tube Size, ASTM D2846 Hot and Cold Water Distribution Systems.

Low VOC PVC Cements

Regular, Medium, heavy and extra heavy bodied cements are specifically formulated for PVC pipe in virtually every schedule and in sizes with interference fit to 30" diameter.

- Low VOC emissions comply with SCAQMD Rule 1168/316A
- 3-Year Shelf Life

PVC SOLVENT CEMENTS	Std. Pkg.*	Pipe Size	Set Time	Available Color	Industry Listing	Features
 **PVC-00 CLEAR** Regular bodied. Excellent for plumbing, DWV, irrigation, electrical conduit pool & spa and PVC foam core pipe.	1/4 Pint 1/2 Pint Pint Quart Gallon	• 4" – All classes and schedules (except Schedule 80)	Fast	CLEAR	ASTM D2564, NSF®-PW, DWV, SW, U.P. Code	---
 **PVC-02 CLEAR** Regular bodied. Excellent for plumbing, DWV, irrigation, electrical conduit pool & spa and PVC foam core pipe.	1/4 Pint 1/2 Pint Pint Quart Gallon	• 4" – All classes and schedules (except Schedule 80)	Fast	CLEAR	ASTM D2564, NSF®-PW, DWV, SW, U.P. Code	Dries Clearest slightly thicker than PVC-00
 **PVC-05 CLEAR** Medium bodied. Designed for Industrial, plumbing, DWV, irrigation, electrical conduit pool & spa and PVC foam core pipe.	1/4 Pint 1/2 Pint Pint Quart Gallon	• 6" – All classes and schedules • 4" – Schedule 80	Fast	CLEAR	ASTM D2564, NSF®-PW, DWV, SW, U.P. Code	**Industrial Duty** Primerless Capability[1]
 **PVC-21 BLUE** Medium bodied. High strength PVC cement suitable for use on rigid PVC.†	1/4 Pint 1/2 Pint Pint Quart Gallon	• 6" – Schedule 40 • 4" – Schedule 80	Fast	BLUE	ASTM D2564, NSF®-PW, DWV, SW, U.P. Code	Primerless Capability[1]
 **PVC-11 – GRAY** Heavy bodied. Medium set allows more working time in warm weather and has good gap filling properties.	1/2 Pint Pint Quart Gallon	• 12" – All classes & Schedules	Medium	GRAY	ASTM D2564, NSF®-PW, DWV, SW, U.P. Code, CSA B137.3, B181.2	**Industrial Duty**
 **PVC-17 CLEAR/GRAY** Heavy bodied. Medium set allows more working time in warm weather and has good gap filling properties. Designed for plumbing, industrial, pool, irrigation and electrical piping systems.	1/2 Pint Pint Quart Gallon	• 12" – All classes & Schedules • 18" – Non-Pressure	Medium	CLEAR/ GRAY	ASTM D2564, NSF®-PW, DWV, SW, U.P. Code (Clear/Gray) CSA B137.3, B181.2 (Gray only)	**Industrial Duty**
 **PVC-19 WHITE/GRAY** Extra Heavy bodied. Designed for large size piping systems requiring high gap filling properties such as industrial piping and fitting fabrication in pressure and non-pressure applications.	Pint Quart Gallon 5 Gallon	• 30" – All classes & Schedules Requiring High Gap Filling	Slow	WHITE/ GRAY	ASTM D2564, NSF®-PW, DWV, SW, U.P. Code CSA B137.3, B181.2 (Gray Only)	**Industrial Duty**

Notes

1 = Primerless Capability indicates a cement can be used without primer in certain applications if local code permits

† = Can be used without primer on PVC Schedule 40 and SDR pressure water piping systems if local code permits. Do not use PVC-21 without primer in any other application, schedule, or size such as Schedule 80 industrial applications.

* = Contact Spears for special packaging not listed.

PVC SPECIALTY SOLVENT CEMENTS	Std. Pkg.*	Pipe Size	Set Time	Available Color	Industry Listing	Features
 **PVC-25 AQUA BLUE WET-N-DRY** Medium bodied. Formulated for wet conditions and quick pressurization. Designed for irrigation, plumbing, and pool & spa applications.	1/4 Pint 1/2 Pint Pint Quart Gallon	• 6" – All classes and schedules • 4" – Schedule 80	Very Fast	AQUA BLUE	ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.	Wet-N-Dry Formulation Primerless Capability[1]
 **PVC-26 POOL-PRO™ BLUE** Medium bodied. Formulated specifically for wet conditions in pool & spa applications. Fades to clear as it cures.	1/4 Pint 1/2 Pint Pint Quart Gallon	• 6" – All classes and schedules • 4" – Schedule 80	Very Fast	BLUE	ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.	Pool & Spa Formulation Primerless Capability[1]
 **PVC-27 CLEAR COLD-N-HOT** Medium Bodied. Designed for industrial, plumbing, irrigation, pool & spa, electrical conduit and PVC foam core pipe.	Pint Quart Gallon	• 6" – All classes and schedules • 4" – Schedule 80	Very Fast	CLEAR	ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.	Cold-N-H Formulation -15°F to 110°F Primerless Capability[1]
 **PVC-50 HOT BLUE** Medium bodied. Excellent for use in challenging conditions including wet damp or cold temperatures in irrigation, plumbing DWV, pool & spa, and non-pressure applications. PVC-50 may be used without primer on Schedule 40 pipe and fittings if local code permits.	1/4 Pint 1/2 Pint Pint Quart Gallon	• 6" – Schedule 40 • 4" – Schedule 80	Very Fast	BLUE	ASTM D2564, NSF®-PW, DWV, SW, U.P. Code	HOT PVC Formulation Primerless Capability[1]
 **PVC-95 CLEAR/BLUE Flexible** Medium Bodied. Specially formulated for use on flex-to-flex and flex-to-rigid PVC connections. Maintains high-strength, flexible joints.	1/4 Pint 1/2 Pint Pint Quart Gallon	• 6" – All classes and schedules • 3" – Schedule 80	Fast	CLEAR/ BLUE	ASTM D2564, NSF®-PW, DWV, SW, U.P. Code	Flexible PVC for Flex-Flex, Flex-Rigid Joints
 **LX-5 CLEAR** Low Extractable One-Step Cement. Specifically formulated for use with Spears® Low Extractable PVC piping. Unlike conventional PVC solvent cements, LX-5 contains fewer contaminants and cures quickly to reduce potential for TOC contamination.	Pint Quart	• 6" – Low Extractable PVC Systems	Fast	CLEAR	ASTM D2564, NSF®-PW, DWV, SW, U.P. Code	One Step[2] Low Extractable, High Purity Cement

Notes
1 = Primerless Capability indicates a cement can be used without primer in certain applications if local code permits
2 = One Step designates a cement specifically designed for use without primer.
* = Contact Spears for special packaging not listed.

CPVC Low VOC Cements

Heavy bodied cements are specifically formulated for CPVC plastic pipe and fittings including a variety of One-Step (no primer required) CPVC specialty cements. These products are ideal for use in hot/cold water plumbing systems, water treatment and chemical plants, as well as industrial piping systems.

- Low VOC emissions comply with SCAQMD Rule 1168/316A
- 2-Year Shelf Life

CPVC SOLVENT CEMENTS	Std. Pkg.*	Pipe Size	Set Time	Available Color	Industry Listing	Features
 **CPVC-24 GRAY/ORANGE** Heavy bodied. High-strength, chemical-resistant solvent cement for use with CPVC piping systems carrying acids, bases, salts, and sodium hypochlorite. Ideal for use in waste water plants. Recommended for use on PVC industrial piping systems for chemical applications; best choice for both PVC and CPVC fume & air duct systems.	1/4 Pint 1/2 Pint Pint Quart Gallon	• 24" – All classes and schedules PVC or CPVC - All Sizes	Medium	GRAY/ ORANGE	ASTM F493, NSF®-PW, DWV, SW, U.P. Code.	Most Versatile, Chemically Resistant Cement for both CPVC & PVC Systems - including Duct - **Industrial Duty**

NOTES
* = Contact Spears for special packaging not listed.

CPVC SPECIALTY SOLVENT CEMENTS	Std. Pkg.*	Pipe Size	Set Time	Available Color	Industry Listing	Features
 **LW-5 MUSTARD** One-Step CPVC cement specifically formulated and approved for use with Spears® **LabWaste™** CPVC Corrosive Waste Drainage System Products.	1/4 Pint 1/2 Pint Pint Quart Gallon 5 Gallon	• 24" – **Lab-Waste™** CPVC Drainages Systems	Medium	MUSTARD	ASTM F493, NSF®-CW, PW, DWV, SW, U.P. Code, ICC-ES PMG	One Step[1] Cement - Only **Labwaste™** System Chemically Approved Cement
 **FS-5 RED** One-Step CPVC Cement specifically formulated and approved for use with Spears® FlameGuard® and other approved CPVC Fire Sprinkler Products.	Pint Quart	• 3" – CPVC Fire Sprinkler Systems	Fast	RED	ASTM F493, NSF®-PW, DWV, SW, U.P. Code, UL®, FM® Approved.	One Step[1] Cement for all CPVC Fire Sprinkler Systems - FlameGuard® & BlazeMaster®
 **CTS-5 EverTUFF® YELLOW** Medium bodied. Cement for copper tube size pipe and fittings.	1/4 Pint 1/2 Pint Pint Quart Gallon	• 4" – All classes and schedules (except Schedule 80)	Fast	YELLOW	ASTM F493/D2846, NSF®-PW, DWV, SW, U.P. Code, CSA B137.6, B181.2	One Step[1] Cement for all CTS CPVC Systems - EverTUFF® & FlowGuard Gold®

Notes
1 = One Step designates a cement specifically designed for use without primer. CTS One Step acceptability depends on local code requirements.
CTS = Copper Tube Size, ASTM D2846 Hot and Cold Water Distribution Systems
* = Contact Spears for special packaging not listed.

ABS Low VOC Cements

ABS cements are specially formulated for rigid ABS pipe and fittings in all classes, schedules and fittings having interference type sockets. These medium-bodied, fast setting cements are used for all classes and schedules with interference fit through 8" diameter in ABS drain, waste and vent systems (DWV), and sewer applications. Do not use primer on ABS pipe and fittings.

- Low VOC emissions comply with SCAQMD Rule 1168/316A
- 3-Year Shelf Life

ABS SOLVENT CEMENTS	Std. Pkg.*	Pipe Size	Set Time	Available Color	Industry Listing	Features
 **ABS-71 YELLOW/MILKY** Medium bodied. ABS solvent cement for all classes and schedules of pipe and fittings.	1/4 Pint 1/2 Pint Pint Quart Gallon	• 8" – All ABS Classes & Schedules	Fast	YELLOW/ MILKY	ASTM D2235, NSF®-DWV, SW, U.P. Code CSA (Yellow Only) B181.1	---
 **ABS-73 BLACK** Medium bodied. ABS solvent cement for all classes and schedules of pipe and fittings.	1/4 Pint 1/2 Pint Pint Quart Gallon	• 8" – All ABS Classes & Schedules	Fast	BLACK	ASTM D2235, NSF®-DWV, SW, U.P. Code	---

Notes
* = Contact Spears for special packaging not listed.

ABS to PVC Transition & Multi Purpose Low VOC Cements

Designed for joining PVC, ABS, CPVC and Styrene pipe and fittings, involving both similar materials and transition joints between dissimilar plastic materials.

- Low VOC emissions comply with SCAQMD Rule 1168/316A
- 3-Year Shelf Life

TRANSITION & MULTI-PURPOSE SOLVENT CEMENTS	Std. Pkg.*	Pipe Size	Set Time	Available Color	Industry Listing	Features
 **ABS TO PVC-94 ABS-PVC GREEN** Medium bodied. Specifically designed for use on ABS to PVC transition joints in non-pressure systems. Suitable for sewer and DWV applications.	1/4 Pint 1/2 Pint Pint Quart Gallon	• 6" – All Classes & Schedules (Except Schedule 80)	Fast	GREEN	ASTM D3138, NSF®-DWV, SW, U.P. Code	For ABS-to-PVC Transition Joints
 **MP-90 MULTI-PURPOSE CLEAR** Medium bodied. High-strength cement for PVC and CPVC pressure and on ABS and styrene low-pressure systems.	1/2 Pint Pint Quart	• 6" – All Classes & Schedules • 6" – Schedule 80	Fast	CLEAR	Meets D2564, D2235 & F493	For PVC and CPVC pressure ABS and Styrene low-pressure systmes

Notes
* = Contact Spears for special packaging not listed.

Low VOC Solvent Primers & Cleaners

Primers are used for the surface preparation of plastic pipe and fittings, which is necessary for the proper solvent welding of these materials. Cleaner aids in pre-cleaning to remove oil and grease.

- All Spears® Primers and Cleaners are low VOC products, which are environmentally friendly with lower emissions and reduced odor, surpassing the most stringent regulations and comply with SCAQMD Rule 1168/316A.
- Spears® Primers are certified for use with potable water by NSF International.
- 3-Year Shelf Life

PRIMERS & CLEANERS	Std. Pkg.*	Available Color	Industry Listing	Features
 **PRIMER-70 INDUSTRIAL GRADE PURPLE/CLEAR** Premium, industrial strength primer essential for proper softening and preparation of PVC and CPVC pipe and fitting surfaces. Specially recommended for use on Schedule 80 (150 psi and higher) and large size pipe. Excellent for cold weather applications.	1/4 Pint 1/2 Pint Pint Quart Gallon	PURPLE/CLEAR	ASTM F656, NSF®-PW, DWV, SW U.P. Code (Purple Only).	**Industrial Duty**
 **PRIMER-68 PURPLE/CLEAR** Essential for proper softening and preparation of PVC and CPVC pipe and fitting surfaces. Choose from Clear or Purple color which provides positive identification that a primer was used (check local code requirements).	1/4 Pint 1/2 Pint Pint Quart Gallon	PURPLE/CLEAR	ASTM F656, NSF®-PW, DWV, SW U.P. Code (Purple Only)..	---
 **CLEANER-65 CLEAR** Water-thin cleaner recommended for use before priming of pipe and fittings to remove dirt oil and grease from the bonding surfaces of PVC, CPVC, ABS and Styrene.	1/4 Pint 1/2 Pint Pint Quart Gallon	CLEAR	---	For PVC, CPVC, ABS or Styrene

Notes
* = Contact Spears for special packaging not listed.

Applicators & Accessories

	**Can-Mate Kit:** Includes Plastic Carrier Strap and two (2) Can-Mate 150 adjustable Daubers. Provides convenient carrying of 1/2 pint, pint or quart cans of cement and primer.
	**Can-Mate Daubers:** Adjustable Plastic Applicator with Telescoping Stem for use with Standard 1/2 Pint, Pint and Quart Cans. See application footnotes below.
	**Cap Dauber:** Fits 1-3/4" Neck Cans. Size by Dauber Diameter and Can Fitment. See application footnotes below.
	**Small-Cap Swab:** Fits 1-3/4" Neck Quart Cans (MT-651). 4" length for pipe size 3" to 8".
	**Large-Cap Swab:** Fits 2-7/8" Neck Gallon Can (MT-648). For pipe size 6" & larger.
	**Swab with Heavy Handle:** For pipe size 6" & larger.
	**Small-Cap Roller:** Fits 1-3/4" Neck Quart Cans (MT-651). Replaceable Cover. For pipe size 3" to 6".
	**Can Roller:** Fits Paint Type Quart Can (MT-653). For use with pipe sizes 3" to 6".
	**Large-Cap Roller:** Fits 2-7/8" Neck Gallon Can (MT-648). Roller for pipe size 6" & larger.
	**Roller with Heavy Handle:** Replaceable Cover. For pipe size 6" & larger.
	**Roller Replacement Covers:** Fits Rollers with Heavy Handles #5520, 6020 & #6520. Sold as Pack of 2, full pack only.
	**Cap Brushes:** For Pint and Quart Cans.
	**Acid Brush:** Small Utility Brush.
	**Standard Empty Cans:** 1-3/4" Neck
	**Large Mouth Empty Cans:** 2-7/8" Neck
	**Easy Pour Spout:** Fits 1/4 Pint, 1/2 Pint, Pint, Quart, Gallon Can 1-3/4" Neck.
	**Paint Type Empty Cans**
	**Deburring Tool:** Cone Type for PVC, CPVC, ABS, PE & PB pipe from 1/2" through 2".

Solvent Cemented Pipe Joints Initial Set Schedule, Cure Schedule And Cement Usage Table

The following are basic guidelines and may require adjustment according to application or installation conditions. Certain specialty cements, such as FlameGuard® FS-5, may have different instructions for specific application conditions. Consult appropriate installation instructions for details.

INITIAL SET SCHEDULE: The Initial set schedule is the necessary waiting period before handling newly assembled joints. After initial set, the joint will withstand the stress of a normal installation. In damp or humid weather allow 50% more set time.

AVERAGE INITIAL SET SCHEDULE FOR SPEARS® PVC/CPVC SOLVENT CEMENTS

Temperature Range	Pipe Sizes 1/2" to 1-1/4"	Pipe Sizes 1-1/2" to 2"	Pipe Sizes 2-1/2" to 8"	Pipe Sizes 10" to 15"	Pipe Sizes 15"+
60°-100°F/16º-38ºC	2 minutes	5 minutes	30 minutes	2 hours	4 hours
40°-60°F/5º-16ºC	5 minutes	10 minutes	2 hours	8 hours	16 hours
0°-40°F/-18º-5ºC	10 minutes	15 minutes	12 hours	24 hours	48 hours

JOINT CURE SCHEDULE: The Joint cure schedule is the necessary waiting period before pressurizing newly assembled joints. Follow the schedule carefully. In damp or humid weather or chemical applications, allow a minimum of 50% more cure time.

AVERAGE JOINT CURE SCHEDULE FOR SPEARS® PVC/CPVC SOLVENT CEMENTS

Relative Humidity 60% or Less	Cure Time Pipe Sizes 1/2" to 1-1/4"		Cure Time Pipe Sizes 1-1/2" to 2"		Cure Time Pipe Sizes 2-1/2" to 8"		Cure Time Pipe Sizes 10" to 15"	Cure Time Pipe Sizes 15"+
Temperature range during assembly and cure periods	Up to 160 psi	Above 160 to 370 psi	Up to 160 psi	Above 160 to 315 psi	Up to 160 psi	Above 160 to 315 psi	Up to 100 psi	Up to 100 psi
60°-100°F/16º-38ºC	15 min	6 hrs	30 min	12 hrs	1-1/2 hrs	24 hrs	48 hrs	72 hrs
40°-60°F/5º-16ºC	20 min	12 hrs	45 min	24 hrs	4 hrs	48 hrs	96 hrs	6 days
0°-40°F/-18º-5ºC	30 min	48 hrs	1 hour	96 hrs	72 hrs	8 days	8 days	14 days

AVERAGE NUMBER OF JOINTS PER QUART OF SPEARS® CEMENT

Pipe Diameter	1/2"	3/4"	1"	1-1/2"	2"	3"	4"	6"	8"	10"	12"	15"	18"	20"	24"
Number of Joints	300	200	125	90	60	40	30	10	5	2-3	1-2	3/4	1/2	7/16	5/16

NOMINAL INCH AND CORRESPONDING NOMINAL MILLIMETER PIPE SIZES

in.	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	6"	8"	10"	12"	14"	18"	24"	30"
mm.	20	25	32	40	50	63	75	90	110	160	200	250	315	355	450	600	800

SPEARS® APPLICATOR SELECTION GUIDE

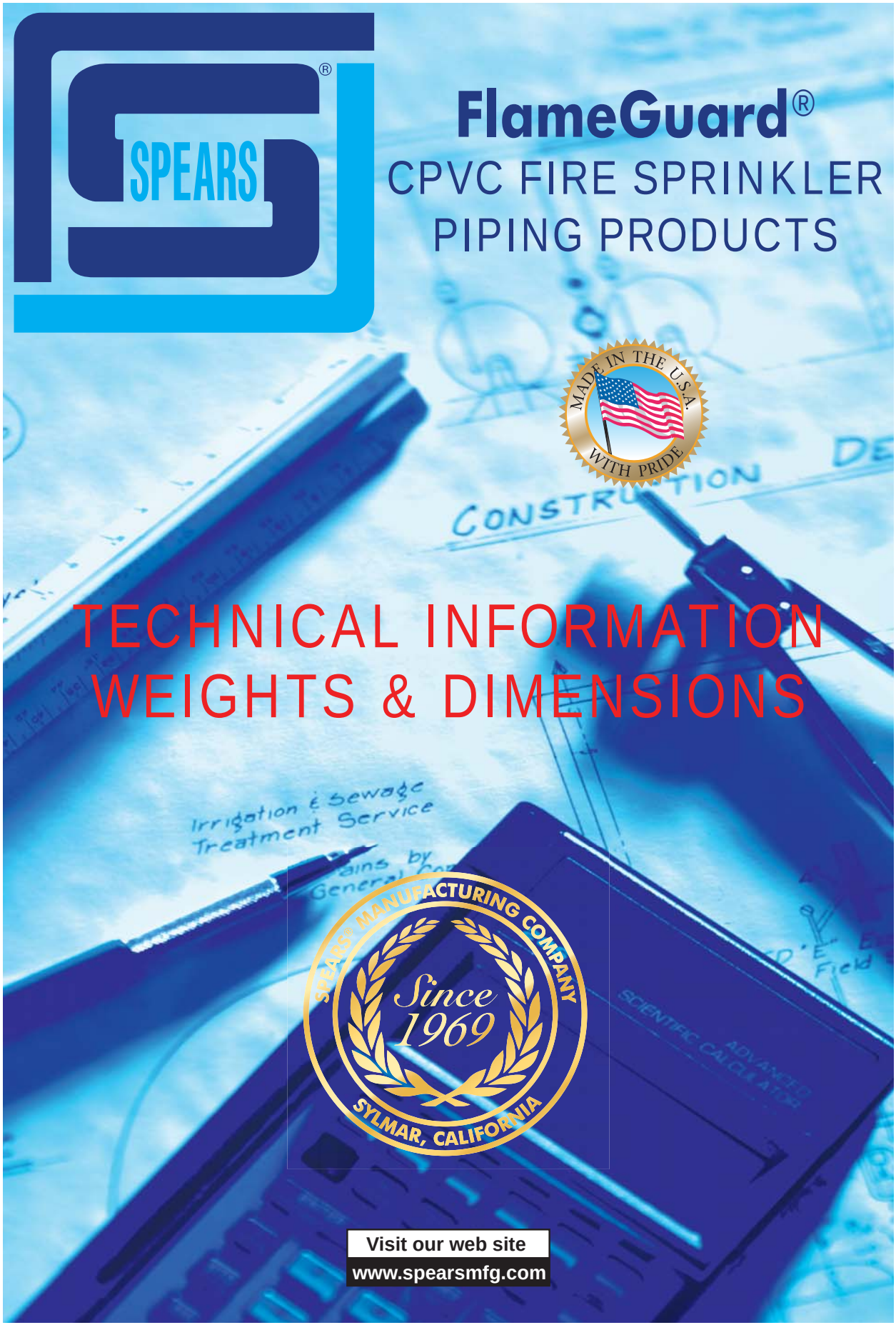
For proper solvent cement welding of pipe and fittings, the cement applicator must be no less than half the size of the pipe

DAUBERS	Pipe Diameters							
	1/4"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	3"
3/8" Dauber	•	•	•					
1/2" Dauber			•	•				
5/8" Dauber				•	•			
3/4" Dauber					•	•		
1-1/4" Dauber							•	•

ROLLERS & SWABS	SIZE	FOR PIPE DIAMETERS
3020	3" Roller	3" - 6"
6020	4" Roller	3" - 8"
7020	7" Roller	6" +
5520	4" Roller	6" +
6520	6" Roller	6" +
4020	4" Swab	6" +
5020	4" Swab	3" - 8"
4520	4" Swab	6" +

PRODUCT SHELF LIFE

Spears® Products	Shelf Life	Spears® Products	Shelf Life
Primers / Cleaners	3 years	CPVC Solvent Cement	2 years
PVC Solvent Cement	3 years	ABS Solvent Cement	3 years


SPEARS
FlameGuard®
CPVC FIRE SPRINKLER
PIPING PRODUCTS
MADE IN THE U.S.A.
WITH PRIDE
TECHNICAL INFORMATION
WEIGHTS & DIMENSIONS
SPEARS® MANUFACTURING COMPANY
Since 1969
SYLMAR, CALIFORNIA
Visit our web site
www.spearsmfg.com

FlameGuard® CPVC FIRE SPRINKLER PIPING PRODUCTS

Complete System of Pipe, Fittings & Solvent Cement
Corrosion Resistant • Superior Flow • Ease of Installation



Spears® **FlameGuard®** CPVC Fire Sprinkler Products provide a cost effective alternative to metal systems with advantages of high corrosion resistance, improved system hydraulics, ease of installation and quick assembly with readily available tools. CPVC Fire Sprinkler Systems are based on proven products that have been in continuous service for over 40 years. Spears® **FlameGuard®** products are approved by UL®, FM® Global, LPCB and Certified by NSF International for potable water use. Check local codes for restrictions and limitations.



Corrosion Resistant CPVC Material Does Not Sustain Biological Growth

Unlike metal systems, **FlameGuard®** CPVC products never rust, scale or pit and do not sustain biological growth - a cause of Microbiologically Influenced Corrosion (MIC) which can destroy metal fire sprinkler systems from the inside out.

Superior Flow Characteristics for Lower Friction Losses

The smooth-wall interior surfaces of **FlameGuard®** CPVC systems result in reduced friction loss over metal systems. The design flow characteristics remain constant throughout the life of the product because there is no interior corrosion in the system due to microbiological activity.

Pressure Rated to 175 psi (1200kpa) @ 150°F (65°C)

FlameGuard® CPVC Products are produced in combinations of Schedule 40 and Schedule 80 Fitting configurations conforming to ASTM F 438 or F 439 standards and **FlameGuard®** SDR 13.5 CPVC Fire Sprinkler Pipe conforming to ASTM F 442 standards. UL® Rated working pressure is 175 psi (1200kpa) @ 150°F (65°C) (LPCB rated to 120°F) (49°C).

Easy Installation for Lower Costs

FlameGuard® CPVC system installations significantly reduce costs over conventional metal piping by virtually eliminating prefabrication. Systems can be fully installed on site using solvent cement joining methods.

UL® Listed for U.S. and Canada in NFPA 13, 13R & 13D Systems

FlameGuard® CPVC Fire Sprinkler Products are UL® listed for U.S. and Canada applications for Light Hazard occupancies as defined in NFPA 13, Residential occupancies up to and including 4-stories as defined in NFPA 13R, and Residential occupancies for one and two family dwellings and manufactured homes as defined in NFPA 13D. Consult Spears® **FlameGuard®** CPVC Fire Sprinkler Products Installation Instructions and NFPA Standards for additional applications including air plenum, system risers, concealed, exposed, underground, combustable attic, garage, basement and low pressure dry piping installations.

Full Limited Lifetime Warranty

FlameGuard® CPVC Fire Sprinkler Products carry a limited lifetime warranty against defects in material or workmanship. Consult Spears® warranty for additional details.

Spears® FlameGuard® . . . The Leader in Innovative CPVC Fire Sprinkler System Products

Pioneer in Molded-in Metal Insert Head Adapters



Spears® pioneered the development of the **FlameGuard®** molded-in-place metal thread insert for connection of sprinkler heads to CPVC fire sprinkler systems, plus Metal FIPT threaded female adapters for metal-to-plastic transitions.

Developed the Special Reinforced (SR) Head Adapters



Spears® **FlameGuard®** continuous improvement program developed the technology to produce a superior patented plastic threaded fitting - the Special Reinforced (SR) Design. This unique design incorporates a patented thermoplastic compression process that equalizes stresses generated by tapered thread joint make-up. All CPVC plastic body and threads provide a more uniform construction and improved corrosion resistance.

Now, the Revolutionary TorqueSafe™ Gasket Sealed Head Adapter



- Requires NO Thread Sealants • Eliminates Stress
- Prevents Over Tightening • Provides Easy Frame Alignment

Spears® revolutionary design features a special molded-in-place Brass Thread Insert fitted with an elastomer gasket seal at the base of the threads. The gasket seal allows a modified thread design that eliminates radial stress and associated problems typical with tapered thread joint make up. The insert is designed to rotate for easy sprinkler frame alignment without over tightening. Patent Pending.

Full Assortment of Specialty Products & Fitting Configurations

Spears® **FlameGuard®** provides the specialty fittings needed in today's fire sprinkler systems. Like the adjustable drop nipple for fine-tuning to finished ceiling height, and ringed head adapter for ease of locating during installation. Plus, Spears® **FlameGuard®** line offers a full assortment of CPVC fire sprinkler fitting configurations including Tees, Elbows, Flanges, Couplings, Caps, Male Adapters, Grooved Coupling Adapters and Unions, sizes 3/4" through 3"; with new 3/4" and 1" Repair Couplings.

Complete Size Range of CPVC Pipe



Spears® **FlameGuard®** CPVC Fire Sprinkler Pipe is available in sizes 3/4" to 3". Conforms to ASTM F 442 standard for SDR 13.5 CPVC pipe.

Spears® Solvent Cements & Thread Sealant

FlameGuard® products should be installed using Spears® FS-5 One-Step Solvent Cement. For threaded joints, use Spears® BLUE 75™ Thread Sealant that has been tested for compatibility with **FlameGuard®** CPVC Fire Sprinkler Products. Spears® **TorqueSafe™** Gasket Sealed Adapter requires no sealant. Consult sprinkler head manufacturer prior to use.

The information contained in this section is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611—East Coast: (678) 985-1263].

General Information

RECOMMENDATIONS FOR INSTALLERS AND USERS:

Plastic piping systems should be **ENGINEERED, INSTALLED** and **OPERATED** in accordance with **ESTABLISHED DESIGN AND ENGINEERING STANDARDS AND PROCEDURES** for plastic piping systems. Suitability for the intended service application should be determined by the installer and/or user prior to installation of a plastic piping system. All Installation and maintenance personnel should be trained in the proper handling and installation requirements and precautions of plastic piping systems. **PRIOR TO ASSEMBLY, all piping system components should be inspected for damage or irregularities. Mating components should be checked to assure that tolerances and engagements are compatible. Do not use any components that appear irregular or do not fit properly. Contact the appropriate manufacturer of the component product in question to determine usability. Consult all applicable codes and regulations for compliance prior to installation.**

Installation must be made in accordance with Spears® Manufacturing Company
FlameGuard® CPVC Fire Sprinkler Piping Products Installation Instructions - FG-3

NOTE — Individual or group instruction in correct solvent welding procedures is available by contacting your local distributor or your servicing Spears® Regional Distribution Center.

SOLVENT CEMENT CONNECTIONS — Spears® Manufacturing Company recommends the use of Spears® FS-5 One Step solvent cement for joining Spears® products. Use of solvent cementing products not approved for CPVC fire sprinkler systems, or failure to follow installation instructions will automatically void the warranty.

THREADED CONNECTION — Spears® Manufacturing Company recommends the use of Spears® **BLUE 75™** Thread Sealant. This product has been tested by Spears® and the sealant manufacturer for compatibility with the Spears® CPVC fire sprinkler products. Consult the sprinkler head manufacturer before using this product. **WARNING: OTHER PIPE JOINT COMPOUNDS OR PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING IN THE CPVC OR OTHER FITTING COMPONENTS.** Care must be taken to avoid over torquing - generally 1 to 2 turns beyond finger tight is all that is required to make up a threaded connection. Factory testing has indicated 10-25 ft. lbs. of torque is adequate to obtain a leak free seal.

GASKET SEALED THREAD CONNECTIONS — This type of connection can only be made with Spears® TorqueSafe™ style Gasket Sealed Female Sprinkler Adapters. DO NOT USE ANY TYPE OF THREAD SEALANT WHEN INSTALLING THIS TYPE OF ADAPTER. Tape or paste may impair proper sealing and function. Testing has shown that hand tight until snug is all that is needed to seal this special connection.

Installation Training Available - Contact Spears® Technical Services for Details

FlameGuard® Products must be installed in accordance with Spears® CPVC Fire Sprinkler Piping Products Installation Instructions, National Fire Protection Association Standards 13, 13R, 13D, and in accordance with local codes. Code requirements and field conditions may differ. It is the responsibility of the installing contractor to insure that the product is suitable to meet these requirements.

Dimension Reference

G = (LAYING LENGTH) Intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses; ± 1/32 inch.

H = Intersection of center lines to face of fitting; 90° elbows tees, crosses; ± 1/32 inch.

J = Intersection of center lines to bottom of socket/thread; 45° elbows; ± 1/32 inch

L = Overall length of fittings; ± 1/16 inch.

M = Outside diameter of socket/thread hub; ± 1/16 inch.

N = Socket bottom to socket bottom; couplings; ± 1/16 inch.

Q = Width of flats; ±1/16 inch.

W = Height of cap; ± 1/16 inch.

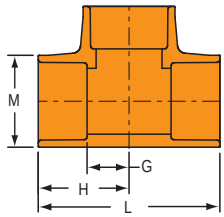
CPVC FIRE SPRINKLER PIPE SDR 13.5 (ASTM F 442)

Part Number	Nominal Size		Average O.D.		Average I.D.		Approx. Weight Lbs./Ft.
	Inches	(mm)	Inches	(mm)	Inches	(mm)	
CP-007	3/4	(19.1)	1.050	(26.7)	.874	(22.5)	.181
CP-010	1	(25.4)	1.315	(33.4)	1.101	(28.2)	.280
CP-012	1-1/4	(31.8)	1.660	(42.2)	1.394	(35.6)	.418
CP-015	1-1/2	(38.1)	1.900	(48.3)	1.598	(40.7)	.550
CP-020	2	(50.8)	2.375	(60.3)	2.003	(50.9)	.872
CP-025	2-1/2	(63.5)	2.875	(73.0)	2.423	(61.5)	1.260
CP-030	3	(76.2)	3.500	(88.9)	2.950	(75.0)	1.900

"Lead Free" low lead certification – unless other wise specified, all Spears® FlameGuard® fittings specified here-in are certified by NSF International to ANSI/NSF® Standard 61, Annex G and is in compliance with California's Health & Safety Code Section 116825 (commonly known as AB1953) and Vermont Act 193. Weighted average lead content <=0.25%. Spears® PVC and CPVC Pipe, Fittings and Valves have always been lead-free and Certified by NSF International for use in potable water systems. Spears® offers a wide range of lead-free specialty fittings and transition adapters for plumbing applications. However, certain brass threaded adapter fittings for applications that are not intended to convey water for human consumption through drinking or cooking are still produced and available.

TEE

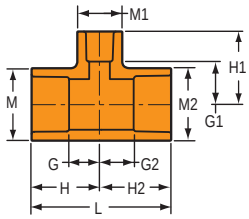
Socket x Socket x Socket



Part Number	Size	G	H	L	M	Approx. Wt. (Lbs.)
4201-007	3/4	9/16	1-1/2	2-31/32	1-5/16	.11
4201-010	1	13/16	1-13/16	3-5/8	1-5/8	.20
4201-012	1-1/4	15/32	2-3/32	4-7/32	2	.29
4201-015	1-1/2	1-5/32	2-9/16	5-3/32	2-11/32	.54
4201-020	2	1-13/32	2-15/16	5-7/8	2-7/8	.86
4201-025	2-1/2	1-23/32	3-1/2	7	3-15/32	1.62
4201-030	3	2-1/16	3-31/32	7-15/16	4-5/32	2.53

REDUCING TEE

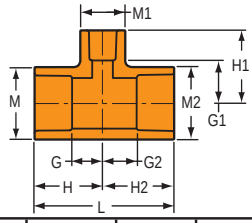
Socket x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4201-102	3/4x3/4x1	3/4	25/32	3/4	1-11/16	1-13/16	1-11/16	3-3/8	1-5/16	1-21/32	1-5/16	.13
4201-125	1x3/4x3/4	3/4	7/8	21/32	1-25/32	1-25/32	1-21/32	3-13/32	1-19/32	1-5/16	1-5/16	.16
4201-126	1x3/4x1	3/4	1-7/8	1-3/32	1-27/32	2-31/32	1-31/32	3-13/16	1-23/32	1-23/32	1-13/32	.26
4201-131	1x1x3/4	21/32	13/16	21/32	1-25/32	1-13/16	1-25/32	3-9/16	1-5/8	1-5/16	1-5/8	.16
4201-157	1-1/4x1x3/4	11/16	1-1/32	11/16	1-15/16	2-1/32	1-13/16	3-25/32	2-3/32	1-13/32	1-23/32	.32
4201-158	1-1/4x1x1	27/32	29/32	25/32	2-1/16	2-1/32	1-29/32	3-15/16	1-31/32	1-5/8	1-5/8	.24
4201-159	1-1/4x1x1-1/4	31/32	31/32	31/32	2-7/32	2-7/32	2-3/32	4-11/32	2-3/32	2-3/32	1-23/32	.35
4201-167	1-1/4x1-1/4x3/4	21/32	1	21/32	1-29/32	2	1-29/32	3-13/16	2	1-5/16	2	.22
4201-168	1-1/4x1-1/4x1	13/16	31/32	13/16	2-1/16	2-3/32	2-1/16	4-1/8	1-31/32	1-21/32	2	.24
4201-169	1-1/4x1-1/4x1-1/2	1-1/8	15/16	1-1/8	2-3/8	2-11/32	2-3/8	4-3/4	2-3/32	2-11/32	2-3/32	.51
4201-201	1-1/2x1-1/4x3/4	11/16	1	1/4	2-1/16	2	1-15/16	4	2-5/16	1-3/8	2-1/16	.41
4201-202	1-1/2x1-1/4x1	27/32	1-1/32	1	2-7/32	2-5/32	2-1/4	4-15/32	2-5/16	1-11/16	2-1/16	.42
4201-210	1-1/2x1-1/2x3/4	11/16	1-1/32	11/16	2-1/16	2-1/32	2-1/16	4-5/32	2-11/32	1-13/32	2-11/32	.39
4201-211	1-1/2x1-1/2x1	13/16	1-3/16	13/16	2-3/16	2-1/4	2-3/16	4-3/8	2-11/32	1-23/32	2-11/32	.41
4201-212	1-1/2x1-1/2x1-1/4	1	1-1/8	1	2-3/8	2-11/32	2-3/8	4-13/16	2-11/32	2-3/32	2-11/32	.48
4201-213	1-1/2x1-1/2x2	1-5/16	1-1/8	1-5/16	2-11/16	2-21/32	2-11/16	5-3/8	2-11/32	2-27/32	2-11/32	.72
4201-248	2x2x3/4	11/16	1-13/32	11/16	2-7/32	2-7/16	2-7/32	4-7/16	2-27/32	1-3/8	2-27/32	.52
4201-249	2x2x1	27/32	1-7/16	27/32	2-11/32	2-9/16	2-11/32	4-23/32	2-7/8	1-3/4	2-7/8	.57
4201-250	2x2x1-1/4	1	1-11/32	1	2-17/32	2-19/32	2-17/32	5-3/32	2-27/32	2-3/32	2-27/32	.63
4201-251	2x2x1-1/2	1-7/32	1-13/32	1-7/32	2-11/16	2-25/32	2-11/16	5-3/8	2-27/32	2-11/32	2-27/32	.85
4201-289	2-1/2x2-1/2x1	27/32	1-23/32	27/32	2-5/8	2-27/32	2-5/8	5-1/4	3-17/32	1-23/32	3-17/32	1.01
4201-290	2-1/2x2-1/2x1-1/4	1-3/32	1-23/32	1-3/32	2-27/32	2-31/32	2-27/32	5-21/32	3-17/32	2-3/32	3-17/32	1.13

REDUCING TEE (continued)

Socket x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4201-291	2-1/2x2-1/2x1-1/2	1-3/16	1/2	1-3/16	2-15/16	1-7/8	2-15/16	5-7/8	3-15/32	2-11/32	3-15/32	1.26
4201-292	2-1/2x2-1/2x2	1-13/32	1-5/8	1-13/32	3-3/16	3-1/8	3-3/16	6-11/32	3-1/2	3-7/8	3-1/2	1.34
4201-335	3x3x1	7/8	1-15/16	7/8	2-3/4	3-1/16	2-3/4	5-15/32	4-3/16	1-23/32	4-3/16	1.26
4201-336*	3x3x1-1/4	1-3/8	1-3/4	1-3/8	3-5/16	3-1/2	3-5/16	6-5/8	4-1/8	2-7/8	4-1/8	1.94
4201-337	3x3x1-1/2	1-5/32	2-1/16	1-5/32	3-1/32	3-7/16	3-1/32	6-3/32	4-3/16	2-3/8	4-3/16	1.46
4201-338	3x3x2	1-7/16	1-13/16	1-7/16	3-5/16	3-5/16	3-5/16	6-19/32	4-3/16	2-7/8	4-3/16	1.69
4201-339	3x3x2-1/2	1-3/4	1-31/32	1-3/4	3-5/8	3-23/32	3-5/8	7-1/4	4-3/16	3-17/32	4-3/16	2.11

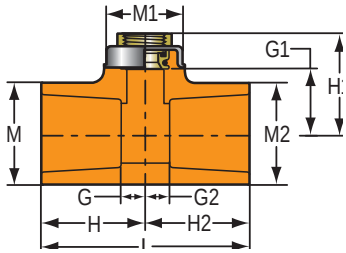
*** Branch Outlet Sized with Bushing**

TorqueSafe™ SPRINKLER HEAD TEE

Gasket Sealed Brass Thread Insert Style

Socket x Socket x Gasket FIPT

With Elastomer Seal - Use NO Thread Sealant



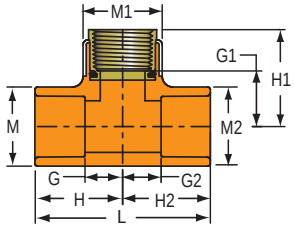
Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4202-101 G	3/4x3/4x1/2	7/16	1-3/16	7/16	1-7/16	1-7/16	1-17/32	2-29/32	1-3/8	1-3/8	1-3/8	.22
4202-124 G	1x3/4x1/2	7/16	1-11/32	9/16	1-9/16	1-11/16	1-9/16	3-1/8	1-11/16	1-3/8	1-3/8	.26
4202-130 G	1x1x1/2	7/16	1-11/32	7/16	1-9/16	1-11/16	1-9/16	3-1/8	1-23/32	1-3/8	1-23/32	.28
4202-166 G	1-1/4x1-1/4x1/2	7/16	1-5/8	7/16	1-11/16	1-15/16	1-11/16	3-3/8	2-1/16	1-3/8	2-1/16	.34
4202-209 G	1-1/2x1-1/2x1/2	1/2	1-13/16	1/2	1-7/8	2-3/32	1-7/8	3-3/4	2-11/32	1-3/8	2-11/32	.41
4202-247 G	2x2x1/2	1/2	2-1/16	1/2	2	2-11/32	2	4-1/32	2-27/32	1-3/8	2-27/32	.54

Not intended to convey or dispense water for human consumption through drinking or cooking

SPRINKLER HEAD TEE

Brass Thread Insert Style

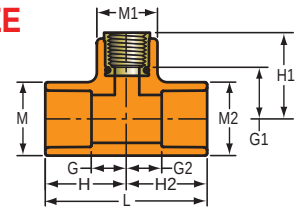
Socket x Socket x Fipt



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4202-010	1x1x1	21/31	1-3/16	21/31	1-25/32	1-29/32	1-25/32	3-19/32	1-23/32	1-23/32	1-23/32	.37

Not intended to convey or dispense water for human consumption through drinking or cooking

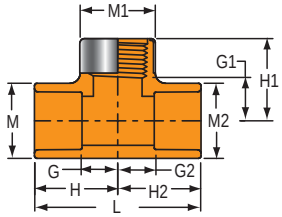
SPRINKLER REDUCING HEAD TEE
Brass Thread Insert Style
Socket x Socket x Fipt



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4202-101	3/4x3/4x1/2	7/16	1-1/16	7/16	1-15/32	1-5/8	1-15/32	2-29/32	1-13/32	1-3/16	1-13/32	.20
4202-124	1x3/4x1/2	7/16	1-11/32	9/16	1-9/16	1-11/16	1-9/16	3-1/8	1-11/16	1-3/8	1-3/8	.26
4202-130	1x1x1/2	7/16	1-7/32	7/16	1-9/16	1-25/32	1-9/16	3-1/8	1-3/4	1-3/16	1-3/4	.26
4202-156	1-1/4x1x1/2	7/16	1-7/16	9/16	1-11/16	2-1/32	1-11/16	3-3/8	2-3/32	1-3/16	1-23/32	.30
4202-166	1-1/4x1-1/4x1/2	7/16	1-1/2	7/16	1-11/16	2-1/16	1-11/16	3-13/32	2-3/32	1-3/16	2-3/32	.32
4202-199	1-1/2x1-1/4x1/2	1/2	1-5/8	9/16	1-7/8	2-3/16	1-13/16	3-11/16	2-11/32	1-3/16	2-1/16	.37
4202-209	1-1/2x1-1/2x1/2	1/2	1-23/32	1/2	1-7/8	2-3/32	1-7/8	3-3/4	2-5/16	1-17/32	2-5/16	.45
4202-237	2x1-1/2x1/2	1/2	1-27/32	17/32	2	2-7/16	1-29/32	3-15/16	2-7/8	1-3/16	2-11/32	.47
4202-247	2x2x1/2	1/2	1-31/32	1/2	2	2-3/8	2	4-1/32	2-27/32	1-17/32	2-27/32	.58

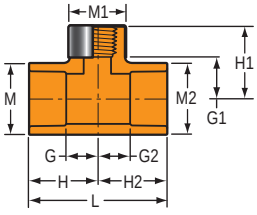
Not intended to convey or dispense water for human consumption through drinking or cooking

SPRINKLER HEAD TEE
Special Reinforced
Plastic Thread Style
Socket x Socket x SR Fipt



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4202-010SR	1x1x1	21/32	3/4	21/32	1-25/32	1-5/8	1-25/32	3-19/32	1-23/32	1-11/16	1-23/32	.26

SPRINKLER REDUCING HEAD TEE
Special Reinforced
Plastic Thread Style
Socket x Socket x SR Fipt

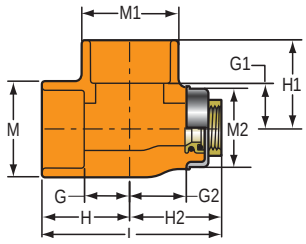


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4202-101SR	3/4x3/4x1/2	19/32	3/4	19/32	1-19/32	1-7/16	1-19/32	3-7/32	1-13/32	1-3/16	1-13/32	.16
4202-124SR	1x3/4x1/2	7/16	29/32	9/16	1-19/32	1-5/8	1-9/16	3-5/32	1-23/32	1-3/16	1-17/32	.19
4202-130SR	1x1x1/2	7/16	29/32	7/16	1-9/16	1-5/8	1-9/16	3-1/8	1-23/32	1-3/16	1-23/32	.20
4202-156SR	1-1/4x1x1/2	15/32	1-5/32	19/32	1-23/32	1-7/8	1-23/32	3-13/32	2-3/32	1-3/16	1-23/32	.26
4202-166SR	1-1/4x1-1/4x1/2	7/16	1-1/8	7/16	1-11/16	1-27/32	1-11/16	3-3/8	2-3/32	1-3/16	2-3/32	.26
4202-168SR	1-1/4x1-1/4x1	27/32	1-1/32	27/32	2-3/32	1-29/32	2-3/32	4-7/32	2-3/32	1-11/16	2-3/32	.34
4202-199SR	1-1/2x1-1/4x1/2	9/16	1-9/32	17/32	1-15/16	2	1-25/32	3-23/32	2-11/32	1-3/16	2-3/32	.33
4202-209SR	1-1/2x1-1/2x1/2	1/2	1-1/4	1/2	1-7/8	1-31/32	1-7/8	3-3/4	2-11/32	1-3/16	2-11/32	.35
4202-211SR	1-1/2x1-1/2x1	27/32	1-7/32	27/32	2-7/32	2-1/8	2-7/32	4-15/32	2-11/32	1-23/32	2-11/32	.44
4202-237SR	2x1-1/2x1/2	23/32	1-9/16	3/8	2-7/32	2-9/32	1-3/4	3-31/32	2-7/8	1-3/16	2-11/32	.45
4202-247SR	2x2x1/2	1/2	31/32	1/2	2	1-11/16	19/32	4	2-7/8	1-3/16	2-7/8	.48
4202-287SR	2-1/2x2-1/2x1/2	17/32	1-3/4	17/32	2-9/32	2-1/2	2-9/32	4-19/32	3-1/2	1-7/32	3-1/2	.78

TORQUESAFE™ SPRINKLER HEAD TEE
Gasket Sealed Brass Thread Insert Style

Socket x Gasket FIPT x Socket

With Elastomer Seal - Use NO Thread Sealant

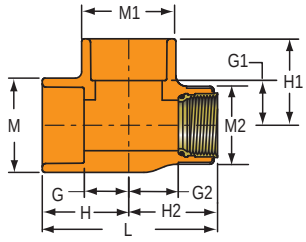


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4203-122 G	1x1/2x1	19/32	13/16	1-13/32	1-19/32	1-27/32	1-3/4	3-11/32	1-5/8	1-5/8	1-3/8	.25

Not intended to convey or dispense water for human consumption through drinking or cooking

SPRINKLER HEAD TEE
Brass Thread Insert Style

Socket x Fipt x Socket

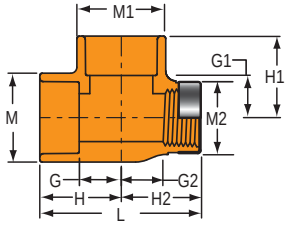


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4203-122	1x1/2x1	23/32	3/4	1-1/4	1-5/8	1-5/8	1-15/16	3-1/2	1-23/32	1-23/32	1-3/16	.25

Not intended to convey or dispense water for human consumption through drinking or cooking

SPRINKLER HEAD TEE
Special Reinforced Plastic Thread Style

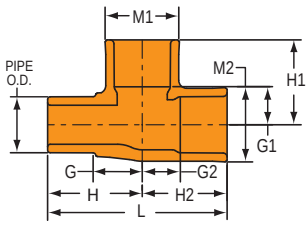
Socket x SR Fipt x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4203-122SR	1x1/2x1	27/32	23/32	1-3/32	1-23/32	1-5/8	1-25/32	3-13/32	1-3/4	1-3/4	1-3/16	.21

STREET TEE

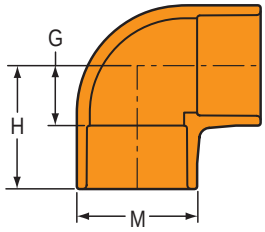
Spigot x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M1	M2	Approx. Wt. (Lbs.)
4244-007	3/4	13/16	27/32	27/32	1-13/16	1-7/8	1-7/8	3-5/8	1-13/32	1-13/32	.16
4244-010	1	1-5/32	1-1/32	1-1/32	2-1/8	1-29/32	1-29/32	4-3/16	1-3/4	1-3/4	.27
4244-012	1-1/4	1-1/4	1	1	2-7/16	2-9/32	2-9/32	4-27/32	2-3/32	2-3/32	.42
4244-015	1-1/2	1-13/16	1-1/8	1-1/8	2-7/8	2-9/16	2-9/16	5-11/32	2-11/32	2-11/32	.56
4244-020	2	1-23/32	1-7/16	1-13/32	3-1/4	2-15/16	2-15/16	6-5/32	2-7/8	2-7/8	.84

90° ELBOW

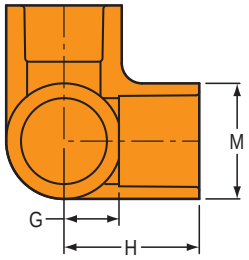
Socket x Socket



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
4206-007	3/4	9/16	1-1/2	1-5/16	.07
4206-010	1	3/4	1-5/8	1-5/8	.11
4206-012	1-1/4	7/8	2-5/32	2	.21
4206-015	1-1/2	1-5/32	2-17/32	2-3/8	.41
4206-020	2	1-13/32	2-29/32	2-7/8	.45
4206-025	2-1/2	1-5/8	3-7/16	3-7/16	1.17
4206-030	3	1-29/32	3-23/32	4-3/16	1.80

SIDE OUTLET ELBOW

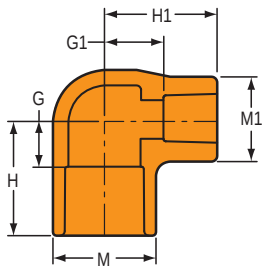
Socket x Socket x Socket



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
4213-007	3/4	27/32	1-19/32	1-5/16	.09
4213-010	1	13/16	1-7/8	1-5/8	.18

REDUCING 90° ELBOW

Socket x Socket

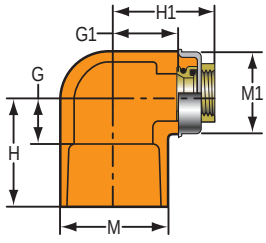


Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
4206-131	1x3/4	25/32	11/16	1-25/32	1-25/32	1-19/32	1-5/16	.11

TorqueSafe™ 90° SPRINKLER HEAD ELBOW
Gasket Sealed Brass Thread Insert Style

Socket x Gasket FIPT

With Elastomer Seal - Use NO Thread Sealant

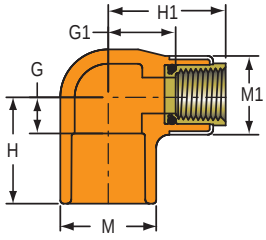


Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
4207-101 G	3/4x1/2	9/16	1-7/32	1-13/32	1-17/32	1-13/32	1-3/8	.19
4207-130 G	1x1/2	15/32	1-13/32	1-9/16	1-11/16	1-23/32	1-3/8	.23
4207-166 G	1-1/4x1/2	15/32	1-19/32	1-15/16	1-11/16	2-3/32	1-3/8	.25

Not intended to convey or dispense water for human consumption through drinking or cooking

SPRINKLER HEAD 90° ELBOW
Brass Thread Insert Style

Socket x Fipt

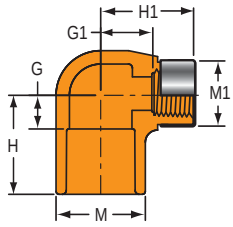


Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
4207-101	3/4x1/2	1/2	1-3/32	1-1/2	1-5/8	1-13/32	1-3/16	.17
4207-130	1x1/2	15/32	1-19/32	1-1/4	1-25/32	1-23/32	1-3/16	.20
4207-131	1x3/4	17/32	1-11/32	1-21/32	1-31/32	1-23/32	1-3/8	.25
4207-166	1-1/4x1/2	15/32	1-17/32	1-11/16	1-15/16	2-3/32	1-17/32	.33

Not intended to convey or dispense water for human consumption through drinking or cooking

SPRINKLER HEAD 90° ELBOW
Special Reinforced Plastic Thread Style

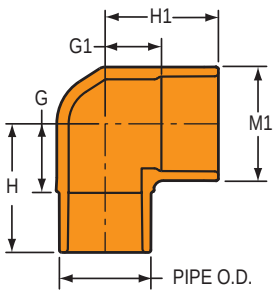
Socket x SR Fipt



Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
4207-101SR	3/4x1/2	11/32	13/16	1-15/32	1-1/2	1-13/32	1-3/16	.14
4207-130SR	1x1/2	7/16	7/8	1-9/16	1-5/8	1-23/32	1-3/8	.20
4207-131SR	1x3/4	1/2	7/8	1-5/8	1-9/16	1-23/32	1-3/8	.16
4207-166SR	1-1/4x1/2	13/32	1-1/32	1-21/32	1-23/32	2-3/32	1-7/32	.19

90° STREET ELBOW

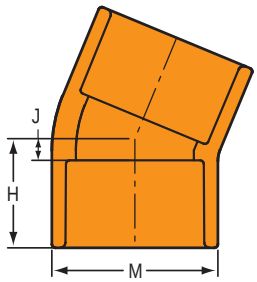
Spigot x Socket



Part Number	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
4209-007	3/4	29/32	19/32	1-15/16	1-11/16	1-13/32	.12
4209-010	1	1-9/32	23/32	2-13/32	1-27/32	1-3/4	.21
4209-012	1-1/4	1-9/16	27/32	2-13/16	2-3/32	2-3/32	.32
4209-015	1-1/2	1-15/32	1-3/16	2-27/32	2-9/16	2-11/32	.42
4209-020	2	1-23/32	1-3/8	3-7/32	2-15/16	2-27/32	.65

22-1/2° ELBOW

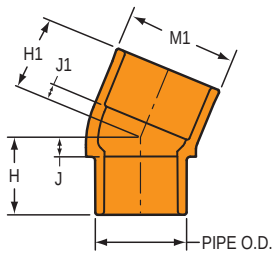
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
4216-007	3/4	1-3/16	7/32	1-13/32	.09
4216-010	1	1-3/8	9/32	1-25/32	.14
4216-012	1-1/4	1-1/2	5/16	2-3/32	.20
4216-015	1-1/2	1-7/16	13/32	1-3/8	.19
4216-020	2	1-7/8	3/8	2-27/32	.43
4216-030	3	2-3/8	1/2	4-5/32	1.00

22-1/2° STREET ELBOW

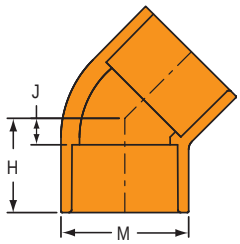
Spigot x Socket



Part Number	Size	H	H1	J	J1	M1	Approx. Wt. (Lbs.)
4242-007	3/4	1-1/4	1-1/2	1/4	1/2	1-3/8	.08
4242-010	1	1-7/16	1-11/32	5/16	7/32	1-23/32	.14
4242-012	1-1/4	1-9/16	1-25/32	17/32	11/16	2-1/16	.21
4242-015	1-1/2	1-13/32	1-23/32	1/2	11/32	2-11/32	.28
4242-020	2	1-29/32	2-1/8	7/32	5/8	2-7/8	.42
4242-025	2-1/2	2-1/8	2-1/4	13/32	1/2	3-1/2	.68
4242-030	3	2-13/32	2-13/32	9/16	17/32	4-5/32	.99

45° ELBOW

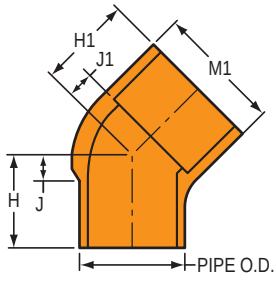
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
4217-007	3/4	1-11/32	13/32	1-5/16	.07
4217-010	1	1-13/32	3/8	1-5/8	.11
4217-012	1-1/4	1-5/8	3/8	2-1/8	.24
4217-015	1-1/2	1-27/32	15/32	2-11/32	.32
4217-020	2	2-1/8	5/8	2-7/8	.48
4217-025	2-1/2	2-17/32	3/4	3-1/2	.88
4217-030	3	2-29/32	29/32	4-5/32	1.16

45° STREET ELBOW

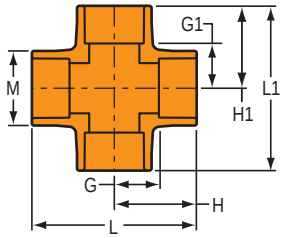
Spigot x Socket



Part Number	Size	H	H1	J	J1	M1	Approx. Wt. (Lbs.)
4227-010	1	1-1/2	1-5/16	1/2	1/4	1-5/8	.10
4227-012	1-1/4	1-25/32	1-9/16	9/16	11/32	1-31/32	.15
4227-015	1-1/2	2-1/32	2-1/8	19/32	25/32	2-11/32	.29
4227-020	2	2-5/16	1-15/16	25/32	13/32	2-7/8	.44

CROSS

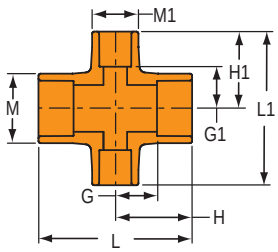
Socket x Socket x Socket x Socket



Part Number	Size	G	G1	H	H1	L	L1	M	Approx. Wt. (Lbs.)
4220-007	3/4	5/8	5/8	1-21/32	1-21/32	3-5/16	3-5/16	1-13/32	.22
4220-010	1	3/4	3/4	1-5/8	1-5/8	3-1/4	3-1/4	1-23/32	.23
4220-012	1-1/4	1-1/8	1-1/8	2-3/8	2-3/8	4-3/4	4-3/4	2-3/32	.63
4220-015	1-1/2	1-7/32	1-7/32	2-5/8	2-5/8	5-7/32	5-7/32	2-3/8	.80
4220-020	2	1-1/2	1-1/2	3	3	6	6	3	1.36
4220-025	2-1/2	1-11/16	1-11/16	3-7/16	3-7/16	6-7/8	6-7/8	3-17/32	2.16
4220-030	3	2-3/32	2-3/32	3-31/32	3-31/32	7-15/16	7-15/16	4-7/16	3.37

REDUCING CROSS

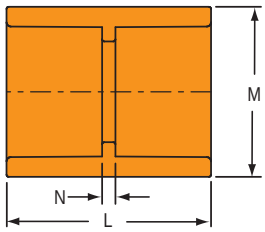
Socket x Socket x Socket x Socket



Part Number	Size	G	G1	H	H1	L	L1	M	M1	Approx. Wt. (Lbs.)
4220-131	1x3/4	23/32	5/8	1-5/8	1-5/8	3-1/4	3-1/4	1-7/8	1-1/2	.31
4220-167	1-1/4x3/4	1-1/16	23/32	2-1/16	1-31/32	4-3/32	3-31/32	2-1/16	1-13/32	.35
4220-210	1-1/2x3/4	11/16	1-5/32	2-3/32	2-3/16	4-3/16	4-11/32	2-3/8	1-13/32	.42
4220-248	2x3/4	11/16	1-7/16	2-7/32	2-7/16	4-13/32	4-7/8	2-29/32	1-13/32	.56
4220-289	2-1/2x1	29/32	1-3/4	2-11/16	2-7/8	5-11/32	5-3/4	3-1/2	1-3/4	.98

COUPLING

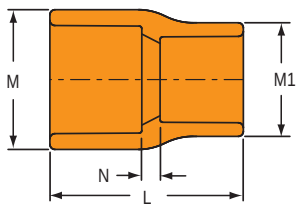
Socket x Socket



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
4229-007	3/4	2-1/8	1-5/16	3/16	.05
4229-010	1	2-3/16	1-5/8	3/32	.08
4229-012	1-1/4	2-19/32	2	3/32	.13
4229-015	1-1/2	2-7/8	2-11/32	3/32	.22
4229-020	2	3-1/8	2-7/8	1/8	.33
4229-025	2-1/2	3-11/16	3-15/32	3/16	.48
4229-030	3	4	4-3/16	1/4	.89

REDUCER COUPLING

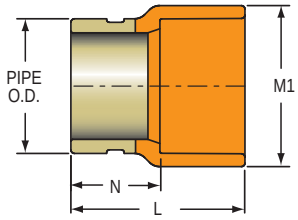
Socket x Socket



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4229-131	1x3/4	2-3/8	1-23/32	1-13/32	7/32	.10
4229-167	1-1/4x3/4	2-19/32	2-3/32	1-5/8	11/32	.17
4229-168	1-1/4x1	2-11/16	2-3/32	1-23/32	5/16	.18
4229-210	1-1/2x3/4	2-13/16	2-11/32	1-13/32	15/32	.19
4229-211	1-1/2x1	2-7/8	2-11/32	1-15/16	3/8	.24
4229-212	1-1/2x1-1/4	2-13/16	2-13/32	2-1/8	5/32	.23
4229-248	2x3/4	3-3/16	2-7/8	1-7/16	23/32	.32
4229-249	2x1	3-1/8	2-7/8	1-23/32	1/2	.31
4229-250	2x1-1/4	3-3/16	2-7/8	2-1/8	17/32	.33
4229-251	2x1-1/2	3-3/16	2-27/32	2-11/32	9/32	.31
4229-291	2-1/2x1-1/2	3-23/32	3-15/32	2-11/32	21/32	.51
4229-292	2-1/2x2	3-21/32	3-1/2	2-7/8	13/32	.52
4229-339	3x2-1/2	3-27/32	4-3/16	3-1/2	3/16	.80

GROOVED COUPLING ADAPTER

Groove x Socket



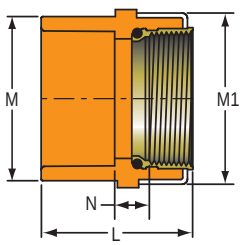
Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4233-012	1-1/4	3-5/8	2-3/32	2-11/32	.72
4233-015	1-1/2	3-3/4	2-11/32	2-11/32	.83
4233-020	2	3-27/32	2-27/32	2-11/32	1.27
4233-025	2-1/2	4-3/16	3-15/32	2-7/16	2.02
4233-030	3	4-5/32	4-1/8	2-7/16	2.79

Not intended to convey or dispense water for human consumption through drinking or cooking

FEMALE ADAPTER

Brass Thread Insert Style

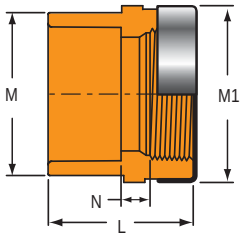
Socket x Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4235-007	3/4	2	1-13/32	1-3/8	5/16	.23
4235-010	1	2-3/16	1-3/4	1-11/16	11/32	.25
4235-012	1-1/4	2-3/8	2-3/32	2-1/16	11/32	.36
4235-015	1-1/2	2-9/16	2-3/8	2-7/16	11/32	.47
4235-020	2	2-25/32	2-27/32	3-3/16	7/16	1.05

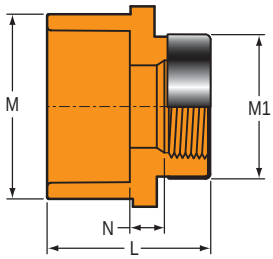
Not intended to convey or dispense water for human consumption through drinking or cooking

FEMALE ADAPTER
Special Reinforced Plastic Thread Style
Socket x SR Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4235-007SR	3/4	1-7/8	1-13/32	1-3/8	3/32	.08
4235-010SR	1	2-5/32	1-23/32	1-7/8	3/32	.22
4235-012SR	1-1/4	2-5/16	2-1/8	2-1/16	3/16	.20

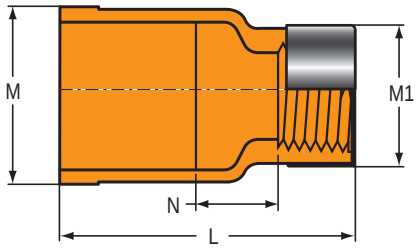
FEMALE SPRINKLER HEAD ADAPTER
Special Reinforced Plastic Thread Style
Socket x SR Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4235-101SR	3/4x1/2	1-29/32	1-13/32	1-3/16	1/8	.08
4235-130SR	1x1/2	1-15/16	1-23/32	1-3/8	3/32	.16
4235-131SR	1x3/4	2-3/32	1-3/4	1-3/8	1/4	.13

FEMALE SPRINKLER HEAD ADAPTER
Special Reinforced Plastic Thread Style with Socket Wrench Flats
Socket x SR Fipt

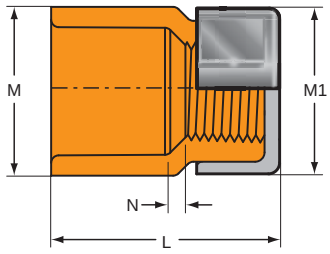
M = Flat-to-Flat Dimension



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
W4235-101SR	3/4x1/2	2-9/32	1-13/32	1-3/16	17/32	.09
W4235-130SR	1x1/2	2-9/32	1-3/4	1-3/16	13/32	.12

FEMALE SPRINKLER HEAD ADAPTER
Special Reinforced Plastic Thread w/Metal Thread Start

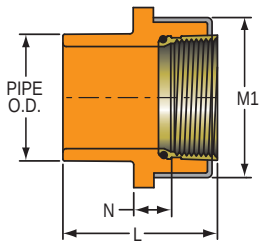
Socket x SR Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
Z4235-101SR	3/4x1/2	1-7/8	1-3/8	1-7/16	3/16	.08

SPIGOT FEMALE ADAPTER
Brass Thread Insert Style

Spigot x Fipt

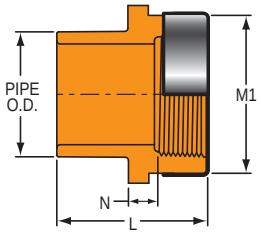


Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4278-007	3/4	2-5/32	1-3/8	17/32	.15
4278-010	1	2-9/32	1-11/16	7/16	.22

Not intended to convey or dispense water for human consumption through drinking or cooking

SPIGOT FEMALE ADAPTER
Special Reinforced Plastic Thread Style

Spigot x SR Fipt

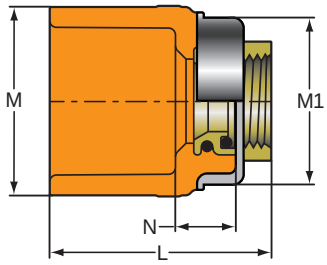


Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4278-007SR	3/4	1-15/16	1-3/8	11/32	.08
4278-010SR	1	2-1/4	1-23/32	13/32	.13

TorqueSafe™ FEMALE SPRINKLER HEAD ADAPTER
Gasket Sealed Brass Thread Insert Style

Socket x Gasket Fipt

With Elastomer Seal - Use NO Thread Sealant

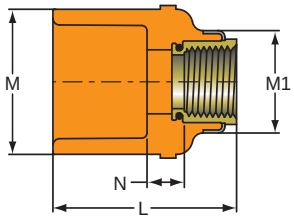


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4235-101 G	3/4x1/2	1-7/8	1-13/32	1-3/8	17/32	.15
4235-130GS	1x1/2	2-1/32	1-11/16	1-3/8	17/32	.17
4235-131 G	1x3/4	2	1-11/16	1-9/16	9/16	.18

Not intended to convey or dispense water for human consumption through drinking or cooking

FEMALE SPRINKLER HEAD ADAPTER
Brass Thread Insert Style

Socket x Fipt

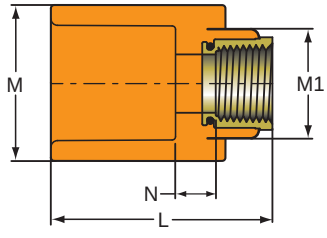


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4235-101	3/4x1/2	1-7/8	1-13/32	1-17/32	15/32	.19
4235-130	1x1/2	2-11/32	1-11/16	1-3/16	5/8	.16
4235-131	1x3/4	2-5/16	1-11/16	1-3/8	17/32	.18

Not intended to convey or dispense water for human consumption through drinking or cooking

FEMALE SPRINKLER HEAD ADAPTER
Brass Thread Insert Style with Long Body

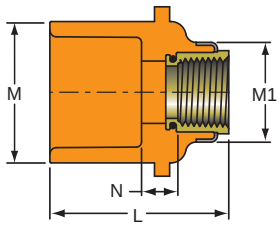
Socket x Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
L4235-130	1x1/2	2-3/16	1-23/32	1-7/32	1/2	.19

Not intended to convey or dispense water for human consumption through drinking or cooking

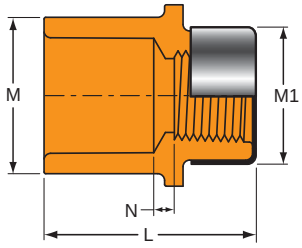
FEMALE SPRINKLER HEAD ADAPTER
Brass Thread Insert Style with Positioning Ring
Socket x Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
R4235-101	3/4x1/2	2-1/32	1-7/16	1-3/16	15/32	.15

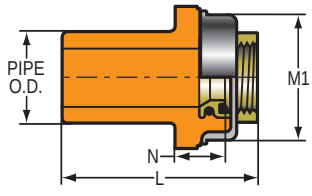
Not intended to convey or dispense water for human consumption through drinking or cooking

FEMALE SPRINKLER HEAD ADAPTER
Special Reinforced Plastic Thread Style with Positioning Ring
Socket x SR Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
R4235-101SR	3/4x1/2	1-15/16	1-7/16	1-7/32	7/32	.09

TorqueSafe™ FEMALE SPIGOT SPRINKLER HEAD ADAPTER
Gasket Sealed Brass Thread Insert Style
Spigot x Gasket Fipt
With Elastomer Seal - Use NO Thread Sealant

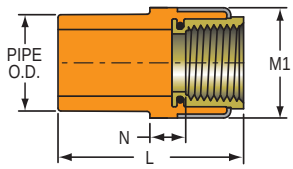


Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
4238-101 G	3/4x1/2	1-15/16	1-3/8	21/32	.14
4238-130 G	1x1/2	2-1/16	1-3/8	19/32	.15

Not intended to convey or dispense water for human consumption through drinking or cooking

SPIGOT FEMALE SPRINKLER HEAD ADAPTER
Brass Thread Insert Style

Spigot x Fipt



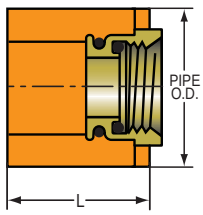
Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4238-101	3/4x1/2	2-5/32	1-7/32	19/32	.12
4238-130	1x1/2	2-1/4	1-3/16	11/32	.19

Not intended to convey or dispense water for human consumption through drinking or cooking

TORQUESAFE™ BUSHING - GASKET SEALED
Brass Thread Insert Style

Spigot x Gasket FIPT

With Elastomer Seal - Use NO Thread Sealant

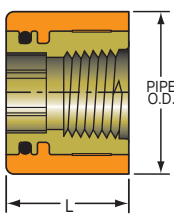


Part Number	Size	L	Approx. Wt. (Lbs.)
4238-130BR G	1x1/2	1-7/32	.10

Not intended to convey or dispense water for human consumption through drinking or cooking

BUSHING with BRASS THREAD INSERT

Spigot x Fipt

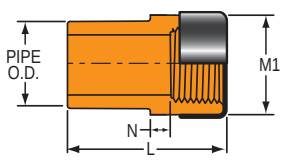


Part Number	Size	L	Approx. Wt. (Lbs.)
4238-130BR	1x1/2	1	.13

Not intended to convey or dispense water for human consumption through drinking or cooking

SPIGOT FEMALE SPRINKLER HEAD ADAPTER
Special Reinforced Plastic Thread Style

Spigot x SR Fipt

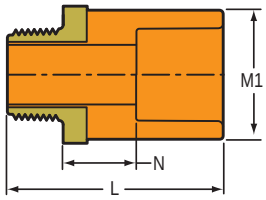


Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4238-101SR	3/4x1/2	1-29/32	1-7/32	1/8	.07
4238-130SR	1x1/2	2-1/32	1-7/32	7/32	.09

MALE ADAPTER

With CPVC Lined Thread Brass Insert

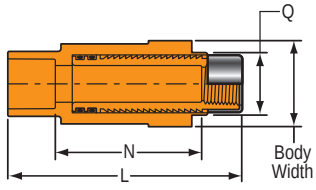
Mipt x Socket



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4236-007	3/4	2-17/32	1-13/32	13/16	.26
4236-010	1	2-15/16	1-23/32	29/32	.43
4236-012	1-1/4	3-1/8	2-3/32	31/32	.66
4236-015	1-1/2	3-9/32	2-11/32	31/32	.80
4236-020	2	3-7/16	2-27/32	31/32	1.00

ADJUSTABLE SPRINKLER HEAD ADAPTER
Special Reinforced Plastic Thread Style

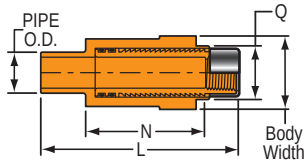
Socket x SR Fipt



Part Number	Size	L		N		Q	Body Width	Approx. Wt. (Lbs.)
		Min	Max	Min	Max			
42001SR	3/4x1/2	6-9/32	8	4-7/16	6-1/4	1-7/16	2-3/16	.66
42011SR	1x1/2	6-13/32	8	4-1/2	6-1/8	1-7/16	2-1/8	.68

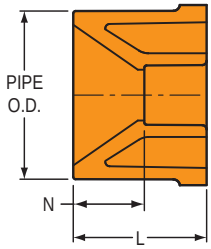
ADJUSTABLE SPRINKLER HEAD ADAPTER
Special Reinforced Plastic Thread Style

Spigot x SR Fipt



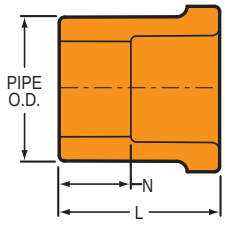
Part Number	Size	L		N		Q	Body Width	Approx. Wt. (Lbs.)
		Min	Max	Min	Max			
42004SR	3/4x1/2	5-1/32	6-5/16	3-3/16	4-15/32	1-5/16	2-1/8	.36
42014SR	1x1/2	6-7/16	8-1/8	4-7/16	6-1/4	1-7/16	2-3/16	.67

REDUCER BUSHING
Flush Style
Spigot x Socket



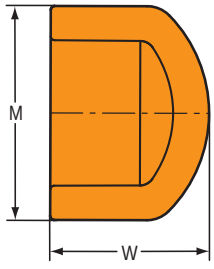
Part Number	Size	L	N	Approx. Wt. (Lbs.)
4237-131	1x3/4	1-1/4	1/4	.04
4237-167	1-1/4x3/4	1-7/16	7/16	.10
4237-168	1-1/4x1	1-13/32	9/32	.06
4237-210	1-1/2x3/4	1-5/8	5/8	.19
4237-211	1-1/2x1	1-17/32	13/32	.13
4237-212	1-1/2x1-1/4	1-9/16	5/16	.07
4237-248	2x3/4	1-29/32	29/32	.28
4237-249	2x1	1-23/32	9/16	.23
4237-250	2x1-1/4	1-11/16	7/16	.21
4237-251	2x1-1/2	1-11/16	5/16	.15
4237-290	2-1/2x1-1/4	2-5/32	7/8	.41
4237-291	2-1/2x1-1/2	2-5/32	3/4	.39
4237-292	2-1/2x2	2-9/32	3/4	.28
4237-338	3x2	2-1/4	3/4	.63
4237-339	3x2-1/2	2-5/16	1/4	.42

TRANSITION BUSHING
IPS Spigot x CTS Socket



Part Number	Size	L	N	Approx. Wt. (Lbs.)
4240-101	3/4x1/2	1-1/8	5/8	.03
4240-130	1x1/2	1-1/4	23/32	.05

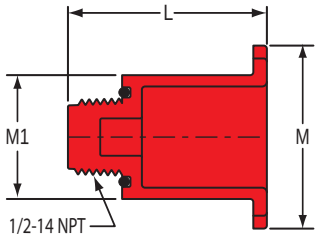
CAP
Socket



Part Number	Size	M	W	Approx. Wt. (Lbs.)
4247-007	3/4	1-3/8	1-13/32	.05
4247-010	1	1-5/8	1-9/16	.06
4247-012	1-1/4	2-3/32	1-27/32	.13
4247-015	1-1/2	2-11/32	2	.17
4247-020	2	2-27/32	2-9/32	.39
4247-025	2-1/2	3-17/32	2-5/8	.50
4247-030	3	4-3/8	3	.92

TEST PLUG - O-ring Sealed

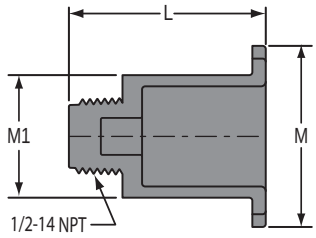
Mipt - For Pressure Testing Only,
Not For use with Z4235 Series Adapters



Part Number	Size	L	M	M1	Approx. Wt. (Lbs.)
FTP-005	1/2	1-27/32	1-15/16	1-7/32	.03

TEST PLUG for TorqueSafe™ Gasket Sealed Head Adapters

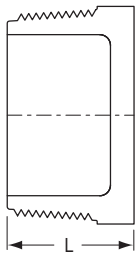
Mipt - For Pressure Testing Only.
Use ONLY with Gasket Sealed Head Adapters



Part Number	Size	L	M	M1	Approx. Wt. (Lbs.)
FTP-005GS	1/2	1-25/32	2-1/32	1-1/4	.05

TEST PLUG

(PVC White) Not UL Listed
Mipt - For Pressure Testing Only



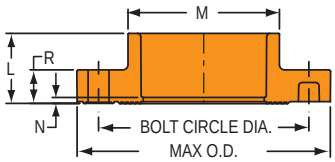
Part Number	Size	L	Approx. Wt. (Lbs.)
4250-005	1/2	27/32	.02

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS
Progressive Products from Spears® Innovation and Technology

FLANGE - ONE PIECE

4 Bolt Holes, 175 psi

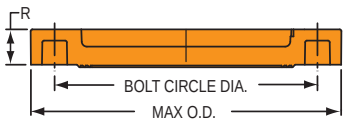
Socket



Part Number	Size	L	M	N	R	No. of Bolt Holes	Bolt Circle Dia.	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)
4251-007	3/4	1-5/32	1-1/2	1/8	17/32	4	2-3/4	1/2	2	3-29/32	.31
4251-010	1	1-5/16	1-13/16	1/8	11/16	4	3-1/8	1/2	2-1/4	4-9/32	.35
4251-012	1-1/4	1-13/32	2-7/32	5/32	11/16	4	3-1/2	1/2	2-1/4	4-5/8	.44
4251-015	1-1/2	1-19/32	2-1/2	3/16	23/32	4	3-27/32	1/2	2-1/2	5-1/16	.61
4251-020	2	1-27/32	3	5/16	27/32	4	4-3/4	5/8	3	5-31/32	.95
4251-025	2-1/2	2-7/32	3-1/2	7/16	1-1/32	4	5-1/2	5/8	3-1/4	7	1.50

BLIND FLANGE

4 Bolt Holes, 175 psi

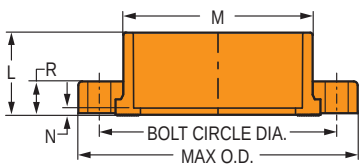


Part Number	Size	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)
4253-007	3/4	17/32	2-3/4	4	1/2	2	3-27/32	.30
4253-010	1	23/32	3-1/8	4	1/2	2-1/4	4-1/4	.35
4253-012	1-1/4	21/32	3-1/2	4	1/2	2-1/4	4-5/8	.40
4253-015	1-1/2	23/32	3-27/32	4	1/2	2-1/2	5-1/16	.52
4253-020	2	27/32	4-3/4	4	5/8	3	5-31/32	.86
4253-025	2-1/2	1-1/32	5-1/2	4	5/8	3-1/4	6-15/16	1.70
4253-030	3	1-5/16	6	4	5/8	3-1/4	7-5/8	1.72

FLANGE - TWO PIECE

Van Stone Style, 4 Bolt Holes, 175 psi

Socket

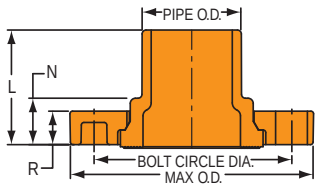


Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)
4254-030	3	2-1/8	4-1/4	9/32	1-1/32	6	4	5/8	3-1/4	7-15/32	1.75

FLANGE - TWO PIECE

Van Stone Style, 4 Bolt Holes, 175 psi

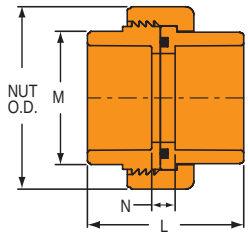
Spigot



Part Number	Size	L	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)
4256-007	3/4	1-15/16	13/16	17/32	2-3/4	4	1/2	2	3-27/32	.30
4256-010	1	2-7/32	1-1/32	11/16	3-1/8	4	1/2	2-1/4	4-1/4	.41
4256-012	1-1/4	2-3/8	1	11/16	3-1/2	4	1/2	2-1/4	4-5/8	.50
4256-015	1-1/2	2-7/16	1-3/32	23/32	3-7/8	4	1/2	2-1/2	4-31/32	.65
4256-020	2	2-3/4	1-5/32	25/32	4-3/4	4	5/8	3	5-15/16	1.00
4256-025	2-1/2	3-1/16	1-9/32	1-1/32	5-1/2	4	5/8	3-1/4	6-15/16	1.62
4256-030	3	3-3/8	1-13/32	1-1/32	6	4	5/8	3-1/4	7-9/16	1.76

UNION

Socket x Socket



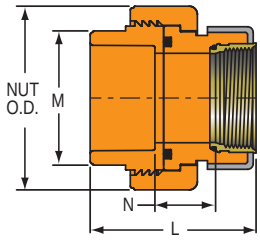
175 psi

Part Number	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
4257-007	3/4	2-3/8	1-17/32	3/8	2-1/2	.38
4257-010	1	2-9/16	1-27/32	3/8	2-7/8	.41
4257-012	1-1/4	2-27/32	2-7/32	11/32	3-5/16	.52
4257-015	1-1/2	3-1/8	2-1/2	3/8	3-17/32	.63
4257-020	2	3-5/8	3-1/32	9/16	4-3/16	1.09

TRANSITION UNION
Brass Thread Insert Style

175 psi

Socket x Fipt



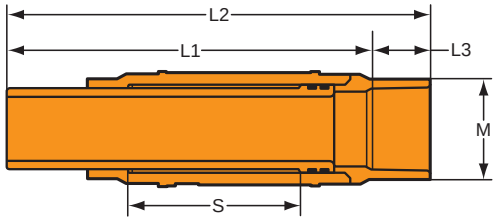
Part Number	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
4259-010BR	1	2-13/16	1-7/8	1-1/32	2-7/8	.52
4259-012BR	1-1/4	3	2-3/16	1-1/8	3-9/32	.98
4259-015BR	1-1/2	3-3/4	2-1/2	1-9/16	3-17/32	.93
4259-020BR	2	3-5/8	2-7/8	1-1/4	4-5/16	1.64

Not intended to convey or dispense water for human consumption through drinking or cooking

SHORT REPAIR COUPLING

Spigot x Socket

175 psi



Part Number	Size	L1	L2	L3	M	S	Approx. Wt. (Lbs.)
SH118-07CO	3/4	4-13/16	5-17/32	3/4	1-3/4	2-3/16	.31
SH118-10CO	1	4-3/4	5-5/8	31/32	2-1/16	2-5/32	.40



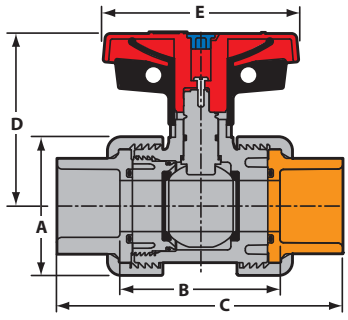


FlameGuard® CPVC Drain & Swing Check Valves for NFPA 13D Applications Only

Application: FlameGuard® CPVC Orange Swing Check Valves and PVC/CPVC True Union Drain Valves are for use in configuring CPVC Fire Sprinkler System connection to water supply (riser/drain assembly) in NFPA 13D installations only. These valves are not UL Listed and NOT for use in any other locations within the fire sprinkler system.

TRUE UNION INDUSTRIAL DRAIN VALVES
CPVC Gray Valve with CPVC Orange End Connector

Socket x Socket

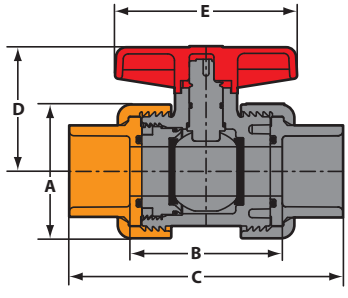


Part Number	Size	A	B	C	D	E
1822-007CFG	3/4	2-1/4	2-3/4	4-3/4	2-7/8	3-3/8
1822-010CFG	1	2-1/2	2-7/8	5-1/8	3-1/8	3-7/16
1822-012CFG	1-1/4	3-1/16	3-1/4	5-3/4	3-5/8	3-7/8
1822-015CFG	1-1/2	3-1/2	3-1/2	6-1/4	4	4-3/16
1822-020CFG	2	4-1/4	4-3/4	7-3/4	4-1/2	5-1/8

Not UL Listed

TRUE UNION DRAIN VALVES
PVC Valve with CPVC End Connector

Socket x Socket

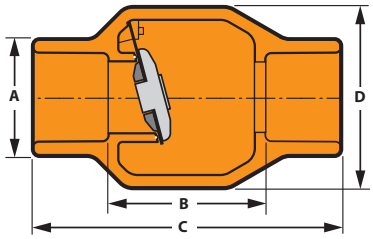


Part Number	Size	A	B	C	D	E
3622-007FG	3/4	2-1/4	2-3/4	4-3/4	2	3
3622-010FG	1	2-1/2	2-7/8	5-1/8	2-5/16	3-7/16

Not UL Listed

CPVC SWING CHECK VALVES

Socket x Socket

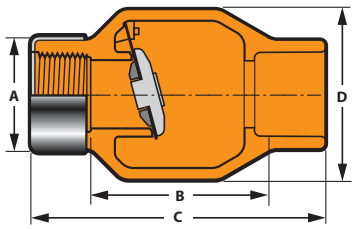


Part Number	Size	A	B	C	D	Approx. Wt. (Lbs)
S1520-10CO	1	1-11/16	2-5/16	4-9/16	2-5/8	.33
S1520-12CO	1-1/4	2-1/16	2-15/16	5-1/2	3-3/8	.42
S1520-15CO	1-1/2	2-7/16	3	5-5/8	3-3/8	.89

Not UL Listed

CPVC SPECIAL REINFORCED THREAD INLET SWING CHECK VALVES

SR Fipt x Socket

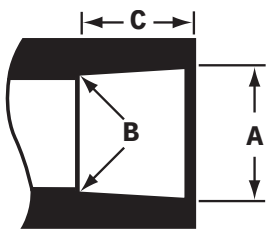


Part Number	Size	A	B	C	D	Approx. Wt. (Lbs)
S1520-10FSRSCO	1	1-11/16	2-15/16	4-9/16	2-5/8	.33
S1520-12FSRSCO	1-1/4	2-1/16	3-5/8	5-1/2	3-3/8	.42
S1520-15FSRSCO	1-1/2	2-7/16	3-11/16	5-5/8	3-3/8	.89

Not UL Listed

SOCKET DIMENSIONS

SCH 40 - ASTM F438
SCH 80 - ASTM F439



Size	Socket Entrance A	Socket Bottom B	Tolerance	SCH 40 Minimum Socket Length C	SCH 80 Minimum Socket Length C
3/4	1.058	1.046	± .004	.719	1.000
1	1.325	1.130	± .005	.875	1.125
1-1/4	1.670	1.655	± .005	.938	1.250
1-1/2	1.912	1.894	± .006	1.094	1.375
2	2.387	2.369	± .005	1.156	1.500
2-1/2	2.889	2.868	± .007	1.750	1.750
3	3.516	3.492	± .008	1.875	1.875

Appendix A - Basic Abbreviations Used in this Catalog

Standard Abbreviations

CI	=	Cast Iron Pipe Size
CTS	=	Copper Tube Size
DWV	=	Drain, Waste & Vent
Fipt		
FPT	=	Female Iron Pipe Thread
GSK		
Gasket	=	Elastomer Gasket Sealed Connection
Grv		
Groove	=	Grooved End for Mechanical Coupling
IPS	=	Iron Pipe Size
INS		
Insert	=	Barbed Insert End
Mipt,		
MPT	=	Male Iron Pipe Thread
NPT	=	National Pipe Thread (alternate to above)
PIP	=	Plastic Irrigation Pipe
PSI	=	Pounds Per Square Inch
PSM	=	Plastic Sewer Main
SDR	=	Standard Dimension Ratio (pipe)
Soc		
Socket	=	Solvent Weld Socket
SPG		
Spig		
Spigot	=	Spigot End (pipe O.D. size)
SR Fipt	=	Special Reinforced Plastic Female Iron Pipe Thread

DWV Specific Abbreviations

H		
HUB	=	Solvent Weld Socket
SPG	=	Spigot End (pipe O.D. size)
S&D	=	Sewer & Drain Pipe Size
SLIP	=	Trap End for Receiving Drain Tail Piece

Metric Specific Abbreviations

BAR	=	4.5 psi
BSP	=	British Standard Pipe
Class 10	=	Pressure Rating 10 BAR at 23°C (145 psi at 73°F)
Class 12	=	Pressure Rating 12 BAR at 23°C (174 psi at 73°F)
d	=	Pipe O.D. in millimeters
DN	=	Diameter Nominal for Metric Fittings
Din	=	Deutsche Industrial Norm (German Standards)
JIS	=	Japanese Industrial Standard
MIPT	=	Male Iron Pipe Thread
NPR	=	Not Pressure Rated
PN7	=	Pressure Rating 7 BAR at 23°C (100 psi at 73°F)
PN16	=	Pressure Rating 16 BAR at 23°C (232 psi at 73°F)
SRBSP	=	Special Reinforced BSP Thread
FBSP	=	Female BSP Thread
MBSP	=	Male BSP Thread
mm	=	millimeter

Packaging Codes

MC (or Mstr Ctn)	= Master Carton (standard master quantity)
SP (or Std Pk)	= Standard Pack (standard box quantity)

Appendix B - Applicable Industry Standards & Test Methods

Standards provide greater assurance of product performance and consistency, and are available to assist design engineers in system specification. The most frequently referenced industry standards for plastic piping systems are ASTM Standard Specifications and Practices. Along with ASTM Standards, additional product specifications and certifications form the basis of product conformance to which Spears® products are manufactured. Although not inclusive, the following list of internationally recognized standards, specifications, test methods and practices relate to PVC and CPVC thermoplastic piping products and related components.

ASTM STANDARD SPECIFICATIONS

ASTM D1784	Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds
ASTM D1785	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80 and 120
ASTM D2241	Standard Specification for Poly (Vinyl Chloride) (PVC) Pressure Rated Pipe (SDR Series)
ASTM D2466	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40
ASTM D2464	Standard Specification for Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
ASTM D2467	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
ASTM D2665	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings
ASTM D2672	Standard Specification for Joints for IPS PVC Pipe Using Solvent Cement
ASTM D2846	Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot- and Cold-Water Distribution Systems
ASTM D3139	Standard Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals
ASTM D3311	Standard Specification for Drain, Waste, and Vent (DWV) Plastic Fittings Patterns
ASTM F438	Standard Specification for Socket-Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 40
ASTM F439	Standard Specification for Socket-Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80
ASTM F441	Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and 80
ASTM F442	Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR)
ASTM F437	Standard Specification for Threaded Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80
ASTM F477	Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe
ASTM F493	Standard Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings
ASTM F656	Standard Specification for Primers for Use in Solvent Cement Joints of Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings
ASTM F913	Standard Specification for Thermoplastic Elastomeric Seals (Gaskets) for Joining Plastic Pipe
ASTM F1498	Standard Specification for Taper Pipe Threads 60° for Thermoplastic Pipe and Fittings
ASTM F1866	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Schedule 40 Drainage and DWV Fabricated Fittings
ASTM F2618	Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Fittings for Chemical Waste Drainage Systems

ASTM STANDARD TEST METHODS

ASTM D1598	Standard Test Method for Time-to-Failure of Plastic Pipe Under Constant Internal Pressure
ASTM D1599	Standard Test Method for Resistance to Short-Time Hydraulic Pressure of Plastic Pipe & Fittings
ASTM D2122	Standard Test Method for Determining Dimensions of Thermoplastic Pipe & Fittings
ASTM D2152	Standard Test Method for Adequacy of Fusion by Acetone Immersion
ASTM D2412	Standard Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading
ASTM D2444	Standard Test Method for Determination of the Impact Resistance of Thermoplastic Pipe and Fittings by Means of a Tup
ASTM D2564	Standard Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems
ASTM D2837	Standard Test Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials
ASTM F610	Standard Test Method for Evaluating the Quality of Molded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings by the Heat Reversion Technique

ASTM STANDARD PRACTICES

ASTM D2321	Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications
ASTM D2774	Standard Practice for Underground Installation of Thermoplastic Pressure Piping
ASTM D2855	Standard Practice for Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings
ASTM F402	Standard Practice for Safe Handling of Solvent Cements, Primers, and Cleaners Used for Joining Thermoplastics Pipe and Fittings
ASTM F645	Standard Guide for Selection, Design, and Installation of Thermoplastic Water Pressure Systems
ASTM F690	Standard Practice for Underground Installation of Thermoplastic Pressure Piping Irrigation Systems
ASTM F1057	Standard Practice for Evaluating the Quality of Extruded Poly (Vinyl Chloride) (PVC) Pipe by the Heat Reversion Technique

Appendix C - Product Approvals & Certifications

NSF International — NSF® is an internationally recognized independent third party product testing laboratory and certification organization. NSF® provides a variety of product certifications. Although not inclusive, the following list those most applicable to Spears® products (see listings at www.nsf.org).

NSF®/ANSI Standard 14 — Plastics Piping System Components and Related Materials. NSF®-14 is a consensus standard that enables comprehensive assessment of plumbing system products, materials, and ingredients. The assessment is for health effects, quality control, quality assurance, marking, material property requirements, long-term strength evaluation, and short-term product performance evaluation to various standards such as ASME, ASTM, ASSE, etc. NSF®-14 Certified products have designated end use.

End Use Certification Marks — The following are typical certification marks applicable to various Spears® products:

NSF®-pw — The product is manufactured for potable water application. It meets all applicable performance standards for a pressure rated application as required in NSF®/ANSI Standard 14, and complies with NSF®/ANSI Standard 61 for health effects.

NSF®-dwv — The product complies with the applicable performance standards as required by NSF®/ANSI Standard 14 for drain, waste, and vent applications. No health effects evaluation is required.

NSF®-cw — The product meets the applicable performance standard as required by NSF®/ANSI Standard 14 for corrosive waste applications. No health effects evaluation is required.

NSF®-61 — Products certified to NSF®/ANSI Standard 61. They are evaluated for health effects only. They are not evaluated for the performance requirements of NSF®/ANSI Standard 14.

NSF®-(end use) SE — Certified Special Engineered (SE) products shall bear a Mark which indicates the end use application. The SE Mark is used for products for which there is not a recognized national performance standard.

Canadian Certification Mark — cNSF Mark demonstrates compliance to a Canadian Standard, while the cNSFus Mark indicates compliance to both Canadian and U.S. requirements. Inspectors and safety code officials in Canada look for product certification by an SCC-accredited certifier.

Uniform Plumbing Code Certification — NSF® U.P.Code Mark demonstrates product compliance with the Uniform Plumbing Code. While the U.P.Code Mark is not mandatory to demonstrate product code compliance, the code marking is more readily identifiable by inspectors in the field.

NSF®/ANSI Standard 61 — Drinking Water System Components – Health Effects. NSF®- 61 is a consensus standard promulgated by NSF International. This standard enables in-depth assessment of a variety of drinking water system products and materials for health effects. This standard is used to evaluate a product for health effect concerns only. NSF®/ANSI Standard 61 is narrow in its scope when compared to NSF®/ANSI Standard 14 in respect to quality and performance. NSF® conducts its own testing, review, and facility inspections when certifying products like PE and PEX. NSF®/ANSI Standard 14 addresses health and performance, NSF®/ANSI Standard 61 only addresses health effect concerns.

NSF®-61 Annex G — Weighted Average Lead Content Evaluation Procedure to a 0.25% Lead Requirement. Certified product meets various states' low lead requirement, such as California's Health & Safety Code (Section 116875) commonly known as AB1953.

ICC-ES-PMG — The ICC-ES Plumbing, Mechanical and Fuel Gas (PMG) Listing Program provides independent third party approval where there is a nationally recognized standard for the product, but the codes do not cover in enough detail permitted uses of the product. Currently Spears® LabWaste™ CPVC Corrosive Waste Drainage System pipe and fittings are certified by ICC-ES-PMG for conformance to both the International Plumbing Code and the Uniform Plumbing Code under PMG-1018 (see listing at www.icc-es-pmg.org).

Underwriters Laboratories (UL) is a global independent third party product testing and certification organization. Currently, UL certifies Spears® FlameGuard® CPVC Fire Sprinkler Products to both UL 1821 for US markets and to ULC/ORD-C199P for Canadian markets, under the c-UL-us mark. UL is an NFPA recognized certification listing organization for CPVC Fire Sprinkler Products (see certifications at www.ul.com).

FM Global — FM Approvals (formerly Factory Mutual Research) offers worldwide certification and testing services of industrial and commercial loss prevention products as an independent third party product testing and certification organization. Currently, FM certifies Spears® FlameGuard® CPVC Fire Sprinkler Products to FM 1635, Plastic Pipe & Fittings for Automatic Sprinkler Systems. FM is an NFPA recognized certification listing organization for CPVC Fire Sprinkler Products (see Approval Guide at www.fmglobal.com).

Loss Prevention Certification Board (LPCB) is an independent, third-party approvals division of the BRE Global organization, that assesses and certifies fire and security systems and services against standards, such as BS, EN and LPS, developed in cooperation with manufacturers and insurers. Currently, LPCB certifies Spears® FlameGuard® CPVC Fire Sprinkler Products to LPS 1260, Plastic Pipe and Fittings for Use in Automatic Sprinkler Systems. LPCB is also the UKAS Certified Registrar of Spears® ISO 9001 Quality Management System. Approved manufacturers are listed in the LPCB Red Book (see www.redbooklive.com).

American Bureau of Shipping (ABS) is a member of the International Association of Classification Societies (IACS) responsible for verifying that marine vessels and offshore structures comply with Rules that the society has established for design, construction and periodic survey. Classification and product use are specified under a Type Approval. Currently Spears® CPVC pipe, fittings and LabWaste™ pipe and fittings are specified under ABS Type Approval Certificate No. 10-HS539421-1-PDA; and Spears® CPVC Valves are specified under ABS Type Approval Certificate No. 12-HS938098-PDA (see Type Approval at www.eagle.org)

Appendix D - Recommendations for Installers & Users

Plastic piping systems should be ENGINEERED, INSTALLED, and OPERATED in accordance with ESTABLISHED DESIGN AND ENGINEERING STANDARDS AND PROCEDURES for plastic piping systems. Suitability for the intended service application should be determined by the installer and/or user prior to installation of a plastic piping system. PRIOR TO ASSEMBLY, all piping system components should be inspected for damage or irregularities. Mating components should be checked to assure that tolerances and engagements are compatible. Do not use any components that appear irregular or do not fit properly. Contact the appropriate manufacturer of the component product in question to determine usability. Consult all applicable codes and regulations for compliance prior to installation.

SOLVENT WELD CONNECTIONS - Use a quality grade of primer and solvent cement formulated for the type of connection, with the CORRECT SIZE APPLICATOR. Read and follow all of the solvent cement MANUFACTURER'S APPLICATION AND CURE TIME INSTRUCTIONS THOROUGHLY.

BEFORE APPLYING PRIMER AND CEMENT, appropriate safety precautions should be taken. Primer and Cement should be stored in the shade between 40°F and 110°F. Eliminate all ignition sources. Avoid breathing of vapors. Use only with adequate ventilation; explosion-proof general mechanical ventilation or local exhaust is recommended to maintain vapor concentrations below recommended exposure limits. In confined or partially enclosed areas, a NIOSH-approved organic vapor cartridge respirator with full face-piece is recommended. Containers should be kept tightly closed when not in use, and covered as much as possible when in use. Avoid frequent contact with skin; wearing PVA coated protective gloves and impervious apron are recommended. Avoid any contact with eyes; splash proof chemical goggles are recommended.

THREADED CONNECTIONS - Use a quality grade thread sealant. **WARNING:** SOME PIPE JOINT COMPOUNDS OR PTFE PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING TO PLASTIC. Spears® Manufacturing Company recommends the use of Spears® **BLUE 75™** Thread Sealant which has been tested for compatibility with Spears® products. Please follow the sealant manufacturers' application/installation instructions. Choice of an appropriate thread sealant other than those listed above is at the discretion of the installer. 1 to 2 turns beyond FINGER TIGHT is generally all that is required to make a sound plastic threaded connection. Unnecessary OVER TIGHTENING will cause DAMAGE TO BOTH PIPE AND FITTING.
NOTE: DO NOT use any thread sealants on Spears® Gasket Sealed Threaded connections.

IMPORTANT

WATER HAMMER - Spears® Manufacturing Company recommends that all PVC and CPVC plastic piping systems be designed and constructed to AVOID EXCESSIVE WATER HAMMER. Water hammer can cause damage, and failure to pipe, valves, and fittings within the piping system. PLEASE NOTE - When temperatures rise above 73°F, the tensile strength of thermoplastics decreases, thereby derating the pipe or fitting Maximum Internal Pressure. When temperatures fall below 73°F, the tensile strength of thermoplastics increases, however, the impact strength decreases. Maximum operating temperatures for PVC piping systems should not exceed 140°F. Maximum operating temperatures for CPVC pressure piping systems should not exceed 200°F. Special drainage systems such as Spears® LabWaste™ CPVC Corrosive Waste Drainage System may be used intermittently to 230° F for intermittent non-pressure laboratory drainage application - see LabWaste™ technical information. Spears® Manufacturing Company will not accept responsibility for damage or impairment of its products, or other consequential or incidental damages caused by misapplication, incorrect assembly, and/or exposure to harmful substances or conditions.

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GASES

WARNING: DO NOT USE ANY PVC OR CPVC THERMOPLASTIC PIPING PRODUCT OR SYSTEM, FOR DISTRIBUTION OR STORAGE OF COMPRESSED AIR OR GASES. THESE PRACTICES MAY RESULT IN EXPLOSIVE FRAGMENTATION OF SYSTEM PIPING AND COMPONENTS CAUSING SERIOUS OR FATAL BODILY INJURY. PVC and CPVC products MAY be used in certain low pressure (i.e. 3-5 psi) air handling applications of oil-free, compatible clean air. Contact Spears® Technical Services with application specifics for additional information.

Not all of the products listed in this price schedule are carried in Spears® Regional Distribution Center inventories. When ordering, please check with your servicing Regional Distribution Center for availability. ALL ORDERS FOR NON-STOCKED products are NON-CANCELABLE and NON-RETURNABLE.

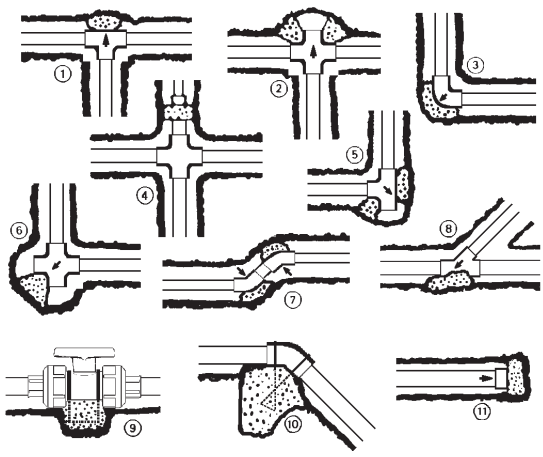
PRODUCTS IN THIS CATALOG ARE ONLY TO BE USED FOR THEIR INTENDED PURPOSE.

THRUST BLOCKING — Water under pressure exerts thrust forces in piping systems. Thrust blocking should be provided, as necessary, to prevent movement of pipe or appurtenances in response to thrust.

Types Of Thrust Blocking:

If thrusts due to high pressure are expected, anchor valves as below. At vertical bends anchor to resist outward thrusts.

1. Thru line connection, tee
2. Thru line connection, cross used as tee
3. Direction change, elbow
4. Change line size, reducer
5. Direction change, tee used as elbow
6. Direction change, cross used as elbow
7. Direction change
8. Thru line connection, wye
9. Valve anchor
10. Direction change vertical, bend anchor
11. End Caps (above or below ground)



Thrust Blocking Is Required Wherever The Pipeline:

* Changes direction (e.g., tees, bends, elbows and crosses)
* Changes size at its reducers
* Stops, as at dead ends
* Valves and hydrants, at which thrust develops when closed.

Size And Type Of Thrust Blocking Depends On:

* Maximum system pressure
* Pipe size
* Type and size of fittings or appurtenance
* Line profile (horizontal or vertical bends)
* Soil type

Appendix E - Special Information on Fabricated Fittings

Except for fittings produced to ASTM F1866, Spears® Fabricated Fittings conform to Spears® Manufacturing Company Special Engineering Specifications.

Not all of the Fabricated Fittings listed in this price schedule are carried in Spears® Distribution Center inventories. When ordering Fabricated Fittings, please check your servicing Distribution Center for availability. ALL ORDERS FOR NON-STOCKED Fabricated Fittings are NON-CANCELABLE and NON-RETURNABLE.

18" and larger Fabricated Fittings are available upon request. Please contact your servicing Spears® Regional Distribution Center for pricing and availability.

All 15" Fabricated Fittings shown as Class 63 are PIP O.D. Reducing fittings are 15" PIP O.D. x specified IPS size. Plastic Irrigation Pipe (PIP) and Iron Pipe Size (IPS) are not the same.

Pipe Dimension Reference Chart

Pipe Type O.D. Size SDR		LH PIP 91	80 PIP 51	100 PIP 41	125 PIP 32.5	CL 63 IPS 64	CL 100 IPS 41	SEWER PSM 35	CL 125 IPS 32.5	CL 160 IPS 26	CL 200 IPS 21	40 DWV IPS —	80 DWV IPS —	SCH 40 IPS —	SCH 80 IPS —	C-900 CI DR 18
4"	O.D.	4.130	4.130	4.130	4.130	4.500	4.500	4.215	4.500	4.500	4.500	4.500	4.500	4.500	4.500	4.800
	I.D.	4.000	3.968	3.928	3.876	4.360	4.280	3.89	4.224	4.154	4.072	3.998	3.786	3.998	3.786	4.22
	Wall	.065	.081	.101	.127	.070	.110	0.125	.138	.173	.214	.237	.337	.237	.337	.267
	PSI	43	80	100	125	63	100	117.5	125	160	200	100	100	220	320	150
6"	O.D.	6.140	6.140	6.140	6.140	6.625	6.625	6.275	6.625	6.625	6.625	6.625	6.625	6.625	6.625	6.900
	I.D.	6.000	5.898	5.840	5.762	6.417	6.301	5.742	6.217	6.115	5.993	6.031	5.709	6.031	5.709	6.08
	Wall	.070	.121	.150	.189	.104	.162	0.18	.204	.255	.316	.280	.432	.280	.432	.383
	PSI	43	80	100	125	63	100	117.5	125	160	200	100	100	180	280	150
8"	O.D.	8.160	8.160	8.160	8.160	8.625	8.625	8.4	8.625	8.625	8.625	8.625	8.625	8.625	8.625	9.050
	I.D.	7.984	7.840	7.762	7.658	8.355	8.205	7.665	8.095	7.961	7.805	7.943	7.565	7.943	7.565	7.97
	Wall	.088	.160	.199	.251	.135	.210	.024	.265	.332	.410	.322	.500	.322	.500	.503
	PSI	43	80	100	125	63	100	117.5	125	160	200	100	100	160	250	150
10"	O.D.	10.200	10.200	10.200	10.200	10.750	10.750	10.5	10.750	10.750	10.750	10.750	10.750	10.750	10.750	11.100
	I.D.	9.980	9.800	9.702	9.572	10.414	10.226	9.563	10.088	9.924	9.748	9.976	9.492	9.976	9.492	9.78
	Wall	.110	.200	.249	.314	.168	.262	0.3	.331	.413	.511	.365	.593	.365	.593	.617
	PSI	43	80	100	125	63	100	117.5	125	160	200	100	100	140	230	150
12"	O.D.	12.240	12.240	12.240	12.240	12.750	12.750	12.5	12.750	12.750	12.750	12.750	12.750	12.750	12.750	13.200
	I.D.	11.975	11.760	11.642	11.486	12.352	12.128	11.361	11.966	11.770	11.538	11.890	11.294	11.890	11.294	11.63
	Wall	.132	.240	.299	.377	.199	.311	0.36	.392	.490	.606	.406	.687	.406	.687	.733
	PSI	43	80	100	125	63	100	117.5	125	160	200	100	100	130	230	150
14"	O.D.	14.280	14.280	14.280	14.280	*	*	*	*	14	*	14.000	14.000	14.000	14.000	15.3
	I.D.	14.000	13.720	13.584	13.402					12.86		13.072	12.410	13.072	12.410	13.48
	Wall	.140	.280	.348	.439					0.538		.438	.750	.438	.750	0.85
	PSI	43	80	100	125					160		100	100	130	220	235
15"	O.D.	15.300	15.300	15.300	15.300	*	*	15.3	*	*	*	*	*	*	*	*
	I.D.	14.970	14.700	14.550	14.358			13.898								
	Wall	.165	.300	.375	.471			0.44								
	PSI	43	80	100	125			117.5								
16"	O.D.	*	*	*	*	*	*	*	*	16	*	16.000	16.000	16.000	16.000	17.4
	I.D.									14.696		14.940	14.214	14.940	14.214	15.33
	Wall									0.615		.500	.843	.500	.843	0.967
	PSI									160		100	100	130	220	235
18"	O.D.	18.360	18.701	18.701	18.701	*	18.000	18.701	*	18.000	*	18	18.000	18	18.000	19.5
	I.D.	17.964	17.967	17.789	17.551		17.122	17.629		16.616		16.808	16.014	16.808	16.014	17.83
	Wall	.198	.367	.456	.575		.439	0.536		.692		0.562	.937	0.582	.937	1.083
	PSI	43	80	100	125		100	117.5		160		100	100	120	220	235
20"	O.D.	20.400	*	*	*	*	20.000	*	*	20.000	*	20	20	20	20	21.6
	I.D.	19.962					19.026			18.462		18.863	17.814	18.863	17.614	19.03
	Wall	.219					.487			.769		0.533	1.031	0.533	1.031	1.2
	PSI	43					100			160		100	100	120	220	235
21"	O.D.	*	22.047	22.047	22.047	*	*	22.047	*	*	*	*	*	*	*	*
	I.D.		21.183	20.971	20.691			20.783								
	Wall		.432	.538	.678			0.632								
	PSI		80	100	125			117.5								
24"	O.D.	*	24.803	24.803	24.803	*	24.000	24.8	*	24	*	24	24	24	24	25.800
	I.D.		23.831	23.593	23.277		22.748	23.381		22.043		22.54	21.418	22.54	21.418	23.73
	Wall		.486	.605	.763		.585	0.711		0.923		0.687	1.218	0.687	1.218	1.200
	PSI		80	100	125		100	117.5		160		100	100	120	210	235

* Information Not Available

GASKET INSTALLATION PROCEDURES

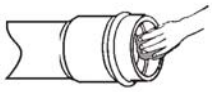


Figure 1



Figure 2



Figure 3

1. Gasket area and pipe or spigot end should be clean and free of dirt and debris. **DO NOT** attempt to remove the formed-in gasket — *Figure 1.*
2. Lubricate the entire sealing surface of the gasket and the pipe or spigot end with a light coating of a suitable lubricant. Make sure the pipe or spigot end has a proper bevel to insure ease of installation — *Figure 2*.
3. Push the pipe or spigot end into the gasket bell while maintaining a straight alignment. The proper insertion depth is equal to the total gasket bell length minus one-half inch (1/2") **—** *Figure 3*.

Appendix F - Discount Codes

Description	Discount Code	
PVC & CPVC Miscellaneous Specialty Valves	004	
PVC Schedule 40 Black Fittings	011	
PVC Schedule 40 White Pool & Spa Specialty	015	
Isolation Joint Specialties	016	
Flange Gasket/Bolt Kits	017	
Irrigation Manifolds	019	
Irrigation Specialty Products	020	
Dri-Splice Sealant	022	
Compression Couplings 1/2" - 6"	024	
Expansion-Repair Couplings 1/2" - 4"	025	
PVC Utility Swing & Spring Check Valves thru 8"	026	
PVC Schedule 40 Tank Adapters 1/2" thru 2-1/2"	029	
Swing Joint Riser Assemblies – Accessories	030	
PVC EverTUFF® TURF™ Fittings Class 315	031	
CPVC EverTUFF® TURF™ Fittings Class 315	032	
CPVC CTS Hot/Cold Water Pipe 1/2" - 2"	034	
CPVC CTS Tan Fittings 1/2" - 2"	035	
PVC Schedule 40 & 80 Clear Pipe	038	
PVC Schedule 40 & 80 Clear Molded Fittings	039	
PVC Schedule 40 White Molded Fittings thru 8"	040	
PVC Schedule 40 White Molded Fittings 10" & Larger	041	
UVR Tan Schedule 40 Molded Fittings	042	
PVC Gray Schedule 40 Molded Fittings Thru 8"	043	
PVC Gray Schedule 40 Fittings 10" & Larger	044	
PVC Gray Schedule 40 Fabricated Fittings	045	
PVC White Schedule 40 Molded Reinforced Fittings	046	
PVC White Schedule 40 Fabricated Fittings	047	
PVC Hot-Tap Saddles thru 1" - 6"	049	
CPVC Hot-Tap Saddles thru 1" - 6"	050	
PVC DWV Schedule 40 Molded thru 8"	051	
PVC DWV Schedule 40 Molded 10" & Larger	052	
Backwater Valve PVC 2" - 6"	055	
PP Natural Schedule 80 SR Threaded Fittings thru 2"	060	
PP Black Schedule 80 SR Threaded Fittings thru 2"	061	
Low-Extractable Solvent Cement	063	
Schedule 80 Low-Extractable Pipe 1/2" - 6"	064	
Schedule 80 Low-Extractable Fittings 1/2" - 6"	065	
Low-Extractable Clear Valves 1/2" - 4"	066	
FlameGuard® CPVC Fittings 3/4" - 3"	070	
FlameGuard® CPVC Pipe 3/4" - 3"	071	
FlameGuard® Solvent Accessories General Products	073	
FlameGuard® CPVC Molded w/Brass Inserts	076	
FlameGuard® CPVC Custom Fittings	079	
PVC Gray Schedule 80 Molded Fittings thru 8"	080	

Description	Discount Code	
PVC Gray Schedule 80 Molded Fittings 10" & Larger	081	
PVC Gray Schedule 80 Fabricated Pressure Fittings	083	
PVC Schedule 80 Fabricated Pressure Custom Fittings	084	
PVC & CPVC Expansion Joints	085	
PVC Gray Schedule 80 Molded Reinforced Fittings	086	
CPVC Gray Schedule 80 Molded Fittings thru 8"	090	
CPVC Gray Schedule 80 Molded Fittings 10" and Larger	091	
CPVC Gray Schedule 80 Molded Reinforced Fittings	096	
CPVC Schedule 80 Fabricated Fittings	097	
CPVC Schedule 80 Fabricated Custom Fittings	098	
CPVC Sch 80 Non Pressure Rated	099	
PVC Gray Tank Adapters	100	
CPVC Gray Tank Adapters	101	
PVC Gray Y-Strainers 1/2" - 4"	102	
PVC Clear Y-Strainers 1/2" - 4"	103	
CPVC Gray Y-Strainers 1/2" - 4"	104	
PVC Swing Check Valves 3/4" - 2"	108	
CPVC Swing Check Valves 3/4"- 2"	109	
PVC Swing Check Valves 2-1/2" and Larger	110	
CPVC Swing Check Valves 2-1/2" and Larger	111	
PP Swing Check Valves 2-1/2" and Larger	112	
PP Swing Check Valves 3/4" - 2"	113	
PE Schedule 80 & Poly Cut-Off Nipples	120	
CPVC Gray Schedule 80 Nipples	121	
PE Four-In-One Cut-Off Nipples	123	
PVC Gray Molded Insert Fittings 3/8" - 4"	140	
PVC Gray Reinforced Insert Fittings 1/2" - 1"	142	
CPVC Molded Insert Fittings 3/4" - 2"	143	
LabWaste™ CPVC Pipe 8" - 12"	157	
LabWaste™ Pipe 14" & Larger	158	
LabWaste™ Fittings 8" & Larger	159	
LabWaste™ CPVC Fittings thru 6"	160	
LabWaste™ Pipe CPVC 1-1/2" - 6"	161	
LabWaste™ CPVC Drain & Accessories	169	
LabWaste™ Tools	170	
LabWaste™ Mechanical Couplings	171	
PVC Metric Molded Standard Fittings	190	
PVC Metric Molded 280mm & Larger	191	
CPVC Metric Molded Standard Fittings	192	
PVC Imperial (BSP) Molded Fittings - White	195	
PVC Imperial (BSP) Molded Fittings - Gray	196	
PVC Gray Transition Unions	197	
PVC Gate Valves thru 2"	200	
PVC Gate Valves 2-1/2" & Larger	201	

Appendix F - Discount Codes

Description	Discount Code	
CPVC Gate Valves thru 2"	202	
CPVC Gate Valves 2-1/2" & Larger	203	
PVC Ball Valves Thru 2"	204	
PVC Ball Valves 2-1/2" & Larger	205	
PVC Metric Gate Valves thru 63mm	208	
CPVC Metric Gate Valves thru 63mm	209	
PVC Compact Ball Valves thru 2"	210	
PVC Compact Ball Valves 3" - 6"	211	
CPVC Compact Ball Valves thru 2"	212	
CPVC Compact Ball Valves 3" - 6"	213	
PVC Utility Ball Valves 2-1/2" - 6"	214	
PVC Utility Ball Valves thru 2"	215	
CPVC Utility Ball Valves thru 2"	216	
CPVC CTS Valves 1/2" - 2"	217	
PVC Lab & Needle Valves 1/4" - 1/2"	218	
CPVC & PP Lab & Needle Valves 1/4" - 1/2"	219	
PVC Compact Ball Valves thru 4"	220	
PVC Compact Ball Valves 6" (Venturied)	221	
CPVC Compact Ball Valves thru 4"	222	
CPVC Compact Ball Valves 6" (Venturied)	223	
PVC Metric True Union Ball Check Valves thru 110mm	228	
CPVC Metric True Union Ball Check Valves thru 110mm	229	
PVC True Union Ball Valves thru 4"	230	
PVC True Union Ball Valves thru 6" (Venturied)	231	
CPVC True Union Ball Valves thru 4"	232	
CPVC True Union Ball Valves thru 6" (Venturied)	233	
PVC Metric True Union Ball Valves thru 110mm	238	
CPVC Metric True Union Ball Valves 110mm	239	
PVC Single Entry Ball Valves thru 4"	240	
PVC Butterfly Valves thru 12"	250	
PVC Butterfly Valves 14" & Larger	251	
CPVC Butterfly Valves thru 12"	252	
CPVC Butterfly Valves 14" & Larger	253	
High Purity Butterfly Valves	254	
PP Butterfly Valves thru 12"	256	
PP Butterfly Valves 14" and Larger	257	
PVC Butterfly Pool Valves thru 8" Manual	260	
PVC Butterfly Pool Valves thru 12" Gear Operated	261	
PVC Tee Valves	263	
CPVC Tee Valves	264	
PVC Diaphragm Valves thru 2"	270	
PVC Diaphragm Valves 2-1/2" and Larger	271	
CPVC Diaphragm Valves thru 2"	272	
CPVC Diaphragm Valves 2-1/2" and Larger	273	

Description	Discount Code	
PVC Metric Diaphragm Valves thru 63mm	274	
CPVC Metric Diaphragm Valves thru 63mm	276	
PP Diaphragm Valves thru 2"	280	
PP Diaphragm Valves 2-1/2" and Larger	281	
PVC Air Admittance Valve	285	
CPVC Air Admittance Valve	286	
PVC Butterfly Check Valves 2" and Larger	289	
CPVC Butterfly Check Valves 2" and Larger	290	
PVC Tee Filters & Basket Strainers	295	
CPVC Tee Filters	296	
CPVC Basket Strainers	297	
Actuation, Accessories, Components	298	
Valves, Accessories, Repair Kits, Components	299	
Low Head (SDR91) Fabricated Fittings	300	
Low Head Fabricated Risers & Accessories	301	
PVC Low Head (SDR91) Custom Fittings	309	
80# PIP (SDR51) Fabricated Fittings	310	
PVC 80# PIP (SDR51) Fabricated Custom Fittings	319	
100# PIP (SDR41) Fabricated Fittings	320	
PVC 100# PIP (SDR41) Fabricated Custom Fittings	329	
125# PIP x PIP (SDR 32.5) Fabricated Fittings	330	
PVC 125# PIP x PIP (SDR32.5) Fabricated Fittings	339	
Class 63 IPS (SDR64) Fabricated Fittings	340	
Class 100 IPS (SDR41) Fabricated Fittings	350	
Class 125 IPS (SD432.5) Fabricated Fittings	360	
PVC Class 125 Molded Fittings 10" & Larger	361	
PVC Class 125 IPS (SDR32.5) Fabricated Custom Fittings	369	
Class 160 IPS (SDR26) Fabricated Fittings	370	
Class 200 IPS (SDR26) Fabricated Fittings	380	
Schedule 40 DWV/Low Pressure Fabricated Fittings	390	
PVC Schedule 40 Fabricated Pipe Extenders	392	
PVC Schedule 80 Fabricated Pipe Extenders	394	
PVC Schedule 40 DWV/Low Pressure Custom Fittings	399	
Schedule 80 DWV/Low Pressure Fabricated Fittings	400	
PVC Fabricated Duct Fittings	430	
CPVC Fabricated Duct Fittings	432	
PVC Fabricated Duct Cold Rolled Pipe	434	
CPVC Fabricated Cold Rolled Pipe	435	
Double Containment Pressure	470	
Electro Actuated Compact 2000 Ball Valves PVC thru 2"	496	
Electro Actuated Compact 2000 Ball Valves CPVC thru 2"	498	
Electro Actuated True Union 2000 Standard & Industrial Ball Valves PVC thru 6"	500	
Electro Actuated True Union 2000 Standard & Industrial Ball Valves CPVC thru 6"	502	
Premium Actuated Standard Butterfly Valve - Electric PVC thru 12"	510	

Appendix F - Discount Codes

Description	Discount Code	
Premium Actuated Standard Butterfly Valve - Electric CPVC thru 12"	512	
Premium Actuated Standard Butterfly Valve - Electric PP thru 24"	514	
Premium Actuated Diaphragm Valves - Electric PVC thru 8"	520	
Premium Actuated Diaphragm Valves - Electric CPVC thru 4"	522	
Premium Actuated Diaphragm Valves - Electric PP thru 4"	524	
Premium Actuated True Union 2000 Industrial Ball Valves - Pneumatic PVC thru 6"	530	
Premium Actuated True Union 2000 Industrial Ball Valves - Pneumatic CPVC thru 6"	532	
Premium Actuated Standard Butterfly Valves - Pneumatic PVC thru 12"	540	
Premium Actuated Standard Butterfly Valves - Pneumatic CPVC thru 12"	542	
Premium Actuated Standard Butterfly Valves - Pneumatic PP thru 24"	544	
Premium Actuated Diaphragm Valves - Pneumatic PVC thru 8"	550	
Premium Actuated Diaphragm Valves - Pneumatic CPVC thru 4"	552	
Premium Actuated Diaphragm Valves - Pneumatic PP thru 4"	554	
PVC True Union 2000 Industrial Ball Check Valves 6"	558	
CPVC True Union 2000 Industrial Ball Check Valves 6"	559	
PVC True Union 2000 Industrial Ball Valves 1/2" thru 2"	600	
PVC True Union 2000 Industrial Ball Valves 2-1/2" thru 4"	601	
CPVC True Union 2000 Industrial Ball Valves 1/2" thru 2"	602	
CPVC True Union 2000 Industrial Ball Valves 2-1/2" thru 4"	603	
PVC True Union 2000 Industrial Ball Check Valves 1/2" thru 2"	604	
PVC True Union 2000 Industrial Ball Check Valves 2-1/2" thru 4"	605	
CPVC True Union 2000 Industrial Ball Check Valves 1/2" thru 2"	606	
CPVC True Union 2000 Industrial Ball Check Valves 2-1/2" thru 4"	607	
PVC True Union 2000 Standard Ball Valves 1-1/2" thru 2"	608	
PVC True Union 2000 Standard Ball Valves 2-1/2" thru 4"	609	
CPVC True Union 2000 Standard Ball Valves 1/2" thru 2"	610	
CPVC True Union 2000 Standard Ball Valves 2-1/2" thru 4"	611	
PVC True Union 2000 Industrial Ball Valves 6"	612	
CPVC True Union 2000 Industrial Ball Valves 6"	613	
PVC Horizontal & Vertical 3-Way Diverter Ball Valves 1/2" - 4"	615	

Description	Discount Code	
CPVC Horizontal & Vertical 3-Way Diverter Ball Valves 1/2" - 4"	617	
PVC Globe Standard & Wye Valves 1/2" - 4"	620	
PVC Clear Globe Wye Valves 1/2" - 4"	621	
CPVC Globe Standard & Wye Valves 1/2" - 4"	622	
Low-Extractable Gauge Guards	623	
PVC Gauge Guards	624	
CPVC Gauge Guards	625	
PP Gauge Guards	626	
PVC Wye Check Valves 1/2" - 4"	627	
PVC Clear Wye Check Valves 1/2" - 4"	628	
CPVC Wye Check Valves 1/2" - 4"	629	
CTS Cement	701	
Low-Extractable Cement	702	
Fire Sprinkler Cement	703	
LabWaste™ Cement	704	
PVC Regular/Medium Cement	705	
PVC Heavy/X-Heavy Cement	706	
Gray/CPVC Cement	707	
ABS Cement	708	
Primers & Cleaners	709	
Cements & Primers Accessories	710	
PVC Clear Pipe Distribution – Sales	742	
PVC Pipe Distribution – Sales	744	
CPVC Pipe Distribution – Sales	745	
PVC Duct Pipe Distribution – Sales	748	
CPVC Duct Pipe Distribution – Sales	749	
PVC White Repair Extender Fittings	894	
Blue 75™ Thread Sealant	895	
PVC Duct Distribution – Sales	948	
CPVC Duct Distribution – Sales	949	

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