

NEW
2006

PH-06

PIPE HANGERS & SUPPORTS



B-Line[®]

SYSTEMS THAT MAKE SENSE



COOPER B-Line



INTRODUCTION

Cooper B-Line[®], Inc. is a leading manufacturer and fabricator of metal products used in the support of pipe and equipment for industrial, commercial, utility, and OEM installations. Cooper B-Line is proud of the exacting standards of research, design, engineering, and manufacturing that go into each and every product that comprise our pipe hanger product line. Our customers have access to the most complete support systems offered in the industry, including pipe hangers, metal framing, cable tray, slotted angle, fasteners, telecom, enclosures and anchors.

Many of Cooper B-Line's products are listed by Underwriters' Laboratories, Inc. All Cooper B-Line products are manufactured to meet or exceed industry standards set for their design and manufacture.

Cooper B-Line products are produced in four modern plants consisting of over 1,000,000 square feet. These facilities are located in Highland, Illinois; Troy, Illinois; Reno, Nevada, and Sherman, Texas. Regional sales and distribution centers are located throughout the United States stocking standard Cooper B-Line products for quick service and delivery.

This catalog is designed to be helpful to engineers and contractors in the application and selection of pipe hanger and support products for construction and maintenance.

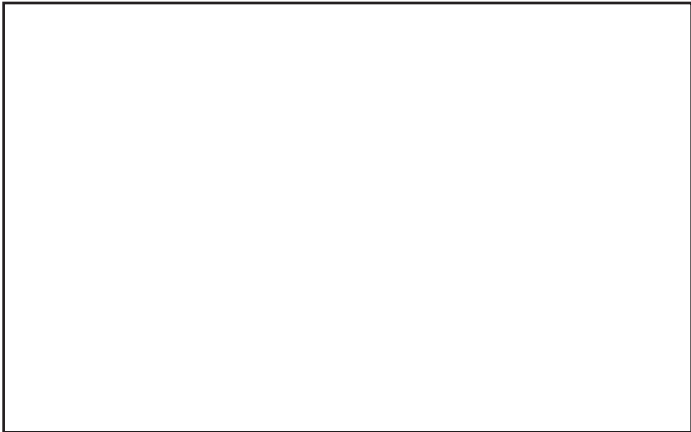
If a unique application requires a special product not included in this catalog, Cooper B-Line engineering personnel are ready to furnish design consultation and realistic material estimates. In addition, sales representatives with engineering know-how are located throughout the United States and abroad for your convenience.



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Warning

All hanger products in this catalog are intended for installation and service as illustrated or described. We are aware that these products have been used successfully for purposes other than for which they were designed. We also know that on occasion, these products have failed when used as tools for erection or for some purpose other than intended use. We caution against misapplication which may result in failure or accident.

Examples of this misapplication which can result in failure include: the use of a beam clamp on a beam other than described in the catalog; the use of concrete inserts as an anchor for pulling pipe up to the required elevation; and the suspension of clevis hangers, one under another, which can result in the accumulative load greater than the pipe hanger will support. Cooper B-Line pipe hanger products are manufactured in accordance with industry standards. Our customers should exercise care to use these products properly so as to avoid an on-the-job accident. Consult the Home Office for assistance of proper installation and use of the products in this catalog.

Pictorial Index

BEAM CLAMPS

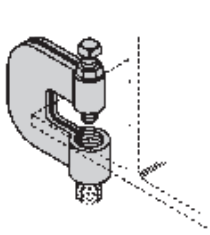


Figure B351L
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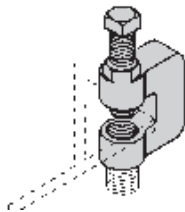
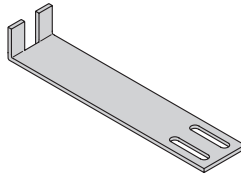


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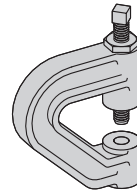


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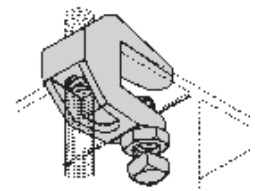


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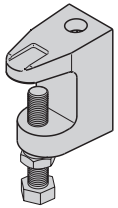


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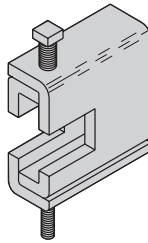


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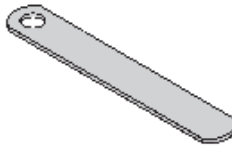


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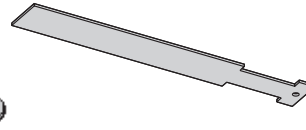


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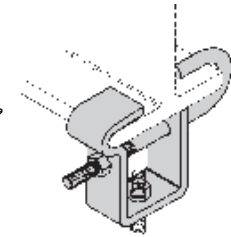


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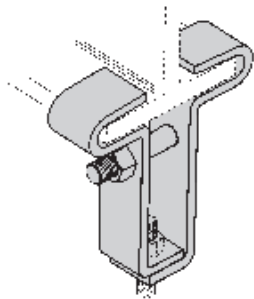


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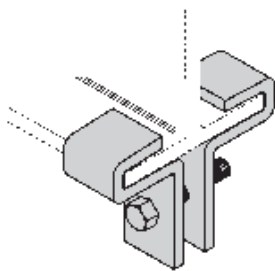


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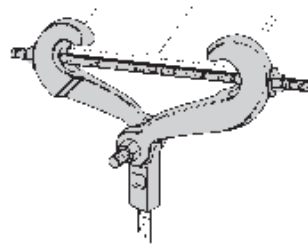


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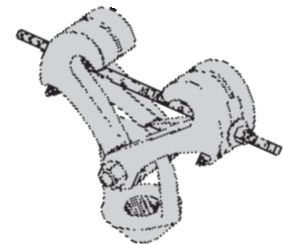


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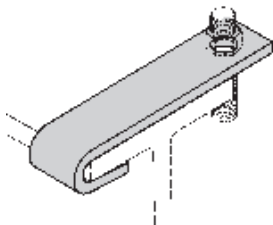


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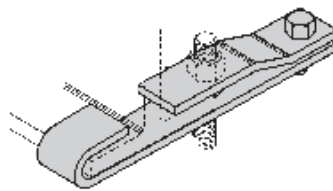


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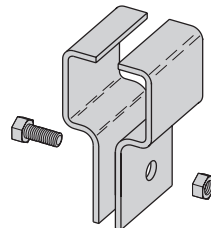


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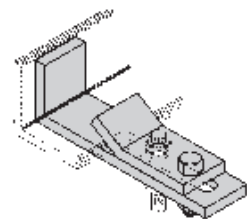


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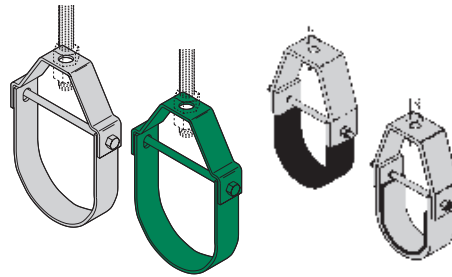


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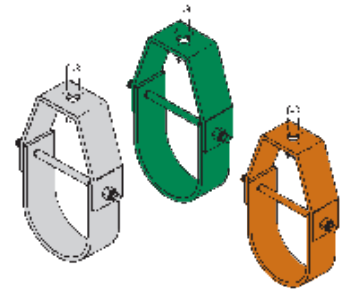


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Figure B3104CT
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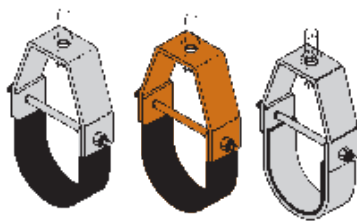


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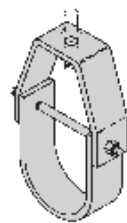


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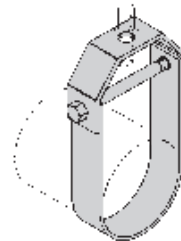


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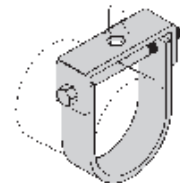


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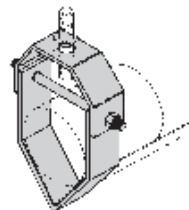


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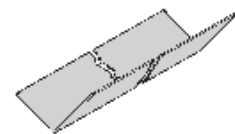


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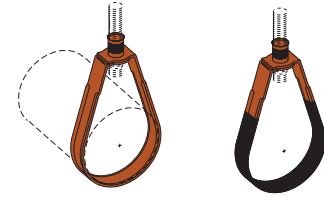


Figure B3170CT
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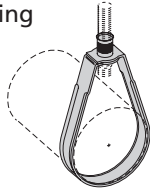


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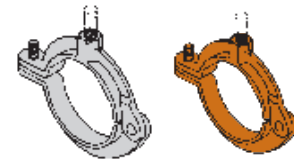


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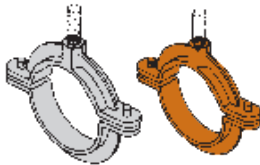


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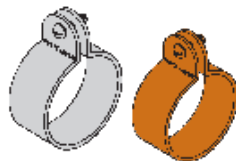


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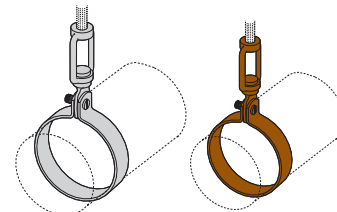


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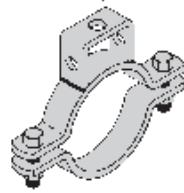


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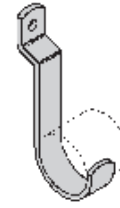


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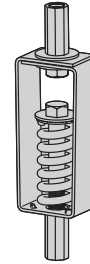


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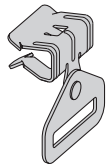


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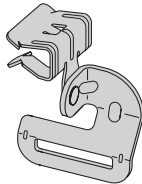


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PIPE CLAMPS

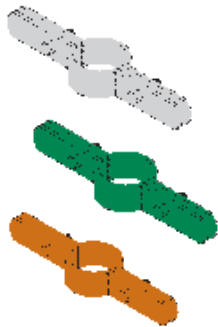


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Figure B3373CT
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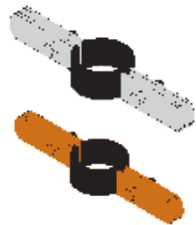


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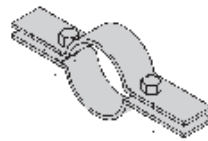


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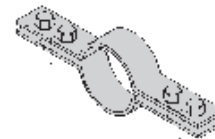


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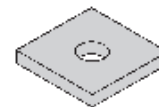


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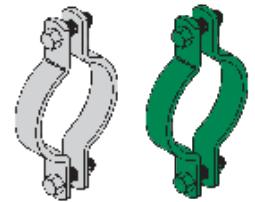


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Figure B3142
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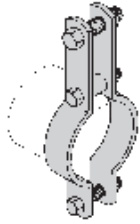


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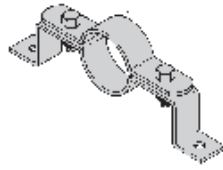


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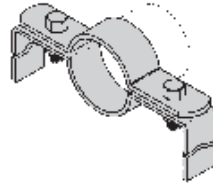


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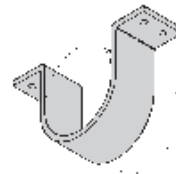


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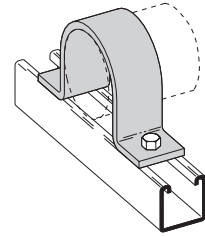


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PIPE ROLLERS & ROLLER SUPPORTS



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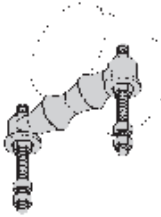


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Figure B3120
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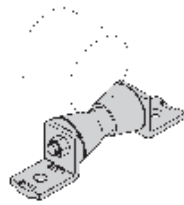


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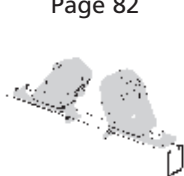


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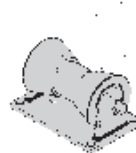


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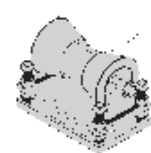


Figure B3118SL
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With Base Plate
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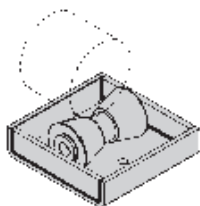


Figure B3119SL
Roller With Steel
Base Plate
Page 90



Figure B3264
Spring Cushion Hanger
Page 91

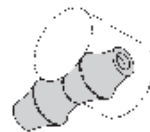


Figure B3114R
Long Pipe Roll Only
Page 92

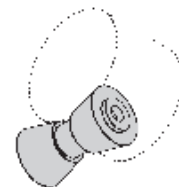
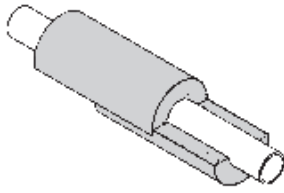


Figure B3117R
Short Pipe Roll Only
Page 92

PIPE SUPPORTS, GUIDES, SHIELDS & SADDLES



**Figure B3380
thru B3384**
360° Calcium Silicate
Shield
Page 95

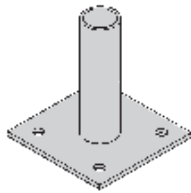


Figure B3088
Base Stand
Page 96

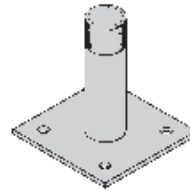


Figure B3088T
Threaded Base Stand
Page 96



Figure B3089
Pipe Support Adjuster
Page 98

Figure B3088S
Seismic Base Stand
Page 97

Figure B3088ST
Seismic Threaded
Base Stand
Page 97

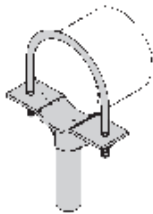


Figure B3090
Pipe Saddle Support
With U-Bolt
Page 99



Figure B3095
Pipe Saddle Support
Page 100



Figure B3091
Pipe Saddle Support
Page 101



Figure B3096
Adjustable Pipe
Saddle Support
Page 102

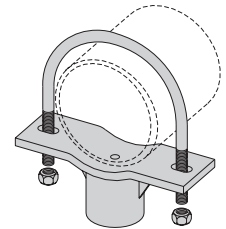


Figure B3097
Pipe Saddle
Support with
Pipe Strap/U-Bolt
Pages 102 & 103



Figure B3092
Adjustable Pipe Saddle
Support With Yoke
Page 104



Figure B3093
Adjustable Pipe
Saddle Support
Page 105

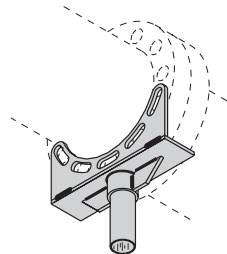


Figure B3094
Pipe Flange
Support
Pages 106 & 107



**Figure B3281
thru B3287**
Pipe Alignment
Guide
Pages 108 & 109

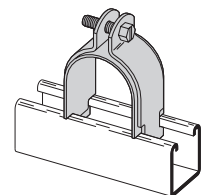
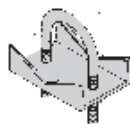


Figure B2417
Pipe Guides
Page 110



Figure B3195
IPS Felt Isolator
Page 110



**Figure B3147A
Figure B3147B**
Anchor Chairs
Page 111



Figure B3252
Standard Hold-Down
Pipe Guide
Page 112



Figure B3253
Base Plate
Page 113



Figure B3256
Hold-Down
Anchor Clamp
Page 114

Pictorial Index

PIPE SUPPORTS, GUIDES, SHIELDS & SADDLES (Continued)



Figure B3257
Base Plate
Page 115

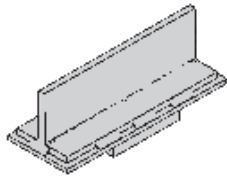


Figure B3891 thru B3897
Pipe Slides
Pages 116-119

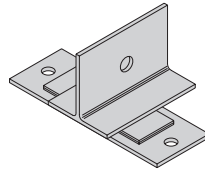


Figure B3991 thru B3993
Pipe Slides
Pages 120-123

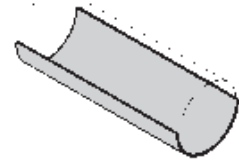


Figure B3151
Insulation
Protection Shield
Page 125



Figure B3153
Insulation Protection
Shield With Tabs
Page 125



Figure B3154
Short Insulation
Protection Shield
Page 126



Figure B3155
Short Insulation
Protection Shield
With Tabs
Page 126

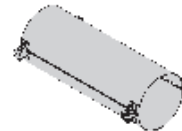


Figure B3152
360° Insulation
Protection Shield
Page 127

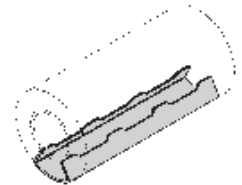


Figure B3160 thru B3165
Pipe Covering
Protection Saddle
Pages 128-133

CONCRETE INSERTS

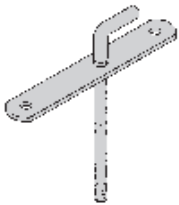


Figure B3019
Adjustable Metal
Deck Ceiling Bolt
Page 135

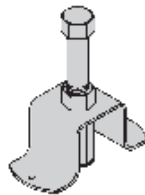


Figure B2501
Light Duty Spot Insert
Page 135

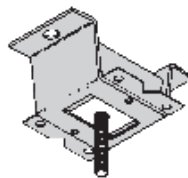


Figure B2500
Light Duty Spot Insert
Page 136

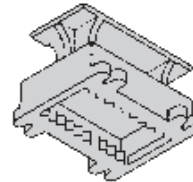


Figure B3014
Malleable Iron
Spot Insert
Page 137

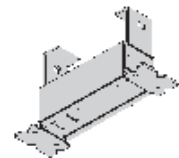


Figure B2505 thru B2508
Spot Insert
Page 138

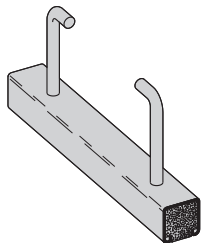


Figure B2503
Heavy Duty Spot Insert
Page 139

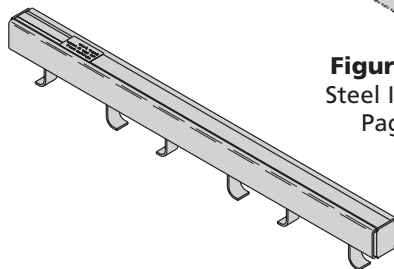


Figure B221, B321, B521
Continuous Concrete Inserts
Pages 140 - 142

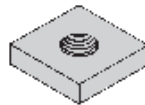


Figure N2500
Steel Insert Nut
Page 136



Figure B3014N
Malleable Iron Insert Nut
Page 137

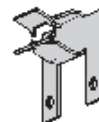


Figure BD40
Fastener Clip
Page 143



Figure BE-5-8
Fastener Clip
Page 143

BRACKETS

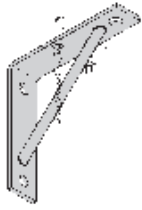


Figure B3063
Light Welded
Steel Bracket
Page 145

Figure B3063CP
Clip
Page 145

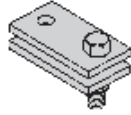


Figure B3064
Adjustable Strut Bracket
Page 146

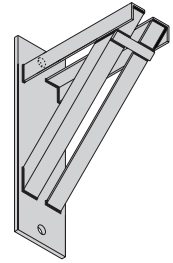
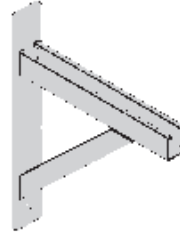


Figure B3066
Medium Duty Angle
Bracket
Page 148

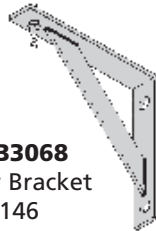


Figure B3068
Light Duty Bracket
Page 146

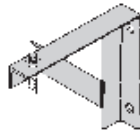


Figure B3065
Angle Iron Bracket
Page 147

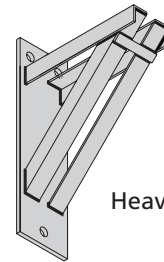


Figure B3067
Heavy Duty Angle Bracket
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UPPER ATTACHMENTS

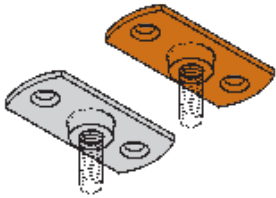


Figure B3199
Ceiling Flange
Page 151

Figure B3199CT
Dura-Copper Coated
Ceiling Flange
Page 151 ◆

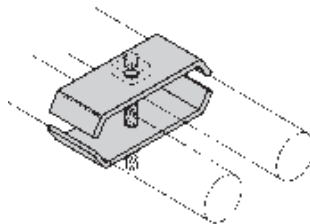


Figure B3059
Bar Joist Washer
Page 151

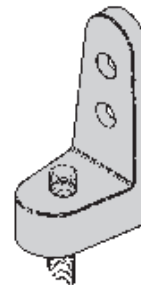


Figure B3058
Side Beam Connector
Page 152

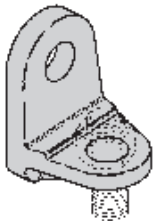


Figure B3062
Side Beam Bracket
Page 152

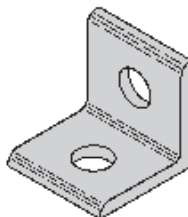


Figure B3060
Side Beam Angle Clip
Page 153

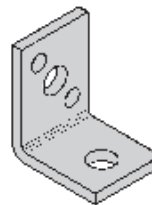


Figure B3060L
Side Beam Angle Clip
Page 153

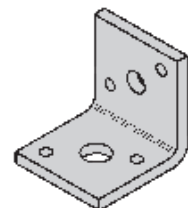


Figure B3070
Reversible Angle Clip
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UPPER ATTACHMENTS (Continued)

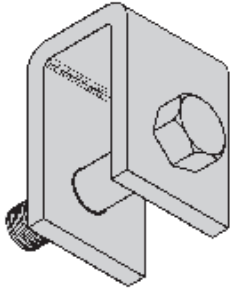


Figure B3083
Figure B3083WO
Welded Beam Attachment
Page 154

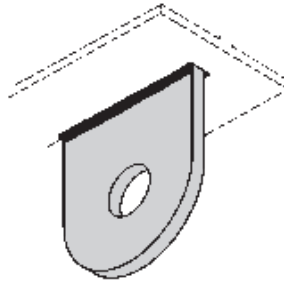


Figure B3080S (Short)
Figure B3080L (Long)
Structural Welding Lug
Page 155

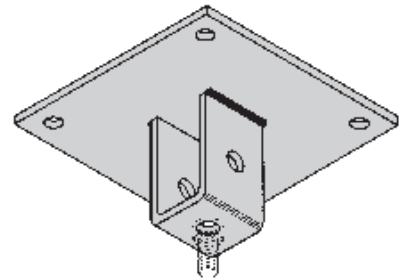


Figure B3085
Rod Attachment Concrete Plate
Page 156

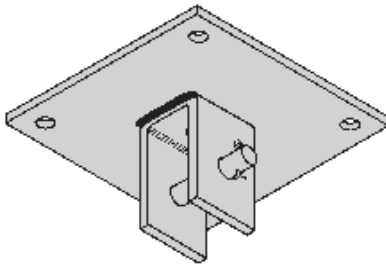


Figure B3086
Clevis Concrete Plate
Page 157

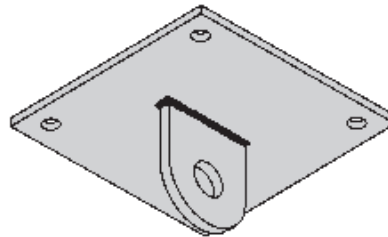


Figure B3084
Single Lug Concrete Plate
Page 158

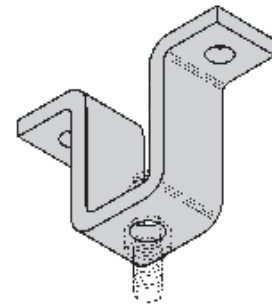


Figure B3082
Rod Beam Attachment
Page 159

THREADED ACCESSORIES

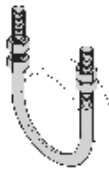


Figure B3501
Light Duty U-Bolt
Page 161



Figure B3188
Standard U-Bolt
Pages 162 & 163

Figure B3188C
Plastic Coated
Standard U-Bolt
Pages 162 & 163



Figure B3222
Eye Socket
Page 164



Figure B3200
Weldless Eye Nut
Page 164



Figure B3201
Forged Steel Clevis
Page 165

THREADED ACCESSORIES (Continued)



Figure B3203
Extension Piece
Page 166



Figure B3223
Offset Eye Socket
Page 166

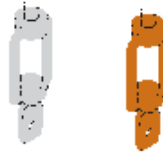


Figure B3224
Hanger Adjuster
Page 167

Figure B3224CT
Dura-Copper Coated
Hanger Adjuster
Page 167 ◆



Figure B3202
Turnbuckle
Page 167



Figure B3205
Machine Threaded Rod
Page 168



Figure B3210
Eye Rod
Page 169

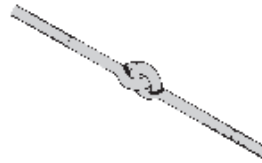


Figure B3210X
Linked Eye Rod
Page 170

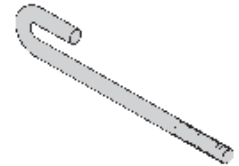


Figure B3212
J-Bolt
Page 171

Figure B3211
Welded Eye Rod
Page 169

Figure B3211X
Linked Welded Eye Rod
Page 170

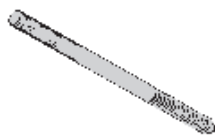


Figure B3213
Coach Screw Rod
Page 171



Figure ATR
All Threaded Rod
Page 171

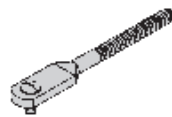


Figure B3227
Flat End Lag Screw
Page 172

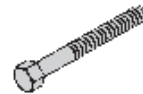


Figure B3228
Hex Head Lag Bolt
Page 172



Figure DS 16 x 2
#16 x 2" Drive Screw
Page 172



Figure B655
Steel Rod Coupling
Page 173



Figure B3220
Malleable Iron
Rod Coupling
Page 173

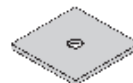


Figure B3248
Steel Washer Plate
Page 174

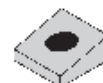


Figure B3234
Bevel Washer
Page 175

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VIBRA TROL®

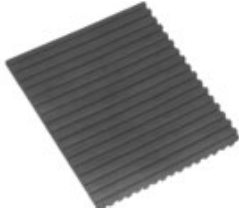


Figure NNP
Ribbed
Neoprene Pad
Page 178

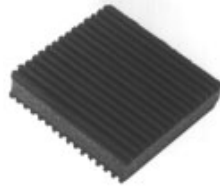


Figure CNP
Cork and Ribbed
Neoprene Pad
Page 178

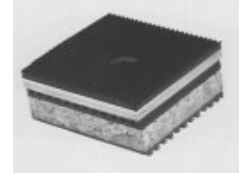


Figure CNNK
Cork, Ribbed
Neoprene and Steel
Page 179



Figure VRP
Rubber Cube Pad
Page 179



Figure BVS
Vibra Strip™ for 1 5/8"
Wide B-Line channel
Page 180



Figure NVD
Double Deflection
Page 181



Figure CM
Metal Housing and
Neoprene
Page 181



Figure OML/OM
Spring Mount
Pages 182 & 183



Figure HMLE/HME
Housed 1"
Deflection Mounting
Pages 184 & 185

VIBRA TROL® (Continued)

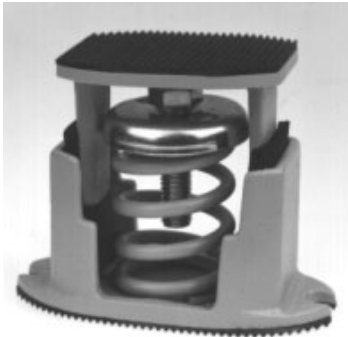


Figure HMLT/HMT
Housed 1"
Deflection Mounting
Pages 186 & 187



Figure ANH
Acoustical Hanger
Page 188



Figure RH
Neoprene Hanger
Page 189



Figure HSL/HS
Vibration Spring Hanger
Pages 190 & 191



Figure HESL/HES
Combination Spring &
Neoprene
Pages 192 & 193



Figure SHE
Isolation Spring Hanger
Pages 194 & 195



Figure BVT
Vibraclamp
Tubing Sizes
Page 197

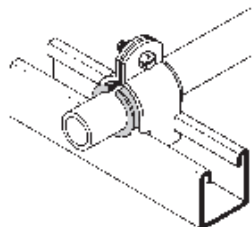


Figure B1999
Vibra Cushion
Page 199

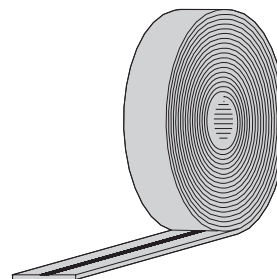


Figure ISO
ISO Pipe
Page 199

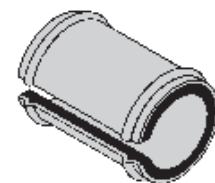


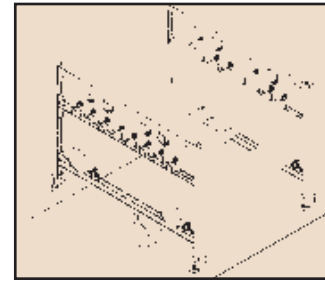
Figure B3195
Felt Isolators
Page 199

Figure BVP
Vibraclamp
Pipe Sizes
Page 198

Figure B3195CT
Copper Tubing
Felt Isolator
Page 199

Strut Systems

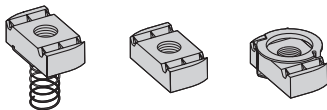
Cooper B-Line's metal framing support system is designed with many time-saving features. Fully adjustable and reusable, with a complete line of channels, fittings, and accessories for multi-purpose applications.



SELECTION CHART for Channels, Materials and Hole Patterns

Channel Type	Channel Dimensions				Material & Thickness*				Channel Hole Pattern **				
					Steel	Alum.	Stainless Steel		SH	S	H17/8	TH	KO6
	Type 304	Type 316	1	2			3	4					
B11	3 ¹ / ₄ "	(82.5)	1 ⁵ / ₈ "	(41.3)	12 Ga.	--	--	--	1	1	1	--	1
B12	2 ⁷ / ₁₆ "	(61.9)	1 ⁵ / ₈ "	(41.3)	12 Ga.	.105	--	--	1 2	1	1 2	--	1 2
B22	1 ⁵ / ₈ "	(41.3)	1 ⁵ / ₈ "	(41.3)	12 Ga.	.105	12 Ga.	12 Ga.	1 2 3 4	1	1 2 3 4	1	1 2
B24	1 ⁵ / ₈ "	(41.3)	1 ⁵ / ₈ "	(41.3)	14 Ga.	.080	14 Ga.	14 Ga.	1 2 3 4	1	1 2 3 4	--	1 2
B26	1 ⁵ / ₈ "	(41.3)	1 ⁵ / ₈ "	(41.3)	16 Ga.	--	--	--	1	1	1	--	1
B32	1 ³ / ₈ "	(34.9)	1 ⁵ / ₈ "	(41.3)	12 Ga.	--	12 Ga.	--	1 3	1	1 3	--	1
B42	1"	(25.4)	1 ⁵ / ₈ "	(41.3)	12 Ga.	--	12 Ga.	--	1 3	1	1 3	--	1
B52	1 ³ / ₁₆ "	(20.6)	1 ⁵ / ₈ "	(41.3)	12 Ga.	--	--	--	1	1	1	--	1
B54	1 ³ / ₁₆ "	(20.6)	1 ⁵ / ₈ "	(41.3)	14 Ga.	.080	14 Ga.	14 Ga.	1 2 3 4	1	1 2 3 4	--	1 2
B56	1 ³ / ₁₆ "	(20.6)	1 ⁵ / ₈ "	(41.3)	16 Ga.	--	--	--	1	1	1	--	1

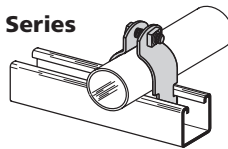
Channel Nuts



Size and Part Number			
Thread Size	With Spring	Without Spring	Twirl Nut
1/4"-20	N224	N224WO	TN224
3/8"-16	N228	N228WO	TN228
1/2"-13	N225	N225WO	TN225
5/8"-11	N255	N255WO	--
3/4"-10	N275	N275WO	--

Available Finishes: Electro-Galvanized

B2000 Series



Copper Tubing Clamps Dura Copper®

Part No.	Nominal Tubing Size	Mat'l Ga.
B2026DCU	1/2" (15)	16
B2008DCU	3/4" (20)	16
B2030DCU	1" (25)	14
B2032DCU	1 1/4" (32)	14
B2011DCU	1 1/2" (40)	14
B2038DCU	2" (50)	12
B2042DCU	2 1/2" (60)	12
B2046DCU	3" (80)	12
B2050DCU	3 1/2" (90)	12
B2054DCU	4" (100)	11

Schedule 40 Pipe Clamps

Part No.	Nominal Pipe Size	Mat'l Ga.
B2001	3/8" (10)	16
B2008	1/2" (15)	16
B2009	3/4" (20)	14
B2010	1" (25)	14
B2011	1 1/4" (32)	14
B2012	1 1/2" (40)	12
B2013	2" (50)	12
B2014	2 1/2" (60)	12
B2015	3" (80)	12
B2016	3 1/2" (90)	11
B2017	4" (100)	11
B2018	4 1/2" (115)	11
B2019	5" (125)	11
B2020	6" (150)	11
B2021	7" (175)	11
B2022	8" (200)	11

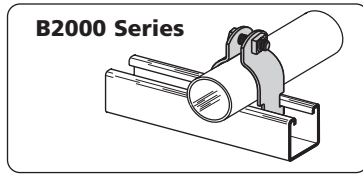
Available Finishes: Electro-Galvanized, Aluminum, Stainless, Dura-Copper Painted, Hot-Dip Galvanized and PVC coated.

Nut and bolts are included with all two-piece clamps.

** Add "PA" to Part No. for Pre-assembled

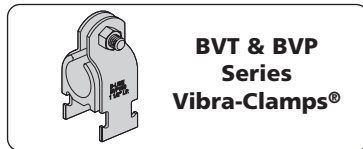
Strut Systems

Below are some basic clamp and cushions to be used with a strut system. For the industry's most complete line of strut and strut fittings, refer to Cooper B-Line's Strut Systems Engineering Catalog.



O.D. Pipe Clamps

Part No.	O.D. Size (Outside Dia.)	Mat'l Ga.
B2023	1/4" (6.3)	16
B2024	3/8" (9.5)	16
B2025	1/2" (12.7)	16
B2026	5/8" (15.9)	16
B2027	3/4" (19.0)	16
B2028	7/8" (22.2)	16
B2029	1" (25.4)	14
B2030	1 1/8" (28.6)	14
B2031	1 1/4" (31.7)	14
B2032	1 3/8" (34.9)	14
B2004	1 1/2" (38.1)	14
B2011	1 5/8" (41.3)	14
B2005	1 3/4" (44.4)	12
B2036	1 7/8" (47.6)	12
B2037	2" (50.8)	12
B2038	2 1/8" (54.0)	12
B2039	2 1/4" (57.1)	12



BVT & BVP Series Vibra-Clamps®

For Copper Tubing & OD Sizes

Catalog No.	Copper & Steel OD Tubing Size	Nominal Copper Size
BVT025	1/4" (6.3)	--
BVT037	3/8" (9.5)	1/4" (6)
BVT050	1/2" (12.7)	3/8" (10)
BVT062	5/8" (15.9)	1/2" (15)
BVT075	3/4" (19.0)	5/8" (17)
BVT087	7/8" (22.2)	3/4" (20)
BVT100	1" (25.4)	--
BVT112	1 1/8" (28.6)	1" (25)
BVT125	1 1/4" (31.7)	--
BVT137	1 3/8" (34.9)	1 1/4" (32)
BVT150	1 1/2" (38.1)	--
BVT162	1 5/8" (41.3)	1 1/2" (40)
BVT175	1 3/4" (44.4)	--
BVT187	1 7/8" (47.6)	--
BVT200	2" (50.8)	--
BVT212	2 1/8" (54.0)	2" (50)
BVT225	2 1/4" (57.1)	--
BVT250	2 1/2" (63.5)	--
BVT262	2 5/8" (66.7)	2 1/2" (65)
BVT300	3" (76.2)	--
BVT312	3 1/8" (79.4)	3" (80)
BVT362	3 5/8" (92.1)	3 1/2" (90)
BVT400	4" (101.6)	--
BVT412	4 1/8" (104.8)	4" (100)
BVT612	6 1/8" (155.6)	6" (150)

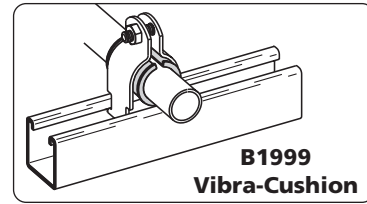
Part No.	O.D. Size (Outside Dia.)	Mat'l Ga.
B2013	2 3/8" (60.3)	12
B2041	2 1/2" (63.5)	12
B2042	2 5/8" (66.7)	12
B2043	2 3/4" (69.8)	12
B2014	2 7/8" (73.0)	12
B2045	3" (76.2)	12
B2046	3 1/8" (79.4)	12
B2047	3 1/2" (82.5)	12
B2048	3 3/8" (85.7)	12
B2015	3 1/2" (88.9)	12
B2050	3 5/8" (92.1)	11
B2051	3 3/4" (95.2)	11
B2052	3 7/8" (98.4)	11
B2016	4" (101.6)	11
B2054	4 1/8" (104.8)	11
B2055	4 1/4" (107.9)	11
B2056	4 3/8" (111.1)	11
B2017	4 1/2" (114.3)	11
B2058	4 5/8" (117.5)	11
B2059	4 3/4" (120.6)	11
B2060	4 7/8" (123.8)	11
B2061	5" (127.0)	11
B2062	5 1/8" (130.2)	11
B2063	5 1/4" (133.3)	11
B2064	5 3/8" (136.5)	11
B2065	5 1/2" (139.7)	11

Available for tubing and pipe sizes 1/4" to 6", OD sizes 1/4" to 6 5/8". Easy one tool installation, dampens vibration and noise, secures tubing firmly, and protects against galvanic reaction.

Stainless Steel available

For Pipe Sizes

Catalog No.	Nominal Pipe Size
BVP025	1/4" (6)
BVP037	3/8" (10)
BVP050	1/2" (15)
BVP075	3/4" (20)
BVP100	1" (25)
BVP125	1 1/4" (32)
BVP150	1 1/2" (40)
BVP200	2" (50)
BVP250	2 1/2" (65)
BVP300	3" (80)
BVP350	3 1/2" (90)
BVP400	4" (100)
BVP500	5" (125)
BVP600	6" (150)



B1999 Vibra-Cushion

- Inhibits Galvanic Reaction
- Reduces Sound & Vibration
- Used on refrigeration, HVAC, copper tubing, glass pipes & hydraulic lines Available in 20 Ft. rolls.

For Rigid Conduit or Iron Pipe

Nominal Size	Length of Vibra-Cushion	Use Clamp No.
3/8" (10)	2 1/8" (54.0)	B2002
1/2" (15)	2 5/8" (66.7)	B2009
3/4" (20)	3 1/4" (82.5)	B2031
1" (25)	4 1/8" (104.8)	B2004
1 1/4" (32)	5 3/16" (131.8)	B2012
1 1/2" (40)	5 15/16" (150.8)	B2038
2" (50)	7 1/2" (190.5)	B2042
2 1/2" (65)	9" (228.6)	B2046
3" (80)	11" (279.4)	B2051
3 1/2" (90)	12 1/2" (317.5)	B2055
4" (100)	14 1/2" (368.3)	B2059
5" (125)	17 7/16" (442.9)	B2067
6" (150)	20 3/4" (527.0)	B2116

For Thinwall (EMT) Conduit

Nominal Size	Length of Vibra-Cushion	Use Clamp No.
3/8" (10)	1 13/16" (46.0)	B2027
1/2" (15)	2 3/16" (58.7)	B2002
3/4" (20)	2 7/8" (73.0)	B2003
1" (25)	3 5/8" (92.1)	B2032
1 1/4" (32)	4 3/8" (120.6)	B2036
1 1/2" (40)	5 7/16" (138.1)	B2012
2" (50)	6 7/8" (174.6)	B2013

For Copper Tubing Type L & K

Nominal Size	Length of Vibra-Cushion	Use Clamp No.
1/4" (6)	1 3/16" (30.2)	B2026
3/8" (10)	1 9/16" (39.7)	B2027
1/2" (15)	1 7/8" (47.6)	B2028
5/8" (17)	2 5/16" (58.7)	B2029
3/4" (20)	2 3/4" (69.8)	B2030
1" (25)	3 1/2" (88.9)	B2032
1 1/4" (32)	4 5/16" (109.5)	B2011
1 1/2" (40)	5 1/8" (130.2)	B2036
2" (50)	6 11/16" (169.9)	B2013
2 1/2" (65)	8 1/4" (209.5)	B2014
3" (80)	9 13/16" (249.2)	B2048
3 1/2" (90)	11 3/8" (288.9)	B2052
4" (100)	12 15/16" (328.6)	B2056
5" (125)	6 1/8" (409.6)	B2064
6" (150)	19 1/4" (488.9)	B2112
8" (200)	25 1/2" (647.7)	B2128

Technical Data

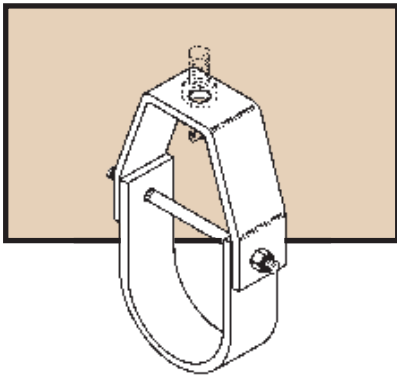
MATERIALS

Carbon Steel

Carbon steel is used in the manufacture of Cooper B-Line pipe hangers and supports. Excellent strength characteristics and adaptability to cold forming provide a well engineered design. By cold forming the steel, mechanical properties are increased, adding to the structural integrity of the fabricated hanger.

Stainless Steel

AISI Type 304 and Type 316 are non-magnetic members of the austenitic stainless steel group. Several conditions make the use of stainless steel ideal. These include reducing long term maintenance costs, high ambient temperatures, appearance, and stable structural properties such as yield strength, and high creep resistance.



CORROSION

All metal surfaces exposed to the environment are affected by corrosion. Depending on the physical properties of the metal and its proximity to other dissimilar metals, an electrochemical reaction may occur which causes an attack on the metal itself, resulting in corrosion. Chemical corrosion is limited to highly corrosive environments, high temperatures, or a combination of both.

FINISHES

Zinc Coatings

Protective zinc coatings are available on a number of pipe hangers and accessories in three basic forms:

Electro-Plated Zinc, Pre-Galvanized, and Hot-Dip Galvanized After Fabrication. In all cases, the zinc protects the steel first as a sacrificial anode to repair bare areas on cut edges and gouges.

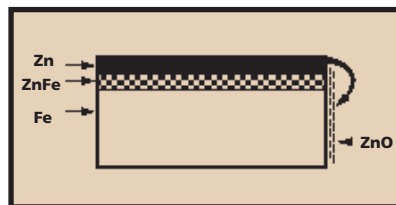
When exposed to air and moisture, zinc forms a tough, adherent protective film consisting of a mixture of zinc oxides, hydroxides, and carbonates. The corrosion resistance of zinc is directly related to its thickness and the environment. For example a 0.2 mil (5 μm) coating will last twice as long as a 0.1 mil (2.5 μm) coating in the same environment.

Electro-Plated Zinc (ASTM B 633 SC1 or SC3)

An Electro-Plated process deposits a coating of zinc on the steel by electrolysis from a bath of zinc salts. This coating is pure zinc and adheres to the steel with a molecular bond. A maximum of 0.5 mils (12.7 μm) of zinc can be applied by this method. This coating is recommended for in-door use in relatively dry areas.

Pre-Galvanized Zinc (ASTM A 653 Coating Designation G90)

Pre-galvanized zinc is produced by continuously rolling the steel coils or sheets through molten zinc at the steel mills. This is also known as "mill-galvanized" or "hot-dipped mill galvanized". Coils are then slit to size for fabrication of pipe hangers. Coating thicknesses of G90, is 0.90 ounces per square foot (0.27 kg/m^2) of steel surface.



Protection of cut edges with zinc coatings.

Cut edges and welded areas are not zinc coated; however, zinc near the uncoated metal becomes a sacrificial anode which protects the bare areas after a short period of time. Pre-galvanized steel is not generally recommended for use outdoors in industrial environments,

but is suitable for extended exposure in dry or mildly corrosive atmospheres.

Hot-Dip Galvanized After Fabrication (ASTM A 123)

After a pipe hanger or fitting has been fabricated, it is completely immersed in a bath of molten zinc. A metallurgical bond is formed, resulting in a zinc coating that completely coats all surfaces, including edges. Zinc coatings of this specification have a minimum thickness of 1.50 ounces per square foot (0.45 kg/m^2) on each side or a total of 3.0 ounces per square foot (0.9 kg/m^2) of steel.

Hot-dip galvanized after fabrication is recommended for outdoor exposure. For best results, a zinc rich paint (available from Cooper B-Line) should be applied to field cuts. The zinc rich paint will provide immediate protection for field cuts and eliminate the short time period for galvanic action to "heal" the damaged coating.

Plastic Coating

Some products offered by Cooper B-Line are plastic or vinyl coated for prevention of galvanic reaction between materials or for noise reduction. These coated products can also be used where contact between glass pipe and hanger is not desirable. Felt lined hangers may be substituted for same purpose.

Red Primer

A corrosion resistant metal primer containing rust inhibitive pigments.

Copper Coating

Hangers and supports with this finish are specifically designed for use with copper tubing. Coating is for product size identification only and is not intended for corrosion resistance, Reference MSS SP-58, 13.2.

Dura-Copper® and Dura-Green® Epoxy Coatings

Dura-Copper® and Dura-Green® are water borne epoxy coatings applied to Cooper B-Line products by a precisely controlled cathodic electro-deposition process. This process is accomplished using a conveyor to transport parts through several cleaning, phosphatizing and application stages prior to being baked (See diagram below).

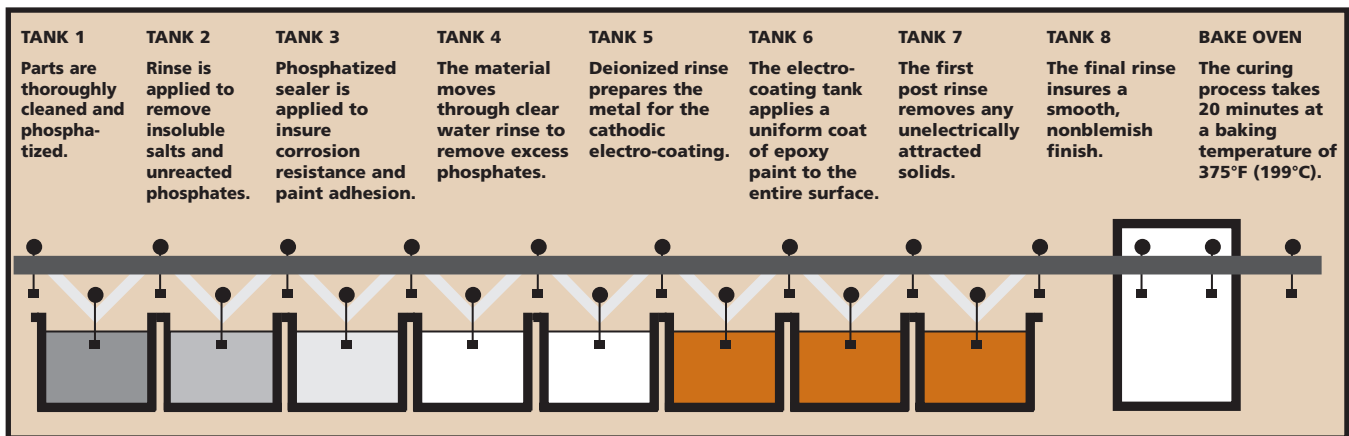
This custom designed paint system is used for painting all copper painted hanger parts and all green channel, slotted angle and fittings.

Samples are selected on a routine basis for Salt Spray (fog) testing to verify the quality of the finish. These tests are performed in accordance with ASTM B 117-73 and evaluated and rated according to ASTM D 1654-79 (Tables 1 & 2). The Dura-Copper® and Dura-Green® Epoxy coatings have been tested and listed by Underwriters Laboratories in accordance with "Standard for Pipe Hanger Equipment for Fire Protection Service, UL 203" and meet or exceed all requirements of Federal Specification TT-C-490B Paragraph 3.

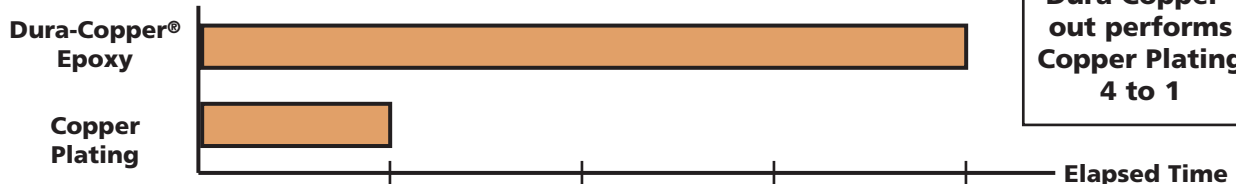
Quality Assurance

Cooper B-Line System's Quality Assurance Program has been developed and implemented for compliance to various industry standards and specifications.

DURA-COPPER® & DURA-GREEN® EPOXY COATING PROCESS



SALT SPRAY TEST RESULTS



Dura-Copper® out performs Copper Plating 4 to 1

(1) All salt spray (fog) tests conducted in accordance with ASTM B 117-73 and evaluated and rated according to ASTM D 1654-79 Tables 1 & 2. Tests were performed and certified by an independent testing laboratory.

General Information

Torque

The torque values in this catalog are to be used as a guide only. The relationship between the applied torque or torque wrench reading and the actual tension created in the bolt may be substantially different. Important factors affecting torque-tension relationships include friction under the bolt head or nut, hole tolerances, and torque wrench tolerances. Accuracy of many commercial torque wrenches may vary as much as plus or minus 25%.

Charts and Tables

Charts and tables in this section are compiled from information published by nationally recognized organizations and are intended for use as a guide only. Cooper B-Line recommends that users of this information determine the validity of such information as applied to their own applications.

Cooper B-Line, Inc. reserves the right to make specification changes without notice.

SECTION 15140 - PIPE HANGERS AND SUPPORTS

Part I - GENERAL

1.01 SECTION INCLUDES

- A. The work covered under this section consists of the furnishing of all necessary labor, supervision, materials, equipment, and services to completely execute the pipe hanger and supports as described in this specification.

1.02 REFERENCES

- A. ASTM B 633 - Specification for Electrodeposited Coatings of Zinc on Iron and Steel.
- B. ASTM A 123 - Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- C. ASTM A 653 - Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- D. ASTM A 1011 - Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, and High-Strength Low-Alloy with Improved Formability.
- E. MSS SP-58 - Manufacturers Standardization Society: Pipe Hangers and Supports - Materials, Design, and Manufacture.
- F. MSS SP-69 - Manufacturers Standardization Society: Pipe Hangers and Supports - Selection and Application.
- G. NFPA 13 - Installation of Sprinkler Systems.

1.03 QUALITY ASSURANCE

- A. Hangers and supports used in fire protection piping systems shall be listed and labeled by Underwriters Laboratories.
- B. Steel pipe hangers and supports shall have the manufacturers name, part number, and applicable size stamped in the part itself for identification.
- C. Hangers and supports shall be designed and manufactured in conformance with MSS SP-58.
- D. Supports for sprinkler piping shall be in conformance with NFPA 13.

1.04 SUBMITTALS

- A. Submit product data on all hanger and support devices, including shields and attachment methods. Product data to include, but not limited to materials, finishes, approvals, load ratings, and dimensional information.

Part II - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Manufacturer: Subject to compliance with these specifications, pipe hanger and support systems shall be as manufactured by Cooper B-Line, Inc.

2.02 PIPE HANGERS AND SUPPORTS

- A. Hangers
 - 1. Uninsulated pipes 2 inch and smaller:
 - a. Adjustable steel swivel ring (band type) hanger, Cooper B-Line B3170.
 - b. Adjustable steel swivel J-hanger, Cooper B-Line B3690.
 - c. Malleable iron ring hanger, Cooper B-Line B3198R or hinged ring hanger, B3198H.
 - d. Government type hanger, Cooper B-Line B3225 or B3226.
 - e. Adjustable steel clevis hanger, Cooper B-Line B3104 or B3100.

2. Uninsulated pipes 2¹/₂ inch and larger:
 - a. Adjustable steel clevis hanger, Cooper B-Line B3100.
 - b. Pipe roll with sockets, Cooper B-Line B3114.
 - c. Adjustable steel yoke pipe roll, Cooper B-Line B3110.
 3. Insulated pipe - Hot or steam piping:
 - a. 2 inch and smaller pipes: use adjustable steel clevis with galvanized sheet metal shield, Cooper B-Line B3100 with B3151 or B3153 series.
 - b. 2¹/₂ inch and larger pipes:
 - i. Adjustable steel yoke pipe roll with pipe covering protection saddle, Cooper B-Line B3110 with B3160 - B3165 series.
 - ii. Pipe roll with sockets with pipe covering protection saddle, Cooper B-Line B3114 with B3160 - B3165 series.
 4. Insulated pipe - Cold or chilled water piping:
 - a. 5 inch and smaller pipes: use adjustable steel clevis with galvanized sheet metal shield, Cooper B-Line B3100 with B3151 or B3153 series.
 - b. 6 inch and larger pipes:
 - i. Adjustable steel yoke pipe, Cooper B-Line B3110, with B3380CW - B3384CW calcium silicate shield.
 - ii. Pipe roll with sockets, Cooper B-Line B3114, with B3380CW - B3384CW calcium silicate shield.
- B. PIPE CLAMPS**
1. When flexibility in the hanger assembly is required due to horizontal movement, use pipe clamps with weldless eye nuts, Cooper B-Line B3140 or B3142 with B3200. For insulated lines use double bolted pipe clamps, Cooper B-Line B3144 or B3146 with B3200.
- C. MULTIPLE OR TRAPEZE HANGERS**
1. Trapeze hangers shall be constructed from 12 gauge roll formed ASTM A 1011 SS Gr. 33 structural steel channel, 1⁵/₈" x 1⁵/₈" minimum, Cooper B-Line B22 strut or stronger as required.
 2. Mount pipes to trapeze with two piece pipe straps sized for outside diameter of pipe, Cooper B-Line B2000 series.
 3. For pipes subjected to axial movement:
 - a. Strut mounted roller support, Cooper B-Line B3126. Use pipe protection shield or saddles on insulated lines.
 - b. Strut mounted pipe guide, Cooper B-Line B2417.
- D. WALL SUPPORTS**
1. Pipes 4 inch and smaller:
 - a. Carbon steel hook, Cooper B-Line B3191.
 - b. Carbon steel J-hanger, Cooper B-Line B3690.
 2. Pipes larger than 4 inch:
 - a. Welded strut bracket and pipe straps, Cooper B-Line B3064 and B2000 series.
 - b. Welded steel brackets, Cooper B-Line B3066 or B3067, with roller chair or adjustable steel yoke pipe roll. Cooper B-Line B3120 or B3110. Use pipe protection shield or saddles on insulated lines.

E. FLOOR SUPPORTS

1. Hot piping under 6 inch and all cold piping:
 - a. Carbon steel adjustable pipe saddle and nipple attached to steel base stand sized for pipe elevation, Cooper B-Line B3093 and B3088T or B3090 and B3088. Pipe saddle shall be screwed or welded to appropriate base stand.
2. Hot piping 6 inch and larger:
 - a. (Adjustable) Roller stand with base plate, Cooper B-Line B31175L (or B31185L).
 - b. Adjustable roller support and steel support sized for elevation, Cooper B-Line B3124

F. VERTICAL SUPPORTS

1. Steel riser clamp sized to fit outside diameter of pipe, Cooper B-Line B3373 or B3374.

G. COPPER TUBING SUPPORTS

1. Hangers shall be sized to fit copper tubing outside diameters.
 - a. Adjustable steel swivel ring (band type) hanger, Cooper B-Line B3170CT.
 - b. Malleable iron ring hanger, Cooper B-Line B3198CT or hinged ring hanger B3198HCT.
 - c. Government type hanger, Cooper B-Line B3225CT or B3226CT.
 - d. Adjustable steel clevis hanger, Cooper B-Line B3104CT.

H. PLASTIC PIPE SUPPORTS

1. V-bottom clevis hanger with galvanized 18 gauge continuous support channel, Cooper B-Line B3106 and B3106V, to form a continuous support system for plastic pipe or flexible tubing.

I. SUPPLEMENTARY STRUCTURAL SUPPORTS

1. Design and fabricate supports using structural quality steel bolted framing materials as manufactured by Cooper B-Line. Channels shall be roll formed, 12 gauge ASTM A 1011 SS Grade 33 steel, 1⁵/₈" x 1⁵/₈" or greater as required by loading conditions. Submit designs for pipe tunnels, pipe galleries, etc., to engineer for approval. Use clamps and fittings designed for use with the strut system.

2.04 UPPER ATTACHMENTS

A. BEAM CLAMPS

1. Beam clamps shall be used where piping is to be suspended from building steel. Clamp type shall be selected on the basis of load to be supported, and load configuration.
2. C-Clamps shall have locknuts and cup point set screws, Cooper B-Line B351L, or B3036L. Top flange C-clamps shall be used when attaching a hanger rod to the top flange of structural shapes, Cooper B-Line B3034 or B3033. Refer to manufacturers' recommendation for setscrew torque. Retaining straps shall be used to maintain the clamp's position on the beam where required.
3. Center loaded beam clamps shall be used where specified. Steel clamps shall be Cooper B-Line B3050 or B3055. Malleable iron or forged steel beam clamps with cross bolt shall be Cooper B-Line B3054 or B3291 - B3297 series as required to fit beams.

B. CONCRETE INSERTS

1. Cast in place spot concrete inserts shall be used where applicable, either steel or malleable iron body, Cooper B-Line B2500 or B3014. Spot inserts shall allow for lateral adjustment and have means for attachment to forms. Select insert nuts to suit threaded hanger rod sizes, Cooper B-Line N2500 or B3014N series.

2. Continuous concrete inserts shall be used where applicable. Channels shall be 12 gauge, ASTM A 1011 SS Grade 33 structural quality carbon steel, complete with styrofoam inserts and end caps with nail holes for attachment to forms. The continuous concrete insert shall have a load rating of 2,000 lbs/ft. in concrete, Cooper B-Line B22I, B32I, or B52I (B52I is limited to 1,500 lbs/ft.). Select channel nuts suitable for strut and rod sizes.

2.05 VIBRATION ISOLATION AND SUPPORTS

- A. For refrigeration, air conditioning, hydraulic, pneumatic, and other vibrating system applications, use a clamp that has a vibration dampening insert and a nylon inserted locknut. For copper and steel tubing use Cooper B-Line BVT series VibraClamps, for pipe sizes use BVP series.
- B. For larger tubing or piping subjected to vibration, use neoprene or spring hangers as required.
- C. For base mounted equipment use vibration pads, molded neoprene mounts, or spring mounts as required.
- D. Vibration isolation products as manufactured by Cooper B-Line, VibraTrol systems.

2.06 ACCESSORIES

- A. Hanger rods shall be threaded both ends, Cooper B-Line B3205, or continuous threaded rods of circular cross section. Use adjusting locknuts at upper attachments and hangers. No wire, chain, or perforated straps are allowed.
- B. Shields shall be 180° galvanized sheet metal, 12 inch minimum length, 18 gauge minimum thickness, designed to match outside diameter of the insulated pipe, Cooper B-Line B3151.
- C. Pipe protection saddles shall be formed from carbon steel, 1/8 inch minimum thickness, sized for insulation thickness. Saddles for pipe sizes greater than 12 inch shall have a center support rib.

2.07 FINISHES

INDOOR FINISHES

- A. Hangers and clamps for support of bare copper piping shall be coated with copper colored epoxy paint, Cooper B-Line Dura-Copper. Additionally a plastic coating or a felt lining in hanger can be used.
- B. Hangers for other than bare copper pipe shall be zinc plated in accordance with ASTM B 633 - SC3 or shall have an electro-deposited green epoxy finish, Cooper B-Line Dura-Green.
- C. Strut channels shall be pre-galvanized in accordance with ASTM A 653 G90 or have an electro-deposited green epoxy finish, Cooper B-Line Dura-Green.

OUTDOOR AND CORROSIVE AREA FINISHES

- D. Hangers and strut located outdoors shall be hot dip galvanized after fabrication in accordance with ASTM A 123. All hanger hardware shall be hot-dip galvanized or stainless steel. Zinc plated hardware is not acceptable for outdoor or corrosive use.
- E. Hangers and strut located in corrosive areas shall be Type 304 (316) stainless steel with stainless steel hardware.

Technical Data

Part III - EXECUTION

3.01 PIPE HANGERS AND SUPPORTS

- A. Pipe shall be adequately supported by pipe hanger and supports specified in PART II - PRODUCTS. Hangers for insulated pipes shall be sized to accommodate insulation thickness.
- B. Horizontal steel piping shall be supported in accordance with MSS SP-69 Tables 3 and 4, excerpts of which follow below:

NOMINAL PIPE SIZE	ROD DIAMETER	MAXIMUM SPACING
3/8" - 1 1/4"	3/8"	7'-0"
1 1/2"	3/8"	9'-0"
2"	3/8"	10'-0"
2 1/2"	1/2"	11'-0"
3"	1/2"	12'-0"
3 1/2"	1/2"	13'-0"
4"	5/8"	14'-0"
5"	5/8"	16'-0"
6"	3/4"	17'-0"
8"	3/4"	19'-0"
10"	7/8"	22'-0"
12"	7/8"	23'-0"
14"	1"	25'-0"
16"	1"	27'-0"

- C. Horizontal copper tubing shall be supported in accordance with MSS SP-69 Tables 3 and 4, excerpts of which follow below:

NOMINAL PIPE SIZE	ROD DIAMETER	MAXIMUM SPACING
1/4" - 3/4"	3/8"	5'-0"
1"	3/8"	6'-0"
1 1/4"	3/8"	7'-0"
1 1/2"	3/8"	8'-0"
2"	3/8"	8'-0"
2 1/2"	1/2"	9'-0"
3"	1/2"	10'-0"
3 1/2"	1/2"	11'-0"
4"	1/2"	12'-0"
5"	1/2"	13'-0"
6"	5/8"	14'-0"
8"	3/4"	16'-0"

- D. Provide means of preventing dissimilar metal contact such as plastic coated hangers, copper colored Cooper B-Line Dura-Copper epoxy paint, or non-adhesive isolation tape (Cooper B-Line Iso-Pipe). Galvanized felt isolators sized for copper tubing may also be used, Cooper B-Line B3195CT.

- E. Support horizontal cast iron pipe adjacent to each hub, with 10 feet maximum spacing between hangers.
- F. Install hangers to provide a minimum of 1/2 inch space between finished covering and adjacent work.
- G. Place a hanger within 12 inches of each horizontal elbow.
- H. Support vertical piping independently of connected horizontal piping. Support vertical pipes at every (other) floor. Wherever possible, locate riser clamps directly below pipe couplings or shear lugs.
- I. Where several pipes can be installed in parallel and at the same elevation, provide trapeze hangers as specified in Section 2.02 C. Trapeze hangers shall be spaced according to the smallest pipe size, or install intermediate supports according to schedule in Section 3.01 B.
- J. Do not support piping from other pipes, ductwork or other equipment which is not building structure.

3.02 CONCRETE INSERTS

- A. Provide inserts for placement in formwork before concrete is poured.
- B. Provide inserts for suspending hangers from reinforced concrete slabs and sides of reinforced concrete beams.
- C. Where concrete slabs form finished ceilings, provide inserts to be flush with slab surface.
- D. Provide hooked rod to concrete reinforcement section for inserts carrying pipe over 4 inch.

Beam Clamps

Beam Clamps



Beam clamps offered in this section are designed to provide attachment of hanger rods to structural members without drilling or welding. A wide range of types and sizes are available for various applications.

Materials

Carbon Steel, Malleable Iron and Forged Steel are used in the manufacturing of beam clamps and accessories. Stainless steel and other materials are available.

Finishes

The standard finishes for mechanical supports are plain steel (oil coated) sometimes referred to as black and Electro-Plated Zinc (ASTM B 633 SC3). Hot-Dip Galvanized After Fabrication (ASTM A 123), Red Primer, Plastic Coating and Dura-Green®. Other special coatings are available upon request.

Note: Due to the design of some products, (threads, connecting hardware, swivels, etc.) items may or may not be uniformly coated with special finishes. In some cases, the hanger itself may be coated, however, the hardware may be supplied Electro-Plated, copper plated, or in stainless steel.

Recommended Setscrew Torque (unless otherwise specified)

1/4"-20	3/8"-16	1/2"-13	5/8"-11	3/4"-10
4 ft/lbs (5 Nm)	5 ft/lbs (7 Nm)	11 ft/lbs (15 Nm)	21 ft/lbs (28 Nm)	34 ft/lbs (46 Nm)

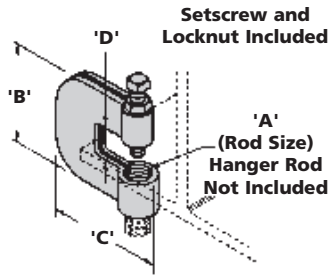
Over torqued setscrews will damage beam clamps in this section.

We are aware that torque wrenches are not used or not available in many instances. In the absence of a torque wrench, the setscrew should be finger tightened to the I-beam and then an additional 1/4 to 1/2 turn applied to the setscrew.

Approvals (as noted)

Items in this section are Underwriters' Laboratories Listed and comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society MSS SP-69 & SP-58.

Beam Clamps



Material: Steel (Stainless Steel Type 304 available $\frac{3}{8}$ " thru $\frac{5}{8}$ " rod sizes)

Standard Finish: Plain or Electro-Plated

Service: Designed for attaching a hanger rod to the flange of a beam.

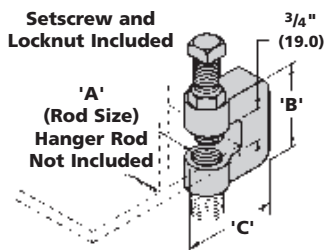
Ordering: Specify part number and finish. When Retaining Strap is required, order B3362 thru B3365 separately. See page 26.

Approvals: B351L ($\frac{3}{8}$ " - $\frac{3}{4}$ "), is Underwriters' Laboratories Listed. Complies with Federal Specification WW-H-171E & A-A-1192A Type 23 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 23.

Figure B351L Steel C-Clamp With Locknut

Part No.	Rod Size 'A'	'B'		'C'		'D'		Design Load		Maximum Iron Pipe Size Per UL		Wt./C	
								Lbs.	kN	Lbs.	kg		
B351L- $\frac{3}{8}$	$\frac{3}{8}$ "-16	$2\frac{3}{8}$ "	(60.3)	$2\frac{3}{8}$ "	(60.3)	$\frac{3}{4}$ "	(19.0)	300	(0.89)	4"	(100)	41	(18.6)
B351L- $\frac{1}{2}$	$\frac{1}{2}$ "-13	$2\frac{3}{8}$ "	(60.3)	$2\frac{3}{8}$ "	(60.3)	$\frac{3}{4}$ "	(19.0)	380	(1.69)	4"	(100)	41	(18.6)
B351L- $\frac{5}{8}$	$\frac{5}{8}$ "-11	$2\frac{3}{8}$ "	(60.3)	$2\frac{1}{4}$ "	(57.1)	$\frac{3}{4}$ "	(19.0)	550	(2.44)	6"	(150)	60	(27.2)
B351L- $\frac{3}{4}$	$\frac{3}{4}$ "-10	$2\frac{3}{8}$ "	(60.3)	$2\frac{1}{4}$ "	(57.1)	$\frac{3}{4}$ "	(19.0)	630	(2.80)	6"	(150)	71	(32.2)
B351L- $\frac{7}{8}$	$\frac{7}{8}$ "-9	3"	(76.2)	$3\frac{1}{4}$ "	(82.5)	1"	(25.4)	1200	(5.34)	--	--	184	(83.4)

Note: See page 24 for recommended setscrew torque.



Material: Malleable Iron

Standard Finish: Plain or Electro-Plated

Service: Designed for attaching a hanger rod to the flange of a beam.

Ordering: Specify part number and finish. When Retaining Strap is required, order B3362 thru B3365 separately. See page 26.

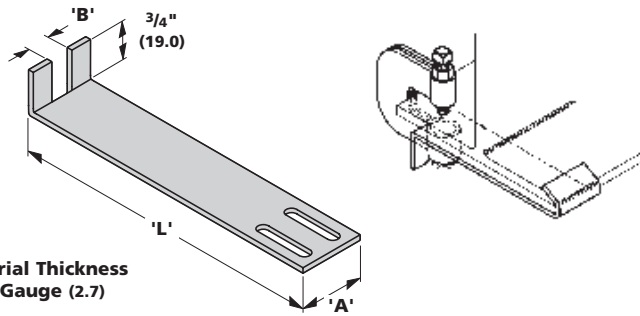
Approvals: B3036L is Underwriters' Laboratories Listed. Complies with Federal Specification WW-H-171E & A-A-1192A Type 23 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 23.

Figure B3036L Malleable Iron C-Clamp With Locknut

Part No.	Rod Size 'A'	'B'		'C'		Design Load		Maximum Iron Pipe Size Per UL		Wt./C	
						Lbs.	kN	Lbs.	kg		
B3036L- $\frac{3}{8}$	$\frac{3}{8}$ "-16	$1\frac{3}{4}$ "	(44.4)	$1\frac{3}{4}$ "	(44.4)	300	(0.89)	4"	(100)	41	(18.6)
B3036L- $\frac{1}{2}$	$\frac{1}{2}$ "-13	$1\frac{3}{4}$ "	(44.4)	$1\frac{3}{4}$ "	(44.4)	380	(1.69)	5"	(125)	41	(18.6)
B3036L- $\frac{5}{8}$	$\frac{5}{8}$ "-11	2"	(50.8)	$1\frac{7}{8}$ "	(47.6)	530	(2.36)	6"	(150)	60	(27.2)
B3036L- $\frac{3}{4}$	$\frac{3}{4}$ "-10	2"	(50.8)	2"	(50.8)	530	(2.36)	6"	(150)	71	(32.2)

Note: See page 24 for recommended setscrew torque.

Beam Clamps



Material Thickness
12 Gauge (2.7)

Material: Steel (Stainless Steel available)

Standard Finish: Pre-Galvanized Zinc

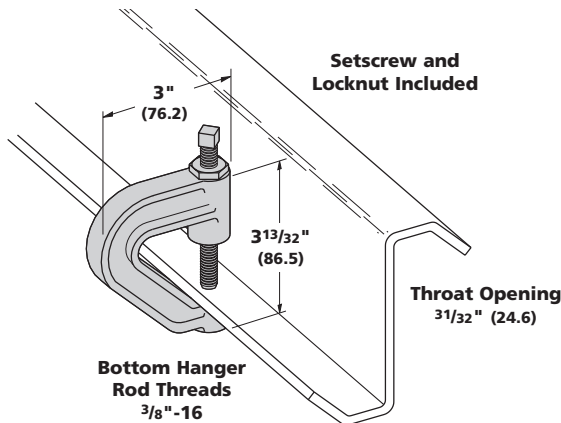
Service: Designed for use with B351L and B3036L C-Clamps.

Ordering: Specify part number, length 'L', (add 1" (25.4) minimum to flange width), and finish.

Note: Requires field forming on beam.

Figure B3362, B3363, B3364, B3365 Retaining Strap

Part No.	For Use With	'A'		'B'		Wt./C for Length 'L' of							
						6" (152.4)		8" (203.2)		10" (254.0)		12" (304.8)	
		Lbs.	kg	Lbs.	kg	Lbs.	kg	Lbs.	kg	Lbs.	kg	Lbs.	kg
B3362	B351L- ³ / ₈ & ¹ / ₂	1 ¹ / ₄ " (31.7)	7 ⁷ / ₁₆ " (11.1)	27	(12.2)	35	(15.9)	44	(19.9)	52	(23.6)		
B3363	B351L- ⁵ / ₈ & ³ / ₄ , B3036L- ³ / ₈ & ¹ / ₂	1 ¹ / ₄ " (31.7)	5 ⁵ / ₈ " (15.9)	26	(11.8)	35	(15.9)	43	(19.5)	52	(23.6)		
B3364	B3036L- ⁵ / ₈ & ³ / ₄	1 ¹ / ₄ " (31.7)	1 ¹¹ / ₁₆ " (17.4)	26	(11.8)	35	(15.9)	43	(19.5)	52	(23.6)		
B3365	B351L- ⁷ / ₈	1 ¹ / ₂ " (38.1)	3 ³ / ₄ " (19.0)	32	(14.5)	42	(19.0)	52	(23.6)	62	(28.1)		



Material: Malleable Iron

Standard Finish: Plain or Electro-Plated

Service: Designed for attaching a ³/₈"-16 hanger rod to the bottom flange of a Z-purlin.

Ordering: Specify part number and finish.

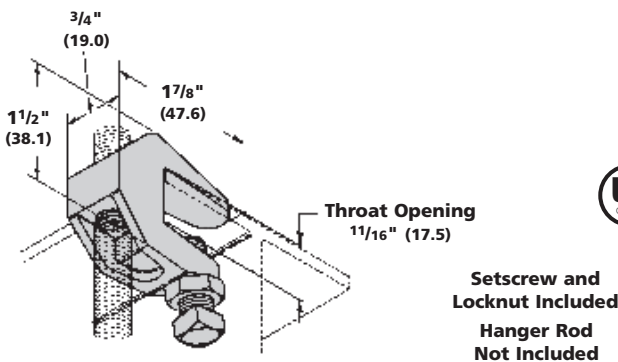
Weight: Wt./C 90 Lbs. (40.8 kg)

Design Load: 400 Lbs. (1.78 kN)

Approvals: Underwriters' Laboratories Listed. Complies with Federal Specification WW-H-171E & A-A-1192A Type 23 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 23.

Figure B3037 Z-Purlin Malleable C-Clamp

Note: See page 24 for recommended setscrew torque.



Material: Malleable Iron

Standard Finish: Plain or Electro-Plated

Service: Designed for attaching a ³/₈"-16 hanger rod to the top or bottom flange of a beam or bar joist when setscrew is in the down position as shown.

Ordering: Specify part number and finish. When Retaining Strap is required, order B3367 separately. See Page 30.

Approvals: Underwriters' Laboratories Listed. Complies with Federal Specification WW-H-171E & A-A-1192A Type 19 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 19.

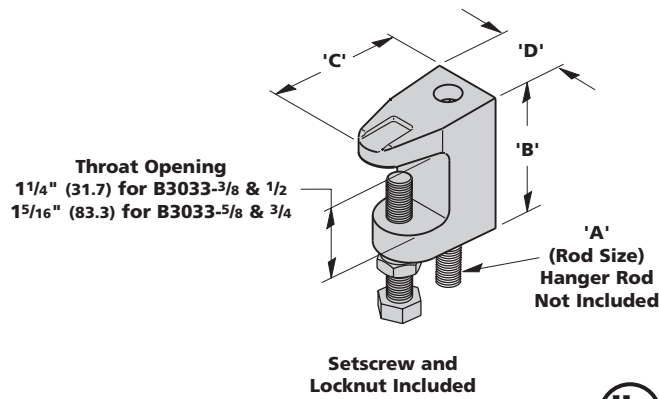
Weight: Wt./C 25 Lbs. (11.3 kg)

Design Load: 350 Lbs. (1.55 kN)

Figure B3031-³/₈ Light Duty Malleable C-Clamp

Note: See page 24 for recommended setscrew torque.

Beam Clamps



Material: Ductile Iron

Standard Finish: Plain or Electro-Plated screw with Hot-Dipped Galvanized clamp

Service: Designed for attaching a hanger rod to the top or bottom flange of a bar joist or other structural shapes.

Note: Installation of C-Clamp other than shown below is not recommended.

Ordering: Specify part number and finish. When Retaining Strap is required, order B3367 separately. See page 30.

Approvals: Underwriters' Laboratories Listed. Complies with Federal Specification WW-H-171E Type 19 & A-A-1192A Type 19 & 23 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 19 & 23.

Beam Clamps

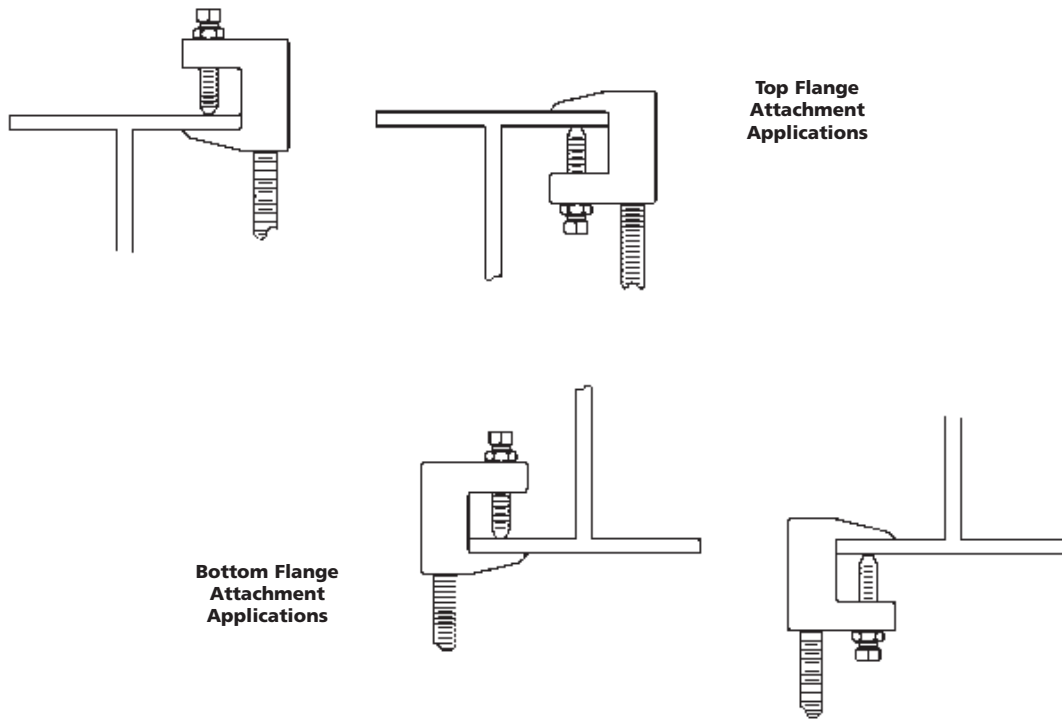


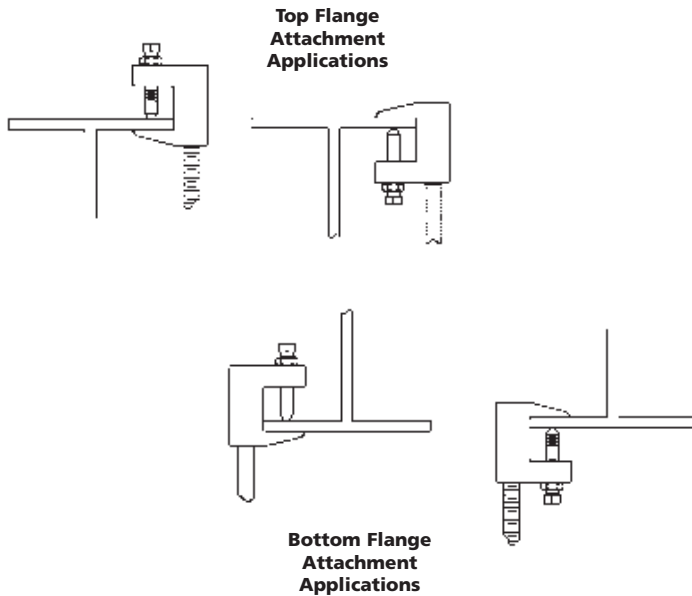
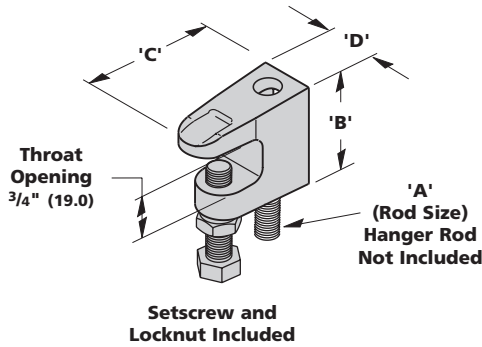
Figure B3033 Wide Jaw Reversible C-Clamp

Part No.	Rod Size 'A'	'B'		'C'		'D'		Design Load		Maximum Iron Pipe Size Per UL		Wt./C	
								Lbs.	kN	Lbs.	kg		
B3033- $\frac{3}{8}$	$\frac{3}{8}$ "-16	$2\frac{1}{4}$ "	(57.1)	2"	(50.8)	$1\frac{1}{8}$ "	(28.6)	500	(2.22)	4"	(100)	54	(24.5)
B3033- $\frac{1}{2}$	$\frac{1}{2}$ "-13	$2\frac{5}{16}$ "	(58.7)	$2\frac{3}{16}$ "	(55.6)	$1\frac{1}{4}$ "	(31.7)	810	(3.60)	8"	(200)	51	(23.1)
B3033- $\frac{5}{8}$	$\frac{5}{8}$ "-11	$2\frac{5}{8}$ "	(66.7)	$2\frac{1}{2}$ "	(63.5)	$1\frac{3}{8}$ "	(34.9)	1000	(4.44)	8"	(250)	70	(31.7)
B3033- $\frac{3}{4}$	$\frac{3}{4}$ "-10	$2\frac{11}{16}$ "	(68.3)	$2\frac{1}{2}$ "	(63.5)	$1\frac{7}{16}$ "	(36.5)	1400	(6.23)	10"	(250)	98	(44.4)

Note: See page 24 for recommended setscrew torque.

Beam Clamps

B3034-3/8" and B3034-1/2" sizes
Attach only as shown.



Material: Ductile Iron for 3/8" & 1/2" sizes
Malleable Iron for 5/8" & 3/4" sizes

Standard Finish: Plain or Electro-Plated screw with Hot-Dipped Galvanized clamp

Service: Designed for attaching a hanger rod to the top or bottom flange (for their respective sizes) of a bar joist or other structural shapes.

Note: Installation of C-Clamps (for their respective sizes) other than shown is not recommended.

Ordering: Specify part number and finish. When Retaining Strap is required, order B3367 separately. See page 30.

Approvals: Underwriters' Laboratories Listed (3/8" and 1/2" only). Complies with Federal Specification WW-H-171E Type 19 & A-A-1192A Type 19 & 23 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 19 & 23.

B3034-5/8" and B3034-3/4" sizes
Attach only as shown.

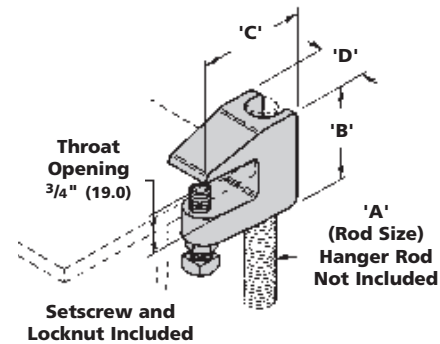
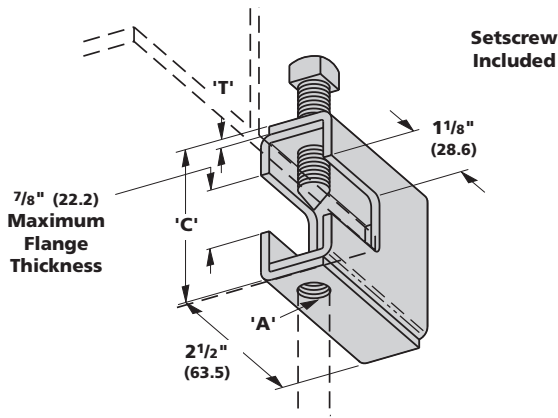


Figure B3034 C-Clamp

Part No.	Rod Size 'A'	'B'	'C'		'D'		Design Load		Maximum Iron Pipe Size Per UL		Wt./C	
							Lbs.	kN			Lbs.	kg
B3034-3/8	3/8"-16	1 5/8" (41.3)	2"	(50.8)	7/8"	(19.0)	560	(2.49)	4"	(100)	30	(13.6)
B3034-1/2	1/2"-13	1 13/16" (46.0)	2 3/16"	(55.6)	1 3/16"	(30.2)	810	(3.60)	8"	(200)	47	(21.3)
B3034-5/8	5/8"-11	1 3/4" (44.5)	2 1/8"	(54.0)	1 1/4"	(31.7)	1000	(4.45)	--	--	58	(26.3)
B3034-3/4	3/4"-10	2" (50.8)	2 1/4"	(57.2)	1 1/4"	(31.7)	1500	(6.67)	--	--	77	(35.0)

Note: See page 24 for recommended setscrew torque.

Beam Clamps



Material: Steel

Standard Finish: Electro-Plated or Hot-Dip Galvanized

Service: Designed for attaching a hanger rod to the flange of a beam.

Ordering: Specify part number and finish. When Retaining Strap is required, order B312 separately. See page 30.

Recommended Setscrew Torque:

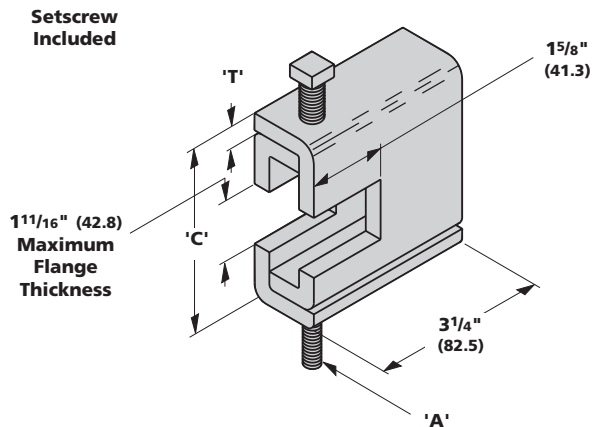
$3/8''-16 = 150$ in-lbs (16.9 N•m)

$1/2''-13 = 350$ in-lbs (39.5 N•m)

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 19 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 19.

Figure B303-B309 Beam Clamps

Part No.	Rod Size 'A'	Setscrew Size	'C'	'T'		Design Load		Wt./C	
						Lbs.	kN	Lbs.	kg
B303	$1/4''-20$	$3/8''-16$	$2^{5/16}''$ (58.7)	11 Ga.	(3.0)	400	(1.78)	72	(32.6)
B304	$5/16''-18$	$3/8''-16$	$2^{5/16}''$ (58.7)	11 Ga.	(3.0)	600	(2.67)	72	(32.6)
B305	$3/8''-16$	$3/8''-16$	$2^{5/16}''$ (58.7)	11 Ga.	(3.0)	600	(2.67)	72	(32.6)
B306	$3/8''-16$	$1/2''-13$	$2^{7/16}''$ (61.9)	7 Ga.	(4.5)	1100	(4.89)	97	(44.0)
B307	$1/2''-13$	$1/2''-13$	$2^{7/16}''$ (61.9)	7 Ga.	(4.5)	1100	(4.89)	97	(44.0)
B308	$1/2''-13$	$1/2''-13$	$2^{9/16}''$ (65.1)	$1/4''$	(6.3)	1500	(6.67)	133	(60.3)
B309	$5/8''-11$	$1/2''-13$	$2^{9/16}''$ (65.1)	$1/4''$	(6.3)	1500	(6.67)	133	(60.3)



Material: Steel

Standard Finish: Electro-Plated or Hot-Dip Galvanized

Service: Designed for attaching a hanger rod to the flange of a beam.

Ordering: Specify part number and finish. When Retaining Strap is required, order B312 separately. See page 30.

Recommended Setscrew Torque:

$1/2''-13 = 350$ in-lbs (39.5 N•m)

$5/8''-11 = 700$ in-lbs (79.0 N•m)

Minimum Flange Thickness:

For B321-1 thru B321-3 = $3/8''$ (9.5)

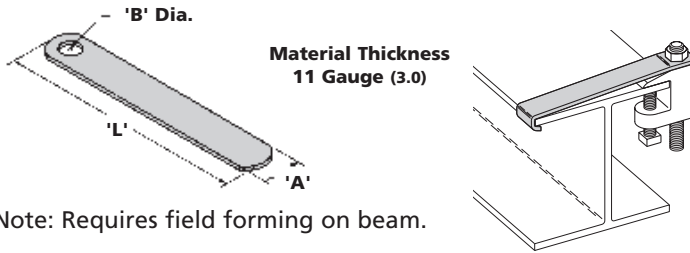
For B321-4 & B321-5 = $5/8''$ (15.9)

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 19 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 19.

Figure B321 Series Beam Clamps

Part No.	Rod Size 'A'	Setscrew Size	'C'	'T'		Design Load		Wt./C	
						Lbs.	kN	Lbs.	kg
B321-1	$3/8''-16$	$1/2''-13$	$3^{9/16}''$ (92.1)	$1/4''$	(6.3)	1300	(5.78)	187	(84.8)
B321-2	$1/2''-13$	$1/2''-13$	$3^{9/16}''$ (92.1)	$1/4''$	(6.3)	1400	(6.23)	186	(84.3)
B321-3	$5/8''-11$	$1/2''-13$	$3^{9/16}''$ (92.1)	$1/4''$	(6.3)	1600	(7.12)	185	(83.9)
B321-4	$5/8''-11$	$5/8''-11$	$3^{23/32}''$ (94.4)	$5/16''$	(7.9)	1800	(8.00)	239	(108.4)
B321-5	$3/4''-10$	$5/8''-11$	$3^{23/32}''$ (94.4)	$5/16''$	(7.9)	2000	(8.89)	238	(107.9)

Beam Clamps



Note: Requires field forming on beam.

Material: Steel

Standard Finish: Electro-Plated or Hot-Dip Galvanized

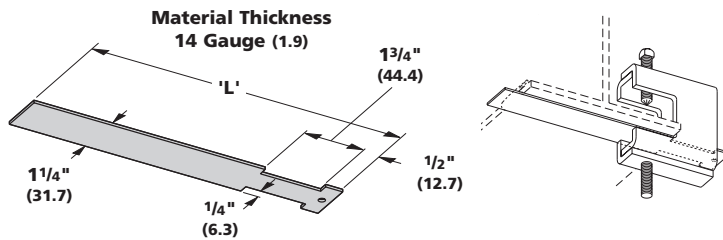
Service: Designed for use with B3031, B3033, and B3034 C-Clamps.

Ordering: Specify part number, length 'L', (add 2" (50.8) minimum to flange width), and finish.

Figure B3367 Retaining Straps

Part No.	For Use With	'A'	'B'	Wt./C for Length 'L' of							
				6" (152.4)		8" (203.2)		10" (254.0)		12" (304.8)	
				Lbs.	kg	Lbs.	kg	Lbs.	kg	Lbs.	kg
B3367- ³ / ₈	B3033- ³ / ₈ , B3034- ³ / ₈ & B3031- ³ / ₈	1 ¹ / ₄ " (31.7)	7 ⁷ / ₁₆ " (11.1)	26	(11.8)	35	(15.9)	44	(19.9)	61	(27.6)
B3367- ¹ / ₂	B3033- ¹ / ₂ & B3034- ¹ / ₂	1 ¹ / ₄ " (31.7)	9 ⁹ / ₁₆ " (14.3)	25	(11.3)	34	(15.4)	43	(19.5)	60	(27.2)
B3367- ⁵ / ₈	B3033- ⁵ / ₈ & B3034- ⁵ / ₈	1 ¹ / ₄ " (31.7)	11 ¹¹ / ₁₆ " (17.5)	24	(10.9)	33	(14.9)	42	(19.0)	59	(26.7)
B3367- ³ / ₄	B3033- ³ / ₄ & B3034- ³ / ₄	1 ¹ / ₄ " (31.7)	13 ¹³ / ₁₆ " (20.6)	23	(10.4)	32	(14.5)	41	(18.6)	58	(26.3)

Beam Clamps



Material: Steel

Standard Finish: Electro-Plated or Hot-Dip Galvanized

Service: Designed for use with B303-B309 and B321 beam clamps.

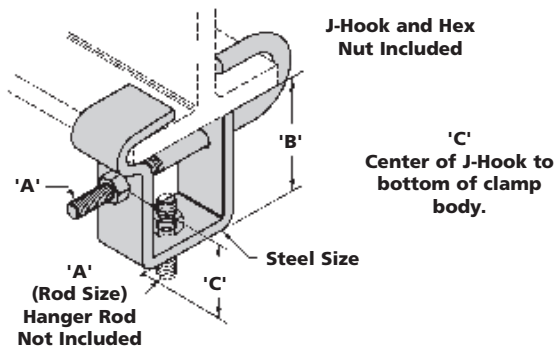
Ordering: Specify part number and finish.

Figure B312 Retaining Straps

Part No.	For Flange With	'L'	Wt./C	
			Lbs.	kg
B312-6	6" (152.4)	9" (228.6)	22	(10.0)
B312-9	9" (228.6)	12" (304.8)	30	(13.6)
B312-12	12" (304.8)	15" (381.0)	40	(18.1)
B312-15	15" (381.0)	18" (457.2)	49	(22.2)

Notes:

Maximum beam thickness ³/₄" (19.0). For thicker beams step up one flange width size. Requires field forming on beam.



Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for attaching rod under a beam flange. Adjustable for 4" (101.6) to 8" (203.2) flange widths. Maximum flange thickness ³/₄" (19.0).

Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E Type 54 & A-A-1192A Type 27 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 27.

Figure B3040 Adjustable Beam Clamp

Part No.	Rod Size 'A'	'B'	'C'	Steel Size		Design Load		Wt./C	
				Lbs.	kN	Lbs.	kg		
B3040- ³ / ₈	³ / ₈ "-16	2 ³ / ₄ " (69.8)	1 ¹³ / ₁₆ " (46.0)	1 ¹ / ₄ " x 1 ¹ / ₄ " (6.3 x 31.7)	300	(1.33)	120	(54.4)	
B3040- ¹ / ₂	¹ / ₂ "-13	2 ³ / ₄ " (69.8)	1 ³ / ₄ " (44.4)	1 ¹ / ₄ " x 1 ¹ / ₂ " (6.3 x 38.1)	700	(3.11)	160	(72.6)	
B3040- ⁵ / ₈	⁵ / ₈ "-11	3" (76.2)	1 ³ / ₄ " (44.4)	1 ¹ / ₂ " x 1 ³ / ₄ " (6.3 x 44.4)	1000	(4.45)	216	(98.0)	
B3040- ³ / ₄	³ / ₄ "-10	3 ³ / ₈ " (85.7)	1 ⁷ / ₈ " (47.6)	³ / ₈ " x 2 ¹ / ₂ " (9.5 x 63.5)	1800	(8.00)	442	(200.5)	

Beam Clamps

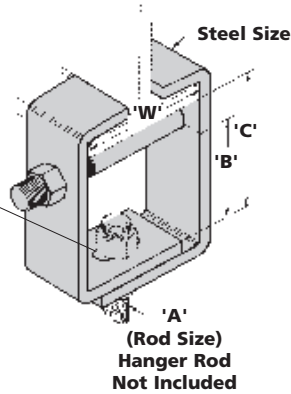
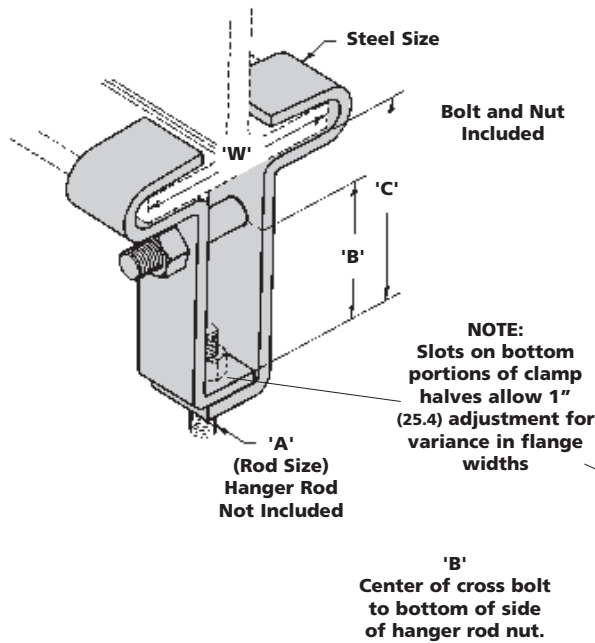
Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for attaching a hanger rod to be centered under beam flanges. 2" (50.8) vertical adjustment is provided in the clamp.

Ordering: Specify part number, flange width, and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 21 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 21.



Note:
Box Style Furnished For

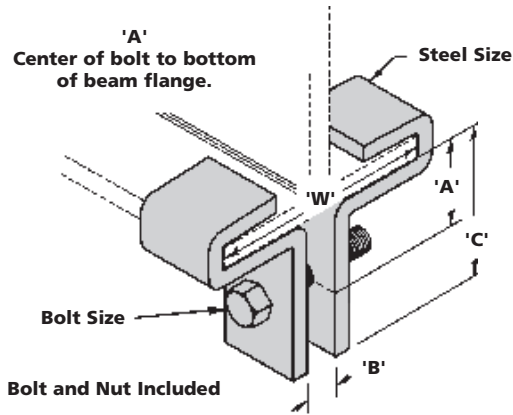
- B3055-3/8 x 2"
- B3055-3/8 x 3"
- B3055-3/8 x 4"
- B3055-1/2 x 2"
- B3055-1/2 x 3"
- B3055-1/2 x 4"
- B3055-5/8 x 2"
- B3055-5/8 x 3"
- B3055-5/8 x 4"
- B3055-3/4 x 2"
- B3055-3/4 x 3"
- B3055-3/4 x 4"
- B3055-7/8 x 3"
- B3055-7/8 x 4"
- B3055-7/8 x 5"
- B3055-1 x 3"
- B3055-1 x 4"
- B3055-1 x 5"
- B3055-1 x 6"
- B3055-1 1/8 x 4"
- B3055-1 1/8 x 5"
- B3055-1 1/8 x 6"
- B3055-1 1/8 x 7"
- B3055-1 1/4 x 4"
- B3055-1 1/4 x 5"
- B3055-1 1/4 x 6"
- B3055-1 1/4 x 7"

Figure B3055 Steel Beam Clamp

Part No.	Rod Size 'A'	'B'		'C'		Steel Size		Design Load	
						Lbs.	kN		
B3055-3/8	3/8"-16	3"	(76.2)	4"	(101.6)	1/4" x 1 1/4"	(6.3 x 31.7)	550	(2.44)
B3055-1/2	1/2"-13	3"	(76.2)	4"	(101.6)	1/4" x 1 1/2"	(6.3 x 38.1)	850	(3.78)
B3055-5/8	5/8"-11	3 1/4"	(82.5)	4 1/2"	(114.3)	3/8" x 1 1/2"	(9.5 x 38.1)	1100	(4.89)
B3055-3/4	3/4"-10	3 1/4"	(82.5)	4 1/2"	(114.3)	3/8" x 2"	(9.5 x 50.8)	1500	(6.67)
B3055-7/8	7/8"-9	3 1/2"	(88.9)	5"	(127.0)	1/2" x 2"	(12.7 x 50.8)	2600	(11.56)
B3055-1	1"-8	3 1/2"	(88.9)	5 1/2"	(139.7)	1/2" x 2 1/2"	(12.7 x 63.5)	4300	(19.12)
B3055-1 1/8	1 1/8"-7	3 1/2"	(88.9)	5 1/2"	(139.7)	5/8" x 3"	(15.9 x 76.2)	6100	(27.13)
B3055-1 1/4	1 1/4"-7	3 1/2"	(88.9)	5 1/2"	(139.7)	5/8" x 4"	(15.9 x 101.6)	8000	(35.58)

Flange Width 'W'	Approximate Wt./C For Beam Clamp Size Lbs. (kg)															
	B3055-3/8"		B3055-1/2"		B3055-5/8"		B3055-3/4"		B3055-7/8"		B3055-1"		B3055-1 1/8"		B3055-1 1/4"	
4" (101.6)	168 (76.2)	201 (91.2)	328 (148.8)	434 (196.8)	657 (298.0)	797 (361.5)	1446 (655.9)	1876 (850.9)								
5" (127.0)	181 (82.1)	217 (98.4)	352 (159.6)	466 (211.4)	667 (302.5)	824 (373.7)	1369 (621.0)	1817 (842.2)								
6" (152.4)	193 (87.5)	231 (104.8)	373 (169.2)	495 (224.5)	705 (319.8)	877 (397.8)	1374 (623.2)	1845 (836.9)								
7" (177.8)	205 (93.0)	246 (111.6)	395 (179.2)	525 (238.1)	744 (337.5)	926 (420.0)	1507 (683.6)	1982 (899.0)								
8" (203.2)	214 (97.1)	256 (116.1)	411 (186.4)	546 (247.6)	773 (350.6)	962 (436.3)	1560 (707.6)	2036 (923.5)								
10" (254.0)	235 (106.6)	282 (127.9)	449 (203.6)	596 (270.3)	840 (381.0)	1046 (474.4)	1686 (764.7)	2221 (1007.4)								
12" (304.8)	259 (117.5)	311 (141.0)	493 (223.6)	655 (297.1)	918 (416.4)	1143 (518.4)	1832 (831.0)	2418 (1096.8)								

Beam Clamps



Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for attaching hanger rods centered under beam flanges. Recommended to use with B3200 Series up to size 1 1/2" (38.1).

Ordering: Specify part number, flange width, and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 21 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 21.

Part Number

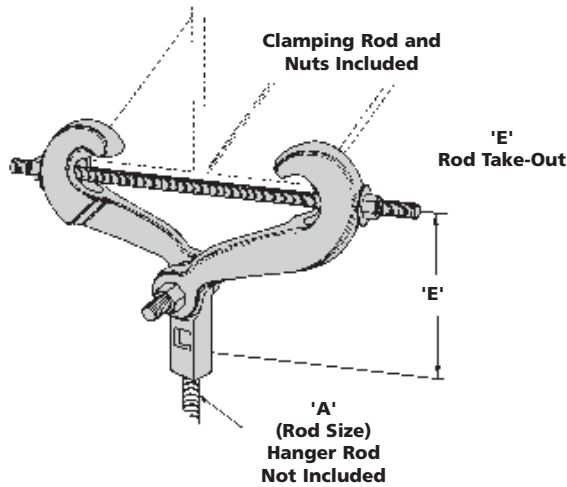
Example: B3050-2 x 'W' finish

Figure B3050 Beam Clamp

Part No. & Size	Bolt Size	'A'		'B' Minimum		'C'		Steel Size		Design Load	
			(mm)		(mm)		(mm)		(mm)	Lbs.	kN
B3050-2	1/2"-13	1 3/8"	(34.9)	5/8"	(15.9)	2 1/8"	(54.0)	1/4" x 1 1/4"	(6.3 x 31.7)	1000	(3.11)
B3050-5	3/4"-10	1 7/8"	(47.6)	7/8"	(22.2)	3"	(76.2)	1/2" x 2"	(12.7 x 50.8)	3000	(6.67)
B3050-7	1 1/8"-7	2 1/2"	(63.5)	1 1/8"	(28.6)	4 1/4"	(108.0)	5/8" x 4"	(15.9 x 101.6)	5000	(22.24)

Flange Width 'W'		Flange Thickness				Wt./C For Beam Clamp Size Lbs. (kg)					
		Min.		Max.		2		5		7	
3"	(76.2)	1/4"	(6.3)	3/8"	(9.5)	103	(46.7)	--	--	--	--
4"	(101.6)	3/16"	(4.8)	1/2"	(12.7)	116	(52.6)	429	(194.6)	--	--
5"	(127.0)	5/16"	(7.9)	5/8"	(15.9)	125	(56.7)	458	(207.8)	1419	(643.7)
6"	(152.4)	1/4"	(6.3)	3/4"	(19.0)	134	(60.8)	486	(220.5)	1490	(675.9)
7"	(177.8)	7/16"	(11.1)	7/8"	(22.2)	143	(64.9)	514	(233.2)	1561	(708.1)
8"	(203.2)	7/16"	(11.1)	7/8"	(22.2)	152	(69.0)	543	(246.3)	1632	(740.3)
9"	(228.6)	9/16"	(14.3)	1"	(25.4)	160	(72.6)	571	(259.0)	1702	(772.0)
10"	(254.0)	5/8"	(15.9)	1"	(25.4)	169	(76.7)	599	(271.8)	1773	(804.2)
12"	(304.8)	5/8"	(15.9)	1 1/4"	(31.7)	187	(84.8)	656	(297.6)	1915	(868.6)

Beam Clamps



Material: Malleable Iron

Standard Finish: Plain or Electro-Plated

Service: Designed for attaching a hanger rod to the bottom flange of a beam. Adjustable for flange widths of 3" (76.2) to 7" (177.8) and a flange thickness of no greater than 5/8" (15.9).

Ordering: Specify part number and finish

Approvals: Underwriters' Laboratories Listed. Complies with Federal Specification WW-H-171E & A-A-1192A Type 30 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 30.



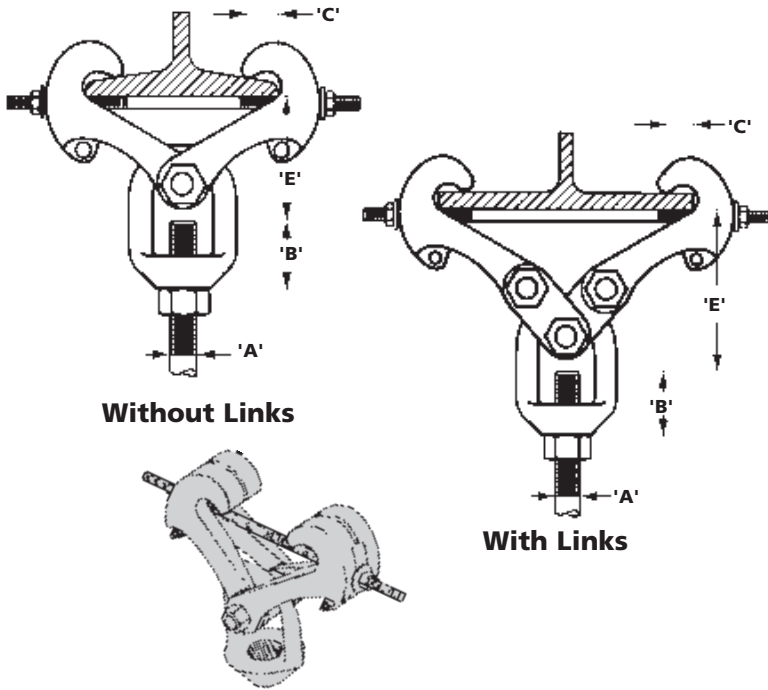
Beam Clamps

Figure B3054 Malleable Iron Beam Clamp
(Available without extension piece as B3054).

Part No.	'A' Rod Size	Rod Take Out 'E' For Beam Flange Width Of									
		3" (76.2)		4" (101.6)		5" (127.0)		6" (152.4)		7" (177.8)	
B3054-3/8	3/8"-16	4 ^{11/16"}	(119.1)	4 ^{9/16"}	(115.9)	4 ^{5/8"}	(117.5)	4"	(101.6)	3 ^{1/8"}	(79.4)
B3054-1/2	1/2"-13	4 ^{13/16"}	(122.2)	4 ^{1/2"}	(114.3)	4 ^{5/16"}	(109.5)	3 ^{15/16"}	(100.0)	3 ^{1/4"}	(82.5)
B3054-5/8	5/8"-11	4 ^{7/8"}	(123.8)	4 ^{5/8"}	(117.5)	4 ^{3/8"}	(111.1)	3 ^{3/4"}	(95.2)	3 ^{5/16"}	(84.1)
B3054-3/4	3/4"-10	5 ^{1/8"}	(130.2)	5"	(127.0)	4 ^{5/8"}	(117.5)	4 ^{1/4"}	(107.9)	3 ^{3/4"}	(95.2)
B3054-7/8	7/8"-9	5 ^{3/16"}	(131.8)	4 ^{7/8"}	(123.8)	4 ^{11/16"}	(119.1)	4 ^{5/16"}	(109.5)	3 ^{3/4"}	(95.2)

Part No.	Design Load		Maximum Iron Pipe Size		Wt./C	
	Lbs.	kN	Per UL		Lbs.	kg
B3054-3/8	730	(3.25)	4"	(100)	236	(107.0)
B3054-1/2	1350	(6.00)	8"	(200)	254	(115.2)
B3054-5/8	1365	(6.07)	10"	(250)	260	(117.9)
B3054-3/4	1365	(6.07)	10"	(250)	278	(126.1)
B3054-7/8	1365	(6.07)	10"	(250)	292	(132.4)

Beam Clamps



Material: Forged Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for attaching a hanger rod to the bottom flange of a beam. Adjustable from flange widths of 3" (76.2) to 15" (381.0). and flange thickness of no greater than 1 1/32" (26.2).

Ordering: Specify part number, rod size and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A (Type 28 without links; Type 29 with links,) and MSS SP-69 & SP-58 (Type 28 without links; Type 29 with links).

Note: Design load for B3291 thru B3295 based on maximum rod size shown. Use the appropriate all threaded rod design load shown on page 207 for sizes less than maximum.

Figure B3291, B3292, B3293, B3294, B3295, B3296, B3297, B3298 UFS Beam Clamp With Weldless Eye Nut

Available with left hand threads by adding an L to part number Example: B3291L-*

Part No. *Rod Size	Maximum Beam Flange Thickness		Rod Size 'A' (Specify) *	'B'		'C'		Design Load		Wt./C	
	In.	mm		Lbs.	kN	Lbs.	kg				
B3291-*	.60	(15.2)	3/8"-16, 1/2"-13, 5/8"-11, 3/4"-10	1 1/4"	(31.7)	1 1/8"	(28.6)	3230	(14.36)	390	(176.9)
B3292-*	.60	(15.2)	7/8"-9, 1"-8	1 11/16"	(42.9)	1 1/8"	(28.6)	5900	(26.24)	915	(415.0)
B3293-*Δ	.60	(15.2)	3/8"-16, 1/2"-13, 5/8"-11, 3/4"-10, 7/8"-9, 1"-8	1 11/16"	(42.9)	1 1/8"	(28.6)	5900	(26.24)	1300	(589.6)
B3294-*	1.031	(26.2)	7/8"-9, 1"-8	1 1/2"	(38.1)	1 1/8"	(28.6)	5900	(26.24)	2165	(982.0)
B3295-*Δ	1.031	(26.2)	7/8"-9, 1"-8	1 1/2"	(38.1)	1 1/8"	(28.6)	5900	(26.24)	3385	(1535.4)
B3296-*	1.031	(26.2)	1"-8, 1 1/8"-7, 1 1/4"-7, 1 1/2"-6	2 1/8"	(54.0)	1 1/8"	(28.6)	11500	(51.15)	2390	(1084.1)
B3297-*Δ	1.031	(26.2)	1 1/8"-7, 1 1/4"-7, 1 1/2"-6	2 1/8"	(54.0)	1 1/8"	(28.6)	11500	(51.15)	3575	(1621.6)
B3298-*	1.031	(26.2)	1 3/4"-5, 2"-4 1/2	4 9/16"	(115.9)	1 1/8"	(28.6)	11500	(51.15)	3675	(1666.9)

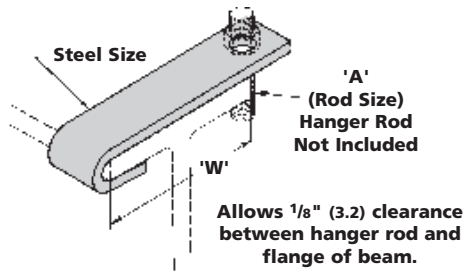
Part No.	'E' Rod Take-Out For Flange Width												
	3"	4"	5"	6"	7"	8"	9"	10"	11"	12"	13"	14"	15"
B3291-*	4 1/2"	5 5/16"	4 1/16"	3 5/8"	2 7/8"	--	--	--	--	--	--	--	--
B3292-*	--	4 3/4"	4 7/16"	4 1/16"	3 3/8"	--	--	--	--	--	--	--	--
B3293-* Δ	--	--	--	--	5 15/16"	6"	5 5/16"	5"	--	--	--	--	--
B3294-*	--	6 13/16"	6 5/8"	6 3/8"	5 7/8"	5 7/8"	5 3/8"	4 13/16"	--	--	--	--	--
B3295-* Δ	--	--	--	--	--	--	--	--	8 1/8"	7 3/4"	7 1/8"	6 5/8"	6 1/16"
B3296-*	--	7 3/16"	7"	6 3/4"	6 1/4"	6 5/16"	5 13/16"	5 3/16"	--	--	--	--	--
B3297-* Δ	--	--	--	--	--	--	--	--	8 1/2"	8 1/8"	7 1/2"	7"	6 7/16"
B3298-*	--	8 3/8"	8 7/16"	8 3/16"	7 3/4"	7 3/4"	7 1/4"	6 5/8"	--	--	--	--	--

To determine (mm) in the above chart, multiply inches by 25.4.

* Rod Size required to finish part number (see Rod Size 'A' in top chart).

Δ These part numbers are furnished with links.

Beam Clamps



Material: Steel

Standard Finish: Plain or Electro Plated

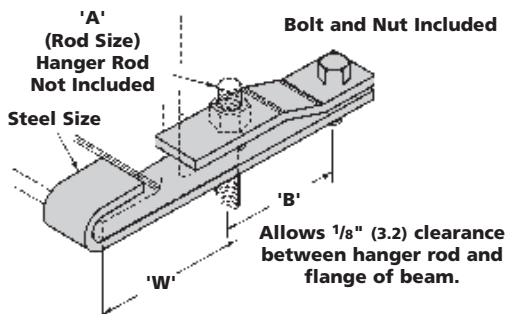
Service: Designed for attaching hanger rod to the top of a beam.

Ordering: Specify part number flange width, flange thickness and finish.

Figure B3042 Top Beam Hook

Part No.	'A'	For Nominal Pipe Size		Design Load	
				Lbs.	kN
B3042-3/8	3/8"-16	3/4-2	(20-50)	300	(1.33)
B3042-1/2	1/2"-13	2 1/2-3 1/2	(65-90)	500	(2.22)
B3042-5/8	5/8"-11	4-5	(100-125)	700	(3.11)
B3042-3/4	3/4"-10	6	(150)	1000	(4.45)
B3042-7/8	7/8"-9	8-12	(200-300)	1200	(5.34)

Part No.	Approximate Wt./C Lbs. (kg) For Width of Beam Flange 'W'							
	4" (101.6)		6" (152.4)		8" (203.2)		12" (304.8)	
B3042-3/8	47	(21.3)	62	(28.1)	72	(32.6)	108	(49.0)
B3042-1/2	65	(29.5)	86	(39.0)	105	(47.6)	146	(66.2)
B3042-5/8	120	(54.4)	159	(72.1)	195	(88.4)	269	(122.0)
B3042-3/4	168	(76.2)	219	(99.3)	268	(121.5)	364	(165.1)
B3042-7/8	289	(131.1)	375	(170.1)	459	(208.2)	621	(281.7)



Material: Steel

Standard Finish: Plain or Electro Plated

Service: Designed for attaching hanger rod to the side of a beam flange. Works on top or bottom of beam.

Ordering: Specify part number, flange width, and finish.

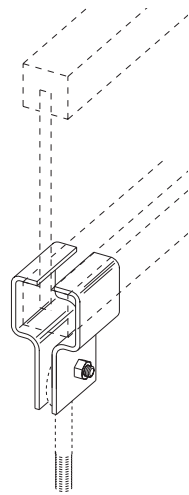
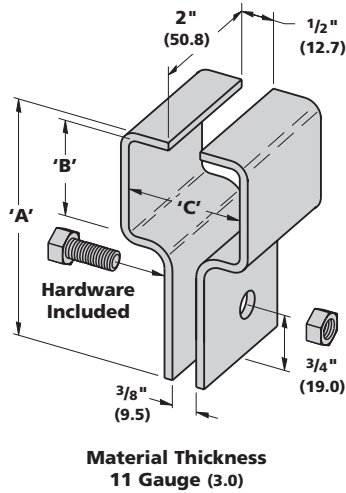
Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 53 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 25.

Figure B3045 Side Beam Clamp

Part No.	'A'	For Nominal Pipe Size		'B'	Steel Size		Design Load	
							Lbs.	kN
B3045-3/8	3/8"-16	3/4-2	(20-50)	3 1/8" (79.4)	3/16" x 1 1/4" (4.8 x 31.7)	300	(1.33)	
B3045-1/2	1/2"-13	2 1/2-3 1/2	(65-90)	3 1/8" (79.4)	1/4" x 1 1/4" (6.3 x 31.7)	500	(2.22)	
B3045-5/8	5/8"-11	4-5	(100-125)	3 1/8" (79.4)	3/8" x 1 1/2" (9.5 x 38.1)	700	(3.11)	
B3045-3/4	3/4"-10	6	(150)	3 1/8" (79.4)	3/8" x 2" (9.5 x 50.8)	1000	(4.45)	
B3045-7/8	7/8"-9	8-12	(200-300)	3 1/8" (79.4)	1/2" x 2 1/2" (12.7 x 63.5)	2000	(8.90)	

Flange Width 'W'	Flange Thickness		Wt./C For Side Beam Clamp Size Lbs. (kg)										
	Minimum	Maximum	B3045-3/8		B3045-1/2		B3045-5/8		B3045-3/4		B3045-7/8		
3"	(76.2)	1/4" (6.3)	3/8" (9.5)	92	(41.7)	125	(56.7)	245	(111.1)	322	(146.0)	576	(261.3)
4"	(101.6)	3/16" (4.8)	1/2" (12.7)	100	(45.3)	141	(63.9)	267	(121.1)	353	(160.1)	618	(280.3)
5"	(127.0)	5/16" (7.9)	5/8" (15.9)	110	(49.9)	152	(68.9)	289	(131.1)	385	(174.6)	675	(306.2)
6"	(152.4)	1/4" (6.3)	3/4" (19.0)	119	(54.0)	164	(74.4)	309	(140.1)	412	(186.9)	718	(325.7)
7"	(177.8)	7/16" (11.1)	7/8" (22.2)	128	(58.0)	175	(79.4)	327	(148.3)	443	(200.9)	742	(336.6)
8"	(203.2)	7/16" (11.1)	7/8" (22.2)	134	(60.8)	182	(82.5)	345	(156.5)	462	(209.5)	798	(362.0)
9"	(228.6)	9/16" (14.3)	1" (25.4)	143	(64.8)	198	(89.8)	368	(166.9)	491	(222.7)	848	(384.6)
10"	(254.0)	5/8" (15.9)	1" (25.4)	149	(67.6)	207	(93.9)	384	(174.2)	512	(232.2)	884	(401.0)
12"	(304.8)	5/8" (15.9)	1 1/4" (31.7)	167	(75.7)	229	(103.9)	425	(192.8)	566	(256.7)	975	(442.2)

Beam Clamps



Material: Steel

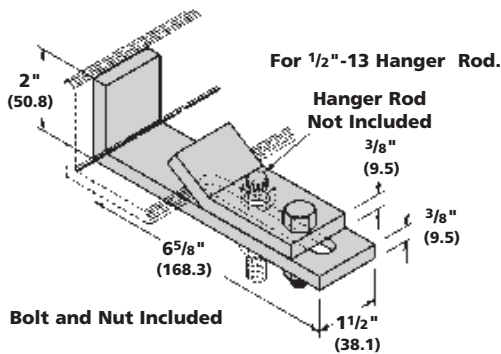
Standard Finish: Electro-Plated or Hot-Dip Galvanized

Service: Designed for attachment to trus joist beams. Use with B3210 Series eye rods.

Ordering: Specify part number and finish.

Figure B3052 Trus Joist Beam Clamp

Part No.	Hardware Size	'A'	'B'		'C'		Design Load		Wt./C	
							Lbs.	kN	Lbs.	kg
B3052-1	3/8"-16	3 ⁹ / ₁₆ " (92.1)	1 ⁹ / ₁₆ " (39.7)	1 ⁹ / ₁₆ " (39.7)	1 ⁹ / ₁₆ " (39.7)	250	(1.11)	68	(30.8)	
B3052-2	3/8"-16	3 ⁹ / ₁₆ " (92.1)	1 ⁹ / ₁₆ " (39.7)	1 ⁹ / ₁₆ " (39.7)	1 ¹³ / ₁₆ " (46.0)	250	(1.11)	72	(32.6)	
B3052-3	3/8"-16	3 ⁹ / ₁₆ " (92.1)	1 ⁹ / ₁₆ " (39.7)	1 ⁹ / ₁₆ " (39.7)	2 ³ / ₈ " (60.3)	250	(1.11)	80	(36.3)	
B3052-4	3/8"-16	3 ⁹ / ₁₆ " (92.1)	1 ⁹ / ₁₆ " (39.7)	1 ⁹ / ₁₆ " (39.7)	2 ¹⁹ / ₃₂ " (65.9)	250	(1.11)	83	(37.6)	
B3052-5	1/2"-13	3 ⁹ / ₁₆ " (96.8)	1 ⁹ / ₁₆ " (39.7)	1 ⁹ / ₁₆ " (39.7)	3 ⁹ / ₁₆ " (90.5)	250	(1.11)	105	(47.6)	
B3052-6	1/2"-13	3 ¹³ / ₁₆ " (96.8)	1 ¹³ / ₁₆ " (46.0)	1 ¹³ / ₁₆ " (46.0)	2 ³ / ₈ " (60.3)	250	(1.11)	92	(41.7)	
B3052-7	1/2"-13	3 ¹³ / ₁₆ " (92.1)	1 ¹³ / ₁₆ " (46.0)	1 ¹³ / ₁₆ " (46.0)	3 ⁹ / ₁₆ " (90.5)	250	(1.11)	108	(49.0)	
B3052-8	1/2"-13	3 ⁹ / ₁₆ " (92.1)	1 ⁹ / ₁₆ " (39.7)	1 ⁹ / ₁₆ " (39.7)	4 ¹³ / ₁₆ " (122.2)	250	(1.11)	120	(54.4)	
B3052-9	1/2"-13	3 ⁹ / ₁₆ " (92.1)	1 ⁹ / ₁₆ " (39.7)	1 ⁹ / ₁₆ " (39.7)	5 ⁹ / ₁₆ " (141.3)	250	(1.11)	130	(58.9)	



Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for attaching 1/2"-13 rod from structural angles with legs up to 3" (76.2) long and 3/8" (9.5) thick.

Design Load: 570 Lbs. (2.54 kN)

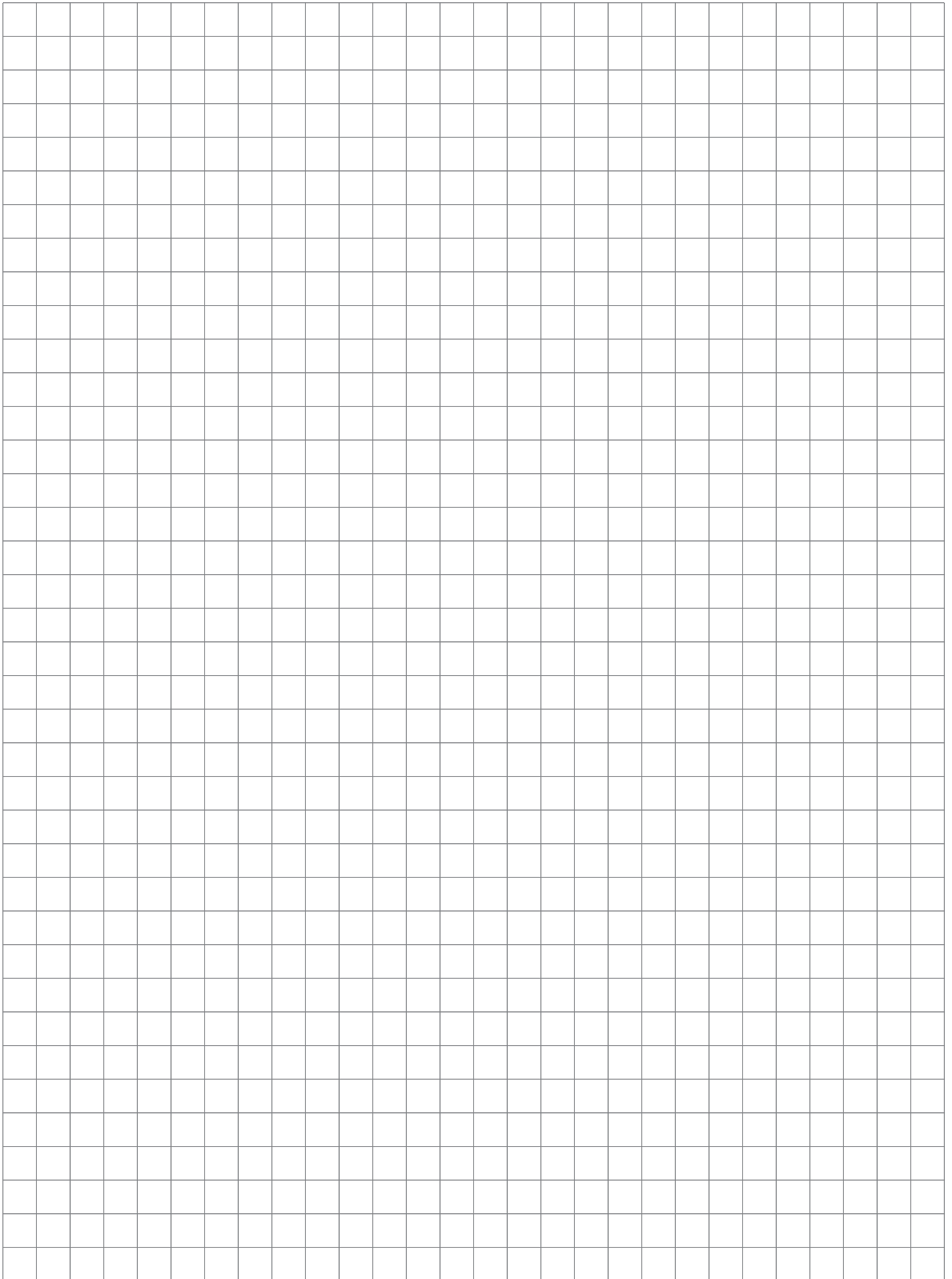
Note: Installation of Beam Clamp other than shown is not recommended.

Ordering: Specify part number and finish.

Weight: Wt./C 181 Lbs. (82.1kg)

Figure B3046 Angle Iron Beam Clamp

Beam Clamps



Beam Clamps

Pipe Hangers



Pipe hangers offered in this section are designed to support insulated or non-insulated pipe allowing for vertical adjustment and limited movement in the piping system.

Materials

Carbon Steel, Malleable Iron and AISI Type 304 & 316 Stainless Steel are used in the manufacturing of pipe hangers. Other materials are available.

Finishes

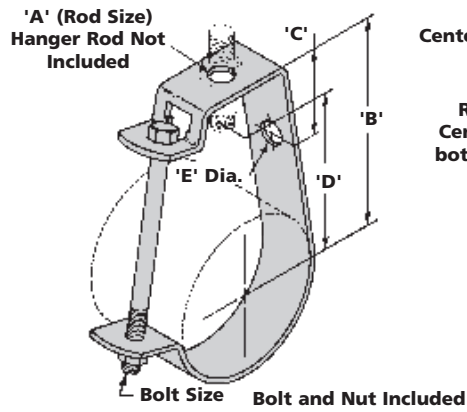
The standard finishes for mechanical supports are plain steel (oil coated) sometimes referred to as black, Electro-Plated Zinc (ASTM B 633 SC3), Pre-Galvanized (ASTM A 653 G90), Hot-Dip Galvanized After Fabrication (ASTM A123), Red Primer, Plastic Coating, Dura-Green®, Dura-Copper® and other special coatings are available upon request.

Note: Due to the design of some products, (threads, connecting hardware, swivels, etc.) items may or may not be uniformly coated with special finishes i.e. Hot-Dip Galvanized, Dura Green®, Dura Copper®, PVC etc. In some cases, the hanger itself may be coated, however, the hardware may be supplied Electro-Plated, Dura Copper® Painted or Stainless Steel. Consult B-Line Systems for availability.

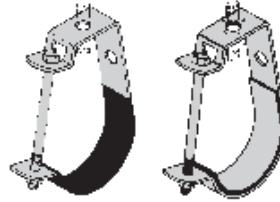
Approvals (as noted)

Items in this section are Underwriters Laboratories Listed, comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers' Standardization Society MSS SP-69 & SP-58.

Pipe Hangers



'B'
Center of pipe to top
of hanger.
'D'
Rod Take-Out
Center of pipe to
bottom of hanger
rod.



B3690C

B3690F

Material: Steel

Standard Finish: Electro-Plated (Hot-Dip Galvanized available with Electro-Plated hardware)

Service: Designed for suspending insulated pipe (with shield) and non-insulated pipe allowing for vertical adjustment. Side hole permits wall mounting.

Ordering: Specify part number and finish.

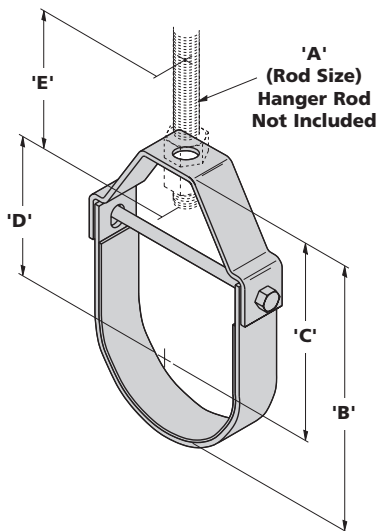
Approvals: Complies with Federal Specification A-A-1192A Type 5 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 5.

Figure B3690 Adjustable "J" Hanger
(Available with plastic coating as B3690C-size or felt lined as B3690F-Size)

Part No.	Nominal Pipe Size		Rod Size 'A'	'B'		'C'		Rod Take Out 'D'		Dia. 'E'	
B3690-1/2	1/2"	(15)	3/8"-16	2 ³ / ₃₂ "	(53.2)	1"	(25.4)	1 ¹¹ / ₁₆ "	(42.5)	1 ³ / ₃₂ "	(10.3)
B3690-3/4	3/4"	(20)	3/8"-16	2 ¹¹ / ₃₂ "	(59.5)	1"	(25.4)	1 ¹³ / ₁₆ "	(46.2)	1 ³ / ₃₂ "	(10.3)
B3690-1	1"	(25)	3/8"-16	2 ¹⁹ / ₃₂ "	(65.9)	1"	(25.4)	1 ¹⁵ / ₁₆ "	(49.2)	1 ³ / ₃₂ "	(10.3)
B3690-1 1/4	1 1/4"	(32)	3/8"-16	2 ¹³ / ₁₆ "	(71.4)	1"	(25.4)	2"	(50.8)	1 ³ / ₃₂ "	(10.3)
B3690-1 1/2	1 1/2"	(40)	3/8"-16	3 ¹ / ₁₆ "	(77.8)	1"	(25.4)	2 ¹ / ₈ "	(53.7)	1 ³ / ₃₂ "	(10.3)
B3690-2	2"	(50)	3/8"-16	3 ¹ / ₂ "	(88.9)	1"	(25.4)	2 ⁵ / ₁₆ "	(58.7)	1 ³ / ₃₂ "	(10.3)
B3690-2 1/2	2 1/2"	(65)	1/2"-13	4 ⁷ / ₁₆ "	(112.7)	1"	(25.4)	3"	(76.2)	9/16"	(14.3)
B3690-3	3"	(80)	1/2"-13	4 ⁷ / ₈ "	(123.8)	1"	(25.4)	3 ¹ / ₈ "	(79.4)	9/16"	(14.3)
B3690-3 1/2	3 1/2"	(90)	1/2"-13	5 ³ / ₁₆ "	(131.8)	1"	(25.4)	3 ³ / ₁₆ "	(81.0)	9/16"	(14.3)
B3690-4	4"	(100)	5/8"-11	6 ¹ / ₈ "	(155.6)	1 1/4"	(31.8)	3 ⁷ / ₈ "	(98.4)	9/16"	(14.3)
B3690-5	5"	(125)	5/8"-11	6 ³ / ₄ "	(171.4)	1 1/2"	(38.1)	4"	(101.6)	9/16"	(14.3)
B3690-6	6"	(150)	3/4"-10	7 ³ / ₄ "	(196.8)	1 3/16"	(30.2)	4 ⁷ / ₁₆ "	(112.7)	9/16"	(14.3)
B3690-8	8"	(200)	3/4"-10	9 ¹ / ₄ "	(234.9)	1"	(25.4)	4 ¹⁵ / ₁₆ "	(125.4)	9/16"	(14.3)

Part No.	Bolt Size	Design Load		Wt./C	
		Lbs.	kN	Lbs.	kg
B3690-1/2	1/4"-20 x 2"	400	(1.78)	20	(9.1)
B3690-3/4	1/4"-20 x 2 1/4"	400	(1.78)	23	(10.4)
B3690-1	1/4"-20 x 2 1/2"	400	(1.78)	24	(10.9)
B3690-1 1/4	1/4"-20 x 2 3/4"	400	(1.78)	27	(12.2)
B3690-1 1/2	1/4"-20 x 3"	400	(1.78)	29	(13.1)
B3690-2	1/4"-20 x 3 1/2"	400	(1.78)	32	(14.5)
B3690-2 1/2	3/8"-16 x 4 1/2"	800	(3.56)	71	(32.2)
B3690-3	3/8"-16 x 5"	800	(3.56)	77	(34.9)
B3690-3 1/2	3/8"-16 x 5 1/2"	800	(3.56)	84	(38.1)
B3690-4	3/8"-16 x 6 1/2"	800	(3.56)	139	(63.0)
B3690-5	3/8"-16 x 7 1/2"	800	(3.56)	166	(75.3)
B3690-6	3/8"-16 x 8 1/2"	1000	(4.45)	226	(102.5)
B3690-8	3/8"-16 x 10 1/2"	1200	(5.34)	332	(150.6)

Pipe Hangers



- 'B'
Bottom of pipe
to top of hanger.
- 'C'
Center of pipe
to top of hanger.
- 'D'
Rod Take-Out
Center of pipe to
bottom of hanger rod.
- 'E'
Minimum thread
length of hanger rod
- 'F'
Adjustment
Top of cross bolt to
bottom of hanger rod
nut inside the hanger.

*Slide-Rite™ Clevis Hanger design, as shown above, for sizes 2, 2½, 3, 4, 5 & 6.

Pat. No. 5,848,770
5,924,655



Material: Steel

Standard Finish: Plain, Electro-Plated, Dura-Green® or Hot-Dip Galvanized

Service: Designed for suspending non-insulated stationary pipe allowing for vertical adjustment.

Ordering: Specify part number and finish.

Approvals: Underwriter's Laboratories Listed for ¾" (20) thru 12" (300). Complies with Federal Specification WW-H-171E & A-A-1192A Type 1 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 1.

For Stainless Steel, see B3105, page 44.

For AWWA - Ductile Iron, see B3102, page 45.

Note: When using oversized clevis hangers, install B3100PS (Pipe Sleeve) over cross bolt to prevent deformation of clevis bottom.

When attaching seismic bracing to clevis hangers, a B3100PS (Pipe Sleeve) must be installed over the cross bolt (see Seismic Restraints Brochure).

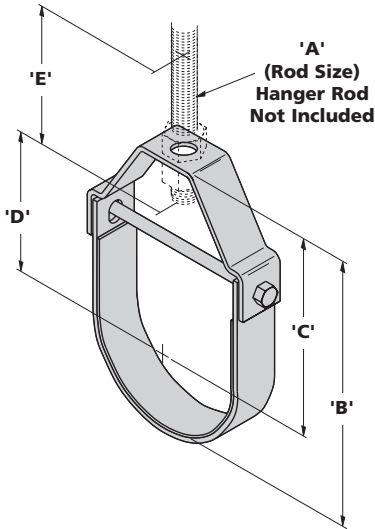
Order pipe sleeves B3100PS-(pipe size) separately. On 24" and larger sizes the pipe sleeve is included with the hanger.

Figure B3100 Standard Clevis Hanger

(Available with plastic coating as B3100C-size or felt lined as B3100F-Size)

Part No.	Nominal Pipe Size	Rod Size 'A'	'B'	'C'
B3100-½	½" (15)	¾"-16	2 ¹ / ₈ " (54.0)	1 ¹¹ / ₁₆ " (42.9)
B3100-¾	¾" (20)	¾"-16	2 ⁷ / ₁₆ " (61.9)	1 ⁷ / ₈ " (47.6)
B3100-1	1" (25)	¾"-16	2 ¹³ / ₁₆ " (71.4)	2 ¹ / ₈ " (54.0)
B3100-1¼	1¼" (32)	¾"-16	3 ⁷ / ₁₆ " (87.3)	2 ⁹ / ₁₆ " (65.1)
B3100-1½	1½" (40)	¾"-16	4" (101.6)	3" (76.2)
B3100-2 *	2" (50)	¾"-16	4½" (114.3)	3¼" (82.5)
B3100-2½ *	2½" (65)	½"-13	5 ⁹ / ₁₆ " (141.3)	4" (101.6)
B3100-3 *	3" (80)	½"-13	6¾" (171.4)	4 ⁷ / ₈ " (123.8)
B3100-3½	3½" (90)	½"-13	7" (177.8)	5" (127.0)
B3100-4 *	4" (100)	5/8"-11	7 ¹³ / ₁₆ " (198.4)	5½" (139.7)
B3100-5 *	5" (125)	5/8"-11	9 ¹ / ₁₆ " (230.2)	6 ¹ / ₈ " (155.6)
B3100-6 *	6" (150)	¾"-10	10 ⁷ / ₁₆ " (265.1)	6 ¹⁵ / ₁₆ " (176.2)
B3100-8	8" (200)	¾"-10	12¾" (323.8)	8 ³ / ₈ " (212.7)
B3100-10	10" (250)	7/8"-9	15¼" (387.3)	9 ¹³ / ₁₆ " (249.2)
B3100-12	12" (300)	7/8"-9	17 ⁵ / ₈ " (447.7)	11 ³ / ₁₆ " (284.2)
B3100-14	14" (350)	1"-8	19 ⁹ / ₁₆ " (496.9)	12 ¹ / ₂ " (317.5)
B3100-16	16" (400)	1"-8	21 ⁷ / ₁₆ " (544.5)	13 ⁵ / ₁₆ " (338.1)
B3100-18	18" (450)	1"-8	25" (635.0)	15 ⁷ / ₈ " (403.2)
B3100-20	20" (500)	1¼"-7	27½" (698.5)	17 ³ / ₈ " (441.3)
B3100-24	24" (600)	1¼"-7	31¾" (806.4)	19 ⁵ / ₈ " (498.5)
B3100-30	30" (750)	1¼"-7	38 ⁷ / ₈ " (987.3)	23¾" (603.2)
B3100-36	36" (900)	1¼"-7	46" (1168.4)	27 ¹³ / ₁₆ " (706.4)

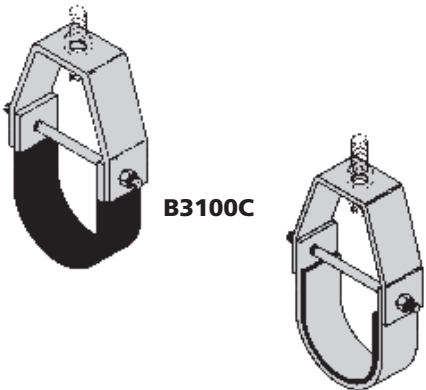
Pipe Hangers



- 'A'
(Rod Size)
Hanger Rod
Not Included
- 'B'
Bottom of pipe
to top of hanger.
- 'C'
Center of pipe
to top of hanger.
- 'D'
Rod Take-Out
Center of pipe to
bottom of hanger rod.
- 'E'
Minimum thread
length of hanger rod
- 'F'
Adjustment
Top of cross bolt to
bottom of hanger rod
nut inside the hanger.

Slide-Rite™ Clevis Hanger Features

Pipe will not 'pinch' when installing.
 15° swing in either direction allows pipe to easily feed thru.
 Engineered design aligns bolt holes for quicker overhead installation.



*Slide-Rite™ Clevis Hanger design, as shown above, for sizes 2, 2½, 3, 4, 5 & 6.

Pat. No. 5,848,770
 5,924,655

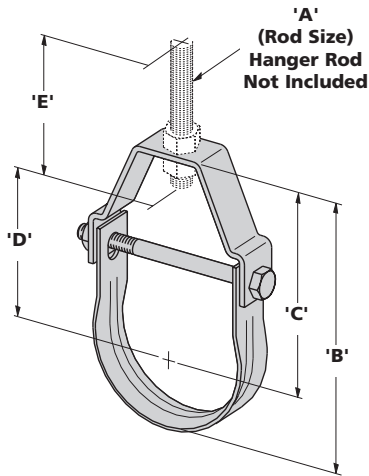


Pipe Hangers

Figure B3100 Standard Clevis Hanger (continued)
 (Available with plastic coating as B3100C-size or felt lined as B3100F-Size)

Part No.	Rod Take-Out 'D'		'E'		Adjustment 'F'		Design Load		Wt./C	
	in	mm	in	mm	in	mm	Lbs.	kN	Lbs.	kg
B3100-½	1 ⁵ / ₁₆ "	(23.8)	2 ¹ / ₂ "	(63.5)	7 ¹ / ₁₆ "	(11.1)	730	(3.25)	25	(11.3)
B3100-¾	1 ¹ / ₈ "	(28.6)	2 ¹ / ₂ "	(63.5)	1 ¹ / ₂ "	(12.7)	730	(3.25)	29	(13.1)
B3100-1	1 ³ / ₈ "	(34.9)	2 ¹ / ₂ "	(63.5)	5 ⁵ / ₈ "	(15.9)	730	(3.25)	35	(15.9)
B3100-1¼	1 ¹³ / ₁₆ "	(46.0)	2 ¹ / ₂ "	(63.5)	7 ⁷ / ₈ "	(22.2)	730	(3.25)	40	(18.1)
B3100-1½	2 ¹ / ₄ "	(57.1)	2 ¹ / ₂ "	(63.5)	1 ³ / ₁₆ "	(30.2)	730	(3.25)	42	(19.0)
B3100-2 *	2 ¹ / ₂ "	(63.5)	2 ¹ / ₂ "	(63.5)	1 ⁵ / ₈ "	(41.3)	730	(3.25)	52	(23.6)
B3100-2½ *	3 ¹ / ₁₆ "	(77.8)	2 ¹ / ₂ "	(63.5)	2"	(50.8)	1350	(6.00)	90	(40.8)
B3100-3 *	3 ¹⁵ / ₁₆ "	(100.0)	2 ¹ / ₂ "	(63.5)	2"	(50.8)	1350	(6.00)	110	(49.9)
B3100-3½	4 ¹ / ₁₆ "	(103.2)	2 ¹ / ₂ "	(63.5)	2"	(50.8)	1350	(6.00)	142	(64.4)
B3100-4 *	4 ³ / ₈ "	(111.1)	2 ¹ / ₂ "	(63.5)	2"	(50.8)	1430	(6.36)	132	(59.9)
B3100-5 *	5"	(127.0)	2 ¹ / ₂ "	(63.5)	2"	(50.8)	1430	(6.36)	215	(97.5)
B3100-6 *	5 ¹¹ / ₁₆ "	(144.5)	3"	(76.2)	2"	(50.8)	1940	(8.63)	320	(145.1)
B3100-8	7 ¹ / ₈ "	(181.0)	3 ¹ / ₂ "	(88.9)	2 ⁵ / ₁₆ "	(58.7)	2000	(8.89)	485	(220.0)
B3100-10	8 ³ / ₈ "	(212.7)	3 ¹ / ₂ "	(88.9)	2 ⁵ / ₁₆ "	(58.7)	3600	(16.01)	846	(383.7)
B3100-12	9 ¹¹ / ₁₆ "	(246.1)	3 ¹ / ₂ "	(88.9)	2 ⁵ / ₈ "	(66.7)	3800	(16.90)	1083	(491.2)
B3100-14	10 ⁵ / ₈ "	(269.9)	4"	(101.6)	2 ⁷ / ₈ "	(73.0)	4200	(18.68)	1432	(649.5)
B3100-16	11 ⁹ / ₁₆ "	(293.7)	4"	(101.6)	2 ¹¹ / ₁₆ "	(68.3)	4600	(20.46)	2200	(997.9)
B3100-18	14 ³ / ₁₆ "	(360.3)	4 ¹ / ₂ "	(114.3)	3 ¹⁵ / ₁₆ "	(100.0)	4800	(21.35)	2500	(1134.0)
B3100-20	16 ⁵ / ₈ "	(422.3)	5"	(127.0)	5 ³ / ₈ "	(136.5)	4800	(21.35)	4400	(1995.8)
B3100-24	18 ⁵ / ₈ "	(473.1)	5"	(127.0)	5 ³ / ₈ "	(136.5)	4800	(21.35)	5000	(2268.0)
B3100-30	22 ³ / ₄ "	(577.8)	5"	(127.0)	6 ¹ / ₄ "	(158.7)	6000	(26.69)	6600	(2993.7)
B3100-36	25"	(635.0)	5"	(127.0)	5 ⁷ / ₁₆ "	(138.1)	6000	(26.69)	8474	(3843.8)

Pipe Hangers



- 'A'
Rod Size
Hanger Rod
Not Included
- 'B'
Bottom of pipe
to top of hanger.
- 'C'
Center of pipe to
top of hanger.
- 'D'
Rod Take-Out
Center of pipe to
bottom of hanger rod.
- 'E'
Minimum thread length
of hanger rod.
- 'F'
Adjustment
Top of cross bolt to
bottom of hanger rod
nut inside the hanger.

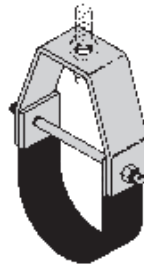
Material: Steel

Standard Finish: Plain, Electro-Plated or Dura-Green®

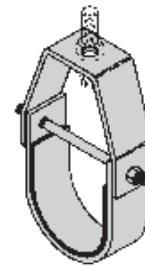
Service: Designed for suspending light stationary pipe allowing for vertical adjustment.

Ordering: Specify part number and finish.

Approvals: Underwriters' Laboratories Listed for 3/4" (20) thru 4" (100) in Electro-Plated and Dura Green only. Complies with Federal Specification WW-H-171E & A-A-1192A Type 12. Electro-Plated and Dura-Green finishes meet Manufacturers Standardization Society MSS SP-69 & SP-58 Type 1.



B3104C



B3104F

*Slide-Rite™ Clevis Hanger design for sizes 2, 3 & 4.

Pat. No. 5,848,770
5,924,655



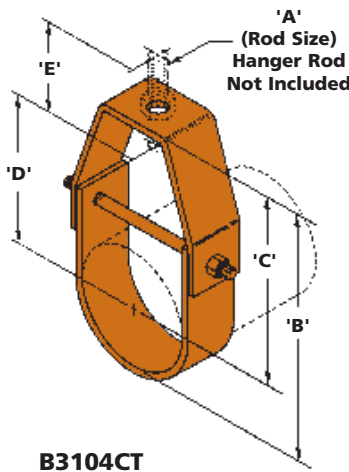
Figure B3104 Light-Duty Clevis Hanger

(Available with plastic coating as B3104C-size or felt lined as B3104F-Size)

Part No.	Nominal Pipe Size		Rod Size 'A'	'B'		'C'	
B3104-1/2	1/2"	(15)	3/8"-16	1 ¹⁵ / ₁₆ "	(49.2)	1 ¹ / ₂ "	(38.1)
B3104-3/4	3/4"	(20)	3/8"-16	2 ⁵ / ₁₆ "	(58.7)	1 ³ / ₄ "	(44.4)
B3104-1	1"	(25)	3/8"-16	2 ³ / ₄ "	(69.8)	2 ¹ / ₁₆ "	(52.4)
B3104-1 ¹ / ₄	1 ¹ / ₄ "	(32)	3/8"-16	3 ⁵ / ₁₆ "	(84.1)	2 ⁷ / ₁₆ "	(61.9)
B3104-1 ¹ / ₂	1 ¹ / ₂ "	(40)	3/8"-16	3 ⁵ / ₈ "	(92.1)	2 ⁵ / ₈ "	(66.7)
B3104-2 *	2"	(50)	3/8"-16	4 ¹³ / ₁₆ "	(122.2)	3 ⁵ / ₈ "	(92.1)
B3104-2 ¹ / ₂	2 ¹ / ₂ "	(65)	1/2"-13	5 ¹³ / ₁₆ "	(147.6)	4 ⁵ / ₁₆ "	(109.5)
B3104-3 *	3"	(80)	1/2"-13	6 ⁷ / ₁₆ "	(163.5)	4 ⁵ / ₈ "	(117.5)
B3104-3 ¹ / ₂	3 ¹ / ₂ "	(90)	1/2"-13	6 ¹⁵ / ₁₆ "	(176.2)	4 ¹⁵ / ₁₆ "	(125.4)
B3104-4 *	4"	(100)	1/2"-13	7 ³ / ₄ "	(196.8)	5 ¹ / ₂ "	(139.7)

Part No.	Rod Take-Out 'D'		'E'		Adjustment 'F'		Design Load		Wt./C	
							Lbs.	kN	Lbs.	kg
B3104-1/2	1 ³ / ₁₆ "	(20.6)	2 ¹ / ₂ "	(63.5)	7 ¹ / ₁₆ "	(11.1)	150	(.67)	13	(5.9)
B3104-3/4	1"	(25.4)	2 ¹ / ₂ "	(63.5)	7 ¹ / ₁₆ "	(11.1)	250	(1.11)	22	(10.0)
B3104-1	1 ³ / ₈ "	(34.9)	2 ¹ / ₂ "	(63.5)	9 ¹ / ₁₆ "	(14.3)	250	(1.11)	24	(10.9)
B3104-1 ¹ / ₄	1 ³ / ₄ "	(44.4)	2 ¹ / ₂ "	(63.5)	1 ³ / ₁₆ "	(20.6)	250	(1.11)	29	(13.1)
B3104-1 ¹ / ₂	2"	(50.8)	2 ¹ / ₂ "	(63.5)	1"	(25.4)	250	(1.11)	30	(13.6)
B3104-2 *	2 ¹⁵ / ₁₆ "	(74.6)	2 ¹ / ₂ "	(63.5)	1 ³ / ₄ "	(44.4)	250	(1.11)	35	(15.9)
B3104-2 ¹ / ₂	3 ⁷ / ₁₆ "	(87.3)	2 ¹ / ₂ "	(63.5)	2"	(50.8)	350	(1.55)	82	(37.2)
B3104-3 *	3 ³ / ₄ "	(95.2)	2 ¹ / ₂ "	(63.5)	2"	(50.8)	350	(1.55)	91	(41.3)
B3104-3 ¹ / ₂	4"	(101.6)	2 ¹ / ₂ "	(63.5)	2"	(50.8)	350	(1.55)	98	(44.4)
B3104-4 *	4 ⁹ / ₁₆ "	(115.9)	2 ¹ / ₂ "	(63.5)	2 ³ / ₁₆ "	(55.6)	400	(1.78)	132	(59.9)

Pipe Hangers



B3104CT

- 'A'
(Rod Size)
Hanger Rod
Not Included
- 'B'
Bottom of pipe
to top of hanger.
- 'C'
Center of pipe
to top of hanger.
- 'D'
Rod Take-Out
Center of pipe to
bottom of hanger rod.
- 'E'
Minimum thread
length of hanger rod.
- 'F'
Adjustment
Top of cross bolt to
bottom of hanger rod
nut inside the hanger.

Material: Steel

Standard Finish: Dura-Copper®

Service: Designed for suspending copper tubing allowing for vertical adjustment. (Available with plastic coating to provide additional separation between tubing and hanger).

Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 12 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 1.



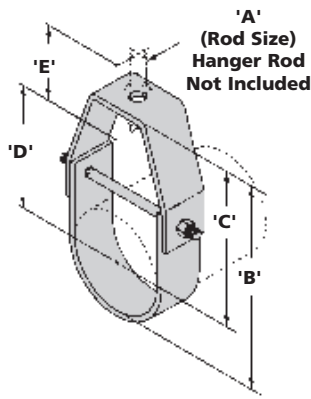
B3104CTC

Figure B3104CT Clevis Hanger
(Available with plastic coating as B3104CTC-size)

Part No.	Nominal Tubing Size		Rod Size 'A'	'B'		'C'		Rod Take-Out 'D'	
B3104CT-1/2	1/2"	(15)	3/8"-16	2 1/4"	(57.1)	1 15/16"	(49.2)	1 1/8"	(28.6)
B3104CT-3/4	3/4"	(20)	3/8"-16	1 15/16"	(49.2)	1 1/2"	(38.1)	1 1/8"	(28.6)
B3104CT-1	1"	(25)	3/8"-16	2 5/16"	(58.7)	1 3/4"	(44.4)	1 5/16"	(33.3)
B3104CT-1 1/4	1 1/4"	(32)	3/8"-16	2 3/4"	(69.8)	2 1/16"	(52.4)	1 9/16"	(39.7)
B3104CT-1 1/2	1 1/2"	(40)	3/8"-16	3 5/16"	(84.1)	2 7/16"	(61.9)	2 1/16"	(52.4)
B3104CT-2	2"	(50)	3/8"-16	4 1/2"	(114.3)	3 7/16"	(87.3)	3 3/8"	(85.7)
B3104CT-2 1/2	2 1/2"	(65)	1/2"-13	5 11/16"	(144.5)	4 1/2"	(114.3)	3 15/16"	(100.0)
B3104CT-3	3"	(80)	1/2"-13	5 3/16"	(131.8)	3 5/8"	(92.1)	4"	(101.6)
B3104CT-3 1/2	3 1/2"	(90)	1/2"-13	6 1/2"	(165.1)	4 9/16"	(115.9)	4 1/8"	(104.8)
B3104CT-4	4"	(100)	1/2"-13	7 3/8"	(187.3)	3 5/16"	(134.9)	4 3/8"	(111.1)
B3104CT-5	5"	(125)	1/2"-13	9"	(228.6)	6 7/16"	(163.5)	5 3/4"	(146.0)
B3104CT-6	6"	(150)	5/8"-11	10 5/16"	(261.9)	7 1/4"	(184.1)	6 1/2"	(165.1)

Part No.	'E'		Adjustment 'F'		Design Load		Wt./C	
					Lbs.	kN	Lbs.	kg
B3104CT-1/2	2 1/2"	(63.5)	3/8"	(9.5)	150	(.67)	12	(5.4)
B3104CT-3/4	2 1/2"	(63.5)	7/16"	(11.1)	250	(1.11)	12	(5.4)
B3104CT-1	2 1/2"	(63.5)	9/16"	(14.3)	250	(1.11)	22	(10.0)
B3104CT-1 1/4	2 1/2"	(63.5)	9/16"	(14.3)	250	(1.11)	24	(10.9)
B3104CT-1 1/2	2 1/2"	(63.5)	15/16"	(23.8)	250	(1.11)	30	(13.6)
B3104CT-2	2 1/2"	(63.5)	1 3/4"	(44.4)	250	(1.11)	35	(15.9)
B3104CT-2 1/2	2 1/2"	(63.5)	2 1/8"	(54.0)	350	(1.55)	80	(36.3)
B3104CT-3	2 1/2"	(63.5)	2 1/16"	(52.4)	350	(1.55)	88	(39.9)
B3104CT-3 1/2	2 1/2"	(63.5)	2 1/8"	(54.0)	350	(1.55)	94	(42.6)
B3104CT-4	2 1/2"	(63.5)	2 1/8"	(54.0)	400	(1.78)	116	(52.6)
B3104CT-5	2 1/2"	(63.5)	2 1/2"	(63.5)	550	(2.44)	208	(94.3)
B3104CT-6	2 1/2"	(63.5)	3"	(76.2)	550	(2.44)	247	(112.0)

Pipe Hangers



- 'B'
Bottom of pipe
to top of hanger.
- 'C'
Center of pipe
to top of hanger.
- 'D'
Rod Take-Out
Center of pipe to
bottom of hanger rod.
- 'E'
Minimum thread
length of hanger rod
- 'F'
Adjustment
Top of cross bolt to
bottom of hanger rod
nut inside the hanger.

Material: Stainless Steel AISI Type 304 (Type 316 Stainless Steel available)

Service: Designed for suspending insulated pipe (with shield) and non-insulated stationary pipe allowing for vertical adjustment.

Ordering: Specify part number and material type.

Approvals: Manufacturers Standardization Society MSS SP-69 & SP-58 Type 1.

*Slide-Rite™ clevis hanger design for sizes 2", 2½", 3", 4", 5" and 6"
Patent No. 5,848,770 & 5,924,655

Figure B3105 Stainless Steel Clevis Hanger

Part No.	Nominal Pipe Size	Rod Size 'A'	'B'		'C'	
B3105-½	½" (15)	¾"-16	1 ¹⁵ / ₁₆ "	(49.2)	1 ¹ / ₂ "	(38.1)
B3105-¾	¾" (20)	¾"-16	2 ⁵ / ₁₆ "	(58.7)	1 ³ / ₄ "	(44.4)
B3105-1	1" (25)	¾"-16	2 ³ / ₄ "	(69.8)	2 ¹ / ₁₆ "	(52.4)
B3105-1¼	1¼" (32)	¾"-16	3 ⁵ / ₁₆ "	(84.1)	2 ⁷ / ₁₆ "	(61.9)
B3105-1½	1½" (40)	¾"-16	3 ⁵ / ₈ "	(92.1)	2 ⁵ / ₈ "	(66.7)
B3105-2 *	2" (50)	¾"-16	4 ¹³ / ₁₆ "	(122.2)	3 ⁵ / ₈ "	(92.1)
B3105-2½ *	2½" (65)	½"-13	5 ⁹ / ₁₆ "	(141.3)	4"	(101.6)
B3105-3 *	3" (80)	½"-13	6 ³ / ₄ "	(171.4)	4 ⁷ / ₈ "	(123.8)
B3105-3½	3½" (90)	½"-13	7"	(177.8)	5"	(127.0)
B3105-4 *	4" (100)	5/8"-11	7 ¹³ / ₁₆ "	(198.4)	5 ¹ / ₂ "	(139.7)
B3105-5 *	5" (125)	5/8"-11	9 ¹ / ₁₆ "	(230.2)	6 ¹ / ₈ "	(155.6)
B3105-6 *	6" (150)	¾"-10	10 ⁷ / ₁₆ "	(265.1)	6 ¹⁵ / ₁₆ "	(176.2)
B3105-8	8" (200)	¾"-10	12 ³ / ₄ "	(323.8)	8 ³ / ₈ "	(238.1)
B3105-10	10" (250)	7/8"-9	15 ¹ / ₄ "	(387.3)	9 ¹³ / ₁₆ "	(249.2)
B3105-12	12" (300)	7/8"-9	17 ⁵ / ₈ "	(447.7)	11 ³ / ₁₆ "	(284.2)

Part No.	Rod Take-Out 'D'		'E'		Adjustment 'F'		Design Load		Wt./C	
							Lbs.	kN	Lbs.	kg
B3105-½	1 ³ / ₁₆ "	(20.6)	2 ¹ / ₂ "	(63.5)	7 ¹ / ₁₆ "	(11.1)	150	(0.67)	13	(5.9)
B3105-¾	1"	(25.4)	2 ¹ / ₂ "	(63.5)	7 ¹ / ₁₆ "	(11.1)	250	(1.11)	22	(10.0)
B3105-1	1 ³ / ₈ "	(34.9)	2 ¹ / ₂ "	(63.5)	9 ¹ / ₁₆ "	(14.3)	250	(1.11)	24	(10.9)
B3105-1¼	1 ³ / ₄ "	(44.4)	2 ¹ / ₂ "	(63.5)	1 ³ / ₁₆ "	(20.6)	250	(1.11)	29	(13.1)
B3105-1½	2"	(50.8)	2 ¹ / ₂ "	(63.5)	1"	(25.4)	250	(1.11)	30	(13.6)
B3105-2	2 ¹⁵ / ₁₆ "	(74.6)	2 ¹ / ₂ "	(63.5)	1 ³ / ₄ "	(44.4)	250	(1.11)	35	(15.9)
B3105-2½	3 ¹ / ₁₆ "	(77.8)	2 ¹ / ₂ "	(63.5)	2"	(50.8)	1350	(6.00)	90	(40.8)
B3105-3	3 ¹⁵ / ₁₆ "	(100.0)	2 ¹ / ₂ "	(63.5)	2"	(50.8)	1350	(6.00)	110	(49.9)
B3105-3½	4 ¹ / ₁₆ "	(103.2)	2 ¹ / ₂ "	(63.5)	2"	(50.8)	1350	(6.00)	142	(64.4)
B3105-4	4 ³ / ₈ "	(111.1)	2 ¹ / ₂ "	(63.5)	2"	(50.8)	1430	(6.36)	132	(59.9)
B3105-5	5"	(127.0)	2 ¹ / ₂ "	(63.5)	2"	(50.8)	1430	(6.36)	215	(97.5)
B3105-6	5 ¹¹ / ₁₆ "	(144.5)	3"	(76.2)	2"	(50.8)	1940	(8.63)	320	(145.1)
B3105-8	7 ¹ / ₈ "	(181.0)	3 ¹ / ₂ "	(88.9)	2 ⁵ / ₁₆ "	(58.7)	2000	(8.89)	485	(220.0)
B3105-10	8 ³ / ₈ "	(212.7)	3 ¹ / ₂ "	(88.9)	2 ⁵ / ₁₆ "	(58.7)	3600	(16.01)	846	(383.7)
B3105-12	9 ¹¹ / ₁₆ "	(246.1)	3 ¹ / ₂ "	(88.9)	2 ⁵ / ₈ "	(66.7)	3800	(16.90)	1083	(491.2)

Pipe Hangers

Material: Steel (Stainless steel available)

Standard Finish: Plain or Electro-Plated

Service: Designed for suspending stationary ductile iron and cast iron pipe and ductile pipe allowing for vertical adjustment.

Ordering: Specify part number and finish.

Note: For pipe sizes 12" (300) and larger; cross bolt sleeve is included.

Approvals: Manufacturers Standardization Society MSS SP-69 & SP-58 Type 1.

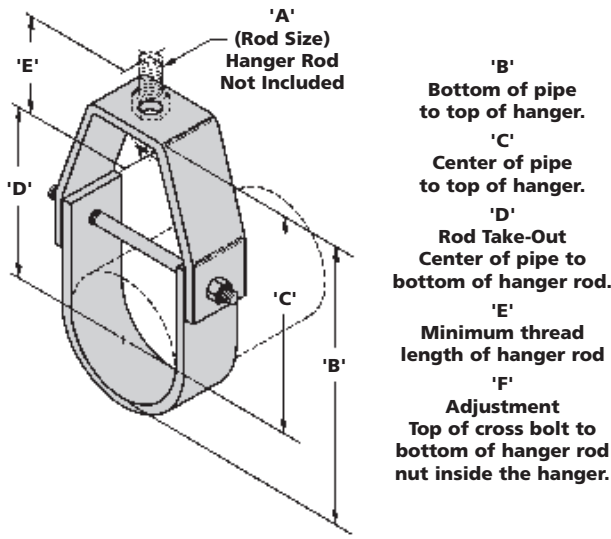
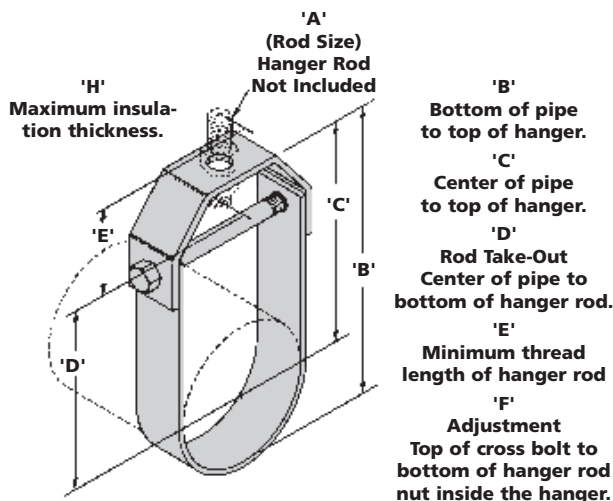


Figure B3102 Clevis Hanger for AWWA Ductile Iron Pipe

Part No.	Nominal Pipe Size		Rod Size 'A'	'B'		'C'	
B3102-4	4"	(100)	5/8"-11	8 ⁵ / ₁₆ "	(211.1)	5 ¹³ / ₁₆ "	(147.6)
B3102-6	6"	(150)	3/4"-10	10 ⁵ / ₈ "	(269.9)	7 ¹ / ₁₆ "	(179.4)
B3102-8	8"	(200)	3/4"-10	13 ¹ / ₄ "	(336.5)	8 ⁵ / ₈ "	(219.1)
B3102-10	10"	(250)	7/8"-9	15 ⁷ / ₈ "	(403.2)	10 ¹ / ₄ "	(260.3)
B3102-12	12"	(300)	7/8"-9	18"	(457.2)	11 ⁵ / ₁₆ "	(287.3)
B3102-14	14"	(350)	1"-8	20 ³ / ₈ "	(517.5)	12 ⁵ / ₈ "	(320.7)
B3102-16	16"	(400)	1"-8	23 ¹ / ₂ "	(569.9)	14 ¹¹ / ₁₆ "	(373.1)
B3102-18	18"	(450)	1"-8	25 ⁵ / ₈ "	(650.9)	15 ³ / ₄ "	(400.0)
B3102-20	20"	(500)	1 ¹ / ₄ "-7	29 ¹ / ₂ "	(749.3)	18 ⁹ / ₁₆ "	(471.5)
B3102-24	24"	(600)	1 ¹ / ₄ "-7	33"	(838.2)	508.0	19 ¹ / ₈ "

Part No.	Rod Take-Out 'D'		'E'		Adjustment 'F'		Design Load		Wt./C	
							Lbs.	kN	Lbs.	kg
B3102-4	4 ⁵ / ₈ "	(117.5)	2 ¹ / ₂ "	(63.5)	2"	(50.8)	1430	(6.36)	203	(92.1)
B3102-6	5 ¹³ / ₁₆ "	(147.6)	3"	(76.2)	2"	(50.8)	1940	(8.63)	352	(159.6)
B3102-8	7 ³ / ₁₆ "	(182.5)	3 ¹ / ₂ "	(88.9)	2 ¹ / ₈ "	(54.0)	2000	(8.89)	532	(241.3)
B3102-10	8 ¹¹ / ₁₆ "	(220.6)	3 ¹ / ₂ "	(88.9)	2 ¹ / ₄ "	(57.1)	3600	(16.01)	800	(362.9)
B3102-12	9 ³ / ₄ "	(247.6)	3 ¹ / ₂ "	(88.9)	2 ¹ / ₄ "	(57.1)	3800	(16.90)	1152	(522.5)
B3102-14	11 ³ / ₁₆ "	(281.6)	4"	(101.6)	2 ⁷ / ₈ "	(73.0)	4200	(18.68)	1449	(657.2)
B3102-16	12 ⁷ / ₈ "	(327.0)	4"	(101.6)	3 ³ / ₈ "	(85.7)	4600	(20.46)	2100	(952.6)
B3102-18	13 ¹⁵ / ₁₆ "	(354.0)	4 ¹ / ₂ "	(114.3)	3 ³ / ₈ "	(85.7)	4800	(21.35)	2294	(1040.5)
B3102-20	17 ⁷ / ₁₆ "	(442.9)	5"	(127.0)	4 ¹³ / ₁₆ "	(122.2)	4800	(21.35)	3887	(1763.1)
B3102-24	20"	(485.8)	5"	(127.0)	5 ¹ / ₄ "	(133.3)	4800	(21.35)	4844	(2197.2)

Pipe Hangers



Material: Steel (Stainless Steel Type 304 available)

Standard Finish: Plain or Electro-Plated

Service: Designed for suspending insulated pipe allowing for vertical adjustment.

Ordering: Specify part number and finish. For Service temperatures of 750°F (399°C) thru 1050°F (565°C) specify Type 304 Stainless Steel.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 1 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 1.

Note: Hangers are sized to nominal pipe size - Allowance must be made for insulation thicknesses.

Figure B3108 Extended Clevis Hanger

Part No.	Nominal Pipe Size		Rod Size 'A'	'B'		'C'	
B3108-3/4	3/4"	(20)	3/8"-16	4 ³ / ₈ "	(111.1)	3 ¹³ / ₁₆ "	(96.8)
B3108-1	1"	(25)	3/8"-16	4 ³ / ₄ "	(120.6)	4 ¹ / ₁₆ "	(103.2)
B3108-1 ¹ / ₄	1 ¹ / ₄ "	(32)	3/8"-16	5 ³ / ₈ "	(136.5)	4 ¹ / ₂ "	(114.3)
B3108-1 ¹ / ₂	1 ¹ / ₂ "	(40)	3/8"-16	6 ⁷ / ₈ "	(174.6)	5 ¹⁵ / ₁₆ "	(150.8)
B3108-2	2"	(50)	3/8"-16	8 ¹³ / ₁₆ "	(223.8)	7 ⁵ / ₈ "	(193.7)
B3108-2 ¹ / ₂	2 ¹ / ₂ "	(65)	1/2"-13	10"	(254.0)	8 ¹ / ₂ "	(215.9)
B3108-3	3"	(80)	1/2"-13	10 ⁵ / ₈ "	(269.9)	8 ¹³ / ₁₆ "	(223.8)
B3108-4	4"	(100)	5/8"-11	11 ¹³ / ₁₆ "	(300.0)	9 ¹ / ₂ "	(241.3)
B3108-5	5"	(125)	5/8"-11	13 ¹ / ₈ "	(333.4)	10 ⁵ / ₁₆ "	(261.9)
B3108-6	6"	(150)	3/4"-10	14 ³ / ₈ "	(365.1)	11"	(279.4)
B3108-8	8"	(200)	3/4"-10	16 ³ / ₄ "	(425.4)	12 ³ / ₈ "	(314.3)
B3108-10	10"	(250)	7/8"-9	19 ¹ / ₄ "	(488.9)	13 ¹³ / ₁₆ "	(350.8)
B3108-12	12"	(300)	7/8"-9	21 ⁵ / ₈ "	(549.3)	15 ³ / ₁₆ "	(385.8)

Part No.	Rod Take-Out 'D'	'E'	Adjustment 'F'	'H'		Design Load		Wt./C	
				Lbs.	kN	Lbs.	kg		
B3108-3/4	3 ¹ / ₁₆ " (77.8)	2 ¹ / ₂ " (63.5)	1/2" (12.7)	2"	(50.8)	730	(3.25)	45	(20.4)
B3108-1	3 ¹ / ₄ " (82.5)	2 ¹ / ₂ " (63.5)	5/8" (15.9)	2"	(50.8)	730	(3.25)	49	(22.2)
B3108-1 ¹ / ₄	3 ⁵ / ₁₆ " (84.1)	2 ¹ / ₂ " (63.5)	7/8" (22.2)	2"	(50.8)	730	(3.25)	55	(24.9)
B3108-1 ¹ / ₂	5 ¹ / ₈ " (130.2)	2 ¹ / ₂ " (63.5)	1 ³ / ₁₆ " (30.2)	2"	(50.8)	730	(3.25)	67	(30.4)
B3108-2	6 ⁷ / ₈ " (174.6)	2 ¹ / ₂ " (63.5)	1 ⁵ / ₈ " (41.3)	4"	(101.6)	730	(3.25)	83	(37.6)
B3108-2 ¹ / ₂	7 ⁹ / ₁₆ " (192.1)	2 ¹ / ₂ " (63.5)	2" (50.8)	4"	(101.6)	1350	(6.00)	177	(80.3)
B3108-3	7 ⁷ / ₈ " (200.0)	2 ¹ / ₂ " (63.5)	2" (50.8)	4"	(101.6)	1350	(6.00)	191	(86.6)
B3108-4	8 ³ / ₈ " (212.7)	2 ¹ / ₂ " (63.5)	2" (50.8)	4"	(101.6)	1430	(6.36)	237	(107.5)
B3108-5	9 ¹ / ₈ " (231.8)	2 ¹ / ₂ " (63.5)	2" (50.8)	4"	(101.6)	1430	(6.36)	302	(137.0)
B3108-6	9 ¹¹ / ₁₆ " (246.0)	3" (76.2)	2" (50.8)	4"	(101.6)	1940	(8.63)	397	(180.1)
B3108-8	11 ¹ / ₈ " (282.6)	3 ¹ / ₂ " (88.9)	2 ⁵ / ₁₆ " (58.7)	4"	(101.6)	2000	(8.89)	582	(264.0)
B3108-10	12 ⁵ / ₁₆ " (312.7)	3 ¹ / ₂ " (88.9)	2 ⁵ / ₁₆ " (58.7)	4"	(101.6)	3600	(16.01)	968	(439.1)
B3108-12	13 ⁵ / ₈ " (346.1)	3 ¹ / ₂ " (88.9)	2 ⁵ / ₈ " (66.7)	4"	(101.6)	3800	(16.90)	1221	(553.8)

Pipe Hangers

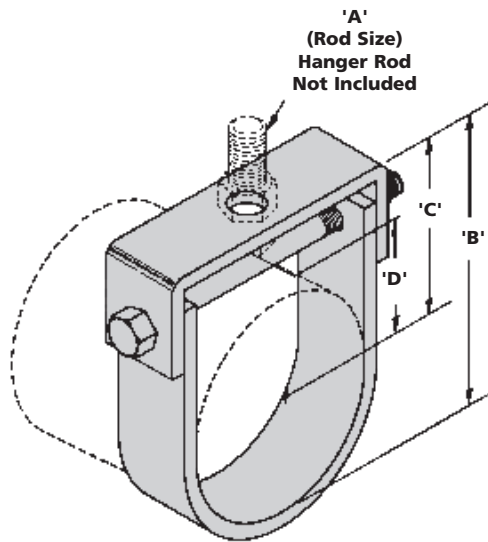
Material: Steel

Standard Finish: Plain or Electro-Plated

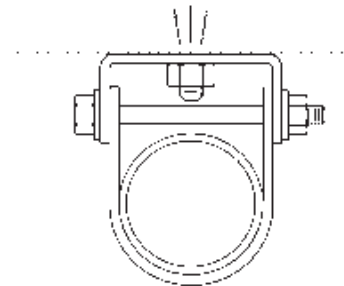
Service: Designed for suspending non-insulated, stationary pipe where space is limited.

Ordering: Specify part number and size.

Approvals: Complies with Manufacturers Standardization Society MSS SP-69 & SP-58 Type 1.



'B'
Bottom of pipe
to top of hanger.
'C'
Center of pipe
to top of hanger.
'D'
Rod Take-Out
Center of pipe to
bottom of hanger rod.



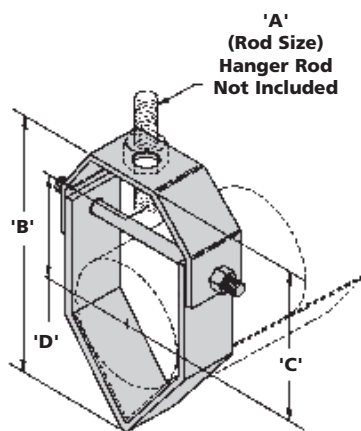
Pipe Hangers

Figure B3109 Flat Top Clevis Hanger

Part No.	Nominal Pipe Size		Rod Size 'A'	'B'	
B3109-2	2"	(50)	3/8"-16	3 ¹³ / ₁₆ "	(96.8)
B3109-2 ¹ / ₂	2 ¹ / ₂ "	(65)	1/2"-13	4 ⁵ / ₈ "	(117.5)
B3109-3	3"	(80)	1/2"-13	5 ⁵ / ₁₆ "	(134.9)
B3109-3 ¹ / ₂	3 ¹ / ₂ "	(90)	1/2"-13	5 ¹³ / ₁₆ "	(147.6)
B3109-4	4"	(100)	5/8"-11	6 ¹ / ₂ "	(165.1)
B3109-5	5"	(125)	5/8"-11	7 ¹³ / ₁₆ "	(198.4)
B3109-6	6"	(150)	3/4"-10	9 ¹ / ₁₆ "	(230.2)
B3109-8	8"	(200)	3/4"-10	11 ³ / ₈ "	(288.9)

Part No.	'C'		Rod Take-Out 'D'		Design Load		Wt./C	
					Lbs.	kN	Lbs.	kg
B3109-2	2 ⁵ / ₈ "	(66.7)	1 ⁷ / ₈ "	(47.6)	300	(1.33)	52	(23.6)
B3109-2 ¹ / ₂	3 ³ / ₁₆ "	(81.0)	2 ³ / ₁₆ "	(55.6)	500	(2.22)	116	(52.6)
B3109-3	3 ⁹ / ₁₆ "	(90.5)	2 ⁵ / ₈ "	(66.7)	500	(2.22)	133	(60.3)
B3109-3 ¹ / ₂	3 ¹³ / ₁₆ "	(96.8)	2 ⁷ / ₈ "	(73.0)	500	(2.22)	145	(65.8)
B3109-4	4 ¹ / ₄ "	(107.9)	3 ¹ / ₈ "	(79.4)	700	(3.11)	180	(81.6)
B3109-5	5"	(127.0)	3 ⁷ / ₈ "	(98.4)	700	(3.11)	248	(112.5)
B3109-6	5 ¹¹ / ₁₆ "	(144.5)	4 ⁷ / ₁₆ "	(112.7)	900	(4.00)	332	(150.6)
B3109-8	7"	(177.8)	5 ¹³ / ₁₆ "	(147.6)	1000	(4.45)	513	(232.7)

Pipe Hangers



'A'
Rod Size
Hanger Rod
Not Included

'B'
Overall Height

'C'
Center of pipe
to top of hanger.

'D'
Rod Take-Out
Center of pipe to
bottom of hanger rod.

'E'
Minimum thread
length of hanger rod

Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for suspending flexible plastic pipe. Use with B3106V Plastic Pipe Support Channel (see below).

Ordering: Specify part number and finish.

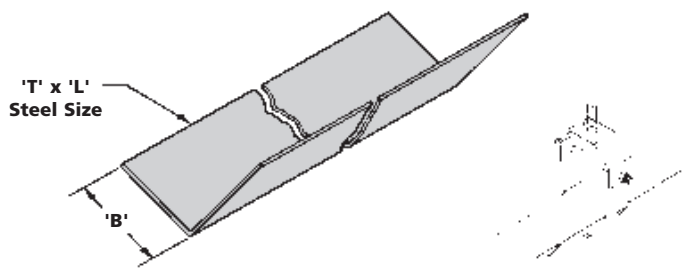
Approvals: Complies with Manufacturers Standardization Society MSS SP-69 & SP-58 Type 1.

Figure B3106 Vee Bottom Clevis Hanger

Part No.	Nominal Pipe Size	Rod Size 'A'	'B'		'C'	
B3106-1 $\frac{1}{2}$	1 $\frac{1}{2}$ "-1 $\frac{1}{2}$ " (15-40)	$\frac{3}{8}$ "-16	5"	(127.0)	3 $\frac{7}{16}$ "	(87.3)
B3106-2	2" (50)	$\frac{3}{8}$ "-16	5 $\frac{15}{16}$ "	(150.8)	4 $\frac{1}{16}$ "	(103.2)
B3106-3	3" (80)	$\frac{1}{2}$ "-13	7 $\frac{13}{16}$ "	(198.4)	5 $\frac{1}{8}$ "	(130.2)
B3106-4	4" (100)	$\frac{1}{2}$ "-13	9 $\frac{3}{8}$ "	(238.1)	6"	(152.4)
B3106-6	6" (150)	$\frac{3}{4}$ "-10	11 $\frac{15}{16}$ "	(303.2)	6 $\frac{7}{8}$ "	(174.6)

Part No.	Rod Take-Out 'D'		Adjustment 'E'		Design Load		Wt./C	
	Lbs.	kg	Lbs.	kg	Lbs.	kg	Lbs.	kg
B3106-1 $\frac{1}{2}$	3 $\frac{1}{8}$ "	(79.4)	1 $\frac{3}{16}$ "	(30.2)	150	(.67)	51	(23.1)
B3106-2	3 $\frac{5}{16}$ "	(84.1)	1 $\frac{5}{8}$ "	(41.3)	150	(.67)	60	(27.2)
B3106-3	4 $\frac{1}{4}$ "	(107.9)	2"	(50.8)	150	(.67)	104	(47.2)
B3106-4	4 $\frac{13}{16}$ "	(122.2)	2 $\frac{3}{16}$ "	(55.6)	150	(.67)	143	(64.8)
B3106-6	5 $\frac{3}{32}$ "	(129.4)	2 $\frac{1}{2}$ "	(63.5)	150	(.67)	271	(122.9)

Pipe Hangers



Material: Steel

Standard Finish: Pre-Galvanized

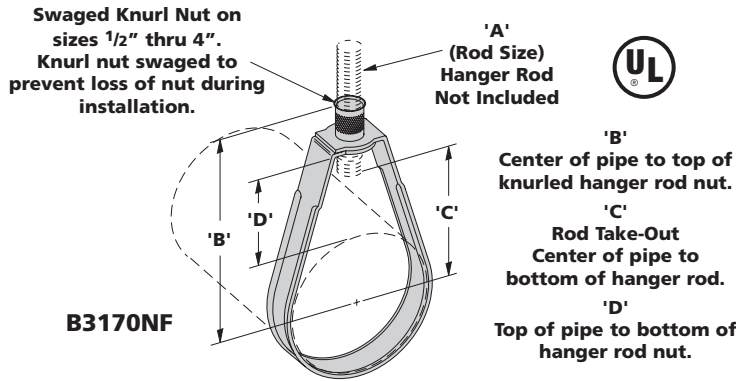
Service: Designed as a continuous support for plastic or other flexible pipe systems. Use with B3106 Vee Bottom Clevis Hanger. Hangers should be located as close as possible to the channel joints.

Ordering: Specify part number and finish.

Figure B3106V Plastic Pipe Support Channel

Part No.	For Nominal Pipe Sizes		Steel Size 'T' x 'L'		'B'		Maximum Hanger Spacing		Design Load		Wt./C	
	Lbs.	kg	Lbs.	kg	Lbs.	kg	Ft.	M	Lbs.	kg	Lbs.	kg
B3106V-1	1 $\frac{1}{2}$ " to 1 $\frac{1}{2}$ "	(15 to 40)	18 Ga. x 96"	(1.2 x 2438.4)	1 $\frac{5}{16}$ "	(33.3)	8	(2.44)	150	(.67)	377	(171.0)
B3106V-2	2"	(50)	18 Ga. x 96"	(1.2 x 2438.4)	1 $\frac{9}{16}$ "	(39.7)	8	(2.44)	150	(.67)	449	(203.6)
B3106V-3	2 $\frac{1}{2}$ " to 3"	(65 to 80)	18 Ga. x 120"	(1.2 x 3048.0)	2 $\frac{3}{8}$ "	(60.3)	10	(3.05)	150	(.67)	853	(386.9)
B3106V-4	4"	(100)	18 Ga. x 120"	(1.2 x 3048.0)	3 $\frac{1}{8}$ "	(79.4)	10	(3.05)	150	(.67)	1123	(509.4)
B3106V-6	6"	(150)	18 Ga. x 120"	(1.2 x 3048.0)	4 $\frac{5}{8}$ "	(117.5)	10	(3.05)	150	(.67)	1488	(674.9)

Pipe Hangers



Material: Steel

Standard Finish: Pre-Galvanized

Service: Designed for suspending insulated pipe (with shield) or non-insulated pipe allowing for vertical adjustment.

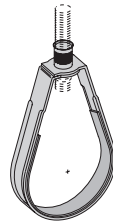
Ordering: Specify part number and finish.

Approvals: Underwriters' Laboratories Listed for 1/2" (15) thru 4" (100). Complies with Federal Specification WW-H-171E & A-A-1192A Type 10 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 10, and the National Fire Protection Association Code (NFPA).

Note: Knurled nut available as B3170KN-(rod size) Specify the B3170NF part number it will be used in when ordering.



B3170NFC



B3170NFF

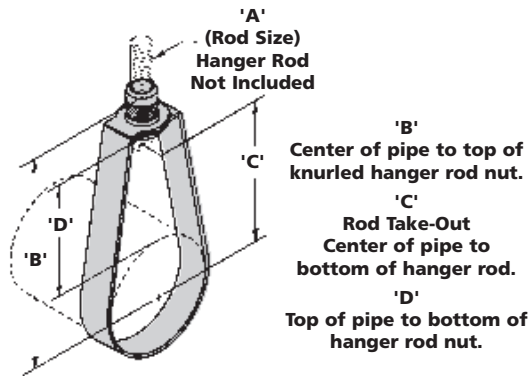
Figure B3170NF Adjustable Swivel Ring

(Available with plastic coating as B3170NFC-size or felt lined as B3170NFF-size)

Part No.	Nominal Pipe Size		Rod Size 'A'	'B'		'C'	
B3170NF-1/2	1/2"	(15)	3/8"-16	2 ⁷ / ₁₆ "	(61.9)	1 ³ / ₁₆ "	(30.2)
B3170NF-3/4	3/4"	(20)	3/8"-16	2 ¹ / ₂ "	(63.5)	1 ¹ / ₄ "	(31.7)
B3170NF-1	1"	(25)	3/8"-16	2 ⁵ / ₈ "	(66.7)	1 ³ / ₈ "	(34.9)
B3170NF-1 ¹ / ₄	1 ¹ / ₄ "	(32)	3/8"-16	2 ⁷ / ₈ "	(73.0)	1 ⁵ / ₈ "	(41.2)
B3170NF-1 ¹ / ₂	1 ¹ / ₂ "	(40)	3/8"-16	3"	(76.2)	1 ³ / ₄ "	(44.4)
B3170NF-2	2"	(50)	3/8"-16	3 ⁷ / ₁₆ "	(87.2)	2 ³ / ₁₆ "	(55.6)
B3170NF-2 ¹ / ₂	2 ¹ / ₂ "	(65)	3/8"-16	3 ⁷ / ₈ "	(98.4)	2 ⁵ / ₈ "	(66.7)
B3170NF-3	3"	(80)	3/8"-16	4 ¹ / ₄ "	(107.9)	3"	(76.2)
B3170NF-3 ¹ / ₂	3 ¹ / ₂ "	(90)	3/8"-16	4 ⁵ / ₈ "	(117.5)	3 ³ / ₈ "	(85.7)
B3170NF-4	4"	(100)	3/8"-16	5"	(127.0)	3 ³ / ₄ "	(95.2)
B3170NF-5	5"	(125)	1/2"-13	5 ⁹ / ₁₆ "	(141.3)	4 ¹ / ₁₆ "	(103.2)
B3170NF-6	6"	(150)	1/2"-13	6 ⁷ / ₁₆ "	(163.5)	4 ¹⁵ / ₁₆ "	(125.4)
B3170NF-8	8"	(200)	1/2"-13	7 ¹¹ / ₁₆ "	(195.3)	6 ³ / ₁₆ "	(157.2)

Part No.	'D'	Design Load		Wt./C	
		Lbs.	kN	Lbs.	kg
B3170NF-1/2	1 ¹ / ₄ " (31.7)	180	(.80)	11	(5.0)
B3170NF-3/4	1 ¹ / ₄ " (31.7)	180	(.80)	12	(5.4)
B3170NF-1	1 ¹ / ₄ " (31.7)	180	(.80)	13	(5.9)
B3170NF-1 ¹ / ₄	1 ¹ / ₄ " (31.7)	180	(.80)	14	(6.3)
B3170NF-1 ¹ / ₂	1 ¹ / ₄ " (31.7)	180	(.80)	14	(6.3)
B3170NF-2	1 ¹ / ₂ " (38.1)	180	(.80)	16	(7.2)
B3170NF-2 ¹ / ₂	1 ¹¹ / ₁₆ " (42.9)	200	(.89)	25	(11.3)
B3170NF-3	1 ³ / ₄ " (44.4)	250	(1.11)	29	(13.1)
B3170NF-3 ¹ / ₂	1 ⁷ / ₈ " (47.6)	300	(1.33)	33	(14.9)
B3170NF-4	2" (50.8)	360	(1.60)	40	(18.1)
B3170NF-5	1 ³ / ₄ " (44.4)	480	(2.13)	83	(37.6)
B3170NF-6	2 ³ / ₁₆ " (53.0)	630	(2.80)	91	(41.3)
B3170NF-8	2 ⁷ / ₁₆ " (61.9)	970	(4.31)	130	(58.9)

Pipe Hangers



Material: Steel

Standard Finish: Pre-Galvanized

Service: Designed for suspending insulated pipe (with shield) or non-insulated pipe allowing for vertical adjustment.

Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 10 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 10.

Note: For pipe sizes 2" (50) and under, use B3170NF.

Note: Knurled nut available as B3170KN-(rod size) Specify the B3170 part number it will be used in when ordering.

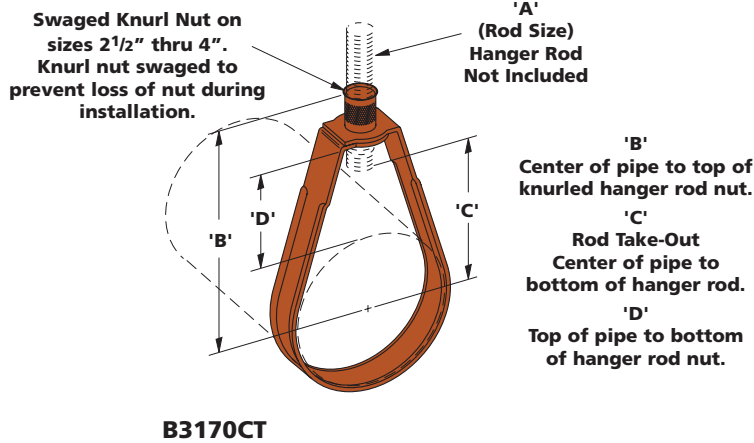
Figure B3170 Adjustable Swivel Ring

Part No.	Nominal Pipe Size	Rod Size 'A'	'B'		'C'	
B3170-2 ¹ / ₂	2 ¹ / ₂ " (65)	1 ¹ / ₂ "-13	4"	(101.6)	2 ⁵ / ₈ "	(66.7)
B3170-3	3" (80)	1 ¹ / ₂ "-13	4 ¹ / ₂ "	(114.3)	3 ¹ / ₈ "	(79.4)
B3170-3 ¹ / ₂	3 ¹ / ₂ " (90)	1 ¹ / ₂ "-13	4 ¹⁵ / ₁₆ "	(125.4)	3 ⁹ / ₁₆ "	(90.5)
B3170-4 *	4" (100)	5 ⁸ / ₈ "-11	5 ³ / ₁₆ "	(131.8)	3 ⁵ / ₈ "	(92.1)
B3170-5	5" (125)	5 ⁸ / ₈ "-11	5 ²³ / ₃₂ "	(145.2)	4 ¹ / ₈ "	(104.8)
B3170-6	6" (150)	3 ⁴ / ₄ "-10	7"	(177.8)	5 ¹ / ₁₆ "	(128.6)
B3170-8	8" (200)	3 ⁴ / ₄ "-10	8"	(203.2)	6 ⁵ / ₁₆ "	(160.3)

* Available for 1¹/₂"-13 rod size. Specify as B3170-4-R¹/₂

Part No.	'D'	Design Load		Wt./C	
		Lbs.	kN	Lbs.	kg
B3170-2 ¹ / ₂	1 ⁷ / ₁₆ " (36.5)	300	(1.33)	29	(13.1)
B3170-3	1 ⁵ / ₈ " (41.3)	300	(1.33)	34	(15.4)
B3170-3 ¹ / ₂	1 ¹³ / ₁₆ " (46.0)	300	(1.33)	42	(19.0)
B3170-4	1 ⁵ / ₈ " (41.3)	475	(2.11)	54	(24.5)
B3170-5	1 ⁵ / ₈ " (41.3)	475	(2.11)	97	(44.0)
B3170-6	2" (50.8)	950	(4.22)	113	(51.2)
B3170-8	2 ¹ / ₄ " (57.1)	950	(4.22)	140	(63.5)

Pipe Hangers



Material: Steel

Standard Finish: Dura-Copper®

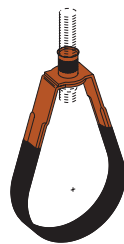
Service: Designed for suspending copper tubing, allowing for vertical adjustment. (Available with plastic coating to provide additional separation between tubing and hanger).

Ordering: Specify part number, rod size and finish.

Note: Sizes 2 1/2" (65) thru 4" (100) available for 3/8"-16 rod size.

Approvals: Complies with Federal Specifications WW-H-171E & A-A-1192A Type 10 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 10.

Note: Knurled nut available as B3170KN-(rod size) Specify the B3170CT part number it will be used in when ordering.



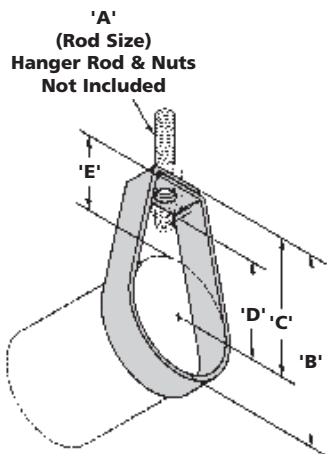
B3170CTC

Pipe Hangers

Figure B3170CT Adjustable Swivel Ring
(Available with Plastic Coating as B3170CTC-size)

Part No.	Nominal Tubing Size		Rod Size 'A'	'B'		'C'		'D'		Design Load		Wt./C	
	Inches	mm		Inches	mm	Inches	mm	Inches	mm	Lbs.	kN	Lbs.	kg
B3170CT-1/2	1/2"	(15)	3/8"-16	2 1/16"	(52.4)	1 1/8"	(28.6)	3 1/32"	(24.6)	180	(.80)	8	(3.6)
B3170CT-3/4	3/4"	(20)	3/8"-16	2 5/16"	(58.7)	1 5/16"	(33.3)	1 1/32"	(26.2)	180	(.80)	10	(4.5)
B3170CT-1	1"	(25)	3/8"-16	2 1/2"	(63.5)	1 9/16"	(39.7)	1 5/32"	(29.3)	180	(.80)	10	(4.5)
B3170CT-1 1/4	1 1/4"	(32)	3/8"-16	2 1/2"	(63.5)	1 9/16"	(39.7)	1"	(25.4)	180	(.80)	12	(5.4)
B3170CT-1 1/2	1 1/2"	(40)	3/8"-16	2 15/16"	(74.6)	2"	(50.8)	1 5/16"	(33.3)	180	(.80)	12	(5.4)
B3170CT-2	2"	(50)	3/8"-16	3 1/8"	(79.4)	2 1/8"	(54.0)	1 3/16"	(30.2)	180	(.80)	12	(5.4)
B3170CT-2 1/2	2 1/2"	(65)	1/2"-13	4 1/16"	(103.2)	2 9/16"	(65.1)	1 3/8"	(34.9)	200	(.80)	31	(14.0)
B3170CT-3	3"	(80)	1/2"-13	3 15/16"	(100.0)	3 3/4"	(69.8)	1 1/4"	(31.7)	250	(1.11)	33	(14.9)
B3170CT-3 1/2	3 1/2"	(90)	1/2"-13	4 7/16"	(112.7)	3 1/4"	(82.5)	1 1/2"	(38.1)	300	(1.33)	38	(17.2)
B3170CT-4	4"	(100)	1/2"-13	4 11/16"	(119.1)	3 9/16"	(90.5)	1 9/16"	(39.7)	360	(1.60)	40	(18.1)
B3170CT-5	5"	(125)	1/2"-13	5 15/16"	(150.8)	4 5/16"	(109.5)	1 25/32"	(45.2)	480	(2.13)	95	(43.1)
B3170CT-6	6"	(150)	1/2"-13	6 11/16"	(169.9)	5 3/16"	(131.8)	2 1/8"	(54.0)	630	(2.80)	118	(53.5)

Pipe Hangers



- 'A'
(Rod Size)
Hanger Rod & Nuts
Not Included
- 'B'
Bottom of pipe to
top of hanger.
- 'C'
Center of pipe to
top of hanger.
- 'D'
Rod Take-Out
Center of pipe to
bottom of hanger rod.
- 'E'
Adjustment
Top of pipe to top
of hanger rod nut
inside the hanger.
- 'F'
Minimum thread
length of hanger rod.



Material: Steel (Stainless Steel Type 304 available)

Standard Finish: Plain or Electro-Plated

Service: Designed for suspending non-insulated pipe allowing for vertical adjustment.

Ordering: Specify part number and finish

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 7 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 7.

Figure B3172 Adjustable Band Hanger
(Available with plastic coating as B3172C-size or felt lined as B3172F-size)

Part No.	Nominal Pipe Size		Rod Size 'A'	'B'		'C'		'D'	
	Inches	mm		Inches	mm	Inches	mm	Inches	mm
B3172-1/2	1/2"	(15)	3/8"-16	2 5/8"	(66.7)	2 3/16"	(55.6)	1 7/16"	(36.5)
B3172-3/4	3/4"	(20)	3/8"-16	2 5/8"	(66.7)	2 1/16"	(52.4)	1 5/16"	(33.3)
B3172-1	1"	(25)	3/8"-16	2 11/16"	(68.3)	2 1/16"	(52.4)	1 5/16"	(33.3)
B3172-1 1/4	1 1/4"	(32)	3/8"-16	3 7/16"	(87.3)	2 9/16"	(65.1)	1 13/16"	(46.0)
B3172-1 1/2	1 1/2"	(40)	3/8"-16	3 11/16"	(93.7)	2 3/4"	(69.8)	2"	(50.8)
B3172-2	2"	(50)	3/8"-16	4 3/16"	(106.4)	3"	(76.2)	2 1/4"	(57.1)
B3172-2 1/2	2 1/2"	(65)	1/2"-13	4 7/8"	(123.8)	3 7/16"	(87.3)	2 7/16"	(61.9)
B3172-3	3"	(80)	1/2"-13	6"	(152.4)	4 1/4"	(107.9)	3 1/4"	(82.5)
B3172-3 1/2	3 1/2"	(90)	1/2"-13	6 1/8"	(155.6)	4 1/8"	(104.8)	3 1/8"	(79.4)
B3172-4	4"	(100)	1/2"-13	6 3/4"	(171.4)	4 1/2"	(114.3)	3 1/4"	(82.5)
B3172-5	5"	(125)	1/2"-13	7 3/4"	(196.8)	5"	(127.0)	4 3/4"	(120.6)
B3172-6	6"	(150)	3/4"-10	10"	(254.0)	6 11/16"	(169.9)	5 3/16"	(131.8)
B3172-8	8"	(200)	3/4"-10	11 7/8"	(301.6)	7 9/16"	(192.1)	6 13/16"	(173.0)

Part No.	'E'		'F'		Design Load		Wt./C	
	Inches	mm	Inches	mm	Lbs.	kN	Lbs.	kg
B3172-1/2	1 1/4"	(31.7)	2 1/2"	(63.5)	610	(2.71)	11	(5.0)
B3172-3/4	1"	(25.4)	2 1/2"	(63.5)	610	(2.71)	12	(5.4)
B3172-1	1 1/16"	(17.5)	2 1/2"	(63.5)	610	(2.71)	12	(5.4)
B3172-1 1/4	1 1/4"	(31.7)	2 1/2"	(63.5)	610	(2.71)	14	(6.3)
B3172-1 1/2	1 3/16"	(30.2)	2 1/2"	(63.5)	610	(2.71)	16	(7.2)
B3172-2	1 3/16"	(30.2)	2 1/2"	(63.5)	610	(2.71)	23	(10.4)
B3172-2 1/2	1 1/4"	(31.7)	3 1/2"	(88.9)	970	(4.31)	28	(12.7)
B3172-3	1 5/8"	(41.3)	3 1/2"	(88.9)	970	(4.31)	41	(18.6)
B3172-3 1/2	1 3/8"	(34.9)	3 1/2"	(88.9)	970	(4.31)	44	(19.9)
B3172-4	1 3/8"	(34.9)	3 1/2"	(88.9)	1250	(5.56)	81	(36.7)
B3172-5	1 1/4"	(31.7)	4"	(101.6)	1250	(5.56)	100	(45.3)
B3172-6	2 1/8"	(54.0)	4 1/2"	(114.3)	1600	(7.11)	160	(72.6)
B3172-8	2"	(50.8)	4 1/2"	(114.3)	1800	(8.00)	260	(117.9)

Pipe Hangers

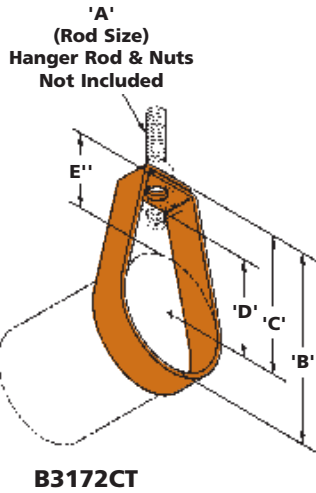
Material: Steel

Standard Finish: Dura-Copper®

Service: Designed for suspending copper tubing allowing for vertical adjustment. (Available with plastic coating to provide additional separation between tubing and hanger).

Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 7 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 7.



'B'
Bottom of pipe
to top of hanger.

'C'
Center of pipe
to top of hanger.

'D'
Rod Take-Out
Center of pipe to
bottom of hanger
rod.

'E'
Adjustment
Top of pipe to top
of hanger rod nut
inside the hanger.

'F'
Minimum thread
length of hanger rod.



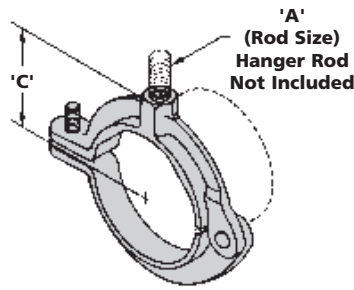
B3172CTC

Figure B3172CT Adjustable Band Hanger
(Available with plastic coating as B3172CTC-size)

Part No.	Nominal Tubing Size		Rod Size 'A'	'B'		'C'		'D'	
	Inches	mm		Inches	mm	Inches	mm	Inches	mm
B3172CT-1/2	1/2"	(15)	3/8"-16	2 ⁹ / ₁₆ "	(65.1)	2 ¹ / ₄ "	(57.1)	1 ¹ / ₂ "	(38.1)
B3172CT-3/4	3/4"	(20)	3/8"-16	2 ⁹ / ₁₆ "	(65.1)	2 ¹ / ₈ "	(54.0)	1 ³ / ₈ "	(34.9)
B3172CT-1	1"	(25)	3/8"-16	2 ⁹ / ₁₆ "	(65.1)	2"	(50.8)	1 ¹ / ₄ "	(31.7)
B3172CT-1 ¹ / ₄	1 ¹ / ₄ "	(32)	3/8"-16	2 ³ / ₄ "	(69.8)	2 ¹ / ₁₆ "	(52.4)	1 ⁵ / ₁₆ "	(33.3)
B3172CT-1 ¹ / ₂	1 ¹ / ₂ "	(40)	3/8"-16	3 ¹ / ₈ "	(79.4)	2 ⁵ / ₁₆ "	(58.7)	1 ⁹ / ₁₆ "	(39.7)
B3172CT-2	2"	(50)	3/8"-16	3 ¹¹ / ₁₆ "	(93.7)	2 ⁵ / ₈ "	(66.7)	1 ⁷ / ₈ "	(47.6)
B3172CT-2 ¹ / ₂	2 ¹ / ₂ "	(65)	1/2"-13	4 ¹ / ₂ "	(114.3)	3 ³ / ₁₆ "	(81.0)	2 ⁵ / ₁₆ "	(58.7)
B3172CT-3	3"	(80)	1/2"-13	5"	(127.0)	3 ⁷ / ₁₆ "	(87.3)	2 ¹ / ₂ "	(63.5)
B3172CT-3 ¹ / ₂	3 ¹ / ₂ "	(90)	1/2"-13	5 ³ / ₄ "	(146.0)	3 ¹⁵ / ₁₆ "	(100.0)	3"	(76.2)
B3172CT-4	4"	(100)	1/2"-13	6 ¹ / ₄ "	(158.7)	4 ³ / ₁₆ "	(106.4)	3 ¹ / ₄ "	(82.5)

Part No.	'E'		'F'		Design Load		Wt./C	
	Inches	mm	Inches	mm	Lbs.	kN	Lbs.	kg
B3172CT-1/2	1 ⁷ / ₁₆ "	(36.5)	2 ¹ / ₂ "	(63.5)	610	(2.71)	12	(5.4)
B3172CT-3/4	1 ³ / ₁₆ "	(30.2)	2 ¹ / ₂ "	(63.5)	610	(2.71)	12	(5.4)
B3172CT-1	1 ⁵ / ₁₆ "	(23.8)	2 ¹ / ₂ "	(63.5)	610	(2.71)	12	(5.4)
B3172CT-1 ¹ / ₄	7/8"	(22.2)	2 ¹ / ₂ "	(63.5)	610	(2.71)	12	(5.4)
B3172CT-1 ¹ / ₂	1"	(25.4)	2 ¹ / ₂ "	(63.5)	610	(2.71)	13	(5.9)
B3172CT-2	1 ¹ / ₁₆ "	(27.0)	2 ¹ / ₂ "	(63.5)	610	(2.71)	16	(7.2)
B3172CT-2 ¹ / ₂	1 ¹ / ₄ "	(31.7)	2 ¹ / ₂ "	(63.5)	970	(4.31)	30	(13.6)
B3172CT-3	1 ³ / ₁₆ "	(30.2)	2 ¹ / ₂ "	(63.5)	970	(4.31)	32	(14.5)
B3172CT-3 ¹ / ₂	1 ⁷ / ₁₆ "	(36.5)	2 ¹ / ₂ "	(63.5)	970	(4.31)	40	(18.1)
B3172CT-4	1 ⁷ / ₁₆ "	(36.5)	2 ¹ / ₂ "	(63.5)	970	(4.31)	49	(22.2)

Pipe Hangers



Material: Malleable Iron

Standard Finish: Plain or Electro-Plated

Service: Designed for suspending non-insulated pipe horizontally or vertically.

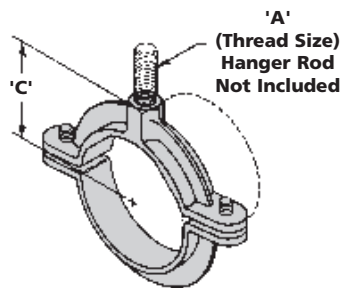
Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 25 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 12.

Figure B3198H Hinged Extension Split Pipe Clamp

Part No.	Nominal Pipe Size		Rod Size 'A'		'C'	Design Load		Wt./C	
		(mm)		(mm)		Lbs.	kN	Lbs.	kg
B3198H-3/8	3/8"	(10)	3/8"-16	31/32"	(24.6)	180	(.80)	9	(4.1)
B3198H-1/2	1/2"	(15)	3/8"-16	11/16"	(27.0)	180	(.80)	12	(5.4)
B3198H-3/4	3/4"	(20)	3/8"-16	17/32"	(30.9)	180	(.80)	12	(5.4)
B3198H-1	1"	(25)	3/8"-16	111/32"	(34.1)	180	(.80)	13	(5.9)
B3198H-11/4	11/4"	(32)	3/8"-16	119/32"	(39.7)	180	(.80)	18	(8.1)
B3198H-11/2	11/2"	(40)	3/8"-16	123/32"	(43.6)	180	(.80)	21	(9.5)
B3198H-2	2"	(50)	3/8"-16	2"	(50.8)	180	(.80)	44	(19.9)
B3198H-21/2	21/2"	(65)	1/2"-13	211/32"	(59.5)	300	(1.33)	73	(33.1)
B3198H-3	3"	(80)	1/2"-13	223/32"	(69.0)	300	(1.33)	95	(43.1)

Pipe Hangers



Material: Malleable Iron (Stainless Steel Type 304 available)

Standard Finish: Plain or Electro-Plated

Service: Designed for suspending non-insulated pipe horizontally.

Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 25 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 12.

**Figure B3198R Extension Split Pipe Clamp (Rod Thread)
Figure B3198P Extension Split Pipe Clamp (Pipe Thread)**

Part No.		Nominal Pipe Size		Thread Size 'A'		'C'	Design Load		Wt./C		
Rod Thread	Pipe Thread		(mm)	Rod	Pipe		Lbs.	kN	Lbs.	kg	
B3198R-3/8	B3198P-3/8	3/8"	(10)	3/8"-16	1/4"-18	31/32"	(24.6)	180	(.80)	12	(5.4)
B3198R-1/2	B3198P-1/2	1/2"	(15)	3/8"-16	1/4"-18	11/16"	(27.0)	180	(.80)	16	(7.2)
B3198R-3/4	B3198P-3/4	3/4"	(20)	3/8"-16	1/4"-18	17/32"	(30.9)	180	(.80)	18	(8.1)
B3198R-1	B3198P-1	1"	(25)	3/8"-16	1/4"-18	111/32"	(34.1)	180	(.80)	24	(10.9)
B3198R-11/4	B3198P-11/4	11/4"	(32)	3/8"-16	1/4"-18	119/32"	(39.7)	180	(.80)	29	(13.1)
B3198R-11/2	B3198P-11/2	11/2"	(40)	3/8"-16	1/4"-18	123/32"	(43.6)	180	(.80)	32	(14.5)
B3198R-2	B3198P-2	2"	(50)	3/8"-16	1/4"-18	2"	(50.8)	180	(.80)	39	(17.7)
B3198R-21/2	--	21/2"	(65)	1/2"-13	--	211/32"	(59.5)	300	(1.33)	115	(52.1)
B3198R-3	--	3"	(80)	1/2"-13	--	223/32"	(69.0)	300	(1.33)	140	(63.5)
B3198R-4	--	4"	(100)	1/2"-13	--	311/32"	(84.9)	300	(1.33)	160	(72.6)

Pipe Hangers

Material: Malleable Iron

Standard Finish: Dura-Copper®

Service: Designed for suspending copper tubing horizontally or vertically.

Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 25 and Manufacturers Standardization MSS Society SP-69 & SP-58 Type 12.

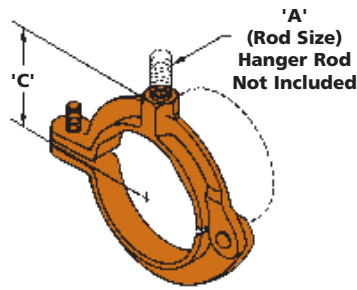


Figure B3198HCT Hinged Extension Split Pipe Clamp

Part No.	Nominal Tubing Size		Rod Size 'A'	'C'		Design Load		Wt./C	
		()				Lbs.	kN	Lbs.	kg
B3198HCT-1/2	1/2"	(15)	3/8"-16	5/8"	(15.9)	180	(.80)	8	(3.6)
B3198HCT-3/4	3/4"	(20)	3/8"-16	13/16"	(20.6)	180	(.80)	10	(4.5)
B3198HCT-1	1"	(25)	3/8"-16	15/16"	(23.8)	180	(.80)	10	(4.5)
B3198HCT-1 1/4	1 1/4"	(32)	3/8"-16	1 1/8"	(28.6)	180	(.80)	14	(6.3)
B3198HCT-1 1/2	1 1/2"	(40)	3/8"-16	1 9/16"	(39.7)	180	(.80)	18	(8.1)
B3198HCT-2	2"	(50)	3/8"-16	1 7/8"	(47.6)	180	(.80)	23	(10.4)

Material: Malleable Iron

Standard Finish: Dura-Copper®

Service: Designed for suspending copper tubing horizontally.

Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 25 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 12.

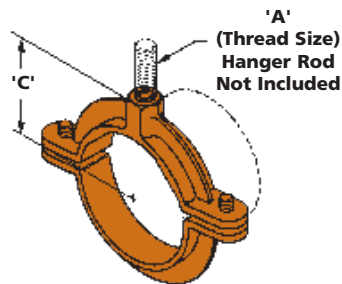
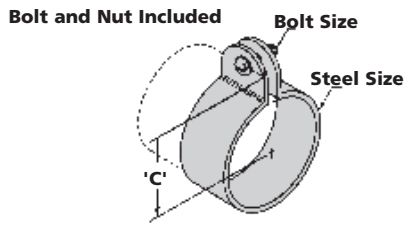


Figure B3198RCT Extension Split Pipe Clamp

Part No.	Nominal Tubing Size		Rod Size 'A'	'C'		Design Load		Wt./C	
		()				Lbs.	kN	Lbs.	kg
B3198RCT-3/8	3/8"	(10)	3/8"-16	1 1/16"	(17.5)	180	(.80)	12	(5.4)
B3198RCT-1/2	1/2"	(15)	3/8"-16	1 11/16"	(17.5)	180	(.80)	12	(5.4)
B3198RCT-3/4	3/4"	(20)	3/8"-16	7/8"	(22.2)	180	(.80)	14	(6.3)
B3198RCT-1	1"	(25)	3/8"-16	1 1/16"	(27.0)	180	(.80)	17	(7.7)
B3198RCT-1 1/4	1 1/4"	(32)	3/8"-16	1 1/8"	(28.6)	180	(.80)	17	(7.7)
B3198RCT-1 1/2	1 1/2"	(40)	3/8"-16	1 5/16"	(33.3)	180	(.80)	22	(10.0)
B3198RCT-2	2"	(50)	3/8"-16	1 1/2"	(38.1)	180	(.80)	26	(11.8)

Pipe Hangers



Material: Steel

Standard Finish: Pre-Galvanized

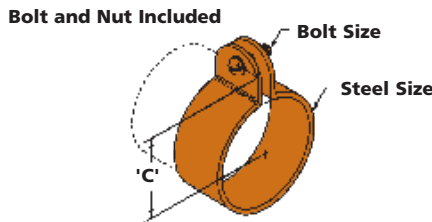
Service: Designed for suspending light-weight non-insulated pipe. (Use with B3222 Eye Socket or B3224 Hanger Adjuster).

Ordering: Specify part number and finish.

Figure B3175 Ring and Bolt Hanger

Part No.	Nominal Pipe Size		'C'		Bolt Size	Steel Size		Design Load		Wt./C	
						Lbs.	kN	Lbs.	kg		
B3175-1/2	1/2"	(15)	1 1/16"	(27.0)	1/4"-20	18 Ga. x 7/8"	(1.2 x 22.2)	275	(1.22)	7.5	(3.4)
B3175-3/4	3/4"	(20)	1 3/16"	(30.2)	1/4"-20	18 Ga. x 7/8"	(1.2 x 22.2)	275	(1.22)	8.0	(3.6)
B3175-1	1"	(25)	1 5/16"	(33.3)	1/4"-20	18 Ga. x 7/8"	(1.2 x 22.2)	275	(1.22)	9.0	(4.1)
B3175-1 1/4	1 1/4"	(32)	1 1/2"	(38.1)	1/4"-20	18 Ga. x 7/8"	(1.2 x 22.2)	275	(1.22)	10.5	(4.7)
B3175-1 1/2	1 1/2"	(40)	1 5/8"	(41.3)	1/4"-20	18 Ga. x 7/8"	(1.2 x 22.2)	275	(1.22)	11.5	(5.2)
B3175-2	2"	(50)	1 13/16"	(46.0)	1/4"-20	18 Ga. x 7/8"	(1.2 x 22.2)	275	(1.22)	13.0	(5.9)
B3175-2 1/2	2 1/2"	(65)	2 5/16"	(58.7)	5/16"-18	16 Ga. x 1 1/4"	(1.5 x 31.7)	500	(2.22)	30.0	(13.6)
B3175-3	3"	(80)	2 5/8"	(66.7)	5/16"-18	16 Ga. x 1 1/4"	(1.5 x 31.7)	500	(2.22)	35.0	(15.9)
B3175-3 1/2	3 1/2"	(90)	2 7/8"	(73.0)	5/16"-18	16 Ga. x 1 1/4"	(1.5 x 31.7)	500	(2.22)	38.5	(17.4)
B3175-4	4"	(100)	3 1/8"	(79.4)	5/16"-18	16 Ga. x 1 1/4"	(1.5 x 31.7)	500	(2.22)	42.0	(19.0)
B3175-5	5"	(125)	3 5/8"	(92.1)	5/16"-18	16 Ga. x 1 1/4"	(1.5 x 31.7)	500	(2.22)	51.0	(23.1)
B3175-6	6"	(150)	4 3/16"	(106.4)	5/16"-18	16 Ga. x 1 1/4"	(1.5 x 31.7)	500	(2.22)	58.5	(26.5)

Pipe Hangers



Material: Steel

Standard Finish: Copper Plated (for identification only)

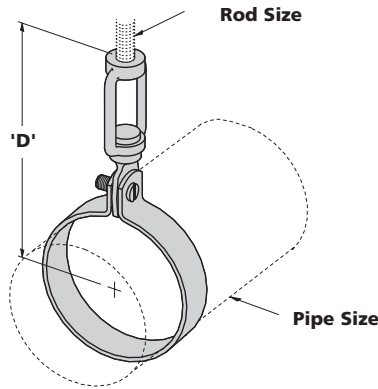
Service: Designed for suspending copper tubing allowing for vertical adjustment. (Use with B3222 Eye Socket or B3224 Hanger Adjuster).

Ordering: Specify part number and finish.

Figure B3175CT Ring & Bolt

Part No.	Nominal Tubing Size		'C'		Bolt Size	Steel Size		Design Load		Wt./C	
						Lbs.	kN	Lbs.	kg		
B3175CT-1/2	1/2"	(15)	1 5/16"	(33.3)	1/4"-20 x 1"	1/16" x 7/8"	(1.6 x 22.2)	200	(.89)	8	(3.6)
B3175CT-3/4	3/4"	(20)	1 3/8"	(34.9)	1/4"-20 x 1"	1/16" x 7/8"	(1.6 x 22.2)	200	(.89)	8	(3.6)
B3175CT-1	1"	(25)	1 3/16"	(30.2)	1/4"-20 x 1"	1/16" x 7/8"	(1.6 x 22.2)	200	(.89)	8	(3.6)
B3175CT-1 1/4	1 1/4"	(32)	1 5/16"	(33.3)	1/4"-20 x 1"	1/16" x 7/8"	(1.6 x 22.2)	200	(.89)	10	(4.5)
B3175CT-1 1/2	1 1/2"	(40)	1 1/2"	(38.1)	1/4"-20 x 1"	1/16" x 7/8"	(1.6 x 22.2)	200	(.89)	11	(5.0)
B3175CT-2	2"	(50)	1 15/16"	(49.2)	1/4"-20 x 1"	1/16" x 7/8"	(1.6 x 22.2)	200	(.89)	11	(5.0)
B3175CT-2 1/2	2 1/2"	(65)	2 3/16"	(55.6)	1/4"-20 x 1"	1/16" x 7/8"	(1.6 x 22.2)	200	(.89)	12	(5.4)
B3175CT-3	3"	(80)	2 1 1/16"	(68.3)	1/4"-20 x 1"	1/16" x 7/8"	(1.6 x 22.2)	200	(.89)	14	(6.3)
B3175CT-3 1/2	3 1/2"	(90)	2 15/16"	(74.6)	1/4"-20 x 1"	1/16" x 7/8"	(1.6 x 22.2)	200	(.89)	16	(7.2)
B3175CT-4	4"	(100)	3 3/16"	(81.0)	1/4"-20 x 1"	1/16" x 7/8"	(1.6 x 22.2)	200	(.89)	18	(8.1)

Pipe Hangers



Material: Steel Ring & Bolt
Malleable Iron Hanger Adjuster

Standard Finish: Plain and Pre-Galvanized

Service: Designed to support pipe and allow vertical rod adjustment.

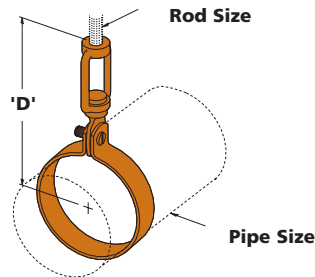
Ordering: Specify part number and finish.
B3225 Series for 3/8"-16 hanger rod
B3226 Series for 1/2"-13 hanger rod

Approvals: Complies with Manufacturers Standardization Society MSS SP-69 & SP-58 Type 11.

Figure B3225 & B3226 Government Type Hanger

B3225 Series		B3226 Series		Pipe Size		'D'		Design Load		Wt./C	
Part No.	Rod Size	Part No.	Rod Size					Lbs.	kN	Lbs.	kg
B3225-1/2	3/8"-16	B3226-1/2	1/2"-13	1/2"	(15)	4 ¹⁵ / ₁₆ "	(125.4)	275	(1.22)	36	(16.3)
B3225-3/4	3/8"-16	B3226-3/4	1/2"-13	3/4"	(20)	5 ¹ / ₁₆ "	(128.6)	275	(1.22)	36	(16.3)
B3225-1	3/8"-16	B3226-1	1/2"-13	1"	(25)	5 ³ / ₁₆ "	(131.7)	275	(1.22)	36	(16.3)
B3225-1 1/4	3/8"-16	B3226-1 1/4	1/2"-13	1 1/4"	(32)	5 ³ / ₈ "	(136.5)	275	(1.22)	38	(17.2)
B3225-1 1/2	3/8"-16	B3226-1 1/2	1/2"-13	1 1/2"	(40)	5 ¹ / ₂ "	(139.7)	275	(1.22)	39	(17.7)
B3225-2	3/8"-16	B3226-2	1/2"-13	2"	(50)	5 ¹¹ / ₁₆ "	(144.4)	275	(1.22)	39	(17.7)
B3225-2 1/2	3/8"-16	B3226-2 1/2	1/2"-13	2 1/2"	(65)	6 ³ / ₁₆ "	(157.1)	500	(2.22)	40	(18.1)
B3225-3	3/8"-16	B3226-3	1/2"-13	3"	(80)	6 ¹ / ₂ "	(165.1)	500	(2.22)	42	(19.0)
B3225-3 1/2	3/8"-16	B3226-3 1/2	1/2"-13	3 1/2"	(90)	6 ³ / ₄ "	(171.4)	500	(2.22)	44	(19.9)
B3225-4	3/8"-16	B3226-4	1/2"-13	4"	(100)	7"	(177.8)	500	(2.22)	46	(20.8)

Pipe Hangers



Design Load:
200 Lbs. (.89 kN)

Material: Steel Ring & Bolt
Malleable Iron Hanger Adjuster

Standard Finish: Adjuster - Dura-Copper®
Ring - Copper Plated (for identification only)

Service: Designed to support tubing and allow vertical rod adjustment.

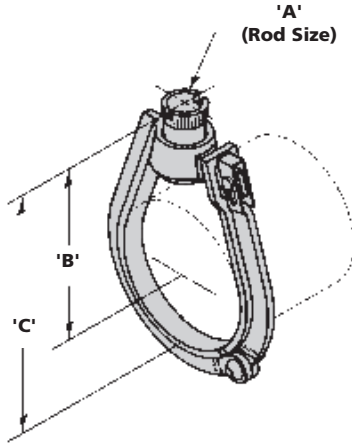
Ordering: Specify part number and finish.
B3225CT Series for 3/8"-16 hanger rod
B3226CT Series for 1/2"-13 hanger rod

Approvals: Complies with Manufacturers Standardization Society MSS SP-69 & SP-58 Type 11.

Figure B3225CT & B3226CT Government Type Hanger

B3225 Series		B3226 Series		Tubing Size		'D'		Wt./C	
Part No.	Rod Size	Part No.	Rod Size					Lbs.	kg
B3225CT-1/2	3/8"-16	B3226CT-1/2	1/2"-13	1/2"	(15)	5 ³ / ₁₆ "	(131.7)	36	(16.3)
B3225CT-3/4	3/8"-16	B3226CT-3/4	1/2"-13	3/4"	(20)	5 ¹ / ₄ "	(133.3)	36	(16.3)
B3225CT-1	3/8"-16	B3226CT-1	1/2"-13	1"	(25)	5 ¹ / ₁₆ "	(128.6)	36	(16.3)
B3225CT-1 1/4	3/8"-16	B3226CT-1 1/4	1/2"-13	1 1/4"	(32)	5 ³ / ₁₆ "	(131.7)	38	(17.2)
B3225CT-1 1/2	3/8"-16	B3226CT-1 1/2	1/2"-13	1 1/2"	(40)	5 ³ / ₈ "	(136.5)	39	(17.7)
B3225CT-2	3/8"-16	B3226CT-2	1/2"-13	2"	(50)	5 ¹³ / ₁₆ "	(147.6)	39	(17.7)
B3225CT-2 1/2	3/8"-16	B3226CT-2 1/2	1/2"-13	2 1/2"	(65)	6 ¹ / ₁₆ "	(154.0)	40	(18.1)
B3225CT-3	3/8"-16	B3226CT-3	1/2"-13	3"	(80)	6 ⁹ / ₁₆ "	(166.7)	42	(19.0)
B3225CT-3 1/2	3/8"-16	B3226CT-3 1/2	1/2"-13	3 1/2"	(90)	6 ¹³ / ₁₆ "	(173.0)	44	(19.9)
B3225CT-4	3/8"-16	B3226CT-4	1/2"-13	4"	(100)	7 ¹ / ₁₆ "	(179.4)	46	(20.8)

Pipe Hangers



Material: Malleable Iron

Standard Finish: Plain or Electro-Plated

Service: Hanger may be installed prior to hoisting pipe in place.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 6 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 6.

Ordering: Specify part number and finish.

Note:

Hanger sizes $\frac{3}{4}$ " (20) thru 2" (50) swivel nut is flared as shown in drawing.

Hanger sizes 2 $\frac{1}{2}$ " (65) thru 6" (150) swivel nut has wire retaining ring.

Figure B3171 Adjustable Swivel Ring

Part No.	Nominal Pipe Size		Rod Size 'A'	'B'		'C'	
B3171- $\frac{3}{4}$	$\frac{3}{4}$ "	(20)	$\frac{3}{8}$ "-16	2 $\frac{1}{8}$ "	(54.0)	2 $\frac{5}{8}$ "	(66.7)
B3171-1	1"	(25)	$\frac{3}{8}$ "-16	2 $\frac{5}{16}$ "	(58.7)	3"	(76.2)
B3171-1 $\frac{1}{4}$	1 $\frac{1}{4}$ "	(32)	$\frac{3}{8}$ "-16	2 $\frac{9}{16}$ "	(65.1)	3 $\frac{3}{8}$ "	(85.7)
B3171-1 $\frac{1}{2}$	1 $\frac{1}{2}$ "	(40)	$\frac{3}{8}$ "-16	2 $\frac{3}{4}$ "	(69.8)	3 $\frac{3}{4}$ "	(95.2)
B3171-2	2"	(50)	$\frac{3}{8}$ "-16	3 $\frac{1}{16}$ "	(77.8)	4 $\frac{1}{4}$ "	(107.9)
B3171-2 $\frac{1}{2}$	2 $\frac{1}{2}$ "	(65)	$\frac{1}{2}$ "-13	4 $\frac{5}{16}$ "	(109.5)	5 $\frac{3}{4}$ "	(146.0)
B3171-3	3"	(80)	$\frac{1}{2}$ "-13	4 $\frac{5}{8}$ "	(117.5)	6 $\frac{3}{8}$ "	(161.9)
B3171-4	4"	(100)	$\frac{5}{8}$ "-11	6"	(152.4)	8 $\frac{1}{4}$ "	(209.5)
B3171-5	5"	(125)	$\frac{5}{8}$ "-11	6 $\frac{3}{4}$ "	(171.4)	9 $\frac{1}{2}$ "	(241.3)
B3171-6	6"	(150)	$\frac{3}{4}$ "-10	7 $\frac{11}{16}$ "	(195.3)	11"	(279.4)

Part No.	Nominal Pipe Size		Design Load Lbs.		Wt./C kg	
B3171- $\frac{3}{4}$	$\frac{3}{4}$ "	(20)	300	(1.33)	23	(10.4)
B3171-1	1"	(25)	300	(1.33)	25	(11.3)
B3171-1 $\frac{1}{4}$	1 $\frac{1}{4}$ "	(32)	300	(1.33)	30	(13.6)
B3171-1 $\frac{1}{2}$	1 $\frac{1}{2}$ "	(40)	300	(1.33)	32	(14.5)
B3171-2	2"	(50)	300	(1.33)	34	(15.4)
B3171-2 $\frac{1}{2}$	2 $\frac{1}{2}$ "	(65)	500	(2.22)	65	(29.5)
B3171-3	3"	(80)	500	(2.22)	78	(35.4)
B3171-4	4"	(100)	900	(4.00)	154	(69.8)
B3171-5	5"	(125)	900	(4.00)	200	(90.7)
B3171-6	6"	(150)	1300	(5.78)	320	(145.1)

Pipe Hangers

Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for supporting non-insulated stationary pipe, allowing vertical adjustment and flexibility for seismic bracing.

Ordering: Specify part number and finish.

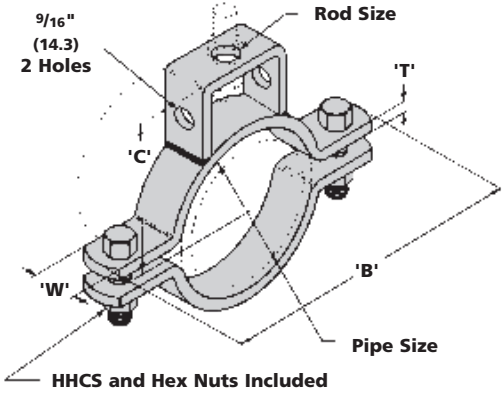
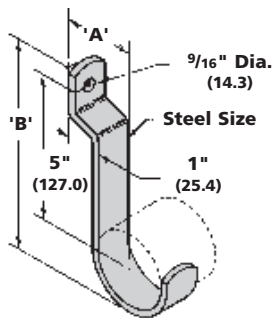


Figure B386 Suspension Rod Pipe Clamp

Part No.	Pipe Size		Rod Size	'B'		'C'	
B386- ³ / ₄	³ / ₄ "	(20)	³ / ₈ "-16	³ / ₅ ⁵ / ₁₆ "	(84.1)	² / ₃ ³ / ₁₆ "	(55.6)
B386-1	1"	(25)	³ / ₈ "-16	³ / ₃ ³ / ₄ "	(95.2)	² / ₅ ⁵ / ₁₆ "	(58.7)
B386-1 ¹ / ₄	1 ¹ / ₄ "	(32)	³ / ₈ "-16	4"	(101.6)	² / ₁₇ ¹⁷ / ₃₂ "	(64.3)
B386-1 ¹ / ₂	1 ¹ / ₂ "	(40)	³ / ₈ "-16	⁴ / ₅ ⁵ / ₁₆ "	(109.6)	² / ₁₁ ¹¹ / ₁₆ "	(68.3)
B386-2	2"	(50)	³ / ₈ "-16	⁵ / ₁ ¹ / ₂ "	(139.7)	³ / ₅ ⁵ / ₁₆ "	(84.1)
B386-2 ¹ / ₂	2 ¹ / ₂ "	(65)	¹ / ₂ "-13	⁶ / ₃ ³ / ₈ "	(161.9)	³ / ₁ ¹ / ₂ "	(88.9)
B386-3	3"	(80)	¹ / ₂ "-13	7"	(177.8)	³ / ₇ ⁷ / ₈ "	(98.4)
B386-3 ¹ / ₂	3 ¹ / ₂ "	(90)	¹ / ₂ "-13	⁷ / ₉ ⁹ / ₁₆ "	(192.1)	⁴ / ₁ ¹ / ₈ "	(104.8)
B386-4	4"	(100)	¹ / ₂ "-13	⁸ / ₅ ⁵ / ₈ "	(219.1)	⁴ / ₃ ³ / ₈ "	(111.1)
B386-5	5"	(125)	⁵ / ₈ "-11	⁹ / ₃ ³ / ₄ "	(247.6)	⁵ / ₃ ³ / ₁₆ "	(131.8)
B386-6	6"	(150)	⁵ / ₈ "-11	¹¹ / ₅ ⁵ / ₈ "	(295.3)	⁶ / ₁ ¹ / ₁₆ "	(154.0)
B386-8	8"	(200)	³ / ₄ "-10	¹³ / ₇ ⁷ / ₈ "	(352.4)	⁷ / ₁ ¹ / ₈ "	(181.0)

Part No.	Pipe Size		'T'		'W'		Design Load		Wt./C	
							Lbs.	kN	Lbs.	kg
B386- ³ / ₄	³ / ₄ "	(20)	¹ / ₈ "	(3.2)	1"	(25.4)	730	(3.25)	46	(20.8)
B386-1	1"	(25)	¹ / ₈ "	(3.2)	1"	(25.4)	730	(3.25)	51	(23.1)
B386-1 ¹ / ₄	1 ¹ / ₄ "	(32)	¹ / ₈ "	(3.2)	1"	(25.4)	730	(3.25)	52	(23.6)
B386-1 ¹ / ₂	1 ¹ / ₂ "	(40)	¹ / ₈ "	(3.2)	1"	(25.4)	730	(3.25)	54	(24.5)
B386-2	2"	(50)	¹ / ₄ "	(6.3)	1"	(25.4)	730	(3.25)	134	(60.8)
B386-2 ¹ / ₂	2 ¹ / ₂ "	(65)	¹ / ₄ "	(6.3)	1"	(25.4)	1350	(6.00)	157	(71.2)
B386-3	3"	(80)	¹ / ₄ "	(6.3)	1"	(25.4)	1350	(6.00)	168	(76.2)
B386-3 ¹ / ₂	3 ¹ / ₂ "	(90)	¹ / ₄ "	(6.3)	1"	(25.4)	1350	(6.00)	197	(89.3)
B386-4	4"	(100)	¹ / ₄ "	(6.3)	1 ¹ / ₄ "	(31.7)	1350	(6.00)	270	(122.4)
B386-5	5"	(125)	¹ / ₄ "	(6.3)	1 ¹ / ₄ "	(31.7)	2160	(9.61)	308	(139.7)
B386-6	6"	(150)	³ / ₈ "	(9.5)	1 ¹ / ₂ "	(38.1)	2160	(9.61)	609	(276.2)
B386-8	8"	(200)	³ / ₈ "	(9.5)	1 ¹ / ₂ "	(38.1)	3230	(14.37)	713	(323.4)

Pipe Hangers



Material: Steel (Stainless steel available)

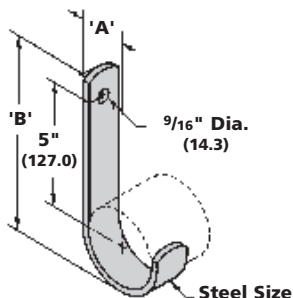
Standard Finish: Plain or Electro-Plated

Service: Designed for supporting light pipe runs with a 1" (25.4) offset from mounting surfaces.

Ordering: Specify part number and finish.

Figure B3190 Offset J-Hook

Part No.	Nominal Pipe Size		'A'		'B'		Steel Size		Design Load		Wt./C	
									Lbs.	kN	Lbs.	kg
B3190-1/2	1/2"	(15)	1 ¹⁵ / ₃₂ "	(37.3)	6 ²⁵ / ₃₂ "	(172.2)	3/16" x 1 ¹ / ₄ "	(4.8 x 31.7)	200	(.89)	56	(25.4)
B3190-3/4	3/4"	(20)	1 ⁹ / ₁₆ "	(39.7)	6 ⁷ / ₈ "	(174.6)	3/16" x 1 ¹ / ₄ "	(4.8 x 31.7)	200	(.89)	59	(26.7)
B3190-1	1"	(25)	1 ¹¹ / ₁₆ "	(42.9)	7 ¹ / ₁₆ "	(179.4)	1/4" x 1 ¹ / ₄ "	(6.3 x 31.7)	200	(.89)	81	(36.7)
B3190-1 ¹ / ₄	1 ¹ / ₄ "	(32)	1 ⁷ / ₈ "	(47.6)	7 ¹ / ₄ "	(184.1)	1/4" x 1 ¹ / ₄ "	(6.3 x 31.7)	200	(.89)	86	(39.0)
B3190-1 ¹ / ₂	1 ¹ / ₂ "	(40)	1 ³¹ / ₃₂ "	(50.0)	7 ¹¹ / ₃₂ "	(186.5)	1/4" x 1 ¹ / ₄ "	(6.3 x 31.7)	200	(.89)	89	(40.4)
B3190-2	2"	(50)	2 ⁷ / ₃₂ "	(56.3)	7 ¹⁹ / ₃₂ "	(192.9)	1/4" x 1 ¹ / ₄ "	(6.3 x 31.7)	200	(.89)	96	(43.5)
B3190-2 ¹ / ₂	2 ¹ / ₂ "	(65)	2 ¹⁵ / ₃₂ "	(62.7)	7 ²⁷ / ₃₂ "	(199.2)	1/4" x 1 ¹ / ₂ "	(6.3 x 38.1)	350	(1.55)	125	(56.7)
B3190-3	3"	(80)	2 ²⁵ / ₃₂ "	(70.6)	8 ⁵ / ₃₂ "	(207.1)	1/4" x 1 ¹ / ₂ "	(6.3 x 38.1)	350	(1.55)	134	(60.8)
B3190-4	4"	(100)	3 ⁹ / ₃₂ "	(83.3)	8 ²⁵ / ₃₂ "	(223.0)	3/8" x 1 ¹ / ₂ "	(9.5 x 38.1)	450	(2.00)	226	(102.5)



Material: Steel (Stainless steel available)

Standard Finish: Plain or Electro-Plated

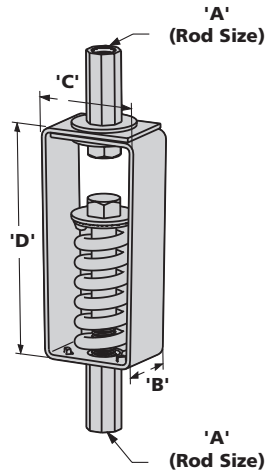
Service: Designed for supporting light pipe runs which require no clearance between mounting surfaces.

Ordering: Specify part number, size and finish.

Figure B3191 Straight J-Hook

Part No.	Nominal Pipe Size		'A'		'B'		Steel Size		Design Load		Wt./C	
									Lbs.	kN	Lbs.	kg
B3191-1/2	1/2"	(15)	2 ¹ / ₃₂ "	(16.6)	6 ²⁵ / ₃₂ "	(172.2)	3/16" x 1 ¹ / ₄ "	(4.8 x 31.7)	200	(.89)	54	(24.5)
B3191-3/4	3/4"	(20)	3/4"	(19.0)	6 ⁷ / ₈ "	(174.6)	3/16" x 1 ¹ / ₄ "	(4.8 x 31.7)	200	(.89)	56	(25.4)
B3191-1	1"	(25)	1 ⁵ / ₁₆ "	(23.8)	7 ¹ / ₁₆ "	(179.4)	1/4" x 1 ¹ / ₄ "	(4.8 x 31.7)	200	(.89)	78	(35.4)
B3191-1 ¹ / ₄	1 ¹ / ₄ "	(32)	1 ¹ / ₈ "	(28.6)	7 ¹ / ₄ "	(184.1)	1/4" x 1 ¹ / ₄ "	(6.3 x 31.7)	200	(.89)	84	(38.1)
B3191-1 ¹ / ₂	1 ¹ / ₂ "	(40)	1 ⁷ / ₃₂ "	(30.9)	7 ¹¹ / ₃₂ "	(186.5)	1/4" x 1 ¹ / ₄ "	(6.3 x 31.7)	200	(.89)	86	(39.0)
B3191-2	2"	(50)	1 ¹⁵ / ₃₂ "	(37.3)	7 ¹⁹ / ₃₂ "	(192.9)	1/4" x 1 ¹ / ₄ "	(6.3 x 31.7)	200	(.89)	93	(42.2)
B3191-2 ¹ / ₂	2 ¹ / ₂ "	(65)	1 ²³ / ₃₂ "	(43.6)	7 ²⁷ / ₃₂ "	(199.2)	1/4" x 1 ¹ / ₂ "	(6.3 x 38.1)	350	(1.55)	120	(54.4)
B3191-3	3"	(80)	2 ¹ / ₃₂ "	(51.6)	8 ³ / ₈ "	(212.7)	1/4" x 1 ¹ / ₂ "	(6.3 x 38.1)	350	(1.55)	134	(60.8)
B3191-4	4"	(100)	2 ²¹ / ₃₂ "	(67.4)	8 ²⁵ / ₃₂ "	(223.0)	3/8" x 1 ¹ / ₂ "	(9.5 x 38.1)	450	(2.00)	223	(101.1)

Pipe Hangers



Material: Steel

Service: Designed for use with a light piping system where vertical movement does not exceed 1¹/₄" (31.7).

Ordering: Specify part number and finish.

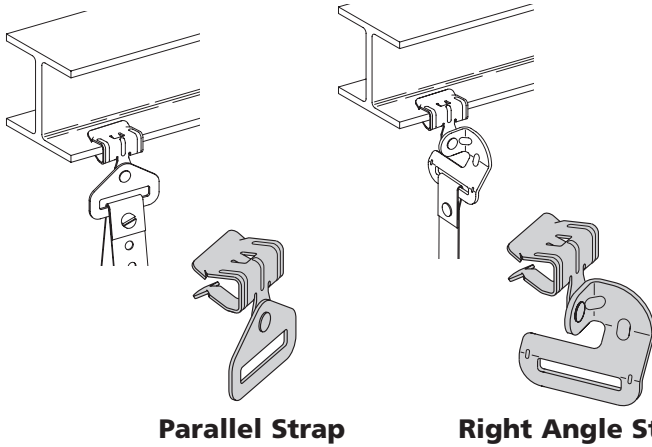
Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 49 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 48.

Figure B3262 Light Duty Spring Hanger

Part No.	Rod Size 'A'	Spring Color	'B'		'C'		'D'	
B3262- ³ / ₈	³ / ₈ "-16	Brown	2"	(50.8)	2 ³ / ₄ "	(69.8)	4 ¹ / ₂ "	(114.3)
B3262- ¹ / ₂	¹ / ₂ "-13	Black	2"	(50.8)	2 ³ / ₄ "	(69.8)	4 ¹ / ₂ "	(114.3)
B3262- ⁵ / ₈	⁵ / ₈ "-11	Red	2"	(50.8)	2 ³ / ₄ "	(69.8)	4 ¹ / ₂ "	(114.3)
B3262- ³ / ₄	³ / ₄ "-10	Orange	2"	(50.8)	3"	(76.2)	7"	(177.8)

Part No.	Spring Deflection		Rated Load		Wt./C	
	In	mm	Lbs.	kN	Lbs.	kg
B3262- ³ / ₈	1.20	(30.1)	100-150	(.44 - .67)	390	(176.2)
B3262- ¹ / ₂	1.10	(27.7)	150-250	(.67 - 1.11)	410	(186.0)
B3262- ⁵ / ₈	1.00	(25.4)	350-450	(1.56 - 2.00)	470	(213.2)
B3262- ³ / ₄	1.20	(30.1)	600-750	(2.67 - 3.34)	1240	(562.6)

Pipe Hangers



Material: Steel

Standard Finish: Zinc Phosphate

Service: The Parallel Strap Hanger series is designed for suspending up to 1" (50.8) wide straps parallel to beams.

The Right Angle Strap Hanger series is designed for suspending up to 1" (50.8) wide straps at right angle to the beam.

Note: Install clip to beam with hammer.

Ordering: Specify part number and finish.

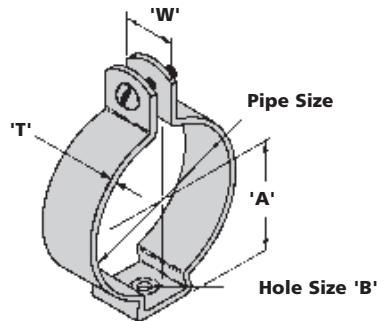
Parallel Strap

Right Angle Strap

Figure BH-2-4, BH-5-8, BH-9-12 Parallel Strap Hangers
Figure BH-2-4-R, BH-5-8-R, BH-9-12-R Right Angle Strap Hangers

Part No.		Flange Thickness	Maximum Load	Wt./C					
Parallel	Right Angle			Lbs.	kN	BH-2-12		BH-2-12R	
				Lbs.	kg	Lbs.	kg	Lbs.	kg
BH-2-4	BH-2-4-R	1/8" to 1/8"	(3.2 to 6.3)	200	(.89)	4.5	(2.0)	6.0	(2.7)
BH-5-8	BH-5-8-R	5/16" to 1/2"	(7.9 to 12.7)	200	(.89)	5.0	(2.3)	6.5	(2.9)
BH-9-12	BH-9-12-R	9/16" to 3/4"	(14.3 to 19.0)	200	(.89)	5.5	(2.5)	7.0	(3.2)

Design Load is a static straight down load.



Material: Steel

Standard Finish: Electro-Plated

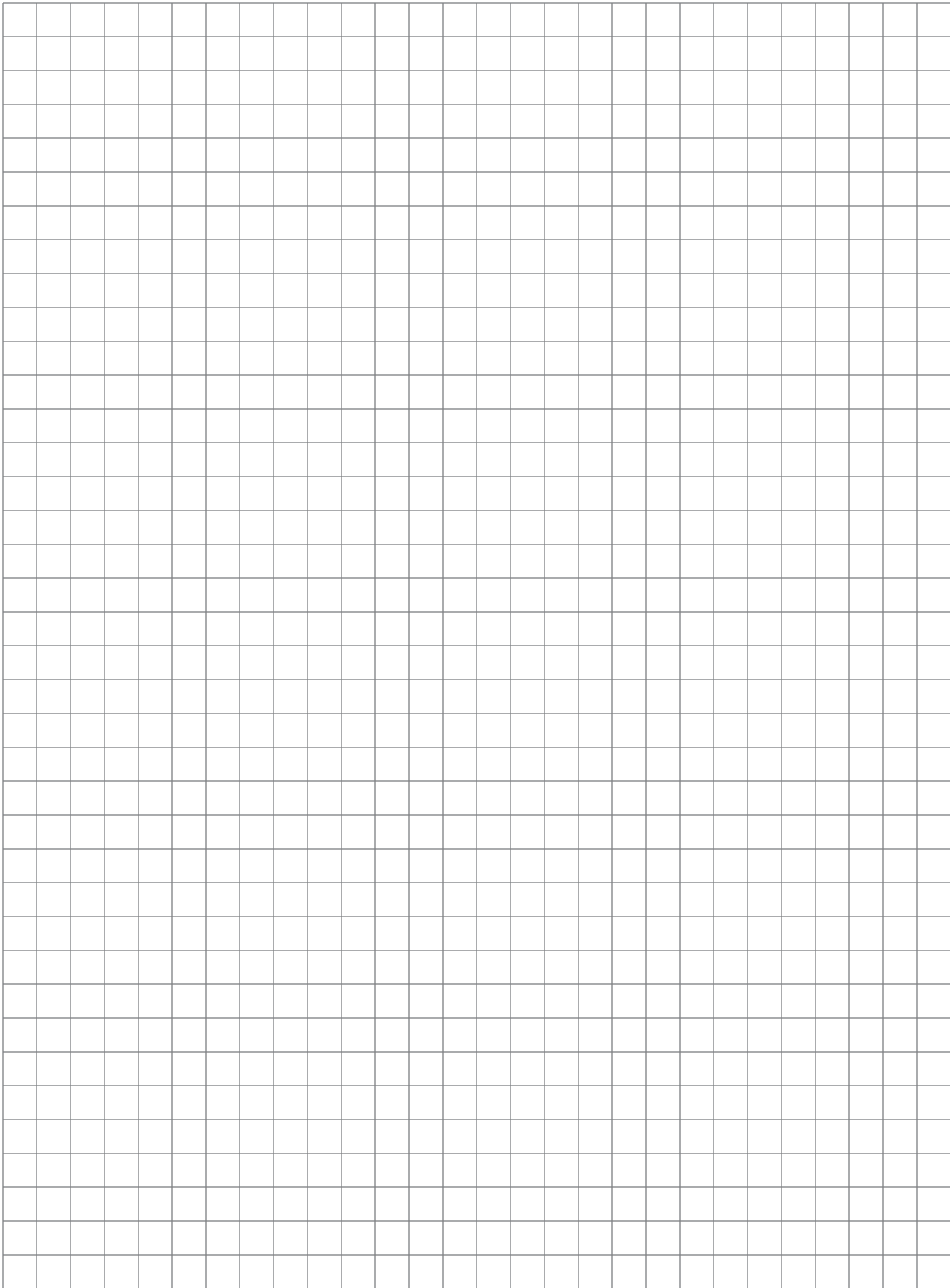
Service: Designed to support or suspend light duty stationary pipe runs.

Ordering: Specify part number.

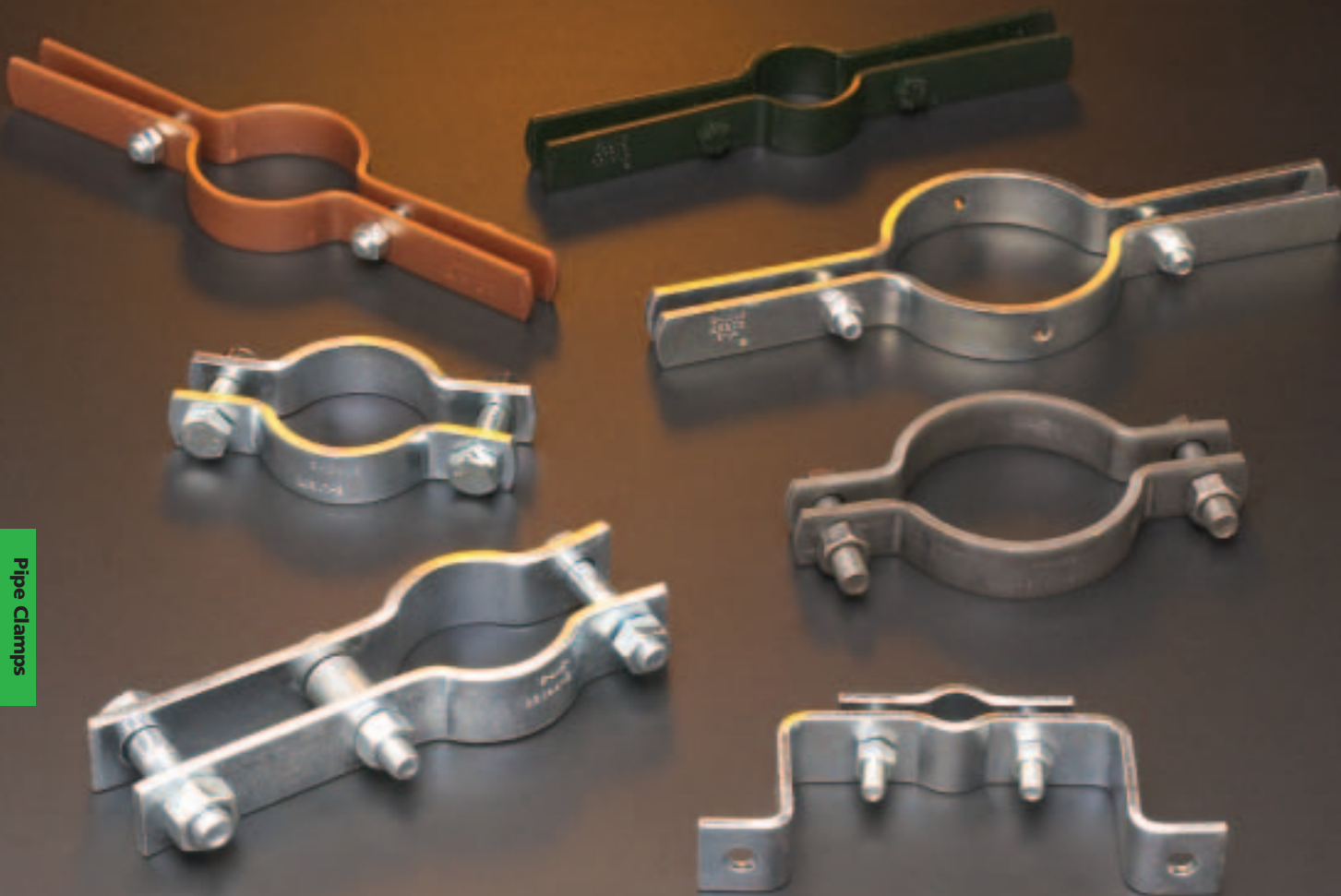
Figure BL1400 Hanger

Part No.	Pipe Size	'A'		'B'		'T'		'W'		Wt./C	
										Lbs.	kg
BL1400	1/2" (15)	29/32"	(23.0)	9/32"	(7.1)	16 Ga.	(1.5)	3/4"	(19.0)	6	(2.7)
BL1410	3/4" (20)	31/32"	(24.6)	9/32"	(7.1)	16 Ga.	(1.5)	3/4"	(19.0)	7	(3.2)
BL1420	1" (25)	1 1/4"	(31.7)	9/32"	(7.1)	16 Ga.	(1.5)	3/4"	(19.0)	8	(3.6)
BL1430	1 1/4" (32)	1 13/32"	(35.7)	9/32"	(7.1)	18 Ga.	(1.5)	7/8"	(22.2)	10	(4.5)
BL1440	1 1/2" (40)	5 5/8"	(41.3)	1 1/32"	(8.7)	16 Ga.	(1.5)	1"	(25.4)	17	(7.7)
BL1450	2" (50)	1 7/8"	(47.6)	1 1/32"	(8.7)	16 Ga.	(1.5)	1 1/4"	(31.7)	25	(11.3)
BL1460	2 1/2" (65)	2 1/16"	(52.4)	1 1/32"	(8.7)	16 Ga.	(1.5)	1 1/4"	(31.7)	26	(11.8)
BL1470	3" (80)	2 1/2"	(63.5)	1 1/32"	(8.7)	16 Ga.	(1.5)	1 1/4"	(31.7)	33	(14.9)
BL1480	3 1/2" (90)	2 3/4"	(69.8)	1 1/32"	(8.7)	16 Ga.	(1.5)	1 1/4"	(31.7)	36	(16.3)
BL1490	4" (100)	3 1/2"	(88.9)	1 1/32"	(8.7)	16 Ga.	(1.5)	1 1/4"	(31.7)	40	(18.1)

Designed for positioning only, no load rating.



Pipe Clamps



Pipe Clamps

Pipe clamps offered in this section are designed for support and attachment of pipe to structural members. A wide range of pipe clamps are available for various applications.

Materials

Carbon Steel is used in the manufacturing of riser and pipe clamps. Stainless Steel and other materials are available.

Finishes

The standard finishes for mechanical supports are plain steel (oil coated) sometimes referred to as black and Electro-Plated Zinc (ASTM B 633 SC3). Hot-Dip Galvanized After Fabrication (ASTM A 123), Red Primer, Plastic Coating, Dura-Green® and other special coatings are available upon request.

Note: Due to the design of some products, (threads, connecting hardware, swivels, etc.) items may or may not be uniformly coated with special finishes. In some cases, the hanger itself may be coated, however, the hardware may be supplied Electro-Plated, Copper Plated, or in Stainless Steel.

Recommended Torque (Pipe Clamp Hardware)

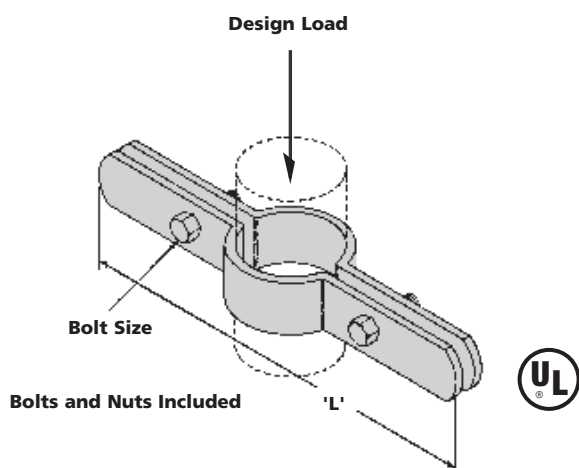
1/4"-20	5/16"-18	3/8"-16	1/2"-13	5/8"-11	3/4"-10 & larger
6 ft/lbs (8 Nm)	11 ft/lbs (19 Nm)	19 ft/lbs (26 Nm)	50 ft/lbs (68 Nm)	65 ft/lbs (88 Nm)	75 ft/lbs (101 Nm)

Approvals (as noted)

Items in this section are Underwriters' Laboratories Listed, comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society MSS SP-69 & SP-58.

All pipe hangers and supports in this section are sized to fit schedule 40/80 pipe unless otherwise noted. Some steel items may be specially fabricated to fit other pipe diameters i.e. ductile iron, cast iron, etc. Select pipe O.D. from charts on pages 201 thru 206.

Pipe Clamps



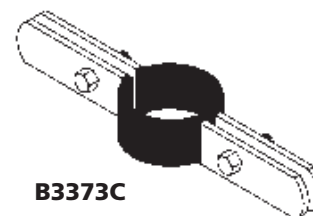
Material: Steel (Stainless steel available)

Standard Finish: Plain, Electro-Plated, Dura-Green® or Hot-Dip Galvanized

Service: Designed for supporting and stabilizing vertical pipe runs. Clamp is fitted for steel pipe and preferably installed below a coupling or shear lugs. Torque bolts to values given on page 64.

Ordering: Specify part number and finish.

Approvals: Underwriters' Laboratories Listed for B3373-3/4" thru B3373-8". Complies with Federal Specification WW-H-171E & A-A-1192A Type 8 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 8.

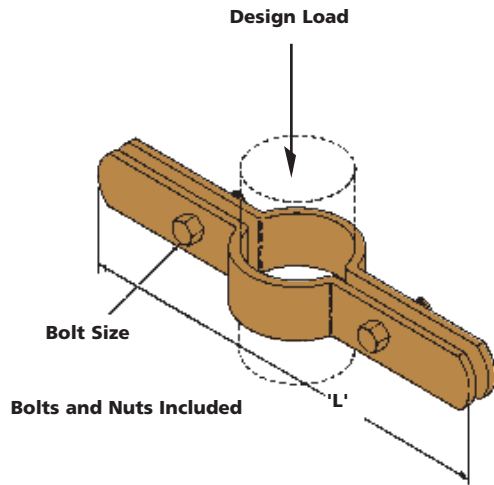


B3373C

Figure B3373 Standard Riser Clamp
(Available with plastic coating as B3373C-size)

Part No.	Nominal Pipe Size		'L'		Bolt Size	Design Load		Wt./C	
		(mm)		(mm)		Lbs.	kN	Lbs.	kg
B3373-1/2	1/2"	(15)	9"	(228.6)	3/8"-16 x 1 1/4"	255	(1.13)	101	(45.9)
B3373-3/4	3/4"	(20)	9 1/4"	(234.9)	3/8"-16 x 1 1/4"	255	(1.13)	105	(47.7)
B3373-1	1"	(25)	9 9/16"	(242.9)	3/8"-16 x 1 1/4"	255	(1.13)	109	(49.4)
B3373-1 1/4	1 1/4"	(32)	10"	(254.0)	3/8"-16 x 1 1/4"	255	(1.13)	112	(50.9)
B3373-1 1/2	1 1/2"	(40)	10 1/4"	(260.3)	3/8"-16 x 1 1/2"	255	(1.13)	113	(51.1)
B3373-2	2"	(50)	10 3/4"	(273.0)	3/8"-16 x 1 1/2"	255	(1.13)	165	(75.0)
B3373-2 1/2	2 1/2"	(65)	11 1/4"	(285.7)	3/8"-16 x 1 1/2"	390	(1.73)	180	(81.6)
B3373-3	3"	(80)	11 15/16"	(303.2)	3/8"-16 x 1 1/2"	530	(2.35)	195	(88.4)
B3373-3 1/2	3 1/2"	(90)	12 3/8"	(314.3)	1/2"-13 x 1 3/4"	670	(2.98)	217	(98.5)
B3373-4	4"	(100)	12 7/8"	(327.0)	1/2"-13 x 1 3/4"	810	(3.60)	228	(103.5)
B3373-5	5"	(125)	14"	(355.6)	1/2"-13 x 1 3/4"	1160	(5.16)	480	(217.7)
B3373-6	6"	(150)	15 3/16"	(385.8)	1/2"-13 x 2"	1570	(6.98)	526	(238.6)
B3373-8	8"	(200)	17 3/4"	(450.8)	5/8"-11 x 2 1/2"	2500	(11.12)	957	(434.1)
B3373-10	10"	(250)	19 7/16"	(493.7)	5/8"-11 x 2 1/2"	2500	(11.12)	1101	(499.4)
B3373-12	12"	(300)	21 11/16"	(550.9)	5/8"-11 x 3"	2700	(12.01)	1622	(735.7)
B3373-14	14"	(350)	23 9/16"	(598.5)	5/8"-11 x 3"	2700	(12.01)	1732	(785.6)
B3373-16	16"	(400)	26 3/8"	(669.9)	3/4"-10 x 3 1/4"	2900	(12.90)	2959	(1342.2)
B3373-18	18"	(450)	28 7/8"	(733.4)	3/4"-10 x 3 1/4"	2900	(12.90)	3235	(1467.4)
B3373-20	20"	(500)	30 7/8"	(784.2)	3/4"-10 x 3 1/2"	2900	(12.90)	3568	(1618.4)
B3373-24	24"	(600)	34 7/8"	(885.8)	3/4"-10 x 3 1/2"	2900	(12.90)	4064	(1843.3)
B3373-30	30"	(750)	40 3/4"	(1035.0)	7/8"-9 x 3 1/2"	2900	(12.90)	6016	(2728.8)

Pipe Clamps



B3373CT

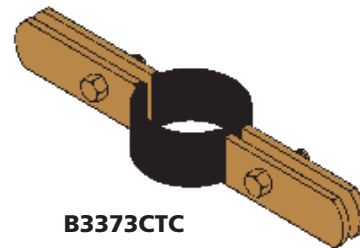
Material: Steel

Standard Finish: Dura-Copper®

Service: Designed to support and stabilize vertical runs of copper tubing. (Available with plastic coating to provide additional separation between tubing and hanger).
Torque bolts to values given on page 64.

Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 8 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 8.



B3373CTC

Figure B3373CT Riser Clamp
(Available with plastic coating as B3373CTC-size)

Part No.	Nominal Tubing Size		'L'		Bolt Size	Design Load		Wt./C	
	Inches	mm	Inches	mm		Lbs.	kN	Lbs.	kg
B3373CT-1/2	1/2"	(15)	8 ³ / ₄ "	(222.2)	5/16"-18 x 1"	75	(.33)	72	(32.6)
B3373CT-3/4	3/4"	(20)	9 ¹ / ₁₆ "	(234.9)	5/16"-18 x 1"	75	(.33)	73	(33.2)
B3373CT-1	1"	(25)	9 ⁵ / ₁₆ "	(236.5)	3/8"-16 x 1"	120	(.53)	74	(33.6)
B3373CT-1 ¹ / ₄	1 ¹ / ₄ "	(32)	9 ⁵ / ₈ "	(244.5)	3/8"-16 x 1"	150	(.67)	77	(34.8)
B3373CT-1 ¹ / ₂	1 ¹ / ₂ "	(40)	9 ³ / ₄ "	(247.6)	3/8"-16 x 1 ¹ / ₄ "	150	(.67)	111	(50.3)
B3373CT-2	2"	(50)	10 ⁷ / ₁₆ "	(265.1)	3/8"-16 x 1 ¹ / ₄ "	150	(.67)	120	(54.5)
B3373CT-2 ¹ / ₂	2 ¹ / ₂ "	(65)	10 ¹⁵ / ₁₆ "	(277.8)	3/8"-16 x 1 ¹ / ₄ "	300	(1.33)	128	(58.1)
B3373CT-3	3"	(80)	11 ⁷ / ₁₆ "	(290.5)	3/8"-16 x 1 ¹ / ₄ "	300	(1.33)	136	(61.5)
B3373CT-3 ¹ / ₂	3 ¹ / ₂ "	(90)	11 ¹⁵ / ₁₆ "	(303.2)	3/8"-16 x 1 ¹ / ₄ "	300	(1.33)	145	(65.7)
B3373CT-4	4"	(100)	12 ¹ / ₂ "	(317.5)	1/2"-13 x 1 ³ / ₄ "	300	(1.33)	170	(77.3)
B3373CT-5	5"	(125)	13 ⁵ / ₈ "	(346.1)	1/2"-13 x 2"	500	(2.22)	355	(161.0)
B3373CT-6	6"	(150)	14 ⁵ / ₈ "	(371.5)	1/2"-13 x 2"	500	(2.22)	386	(175.1)

Pipe Clamps

Material: Steel

Standard Finish: Plain or Electro-Plated
(Hot-Dip Galvanized available)

Service: Designed to prevent separation of caulked joints on AWWA ductile iron water pipes.

Ordering: Specify part number and finish.
(Order B3132W Lug Washers, Tie Rods, and Hex Nuts separately).

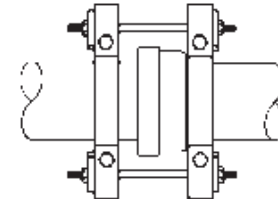
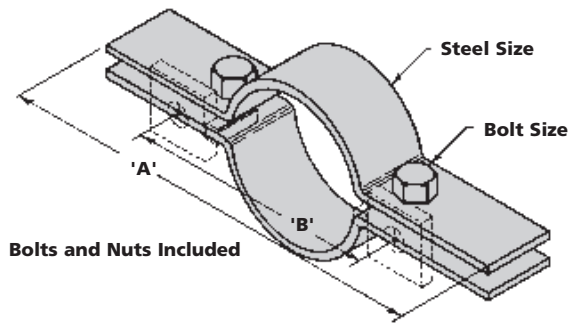
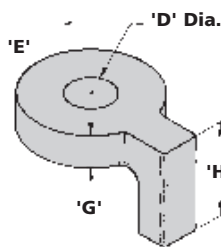


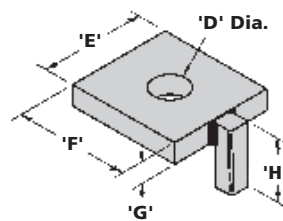
Figure B3132 Two-Bolt Underground Clamp

Part No.	Nominal Pipe Size		'A'		'B'		Clamp 'I.D.'		Steel Size		Bolt Size		Wt./C	
												Lbs.	kg	
B3132-4	4"	(100)	12 ⁷ / ₈ "	(327.0)	9 ³ / ₄ "	(247.6)	5"	(127.0)	1 ¹ / ₂ " x 2"	(12.7 x 50.8)	5 ⁵ / ₈ "-11 x 3"	864	(391.9)	
B3132-6	6"	(150)	14 ³ / ₄ "	(374.6)	12"	(304.8)	7 ¹ / ₁₆ "	(179.4)	1 ¹ / ₂ " x 2"	(12.7 x 50.8)	5 ⁵ / ₈ "-11 x 3"	1020	(462.6)	
B3132-8	8"	(200)	17 ¹ / ₄ "	(438.1)	14 ¹ / ₄ "	(361.9)	9 ³ / ₁₆ "	(233.4)	1 ¹ / ₂ " x 2"	(12.7 x 50.8)	5 ⁵ / ₈ "-11 x 3"	1222	(554.3)	
B3132-10	10"	(250)	19 ³ / ₈ "	(492.1)	16 ¹ / ₂ "	(419.1)	11 ³ / ₈ "	(288.9)	1 ¹ / ₂ " x 2"	(12.7 x 50.8)	5 ⁵ / ₈ "-11 x 3"	1409	(639.1)	
B3132-12	12"	(300)	21 ⁷ / ₈ "	(555.6)	18 ⁷ / ₈ "	(479.4)	13 ¹ / ₂ "	(342.9)	1 ¹ / ₂ " x 2"	(12.7 x 50.8)	5 ⁵ / ₈ "-11 x 3"	1608	(729.4)	
B3132-14	14"	(350)	26"	(660.4)	22 ¹ / ₄ "	(565.1)	15 ³ / ₄ "	(400.0)	3 ³ / ₄ " x 3"	(19.0 x 76.2)	7 ⁷ / ₈ "-9 x 4 ¹ / ₂ "	4359	(1977.2)	
B3132-16	16"	(400)	28 ³ / ₈ "	(720.7)	24 ⁵ / ₈ "	(625.5)	17 ⁷ / ₈ "	(454.0)	3 ³ / ₄ " x 4"	(19.0 x 101.6)	1"-8 x 4 ¹ / ₂ "	6403	(2904.4)	
B3132-18	18"	(450)	31 ³ / ₈ "	(796.9)	27 ⁵ / ₈ "	(701.7)	20"	(508.0)	3 ³ / ₄ " x 4"	(19.0 x 101.6)	1 ¹ / ₄ "-7 x 5"	7293	(3308.1)	
B3132-20	20"	(500)	33 ¹ / ₂ "	(850.9)	29 ³ / ₄ "	(755.6)	22 ¹ / ₈ "	(562.0)	3 ³ / ₄ " x 4 ¹ / ₂ "	(19.0 x 114.3)	1 ¹ / ₄ "-7 x 5"	8778	(3981.7)	
B3132-24	24"	(600)	39"	(990.6)	35 ¹ / ₄ "	(895.3)	26 ³ / ₈ "	(669.9)	3 ³ / ₄ " x 5"	(19.0 x 127.0)	1 ¹ / ₄ "-6 x 5 ¹ / ₂ "	11659	(5288.5)	

Pipe Clamps



B3132W-³/₄



B3132W-1 thru 1¹/₂

Material: Ductile iron for B3132W-³/₄, steel for other sizes.

Standard Finish: Plain or Electro-Plated

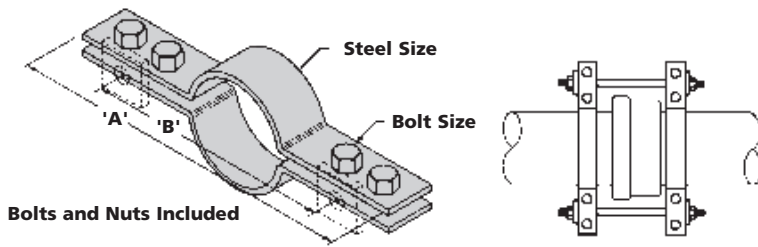
Service: Designed to use with B3132 Two-Bolt Underground Clamp for aligning and securing tie rods.

Ordering: Specify part number and finish.

Figure B3132W Lug Washer

Part No.	Tie Rod Size	For Use With Pipe Size		Dia. 'D'		'E'		'F'		'G'		'H'		Wt./C	
												Lbs.	kg		
B3132W- ³ / ₄	³ / ₄ "-10	4"-12"	(100-300)	7 ⁷ / ₈ "	(22.2)	2 ³ / ₈ "	(60.3)	--	--	5 ⁵ / ₈ "	(15.9)	1 ⁵ / ₈ "	(41.3)	74	(33.7)
B3132W-1	1"-8	14"-16"	(350-400)	1 ¹ / ₈ "	(28.6)	3 ¹ / ₂ "	(88.9)	3 ¹ / ₂ "	(88.9)	5 ⁵ / ₈ "	(15.9)	2 ¹ / ₂ "	(63.5)	207	(93.9)
B3132W-1 ¹ / ₄	1 ¹ / ₄ "-7	18"	(450)	1 ³ / ₈ "	(34.9)	3 ¹ / ₂ "	(88.9)	4"	(101.6)	5 ⁵ / ₈ "	(15.9)	3 ¹ / ₂ "	(63.5)	236	(107.0)
B3132W-1 ³ / ₈	1 ³ / ₈ "-6	20"	(500)	1 ¹ / ₂ "	(38.1)	4"	(101.6)	4 ¹ / ₄ "	(107.9)	5 ⁵ / ₈ "	(15.9)	4"	(101.6)	231	(104.8)
B3132W-1 ¹ / ₂	1 ¹ / ₂ "-6	24"	(600)	1 ⁵ / ₈ "	(41.3)	4"	(101.6)	4 ³ / ₄ "	(120.6)	5 ⁵ / ₈ "	(15.9)	4"	(101.6)	259	(117.5)

Pipe Clamps



Bolts and Nuts Included

Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed to prevent separation of caulked joints on AWWA ductile iron water pipes.

Ordering: Specify part number and finish. (Order B3134W Washer, tie rods, and hex nuts separately).

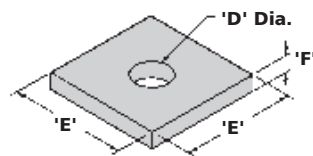
Approvals: Complies with National Fire Protection Association Standard 24 for 4" (100) thru 12" (300).

Figure B3134 Four Bolt Underground Clamp

Part No.	Nominal Pipe Size		'A'		'B'		Clamp 'I.D.'		Steel Size	
B3134-4	4"	(100)	14 ⁷ / ₁₆ "	(366.7)	9 ⁵ / ₈ "	(244.5)	5"	(127.0)	1/2" x 2"	(12.7 x 50.8)
B3134-6	6"	(150)	16 ⁷ / ₈ "	(428.6)	11 ⁷ / ₈ "	(301.6)	7 ¹ / ₈ "	(181.0)	1/2" x 2"	(12.7 x 50.8)
B3134-8	8"	(200)	19 ¹ / ₈ "	(485.8)	14 ¹ / ₈ "	(358.8)	9 ⁵ / ₁₆ "	(236.5)	5/8" x 2 ¹ / ₂ "	(15.9 x 63.5)
B3134-10	10"	(250)	21 ³ / ₈ "	(542.9)	16 ⁵ / ₈ "	(422.3)	11 ¹ / ₂ "	(292.1)	5/8" x 2 ¹ / ₂ "	(15.9 x 63.5)
B3134-12	12"	(300)	25 ¹ / ₈ "	(638.2)	19 ⁵ / ₈ "	(498.5)	13 ¹ / ₂ "	(342.9)	5/8" x 3"	(15.9 x 76.2)
B3134-14	14"	(350)	28 ¹ / ₄ "	(717.5)	22 ¹ / ₄ "	(565.1)	15 ³ / ₄ "	(400.0)	3/4" x 3"	(19.0 x 76.2)
B3134-16	16"	(400)	32 ¹ / ₈ "	(816.0)	26 ¹ / ₄ "	(666.7)	17 ⁷ / ₈ "	(454.0)	3/4" x 4"	(19.0 x 101.6)
B3134-18	18"	(450)	35 ¹ / ₈ "	(892.2)	28 ¹ / ₈ "	(714.4)	20"	(508.0)	3/4" x 4"	(19.0 x 101.6)
B3134-20	20"	(500)	37 ³ / ₄ "	(958.8)	30 ¹ / ₂ "	(774.7)	22 ¹ / ₈ "	(562.0)	3/4" x 4 ¹ / ₂ "	(19.0 x 114.3)
B3134-24	24"	(600)	44 ¹ / ₄ "	(1123.9)	36"	(914.4)	26 ³ / ₈ "	(669.9)	3/4" x 5"	(19.0 x 127.0)

Part No.	Bolt Size	Maximum Test Pressure		Force On Clamp		Wt./C	
		psi	Pa	Lbs.	kN	Lbs.	kg
B3134-4	5/8"-11 x 3"	250	(1722.5)	4550	(20.24)	1012	(459.0)
B3134-6	5/8"-11 x 3"	250	(1722.5)	9340	(41.54)	1204	(546.1)
B3134-8	5/8"-11 x 3 ¹ / ₂ "	250	(1722.5)	16080	(71.52)	2091	(948.5)
B3134-10	3/4"-10 x 4"	250	(1722.5)	24180	(107.55)	2466	(1118.6)
B3134-12	7/8"-9 x 4"	250	(1722.5)	34230	(152.25)	3537	(1604.4)
B3134-14	7/8"-9 x 4 ¹ / ₂ "	120	(826.8)	22200	(98.74)	4718	(2140.1)
B3134-16	1"-8 x 4 ¹ / ₂ "	115	(792.3)	27760	(123.47)	7155	(3245.5)
B3134-18	1 ¹ / ₄ "-7 x 5"	100	(689.0)	23900	(106.31)	8179	(3710.0)
B3134-20	1 ¹ / ₄ "-7 x 5"	75	(516.7)	27500	(122.32)	9856	(4470.7)
B3134-24	1 ¹ / ₂ "-6 x 5 ¹ / ₂ "	50	(344.5)	26200	(116.54)	13384	(6071.0)

For higher test pressure requirements, consult pipe manufacturer.



Material: Steel

Standard Finish: Plain or Electro-Plated

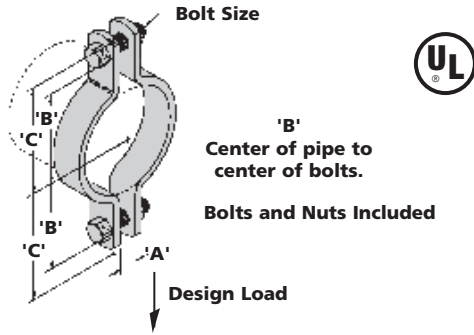
Service: Designed for use with B3134 Four-Bolt Underground Clamp to secure tie rods.

Ordering: Specify part number and finish.

Figure B3134W Washer

Part No.	Tie Rod Size	For Use With Pipe Size		Dia. 'D'		'E'		'F'		Wt./C	
										Lbs.	kg
B3134W-3/4	3/4"-10	4"-8"	(100-200)	7/8"	(22.2)	3"	(76.2)	1/2"	(12.7)	119	(54.0)
B3134W-1	1"-9	10"-12"	(250-300)	1 ¹ / ₈ "	(28.6)	3 ¹ / ₂ "	(88.9)	1/2"	(12.7)	159	(72.1)
B3134W-1 ¹ / ₈	1 ¹ / ₈ "-7	14"-16"	(350-400)	1 ¹ / ₄ "	(31.7)	3 ¹ / ₂ "	(88.9)	5/8"	(15.9)	181	(82.1)
B3134W-1 ¹ / ₄	1 ¹ / ₄ "-7	18"	(450)	1 ³ / ₈ "	(34.9)	4"	(101.6)	3/4"	(19.0)	229	(103.9)
B3134W-1 ³ / ₈	1 ³ / ₈ "-6	20"	(500)	1 ¹ / ₂ "	(38.1)	4"	(101.6)	3/4"	(19.0)	223	(101.1)
B3134W-1 ¹ / ₂	1 ¹ / ₂ "-6	24"	(600)	1 ⁵ / ₈ "	(41.3)	4 ¹ / ₂ "	(114.3)	3/4"	(19.0)	217	(98.4)

Pipe Clamps



Material: Steel (Stainless steel available)

Standard Finish: Plain, Electro-Plated, Dura-Green® or Hot-Dip Galvanized

Service: Designed for suspending non-insulated pipe runs. (Use with B3200 Weldless Eye Nut, B3210 Eye Rod, or B3211 Welded Eye Rod).

Ordering: Specify part number and finish.

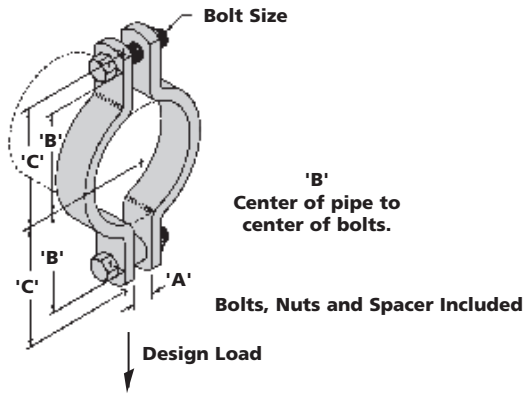
Approvals: Underwriters' Laboratories Listed for 3/4" (20) thru 12" (300). Complies with Federal Specification WW-H-171E & A-A-1192A Type 4 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 4.

Figure B3140 Standard Pipe Clamp

Part No.	Nominal Pipe Size	'A'	'B'	'C'
B3140-1/2	1/2" (15)	3/8" (9.5)	31/32" (24.6)	17/32" (38.9)
B3140-3/4	3/4" (20)	9/16" (14.3)	13/32" (27.8)	121/32" (42.0)
B3140-1	1" (25)	9/16" (14.3)	15/16" (33.3)	17/8" (47.6)
B3140-1 1/4	1 1/4" (32)	17/32" (13.5)	17/16" (36.5)	2" (50.8)
B3140-1 1/2	1 1/2" (40)	19/32" (15.1)	121/32" (42.0)	27/32" (56.4)
B3140-2	2" (50)	9/16" (14.3)	2 1/8" (54.0)	23/4" (69.8)
B3140-2 1/2	2 1/2" (65)	5/8" (15.9)	221/32" (67.5)	39/32" (83.3)
B3140-3	3" (80)	5/8" (15.9)	215/16" (74.6)	39/16" (90.5)
B3140-3 1/2	3 1/2" (90)	5/8" (15.9)	35/32" (80.1)	325/32" (96.0)
B3140-4	4" (100)	3/4" (19.0)	39/16" (90.5)	45/16" (109.5)
B3140-5	5" (125)	3/4" (19.0)	4 1/8" (104.8)	47/8" (123.8)
B3140-6	6" (150)	7/8" (22.2)	415/16" (125.4)	513/16" (147.6)
B3140-8	8" (200)	1" (25.4)	6 1/16" (154.0)	615/16" (176.2)
B3140-10	10" (250)	1" (25.4)	73/8" (187.3)	811/16" (220.7)
B3140-12	12" (300)	1" (25.4)	87/16" (214.3)	93/4" (247.6)
B3140-14	14" (350)	1 1/8" (28.6)	9 1/4" (234.9)	105/8" (269.9)
B3140-16	16" (400)	1 1/8" (28.6)	10 1/4" (260.3)	115/8" (295.3)
B3140-18	18" (450)	1 1/4" (31.7)	11 7/8" (301.6)	13 1/4" (336.5)
B3140-20	20" (500)	1 3/8" (34.9)	12 3/4" (323.8)	14 1/8" (358.8)
B3140-24	24" (600)	1 5/8" (41.3)	15 1/4" (387.3)	16 7/8" (428.6)
B3140-30	30" (750)	2 1/4" (57.1)	18 5/8" (473.1)	21" (533.4)

Part No.	Bolt Size	Maximum Design Load For Service Temperature				Wt./C	
		650°F (343°C)		750°F (399°C)		Lbs.	kg
		Lbs.	kN	Lbs.	kN		
B3140-1/2	5/16"-18 x 1 1/4"	500	(2.22)	390	(1.73)	30	(13.6)
B3140-3/4	5/16"-18 x 1 1/4"	500	(2.22)	390	(1.73)	31	(14.0)
B3140-1	5/16"-18 x 1 1/4"	500	(2.22)	390	(1.73)	32	(14.5)
B3140-1 1/4	5/16"-18 x 1 1/4"	500	(2.22)	390	(1.73)	39	(17.7)
B3140-1 1/2	5/16"-18 x 1 1/4"	800	(3.56)	620	(2.76)	41	(18.6)
B3140-2	1/2"-13 x 2"	1040	(4.62)	810	(3.60)	118	(53.5)
B3140-2 1/2	1/2"-13 x 2"	1040	(4.62)	810	(3.60)	130	(58.9)
B3140-3	1/2"-13 x 2"	1040	(4.62)	810	(3.60)	150	(68.0)
B3140-3 1/2	1/2"-13 x 2"	1040	(4.62)	810	(3.60)	158	(71.6)
B3140-4	5/8"-11 x 2 1/4"	1040	(4.62)	810	(3.60)	239	(108.4)
B3140-5	5/8"-11 x 2 1/2"	1040	(4.62)	810	(3.60)	272	(123.4)
B3140-6	3/4"-10 x 2 3/4"	1615	(7.18)	1260	(5.60)	541	(245.4)
B3140-8	3/4"-10 x 3"	1615	(7.18)	1260	(5.60)	642	(291.2)
B3140-10	7/8"-9 x 3 1/2"	2490	(11.07)	1950	(8.67)	1366	(619.6)
B3140-12	7/8"-9 x 3 1/2"	2490	(11.07)	1950	(8.67)	1543	(699.9)
B3140-14	7/8"-9 x 3 1/2"	2490	(11.07)	1950	(8.67)	2077	(942.1)
B3140-16	7/8"-9 x 3 1/2"	2490	(11.07)	1950	(8.67)	2289	(1038.3)
B3140-18	1"-8 x 4"	3060	(13.61)	2390	(10.63)	3206	(1454.2)
B3140-20	1 1/8"-7 x 4 1/2"	3060	(13.61)	2390	(10.63)	3616	(1640.2)
B3140-24	1 1/4"-7 x 5"	3060	(13.61)	2390	(10.63)	5161	(2341.0)
B3140-30	1 1/2"-6 x 6"	3500	(15.57)	2740	(12.14)	10460	(4744.6)

Pipe Clamps



Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for suspending non-insulated, heavy-duty pipe runs. (Use with B3200 Weldless Eye Nut, B3210 Eye Rod or B3211 Welded Eye Rod).

Ordering: Specify part number and finish.

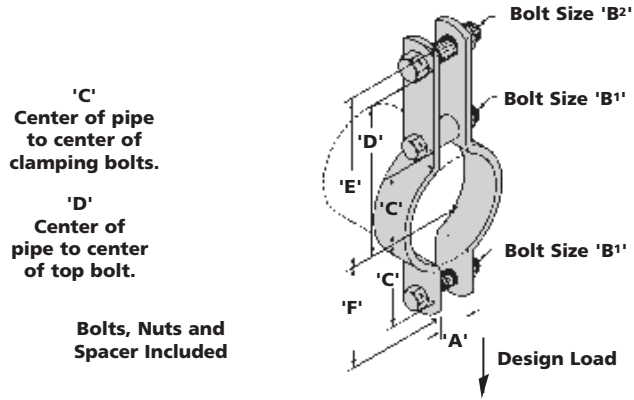
Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 4 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 4.

Figure B3142 Heavy Duty Pipe Clamp

Part No.	Nominal Pipe Size		'A'		'B'		'C'	
B3142-3	3"	(80)	1"	(25.4)	3 ¹ / ₈ "	(79.4)	4 ¹ / ₈ "	(104.8)
B3142-4	4"	(100)	1"	(25.4)	3 ³ / ₄ "	(95.2)	5 ¹ / ₁₆ "	(128.6)
B3142-5	5"	(125)	1"	(25.4)	4 ³ / ₈ "	(111.1)	5 ¹¹ / ₁₆ "	(144.5)
B3142-6	6"	(150)	1 ¹ / ₈ "	(28.6)	5 ¹ / ₄ "	(133.3)	6 ³ / ₄ "	(171.4)
B3142-8	8"	(200)	1 ¹ / ₈ "	(28.6)	6 ¹ / ₄ "	(158.7)	7 ³ / ₄ "	(196.8)
B3142-10	10"	(250)	1 ¹ / ₄ "	(31.7)	7 ¹¹ / ₁₆ "	(195.3)	9 ¹ / ₁₆ "	(230.2)
B3142-12	12"	(300)	1 ⁵ / ₈ "	(41.3)	9 ¹ / ₈ "	(231.8)	10 ³ / ₄ "	(273.0)
B3142-14	14"	(350)	1 ⁵ / ₈ "	(41.3)	10 ¹ / ₈ "	(257.2)	12"	(304.8)
B3142-16	16"	(400)	1 ⁵ / ₈ "	(41.3)	11"	(279.4)	12 ⁷ / ₈ "	(327.0)
B3142-18	18"	(450)	3"	(76.2)	14 ¹ / ₂ "	(368.3)	18 ¹ / ₂ "	(469.9)
B3142-20	20"	(500)	3"	(76.2)	16"	(406.4)	20"	(508.0)
B3142-24	24"	(600)	3 ¹ / ₄ "	(82.5)	18 ¹ / ₂ "	(469.9)	23"	(584.2)
B3142-30	30"	(750)	3 ¹ / ₂ "	(88.9)	22 ¹ / ₂ "	(571.5)	27 ¹ / ₂ "	(698.5)

Part No.	Bolt Size	Maximum Design Load For Service Temperature				Wt./C	
		650°F (343°C)		750°F (399°C)		Lbs.	kg
		Lbs.	kN	Lbs.	kN		
B3142-3	3/4"-10 x 2 ³ / ₄ "	3370	(14.99)	2640	(11.74)	404	(183.2)
B3142-4	7/8"-9 x 3"	3515	(15.63)	2750	(12.23)	616	(279.4)
B3142-5	7/8"-9 x 3"	3515	(15.63)	2750	(12.23)	687	(311.6)
B3142-6	1"-8 x 3 ¹ / ₂ "	4865	(21.64)	3800	(16.90)	1293	(586.5)
B3142-8	1"-8 x 4"	4865	(21.64)	3800	(16.90)	1523	(690.8)
B3142-10	1 ¹ / ₄ "-7 x 4"	6010	(26.73)	4700	(20.90)	2348	(1065.0)
B3142-12	1 ¹ / ₄ "-7 x 5"	8675	(38.58)	6770	(30.11)	3749	(1700.5)
B3142-14	1 ¹ / ₂ "-6 x 5 ¹ / ₂ "	9120	(40.56)	7140	(31.76)	5011	(2273.0)
B3142-16	1 ³ / ₄ "-5 x 5 ¹ / ₂ "	9120	(40.56)	7140	(31.76)	5885	(2669.4)
B3142-18	2"-4 ¹ / ₂ x 7"	13800	(61.38)	10800	(48.04)	12902	(5852.3)
B3142-20	2"-4 ¹ / ₂ x 7 ¹ / ₂ "	15300	(68.05)	11900	(52.93)	15113	(6855.2)
B3142-24	2"-4 ¹ / ₂ x 8"	16300	(72.50)	12700	(56.49)	20561	(9326.4)
B3142-30	2 ¹ / ₄ "-4 ¹ / ₂ x 9"	20500	(91.18)	16000	(71.17)	36658	(16628.0)

Pipe Clamps



Material: Steel (Stainless steel available)

Standard Finish: Plain or Electro-Plated

Service: Designed for suspending high-temperature (maximum 750°F (399°C) pipe runs requiring up to 4" (101.6) thick insulation. (Use with B3200 Weldless Eye Nut, B3210 Eye Rod or B3211 Welded Eye Rod).

Ordering: Specify part number and finish. For Service Temperatures of 750°F (399°C) thru 1050°F (565°C) specify type 304 Stainless Steel.

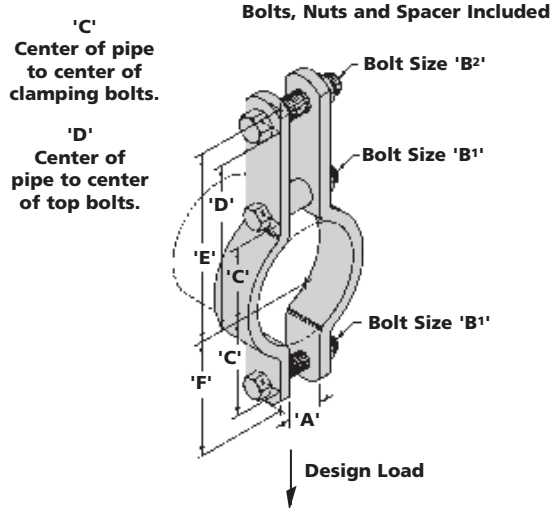
Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 3 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 3.

Figure B3144 Double Bolt Pipe Clamp

Part No.	Nominal Pipe Size	'A'	Bolt Size 'B1'	Bolt Size 'B2'	'C'	'D'
B3144-3/4	3/4" (20)	5/8" (15.9)	3/8"-16 x 1 3/4"	1/2"-13 x 2"	1 3/8" (34.9)	4" (101.6)
B3144-1	1" (25)	5/8" (15.9)	3/8"-16 x 1 3/4"	1/2"-13 x 2"	1 3/8" (34.9)	4" (101.6)
B3144-1 1/4	1 1/4" (32)	5/8" (15.9)	3/8"-16 x 1 3/4"	1/2"-13 x 2"	1 1/2" (38.1)	4" (101.6)
B3144-1 1/2	1 1/2" (40)	1 1/16" (27.0)	1/2"-13 x 2 1/2"	5/8"-11 x 2 1/2"	1 13/16" (46.0)	4 1/8" (104.8)
B3144-2	2" (50)	1 1/16" (27.0)	1/2"-13 x 2 1/2"	5/8"-11 x 2 1/2"	2 1/8" (54.0)	5 1/8" (130.2)
B3144-2 1/2	2 1/2" (65)	1 1/16" (27.0)	1/2"-13 x 2 1/2"	5/8"-11 x 2 1/2"	2 3/8" (60.3)	5 3/8" (136.5)
B3144-3	3" (80)	1 1/16" (27.0)	1/2"-13 x 2 1/2"	5/8"-11 x 2 1/2"	2 15/16" (74.6)	5 15/16" (150.8)
B3144-4	4" (100)	1 1/16" (27.0)	5/8"-11 x 2 3/4"	3/4"-10 x 3"	3 1/2" (88.9)	6 1/2" (165.1)
B3144-5	5" (125)	1 1/16" (27.0)	5/8"-11 x 2 3/4"	3/4"-10 x 3"	4" (101.6)	7" (177.8)
B3144-6	6" (150)	1 7/16" (36.5)	3/4"-10 x 3 1/4"	1"-8 x 3 1/2"	5" (127.0)	8 9/16" (217.5)
B3144-8	8" (200)	1 7/16" (36.5)	3/4"-10 x 3 1/4"	1"-8 x 3 1/2"	6" (152.4)	9 9/16" (242.9)
B3144-10	10" (250)	1 7/16" (36.5)	3/4"-10 x 3 1/4"	1"-8 x 3 1/2"	7 1/8" (181.0)	10 5/8" (269.9)
B3144-12	12" (300)	1 7/16" (36.5)	3/4"-10 x 3 1/4"	1"-8 x 3 1/2"	7 7/8" (200.0)	11 5/8" (295.3)
B3144-14	14" (350)	2" (50.8)	1"-8 x 4 1/2"	1 1/4"-7 x 5"	9 1/16" (230.2)	12 11/16" (322.3)
B3144-16	16" (400)	2" (50.8)	1"-8 x 4 1/2"	1 1/4"-7 x 5"	10 1/16" (255.6)	13 11/16" (347.7)
B3144-18	18" (450)	2" (50.8)	1"-8 x 4 1/2"	1 1/4"-7 x 5"	11 1/16" (281.0)	14 11/16" (373.1)
B3144-20	20" (500)	2" (50.8)	1"-8 x 5"	1 1/4"-7 x 5"	12 3/8" (314.3)	15 7/8" (403.2)
B3144-24	24" (600)	2" (50.8)	1 1/8"-7 x 5"	1 1/2"-6 x 5 1/2"	14 3/4" (374.6)	17 7/8" (454.0)

Part No.	'E'	'F'	Maximum Design Load For Service Temperature				Wt./C	
			650°F (343°C)		750°F (399°C)		Lbs.	kg
			Lbs.	kN	Lbs.	kN		
B3144-3/4	4 3/4" (120.6)	1 7/8" (47.6)	950	(4.22)	740	(3.29)	146	(66.2)
B3144-1	4 3/4" (120.6)	1 7/8" (47.6)	950	(4.22)	740	(3.29)	147	(66.7)
B3144-1 1/4	4 3/4" (120.6)	2" (50.8)	950	(4.22)	740	(3.29)	152	(68.9)
B3144-1 1/2	4 7/8" (123.8)	2 3/8" (60.3)	1545	(6.87)	1200	(5.34)	200	(90.7)
B3144-2	5 7/8" (149.2)	2 11/16" (68.3)	1545	(6.87)	1200	(5.34)	226	(102.5)
B3144-2 1/2	6 1/8" (155.6)	2 15/16" (74.6)	1545	(6.87)	1200	(5.34)	239	(108.4)
B3144-3	6 11/16" (169.9)	3 1/2" (88.9)	1545	(6.87)	1200	(5.34)	264	(119.7)
B3144-4	7 5/8" (193.7)	4 1/2" (114.3)	2500	(11.12)	1950	(8.67)	672	(304.8)
B3144-5	8 1/8" (206.4)	5" (127.0)	2500	(11.12)	1950	(8.67)	752	(341.1)
B3144-6	9 15/16" (252.4)	6 1/8" (155.6)	2865	(12.74)	2240	(9.96)	1158	(525.2)
B3144-8	10 15/16" (277.8)	7 1/8" (181.0)	2865	(12.74)	2240	(9.96)	1325	(601.0)
B3144-10	12" (304.8)	8 1/4" (209.5)	3240	(14.41)	2530	(11.25)	1505	(682.6)
B3144-12	13" (330.2)	9 1/4" (234.9)	3240	(14.41)	2530	(11.25)	1671	(757.9)
B3144-14	14 5/16" (363.5)	10 11/16" (271.5)	4300	(19.12)	3360	(14.94)	3666	(1662.9)
B3144-16	15 5/16" (388.9)	11 11/16" (296.9)	4300	(19.12)	3360	(14.94)	3992	(1810.8)
B3144-18	16 5/16" (414.3)	12 11/16" (322.3)	4300	(19.12)	3360	(14.94)	4330	(1964.1)
B3144-20	17 1/2" (444.5)	14" (355.6)	4500	(20.01)	3520	(15.65)	5535	(2510.7)
B3144-24	19 1/2" (495.3)	16 3/8" (415.9)	4500	(20.01)	3520	(15.65)	6590	(2989.2)

Pipe Clamps



Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for suspending heavy-duty, high-temperature pipe runs requiring up to 4" (101.6) thick insulation. (Use with B3200 Weldless Eye Nut, B3210 Eye Rod, or B3211 Welded Eye Rod).

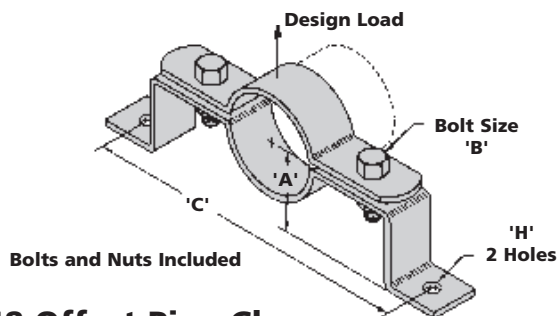
Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 3 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 3.

Figure B3146 Heavy Duty Double Bolt Pipe Clamp

Part No.	Nominal Pipe Size	'A'		Bolt Size 'B1'	Bolt Size 'B2'	'C'		'D'	
B3146-6	6" (150)	1 ³ / ₄ "	(44.4)	³ / ₄ "-10 x 3 ¹ / ₂ "	1"-8 x 4"	4 ³ / ₄ "	(120.6)	8 ¹⁵ / ₁₆ "	(227.0)
B3146-8	8" (200)	2"	(50.8)	³ / ₄ "-10 x 4"	1"-8 x 4 ¹ / ₂ "	6"	(152.4)	10 ³ / ₈ "	(257.2)
B3146-10	10" (250)	2 ¹ / ₄ "	(57.1)	1"-8 x 4 ¹ / ₂ "	1 ¹ / ₄ "-7 x 5"	7 ¹ / ₄ "	(184.1)	11 ³ / ₈ "	(288.9)
B3146-12	12" (300)	2 ¹ / ₂ "	(63.5)	1"-8 x 5"	1 ¹ / ₄ "-7 x 5 ¹ / ₂ "	8 ⁵ / ₈ "	(219.1)	12 ⁹ / ₁₆ "	(319.1)
B3146-14	14" (350)	2 ¹ / ₂ "	(63.5)	1 ¹ / ₈ "-7 x 5 ¹ / ₂ "	1 ¹ / ₂ "-6 x 6"	9 ⁵ / ₈ "	(244.5)	13 ¹ / ₂ "	(342.9)
B3146-16	16" (400)	3"	(76.2)	1 ¹ / ₄ "-7 x 6"	1 ³ / ₄ "-5 x 6 ¹ / ₂ "	10 ⁷ / ₈ "	(276.2)	14 ⁷ / ₈ "	(377.8)
B3146-18	18" (450)	3 ¹ / ₂ "	(88.9)	1 ¹ / ₂ "-6 x 7 ¹ / ₂ "	2"-4 ¹ / ₂ x 8"	12 ¹ / ₂ "	(317.5)	16 ¹ / ₄ "	(412.7)
B3146-20	20" (500)	3 ¹ / ₂ "	(88.9)	1 ¹ / ₂ "-6 x 7 ¹ / ₂ "	2"-4 ¹ / ₂ x 8"	13 ¹ / ₂ "	(342.9)	17 ¹ / ₄ "	(438.1)
B3146-24	24" (600)	3 ¹ / ₂ "	(88.9)	1 ¹ / ₂ "-6 x 7 ¹ / ₂ "	2"-4 ¹ / ₂ x 8"	15 ¹ / ₂ "	(393.7)	19 ⁵ / ₁₆ "	(490.5)
B3146-30	30" (750)	4 ¹ / ₄ "	(107.9)	1 ³ / ₄ "-5 x 8 ¹ / ₂ "	2 ¹ / ₄ "-4 ¹ / ₂ x 9"	19 ⁷ / ₈ "	(504.8)	28 ¹ / ₄ "	(717.5)

Part No.	'E'	'F'	Maximum Design Load For Service Temperature				Wt./C	
			650°F (343°C)		750°F (399°C)		Lbs.	kg
			Lbs.	kN	Lbs.	kN		
B3146-6	10 ³ / ₁₆ " (258.8)	6" (152.4)	3500	(15.57)	2740	(12.19)	1182	(536.1)
B3146-8	11 ³ / ₈ " (288.9)	7 ¹ / ₄ " (184.1)	4800	(21.35)	3750	(16.68)	1742	(790.2)
B3146-10	13 ¹ / ₈ " (333.4)	9" (228.6)	5500	(24.46)	4300	(19.12)	2979	(1351.3)
B3146-12	14 ⁵ / ₁₆ " (363.5)	10 ³ / ₈ " (263.5)	8675	(38.58)	6790	(30.20)	3847	(1745.0)
B3146-14	15 ¹ / ₂ " (393.7)	11 ⁵ / ₈ " (295.3)	9500	(42.25)	7400	(32.91)	6104	(2768.8)
B3146-16	17 ¹ / ₈ " (435.0)	13 ¹ / ₈ " (333.4)	10000	(44.48)	7800	(34.69)	7899	(3583.0)
B3146-18	18 ¹ / ₄ " (463.5)	14 ¹ / ₂ " (368.3)	13800	(61.38)	10800	(48.04)	10588	(4802.7)
B3146-20	19 ³ / ₄ " (501.6)	16" (406.4)	15300	(68.05)	11900	(52.93)	14180	(6432.0)
B3146-24	22 ⁵ / ₁₆ " (566.7)	18 ¹ / ₂ " (469.9)	16300	(72.50)	12700	(56.49)	19145	(8684.2)
B3146-30	32 ³ / ₄ " (831.8)	24 ³ / ₈ " (619.1)	20500	(91.18)	16000	(71.17)	34983	(15868.3)



Material: Steel (Stainless steel available)

Standard Finish: Plain or Electro-Plated

Service: Designed for supporting vertical or horizontal pipe runs at a fixed distance from a wall or structure.

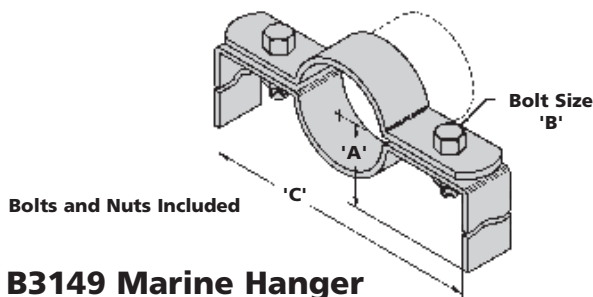
Ordering: Specify part number and finish.

Note: Ductile and cast iron sizes are available.

Figure B3148 Offset Pipe Clamp

Part No.	Nominal Pipe Size	'A'		Bolt Size 'B'	'C'		'H'		Design Load		Wt./C	
							Lbs.	kN	Lbs.	kg		
B3148-1/2	1/2" (15)	2 1/2"	(63.5)	3/8"-16 x 1 1/2"	6"	(152.4)	7 1/16"	(11.1)	190	(.84)	106	(48.1)
B3148-3/4	3/4" (20)	2 1/2"	(63.5)	3/8"-16 x 1 1/2"	7 5/16"	(185.7)	7 1/16"	(11.1)	190	(.84)	112	(50.8)
B3148-1	1" (25)	2 5/8"	(66.7)	3/8"-16 x 1 1/2"	7 9/16"	(192.1)	7 1/16"	(11.1)	190	(.84)	123	(55.8)
B3148-1 1/4	1 1/4" (32)	2 13/16"	(71.4)	3/8"-16 x 1 1/2"	7 7/8"	(200.0)	7 1/16"	(11.1)	190	(.84)	133	(60.3)
B3148-1 1/2	1 1/2" (40)	2 15/16"	(74.6)	3/8"-16 x 1 1/2"	8 1/4"	(209.5)	7 1/16"	(11.1)	190	(.84)	140	(63.5)
B3148-2	2" (50)	3 3/16"	(81.0)	3/8"-16 x 1 3/4"	9 1/8"	(231.8)	7 1/16"	(11.1)	420	(1.87)	195	(88.4)
B3148-2 1/2	2 1/2" (65)	3 7/16"	(87.3)	3/8"-16 x 1 3/4"	10 1/2"	(266.7)	7 1/16"	(11.1)	420	(1.87)	226	(102.5)
B3148-3	3" (80)	3 3/4"	(95.2)	3/8"-16 x 1 3/4"	11 1/8"	(282.6)	7 1/16"	(11.1)	420	(1.87)	244	(110.7)
B3148-4	4" (100)	4 1/4"	(107.9)	1/2"-13 x 2"	12 1/2"	(317.5)	9 1/16"	(14.3)	610	(2.71)	358	(162.4)
B3148-5	5" (125)	4 3/4"	(120.6)	1/2"-13 x 2 1/4"	13 3/4"	(349.2)	9 1/16"	(14.3)	610	(2.71)	415	(188.2)
B3148-6	6" (150)	5 5/16"	(134.9)	1/2"-13 x 2 1/4"	16 1/2"	(419.1)	9 1/16"	(14.3)	870	(3.87)	685	(310.7)
B3148-8	8" (200)	6 5/16"	(160.3)	1/2"-13 x 2 1/2"	18 5/8"	(473.1)	9 1/16"	(14.3)	870	(3.87)	815	(369.7)
B3148-10	10" (250)	7 3/4"	(196.8)	3/4"-10 x 3"	23"	(584.2)	13 1/16"	(20.6)	870	(3.87)	2142	(971.6)
B3148-12	12" (300)	8 3/4"	(222.2)	3/4"-10 x 3"	25"	(635.0)	13 1/16"	(20.6)	870	(3.87)	2337	(1060.0)

Pipe Clamps



Material: Steel (Stainless steel available)

Standard Finish: Plain or Electro-Plated

Service: Designed for suspending or supporting pipe runs where exact distance from structure to pipe cannot be determined until installation. Field modify legs to suit conditions.

Ordering: Specify part number and finish.

Note: Ductile and cast iron sizes are available.

Figure B3149 Marine Hanger

Part No.	Nominal Pipe Size	'A'		Bolt Size 'B'	'C'	Wt./C	
						Lbs.	kg
B3149-3/4	3/4" (20)	12"	(304.8)	3/8"-16 x 1 1/2"	4 7/16"	(112.7)	182 (82.5)
B3149-1	1" (25)	12"	(304.8)	3/8"-16 x 1 1/2"	4 11/16"	(119.1)	230 (104.3)
B3149-1 1/4	1 1/4" (32)	12"	(304.8)	3/8"-16 x 1 1/2"	5"	(127.0)	239 (108.4)
B3149-1 1/2	1 1/2" (40)	12"	(304.8)	3/8"-16 x 1 1/2"	5 1/4"	(133.3)	244 (110.7)
B3149-2	2" (50)	12"	(304.8)	1/2"-13 x 1 3/4"	6"	(152.4)	319 (144.7)
B3149-2 1/2	2 1/2" (65)	12"	(304.8)	1/2"-13 x 2"	7 1/4"	(184.1)	434 (196.8)
B3149-3	3" (80)	12"	(304.8)	1/2"-13 x 2"	7 7/8"	(200.0)	454 (205.9)
B3149-4	4" (100)	12"	(304.8)	1/2"-13 x 2"	9 1/4"	(234.9)	493 (223.6)
B3149-5	5" (125)	12"	(304.8)	1/2"-13 x 2"	10 1/2"	(266.7)	530 (240.4)
B3149-6	6" (150)	12"	(304.8)	5/8"-11 x 2 1/2"	12 1/2"	(317.5)	1142 (518.0)
B3149-8	8" (200)	12"	(304.8)	5/8"-11 x 2 1/2"	14 5/8"	(371.5)	1273 (577.4)

Pipe Clamps

Material: Steel (Stainless Steel available)

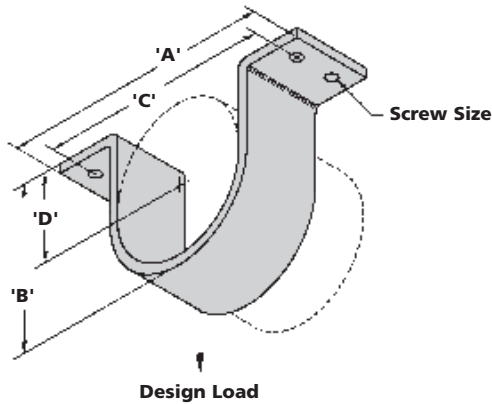
Standard Finish: Plain or Electro-Plated

Service: Designed for supporting pipe runs from walls or ceilings.

Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 26 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 26.

Note: B2400 (page 75) can be used as an alternate.



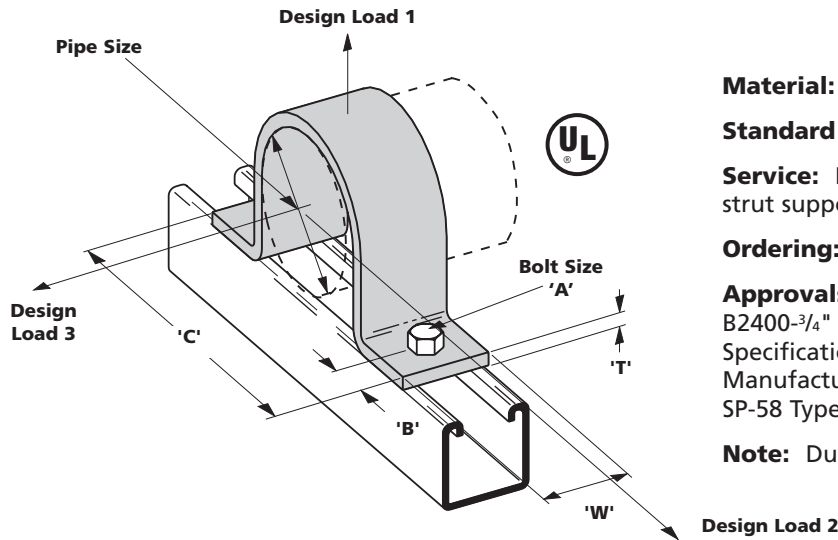
Note: Pipe Sizes 1/2" (15) thru 2" (50) have 2 mounting holes.
Pipe Sizes 2 1/2" (65) thru 4" (100) as illustrated above.

Figure B3180 Short Pipe Strap

Part No.	Nominal Pipe Size	'A'	'B'	'C'	'D'
B3180-1/2	1/2" (15)	3 ⁹ / ₁₆ " (90.5)	1 ³ / ₁₆ " (30.2)	2 ¹¹ / ₁₆ " (68.3)	9/ ₁₆ " (14.3)
B3180-3/4	3/4" (20)	3 ⁷ / ₈ " (98.4)	1 ¹ / ₂ " (38.1)	3" (76.2)	3/4" (19.0)
B3180-1	1" (25)	4 ¹ / ₈ " (104.8)	1 ³ / ₄ " (44.4)	3 ¹ / ₄ " (82.5)	7/8" (22.2)
B3180-1 ¹ / ₄	1 ¹ / ₄ " (32)	4 ⁹ / ₁₆ " (115.9)	2 ³ / ₁₆ " (55.6)	3 ¹¹ / ₁₆ " (93.7)	1 ¹ / ₈ " (28.6)
B3180-1 ¹ / ₂	1 ¹ / ₂ " (40)	5 ³ / ₁₆ " (131.8)	2 ⁹ / ₁₆ " (65.1)	4 ³ / ₁₆ " (106.4)	1 ⁵ / ₁₆ " (33.3)
B3180-2	2" (50)	5 ³ / ₄ " (146.0)	2 ¹⁵ / ₁₆ " (74.6)	4 ³ / ₄ " (120.6)	1 ⁷ / ₁₆ " (36.5)
B3180-2 ¹ / ₂	2 ¹ / ₂ " (65)	6 ¹ / ₄ " (158.7)	3 ⁹ / ₁₆ " (90.5)	5 ¹ / ₄ " (133.3)	1 ⁷ / ₈ " (47.6)
B3180-3	3" (80)	6 ⁷ / ₈ " (174.6)	4" (101.6)	5 ⁷ / ₈ " (149.2)	2" (50.8)
B3180-3 ¹ / ₂	3 ¹ / ₂ " (90)	7 ¹ / ₂ " (190.5)	4 ⁹ / ₁₆ " (115.9)	6 ¹ / ₂ " (165.1)	2 ⁵ / ₁₆ " (58.7)
B3180-4	4" (100)	8" (203.2)	5 ¹ / ₁₆ " (128.6)	7" (177.8)	2 ⁹ / ₁₆ " (65.1)

Part No.	Screw Size	Design Load				Wt./C	
		With Lag Screws		With Bolt to Steel		Lbs.	kg
		Lbs.	kN	Lbs.	kN		
B3180-1/2	Two #18 x 2" Steel Wood Screws or Two 1/4"-20 Bolts To Steel	300	(1.33)	-	-	22	(10.0)
B3180-3/4		300	(1.33)	485	(2.16)	26	(11.8)
B3180-1		300	(1.33)	485	(2.16)	30	(13.6)
B3180-1 ¹ / ₄		300	(1.33)	485	(2.16)	34	(15.4)
B3180-1 ¹ / ₂		300	(1.33)	485	(2.16)	58	(26.3)
B3180-2		300	(1.33)	485	(2.16)	69	(31.3)
B3180-2 ¹ / ₂	Four #18 x 2" Steel Wood Screws or Four 1/4"-20 Bolts To Steel	500	(2.22)	970	(4.31)	153	(69.4)
B3180-3		500	(2.22)	970	(4.31)	171	(77.5)
B3180-3 ¹ / ₂		500	(2.22)	970	(4.31)	196	(88.9)
B3180-4		500	(2.22)	970	(4.31)	212	(96.1)

Pipe Clamps



Material: Steel (Stainless Steel available)

Standard Finish: Plain or Electro-Plated

Service: Designed for supporting pipe runs from strut supports.

Ordering: Specify part number and finish.

Approvals: Underwriters' Laboratories Listed for B2400-3/4" thru B2400-8". Complies with Federal Specification WW-H-171E & A-A-1192A Type 26 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 26.

Note: Ductile iron sizes available.

Figure B2400 Standard Pipe Strap

Part No.	Pipe Size	'A'	'B'	'C'	'T'	'W'
B2400-1/2	1/2" (15)	5/16" (7.9)	7/16" (11.1)	2 13/16" (71.4)	10 Ga. (3.4)	1 5/8" (41.3)
B2400-3/4	3/4" (20)	5/16" (7.9)	7/16" (11.1)	3" (76.2)	10 Ga. (3.4)	1 5/8" (41.3)
B2400-1	1" (25)	5/16" (7.9)	7/16" (11.1)	3 17/32" (89.7)	10 Ga. (3.4)	1 5/8" (41.3)
B2400-1 1/4	1 1/4" (32)	5/16" (7.9)	7/16" (11.1)	3 3/4" (95.2)	10 Ga. (3.4)	1 5/8" (41.3)
B2400-1 1/2	1 1/2" (40)	5/16" (7.9)	7/16" (11.1)	4 1/16" (103.2)	10 Ga. (3.4)	1 5/8" (41.3)
B2400-2	2" (50)	7/16" (11.1)	1 1/16" (17.4)	5 21/32" (143.6)	1/4" (6.3)	1 5/8" (41.3)
B2400-2 1/2	2 1/2" (65)	7/16" (11.1)	1 1/16" (17.4)	6 5/32" (156.3)	1/4" (6.3)	1 5/8" (41.3)
B2400-3	3" (80)	7/16" (11.1)	1 1/16" (17.4)	6 25/32" (172.2)	1/4" (6.3)	1 5/8" (41.3)
B2400-3 1/2	3 1/2" (90)	7/16" (11.1)	1 1/16" (17.4)	7 9/32" (184.9)	1/4" (6.3)	1 5/8" (41.3)
B2400-4	4" (100)	9/16" (14.3)	1 1/16" (17.4)	7 25/32" (197.6)	1/4" (6.3)	1 5/8" (41.3)
B2400-5	5" (125)	9/16" (14.3)	1 1/16" (17.4)	8 7/8" (225.4)	1/4" (6.3)	1 5/8" (41.3)
B2400-6	6" (150)	9/16" (14.3)	1 1/16" (17.4)	9 15/16" (252.4)	1/4" (6.3)	1 5/8" (41.3)
B2400-8	8" (200)	9/16" (14.3)	1 1/16" (17.4)	11 31/32" (304.0)	1/4" (6.3)	1 5/8" (41.3)
B2400-10	10" (250)	9/16" (14.3)	1 1/16" (17.4)	14" (355.6)	1/4" (6.3)	1 5/8" (41.3)
B2400-12	12" (300)	9/16" (14.3)	1 1/16" (17.4)	16" (406.4)	1/4" (6.3)	1 5/8" (41.3)
B2400-14	14" (350)	1 5/16" (23.8)	1 5/16" (33.3)	20 3/8" (517.5)	3/8" (9.5)	1 3/4" (44.4)
B2400-16	16" (400)	1 5/16" (23.8)	1 5/16" (33.3)	22 3/8" (568.3)	3/8" (9.5)	1 3/4" (44.4)
B2400-18	18" (450)	1 5/16" (23.8)	1 5/16" (33.3)	26 1/8" (663.6)	1/2" (12.7)	1 3/4" (44.4)
B2400-20	20" (500)	1 5/16" (23.8)	1 5/16" (33.3)	28 1/8" (714.4)	1/2" (12.7)	1 3/4" (44.4)
B2400-24	24" (600)	1 5/16" (23.8)	1 5/16" (33.3)	32 1/8" (816.0)	1/2" (12.7)	1 3/4" (44.4)

Part No.	Design Load 1		Design Load 2		Design Load 3		Wt./C	
	Lbs.	kN	Lbs.	kN	Lbs.	kN	Lbs.	kg
B2400-1/2	600	(2.67)	150	(.67)	105	(.47)	23	(10.4)
B2400-3/4	600	(2.67)	150	(.67)	105	(.47)	26	(11.8)
B2400-1	600	(2.67)	150	(.67)	120	(.53)	31	(14.0)
B2400-1 1/4	600	(2.67)	150	(.67)	120	(.53)	36	(16.3)
B2400-1 1/2	600	(2.67)	150	(.67)	120	(.53)	39	(17.7)
B2400-2	1200	(5.34)	480	(2.14)	180	(.80)	93	(42.2)
B2400-2 1/2	1200	(5.34)	480	(2.14)	180	(.80)	106	(48.1)
B2400-3	1200	(5.34)	480	(2.14)	300	(1.33)	132	(59.9)
B2400-3 1/2	1200	(5.34)	480	(2.14)	300	(1.33)	151	(68.5)
B2400-4	1500	(6.67)	600	(2.67)	450	(2.00)	160	(72.6)
B2400-5	1500	(6.67)	600	(2.67)	450	(2.00)	192	(87.1)
B2400-6	1500	(6.67)	600	(2.67)	450	(2.00)	219	(99.3)
B2400-8	2000	(8.90)	800	(3.56)	600	(2.67)	297	(134.7)
B2400-10	2000	(8.90)	800	(3.56)	600	(2.67)	465	(210.9)
B2400-12	2000	(8.90)	800	(3.56)	600	(2.67)	560	(254.0)
B2400-14	2000	(8.90)	800	(3.56)	600	(2.67)	761	(345.2)
B2400-16	2000	(8.90)	800	(3.56)	600	(2.67)	861	(390.5)
B2400-18	2000	(8.90)	800	(3.56)	600	(2.67)	1297	(588.3)
B2400-20	2000	(8.90)	800	(3.56)	600	(2.67)	1426	(646.8)
B2400-24	2000	(8.90)	800	(3.56)	600	(2.67)	1682	(762.9)

Pipe Rollers & Roller Supports



Pipe rollers and roller supports offered in this section are designed to compensate for longitudinal movement due to the expansion or contraction of both insulated or non-insulated pipe.

Materials

Carbon Steel with Cast Iron rollers are used in the manufacture of pipe roller supports. Stainless Steel and other materials are available.

Finishes

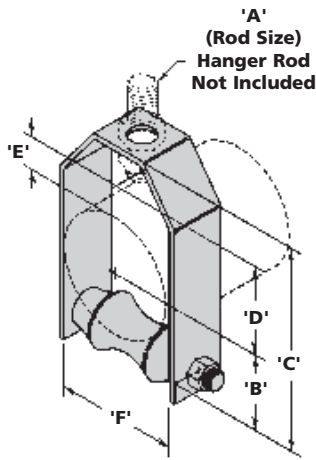
The standard finishes for mechanical supports are plain steel (oil coated) sometimes referred to as black and Electro-Plated Zinc (ASTM B 633 SC3). Hot-Dip Galvanized After Fabrication (ASTM A 123), Red Primer, Plastic Coating, Dura-Green® and other special coatings are available upon request.

Note: Due to the design of some products, (threads, connecting hardware, swivels, etc.) items may or may not be uniformly coated with special finishes. In some cases, the hanger itself may be coated, however, the hardware may be supplied Electro-Plated, Copper plated, or in Stainless Steel.

Approvals (as noted)

Items in this section comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society MSS SP-69 SP-58.

Pipe Rollers & Roller Supports



- 'A'
Rod Size
Hanger Rod
Not Included
- 'B'
Center of axle to
center of pipe.
- 'C'
Center of axle to
top of hanger steel.
- 'D'
Rod Take-Out
Center of pipe to
bottom of hanger rod.
- 'E'
Adjustment
Top of pipe to bottom
of hanger rod nut.

Note: Not for continuous cycling applications.

Material: Steel with Cast Iron Roller

Standard Finish: Plain, Electro-Plated or Dura-Green®

Service: Designed for suspending pipe where longitudinal movement and vertical adjustment is required. When used with insulated pipe, see B3160-B3165 Pipe Covering Protection Saddle charts for proper sizing on pages 128 thru 133.

Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 44 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 43.

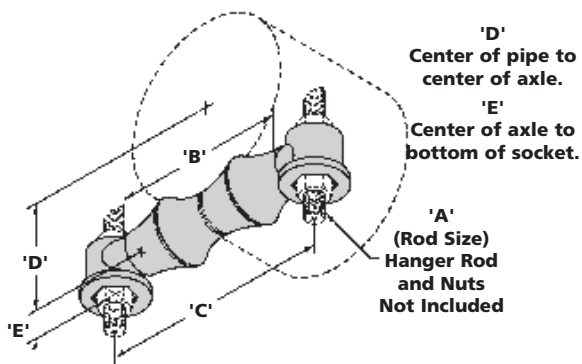
Note: If using D.I. pipe refer to page 202 for sizing. Non-metallic rollers with stainless steel yoke and hardware are available for most sizes (B3110NM-Pipe Size). Contact B-Line Engineering for more information.

Figure B3110 Adjustable Steel Yoke Pipe Roll

Part No.	Nominal Pipe Size	Rod Size 'A'	'B'	'C'	'D'	'E'
B3110-2	2" (50)	3/8"-16	1 9/16" (39.7)	4 3/4" (120.6)	2 3/8" (60.3)	1 7/16" (36.5)
B3110-2 1/2	2 1/2" (65)	1/2"-13	1 7/8" (47.6)	6" (152.4)	3 3/16" (81.0)	2" (50.8)
B3110-3	3" (80)	1/2"-13	2 3/16" (55.6)	6 5/8" (168.3)	3 1/2" (88.9)	2" (50.8)
B3110-3 1/2	3 1/2" (90)	1/2"-13	2 1/2" (63.5)	7 1/4" (184.1)	3 3/4" (95.2)	2" (50.8)
B3110-4	4" (100)	5/8"-11	2 3/4" (69.8)	7 7/8" (200.0)	4" (101.6)	2" (50.8)
B3110-5	5" (125)	5/8"-11	3 3/8" (85.7)	9 3/16" (233.4)	4 9/16" (115.9)	2" (50.8)
B3110-6	6" (150)	3/4"-10	3 15/16" (100.0)	10 3/8" (263.5)	5 1/16" (128.6)	2" (50.8)
B3110-8	8" (200)	3/4"-10	5 1/16" (128.6)	12 5/8" (320.7)	6 1/16" (154.0)	2" (50.8)
B3110-10	10" (250)	7/8"-9	6 1/4" (158.7)	14 15/16" (379.4)	7 3/16" (182.6)	2 1/16" (52.4)
B3110-12	12" (300)	7/8"-9	7 3/8" (187.3)	17 3/8" (441.3)	8 3/8" (212.7)	2 1/4" (57.1)
B3110-14	14" (350)	1"-8	8 1/4" (209.5)	19" (482.6)	8 3/4" (222.2)	2 1/4" (57.1)
B3110-16	16" (400)	1"-8	9 1/4" (234.9)	20 3/4" (527.0)	9 3/4" (247.6)	2" (50.8)
B3110-18	18" (450)	1"-8	10 3/8" (263.5)	23 11/16" (601.7)	11 7/16" (290.5)	2 1/16" (68.3)
B3110-20	20" (500)	1 1/4"-7	11 1/2" (292.1)	25 7/8" (657.2)	12 1/4" (311.1)	2 1/2" (63.5)
B3110-24	24" (600)	1 1/2"-6	13 13/16" (350.8)	31 9/16" (801.7)	15" (381.0)	3 1/2" (88.9)

Part No.	'F'	Maximum O.D. Covering		Design Load		Wt./C	
				Lbs.	kN	Lbs.	kg
B3110-2	2 7/8" (73.0)	2 5/8" (66.7)		150	(.67)	123	(55.8)
B3110-2 1/2	3 1/4" (82.5)	3" (76.2)		225	(1.00)	178	(80.7)
B3110-3	3 7/8" (98.4)	3 5/8" (92.1)		310	(1.38)	206	(93.4)
B3110-3 1/2	4 3/8" (111.1)	4 1/8" (104.8)		390	(1.73)	267	(121.1)
B3110-4	4 7/8" (123.8)	4 11/16" (119.1)		475	(2.11)	344	(156.0)
B3110-5	5 15/16" (150.8)	5 3/4" (146.0)		685	(3.04)	600	(272.1)
B3110-6	7" (177.8)	6 3/4" (171.4)		780	(3.47)	800	(362.9)
B3110-8	9" (228.6)	8 3/4" (222.2)		780	(3.47)	1300	(589.7)
B3110-10	11 1/8" (282.6)	10 3/4" (273.0)		965	(4.29)	1600	(725.7)
B3110-12	13 3/8" (339.7)	13" (330.2)		1200	(5.34)	2600	(1179.3)
B3110-14	14 1/2" (368.3)	14 1/4" (361.9)		1200	(5.34)	3400	(1542.2)
B3110-16	16 3/8" (415.9)	16 1/8" (409.6)		1200	(5.34)	3900	(1769.0)
B3110-18	18 3/8" (466.7)	18 1/8" (460.4)		1400	(6.23)	4900	(2222.6)
B3110-20	20 3/8" (517.5)	20 1/8" (511.2)		1600	(7.11)	6686	(3032.7)
B3110-24	24 5/8" (625.5)	24 3/8" (619.1)		1800	(8.00)	11630	(5275.3)

Pipe Rollers & Roller Supports



Material: Steel Axle with Cast Iron Roller/Malleable Sockets

Standard Finish: Plain or Electro-Plated

Service: Designed for suspending piping where longitudinal movement and vertical adjustment is required. When used with insulated pipe, see B3160-B3165 Pipe Covering Protection Saddle charts for proper sizing on pages 128 thru 133.

Ordering: Specify part number and finish

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 42 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 41.

Figure B3114 Pipe Roll with Sockets

Part No.	Nominal Pipe Size	Rod Size 'A'	'B'	'C'	'D'
B3114-2	2" (50)	3/8"-16	2 5/8" (66.7)	4 1/8" (104.8)	1 9/16" (39.7)
B3114-2 1/2	2 1/2" (65)	1/2"-13	3 1/8" (79.4)	4 7/8" (123.8)	1 7/8" (47.6)
B3114-3	3" (80)	1/2"-13	3 3/4" (95.2)	5 1/2" (139.7)	2 3/16" (55.6)
B3114-3 1/2	3 1/2" (90)	1/2"-13	4 1/4" (107.9)	6 1/8" (155.6)	2 1/2" (63.5)
B3114-4	4" (100)	5/8"-11	4 3/4" (120.6)	6 3/4" (171.4)	2 3/4" (69.8)
B3114-5	5" (125)	5/8"-11	5 13/16" (147.6)	8 1/16" (204.8)	3 3/8" (85.7)
B3114-6	6" (150)	3/4"-10	6 7/8" (174.6)	9 9/16" (242.9)	3 15/16" (100.0)
B3114-8	8" (200)	7/8"-9	8 7/8" (225.4)	11 15/16" (303.2)	5 1/16" (128.6)
B3114-10	10" (250)	7/8"-9	11" (279.4)	14 1/16" (357.2)	6 1/4" (158.7)
B3114-12	12" (300)	7/8"-9	13" (330.2)	15 13/16" (401.6)	7 3/8" (187.3)
B3114-14	14" (350)	1"-8	14 1/4" (361.9)	17 3/4" (450.8)	8 1/4" (209.5)
B3114-16	16" (400)	1"-8	16 1/4" (412.7)	19 3/4" (501.6)	9 1/4" (234.9)
B3114-18	18" (450)	1"-8	18 1/4" (463.5)	21 7/8" (555.6)	10 3/8" (263.5)
B3114-20	20" (500)	1 1/4"-7	20 1/4" (514.3)	24 1/4" (615.9)	11 1/2" (292.1)
B3114-24	24" (600)	1 1/2"-6	24 1/4" (615.9)	28 7/8" (733.4)	13 13/16" (350.8)
B3114-30	30" (750)	1 1/2"-6	30 1/4" (768.3)	35 1/2" (901.7)	17 1/4" (438.1)

Notes: If using D.I. pipe refer to page 202 for sizing.

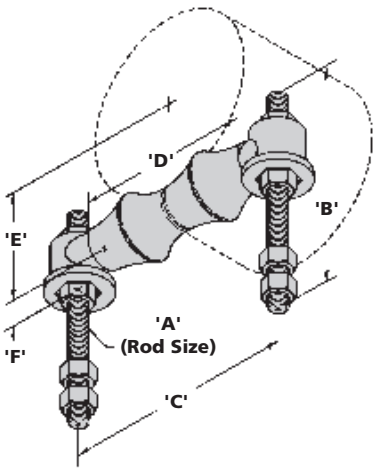
Non-metallic rollers with hot-dip galvanized sockets and stainless steel hardware are available for most sizes (B3114NM-Pipe Size). Contact B-Line Engineering for more information.

Note: Not for continuous cycling applications.

Part No.	'E'		Maximum O.D. Covering		Design Load		Wt./C	
					Lbs.	kN	Lbs.	kg
B3114-2	3/4"	(19.0)	3 1/4"	(82.5)	600	(2.67)	119	(54.0)
B3114-2 1/2	3/4"	(19.0)	3 3/4"	(95.2)	660	(2.93)	140	(63.5)
B3114-3	3/4"	(19.0)	4 1/2"	(114.3)	700	(3.11)	158	(71.6)
B3114-3 1/2	3/4"	(19.0)	5"	(127.0)	750	(3.33)	170	(77.1)
B3114-4	3/4"	(19.0)	5 7/8"	(149.2)	750	(3.33)	188	(85.3)
B3114-5	3/4"	(19.0)	7"	(177.8)	750	(3.33)	246	(111.6)
B3114-6	1 1/8"	(28.6)	8 1/4"	(209.5)	1070	(4.76)	504	(228.6)
B3114-8	1 1/8"	(28.6)	10 1/2"	(266.7)	1350	(6.00)	658	(298.4)
B3114-10	1 1/8"	(28.6)	12 3/4"	(323.8)	1730	(7.69)	849	(385.1)
B3114-12	1 1/8"	(28.6)	14 3/4"	(374.6)	2400	(10.67)	1200	(544.3)
B3114-14	1 1/2"	(38.1)	16 1/4"	(412.7)	3130	(13.92)	2289	(1038.3)
B3114-16	1 1/2"	(38.1)	18"	(457.2)	3970	(17.66)	2497	(1132.6)
B3114-18	1 1/2"	(38.1)	20 1/4"	(514.3)	4200	(18.68)	2899	(1315.0)
B3114-20	1 1/2"	(38.1)	22 1/2"	(571.5)	4550	(20.24)	3637	(1649.7)
B3114-24	2"	(50.8)	26 1/2"	(673.1)	6160	(27.40)	5664	(2569.2)
B3114-30	2"	(50.8)	32 1/2"	(825.5)	7290	(32.42)	9437	(4280.6)

36" (900) available upon request.

Pipe Rollers & Roller Supports



'D'
Length of Roller
'E'
Center of axle to
center of pipe.
'F'
Center of axle to
bottom of socket.

Material: Steel Rods and Axle with Cast Iron Roller/Malleable Sockets

Standard Finish: Plain or Electro-Plated

Service: Designed for supporting pipe where longitudinal movement and vertical adjustment are required. When used with insulated pipe, see B3160-B3165 Pipe Covering Protection Saddle charts for proper sizing on pages 128 thru 133.

Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 42 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 41.

Notes: If using D.I. pipe refer to page 202 for sizing. Non-metallic rollers with hot-dip galvanized sockets and stainless steel hardware are available for most sizes (B3122NM-Pipe Size). Contact B-Line Engineering for more information.

Figure B3122 Adjustable Roller Support

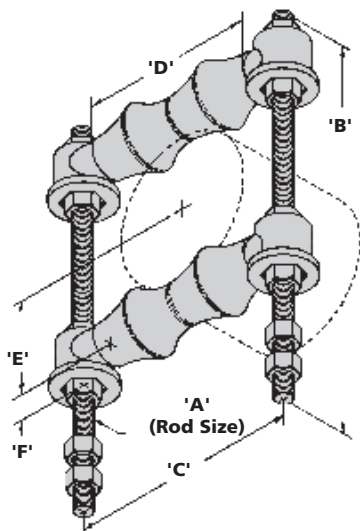
Part No.	Nominal Pipe Size	Rod Size 'A'	'B'	'C'	'D'
B3122-2	2" (50)	3/8"-16	12" (304.8)	4 1/8" (104.8)	2 5/8" (66.7)
B3122-2 1/2	2 1/2" (65)	1/2"-13	12" (304.8)	4 7/8" (123.8)	3 1/8" (79.4)
B3122-3	3" (80)	1/2"-13	12" (304.8)	5 1/2" (139.7)	3 3/4" (95.2)
B3122-3 1/2	3 1/2" (90)	1/2"-13	12" (304.8)	6 1/8" (155.6)	4 1/4" (107.9)
B3122-4	4" (100)	5/8"-11	12" (304.8)	6 3/4" (171.4)	4 3/4" (120.6)
B3122-5	5" (125)	5/8"-11	12" (304.8)	8 1/16" (204.8)	5 13/16" (147.6)
B3122-6	6" (150)	3/4"-10	12" (304.8)	9 9/16" (242.9)	6 7/8" (174.6)
B3122-8	8" (200)	7/8"-9	12" (304.8)	11 15/16" (303.2)	8 7/8" (225.4)
B3122-10	10" (250)	7/8"-9	12" (304.8)	14 1/16" (357.2)	11" (279.4)
B3122-12	12" (300)	7/8"-9	12" (304.8)	15 13/16" (401.6)	13" (330.2)
B3122-14	14" (350)	1"-8	12" (304.8)	17 3/4" (450.8)	14 1/4" (361.9)
B3122-16	16" (400)	1"-8	18" (457.2)	19 3/4" (501.6)	16 1/4" (412.7)
B3122-18	18" (450)	1"-8	18" (457.2)	21 7/8" (555.6)	18 1/4" (463.5)
B3122-20	20" (500)	1 1/4"-7	18" (457.2)	24 1/4" (615.9)	20 1/4" (514.3)
B3122-24	24" (600)	1 1/2"-6	24" (609.6)	28 7/8" (733.4)	24 1/4" (615.9)

Note: Not for continuous cycling applications.

Pipe Rollers & Pipe Supports

Part No.	'E'		'F'		Design Load		Wt./C	
	Lbs.	kN	Lbs.	kN	Lbs.	kg	Lbs.	kg
B3122-2	1 9/16" (39.7)		3/4" (19.0)		600	(2.67)	194	(88.0)
B3122-2 1/2	1 7/8" (47.6)		3/4" (19.0)		660	(2.93)	284	(128.8)
B3122-3	2 3/16" (55.6)		3/4" (19.0)		700	(3.11)	302	(137.0)
B3122-3 1/2	2 1/2" (63.5)		3/4" (19.0)		750	(3.33)	314	(142.4)
B3122-4	2 3/4" (69.8)		3/4" (19.0)		750	(3.33)	438	(198.7)
B3122-5	3 3/8" (85.7)		3/4" (19.0)		750	(3.33)	495	(224.5)
B3122-6	3 15/16" (100.0)		1 1/8" (28.6)		1070	(4.76)	867	(393.3)
B3122-8	5 1/16" (128.6)		1 1/8" (28.6)		1350	(6.00)	1176	(533.4)
B3122-10	6 1/4" (158.7)		1 1/8" (28.6)		1730	(7.69)	1368	(620.5)
B3122-12	7 3/8" (187.3)		1 1/8" (28.6)		2400	(10.67)	1861	(844.1)
B3122-14	8 1/4" (209.5)		1 1/2" (38.1)		3130	(13.92)	3116	(1413.4)
B3122-16	9 7/16" (239.7)		1 1/2" (38.1)		3970	(17.66)	3550	(1610.3)
B3122-18	10 1/2" (266.7)		1 1/2" (38.1)		4200	(18.68)	4328	(1963.2)
B3122-20	11 1/2" (292.1)		1 1/2" (38.1)		4550	(20.24)	5241	(2377.3)
B3122-24	13 13/16" (350.8)		2" (50.8)		6160	(27.40)	7773	(3525.8)

Pipe Rollers & Roller Supports



'D'
Length of Roller
'E'
Center of axle to
center of pipe.
'F'
Center of axle to
bottom of socket.

Material: Steel Rods and Axle with Cast Iron Rollers/Malleable Sockets

Standard Finish: Plain or Electro-Plated

Service: Designed for supporting and guiding pipe where longitudinal movement and vertical adjustment are required. When used with insulated pipe, see B3160-B3165 Pipe Covering Protection Saddle charts for proper sizing on pages 128 thru 133.

Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 42 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 41.

Notes: If using D.I. pipe refer to page 202 for sizing. Non-metallic rollers with hot-dip galvanized sockets and stainless steel hardware are available for most sizes (B3122ANM-Pipe Size). Contact B-Line Engineering for more information.

Figure B3122A Adjustable Double Roller Guide

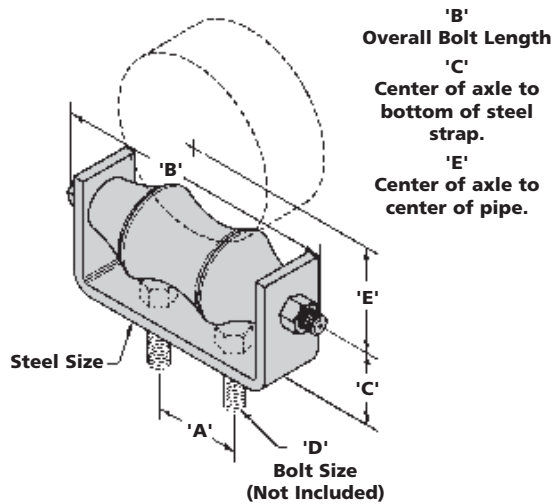
Part No.	Nominal Pipe Size		Rod Size 'A'	'B'		'C'		'D'	
B3122A-2	2"	(50)	3/8"-16	12"	(304.8)	4 1/8"	(104.8)	2 5/8"	(66.7)
B3122A-2 1/2	2 1/2"	(65)	1/2"-13	14"	(355.6)	4 7/8"	(123.8)	3 1/8"	(79.4)
B3122A-3	3"	(80)	1/2"-13	14"	(355.6)	5 1/2"	(139.7)	3 3/4"	(95.2)
B3122A-3 1/2	3 1/2"	(90)	1/2"-13	14"	(355.6)	6 1/8"	(155.6)	4 1/4"	(107.9)
B3122A-4	4"	(100)	5/8"-11	18"	(457.2)	6 3/4"	(171.4)	4 3/4"	(120.6)
B3122A-5	5"	(125)	5/8"-11	18"	(457.2)	8 1/16"	(204.8)	5 13/16"	(147.6)
B3122A-6	6"	(150)	3/4"-10	24"	(609.6)	9 9/16"	(242.9)	6 7/8"	(174.6)
B3122A-8	8"	(200)	7/8"-9	24"	(609.6)	11 15/16"	(303.2)	8 7/8"	(225.4)
B3122A-10	10"	(250)	7/8"-9	30"	(762.0)	14 1/16"	(357.2)	11"	(279.4)
B3122A-12	12"	(300)	7/8"-9	30"	(762.0)	15 13/16"	(401.6)	13"	(330.2)
B3122A-14	14"	(350)	1"-8	36"	(914.4)	17 3/4"	(450.8)	14 1/4"	(361.9)
B3122A-16	16"	(400)	1"-8	36"	(914.4)	19 3/4"	(501.6)	16 1/4"	(412.7)
B3122A-18	18"	(450)	1"-8	42"	(1066.8)	21 7/8"	(555.6)	18 1/4"	(463.5)
B3122A-20	20"	(500)	1 1/4"-7	42"	(1066.8)	24 1/4"	(615.9)	20 1/4"	(514.3)
B3122A-24	24"	(600)	1 1/2"-6	48"	(1219.2)	28 7/8"	(733.4)	24 1/4"	(615.9)

Note: Not for continuous cycling applications.

Part No.	'E'		'F'		Design Load		Wt./C	
	Lbs.	kN	Lbs.	kN	Lbs.	kg	Lbs.	kg
B3122A-2	1 9/16"	(39.7)	3/4"	(19.0)	600	(2.67)	323	(146.5)
B3122A-2 1/2	1 7/8"	(47.6)	3/4"	(19.0)	660	(2.93)	465	(210.9)
B3122A-3	2 3/16"	(55.6)	3/4"	(19.0)	700	(3.11)	501	(227.2)
B3122A-3 1/2	2 1/2"	(63.5)	3/4"	(19.0)	750	(3.33)	525	(238.1)
B3122A-4	2 3/4"	(69.8)	3/4"	(19.0)	750	(3.33)	757	(343.4)
B3122A-5	3 3/8"	(85.7)	3/4"	(19.0)	750	(3.33)	872	(395.5)
B3122A-6	3 15/16"	(100.0)	1 1/8"	(28.6)	1070	(4.76)	1687	(765.2)
B3122A-8	5 1/16"	(128.6)	1 1/8"	(28.6)	1350	(6.00)	2277	(1032.8)
B3122A-10	6 1/4"	(158.7)	1 1/8"	(28.6)	1730	(7.69)	2830	(1283.7)
B3122A-12	7 3/8"	(187.3)	1 1/8"	(28.6)	2400	(10.67)	3817	(1731.4)
B3122A-14	8 1/4"	(209.5)	1 1/2"	(38.1)	3130	(13.92)	6513	(2954.3)
B3122A-16	9 7/16"	(242.9)	1 1/2"	(38.1)	3970	(17.66)	6759	(3065.9)
B3122A-18	10 1/2"	(266.7)	1 1/2"	(38.1)	4200	(18.68)	7518	(3410.1)
B3122A-20	11 1/2"	(292.1)	1 1/2"	(38.1)	4550	(20.24)	11222	(5090.3)
B3122A-24	13 13/16"	(350.8)	2"	(50.8)	6160	(27.40)	17666	(8013.3)

Pipe Rollers & Pipe Supports

Pipe Rollers & Roller Supports



Material: Steel with Cast Iron Roller

Standard Finish: Plain or Electro-Plated

Service: Designed for supporting pipe with longitudinal movement. When used with insulated pipe, see B3160-B3165 Pipe Covering Protection Saddle charts for proper sizing on pages 128 thru 133.

Ordering: Specify part number and finish. (Order mounting bolts separately).

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 45 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 44.

Notes: If using D.I. pipe refer to page 202 for sizing. Non-metallic rollers with stainless steel chair and hardware are available for most sizes (B3120NM-Pipe Size). Contact B-Line Engineering for more information.

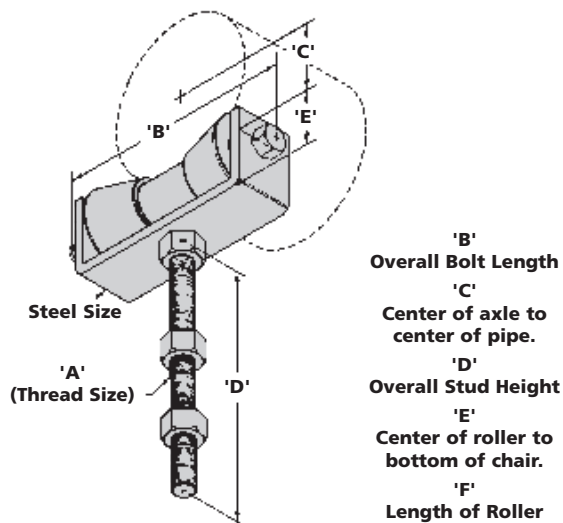
Figure B3120 Roller Chair

Part No.	Nominal Pipe Size		'A'		'B'		'C'		Recommended Bolt Size (Not Included) 'D'
	IN	MM	IN	MM	IN	MM	IN	MM	
B3120-2	2"	(50)	1 1/4"	(31.7)	4 5/8"	(117.5)	1 1/2"	(38.1)	3/8"-16 x 1 1/2"
B3120-2 1/2	2 1/2"	(65)	1 1/4"	(31.7)	5 3/8"	(136.5)	1 5/8"	(41.3)	3/8"-16 x 1 1/2"
B3120-3	3"	(80)	2"	(50.8)	6"	(152.4)	1 3/4"	(44.4)	3/8"-16 x 1 1/2"
B3120-3 1/2	3 1/2"	(90)	2"	(50.8)	6 3/4"	(171.4)	2 1/16"	(52.4)	3/8"-16 x 1 1/2"
B3120-4	4"	(100)	2"	(50.8)	7 1/4"	(184.1)	2 5/16"	(58.7)	1/2"-13 x 1 1/2"
B3120-5	5"	(125)	3"	(76.2)	8 7/16"	(214.3)	2 1/2"	(63.5)	1/2"-13 x 1 1/2"
B3120-6	6"	(150)	3 1/8"	(79.4)	9 3/4"	(247.6)	2 3/4"	(69.8)	1/2"-13 x 1 1/2"
B3120-8	8"	(200)	3 3/8"	(85.7)	12"	(304.8)	3"	(76.2)	5/8"-11 x 1 1/2"
B3120-10	10"	(250)	5 1/4"	(133.3)	14 7/16"	(366.7)	3 5/8"	(92.1)	5/8"-11 x 2"
B3120-12	12"	(300)	5 1/2"	(139.7)	16 5/8"	(422.3)	4 1/8"	(104.8)	5/8"-11 x 2"
B3120-14	14"	(350)	6"	(152.4)	18 1/4"	(463.5)	4 5/8"	(117.5)	5/8"-11 x 2"
B3120-16	16"	(400)	8"	(203.2)	21"	(533.4)	5"	(127.0)	5/8"-11 x 2 1/2"
B3120-18	18"	(450)	9"	(228.6)	23"	(584.2)	5 1/4"	(133.3)	5/8"-11 x 2 1/2"
B3120-20	20"	(500)	10"	(254.0)	25"	(635.0)	5 3/4"	(146.0)	3/4"-10 x 3"
B3120-24	24"	(600)	12"	(304.8)	30"	(762.0)	7"	(177.8)	3/4"-10 x 3"

Note: Not for continuous cycling applications.

Part No.	'E'	Steel Size		Design Load		Wt./C		
		IN	MM	Lbs.	kN	Lbs.	kg	
B3120-2	1 9/16"	(39.7)	1/4" x 1 1/4"	(6.3 x 31.7)	300	(1.33)	119	(54.0)
B3120-2 1/2	1 7/8"	(47.6)	1/4" x 1 1/4"	(6.3 x 31.7)	600	(2.67)	146	(66.2)
B3120-3	2 3/16"	(55.6)	1/4" x 1 1/4"	(6.3 x 31.7)	600	(2.67)	172	(78.0)
B3120-3 1/2	2 1/2"	(63.5)	3/8" x 1 1/2"	(9.5 x 38.1)	600	(2.67)	264	(119.7)
B3120-4	2 3/4"	(69.8)	3/8" x 1 1/2"	(9.5 x 38.1)	700	(3.11)	303	(137.4)
B3120-5	3 3/8"	(85.7)	3/8" x 1 1/2"	(9.5 x 38.1)	700	(3.11)	401	(181.9)
B3120-6	3 15/16"	(100.0)	3/8" x 2"	(9.5 x 50.8)	1000	(4.45)	620	(281.2)
B3120-8	5 1/16"	(128.6)	3/8" x 2"	(9.5 x 50.8)	1300	(5.78)	874	(396.4)
B3120-10	6 1/4"	(158.7)	1/2" x 2"	(12.7 x 50.8)	1700	(7.56)	1270	(576.1)
B3120-12	7 3/8"	(187.3)	1/2" x 2"	(12.7 x 50.8)	2300	(10.33)	1918	(870.0)
B3120-14	8 1/4"	(209.5)	1/2" x 2 1/2"	(12.7 x 63.5)	3100	(13.79)	2629	(1192.5)
B3120-16	9 1/4"	(234.9)	5/8" x 2 1/2"	(15.9 x 63.5)	3900	(17.35)	3248	(1473.3)
B3120-18	10 3/8"	(263.5)	5/8" x 2 1/2"	(15.9 x 63.5)	4200	(18.68)	4120	(1868.8)
B3120-20	11 1/2"	(292.1)	5/8" x 3"	(15.9 x 76.2)	4500	(20.01)	5630	(3553.7)
B3120-24	13 3/4"	(349.2)	3/4" x 3"	(19.0 x 76.2)	6000	(26.69)	7702	(3493.6)

Pipe Rollers & Roller Supports



Material: Steel with Cast Iron Roller

Standard Finish: Plain or Electro-Plated

Service: Designed for supporting pipe where longitudinal movement and vertical adjustment are required. When used with insulated pipe, see B3160-B3165 Pipe Covering Protection Saddle charts for proper sizing on pages 128 thru 133.

Ordering: Specify part number and finish.

Notes: If using D.I. pipe refer to page 202 for sizing. Non-metallic rollers with stainless steel chair and hardware are available for most sizes (B3124NM-Pipe Size). Contact B-Line Engineering for more information.

Figure B3124 Roller Support

Part No.	Nominal Pipe Size		Thread Size 'A'	'B'		'C'		'D'	
B3124-2 to 3 1/2	2"	(50)	5/8"-11	4 3/4"	(120.6)	1 3/4"	(44.4)	5"	(127.0)
	2 1/2"	(65)	5/8"-11	4 3/4"	(120.6)	2 1/8"	(54.0)	5"	(127.0)
	3"	(80)	5/8"-11	4 3/4"	(120.6)	2 3/8"	(60.3)	5"	(127.0)
	3 1/2"	(90)	5/8"-11	4 3/4"	(120.6)	2 5/8"	(66.7)	5"	(127.0)
B3124-4 to 6	4"	(100)	3/4"-10	5 7/8"	(149.2)	2 3/4"	(69.8)	6"	(152.4)
	5"	(125)	3/4"-10	5 7/8"	(149.2)	3 3/8"	(85.7)	6"	(152.4)
	6"	(150)	3/4"-10	5 7/8"	(149.2)	4"	(101.6)	6"	(152.4)
B3124-8 to 10	8"	(200)	7/8"-9	8 3/4"	(222.2)	5 1/4"	(133.3)	6"	(152.4)
	10"	(250)	7/8"-9	8 3/4"	(222.2)	6 3/8"	(161.9)	6"	(152.4)
B3124-12 to 14	12"	(300)	1"-8	11 1/4"	(285.7)	7 1/2"	(190.5)	7"	(177.8)
	14"	(350)	1"-8	11 1/4"	(285.7)	8 1/8"	(206.4)	7"	(177.8)
B3124-16 to 20	16"	(400)	1 1/8"-7	12 1/2"	(317.5)	9 3/8"	(238.1)	8"	(203.2)
	18"	(450)	1 1/8"-7	12 1/2"	(317.5)	10 3/8"	(263.5)	8"	(203.2)
	20"	(500)	1 1/8"-7	12 1/2"	(317.5)	11 3/8"	(288.9)	8"	(203.2)

Note: Not for continuous cycling applications.

Part No.	'E'		Length of Roller		Steel Size		Design Load		Wt./C	
							Lbs.	kN	Lbs.	kg
B3124-2 to 3 1/2	1 13/16"	(46.0)	2 3/4"	(69.8)	3/16" x 1 1/2"	(4.8 x 38.1)	390	(1.73)	233	(105.7)
B3124-4 to 6	2"	(50.8)	3 3/4"	(95.2)	1/4" x 2"	(6.3 x 50.8)	600	(2.67)	368	(166.9)
B3124-8 to 10	2 11/16"	(68.3)	6"	(152.4)	3/8" x 2"	(9.5 x 50.8)	800	(3.56)	919	(416.8)
B3124-12 to 14	3 1/4"	(82.5)	8"	(203.2)	1/2" x 2"	(12.7 x 50.8)	1300	(5.78)	1660	(753.0)
B3124-16 to 20	3 1/2"	(88.9)	9"	(228.6)	1/2" x 2"	(12.7 x 50.8)	2300	(10.23)	2250	(1020.6)

All dimensions in charts and on drawings are in inches. Dimensions shown in parentheses are in millimeters unless otherwise specified.

Pipe Rollers & Roller Supports

Material: Steel with Cast Iron Roller

Standard Finish: Plain or Electro-Plated

Service: Designed to mount on strut (metal framing) for the support of pipe with longitudinal movement. When used with insulated pipe, see B3160-B3165 Pipe Covering Protection Saddle charts for proper sizing on pages 128 thru 133.

Ordering: Specify part number and finish.

Notes: If using D.I. pipe refer to page 202 for sizing. Non-metallic rollers with stainless steel brackets and hardware are available (B3126NM-Pipe Size). Contact B-Line Engineering for more information.

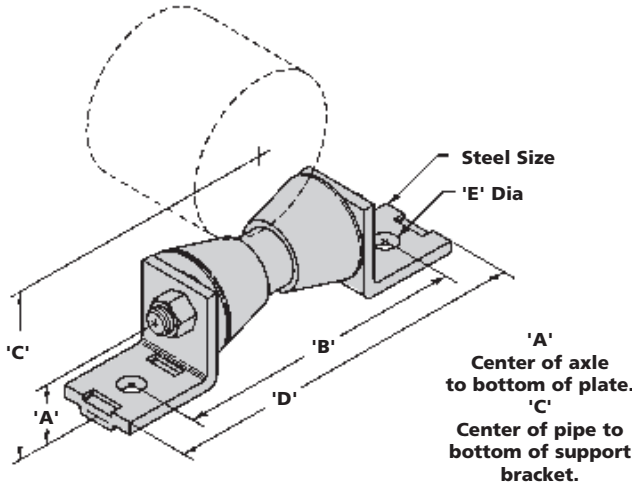


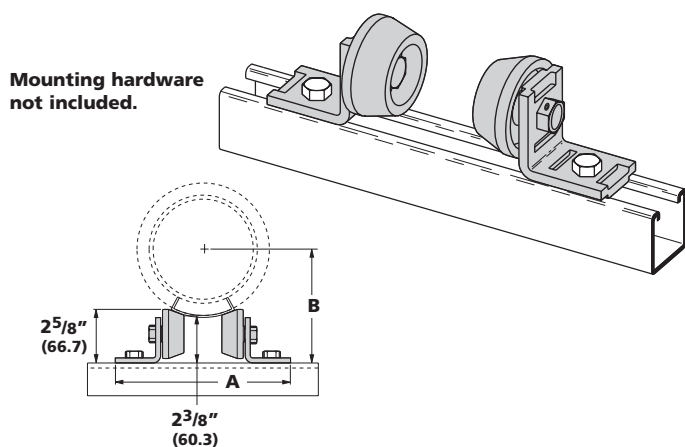
Figure B3126 Roller Support

Note: Not for continuous cycling applications.

Part No.	Nominal Pipe Size	'A'	'B'	'C'	'D'
B3126-2 to 3 1/2	2" (50)	1 7/16" (36.5)	6" (152.4)	3 11/64" (80.6)	7 5/8" (193.7)
	2 1/2" (65)	1 7/16" (36.5)	6" (152.4)	3 27/64" (86.9)	7 5/8" (193.7)
	3" (80)	1 7/16" (36.5)	6" (152.4)	3 47/64" (94.8)	7 5/8" (193.7)
	3 1/2" (90)	1 7/16" (36.5)	6" (152.4)	3 63/64" (101.2)	7 5/8" (193.7)
B3126-4 to 6	4" (100)	1 7/16" (36.5)	7" (177.8)	4 13/64" (106.8)	8 5/8" (219.1)
	5" (125)	1 7/16" (36.5)	7" (177.8)	4 47/64" (120.2)	8 5/8" (219.1)
	6" (150)	1 7/16" (36.5)	7" (177.8)	5 17/64" (133.8)	8 5/8" (219.1)
B3126-8 to 10	8" (200)	1 13/16" (46.0)	8 3/4" (222.3)	7" (177.8)	10 3/8" (263.5)
	10" (250)	1 13/16" (46.0)	8 3/4" (222.3)	8 1/16" (204.8)	10 3/8" (263.5)
B3126-12 to 14	12" (300)	2 7/16" (61.9)	12 1/8" (308.0)	9 27/32" (250.1)	14 3/8" (365.1)
	14" (350)	2 7/16" (61.9)	12 1/8" (308.0)	10 15/32" (265.9)	14 3/8" (365.1)
B3126-16 to 20	16" (400)	2 5/8" (66.7)	13 1/8" (333.4)	11 7/8" (301.6)	15 3/8" (390.5)
	18" (450)	2 5/8" (66.7)	13 1/8" (333.4)	12 7/8" (327.1)	15 3/8" (390.5)
	20" (500)	2 5/8" (66.7)	13 1/8" (333.4)	13 7/8" (352.4)	15 3/8" (390.5)

Part No.	'E'		Steel Size		Design Load		Wt./C	
					Lbs.	kN	Lbs.	kg
B3126-2 to 3 1/2	9/16"	(14.3)	1/4" x 1 5/8"	(6.3 x 41.3)	390	(1.73)	177	(80.3)
B3126-4 to 6	9/16"	(14.3)	1/4" x 1 5/8"	(6.3 x 41.3)	600	(2.67)	231	(104.8)
B3126-8 to 10	9/16"	(14.3)	1/4" x 1 5/8"	(6.3 x 41.3)	800	(3.56)	542	(245.8)
B3126-12 to 14	13/16"	(20.6)	3/8" x 2"	(9.5 x 50.8)	1300	(5.78)	1040	(471.7)
B3126-16 to 20	13/16"	(20.6)	3/8" x 2"	(9.5 x 50.8)	2300	(10.23)	1508	(684.0)

Pipe Rollers & Roller Supports



Material: Steel with Malleable Iron Rollers

Standard Finish: Electro-Plated

Service: Designed to mount on strut (metal framing) for the support of pipe with longitudinal movement. When used with insulated pipe, see B3160-B3165 Pipe Covering Protection Saddle charts for proper sizing on pages 128 thru 133.

Ordering: Specify part number and finish.

Design Load: 500 Lbs. (2.22kN)

Note: If using D.I. pipe refer to page 202 for sizing.

Figure B218 Pipe Rollers-1/2" (15) to 8" (200) Pipe

Note: Not for continuous cycling applications.

Reference Chart - A Dimension

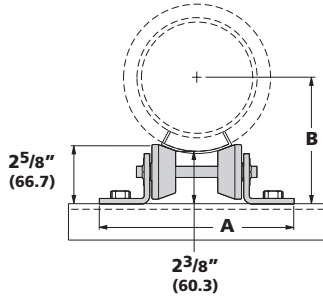
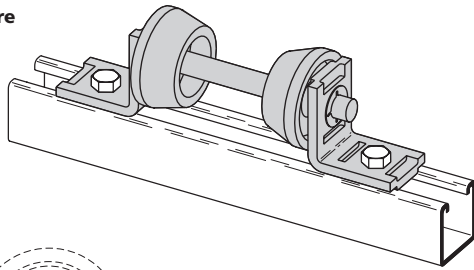
Pipe Size	Insulation Thickness													
	0" (0.0)		1" (25.4)		1 1/2" (38.1)		2" (50.8)		2 1/2" (63.5)		3" (76.2)		4" (101.6)	
1/2" (15)	7 1/4" (184.1)	--	--	--	--	--	--	--	--	--	--	--	--	--
3/4" (20)	7 1/4" (184.1)	7 1/4" (184.1)	7 5/8" (193.7)	8" (203.2)	--	--	--	--	--	--	--	--	--	--
1" (25)	7 1/4" (184.1)	7 1/4" (184.1)	7 5/8" (193.7)	8 1/4" (209.5)	--	--	--	--	--	--	--	--	--	--
1 1/4" (32)	7 1/4" (184.1)	7 1/4" (184.1)	8" (203.2)	8 1/4" (209.5)	--	--	--	--	--	--	--	--	--	--
1 1/2" (40)	7 1/4" (184.1)	7 5/8" (193.7)	8" (203.2)	8 1/2" (215.9)	9" (228.6)	--	--	--	--	--	--	--	--	--
2" (50)	7 1/4" (184.1)	7 5/8" (193.7)	8 1/2" (215.9)	8 1/2" (215.9)	9" (228.6)	--	--	--	--	--	--	--	--	--
2 1/2" (65)	7 1/4" (184.1)	8" (203.2)	8 1/2" (215.9)	9" (228.6)	10" (254.0)	--	--	--	--	--	--	--	--	--
3" (80)	7 1/4" (184.1)	8 1/2" (215.9)	9" (228.6)	9" (228.6)	10" (254.0)	10" (254.0)	10" (254.0)	10" (254.0)	10" (254.0)	--	--	--	--	--
3 1/2" (90)	7 1/4" (184.1)	8 1/2" (215.9)	9" (228.6)	10" (254.0)	10" (254.0)	10" (254.0)	10" (254.0)	10" (254.0)	10" (254.0)	--	--	--	--	--
4" (100)	7 5/8" (193.7)	9" (228.6)	9" (228.6)	10" (254.0)	10" (254.0)	10" (254.0)	10" (254.0)	10" (254.0)	10" (254.0)	--	--	--	--	--
5" (125)	8 1/2" (215.9)	9" (228.6)	10" (254.0)	10" (254.0)	10" (254.0)	11" (279.4)	11" (279.4)	11" (279.4)	11" (279.4)	12" (304.8)	--	--	--	--
6" (150)	9" (228.6)	10" (254.0)	10" (254.0)	10" (254.0)	11" (279.4)	11" (279.4)	11" (279.4)	11" (279.4)	11" (279.4)	12" (304.8)	--	--	--	--
8" (200)	10" (254.0)	11" (279.4)	11" (279.4)	11" (279.4)	11" (279.4)	12" (304.8)	--	--	--	--	--	--	--	--

Reference Chart - B Dimension

Pipe Size	Insulation Thickness													
	0" (0.0)		1" (25.4)		1 1/2" (38.1)		2" (50.8)		2 1/2" (63.5)		3" (76.2)		4" (101.6)	
1/2" (15)	2 11/16" (68.3)	--	--	--	--	--	--	--	--	--	--	--	--	--
3/4" (20)	2 13/16" (71.4)	3 7/8" (98.4)	4 3/8" (111.1)	4 7/8" (123.8)	--	--	--	--	--	--	--	--	--	--
1" (25)	2 15/16" (74.6)	4 3/16" (106.4)	4 11/16" (119.1)	5 1/16" (128.6)	--	--	--	--	--	--	--	--	--	--
1 1/4" (32)	3 1/8" (79.4)	4 3/16" (106.4)	4 5/8" (117.5)	5 1/8" (130.2)	--	--	--	--	--	--	--	--	--	--
1 1/2" (40)	3 1/4" (82.5)	4 3/8" (111.1)	4 7/8" (123.8)	5 5/16" (134.9)	5 3/4" (146.0)	--	--	--	--	--	--	--	--	--
2" (50)	3 9/16" (90.5)	4 11/16" (119.1)	5 1/16" (128.6)	5 5/8" (142.9)	6 1/16" (154.0)	--	--	--	--	--	--	--	--	--
2 1/2" (65)	3 13/16" (96.8)	4 7/8" (123.8)	5 5/16" (134.9)	6" (152.4)	6 3/8" (161.9)	--	--	--	--	--	--	--	--	--
3" (80)	4 1/8" (104.8)	5 1/16" (128.6)	5 9/16" (141.3)	6 1/8" (155.6)	6 7/16" (163.5)	7" (177.8)	--	--	--	--	--	--	--	--
3 1/2" (90)	4 3/8" (111.1)	5 5/16" (134.9)	5 13/16" (147.6)	6 1/4" (158.7)	6 11/16" (169.9)	7 1/4" (184.1)	--	--	--	--	--	--	--	--
4" (100)	4 5/8" (117.5)	5 9/16" (141.3)	6 1/16" (154.0)	6 7/16" (163.5)	6 15/16" (176.2)	7 3/8" (187.3)	--	--	--	--	--	--	--	--
5" (125)	5 1/2" (127.0)	6 1/16" (154.0)	6 7/16" (163.5)	7" (177.8)	7 3/8" (187.3)	7 7/8" (200.0)	8 13/16" (223.8)	--	--	--	--	--	--	--
6" (150)	5 1/2" (139.7)	6 1/16" (163.5)	6 15/16" (176.2)	7 3/8" (187.3)	7 15/16" (201.6)	8 1/2" (215.9)	9 1/2" (241.3)	--	--	--	--	--	--	--
8" (200)	6 15/16" (160.3)	7 3/8" (187.3)	7 15/16" (201.6)	8 7/16" (214.3)	8 15/16" (227.0)	--	--	--	--	--	--	--	--	--

Pipe Rollers & Roller Supports

Mounting hardware not included.



Material: Steel with Malleable Iron Rollers

Standard Finish: Electro-Plated

Service: Designed to mount on strut (metal framing) for the support of pipe with longitudinal movement. When used with insulated pipe, see B3160-B3165 Pipe Covering Protection Saddle charts for proper sizing on pages 128 thru 133.

Ordering: Specify part number and finish.

Design Load: 750 Lbs. (3.33kN)

Note: If using D.I. pipe refer to page 202 for sizing.

Note: Not for continuous cycling applications.

Figure B219 Pipe Rollers $\frac{3}{4}$ " (15) to 12" (300) Pipe

B219 Sizing Chart

Pipe Size	Insulation Thickness							
	0" (0.0)	1" (25.4)	1 1/2" (38.1)	2" (50.8)	2 1/2" (63.5)	3" (76.2)	4" (101.6)	
1/2" (15)	B219	--	--	--	--	--	--	--
3/4" (20)	B219	B219	B219	B219-1	--	--	--	--
1" (25)	B219	B219	B219-1	B219-1	--	--	--	--
1 1/4" (32)	B219	B219	B219-1	B219-1	--	--	--	--
1 1/2" (40)	B219	B219	B219-1	B219-2	B219-2	--	--	--
2" (50)	B219	B219-1	B219-1	B219-2	B219-2	--	--	--
2 1/2" (65)	B219	B219-1	B219-2	B219-2	B219-3	--	--	--
3" (80)	B219	B219-1	B219-2	B219-2	B219-3	B219-3	--	--
3 1/2" (90)	B219-1	B219-2	B219-2	B219-3	B219-3	B219-4	--	--
4" (100)	B219-1	B219-2	B219-2	B219-3	B219-3	B219-4	--	--
5" (125)	B219-1	B219-2	B219-3	B219-3	B219-4	B219-4	B219-5	--
6" (150)	B219-2	B219-3	B219-3	B219-4	B219-4	B219-5	B219-5	--
8" (200)	B219-3	B219-4	B219-4	B219-5	B219-5	--	--	--
10" (250)	B219-4	B219-5	--	--	--	--	--	--
12" (300)	B219-5	--	--	--	--	--	--	--

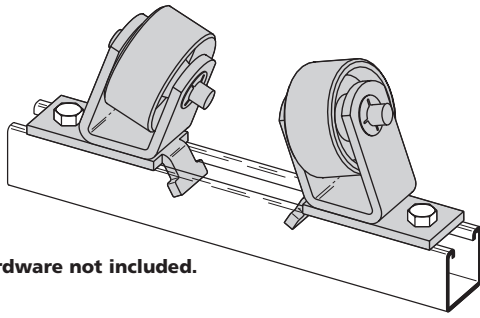
Reference Chart - A Dimension

Part No.	A		Wt./C	
	in	mm	Lbs.	kg
B219	7 1/4"	(184.1)	253	(114.7)
B219-1	8"	(203.2)	258	(117.0)
B219-2	9"	(228.6)	263	(119.3)
B219-3	10"	(254.0)	269	(122.0)
B219-4	10 7/8"	(276.2)	274	(124.8)
B219-5	11 5/8"	(295.3)	279	(126.5)

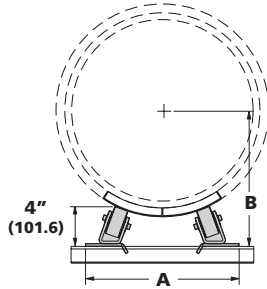
Reference Chart - B Dimension

Pipe Size	Insulation Thickness													
	0" (0.0)		1" (25.4)		1 1/2" (38.1)		2" (50.8)		2 1/2" (63.5)		3" (76.2)		4" (101.6)	
1/2" (15)	2 11/16"	(68.3)	--	--	--	--	--	--	--	--	--	--	--	--
3/4" (20)	2 13/16"	(71.4)	3 7/8"	(98.4)	4 1/2"	(114.3)	4 7/8"	(123.8)	--	--	--	--	--	--
1" (25)	2 15/16"	(74.6)	4 3/8"	(106.4)	4 5/8"	(117.5)	5 1/16"	(128.6)	--	--	--	--	--	--
1 1/4" (32)	3 1/8"	(79.4)	4 3/8"	(106.4)	4 5/8"	(117.5)	5 1/8"	(130.2)	--	--	--	--	--	--
1 1/2" (40)	3 1/4"	(82.5)	4 7/16"	(112.7)	4 7/8"	(123.8)	5 1/4"	(133.3)	5 3/4"	(146.0)	--	--	--	--
2" (50)	3 9/16"	(90.5)	4 5/8"	(117.5)	5 3/16"	(131.8)	5 1/2"	(139.7)	6 1/16"	(154.0)	--	--	--	--
2 1/2" (65)	3 3/4"	(95.2)	4 7/8"	(123.8)	5 1/4"	(133.3)	6"	(152.4)	6 3/8"	(161.9)	--	--	--	--
3" (80)	4 1/8"	(104.8)	5 1/8"	(130.2)	5 9/16"	(141.3)	6 1/16"	(154.0)	6 7/16"	(163.5)	6 15/16"	(176.2)	--	--
3 1/2" (90)	4 1/4"	(107.9)	5 1/4"	(133.3)	5 13/16"	(147.6)	6 1/4"	(158.7)	6 11/16"	(169.9)	7 1/16"	(179.4)	--	--
4" (100)	4 9/16"	(115.9)	5 1/2"	(139.7)	6 1/16"	(154.0)	6 7/16"	(163.5)	6 15/16"	(176.2)	7 3/8"	(187.3)	--	--
5" (125)	5 1/16"	(128.6)	6 1/16"	(154.0)	6 7/16"	(163.5)	7"	(177.8)	7 3/8"	(187.3)	7 7/8"	(200.0)	8 15/16"	(211.1)
6" (150)	5 7/16"	(138.1)	6 7/16"	(163.5)	6 15/16"	(176.2)	7 3/8"	(187.3)	7 7/8"	(200.0)	8 15/16"	(211.1)	9 9/16"	(242.9)
8" (200)	6 3/8"	(161.9)	7 7/16"	(188.9)	7 15/16"	(201.6)	8 3/8"	(212.7)	9"	(228.6)	--	--	--	--
10" (250)	7 5/16"	(185.7)	8 3/16"	(208.0)	--	--	--	--	--	--	--	--	--	--
12" (300)	8 1/4"	(209.5)	--	--	--	--	--	--	--	--	--	--	--	--

Pipe Rollers & Roller Supports



Mounting hardware not included.



Material: Steel with Malleable Iron Rollers

Standard Finish: Electro-Plated

Service: Designed to mount on strut (metal framing) for the support of pipe with longitudinal movement. When used with insulated pipe, see B3160-B3165 Pipe Covering Protection Saddle charts for proper sizing on pages 128 thru 133.

Ordering: Specify part number and finish.

Design Load: 1500 Lbs. (6.67kN)

Note: If using D.I. pipe refer to page 202 for sizing.

Figure B379 Pipe Roller - 6" (150) to 18" (450) Pipe

Note: Not for continuous cycling applications.

Pipe Rollers & Pipe Supports

Reference Chart - A Dimension

Pipe Size	Insulation Thickness						
	0" (0.0)	1" (25.4)	1 1/2" (38.1)	2" (50.8)	2 1/2" (63.5)	3" (76.2)	4" (101.6)
6" (150)	9 ⁹ / ₁₆ " (242.9)	10 ³ / ₁₆ " (258.8)	10 ⁵ / ₈ " (269.9)	11" (279.4)	11 ³ / ₈ " (288.9)	11 ³ / ₄ " (298.4)	12 ¹ / ₂ " (317.5)
8" (200)	10 ¹ / ₄ " (260.3)	11 ¹ / ₁₆ " (281.0)	11 ³ / ₈ " (288.9)	11 ³ / ₄ " (298.4)	12 ³ / ₁₆ " (309.6)	12 ¹ / ₂ " (317.5)	13 ¹ / ₄ " (336.5)
10" (250)	11" (279.4)	11 ³ / ₄ " (298.4)	12 ¹ / ₈ " (308.0)	12 ¹ / ₂ " (317.5)	12 ¹³ / ₁₆ " (325.4)	13 ¹ / ₈ " (333.4)	13 ⁷ / ₈ " (352.4)
12" (300)	11 ¹¹ / ₁₆ " (296.9)	12 ⁹ / ₁₆ " (319.1)	12 ⁷ / ₈ " (327.0)	13 ¹ / ₄ " (336.5)	13 ⁹ / ₁₆ " (344.5)	13 ⁷ / ₈ " (352.4)	14 ⁵ / ₈ " (371.5)
14" (350)	12 ¹ / ₁₆ " (306.4)	12 ⁷ / ₈ " (327.0)	13 ³ / ₁₆ " (335.0)	13 ⁹ / ₁₆ " (344.5)	13 ⁷ / ₈ " (352.4)	14 ¹ / ₄ " (361.9)	14 ⁷ / ₈ " (377.8)
16" (400)	12 ³ / ₄ " (323.8)	13 ¹ / ₂ " (342.9)	13 ⁷ / ₈ " (352.4)	14 ¹³ / ₁₆ " (360.4)	14 ¹ / ₂ " (368.3)	14 ⁷ / ₈ " (377.8)	15 ¹ / ₂ " (393.7)
18" (450)	13 ¹ / ₂ " (342.9)	14 ¹ / ₄ " (361.9)	14 ⁵ / ₈ " (371.5)	15" (381.0)	15 ⁵ / ₁₆ " (388.9)	15 ⁵ / ₈ " (396.9)	16 ⁵ / ₁₆ " (414.3)

Reference Chart - B Dimension

Pipe Size	Insulation Thickness						
	0" (0.0)	1" (25.4)	1 1/2" (38.1)	2" (50.8)	2 1/2" (63.5)	3" (76.2)	4" (101.6)
6" (150)	6 ⁷ / ₈ " (174.6)	7 ⁷ / ₈ " (200.0)	8 ³ / ₈ " (212.7)	8 ⁷ / ₈ " (225.4)	9 ³ / ₈ " (238.1)	9 ⁷ / ₈ " (250.8)	10 ¹⁵ / ₁₆ " (277.8)
8" (200)	7 ¹³ / ₁₆ " (198.4)	8 ⁷ / ₈ " (225.4)	9 ³ / ₈ " (238.1)	9 ⁷ / ₈ " (250.8)	10 ⁷ / ₁₆ " (265.1)	10 ¹⁵ / ₁₆ " (277.8)	11 ⁷ / ₈ " (301.6)
10" (250)	8 ¹³ / ₁₆ " (223.8)	9 ⁷ / ₈ " (250.8)	10 ⁷ / ₁₆ " (265.1)	10 ¹⁵ / ₁₆ " (277.8)	11 ³ / ₈ " (288.9)	11 ⁷ / ₈ " (301.6)	12 ¹³ / ₁₆ " (325.4)
12" (300)	9 ³ / ₄ " (247.6)	10 ¹⁵ / ₁₆ " (277.8)	11 ³ / ₈ " (288.9)	11 ⁷ / ₈ " (301.6)	12 ⁵ / ₁₆ " (312.7)	12 ¹³ / ₁₆ " (325.4)	13 ³ / ₄ " (349.2)
14" (350)	10 ⁵ / ₁₆ " (261.9)	11 ³ / ₈ " (288.9)	11 ⁷ / ₈ " (301.6)	12 ⁵ / ₁₆ " (312.7)	12 ¹³ / ₁₆ " (325.4)	13 ¹ / ₄ " (336.5)	14 ¹ / ₄ " (361.9)
16" (400)	11 ⁵ / ₁₆ " (287.3)	12 ⁵ / ₁₆ " (312.7)	12 ¹³ / ₁₆ " (325.4)	13 ¹ / ₄ " (336.5)	13 ³ / ₄ " (349.2)	14 ¹ / ₄ " (361.9)	15 ¹ / ₈ " (384.2)
18" (450)	12 ¹ / ₄ " (311.1)	13 ¹ / ₄ " (336.5)	13 ³ / ₄ " (349.2)	14 ³ / ₁₆ " (360.4)	14 ¹¹ / ₁₆ " (373.1)	15 ¹ / ₈ " (384.2)	16 ¹ / ₁₆ " (408.0)

Pipe Rollers & Roller Supports

Material: Steel with Malleable Iron Rollers

Standard Finish: Electro-Plated

Service: Designed to mount on strut (metal framing) for the support of pipe with longitudinal movement. When used with insulated pipe, see B3160-B3165 Pipe Covering Protection Saddle charts for proper sizing on pages 128 thru 133.

Ordering: Specify part number and finish.

Design Load: 2000 Lbs. (8.89kN)

Note: If using D.I. pipe refer to page 202 for sizing.

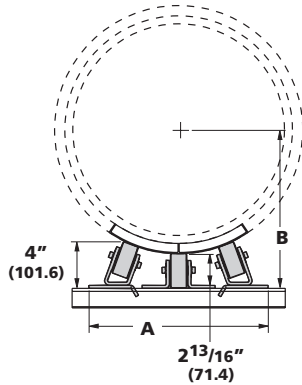
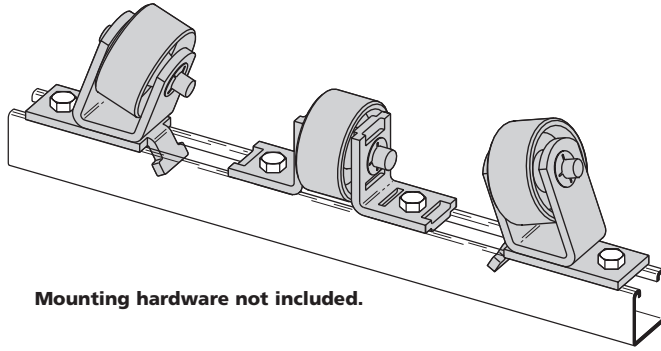


Figure B479 Pipe Roller - 16" (400) to 30" (750) Pipe

Note: Not for continuous cycling applications.

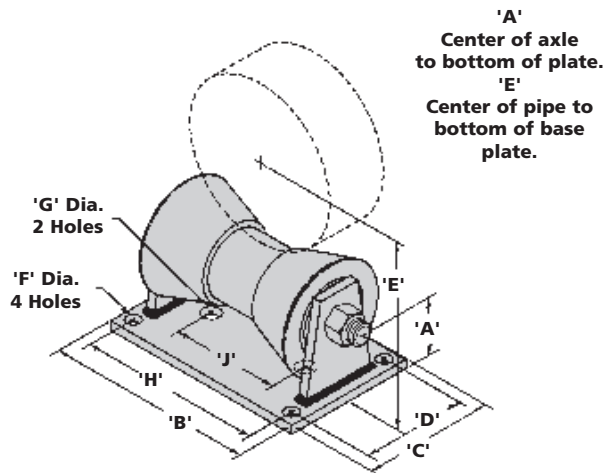
Reference Chart - A Dimension

Pipe Size	Insulation Thickness													
	0" (0.0)		1" (25.4)		1 1/2" (38.1)		2" (50.8)		2 1/2" (63.5)		3" (76.2)		4" (101.6)	
16" (400)	15 ³ / ₁₆ " (385.8)	15 ⁵ / ₈ " (396.9)	15 ⁷ / ₈ " (403.2)	16" (406.4)	16 ¹ / ₄ " (412.7)	16 ¹ / ₂ " (419.1)	17" (431.8)	15 ¹ / ₂ " (393.7)	16" (406.4)	16 ³ / ₁₆ " (411.2)	16 ³ / ₈ " (415.9)	16 ⁹ / ₁₆ " (420.7)	16 ³ / ₄ " (425.4)	17 ³ / ₁₆ " (436.6)
18" (450)	16" (406.4)	16 ³ / ₈ " (415.9)	16 ⁹ / ₁₆ " (420.7)	16 ⁷ / ₈ " (428.6)	16 ¹⁵ / ₁₆ " (430.2)	17 ³ / ₁₆ " (436.6)	17 ¹ / ₂ " (444.5)	16 ¹³ / ₁₆ " (427.0)	17 ⁵ / ₁₆ " (439.7)	17 ¹ / ₂ " (444.5)	17 ¹¹ / ₁₆ " (449.3)	17 ⁷ / ₈ " (454.0)	18 ¹ / ₈ " (460.4)	
20" (450)	16 ¹³ / ₁₆ " (427.0)	17 ⁵ / ₁₆ " (439.7)	17 ¹ / ₂ " (444.5)	17 ¹ / ₂ " (444.5)	17 ¹¹ / ₁₆ " (449.3)	17 ⁷ / ₈ " (454.0)	18 ¹ / ₈ " (460.4)	17 ¹³ / ₁₆ " (452.4)	18 ¹ / ₄ " (463.5)	18 ³ / ₈ " (466.7)	18 ⁹ / ₁₆ " (471.5)	18 ⁷ / ₈ " (476.2)	18 ⁷ / ₈ " (476.2)	19 ¹ / ₄ " (488.9)

Reference Chart - B Dimension

Pipe Size	Insulation Thickness													
	0" (0.0)		1" (25.4)		1 1/2" (38.1)		2" (50.8)		2 1/2" (63.5)		3" (76.2)		4" (101.6)	
16" (400)	10 ¹³ / ₁₆ " (274.6)	11 ¹⁵ / ₁₆ " (303.2)	12 ³ / ₈ " (314.3)	12 ¹⁵ / ₁₆ " (328.6)	13 ³ / ₈ " (339.7)	13 ¹⁵ / ₁₆ " (354.0)	14 ¹⁵ / ₁₆ " (379.4)	11 ⁷ / ₈ " (301.6)	12 ¹⁵ / ₁₆ " (328.6)	13 ⁷ / ₁₆ " (341.3)	13 ¹⁵ / ₁₆ " (354.0)	14 ⁷ / ₁₆ " (366.7)	14 ¹⁵ / ₁₆ " (379.4)	15 ¹⁵ / ₁₆ " (404.8)
18" (450)	12 ³ / ₁₆ " (325.4)	13 ¹⁵ / ₁₆ " (354.0)	14 ⁷ / ₁₆ " (366.7)	14 ⁷ / ₈ " (377.8)	15 ⁷ / ₁₆ " (392.1)	15 ⁷ / ₈ " (403.2)	16 ¹⁵ / ₁₆ " (430.2)	12 ¹³ / ₁₆ " (325.4)	13 ¹⁵ / ₁₆ " (354.0)	14 ⁷ / ₁₆ " (366.7)	14 ⁷ / ₈ " (377.8)	15 ⁷ / ₁₆ " (392.1)	15 ⁷ / ₈ " (403.2)	16 ¹⁵ / ₁₆ " (430.2)
24" (450)	14 ¹³ / ₁₆ " (376.2)	15 ⁷ / ₈ " (403.2)	16 ³ / ₈ " (415.9)	16 ⁷ / ₈ " (428.6)	17 ³ / ₈ " (441.3)	17 ⁷ / ₈ " (454.0)	18 ⁷ / ₈ " (479.4)	17 ¹³ / ₁₆ " (452.4)	18 ⁷ / ₈ " (476.2)	19 ³ / ₈ " (492.1)	19 ⁷ / ₈ " (504.8)	20 ³ / ₈ " (517.5)	20 ⁵ / ₁₆ " (531.8)	21 ¹⁵ / ₁₆ " (557.2)

Pipe Rollers & Roller Supports



Material: Steel with Cast Iron Roller

Standard Finish: Plain or Electro-Plated

Service: Designed for support of pipe with longitudinal movement. When used with insulated pipe, see B3160-B3165 Pipe Covering Protection Saddle charts for proper sizing on pages 128 thru 133.

Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 45 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 44.

Notes: If using D.I. pipe refer to page 202 for sizing. Non-metallic rollers with stainless steel stand and hardware are available for most sizes (B3117SLNM-Pipe Size). Contact B-Line Engineering for more information.

Figure B3117SL Steel Roller Stand

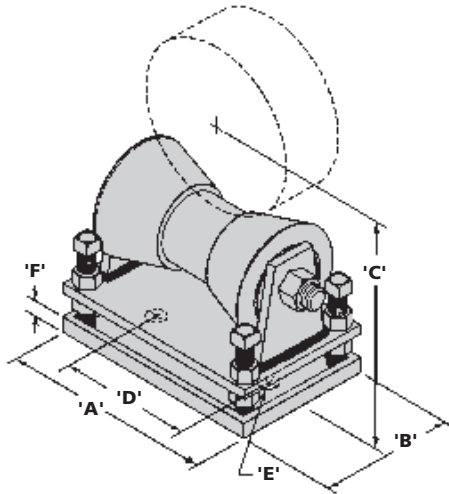
Note: Not for continuous cycling applications.

Part No.	Nominal Pipe Size	'A'		'B'		'C'		'D'		'E'	
B3117SL-2 to 3 1/2	2" (50)	1 3/4"	(44.4)	8 3/8"	(212.7)	6"	(152.4)	4"	(101.6)	3 11/16"	(93.7)
	2 1/2" (65)	1 3/4"	(44.4)	8 3/8"	(212.7)	6"	(152.4)	4"	(101.6)	3 15/16"	(100.0)
	3" (80)	1 3/4"	(44.4)	8 3/8"	(212.7)	6"	(152.4)	4"	(101.6)	4 1/4"	(107.9)
	3 1/2" (90)	1 3/4"	(44.4)	8 3/8"	(212.7)	6"	(152.4)	4"	(101.6)	4 1/2"	(114.3)
B3117SL-4 to 6	4" (100)	2 1/16"	(52.4)	9 7/8"	(250.8)	6"	(152.4)	4 1/4"	(107.9)	5"	(127.0)
	5" (125)	2 1/16"	(52.4)	9 7/8"	(250.8)	6"	(152.4)	4 1/4"	(107.9)	5 9/16"	(141.3)
	6" (150)	2 1/16"	(52.4)	9 7/8"	(250.8)	6"	(152.4)	4 1/4"	(107.9)	6 1/16"	(154.0)
B3117SL-8 to 10	8" (200)	3 7/16"	(87.3)	8 5/8"	(219.1)	8"	(203.2)	5"	(127.0)	8 13/16"	(223.8)
	10" (250)	3 7/16"	(87.3)	8 5/8"	(219.1)	8"	(203.2)	5"	(127.0)	9 7/8"	(250.8)
B3117SL-12 to 14	12" (300)	3 7/8"	(98.4)	10 15/16"	(277.8)	8"	(203.2)	6"	(152.4)	11 7/16"	(290.5)
	14" (350)	3 7/8"	(98.4)	10 15/16"	(277.8)	8"	(203.2)	6"	(152.4)	12 1/16"	(306.4)
B3117SL-16 to 20	16" (400)	4 1/4"	(107.9)	12 3/8"	(314.3)	10"	(254.0)	6 1/2"	(165.1)	13 5/8"	(346.1)
	18" (450)	4 1/4"	(107.9)	12 3/8"	(314.3)	10"	(254.0)	6 1/2"	(165.1)	14 11/16"	(373.1)
	20" (500)	4 1/4"	(107.9)	12 3/8"	(314.3)	10"	(254.0)	6 1/2"	(165.1)	15 11/16"	(398.5)
B3117SL-24	24" (600)	4 3/8"	(111.1)	13 1/2"	(342.9)	10"	(254.0)	6 1/2"	(165.1)	17 11/16"	(449.3)
B3117SL-30	30" (750)	5 1/8"	(130.2)	17"	(431.8)	10 3/4"	(273.0)	8"	(203.2)	21 3/4"	(552.4)
B3117SL-36 to 42	36" (900)	5 3/4"	(146.0)	20"	(508.0)	12"	(304.8)	9"	(228.6)	25 5/16"	(642.9)
	42" (1050)	5 3/4"	(146.0)	20"	(508.0)	12"	(304.8)	9"	(228.6)	28 5/16"	(719.1)

Part No.	Dia. 'F'	Dia. 'G'	'H'		'J'		Design Load		Wt./C	
							Lbs.	kN	Lbs.	kg
B3117SL-2 to 3 1/2	1 1/2" (12.7)	1" (25.4)	3 7/16"	(87.3)	6 3/8"	(161.9)	390	(1.73)	508	(230.4)
B3117SL-4 to 6	1 1/2" (12.7)	1" (25.4)	4 11/16"	(119.1)	7 7/8"	(200.0)	950	(4.22)	631	(286.2)
B3117SL-8 to 10	5/8" (15.9)	1" (25.4)	7"	(177.8)	4"	(101.6)	2100	(9.34)	1271	(576.5)
B3117SL-12 to 14	3/4" (19.0)	1" (25.4)	9 1/16"	(230.2)	5 3/4"	(146.0)	3075	(13.68)	1994	(904.5)
B3117SL-16 to 20	1 3/16" (20.6)	1" (25.4)	10 1/4"	(260.3)	6 3/4"	(171.4)	4980	(22.15)	3423	(1552.7)
B3117SL-24	1 3/16" (20.6)	1" (25.4)	11 3/8"	(288.9)	7 1/2"	(190.5)	6100	(27.13)	4710	(2136.4)
B3117SL-30	1 1/16" (27.0)	1" (25.4)	14 1/4"	(361.9)	10"	(254.0)	7500	(33.36)	7132	(3235.1)
B3117SL-36 to 42	1 3/16" (30.2)	1" (25.4)	17"	(431.8)	12"	(304.8)	12000	(53.37)	10386	(4711.1)

All dimensions in charts and on drawings are in inches. Dimensions shown in parentheses are in millimeters unless otherwise specified.

Pipe Rollers & Roller Supports



'C'
Center of pipe to
bottom of base
plate.
'D'
Center to center of
mounting holes in
bottom plate.
'E' Dia.
Mounting holes in
bottom plate.

Material: Steel with Cast Iron Roller

Standard Finish: Plain or Electro-Plated

Service: Designed for support of pipe where longitudinal movement and vertical adjustment are required. When used with insulated pipe, see B3160-B3165 Pipe Covering Protection Saddle charts for proper sizing on pages 128 thru 133.

Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 47 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 46.

Notes: If using D.I. pipe refer to page 202 for sizing. Non-metallic rollers with stainless steel stand and hardware are available for most sizes (B3118SLNM-Pipe Size). Contact B-Line Engineering for more information.

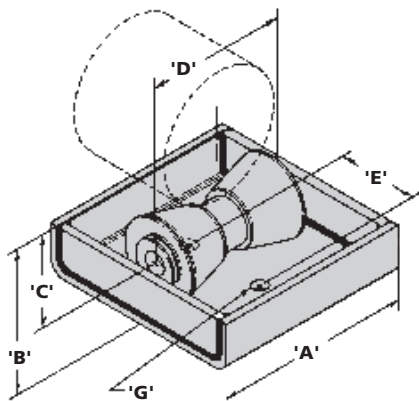
Note: Not for continuous cycling applications.

Figure B3118SL Adjustable Roller Stand with Base Plate

Part No.	Nominal Pipe Size	'A'		'B'		'C'				'D'	
						Minimum	Maximum	Minimum	Maximum		
B3118SL-2 to 3 1/2	2" (50)	6 7/8"	(174.6)	6"	(152.4)	4 3/4"	(120.6)	5 5/8"	(142.9)	3 7/8"	(98.4)
	2 1/2" (65)	6 7/8"	(174.6)	6"	(152.4)	5"	(127.0)	5 7/8"	(142.9)	3 7/8"	(98.4)
	3" (80)	6 7/8"	(174.6)	6"	(152.4)	5 5/16"	(134.9)	6 3/16"	(157.2)	3 7/8"	(98.4)
	3 1/2" (90)	6 7/8"	(174.6)	6"	(152.4)	5 9/16"	(141.3)	6 7/16"	(163.5)	3 7/8"	(98.4)
B3118SL-4 to 6	4" (100)	8 1/8"	(206.4)	6"	(152.4)	6 3/16"	(157.2)	7 7/16"	(188.9)	5 1/8"	(130.2)
	5" (125)	8 1/8"	(206.4)	6"	(152.4)	6 3/4"	(171.4)	8"	(203.2)	5 1/8"	(130.2)
	6" (150)	8 1/8"	(206.4)	6"	(152.4)	7 1/4"	(184.1)	8 1/2"	(215.9)	5 1/8"	(130.2)
B3118SL-8 to 10	8" (200)	10 5/8"	(269.9)	8"	(203.2)	10 1/8"	(257.2)	11 11/16"	(296.9)	7 3/8"	(187.3)
	10" (250)	10 5/8"	(269.9)	8"	(203.2)	11 3/16"	(284.2)	12 3/4"	(323.8)	7 3/8"	(187.3)
B3118SL-12 to 14	12" (300)	13"	(330.2)	8"	(203.2)	12 3/4"	(323.8)	14 1/8"	(358.8)	9 1/2"	(241.3)
	14" (350)	13"	(330.2)	8"	(203.2)	13 3/8"	(339.7)	14 3/8"	(365.1)	9 1/2"	(241.3)
B3118SL-16 to 20	16" (400)	14 5/8"	(371.5)	10"	(254.0)	15 3/8"	(390.5)	17 1/4"	(438.1)	11 1/8"	(282.6)
	18" (450)	14 5/8"	(371.5)	10"	(254.0)	16 3/8"	(415.9)	18 1/4"	(463.5)	11 1/8"	(282.6)
	20" (500)	14 5/8"	(371.5)	10"	(254.0)	17 3/8"	(441.3)	19 1/4"	(488.9)	11 1/8"	(282.6)
B3118SL-24	24" (600)	15 3/4"	(400.0)	10"	(254.0)	19 1/4"	(488.9)	21 1/4"	(539.7)	12 1/4"	(311.1)
B3118SL-30	30" (750)	19 1/4"	(488.9)	10 1/2"	(266.7)	24 7/16"	(620.7)	26 11/16"	(677.9)	15 3/4"	(400.0)

Part No.	'E'		'F'		Design Load		Wt./C	
	Lbs.	mm	Lbs.	mm	Lbs.	kN	Lbs.	kg
B3118SL-2 to 3 1/2	1"	(25.4)	1"	(25.4)	390	(1.73)	1100	(498.9)
B3118SL-4 to 6	1"	(25.4)	1"	(25.4)	950	(4.22)	1310	(594.2)
B3118SL-8 to 10	1"	(25.4)	1 1/8"	(28.6)	2100	(9.34)	2725	(1236.0)
B3118SL-12 to 14	1"	(25.4)	1 1/8"	(28.6)	3075	(13.68)	3612	(1638.4)
B3118SL-16 to 20	1"	(25.4)	1 1/4"	(31.7)	4980	(22.15)	6384	(2895.8)
B3118SL-24	1"	(25.4)	1 3/8"	(34.9)	6100	(27.13)	8437	(3827.0)
B3118SL-30	1"	(25.4)	1 5/8"	(41.3)	7500	(33.36)	12528	(5682.7)

Pipe Rollers & Roller Supports



- 'B'
Center of pipe to bottom of plate.
- 'C'
Center of pipe to center of roller.
- 'D'
Length of Roller
- 'E'
Center to center of mounting holes in bottom plate.
- 'F'
Roller Travel
- 'G' Dia.
1 hole for sizes 2 thru 6
2 holes for sizes 8 thru 30

Material: Steel with Cast Iron Roller

Standard Finish: Plain or Electro-Plated

Service: Designed for support of pipe with longitudinal movement. When used with insulated pipe, see B3160-B3165 Pipe Covering Protection Saddle charts for proper sizing on pages 128 thru 133.

Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 46 and Manufacturers Standardization Society MSS SP-69 & Sp-58 Type 45.

Notes: If using D.I. pipe refer to page 202 for sizing. Non-metallic rollers with stainless steel base are available for most sizes (B3119SLNM-Pipe Size). Contact B-Line Engineering for more information.

Note: Not for continuous cycling applications.

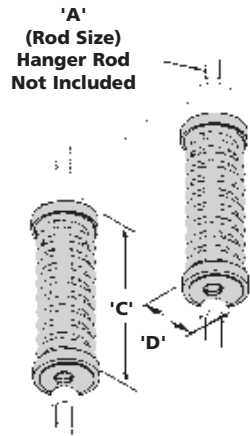
Figure B3119SL Roller with Steel Base Plate

Part No.	Nominal Pipe Size	Structural Channel Size	'A'		'B'		'C'		'D'	
B3119SL-2 to 3 1/2	2" (50)	C4 x 5.4	4 3/4"	(120.6)	3 1/16"	(77.8)	1 15/16"	(49.2)	2 3/4"	(69.8)
	2 1/2" (65)		4 3/4"	(120.6)	3 5/16"	(84.1)	2 3/16"	(55.6)	2 3/4"	(69.8)
	3" (80)		4 3/4"	(120.6)	3 5/8"	(92.1)	2 1/2"	(63.5)	2 3/4"	(69.8)
	3 1/2" (90)		4 3/4"	(120.6)	3 7/8"	(98.4)	2 3/4"	(69.8)	2 3/4"	(69.8)
B3119SL-4 to 6	4" (100)	C5 x 6.7	5 3/4"	(146.0)	4 1/8"	(104.8)	2 15/16"	(74.6)	3 3/4"	(95.2)
	5" (125)		5 3/4"	(146.0)	4 11/16"	(119.1)	3 1/2"	(88.9)	3 3/4"	(95.2)
	6" (150)		5 3/4"	(146.0)	5 3/16"	(131.8)	4"	(101.6)	3 3/4"	(95.2)
B3119SL-8 to 10	8" (200)	C6 x 8.2	8"	(203.2)	7 3/16"	(182.6)	5 3/8"	(136.5)	6"	(152.4)
	10" (250)		8"	(203.2)	8 1/4"	(209.5)	6 7/16"	(163.5)	6"	(152.4)
B3119SL-12 to 14	12" (300)	C8 x 11.5	10"	(254.0)	9 13/16"	(249.2)	7 9/16"	(192.1)	8"	(203.2)
	14" (350)		10"	(254.0)	10 7/16"	(265.1)	8 3/16"	(208.0)	8"	(203.2)
B3119SL-16 to 20	16" (400)	C8 x 11.5	11"	(279.4)	11 7/8"	(301.6)	9 3/8"	(238.1)	9"	(228.6)
	18" (450)		11"	(279.4)	12 15/16"	(328.6)	10 7/16"	(265.1)	9"	(228.6)
	20" (500)		11"	(279.4)	13 15/16"	(354.0)	11 7/16"	(290.5)	9"	(228.6)
B3119SL-24	24" (600)	C8 x 11.5	12"	(304.8)	15 13/16"	(401.6)	13 5/16"	(338.1)	10"	(254.0)
B3119SL-30	30" (750)	C10 x 15.3	14 1/2"	(368.3)	19 5/8"	(498.5)	16 5/8"	(422.3)	12 1/2"	(317.5)

Part No.	'E'		'F'		Dia. 'G'		Design Load		Wt./C	
							Lbs.	kN	Lbs.	kg
B3119SL-2 to 3 1/2	-	-	1 3/4"	(44.4)	9/16"	(14.3)	390	(1.73)	314	(142.3)
B3119SL-4 to 6	-	-	2 1/2"	(63.5)	1 1/16"	(17.5)	950	(4.22)	489	(225.9)
B3119SL-8 to 10	3"	(76.2)	2 1/2"	(63.5)	1 3/16"	(20.6)	2100	(9.34)	950	(430.9)
B3119SL-12 to 14	4"	(101.6)	3 5/8"	(92.1)	1 3/16"	(20.6)	3075	(13.68)	1741	(789.7)
B3119SL-16 to 20	4"	(101.6)	3 1/8"	(79.4)	1 3/16"	(20.6)	4980	(22.15)	2018	(915.3)
B3119SL-24	4"	(101.6)	3 1/8"	(79.4)	1 3/16"	(20.6)	6100	(27.13)	2175	(986.6)
B3119SL-30	6"	(152.4)	4 1/8"	(104.8)	1 3/16"	(20.6)	7500	(33.36)	3510	(1592.1)

Pipe Rollers & Pipe Supports

Pipe Rollers & Roller Supports



'A'
(Rod Size)
Hanger Rod
Not Included

'C'
'D'

Includes:
2 Springs
4 Cup Washers

Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for use with B3114 as a cushion spring for a piping system where vertical movement does not exceed 1¹/₄" (31.7).

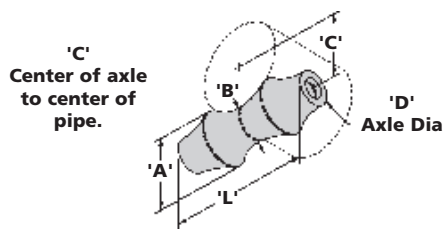
Ordering: Specify part number, size and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 50 and Manufacturers' Standardization Society SP-69 & SP-58 Type 49.

Figure B3264 Spring Cushion Hanger

Part No.	Rod Size 'A'	Free Height 'C'		'D'		Spring Deflection Per Spring		Maximum Load at 1" (25.4) Deflection-2 Springs		Wt./CPR	
		Lbs.	mm	Lbs.	mm	Lbs./In.	kg/mm	Lbs.	kN	Lbs.	kg
B3264-1	3/8"-16	3"	(76.2)	1 ¹¹ / ₁₆ "	(42.8)	30	(0.5)	78	(.34)	100	(45.3)
B3264-2	3/8"-16	3 ¹ / ₄ "	(82.5)	1 ¹¹ / ₁₆ "	(42.8)	105	(1.9)	210	(.93)	100	(45.3)
B3264-3	5/8"-11	3 ¹ / ₄ "	(82.5)	2 ³ / ₁₆ "	(55.5)	133	(2.4)	330	(1.47)	200	(90.7)
B3264-4	5/8"-11	3 ¹ / ₄ "	(82.5)	2 ³ / ₁₆ "	(55.5)	263	(4.7)	520	(2.31)	200	(90.7)
B3264-5	3/4"-10	4 ⁵ / ₈ "	(117.5)	2 ⁵ / ₁₆ "	(58.7)	707	(12.6)	1500	(6.67)	400	(181.4)
B3264-6	1"-8	4 ⁷ / ₈ "	(123.8)	3 ¹ / ₄ "	(82.5)	1600	(28.6)	3200	(14.23)	700	(317.5)

Pipe Rollers & Roller Supports



Material: Cast Iron

Standard Finish: Plain or Electro-Plated

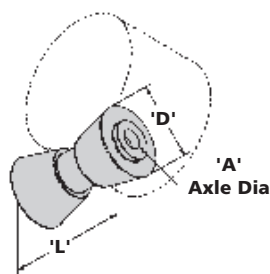
Service: Designed for supporting pipe runs with longitudinal movement. Use with steel rod axle.

Ordering: Specify part number and finish.

Notes: If using D.I. pipe refer to page 202 for sizing. Non-metallic roller with stainless steel axle sleeve are available for most sizes (BFP3114R-Pipe Size). Contact B-Line Engineering for more information.

Figure B3114R Long Pattern Pipe Roller Only

Part No.	Nominal Pipe Size		'A'		'B'		'C'		Axle Dia. 'D'		'L'		Wt./C	
													Lbs.	kg
B3114R-2	2"	(50)	1 ¹ / ₁₆ "	(27.0)	3 ³ / ₄ "	(19.0)	1 ⁹ / ₁₆ "	(39.7)	3 ³ / ₈ "	(9.5)	2 ⁵ / ₈ "	(66.7)	29	(13.1)
B3114R-2 ¹ / ₂	2 ¹ / ₂ "	(65)	1 ¹ / ₄ "	(31.7)	7 ⁷ / ₈ "	(22.2)	1 ⁷ / ₈ "	(47.6)	1 ¹ / ₂ "	(12.7)	3 ¹ / ₈ "	(79.4)	47	(21.3)
B3114R-3	3"	(80)	1 ³ / ₈ "	(34.9)	7 ⁷ / ₈ "	(22.2)	2 ³ / ₁₆ "	(55.6)	1 ¹ / ₂ "	(12.7)	3 ³ / ₄ "	(95.2)	62	(28.1)
B3114R-3 ¹ / ₂	3 ¹ / ₂ "	(90)	1 ¹ / ₂ "	(38.1)	1"	(25.4)	2 ¹ / ₂ "	(63.5)	1 ¹ / ₂ "	(12.7)	4 ¹ / ₄ "	(107.9)	71	(32.2)
B3114R-4	4"	(100)	1 ¹⁹ / ₃₂ "	(40.5)	1"	(25.4)	2 ³ / ₄ "	(69.8)	1 ¹ / ₂ "	(12.7)	4 ³ / ₄ "	(120.6)	96	(43.5)
B3114R-5	5"	(125)	1 ⁷ / ₈ "	(47.6)	1 ¹ / ₈ "	(28.6)	3 ³ / ₈ "	(85.7)	5 ⁵ / ₈ "	(15.9)	5 ¹³ / ₁₆ "	(147.6)	131	(59.4)
B3114R-6	6"	(150)	2 ¹ / ₈ "	(54.0)	1 ¹ / ₄ "	(31.7)	3 ¹⁵ / ₁₆ "	(100.0)	3 ³ / ₄ "	(19.0)	6 ⁷ / ₈ "	(174.6)	207	(93.9)
B3114R-8	8"	(200)	2 ⁵ / ₈ "	(66.7)	1 ¹ / ₂ "	(38.1)	5 ¹ / ₁₆ "	(128.6)	7 ⁷ / ₈ "	(22.2)	8 ⁷ / ₈ "	(225.4)	323	(146.5)
B3114R-10	10"	(250)	3 ³ / ₁₆ "	(81.0)	1 ³ / ₄ "	(44.4)	6 ¹ / ₄ "	(158.7)	7 ⁷ / ₈ "	(22.2)	11"	(279.4)	482	(218.6)
B3114R-12	12"	(300)	3 ³ / ₄ "	(95.2)	2"	(50.8)	7 ³ / ₈ "	(187.3)	1"	(25.4)	13"	(330.2)	854	(387.4)
B3114R-14	14"	(350)	4 ³ / ₈ "	(111.1)	2 ¹ / ₂ "	(63.5)	8 ¹ / ₄ "	(209.5)	1 ¹ / ₈ "	(28.6)	14 ¹ / ₄ "	(361.9)	1150	(521.6)
B3114R-16	16"	(400)	4 ⁵ / ₈ "	(117.5)	2 ¹ / ₂ "	(63.5)	9 ¹ / ₄ "	(234.9)	1 ¹ / ₄ "	(31.7)	16 ¹ / ₄ "	(412.7)	1200	(544.3)
B3114R-18	18"	(450)	5 ¹ / ₈ "	(130.2)	2 ³ / ₄ "	(69.8)	10 ³ / ₈ "	(263.5)	1 ¹ / ₄ "	(31.7)	18 ¹ / ₄ "	(463.5)	1550	(703.1)
B3114R-20	20"	(500)	5 ⁵ / ₈ "	(142.9)	3"	(76.2)	11 ¹ / ₂ "	(292.1)	1 ³ / ₈ "	(34.9)	20 ¹ / ₄ "	(514.3)	2080	(943.5)
B3114R-24	24"	(600)	6 ³ / ₄ "	(171.4)	3 ⁵ / ₈ "	(92.1)	13 ¹³ / ₁₆ "	(350.8)	1 ¹ / ₂ "	(38.1)	24 ¹ / ₄ "	(615.9)	3300	(1496.9)
B3114R-30	30"	(750)	8 ¹ / ₂ "	(215.9)	4 ¹ / ₂ "	(114.3)	17 ¹ / ₄ "	(438.1)	1 ³ / ₄ "	(44.4)	30 ¹ / ₄ "	(768.3)	6200	(2812.3)



Material: Cast Iron

Standard Finish: Plain or Electro-Plated

Service: Designed for supporting pipe runs with longitudinal movement. Use with steel rod axle.

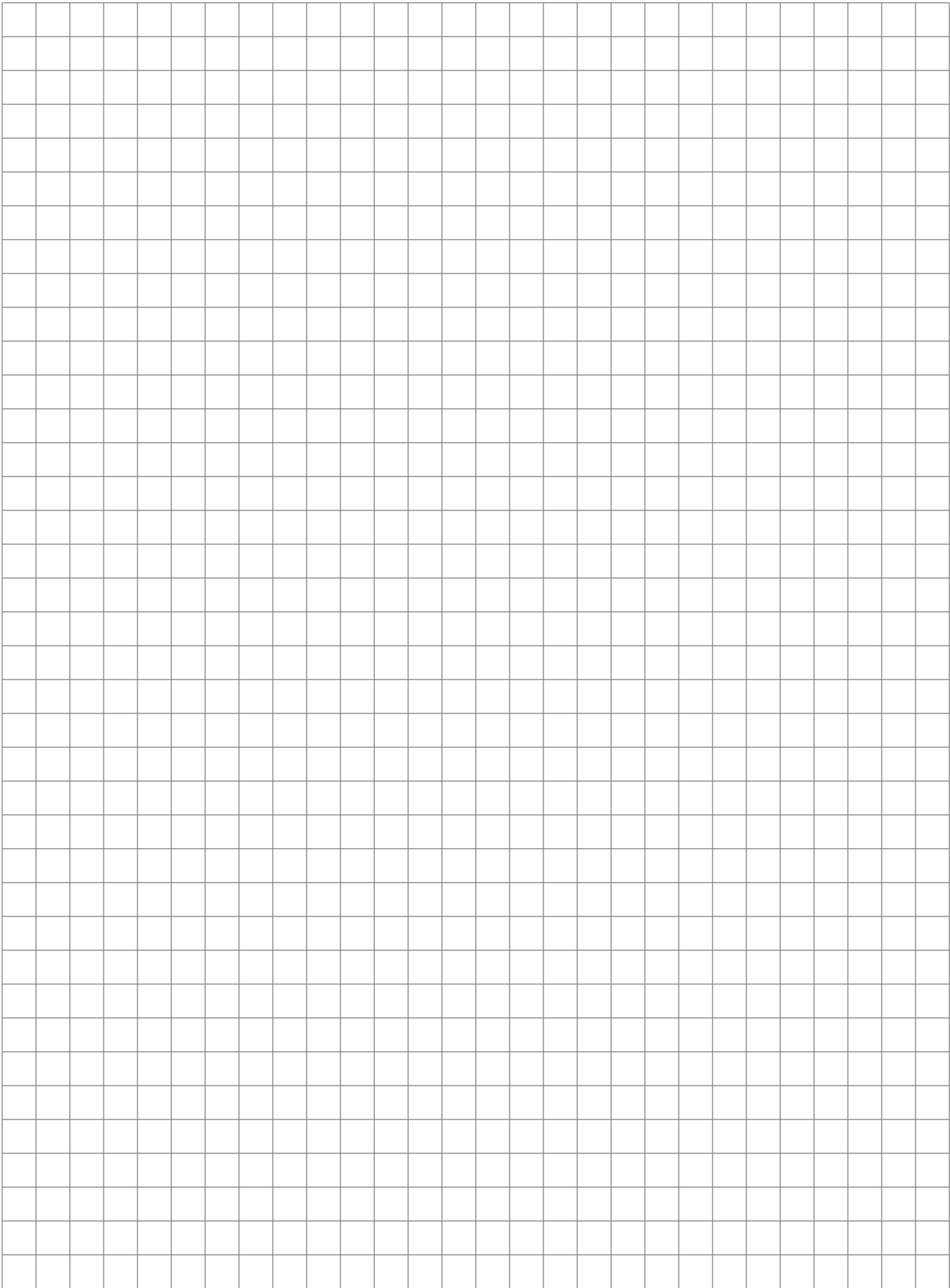
Ordering: Specify part number and finish.

Notes: If using D.I. pipe refer to page 202 for sizing. Non-metallic roller with stainless steel axle sleeve are available for most sizes (BFP3117R-Pipe Size). Contact B-Line Engineering for more information.

Figure B3117R Short Pattern Pipe Roller Only

Part No.	Nominal Pipe Size		Axle Dia. 'A'		'D'		'L'		Wt./C	
									Lbs.	kg
B3117R-2 to 3 ¹ / ₂	2" to 3 ¹ / ₂ "	(50 to 90)	1 ¹ / ₂ "	(12.7)	1 ⁷ / ₈ "	(47.6)	2 ³ / ₄ "	(69.8)	70	(31.7)
B3117R-4 to 6	4" to 6"	(100 to 150)	1 ¹ / ₂ "	(12.7)	2 ¹ / ₁₆ "	(52.4)	3 ³ / ₄ "	(95.2)	114	(51.7)
B3117R-8, 10	8", 10"	(200, 250)	3 ³ / ₄ "	(19.0)	3 ¹ / ₄ "	(82.5)	6"	(152.4)	329	(149.2)
B3117R-12, 14	12", 14"	(300, 350)	7 ⁷ / ₈ "	(22.2)	4"	(101.6)	8"	(203.2)	600	(272.1)
B3117R-16 to 20	16" to 20"	(400 to 500)	1 ¹ / ₈ "	(28.6)	4 ¹ / ₂ "	(114.3)	9"	(228.6)	781	(354.2)
B3117R-24	24"	600	1 ¹ / ₄ "	(31.7)	4 ⁷ / ₁₆ "	(112.7)	10"	(254.0)	842	(381.9)
B3117R-30	30"	750	1 ³ / ₄ "	(44.4)	5 ¹ / ₂ "	(139.7)	12 ¹ / ₂ "	(317.5)	1385	(628.2)
B3117R-36 to 42	36" to 42"	(900 to 1050)	2"	(50.8)	6"	(152.4)	14 ⁷ / ₈ "	(377.8)	1585	(718.9)

Pipe Rollers & Roller Supports



Pipe Rollers &
Pipe Supports

Pipe Supports, Guides, Shields & Saddles



Supports, Guides, Shields & Saddles

Pipe supports offered in this section are designed to support pipe from a base structure where vertical adjustment may be required. Pipe guides and slides are designed to allow longitudinal movement due to thermal expansion and contraction of pipe. Protection shields and saddles are designed to prevent damage to pipe insulation.

Materials

Carbon Steel is used in the manufacturing of pipe supports, guides, shields and saddles. Stainless Steel and other materials are available.

Finishes

The standard finishes for mechanical supports are plain steel (oil coated) sometimes referred to as black and Electro-Plated Zinc (ASTM B 633 SC3). Hot-Dip Galvanized After Fabrication (ASTM A 123), Red Primer, Dura-Green® and other special coatings are available upon request.

Note: Due to the design of some products, (threads, connecting hardware, swivels, etc.) items may or may not be uniformly coated with special finishes. In some cases, the hanger itself may be coated, however, the hardware may be supplied Electro-Plated, Copper plated, or in Stainless Steel.

Approvals (as noted)

Items in this section comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society MSS SP-69 & SP-58.

All pipe hangers and supports in this section are sized to fit schedule 40/80 pipe unless otherwise noted. Some steel items may be specially fabricated to fit other pipe diameters i.e. ductile iron, cast iron, etc. See pipe data charts on pages 201 thru 206 for proper size selection.

Pipe Supports, Guides, Shields & Saddles

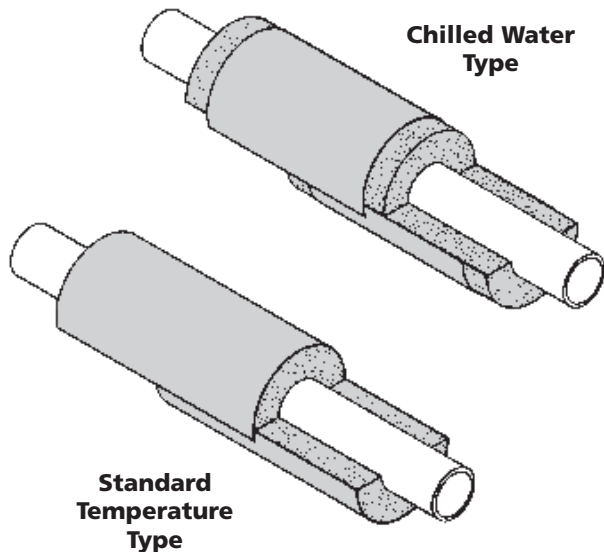
Figure B3380 thru B3387
360° Calcium Silicate Shield
Pre-Insulated Support

Material: Asbestos-free, Hydrous Calcium Silicate Insulation with Pre-Galvanized steel jacket

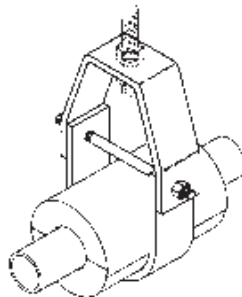
Service: Designed to provide a crush resistant insulation insert at pipe support points. Can be used with hangers or straps.

Miscellaneous Information: Flame retardant, water and rot resistant, temperature range from ambient to 1200°F (649°C). Easily installed in a pipe hanger or mounted to strut.

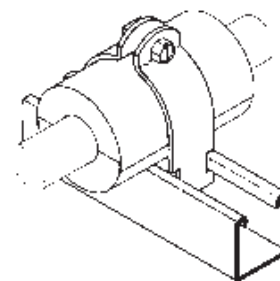
Ordering: Specify part number. (See part number legend below.) For additional information, contact factory.



Applications

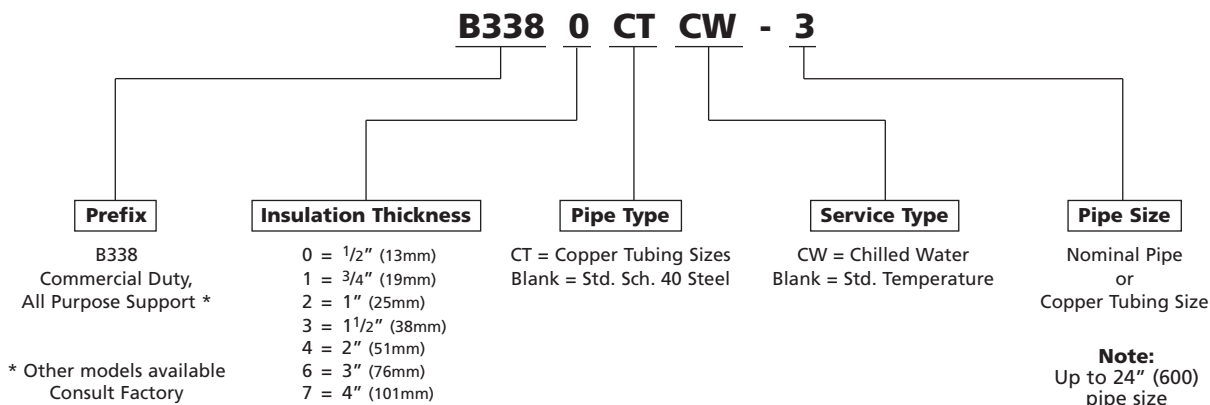


Pipe Hanger

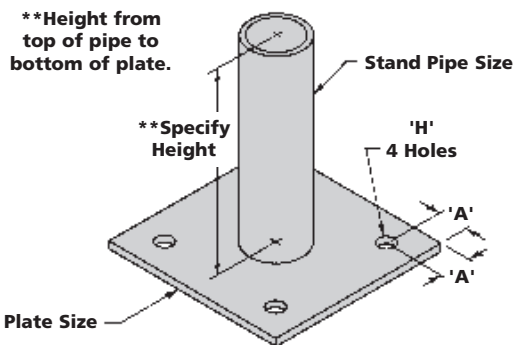


Strut Mounted

Supports, Guides, Shields & Saddles



Pipe Supports, Guides, Shields & Saddles



Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed as an unthreaded base stand for Pipe Supports B3090, B3095, B3094 and B3096.

Ordering: Specify part number, height and finish.

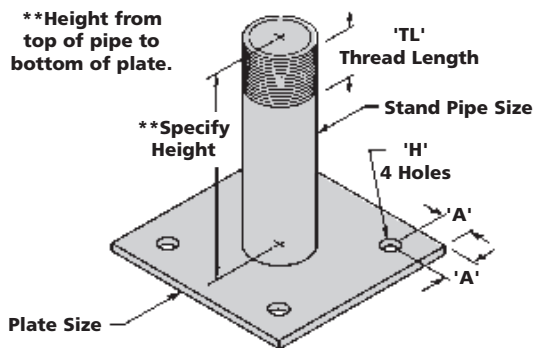
Note: Match B3088 part number with dimension 'D' from B3090 (page 99), B3094 (page 106), B3095 (page 100) or B3096 (page 102) charts.

Figure B3088 Base Stand

Part No.	Plate Size		Stand Pipe Size		'A'		Dia. 'H'		Wt./C*	
									Lbs.	kg
B3088-3/4	1/4" x 6" x 6"	(6.3 x 152.4 x 152.4)	3/4"	(20)	7/8"	(22.2)	3/4"	(14.3)	420	(190.5)
B3088-1	1/4" x 6" x 6"	(6.3 x 152.4 x 152.4)	1"	(25)	7/8"	(22.2)	3/4"	(14.3)	480	(216.0)
B3088-1 1/4	1/4" x 6" x 6"	(6.3 x 152.4 x 152.4)	1 1/4"	(32)	7/8"	(22.2)	3/4"	(14.3)	590	(267.6)
B3088-1 1/2	1/4" x 6" x 6"	(6.3 x 152.4 x 152.4)	1 1/2"	(40)	7/8"	(22.2)	3/4"	(14.3)	655	(297.1)
B3088-2	1/4" x 6" x 6"	(6.3 x 152.4 x 152.4)	2"	(50)	7/8"	(22.2)	3/4"	(14.3)	1211	(549.3)
B3088-2 1/2	3/8" x 8" x 8"	(9.5 x 203.2 x 203.2)	2 1/2"	(65)	1 1/4"	(31.7)	13/16"	(14.3)	2376	(1077.7)
B3088-3	3/8" x 12" x 12"	(9.5 x 304.8 x 304.8)	3"	(80)	1 1/2"	(38.1)	13/16"	(20.6)	3137	(1422.9)
B3088-4	1/2" x 12" x 12"	(12.7 x 304.8 x 304.8)	4"	(100)	1 1/2"	(38.1)	15/16"	(23.8)	4338	(1967.7)
B3088-6	1/2" x 18" x 18"	(12.7 x 457.2 x 457.2)	6"	(150)	1 1/2"	(38.1)	1 1/8"	(28.6)	7378	(3346.6)

*Based on a height of 18" (457.2).

Supports, Guides, Shields & Saddles



Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed as a threaded base stand for Pipe Supports B3089, B3091, B3092, B3093 and B3097.

Ordering: Specify part number, height and finish.

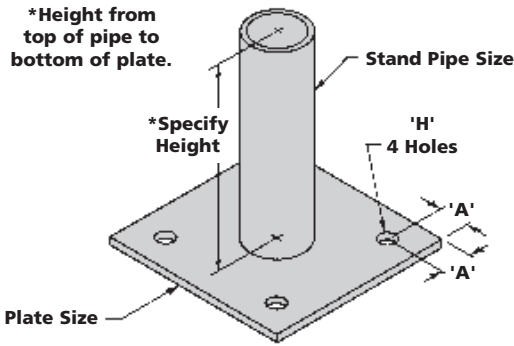
Note: Match B3088T part number with dimension 'D' from B3089 (page 98), B3091 (page 101), B3092 (page 104), B3093 (page 105) and B3097 (pages 102 & 103) charts.

Figure B3088T Threaded Base Stand

Part No.	Plate Size		Stand Pipe Size		'A'		Dia. 'H'		'TL'		Wt./C*	
											Lbs.	kg
B3088T-1	1/4" x 6" x 6"	(6.3 x 152.4 x 152.4)	1"	(25)	7/8"	(22.2)	3/4"	(22.2)	1 1/2"	(38.1)	495	(224.5)
B3088T-1 1/4	1/4" x 6" x 6"	(6.3 x 152.4 x 152.4)	1 1/4"	(32)	7/8"	(22.2)	3/4"	(22.2)	1 1/2"	(38.1)	583	(264.4)
B3088T-1 1/2	1/4" x 6" x 6"	(6.3 x 152.4 x 152.4)	1 1/2"	(40)	7/8"	(22.2)	3/4"	(22.2)	1 1/2"	(38.1)	649	(294.4)
B3088T-2	1/4" x 6" x 6"	(6.3 x 152.4 x 152.4)	2"	(50)	7/8"	(22.2)	3/4"	(22.2)	1 1/2"	(38.1)	785	(356.1)
B3088T-2 1/2	3/8" x 8" x 8"	(9.5 x 203.2 x 203.2)	2 1/2"	(65)	1 1/4"	(31.7)	13/16"	(22.2)	1 1/2"	(38.1)	1524	(691.3)
B3088T-3	3/8" x 12" x 12"	(9.5 x 304.8 x 304.8)	3"	(80)	1 1/2"	(38.1)	13/16"	(20.6)	1 1/2"	(38.1)	2624	(1190.2)
B3088T-4	1/2" x 12" x 12"	(12.7 x 304.8 x 304.8)	4"	(100)	1 1/2"	(38.1)	15/16"	(23.8)	2"	(50.8)	3594	(1630.2)
B3088T-6	1/2" x 18" x 18"	(12.7 x 457.2 x 457.2)	6"	(150)	1 1/2"	(38.1)	1 1/8"	(28.6)	2"	(50.8)	7346	(3332.1)

*Based on a height of 18" (457.2).

Pipe Supports, Guides, Shields & Saddles



Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed as an unthreaded base stand for Pipe Supports B3090, B3095, B3094 and B3096. Designed to meet requirements of 12X anchor diameter hole spacing for seismic applications. The standard B3088-3 & B3088-6 already meet this requirement.

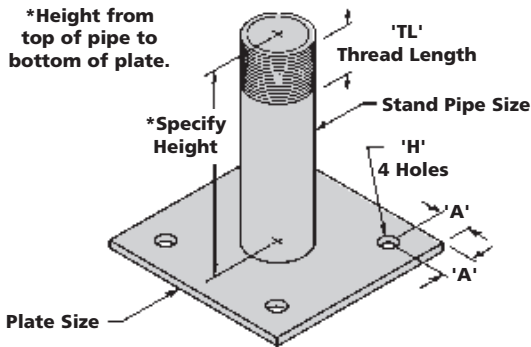
Ordering: Specify part number, height and finish.

Note: Match B3088 part number with dimension 'D' from B3090 (page 99), B3094 (page 106), B3095 (page 100) or B3096 (page 102) charts.

Figure B3088S Seismic Base Stand

Part No.	Plate Size		Stand Pipe Size		'A'		Dia. 'H'		Wt./C*	
		(mm)		(mm)		(mm)		(mm)	Lbs.	kg
B3088S-3/4	1/4" x 8" x 8"	(6.3 x 203.2 x 203.2)	3/4"	(20)	1"	(25.4)	9/16"	(14.3)	618	(280.3)
B3088S-1	1/4" x 8" x 8"	(6.3 x 203.2 x 203.2)	1"	(25)	1"	(25.4)	9/16"	(14.3)	708	(321.1)
B3088S-1 1/4	1/4" x 8" x 8"	(6.3 x 203.2 x 203.2)	1 1/4"	(32)	1"	(25.4)	9/16"	(14.3)	798	(362.0)
B3088S-1 1/2	1/4" x 8" x 8"	(6.3 x 203.2 x 203.2)	1 1/2"	(40)	1"	(25.4)	9/16"	(14.3)	858	(389.2)
B3088S-2	1/4" x 8" x 8"	(6.3 x 203.2 x 203.2)	2"	(50)	1"	(25.4)	9/16"	(14.3)	993	(450.4)
B3088S-2 1/2	3/8" x 8 1/2" x 8 1/2"	(9.5 x 215.9 x 215.9)	2 1/2"	(65)	1 1/4"	(31.7)	9/16"	(14.3)	1638	(743.0)
B3088S-4	1/2" x 13 1/2" x 13 1/2"	(12.7 x 342.9 x 342.9)	4"	(100)	1 1/2"	(38.1)	15/16"	(23.8)	4202	(1906.0)

*Based on a height of 18" (457.2).



Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed as a threaded base stand for Pipe Supports B3089, B3091, B3092, B3093 and B3097. Designed to meet requirements of 12X anchor diameter hole spacing for seismic applications. The standard B3088T-3 & B3088T-6 already meet this requirement.

Ordering: Specify part number, height and finish.

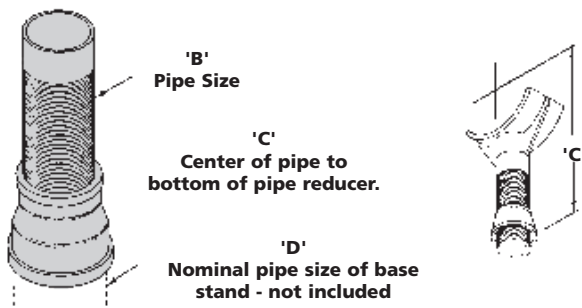
Note: Match B3088T part number with dimension 'D' from B3089 (page 98), B3091 (page 101), B3092 (page 104), B3093 (page 105) and B3097 (pages 102 & 103) charts.

Figure B3088ST Threaded Seismic Base Stand

Part No.	Plate Size		Stand Pipe Size		'A'		Dia. 'H'		'TL'		Wt./C*	
		(mm)		(mm)		(mm)		(mm)		(mm)	Lbs.	kg
B3088ST-1	1/4" x 8" x 8"	(6.3 x 203.2 x 203.2)	1"	(25)	1"	(25.4)	9/16"	(14.3)	1 1/2"	(38.1)	708	(321.1)
B3088ST-1 1/4	1/4" x 8" x 8"	(6.3 x 203.2 x 203.2)	1 1/4"	(32)	1"	(25.4)	9/16"	(14.3)	1 1/2"	(38.1)	798	(362.0)
B3088ST-1 1/2	1/4" x 8" x 8"	(6.3 x 203.2 x 203.2)	1 1/2"	(40)	1"	(25.4)	9/16"	(14.3)	1 1/2"	(38.1)	858	(389.2)
B3088ST-2	1/4" x 8" x 8"	(6.3 x 203.2 x 203.2)	2"	(50)	1"	(25.4)	9/16"	(14.3)	1 1/2"	(38.1)	993	(450.4)
B3088ST-2 1/2	3/8" x 8 1/2" x 8 1/2"	(9.5 x 215.9 x 215.9)	2 1/2"	(65)	1 1/4"	(31.7)	9/16"	(14.3)	1 1/2"	(38.1)	1638	(743.0)
B3088ST-4	1/2" x 13 1/2" x 13 1/2"	(12.7 x 342.9 x 342.9)	4"	(100)	1 1/2"	(38.1)	15/16"	(23.8)	2"	(50.8)	4202	(1906.0)

*Based on a height of 18" (457.2).

Pipe Supports, Guides, Shields & Saddles



Material: Steel Pipe/Malleable Iron Reducer

Standard Finish: Plain or Electro-Plated

Service: Designed to provide up to 4 1/2" (114.3) vertical adjustment after pipe installation. For use with B3090, B3094 and B3095 Pipe Saddle Supports and B3088T or B3088ST Threaded Base Stands.

Ordering: Specify part number and finish.

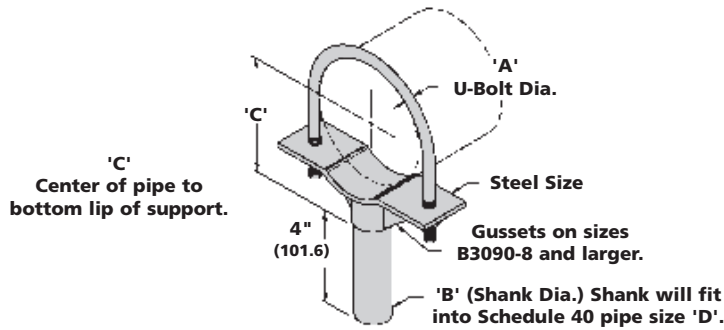
Figure B3089 Pipe Adjuster

Part No.	To Support Nominal Pipe Size		'B'		'D' (Not Supplied)		Wt./C	
							Lbs.	kg
B3089-3/4	1 1/2"	(40)	3/4"	(20)	1 1/2"	(40)	140	(63.5)
	2"	(50)						
B3089-1 1/2	2 1/2"	(65)	1 1/2"	(40)	2 1/2"	(65)	400	(181.4)
	3"	(80)						
	3 1/2"	(90)						
B3089-2 1/2	4"	(100)	2 1/2"	(65)	3"	(80)	700	(317.5)
	5"	(125)						
	6"	(150)						
	8"	(200)						
	10"	(250)						
B3089-3	12"	(300)	3"	(80)	4"	(100)	1000	(453.6)
	14"	(350)						
B3089-4	16"	(400)	4"	(100)	6"	(150)	2200	(997.9)
	18"	(450)						
	20"	(500)						
	24"	(600)						
	30"	(750)						
	36"	(900)						

Part No.	To Support Nom. Pipe Size		'C' When used with B3090			'C' When used with B3095				
			Minimum	Maximum		Minimum	Maximum			
B3089-3/4	1 1/2"	(40)	6 1/4"	(158.8)	10 3/4"	(273.1)	6"	(152.4)	10 1/2"	(266.7)
	2"	(50)	6 7/16"	(163.5)	10 15/16"	(277.8)	6 3/16"	(157.2)	10 11/16"	(271.5)
B3089-1 1/2	2 1/2"	(65)	8 3/8"	(212.7)	12 7/8"	(327.0)	7 15/16"	(201.6)	12 7/16"	(315.9)
	3"	(80)	8 11/16"	(220.7)	13 3/16"	(335.0)	8 1/8"	(206.4)	12 5/8"	(320.7)
	3 1/2"	(90)	8 15/16"	(227.0)	13 7/16"	(341.3)	8 3/8"	(212.7)	12 7/8"	(327.0)
B3089-2 1/2	4"	(100)	9 15/16"	(252.4)	14 7/16"	(366.7)	9 7/16"	(239.7)	13 15/16"	(354.0)
	5"	(125)	10 1/4"	(260.3)	14 3/4"	(374.6)	9 3/4"	(247.6)	14 1/4"	(361.9)
	6"	(150)	11 3/16"	(284.2)	15 11/16"	(398.5)	10 7/16"	(265.1)	14 15/16"	(379.4)
	8"	(200)	12 11/16"	(322.3)	17 3/16"	(436.6)	12 3/8"	(314.3)	16 7/8"	(428.6)
	10"	(250)	13 11/16"	(347.7)	18 3/16"	(462.0)	13 7/16"	(341.3)	17 15/16"	(455.6)
	12"	(300)	14 7/8"	(377.8)	19 3/8"	(492.1)	14 7/16"	(366.7)	18 15/16"	(481.0)
B3089-3	14"	(350)	18"	(457.2)	22 1/2"	(571.5)	18 3/16"	(462.0)	22 11/16"	(576.3)
	16"	(400)	19"	(482.6)	23 1/2"	(596.9)	19 3/16"	(487.4)	23 11/16"	(601.7)
B3089-4	18"	(450)	21 9/16"	(547.7)	26 1/16"	(662.0)	21 1/2"	(546.1)	26"	(660.4)
	20"	(500)	22 9/16"	(573.1)	27 1/16"	(687.4)	22 1/2"	(571.5)	27"	(685.8)
	24"	(600)	24 9/16"	(623.9)	29 1/16"	(738.2)	25 3/4"	(654.0)	30 1/4"	(768.3)
	30"	(750)	28 11/16"	(728.7)	33 3/16"	(843.0)	28 7/8"	(733.4)	33 3/8"	(847.7)
	36"	(900)	31 11/16"	(804.9)	36 3/16"	(919.2)	31 7/8"	(809.6)	36 3/8"	(923.9)

Supports, Guides, Shields & Saddles

Pipe Supports, Guides, Shields & Saddles



Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for support of horizontal pipe from floor. U-Bolt and Hex Nuts are provided to hold pipe securely to the saddle. Use with B3088 or B3088S Base Stands.

Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 38 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 37.

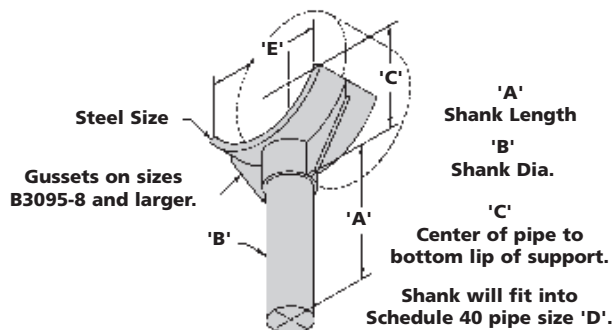
Figure B3090 Pipe Support with U-Bolt

Part No.	Nominal Pipe Size		Maximum O.D. of Pipe		Steel Size		'A'	
B3090-3/4	3/4"	(19)	1 3/8"	(34.9)	1/4" x 1 1/2"	(6.3 x 38.1)	1/4"	(6.4)
B3090-1	1"	(25)	1 3/8"	(34.9)	1/4" x 1 1/2"	(6.3 x 38.1)	1/4"	(6.4)
B3090-1 1/4	1 1/4"	(32)	1 11/16"	(42.9)	1/4" x 2"	(6.3 x 50.8)	3/8"	(9.5)
B3090-1 1/2	1 1/2"	(40)	2"	(50.8)	1/4" x 2"	(6.3 x 50.8)	3/8"	(9.5)
B3090-2	2"	(50)	2 7/16"	(61.9)	1/4" x 2"	(6.3 x 50.8)	3/8"	(9.5)
B3090-2 1/2	2 1/2"	(65)	2 7/8"	(73.0)	1/4" x 3"	(6.3 x 76.2)	1/2"	(12.7)
B3090-3	3"	(80)	3 1/2"	(88.9)	1/4" x 3"	(6.3 x 76.2)	1/2"	(12.7)
B3090-3 1/2	3 1/2"	(90)	4"	(101.6)	1/4" x 3"	(6.3 x 76.2)	1/2"	(12.7)
B3090-4	4"	(100)	4 7/8"	(123.8)	3/8" x 3 1/2"	(9.5 x 88.9)	1/2"	(12.7)
B3090-5	5"	(125)	5 5/8"	(142.9)	3/8" x 3 1/2"	(9.5 x 88.9)	1/2"	(12.7)
B3090-6	6"	(150)	6 29/32"	(175.4)	1/2" x 3 1/2"	(12.7 x 88.9)	5/8"	(15.9)
B3090-8	8"	(200)	9 1/8"	(231.8)	1/2" x 3 1/2"	(12.7 x 88.9)	5/8"	(15.9)
B3090-10	10"	(250)	11 3/32"	(281.8)	1/2" x 3 1/2"	(12.7 x 88.9)	3/4"	(19.0)
B3090-12	12"	(300)	13 3/16"	(335.0)	1/2" x 3 1/2"	(12.7 x 88.9)	7/8"	(22.2)
B3090-14	14"	(350)	14"	(355.6)	5/8" x 4"	(19.0 x 101.6)	7/8"	(22.2)
B3090-16	16"	(400)	16"	(406.4)	5/8" x 4"	(19.0 x 101.6)	7/8"	(22.2)
B3090-18	18"	(450)	18"	(457.2)	3/4" x 5"	(19.0 x 127.0)	1"	(25.4)
B3090-20	20"	(500)	20"	(508.0)	3/4" x 5"	(19.0 x 127.0)	1"	(25.4)
B3090-24	24"	(600)	24"	(609.6)	1" x 5"	(25.4 x 127.0)	1"	(25.4)
B3090-30	30"	(750)	30"	(762.0)	1" x 5"	(25.4 x 127.0)	1"	(25.4)
B3090-36	36"	(900)	36"	(914.4)	1" x 5"	(25.4 x 127.0)	1"	(25.4)

Note:
4" (100) thru 12" (300) fits both steel and ductile iron pipe. For other ductile iron pipe sizes specify B3090DI - size. 3" (80) Ductile Iron uses B3090-3 1/2

Part No.	'B'		'C'		'D' (Base Stand Not Included)		Wt./C	
							Lbs.	kg
B3090-3/4	3/4"	(19.1)	2"	(50.8)	3/4"	(19)	107	(48.5)
B3090-1	3/4"	(19.1)	2 5/32"	(54.8)	3/4"	(19)	117	(53.1)
B3090-1 1/4	3/4"	(19.1)	2 21/64"	(59.1)	3/4"	(19)	149	(67.6)
B3090-1 1/2	3/4"	(19.1)	2 1/2"	(63.5)	3/4"	(19)	166	(75.3)
B3090-2	3/4"	(19.1)	2 11/16"	(68.3)	3/4"	(19)	186	(84.4)
B3090-2 1/2	1 5/16"	(33.3)	3 1/8"	(79.4)	1 1/2"	(40)	251	(113.8)
B3090-3	1 5/16"	(33.3)	3 7/16"	(87.3)	1 1/2"	(40)	316	(143.3)
B3090-3 1/2	1 5/16"	(33.3)	3 11/16"	(93.7)	1 1/2"	(40)	317	(143.8)
B3090-4	2 3/8"	(60.3)	4 1/16"	(103.2)	2 1/2"	(65)	586	(265.8)
B3090-5	2 3/8"	(60.3)	4 17/32"	(115.1)	2 1/2"	(65)	621	(281.7)
B3090-6	2 3/8"	(60.3)	5 5/16"	(134.9)	2 1/2"	(65)	895	(406.0)
B3090-8	2 3/8"	(60.3)	6 3/4"	(171.4)	2 1/2"	(65)	1115	(505.7)
B3090-10	2 3/8"	(60.3)	7 13/16"	(198.4)	2 1/2"	(65)	1423	(645.5)
B3090-12	2 3/8"	(60.3)	8 13/16"	(223.8)	2 1/2"	(65)	1846	(837.3)
B3090-14	2 7/8"	(73.0)	10 9/16"	(268.3)	3"	(80)	2593	(1176.2)
B3090-16	2 7/8"	(73.0)	11 9/16"	(293.7)	3"	(80)	2825	(1281.4)
B3090-18	4"	(101.6)	13 9/16"	(344.5)	4"	(100)	4843	(2196.8)
B3090-20	4"	(101.6)	14 9/16"	(369.9)	4"	(100)	5225	(2370.0)
B3090-24	4"	(101.6)	16 9/16"	(420.7)	4"	(100)	6970	(3161.6)
B3090-30	4"	(101.6)	20 11/16"	(525.5)	4"	(100)	8587	(3895.0)
B3090-36	4"	(101.6)	23 11/16"	(601.7)	4"	(100)	9977	(4525.5)

Pipe Supports, Guides, Shields & Saddles



Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for support of horizontal pipe from floor. Use with B3088 or B3088S Base Stands.

Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 37 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 36.

Figure B3095 Pipe Saddle Support

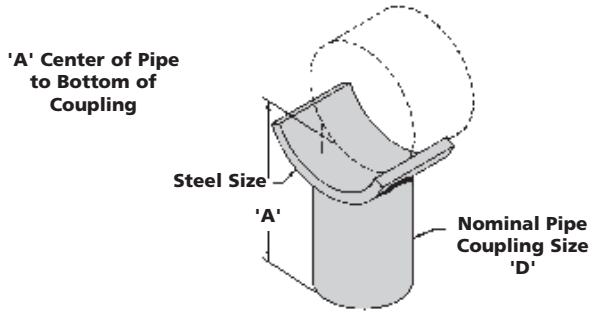
Part No.	Nominal Pipe Size		Maximum O.D. of Pipe		Steel Size		'A'	
B3095-1	1"	(25)	1 ⁵ / ₁₆ "	(33.3)	1/4" x 1 ³ / ₄ "	(6.3 x 44.4)	3"	(76.2)
B3095-1 ¹ / ₄	1 ¹ / ₄ "	(32)	1 ¹¹ / ₁₆ "	(42.9)	1/4" x 1 ³ / ₄ "	(6.3 x 44.4)	3"	(76.2)
B3095-1 ¹ / ₂	1 ¹ / ₂ "	(40)	1 ²⁹ / ₁₆ "	(48.4)	1/4" x 1 ³ / ₄ "	(6.3 x 44.4)	3"	(76.2)
B3095-2	2"	(50)	2 ³ / ₈ "	(60.3)	1/4" x 1 ³ / ₄ "	(6.3 x 44.4)	3"	(76.2)
B3095-2 ¹ / ₂	2 ¹ / ₂ "	(65)	2 ⁷ / ₈ "	(73.0)	1/4" x 3"	(6.3 x 76.2)	4"	(101.6)
B3095-3	3"	(80)	3 ¹ / ₂ "	(88.9)	1/4" x 3"	(6.3 x 76.2)	4"	(101.6)
B3095-3 ¹ / ₂	3 ¹ / ₂ "	(90)	4"	(101.6)	1/4" x 3"	(6.3 x 76.2)	4"	(101.6)
B3095-4	4"	(100)	4 ⁷ / ₈ "	(123.8)	1/4" x 4"	(6.3 x 101.6)	4"	(101.6)
B3095-5	5"	(125)	5 ⁹ / ₁₆ "	(141.3)	1/4" x 4"	(6.3 x 101.6)	4"	(101.6)
B3095-6	6"	(150)	7"	(177.8)	3/8" x 4"	(9.5 x 101.6)	4"	(101.6)
B3095-8	8"	(200)	9 ¹ / ₈ "	(231.8)	3/8" x 4"	(9.5 x 101.6)	4"	(101.6)
B3095-10	10"	(250)	11 ¹ / ₈ "	(282.6)	3/8" x 4"	(9.5 x 101.6)	4"	(101.6)
B3095-12	12"	(300)	13 ¹ / ₂ "	(342.9)	3/8" x 4"	(9.5 x 101.6)	4"	(101.6)
B3095-14	14"	(350)	14"	(355.6)	3/8" x 5"	(9.5 x 127.0)	4"	(101.6)
B3095-16	16"	(400)	16"	(406.4)	3/8" x 5"	(9.5 x 127.0)	4"	(101.6)
B3095-18	18"	(450)	18"	(457.2)	1/2" x 5"	(12.7 x 127.0)	4"	(101.6)
B3095-20	20"	(500)	20"	(508.0)	1/2" x 5"	(12.7 x 127.0)	4"	(101.6)
B3095-24	24"	(600)	24"	(609.6)	1/2" x 6"	(12.7 x 152.4)	4"	(101.6)
B3095-30	30"	(750)	30"	(762.0)	1" x 6"	(25.4 x 152.4)	4"	(101.6)
B3095-36	36"	(900)	36"	(914.4)	1" x 6"	(25.4 x 152.4)	4"	(101.6)

Note:
4" (100) thru 12" (300) fits both steel and ductile iron pipe. For other ductile iron pipe sizes specify B3095DI - size. 3" (80) Ductile Iron uses B3095-3¹/₂

Supports, Guides, Shields & Saddles

Part No.	'B'		'C'		'D' (Base Stand Not Included)		'E'		Wt./C Lbs. kg	
B3095-1	1/2"	(12.7)	1 ²⁹ / ₃₂ "	(48.4)	3/4"	(20)	1 ¹ / ₈ "	(31.7)	49	(22.2)
B3095-1 ¹ / ₄	3/4"	(19.0)	2 ⁵ / ₆₄ "	(52.8)	3/4"	(20)	1 ⁷ / ₁₆ "	(36.5)	81	(36.7)
B3095-1 ¹ / ₂	3/4"	(19.0)	2 ¹ / ₄ "	(57.1)	3/4"	(20)	1 ²¹ / ₃₂ "	(42.0)	88	(39.9)
B3095-2	3/4"	(19.0)	2 ⁷ / ₁₆ "	(61.9)	3/4"	(20)	2 ¹ / ₁₆ "	(52.4)	94	(42.6)
B3095-2 ¹ / ₂	1 ⁵ / ₁₆ "	(33.3)	2 ⁹ / ₁₆ "	(66.1)	1 ¹ / ₂ "	(40)	2 ¹ / ₂ "	(63.5)	167	(75.7)
B3095-3	1 ⁵ / ₁₆ "	(33.3)	2 ⁷ / ₈ "	(73.0)	1 ¹ / ₂ "	(40)	3 ¹ / ₃₂ "	(77.0)	176	(79.8)
B3095-3 ¹ / ₂	1 ⁵ / ₁₆ "	(33.3)	3 ¹ / ₈ "	(79.4)	1 ¹ / ₂ "	(40)	3 ⁷ / ₁₆ "	(87.3)	188	(85.3)
B3095-4	2 ³ / ₈ "	(60.3)	3 ¹ / ₂ "	(88.9)	2 ¹ / ₂ "	(65)	4 ¹ / ₄ "	(107.9)	364	(165.1)
B3095-5	2 ³ / ₈ "	(60.3)	4 ¹ / ₃₂ "	(102.4)	2 ¹ / ₂ "	(65)	4 ¹³ / ₁₆ "	(122.2)	381	(172.8)
B3095-6	2 ³ / ₈ "	(60.3)	4 ¹¹ / ₁₆ "	(119.1)	2 ¹ / ₂ "	(65)	6 ¹ / ₁₆ "	(154.0)	534	(242.2)
B3095-8	2 ³ / ₈ "	(60.3)	6 ¹ / ₂ "	(165.1)	2 ¹ / ₂ "	(65)	7 ¹⁵ / ₁₆ "	(201.6)	796	(361.0)
B3095-10	2 ³ / ₈ "	(60.3)	7 ⁹ / ₁₆ "	(192.1)	2 ¹ / ₂ "	(65)	9 ⁵ / ₈ "	(244.5)	914	(414.6)
B3095-12	2 ³ / ₈ "	(60.3)	8 ³ / ₈ "	(212.7)	2 ¹ / ₂ "	(65)	11 ¹¹ / ₁₆ "	(296.9)	1068	(484.4)
B3095-14	2 ⁷ / ₈ "	(73.0)	10 ³ / ₄ "	(273.0)	3"	(80)	12 ¹ / ₈ "	(308.0)	1654	(750.2)
B3095-16	2 ⁷ / ₈ "	(73.0)	11 ³ / ₄ "	(298.4)	3"	(80)	13 ⁷ / ₈ "	(352.4)	1817	(824.2)
B3095-18	3 ¹ / ₂ "	(88.9)	13 ¹ / ₂ "	(342.9)	4"	(100)	15 ¹⁹ / ₃₂ "	(396.1)	2798	(1269.2)
B3095-20	3 ¹ / ₂ "	(88.9)	14 ¹ / ₂ "	(368.3)	4"	(100)	17 ⁵ / ₁₆ "	(439.7)	3018	(1368.9)
B3095-24	3 ¹ / ₂ "	(88.9)	17 ³ / ₄ "	(450.8)	4"	(100)	20 ²⁵ / ₃₂ "	(527.8)	4146	(1880.6)
B3095-30	3 ¹ / ₂ "	(88.9)	20 ⁷ / ₈ "	(530.2)	4"	(100)	26"	(660.4)	7624	(3458.2)
B3095-36	3 ¹ / ₂ "	(88.9)	23 ⁷ / ₈ "	(606.4)	4"	(100)	31 ³ / ₁₆ "	(792.2)	8877	(4026.6)

Pipe Supports, Guides, Shields & Saddles



Gussets on sizes B3091-8 and larger.

Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for support of horizontal pipe from floor where there is minimal space between pipe and floor. Use with B3088T or B3088ST Threaded Base Stands.

Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 39 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 38.

Note:

4" (100) thru 12" (300) fits both steel and ductile iron pipe. For other ductile iron pipe sizes specify B3091DI - size.

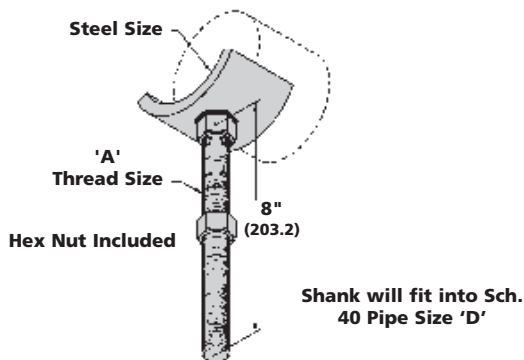
3" (80) Ductile Iron uses B3091-3¹/₂

Figure B3091 Pipe Saddle Support

Part No.	Nominal Pipe Size		Maximum O.D. of Pipe		'A'		Steel Size		Nominal Pipe Coupling 'D'		Wt./C	
											Lbs.	kg
B3091- ³ / ₄	³ / ₄ "	(20)	¹ / ₈ "	(28.6)	2 ²³ / ₃₂ "	(69.0)	7 Ga" x ³ / ₄ "	(4.5 x 44.4)	1"	(25)	51	(23.1)
B3091-1	1"	(25)	¹ / ₈ "	(34.9)	2 ²⁷ / ₃₂ "	(72.2)	7 Ga" x ³ / ₄ "	(4.5 x 44.4)	1"	(25)	53	(24.0)
B3091-1 ¹ / ₄	1 ¹ / ₄ "	(32)	1 ¹¹ / ₁₆ "	(42.9)	3 ¹ / ₆₄ "	(76.6)	7 Ga" x ³ / ₄ "	(4.5 x 44.4)	1"	(25)	56	(25.4)
B3091-1 ¹ / ₂	1 ¹ / ₂ "	(40)	2"	(50.8)	3 ¹ / ₄ "	(82.5)	¹ / ₄ " x 2"	(6.3 x 50.8)	1 ¹ / ₄ "	(32)	84	(38.1)
B3091-2	2"	(50)	2 ³ / ₈ "	(60.3)	3 ⁵ / ₈ "	(92.1)	³ / ₈ " x 2"	(9.5 x 50.8)	1 ¹ / ₄ "	(32)	112	(50.8)
B3091-2 ¹ / ₂	2 ¹ / ₂ "	(65)	2 ⁷ / ₈ "	(73.0)	3 ⁷ / ₈ "	(98.4)	³ / ₈ " x 2 ¹ / ₂ "	(9.5 x 63.5)	1 ¹ / ₂ "	(40)	162	(73.5)
B3091-3	3"	(80)	3 ¹ / ₂ "	(88.9)	4 ³ / ₁₆ "	(106.3)	³ / ₈ " x 2 ¹ / ₂ "	(9.5 x 63.5)	1 ¹ / ₂ "	(40)	179	(81.2)
B3091-3 ¹ / ₂	3 ¹ / ₂ "	(90)	4"	(101.6)	4 ⁷ / ₁₆ "	(112.7)	³ / ₈ " x 2 ¹ / ₂ "	(9.5 x 63.5)	1 ¹ / ₂ "	(40)	193	(87.5)
B3091-4	4"	(100)	4 ¹³ / ₁₆ "	(122.2)	4 ³ / ₄ "	(120.6)	³ / ₈ " x 3"	(9.5 x 76.2)	2"	(50)	273	(123.8)
B3091-5	5"	(125)	5 ⁹ / ₁₆ "	(141.3)	5 ⁹ / ₃₂ "	(134.1)	³ / ₈ " x 3"	(9.5 x 76.2)	2"	(50)	309	(140.1)
B3091-6	6"	(150)	6 ²⁹ / ₃₂ "	(175.4)	6 ¹⁵ / ₁₆ "	(176.2)	¹ / ₂ " x 3 ¹ / ₂ "	(12.7 x 88.9)	2 ¹ / ₂ "	(65)	586	(265.8)
B3091-8	8"	(200)	9 ¹ / ₁₆ "	(230.2)	7 ¹⁵ / ₁₆ "	(201.6)	¹ / ₂ " x 3 ¹ / ₂ "	(12.7 x 88.9)	2 ¹ / ₂ "	(65)	688	(312.1)
B3091-10	10"	(250)	11 ¹ / ₈ "	(282.6)	9 ¹ / ₈ "	(231.8)	¹ / ₂ " x 4"	(12.7 x 101.6)	3"	(80)	1011	(458.6)
B3091-12	12"	(300)	13 ¹ / ₄ "	(336.5)	10 ¹ / ₈ "	(257.2)	¹ / ₂ " x 4"	(12.7 x 101.6)	3"	(80)	1128	(511.6)
B3091-14	14"	(250)	14"	(355.6)	11"	(279.4)	¹ / ₂ " x 5"	(12.7 x 127.0)	4"	(100)	1532	(694.9)
B3091-16	16"	(400)	16"	(406.4)	12"	(304.8)	¹ / ₂ " x 5"	(12.7 x 127.0)	4"	(100)	1680	(762.0)
B3091-18	18"	(450)	18"	(457.2)	13 ¹ / ₂ "	(342.9)	¹ / ₂ " x 7 ¹ / ₂ "	(12.7 x 190.5)	6"	(150)	3179	(1442.0)
B3091-20	20"	(500)	20"	(508.0)	14 ¹ / ₂ "	(368.3)	¹ / ₂ " x 7 ¹ / ₂ "	(12.7 x 190.5)	6"	(150)	3401	(1542.7)
B3091-24	24"	(600)	24"	(609.6)	16 ¹ / ₂ "	(419.1)	¹ / ₂ " x 7 ¹ / ₂ "	(12.7 x 190.5)	6"	(150)	3846	(1744.5)

Supports, Guides, Shields & Saddles

Pipe Supports, Guides, Shields & Saddles



Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for support of horizontal pipe from floor stanchions (B3088 or B3088S) where vertical adjustment is required.

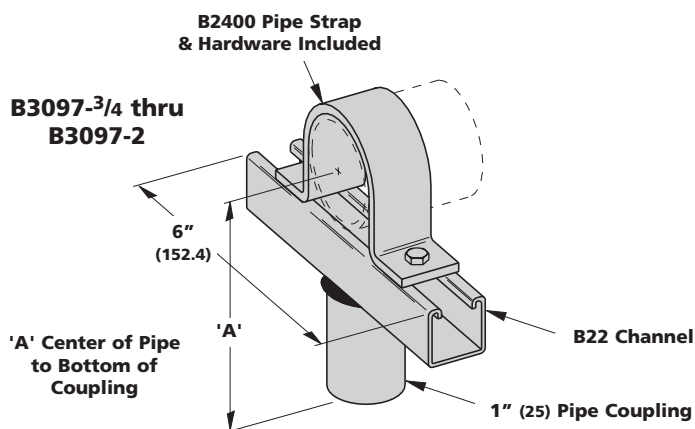
Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 39 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 38.

Figure B3096 Adjustable Pipe Saddle Support

Part No.	Nominal Pipe Size		Maximum O.D. of Pipe		Thread Size 'A'	'D' (Base Stand Not Included)		Steel Size		Wt./C	
										Lbs.	kg
B3096-2	2"	(50)	2 ³ / ₈ "	(60.3)	7/8"-9	1"	(25)	3/8" x 2"	(9.5 x 50.8)	212	(96.1)
B3096-3	3"	(80)	3 ¹ / ₂ "	(88.9)	7/8"-9	1"	(25)	3/8" x 2 ¹ / ₂ "	(9.5 x 63.5)	259	(117.5)
B3096-4	4"	(100)	4 ¹ / ₂ "	(114.3)	1"-8	1"	(25)	3/8" x 3"	(9.5 x 76.2)	370	(167.8)
B3096-5	5"	(125)	5 ⁹ / ₁₆ "	(141.3)	1"-8	1"	(25)	3/8" x 3"	(9.5 x 76.2)	404	(183.2)
B3096-6	6"	(150)	6 ⁵ / ₈ "	(168.3)	1 ¹ / ₄ "-7	1 ¹ / ₄ "	(32)	1/2" x 3 ¹ / ₂ "	(12.7 x 88.9)	714	(323.9)
B3096-8	8"	(200)	8 ⁵ / ₈ "	(219.1)	1 ¹ / ₄ "-7	1 ¹ / ₄ "	(32)	1/2" x 3 ¹ / ₂ "	(12.7 x 88.9)	819	(371.5)
B3096-10	10"	(250)	10 ³ / ₄ "	(273.0)	1 ¹ / ₂ "-6	1 ¹ / ₂ "	(40)	1/2" x 4"	(12.7 x 101.6)	1194	(541.6)
B3096-12	12"	(300)	12 ³ / ₄ "	(323.8)	1 ¹ / ₂ "-6	1 ¹ / ₂ "	(40)	1/2" x 4"	(12.7 x 101.6)	1315	(596.5)

Supports, Guides, Shields & Saddles



Material: Steel

Standard Finish: Electro-Plated

Service: Designed for support of horizontal pipe from floor where there is minimal space between pipe and floor. B2400 pipe strap holds pipe securely to support. Use with B3088T or B3088ST Threaded Base Stands.

Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 38 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 37.

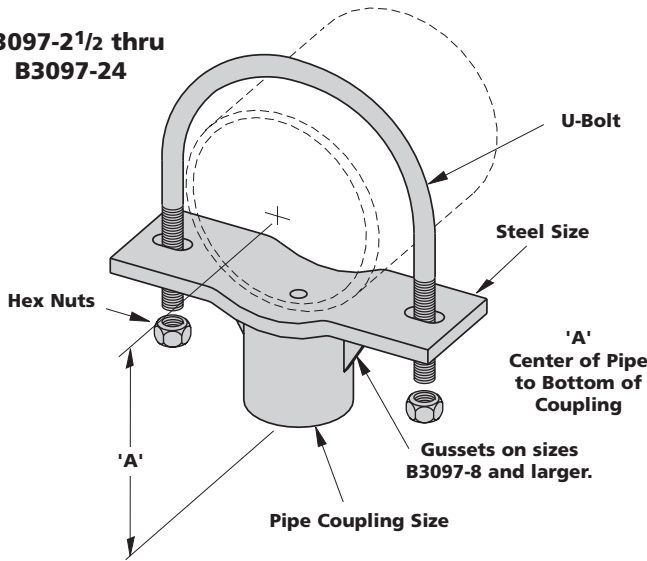
Figure B3097 Pipe Support With Pipe Strap

Part No.	Nominal Pipe Size		'A'	Strap Size	Wt./C	
					Lbs.	kg
B3097-3/4	3/4"	(20)	4 ⁵ / ₃₂ " (105.5)	B2400-3/4	176	(79.8)
B3097-1	1"	(25)	4 ⁹ / ₃₂ " (108.7)	B2400-1	181	(82.1)
B3097-1 ¹ / ₄	1 ¹ / ₄ "	(32)	4 ⁷ / ₁₆ " (112.7)	B2400-1 ¹ / ₄	186	(84.3)
B3097-1 ¹ / ₂	1 ¹ / ₂ "	(40)	4 ⁹ / ₁₆ " (115.9)	B2400-1 ¹ / ₂	189	(85.7)
B3097-2	2"	(50)	4 ¹³ / ₁₆ " (122.2)	B2400-2	253	(114.7)

Larger sizes
2¹/₂" (65) thru 24" (600)
on following page.

Pipe Supports, Guides, Shields & Saddles

B3097-2½ thru
B3097-24



Material: Steel

Standard Finish: Electro-Plated

Service: Designed for support of horizontal pipe from floor where there is minimal space between pipe and floor. U-Bolt holds pipe securely to support.

Use with B3088T or B3088ST Threaded Base Stands.

Ordering: Specify part number and finish.

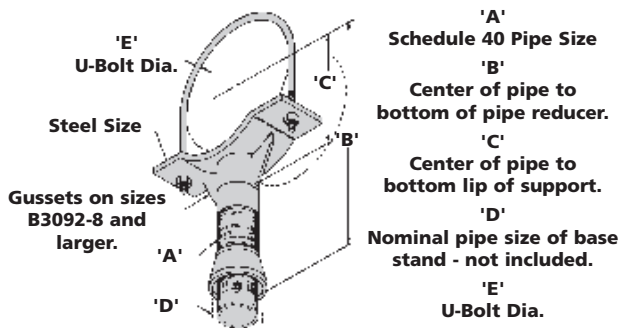
Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 38 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 37.

Figure B3097 Pipe Saddle Support With U-Bolt

Part No.	Nominal Pipe Size				'A'			
	Sch 40/80	Ductile Iron	Sch 40/80	Ductile Iron	Sch 40/80	Ductile Iron	Sch 40/80	Ductile Iron
B3097-2½	2½"	(65)	---	---	¾"	(98.4)	---	---
B3097-3	3"	(80)	---	---	1/16"	(106.3)	---	---
B3097-3½	3½"	(90)	3"	(80)	5/16"	(112.7)	4 ¹⁹ /64"	(109.1)
B3097-4	4"	(100)	4"	(100)	¾"	(120.6)	4 ²⁹ /32"	(124.6)
B3097-5	5"	(125)	---	---	9/32"	(134.1)	---	---
B3097-6	6"	(150)	6"	(150)	15/16"	(176.2)	7 ⁵ /64"	(179.8)
B3097-8	8"	(200)	8"	(200)	15/16"	(201.6)	8 ⁵ /32"	(207.1)
B3097-10	10"	(250)	10"	(250)	1 1/8"	(231.8)	9 ¹⁹ /64"	(236.1)
B3097-12	12"	(300)	12"	(300)	1 1/8"	(257.2)	10 ¹¹ /32"	(262.7)
B3097-14	14"	(250)	---	---	1 1/8"	(279.4)	---	---
B3097-16	16"	(400)	---	---	1 1/8"	(304.8)	---	---
B3097-18	18"	(450)	---	---	1 3/4"	(342.9)	---	---
B3097-20	20"	(500)	---	---	1 3/4"	(368.3)	---	---
B3097-24	24"	(600)	---	---	1 3/4"	(419.1)	---	---

Part No.	Steel Size		Pipe Coupling		U-Bolt Thread Size	Wt./C	
	Lbs.	kg	Lbs.	kg			
B3097-2½	1/4" x 3"	(6.3 x 76.2)	1½"	(40)	1/2"-13	303	(137.3)
B3097-3	1/4" x 3"	(6.3 x 76.2)	1½"	(40)	1/2"-13	303	(137.3)
B3097-3½	1/4" x 3"	(6.3 x 76.2)	1½"	(40)	1/2"-13	351	(159.2)
B3097-4	3/8" x 3½"	(9.5 x 88.9)	2"	(50)	1/2"-13	504	(228.6)
B3097-5	3/8" x 3½"	(9.5 x 88.9)	2"	(50)	1/2"-13	551	(249.9)
B3097-6	1/2" x 3½"	(12.7 x 88.9)	2½"	(65)	5/8"-11	978	(443.6)
B3097-8	1/2" x 3½"	(12.7 x 88.9)	2½"	(65)	5/8"-11	1143	(518.4)
B3097-10	1/2" x 4"	(12.7 x 101.6)	3"	(80)	¾"-10	1724	(782.0)
B3097-12	1/2" x 4"	(12.7 x 101.6)	3"	(80)	7/8"-9	2156	(977.9)
B3097-14	5/8" x 5"	(15.9 x 127.0)	4"	(100)	7/8"-9	3217	(1459.2)
B3097-16	5/8" x 5"	(15.9 x 127.0)	4"	(100)	7/8"-9	3494	(1584.9)
B3097-18	¾" x 7½"	(19.0 x 190.5)	6"	(150)	1"-8	7067	(3205.6)
B3097-20	¾" x 7½"	(19.0 x 190.5)	6"	(150)	1"-8	7399	(3356.2)
B3097-24	¾" x 7½"	(19.0 x 190.5)	6"	(150)	1"-8	8318	(3773.0)

Pipe Supports, Guides, Shields & Saddles



Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for support of horizontal pipe from floor where vertical adjustment is required. U-Bolt and Hex Nuts are provided to hold pipe securely to the saddle. Use with B3088T Threaded Base Stand.

Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 38 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 37.

Note: 4" (100) thru 12" (300) fits both steel and ductile iron pipe. For other ductile iron pipe sizes specify B3092DI - size. 3" (80) Ductile Iron uses B3092-3¹/₂

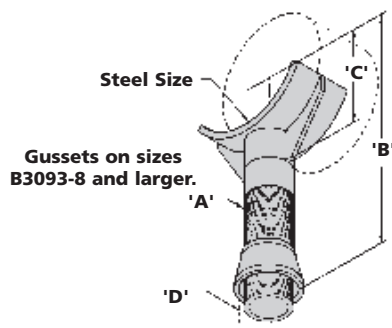
Figure B3092 Adjustable Pipe Saddle Support with Yoke

Part No.	Nominal Pipe Size		Maximum O.D. Pipe		'A'		'B'			
							Minimum		Maximum	
B3092-3 ¹ / ₄	3 ³ / ₄ "	(19)	1 ³ / ₈ "	(34.9)	3 ³ / ₄ "	(19)	5 ³ / ₄ "	(146.0)	10 ¹ / ₄ "	(260.3)
B3092-1	1"	(25)	1 ³ / ₈ "	(34.9)	3 ³ / ₄ "	(19)	5 ²⁹ / ₃₂ "	(150.0)	10 ¹³ / ₃₂ "	(264.3)
B3092-1 ¹ / ₄	1 ¹ / ₄ "	(32)	1 ¹¹ / ₁₆ "	(42.9)	3 ³ / ₄ "	(19)	6 ⁵ / ₆₄ "	(154.4)	10 ³⁷ / ₆₄ "	(268.7)
B3092-1 ¹ / ₂	1 ¹ / ₂ "	(38)	2"	(50.8)	3 ³ / ₄ "	(19)	6 ¹ / ₄ "	(158.7)	10 ³ / ₄ "	(273.0)
B3092-2	2"	(50)	2 ⁷ / ₁₆ "	(61.9)	3 ³ / ₄ "	(19)	6 ⁷ / ₁₆ "	(163.5)	10 ¹⁵ / ₁₆ "	(277.8)
B3092-2 ¹ / ₂	2 ¹ / ₂ "	(65)	2 ⁷ / ₈ "	(73.0)	1 ¹ / ₂ "	(40)	6 ⁷ / ₈ "	(174.6)	11 ³ / ₈ "	(288.9)
B3092-3	3"	(80)	3 ¹ / ₂ "	(88.9)	1 ¹ / ₂ "	(40)	7 ³ / ₁₆ "	(182.6)	11 ¹¹ / ₁₆ "	(296.9)
B3092-3 ¹ / ₂	3 ¹ / ₂ "	(90)	4"	(101.6)	1 ¹ / ₂ "	(40)	7 ⁷ / ₁₆ "	(188.9)	11 ¹⁵ / ₁₆ "	(303.2)
B3092-4	4"	(100)	4 ⁷ / ₈ "	(123.8)	2 ¹ / ₂ "	(65)	7 ¹³ / ₁₆ "	(198.4)	12 ⁵ / ₁₆ "	(312.7)
B3092-5	5"	(125)	5 ⁵ / ₈ "	(142.9)	2 ¹ / ₂ "	(65)	8 ⁹ / ₃₂ "	(210.3)	12 ²⁵ / ₃₂ "	(324.6)
B3092-6	6"	(150)	6 ²⁹ / ₃₂ "	(175.4)	2 ¹ / ₂ "	(65)	9 ¹ / ₁₆ "	(230.2)	13 ⁹ / ₁₆ "	(344.5)
B3092-8	8"	(200)	9 ¹ / ₈ "	(231.8)	2 ¹ / ₂ "	(65)	10 ¹ / ₂ "	(266.7)	15"	(381.0)
B3092-10	10"	(250)	11 ³ / ₃₂ "	(281.8)	2 ¹ / ₂ "	(65)	11 ⁹ / ₁₆ "	(293.7)	16 ¹ / ₁₆ "	(408.0)
B3092-12	12"	(300)	13 ³ / ₁₆ "	(334.9)	2 ¹ / ₂ "	(65)	12 ⁹ / ₁₆ "	(319.1)	17 ¹ / ₁₆ "	(433.4)
B3092-14	14"	(350)	14"	(355.6)	3"	(80)	14 ⁵ / ₁₆ "	(363.5)	18 ¹³ / ₁₆ "	(477.8)
B3092-16	16"	(400)	16"	(406.4)	3"	(80)	15 ⁵ / ₁₆ "	(388.9)	19 ¹³ / ₁₆ "	(503.2)
B3092-18	18"	(450)	18"	(457.2)	4"	(100)	17 ⁵ / ₁₆ "	(439.7)	21 ¹³ / ₁₆ "	(554.0)
B3092-20	20"	(500)	20"	(508.0)	4"	(100)	18 ⁵ / ₁₆ "	(465.1)	22 ¹³ / ₁₆ "	(579.4)
B3092-24	24"	(600)	24"	(609.6)	4"	(100)	20 ⁵ / ₁₆ "	(515.9)	24 ¹³ / ₁₆ "	(630.2)
B3092-30	30"	(750)	30"	(762.0)	4"	(100)	24 ⁷ / ₁₆ "	(620.7)	28 ¹⁵ / ₁₆ "	(735.0)
B3092-36	36"	(900)	36"	(914.4)	4"	(100)	27 ⁷ / ₁₆ "	(696.9)	31 ¹⁵ / ₁₆ "	(811.2)

Part No.	'C'		'D' (Base Stand Not Supplied)		'E'		Saddle Steel Size		Wt./C	
									Lbs.	kg
B3092-3 ¹ / ₄	2"	(50.8)	1 ¹ / ₂ "	(38)	1 ¹ / ₄ "	(6.4)	1 ¹ / ₄ " x 1 ¹ / ₂ "	(6.3 x 38.1)	247	(112.0)
B3092-1	2 ⁵ / ₃₂ "	(54.8)	1 ¹ / ₂ "	(38)	1 ¹ / ₄ "	(6.4)	1 ¹ / ₄ " x 1 ¹ / ₂ "	(6.3 x 38.1)	257	(116.6)
B3092-1 ¹ / ₄	2 ²¹ / ₆₄ "	(59.1)	1 ¹ / ₂ "	(38)	3 ³ / ₈ "	(9.5)	1 ¹ / ₄ " x 2"	(6.3 x 50.8)	289	(131.1)
B3092-1 ¹ / ₂	2 ¹ / ₂ "	(63.5)	1 ¹ / ₂ "	(38)	3 ³ / ₈ "	(9.5)	1 ¹ / ₄ " x 2"	(6.3 x 50.8)	306	(138.8)
B3092-2	2 ¹¹ / ₁₆ "	(68.3)	1 ¹ / ₂ "	(38)	3 ³ / ₈ "	(9.5)	1 ¹ / ₄ " x 2"	(6.3 x 50.8)	326	(147.9)
B3092-2 ¹ / ₂	3 ¹ / ₈ "	(79.4)	2 ¹ / ₂ "	(65)	1 ¹ / ₂ "	(12.7)	1 ¹ / ₄ " x 3"	(6.3 x 76.2)	651	(295.3)
B3092-3	3 ⁷ / ₁₆ "	(87.3)	2 ¹ / ₂ "	(65)	1 ¹ / ₂ "	(12.7)	1 ¹ / ₄ " x 3"	(6.3 x 76.2)	716	(324.8)
B3092-3 ¹ / ₂	3 ¹¹ / ₁₆ "	(93.7)	2 ¹ / ₂ "	(65)	1 ¹ / ₂ "	(12.7)	1 ¹ / ₄ " x 3"	(6.3 x 76.2)	717	(325.2)
B3092-4	4 ¹ / ₄ "	(107.9)	3"	(80)	1 ¹ / ₂ "	(12.7)	3 ³ / ₈ " x 3 ¹ / ₂ "	(9.5 x 88.9)	1286	(583.3)
B3092-5	4 ⁹ / ₁₆ "	(115.9)	3"	(80)	1 ¹ / ₂ "	(12.7)	3 ³ / ₈ " x 3 ¹ / ₂ "	(9.5 x 88.9)	1321	(599.2)
B3092-6	5 ¹ / ₂ "	(139.7)	3"	(80)	5 ⁵ / ₈ "	(15.9)	1 ¹ / ₂ " x 3 ¹ / ₂ "	(12.7 x 88.9)	1595	(723.5)
B3092-8	7"	(177.8)	3"	(80)	5 ⁵ / ₈ "	(15.9)	1 ¹ / ₂ " x 3 ¹ / ₂ "	(12.7 x 88.9)	1815	(823.3)
B3092-10	8"	(203.2)	3"	(80)	3 ³ / ₄ "	(19.0)	1 ¹ / ₂ " x 3 ¹ / ₂ "	(12.7 x 88.9)	2123	(963.0)
B3092-12	9 ³ / ₁₆ "	(233.4)	3"	(80)	7 ⁷ / ₈ "	(22.2)	1 ¹ / ₂ " x 3 ¹ / ₂ "	(12.7 x 88.9)	2546	(1154.8)
B3092-14	10 ⁹ / ₁₆ "	(268.3)	4"	(100)	7 ⁷ / ₈ "	(22.2)	5 ⁵ / ₈ " x 4"	(15.9 x 101.6)	3593	(1629.8)
B3092-16	11 ⁹ / ₁₆ "	(293.7)	4"	(100)	7 ⁷ / ₈ "	(22.2)	5 ⁵ / ₈ " x 4"	(15.9 x 101.6)	3825	(1735.0)
B3092-18	13 ⁹ / ₁₆ "	(344.5)	6"	(150)	1"	(25.4)	3 ³ / ₄ " x 5"	(19.0 x 127.0)	7043	(3194.7)
B3092-20	14 ⁹ / ₁₆ "	(369.9)	6"	(150)	1"	(25.4)	3 ³ / ₄ " x 5"	(19.0 x 127.0)	7425	(3368.0)
B3092-24	16 ⁹ / ₁₆ "	(420.7)	6"	(150)	1"	(25.4)	1" x 5"	(25.4 x 127.0)	9170	(4159.5)
B3092-30	20 ¹¹ / ₁₆ "	(525.5)	6"	(150)	1"	(25.4)	1" x 5"	(25.4 x 127.0)	10787	(4893.0)
B3092-36	23 ¹¹ / ₁₆ "	(601.7)	6"	(150)	1"	(25.4)	1" x 5"	(25.4 x 127.0)	12177	(5523.5)

Supports, Guides, Shields & Saddles

Pipe Supports, Guides, Shields & Saddles



'A'
Schedule 40 Pipe Size
'B'
Center of pipe to bottom
of pipe reducer.
'C'
Center of pipe to bottom
lip of support.
'D'
Nominal pipe size of base
stand - not included.

Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for support of horizontal pipe from floor stanchions where vertical adjustment is required. Use with B3088T or B3088ST Threaded Base Stands.

Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 39 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 38.

Figure B3093 Adjustable Pipe Saddle Support

Part No.	Nominal Pipe Size		Maximum O.D. Pipe		'A'		Minimum 'B'		Maximum 'B'		'C'	
	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm
B3093-1	1"	(25)	1 ⁵ / ₁₆ "	(33.3)	3/4"	(20)	5 ²¹ / ₃₂ "	(143.6)	10 ⁵ / ₃₂ "	(257.9)	1 ²⁹ / ₃₂ "	(48.4)
B3093-1 ¹ / ₄	1 ¹ / ₄ "	(32)	1 ¹¹ / ₁₆ "	(42.9)	3/4"	(20)	5 ⁵³ / ₆₄ "	(148.0)	10 ²¹ / ₆₄ "	(2262.3)	2 ⁵ / ₆₄ "	(52.8)
B3093-1 ¹ / ₂	1 ¹ / ₂ "	(40)	1 ²⁹ / ₃₂ "	(48.4)	3/4"	(20)	6"	(152.4)	10 ¹ / ₂ "	(266.7)	2 ¹ / ₄ "	(58.1)
B3093-2	2"	(50)	2 ³ / ₈ "	(60.3)	3/4"	(20)	6 ³ / ₁₆ "	(157.2)	10 ¹¹ / ₁₆ "	(271.5)	2 ⁷ / ₁₆ "	(61.9)
B3093-2 ¹ / ₂	2 ¹ / ₂ "	(65)	2 ⁷ / ₈ "	(73.0)	1 ¹ / ₂ "	(40)	6 ⁵ / ₁₆ "	(160.3)	10 ¹³ / ₁₆ "	(274.6)	2 ⁹ / ₁₆ "	(65.1)
B3093-3	3"	(80)	3 ¹ / ₂ "	(88.9)	1 ¹ / ₂ "	(40)	6 ⁵ / ₈ "	(168.3)	11 ¹ / ₈ "	(282.6)	2 ⁷ / ₈ "	(73.0)
B3093-3 ¹ / ₂	3 ¹ / ₂ "	(90)	4"	(101.6)	1 ¹ / ₂ "	(40)	6 ⁷ / ₈ "	(174.6)	11 ³ / ₈ "	(288.9)	3 ¹ / ₈ "	(79.4)
B3093-4	4"	(100)	4 ⁷ / ₈ "	(123.8)	2 ¹ / ₂ "	(65)	7 ¹ / ₄ "	(184.1)	11 ³ / ₄ "	(298.4)	3 ¹ / ₂ "	(88.9)
B3093-5	5"	(125)	5 ⁹ / ₁₆ "	(141.3)	2 ¹ / ₂ "	(65)	7 ²⁵ / ₃₂ "	(197.6)	12 ³ / ₃₂ "	(311.9)	4 ¹ / ₃₂ "	(102.4)
B3093-6	6"	(150)	7"	(177.8)	2 ¹ / ₂ "	(65)	8 ⁷ / ₁₆ "	(214.3)	12 ¹⁵ / ₁₆ "	(328.6)	4 ¹¹ / ₁₆ "	(119.1)
B3093-8	8"	(200)	9 ¹ / ₈ "	(231.8)	2 ¹ / ₂ "	(65)	10 ¹ / ₄ "	(260.3)	14 ³ / ₄ "	(374.6)	6 ¹ / ₂ "	(165.1)
B3093-10	10"	(250)	11 ¹ / ₈ "	(282.6)	2 ¹ / ₂ "	(65)	11 ⁵ / ₁₆ "	(287.3)	15 ¹³ / ₁₆ "	(401.6)	7 ⁹ / ₁₆ "	(192.1)
B3093-12	12"	(300)	13 ¹ / ₂ "	(342.9)	2 ¹ / ₂ "	(65)	12 ¹ / ₈ "	(308.0)	16 ⁵ / ₈ "	(422.3)	8 ³ / ₈ "	(212.7)
B3093-14	14"	(350)	14"	(355.6)	3"	(80)	14 ¹ / ₂ "	(368.3)	19"	(482.6)	10 ³ / ₄ "	(273.0)
B3093-16	16"	(400)	16"	(406.4)	3"	(80)	15 ¹ / ₂ "	(393.7)	20"	(508.0)	11 ³ / ₄ "	(298.4)
B3093-18	18"	(450)	18"	(457.2)	4"	(100)	17 ¹ / ₄ "	(438.1)	21 ³ / ₄ "	(552.4)	13 ¹ / ₂ "	(342.9)
B3093-20	20"	(500)	20"	(508.0)	4"	(100)	18 ¹ / ₄ "	(463.5)	22 ³ / ₄ "	(577.8)	14 ¹ / ₂ "	(368.3)
B3093-24	24"	(600)	24"	(609.6)	4"	(100)	21 ¹ / ₂ "	(546.1)	26"	(660.4)	17 ³ / ₄ "	(450.8)
B3093-30	30"	(750)	30"	(762.0)	4"	(100)	24 ⁵ / ₈ "	(625.5)	29 ⁵ / ₈ "	(739.8)	20 ⁷ / ₈ "	(530.2)
B3093-36	36"	(900)	36"	(914.4)	4"	(100)	27 ⁵ / ₈ "	(701.7)	32 ¹ / ₈ "	(816.0)	23 ⁷ / ₈ "	(606.4)

Part No.	'D' (Base Stand Not Supplied)		Saddle Steel Size		Wt./C			
	Inches	mm	Inches	mm	Complete		Saddle Only	
					Lbs.	kg	Lbs.	kg
B3093-1	1 ¹ / ₂ "	(40)	1/4" x 1 ³ / ₄ "	(6.3 x 44.4)	189	(85.7)	49	(22.2)
B3093-1 ¹ / ₄	1 ¹ / ₂ "	(40)	1/4" x 1 ³ / ₄ "	(6.3 x 44.4)	221	(100.2)	81	(36.7)
B3093-1 ¹ / ₂	1 ¹ / ₂ "	(40)	1/4" x 1 ³ / ₄ "	(6.3 x 44.4)	228	(103.4)	88	(39.9)
B3093-2	1 ¹ / ₂ "	(40)	1/4" x 1 ³ / ₄ "	(6.3 x 44.4)	234	(106.1)	94	(42.6)
B3093-2 ¹ / ₂	2 ¹ / ₂ "	(65)	1/4" x 3"	(6.3 x 76.2)	567	(257.2)	167	(75.8)
B3093-3	2 ¹ / ₂ "	(65)	1/4" x 3"	(6.3 x 76.2)	576	(261.3)	176	(79.9)
B3093-3 ¹ / ₂	2 ¹ / ₂ "	(65)	1/4" x 3"	(6.3 x 76.2)	588	(266.7)	188	(85.3)
B3093-4	3"	(80)	1/4" x 4"	(6.3 x 101.6)	1064	(482.6)	364	(165.1)
B3093-5	3"	(80)	1/4" x 4"	(6.3 x 101.6)	1081	(490.3)	381	(172.8)
B3093-6	3"	(80)	3/8" x 4"	(6.3 x 101.6)	1234	(559.7)	534	(242.2)
B3093-8	3"	(80)	3/8" x 4"	(6.3 x 101.6)	1496	(678.6)	796	(361.1)
B3093-10	3"	(80)	3/8" x 4"	(6.3 x 101.6)	1614	(732.1)	914	(414.6)
B3093-12	3"	(80)	3/8" x 4"	(6.3 x 101.6)	1768	(801.9)	1068	(484.4)
B3093-14	4"	(100)	3/8" x 5"	(9.5 x 127.0)	2654	(1203.8)	1654	(750.2)
B3093-16	4"	(100)	3/8" x 5"	(9.5 x 127.0)	2817	(1277.8)	1817	(824.2)
B3093-18	6"	(150)	1/2" x 5"	(12.7 x 127.0)	4998	(2267.1)	2798	(1269.1)
B3093-20	6"	(150)	1/2" x 5"	(12.7 x 127.0)	5218	(2366.8)	3018	(1368.9)
B3093-24	6"	(150)	1/2" x 6"	(12.7 x 152.4)	6346	(2878.5)	4146	(1880.6)
B3093-30	6"	(150)	1" x 6"	(25.4 x 152.4)	9824	(4456.1)	7624	(3458.2)
B3093-36	6"	(150)	1" x 6"	(25.4 x 152.4)	11077	(5024.4)	8877	(4026.5)

Note:
4" (100) thru 12" (300) fits both steel and ductile iron pipe.
For other ductile iron pipe sizes specify B3093DI - size.
3" (80) Ductile Iron uses B3093-3¹/₂

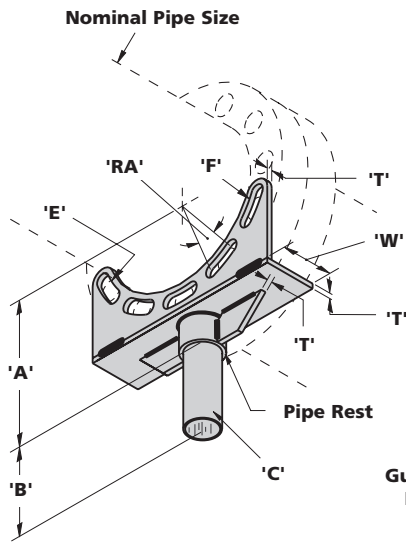
Pipe Supports, Guides, Shields & Saddles

Material: Steel & Stainless Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for support of horizontal pipe at the flanges. Use with B3088 or B3088S Base Stands.

Ordering: Specify part number and finish.



Gussets on sizes B3094-8 and larger.

- 'A' Center of pipe to bottom of pipe rest.
- 'B' Length of Pipe Shank.
- 'C' Pipe Shank O.D.
- 'D' Base Stand Pipe Size Required
- 'E' Quantity of Slots.
- 'F' Bolt Size
- 'RA' Rotation Adjustment

Figure B3094 Pipe Flange Support

Part No.	Nominal Pipe Size		'A'		'B'		'C'		'D' (Base Stand Not Supplied)	
B3094-1/2 *	1/2"	(15)	3"	(76.2)	3"	(76.2)	3/4"	(19.0)	3/4"	(20)
B3094-3/4 *	3/4"	(20)	3 ³ / ₁₆ "	(81.0)	3"	(76.2)	3/4"	(19.0)	3/4"	(20)
B3094-1 *	1"	(25)	3 ³ / ₈ "	(85.7)	3"	(76.2)	3/4"	(19.0)	3/4"	(20)
B3094-1 ¹ / ₄ *	1 ¹ / ₄ "	(32)	3 ⁹ / ₁₆ "	(90.5)	3"	(76.2)	3/4"	(19.0)	3/4"	(20)
B3094-1 ¹ / ₂ *	1 ¹ / ₂ "	(40)	3 ³ / ₄ "	(95.2)	3"	(76.2)	3/4"	(19.0)	3/4"	(20)
B3094-2 *	2"	(50)	4 ¹ / ₄ "	(107.9)	3"	(76.2)	3/4"	(19.0)	3/4"	(20)
B3094-2 ¹ / ₂ *	2 ¹ / ₂ "	(65)	4 ⁵ / ₈ "	(117.5)	4"	(101.6)	1 ⁵ / ₁₆ "	(33.3)	1 ¹ / ₂ "	(40)
B3094-3 *Δ	3"	(80)	4 ⁷ / ₈ "	(123.8)	4"	(101.6)	1 ⁵ / ₁₆ "	(33.3)	1 ¹ / ₂ "	(40)
B3094-3 ¹ / ₂ *	3 ¹ / ₂ "	(90)	5 ³ / ₈ "	(136.5)	4"	(101.6)	1 ⁵ / ₁₆ "	(33.3)	1 ¹ / ₂ "	(40)
B3094-4 *Δ	4"	(100)	5 ³ / ₄ "	(146.0)	4"	(101.6)	2 ³ / ₈ "	(60.3)	2 ¹ / ₂ "	(65)
B3094-5 *	5"	(125)	6 ¹ / ₄ "	(158.7)	4"	(101.6)	2 ³ / ₈ "	(60.3)	2 ¹ / ₂ "	(65)
B3094-6 *Δ	6"	(150)	6 ³ / ₄ "	(171.4)	4"	(101.6)	2 ³ / ₈ "	(60.3)	2 ¹ / ₂ "	(65)
B3094-8 *Δ	8"	(200)	9 ¹ / ₈ "	(231.8)	4"	(101.6)	2 ³ / ₈ "	(60.3)	2 ¹ / ₂ "	(65)
B3094-10 *Δ	10"	(250)	10 ³ / ₈ "	(263.5)	4"	(101.6)	2 ³ / ₈ "	(60.3)	2 ¹ / ₂ "	(65)
B3094-12 *Δ	12"	(300)	11 ⁷ / ₈ "	(301.6)	4"	(101.6)	2 ³ / ₈ "	(60.3)	2 ¹ / ₂ "	(65)
B3094-14 *Δ	14"	(350)	14 ¹ / ₄ "	(361.9)	4"	(101.6)	2 ⁷ / ₈ "	(73.0)	3"	(80)
B3094-16 *Δ	16"	(400)	15 ¹ / ₂ "	(393.7)	4"	(101.6)	2 ⁷ / ₈ "	(73.0)	3"	(80)
B3094-18 *Δ	18"	(450)	17"	(431.8)	4"	(101.6)	3 ¹ / ₂ "	(88.9)	4"	(100)
B3094-20 *Δ	20"	(500)	18 ¹ / ₄ "	(463.5)	4"	(101.6)	3 ¹ / ₂ "	(88.9)	4"	(100)
B3094-24 *Δ	24"	(600)	21 ³ / ₄ "	(552.4)	4"	(101.6)	3 ¹ / ₂ "	(88.9)	4"	(100)

* Fits Flange Class ANSI B16.1 Class 125 & ANSI B16.5 Class 150

Δ Fits Flange Class AWWA C110 & AWWA C115

Pipe Supports, Guides, Shields & Saddles

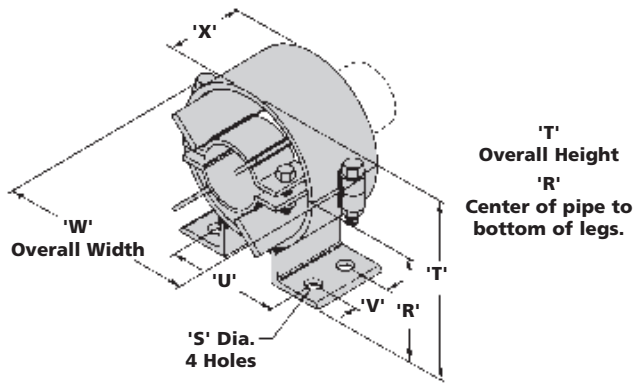
Figure B3094 Pipe Flange Support cont.

Part No.	'RA'	'E'	'F'	'T'		'W'		Wt./C	
								Lbs.	kg
B3094-1/2 *	29°	2	1/2"	1/4"	(6.3)	1 3/4"	(44.4)	119	(54.0)
B3094-3/4 *	34°	2	1/2"	1/4"	(6.3)	1 3/4"	(44.4)	127	(57.6)
B3094-1 *	37°	2	1/2"	1/4"	(6.3)	1 3/4"	(44.4)	136	(61.7)
B3094-1 1/4 *	54°	2	1/2"	1/4"	(6.3)	1 3/4"	(44.4)	148	(67.1)
B3094-1 1/2 *	56°	2	1/2"	1/4"	(6.3)	1 3/4"	(44.4)	158	(71.6)
B3094-2 *	57°	2	5/8"	1/4"	(6.3)	1 3/4"	(44.4)	183	(83.0)
B3094-2 1/2 *	59°	2	5/8"	1/4"	(6.3)	2 1/2"	(63.5)	273	(123.8)
B3094-3 *Δ	61°	2	5/8"	1/4"	(6.3)	2 1/2"	(63.5)	291	(132.0)
B3094-3 1/2 *	23°	2	5/8"	1/4"	(6.3)	2 1/2"	(63.5)	284	(128.8)
B3094-4 *Δ	24°	2	5/8"	1/4"	(6.3)	4"	(101.6)	478	(216.8)
B3094-5 *	24°	2	3/4"	1/4"	(6.3)	4"	(101.6)	518	(234.9)
B3094-6 *Δ	27°	2	3/4"	3/8"	(9.5)	4"	(101.6)	569	(258.1)
B3094-8 *Δ	30°	2	3/4"	3/8"	(9.5)	3 7/8"	(98.4)	1088	(493.5)
B3094-10 *Δ	15°	4	7/8"	3/8"	(9.5)	3 7/8"	(98.4)	1413	(640.9)
B3094-12 *Δ	20°	4	7/8"	3/8"	(9.5)	3 7/8"	(98.4)	1688	(765.7)
B3094-14 *Δ	16°	4	1"	3/8"	(9.5)	4 3/8"	(111.1)	2448	(1110.4)
B3094-16 *Δ	12°	4	1"	3/8"	(9.5)	4 3/8"	(111.1)	2260	(1025.1)
B3094-18 *Δ	10°	4	1 1/8"	1/2"	(12.7)	5"	(127.0)	3563	(1616.2)
B3094-20 *Δ	7°	4	1 1/8"	1/2"	(12.7)	5"	(127.0)	3321	(1506.4)
B3094-24 *Δ	7°	4	1 1/4"	1/2"	(12.7)	5"	(127.0)	4136	(1876.1)

* Fits Flange Class ANSI B16.1 Class 125 & ANSI B16.5 Class 150

Δ Fits Flange Class AWWA C110 & AWWA C115

Pipe Supports, Guides, Shields & Saddles



Material: Steel

Standard Finish: Black Primer

Service: Designed for use in directing thermal expansion of insulated or non-insulated pipe in the direction permitted by expansion joints or loops. The use of two or more guides on both sides of an expansion joint or loop is recommended. Pipe lines should be supported with hangers or rollers so that when properly installed, the guides will not be supporting any pipe loads. Maximum operating temperature should not exceed 750°F (399°C).

Ordering: Specify part number and finish. For use with copper tubing, add CT suffix to the part number.

Figure B3281 thru B3287 Pipe Alignment Guide

Body Size	'R'		'S'		'T'		'U'		'V'	
001	3 1/2"	(88.9)	5/8"	(15.9)	5 7/8"	(149.2)	4 1/8"	(104.8)	1 3/4"	(44.4)
002	4"	(101.6)	5/8"	(15.9)	6 3/4"	(171.4)	4 3/8"	(111.1)	1 3/4"	(44.4)
003	4 3/8"	(111.1)	5/8"	(15.9)	7 5/8"	(193.7)	5 1/8"	(130.2)	1 3/4"	(44.4)
004	5 1/4"	(133.3)	5/8"	(15.9)	9 1/4"	(234.9)	6 1/8"	(155.6)	1 3/4"	(44.4)
005	6 1/4"	(158.7)	5/8"	(15.9)	11 5/8"	(295.3)	7"	(177.8)	2 3/4"	(69.8)
006	7"	(177.8)	5/8"	(15.9)	13 3/8"	(339.7)	8 1/4"	(209.5)	2 3/4"	(69.8)
007	7 7/8"	(200.0)	3/4"	(19.0)	15 1/8"	(384.2)	9 7/8"	(250.8)	4"	(101.6)
008	8 7/8"	(225.4)	3/4"	(19.0)	17"	(431.8)	10 7/8"	(276.2)	4"	(101.6)
009	9 3/4"	(247.6)	3/4"	(19.0)	18 3/4"	(476.2)	11 7/8"	(301.6)	4"	(101.6)
010	10 7/8"	(276.2)	3/4"	(19.0)	21"	(533.4)	11 3/4"	(298.4)	6"	(152.4)
011	12 1/8"	(308.0)	7/8"	(22.2)	23 1/8"	(587.4)	14 1/2"	(368.3)	6"	(152.4)
012	13"	(330.2)	7/8"	(22.2)	25"	(635.0)	15 1/2"	(393.7)	6"	(152.4)
013	14 3/4"	(374.6)	1 1/8"	(28.6)	27 3/4"	(704.8)	17 1/8"	(435.0)	6"	(152.4)
014	16 1/2"	(419.1)	1 1/8"	(28.6)	31 1/2"	(800.1)	19 1/4"	(488.9)	6"	(152.4)

Note: CT sizes have lead shims between the steel clamp and the copper tubing.

Guides with greater allowable movement available, Contact B-Line Engineering for more information.

Supports, Guides, Shields & Saddles

Body Size	'W'		'X'		Wt./C	
	Lbs.	kg	Lbs.	kg	Lbs.	kg
001	6 1/8"	(155.6)	3"	(76.2)	700	(317.5)
002	7 1/8"	(181.0)	3"	(76.2)	800	(362.9)
003	8 1/8"	(206.4)	3"	(76.2)	900	(408.2)
004	10 1/8"	(257.2)	3"	(76.2)	1100	(498.9)
005	12 1/8"	(308.0)	4"	(101.6)	1700	(771.1)
006	14 1/8"	(358.8)	4"	(101.6)	2000	(907.2)
007	16 1/8"	(409.6)	6"	(152.4)	4000	(1814.4)
008	18 1/8"	(460.4)	6"	(152.4)	4800	(2177.3)
009	20 1/8"	(511.2)	6"	(152.4)	5400	(2449.4)
010	22 1/8"	(562.0)	8"	(203.2)	6100	(2766.9)
011	24 1/8"	(612.8)	8"	(203.2)	8900	(4037.0)
012	26 1/8"	(663.6)	8"	(203.2)	10200	(4626.7)
013	28 1/8"	(714.4)	8"	(203.2)	11000	(4989.6)
014	32 1/8"	(816.0)	8"	(203.2)	15000	(6804.0)

Pipe Supports, Guides, Shields & Saddles

Figure B3281 thru B3287 Pipe Alignment Guide (Continued)

Nominal Pipe Size	Insulation Thickness											
	1" (25.4)			1½" (38.1)			2" (50.8)			2½" (63.5)		
	Part No.	BS*	SAM**	Part No.	BS*	SAM**	Part No.	BS*	SAM**	Part No.	BS*	SAM**
½" (15)	B3281-½	001	4" (101.6)	B3281-½	001	4" (101.6)	B3283-½	002	4" (101.6)	B3284-½	003	4" (101.6)
¾" (20)	B3281-¾	001	4" (101.6)	B3282-¾	002	4" (101.6)	B3283-¾	003	4" (101.6)	B3284-¾	004	4" (101.6)
1" (25)	B3281-1	001	4" (101.6)	B3282-1	002	4" (101.6)	B3283-1	003	4" (101.6)	B3284-1	004	4" (101.6)
1¼" (32)	B3281-1¼	001	4" (101.6)	B3282-1¼	002	4" (101.6)	B3283-1¼	003	4" (101.6)	B3284-1¼	004	4" (101.6)
1½" (40)	B3281-1½	002	4" (101.6)	B3281-1½	002	4" (101.6)	B3283-1½	003	4" (101.6)	B3284-1½	004	4" (101.6)
2" (50)	B3281-2	002	4" (101.6)	B3282-2	003	4" (101.6)	B3283-2	004	4" (101.6)	B3283-2	004	4" (101.6)
2½" (65)	B3281-2½	003	4" (101.6)	B3281-2½	003	4" (101.6)	B3283-2½	004	4" (101.6)	B3283-2½	004	4" (101.6)
3" (80)	B3281-3	003	4" (101.6)	B3282-3	004	4" (101.6)	B3282-3	004	4" (101.6)	B3284-3	005	4" (101.6)
4" (100)	B3281-4	004	4" (101.6)	B3281-4	004	4" (101.6)	B3283-4	005	4" (101.6)	B3283-4	005	4" (101.6)
5" (125)	B3281-5	005	4" (101.6)	B3281-5	005	4" (101.6)	B3281-5	005	4" (101.6)	B3284-5	006	4" (101.6)
6" (150)	B3281-6	005	4" (101.6)	B3281-6	005	4" (101.6)	B3283-6	006	4" (101.6)	B3283-6	006	4" (101.6)
8" (200)	B3281-8	006	4" (101.6)	B3281-8	006	4" (101.6)	B3283-8	007	6" (152.4)	B3284-8	008	6" (152.4)
10" (250)	B3281-10	008	6" (152.4)	B3281-10	008	6" (152.4)	B3281-10	008	6" (152.4)	B3284-10	009	6" (152.4)
12" (300)	B3281-12	009	6" (152.4)	B3281-12	009	6" (152.4)	B3281-12	009	6" (152.4)	B3284-12	010	6" (152.4)
14" (350)	B3281-14	010	6" (152.4)	B3281-14	010	6" (152.4)	B3281-14	010	6" (152.4)	B3281-14	010	6" (152.4)
16" (400)	B3281-16	011	8" (203.2)	B3281-16	011	8" (203.2)	B3281-16	011	8" (203.2)	B3281-16	011	8" (203.2)
18" (450)	B3281-18	012	8" (203.2)	B3281-18	012	8" (203.2)	B3281-18	012	8" (203.2)	B3281-18	012	8" (203.2)
20" (500)	B3281-20	013	8" (203.2)	B3281-20	013	8" (203.2)	B3281-20	013	8" (203.2)	B3281-20	013	8" (203.2)
24" (600)	B3281-24	014	8" (203.2)	B3281-24	014	8" (203.2)	B3281-24	014	8" (203.2)	B3281-24	014	8" (203.2)

Nominal Pipe Size	Insulation Thickness								
	3" (76.2)			3½" (88.9)			4" (101.6)		
	Part No.	BS*	SAM**	Part No.	BS*	SAM**	Part No.	BS*	SAM**
½" (15)	B3285-½	004	4" (101.6)	B3285-½	004	4" (101.6)	B3287-½	005	4" (101.6)
¾" (20)	B3284-¾	004	4" (101.6)	B3286-¾	005	4" (101.6)	B3286-¾	005	4" (101.6)
1" (25)	B3284-1	004	4" (101.6)	B3286-1	005	4" (101.6)	B3286-1	005	4" (101.6)
1¼" (32)	B3284-1¼	004	4" (101.6)	B3286-1¼	005	4" (101.6)	B3286-1¼	005	4" (101.6)
1½" (40)	B3284-1½	004	4" (101.6)	B3286-1½	005	4" (101.6)	B3286-1½	005	4" (101.6)
2" (50)	B3285-2	005	4" (101.6)	B3285-2	005	4" (101.6)	B3287-2	006	4" (101.6)
2½" (65)	B3285-2½	005	4" (101.6)	B3285-2½	005	4" (101.6)	B3287-2½	006	4" (101.6)
3" (80)	B3284-3	005	4" (101.6)	B3286-3	006	4" (101.6)	B3286-3	006	4" (101.6)
4" (100)	B3285-4	006	4" (101.6)	B3285-4	006	4" (101.6)	B3287-4	007	6" (152.4)
5" (125)	B3284-5	006	4" (101.6)	B3286-5	007	6" (152.4)	B3287-5	008	6" (152.4)
6" (150)	B3285-6	007	6" (152.4)	B3286-6	008	6" (152.4)	B3286-6	008	6" (152.4)
8" (200)	B3284-8	008	6" (152.4)	B3286-8	009	6" (152.4)	B3286-8	009	6" (152.4)
10" (250)	B3284-10	009	6" (152.4)	B3286-10	010	6" (152.4)	B3286-10	010	6" (152.4)
12" (300)	B3284-12	010	6" (152.4)	B3286-12	011	6" (152.4)	B3286-12	011	6" (152.4)
14" (350)	B3285-14	011	8" (203.2)	B3285-14	011	8" (203.2)	B3287-14	012	8" (203.2)
16" (400)	B3285-16	012	8" (203.2)	B3285-16	012	8" (203.2)	B3287-16	013	8" (203.2)
18" (450)	B3285-18	013	8" (203.2)	B3285-18	013	8" (203.2)	B3287-18	014	8" (203.2)
20" (500)	B3285-20	014	8" (203.2)	B3285-20	014	8" (203.2)	B3285-20	014	8" (203.2)
24" (600)	---	---	---	---	---	---	---	---	---

BS* = Body Size

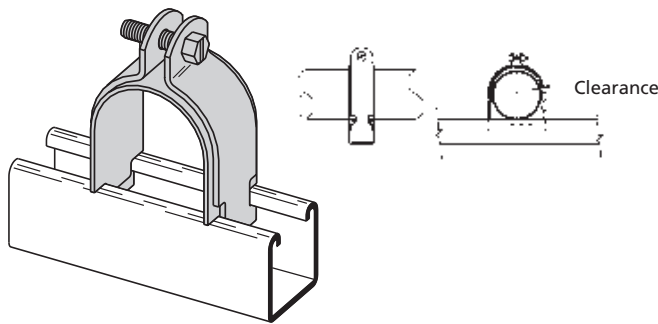
SAM** = Standard Allowable Movement

Note: Use 1" (25.4mm) insulation thickness column when no insulation is present.

Supports, Guides, Shields & Saddles

Installation: Attach outer housing of the first pipe guide to the structure a maximum of four pipe diameters from an expansion joint. The second pipe guide should be located a maximum of 14 pipe diameters from the first pipe guide. The spider pipe clamp should be offset at a minimum of half the distance in the opposite direction of the axial expansion. See chart for Standard Allowable Movement (SAM).

Pipe Supports, Guides, Shields & Saddles



Material: Steel

Standard Finish: Electro-Plated

Service: Designed as a guide to permit longitudinal movement of pipe.

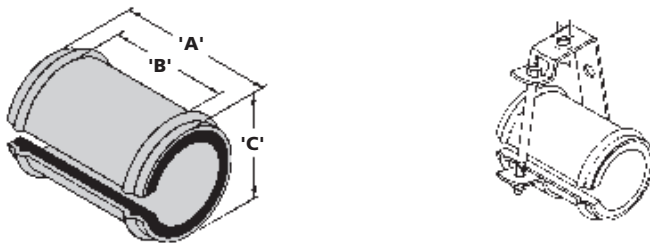
Ordering: Specify part number and finish. (Includes guide and pipe clamp).

Figure B2417 Strut Mounted Pipe Guide

Part No.	Pipe Size		Minimum Radial Clearance		Includes Clamp No.	Wt./C	
		(mm)		(mm)		Lbs.	kg
B2417-1/2	1/2"	(15)	1/16"	(1.6)	B2009	22	(10.0)
B2417-3/4	3/4"	(20)	1/16"	(1.6)	B2010	25	(11.3)
B2417-1	1"	(25)	3/32"	(2.3)	B2034	30	(13.6)
B2417-1 1/4	1 1/4"	(32)	3/32"	(2.3)	B2037	47	(21.8)
B2417-1 1/2	1 1/2"	(40)	3/32"	(2.3)	B2039	51	(23.1)
B2417-2	2"	(50)	1/8"	(3.2)	B2043	62	(28.1)
B2417-2 1/2	2 1/2"	(65)	1/8"	(3.2)	B2047	69	(31.3)
B2417-3	3"	(80)	5/32"	(3.9)	B2016	108	(49.0)
B2417-3 1/2	3 1/2"	(90)	5/32"	(3.9)	B2017	118	(53.5)
B2417-4	4"	(100)	5/32"	(3.9)	B2018	128	(58.0)

Note: Strut Mounted Pipe Guides are available for copper tubing: B2417CT-Size

Supports, Guides, Shields & Saddles



Material: Steel and Felt

Standard Finish: Pre-Galvanized

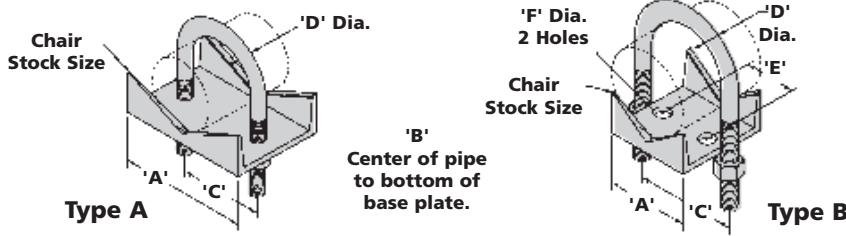
Service: Designed to control sound vibration and transmission of sound to the building structure and prevent electrolysis. May be used with B3100 Clevis Hangers, B3690 J-Hanger, B3170 Ring Hangers and B-Line Strut Clamps.

Ordering: Specify part number and finish.

Figure B3195 (IPS sizes) & B3195CT (Copper Tubing sizes) Felt Isolators

Pipe	Part No. Copper Tubing	Nominal Size		'A'	'B'	'C'	Use With Hanger Size		Wt./C						
		Pipe	Tubing						Lbs.	kg					
B3195-1/2	B3195CT-1/2	1/2"	(15)	1/2"	(15)	2"	(50.8)	1 1/4"	(31.7)	1 5/32"	(29.3)	3/4"	(20)	7	(3.2)
--	B3195CT-3/4	--	--	3/4"	(20)	2"	(50.8)	1 1/4"	(31.7)	1 5/32"	(29.3)	3/4"	(20)	7	(3.2)
B3195-3/4	B3195CT-1	3/4"	(20)	1"	(25)	2"	(50.8)	1 1/4"	(31.7)	1 5/16"	(33.3)	1"	(25)	7	(3.2)
B3195-1	B3195CT-1 1/4	1"	(25)	1 1/4"	(32)	2"	(50.8)	1 1/4"	(31.7)	1 21/32"	(42.0)	1 1/4"	(32)	8	(3.6)
B3195-1 1/4	B3195CT-1 1/2	1 1/4"	(32)	1 1/2"	(40)	2"	(50.8)	1 1/4"	(31.7)	1 29/32"	(48.4)	1 1/2"	(40)	9	(4.1)
B3195-1 1/2	B3195CT-2	1 1/2"	(40)	2"	(50)	2"	(50.8)	1 1/4"	(31.7)	2 3/8"	(60.3)	2"	(50)	12	(5.4)
B3195-2	B3195CT-2 1/2	2"	(50)	2 1/2"	(65)	2"	(50.8)	1 1/4"	(31.7)	2 7/8"	(73.0)	2 1/2"	(65)	15	(6.8)
B3195-2 1/2	B3195CT-3	2 1/2"	(65)	3"	(80)	2 1/2"	(63.5)	1 1/4"	(31.7)	3 1/2"	(88.9)	3"	(80)	21	(9.5)
B3195-3	B3195CT-3 1/2	3"	(80)	3 1/2"	(90)	2 1/2"	(63.5)	1 1/4"	(31.7)	4"	(101.6)	3 1/2"	(90)	27	(12.2)
B3195-3 1/2	B3195CT-4	3 1/2"	(90)	4"	(100)	3 1/4"	(82.5)	1 1/4"	(31.7)	4 1/2"	(114.3)	4"	(100)	45	(20.4)
B3195-4	B3195CT-5	4"	(100)	5"	(125)	3 5/8"	(92.1)	1 3/8"	(34.9)	5 9/16"	(141.3)	5"	(125)	66	(29.9)
B3195-5	B3195CT-6	5"	(125)	6"	(150)	4"	(101.6)	2"	(50.8)	6 5/8"	(168.3)	6"	(150)	83	(37.6)
B3195-6	--	6"	(150)	--	--	4 1/2"	(114.3)	2"	(50.8)	8 5/8"	(219.1)	8"	(200)	137	(62.1)

Pipe Supports, Guides, Shields & Saddles



Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for anchoring pipe to structural members.

Ordering: Specify part number and finish.

Figure B3147A & B3147B Pipe Anchor

Part No.	Nominal Pipe Size		'A'		'B'		'C'	
B3147A-1/2	1/2"	(15)	2 3/8"	(60.3)	1 3/16"	(20.6)	1 3/16"	(30.2)
B3147A-3/4	3/4"	(20)	2 5/8"	(66.7)	1"	(25.4)	1 3/8"	(34.9)
B3147A-1	1"	(25)	2 7/8"	(73.0)	1 3/16"	(30.2)	1 5/8"	(41.3)
B3147A-1 1/4	1 1/4"	(32)	3 1/8"	(79.4)	1 5/16"	(33.3)	2 1/16"	(52.4)
B3147A-1 1/2	1 1/2"	(40)	3 7/8"	(98.4)	1 3/8"	(34.9)	2 3/8"	(60.3)
B3147A-2	2"	(50)	4 1/4"	(107.9)	1 5/8"	(41.3)	2 13/16"	(71.4)
B3147B-2 1/2	2 1/2"	(65)	2 3/4"	(69.8)	2 3/16"	(55.6)	3 7/16"	(87.2)
B3147B-3	3"	(80)	3 1/4"	(82.5)	2 7/16"	(61.9)	4 1/16"	(103.2)
B3147B-3 1/2	3 1/2"	(90)	3 3/4"	(95.2)	2 5/8"	(66.7)	4 9/16"	(115.9)
B3147B-4	4"	(100)	4"	(101.6)	2 15/16"	(74.6)	5 1/16"	(128.6)
B3147B-5	5"	(125)	4"	(101.6)	3 9/16"	(90.5)	6 5/32"	(156.3)
B3147B-6	6"	(150)	5"	(127.0)	3 15/16"	(100.0)	7 3/8"	(187.3)
B3147B-8	8"	(200)	7"	(177.8)	5 1/2"	(139.7)	9 3/8"	(238.1)
B3147B-10	10"	(250)	8"	(203.2)	6 1/2"	(165.1)	11 5/8"	(295.3)
B3147B-12	12"	(300)	9"	(228.6)	7 1/2"	(190.5)	13 3/4"	(349.2)
B3147B-14	14"	(350)	10"	(254.0)	8 1/16"	(204.8)	15"	(381.0)
B3147B-16	16"	(400)	10"	(254.0)	9 1/8"	(231.8)	17"	(431.8)
B3147B-18	18"	(450)	11"	(279.4)	10 1/8"	(257.2)	19 1/8"	(485.8)
B3147B-20	20"	(500)	11"	(279.4)	11 1/8"	(282.6)	21 1/8"	(536.6)
B3147B-24	24"	(600)	12"	(304.8)	13 1/8"	(333.4)	25 1/8"	(638.2)

Type A

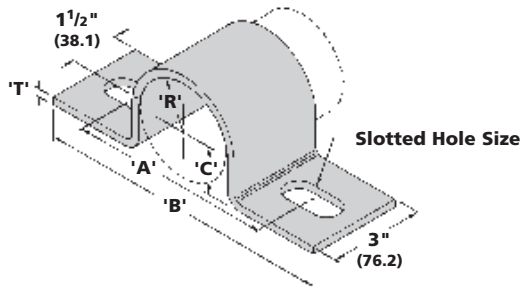
Type B

Part No.	'D'		'E'		'F'		Chair Stock Size	Wt./C	
								Lbs.	kg
B3147A-1/2	1/4"	(6.3)	--	--	--	--	C3 x 4.1 Channel	72	(32.6)
B3147A-3/4	1/4"	(6.3)	--	--	--	--		82	(37.2)
B3147A-1	1/4"	(6.3)	--	--	--	--		99	(44.9)
B3147A-1 1/4	3/8"	(9.5)	--	--	--	--		109	(49.4)
B3147A-1 1/2	3/8"	(9.5)	--	--	--	--		130	(58.9)
B3147A-2	3/8"	(9.5)	--	--	--	--		140	(63.5)
B3147B-2 1/2	1/2"	(12.7)	1 1/4"	(31.7)	9/16"	(14.3)	MC4 x 13.8 Channel	147	(66.7)
B3147B-3	1/2"	(12.7)	1 3/4"	(44.4)	9/16"	(14.3)		163	(73.9)
B3147B-3 1/2	1/2"	(12.7)	2 1/4"	(57.1)	13/16"	(20.6)		181	(82.1)
B3147B-4	1/2"	(12.7)	2 1/4"	(57.1)	13/16"	(20.6)		198	(89.8)
B3147B-5	1/2"	(12.7)	2 1/4"	(57.1)	13/16"	(20.6)		210	(95.2)
B3147B-6	5/8"	(15.9)	3"	(76.2)	13/16"	(20.6)		331	(150.1)
B3147B-8	5/8"	(15.9)	4 1/2"	(114.3)	13/16"	(20.6)	MC4 x 13.8 Channel	793	(359.7)
B3147B-10	3/4"	(19.0)	5 1/2"	(139.7)	13/16"	(20.6)		1096	(497.1)
B3147B-12	7/8"	(22.2)	6"	(152.4)	13/16"	(20.6)		1419	(643.6)
B3147B-14	7/8"	(22.2)	7"	(177.8)	13/16"	(20.6)		1555	(705.3)
B3147B-16	7/8"	(22.2)	7"	(177.8)	13/16"	(20.6)		1643	(745.2)
B3147B-18	1"	(25.4)	7"	(177.8)	13/16"	(20.6)		2286	(1036.9)
B3147B-20	1"	(25.4)	7"	(177.8)	13/16"	(20.6)		2401	(1089.1)
B3147B-24	1"	(25.4)	8"	(203.2)	13/16"	(20.6)		2713	(1230.6)

Type A

Type B

Pipe Supports, Guides, Shields & Saddles



Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed as a guide to permit longitudinal movement of pipe.

Ordering: Specify part number and finish.

Figure B3252 Standard Hold-Down Pipe Guide

Part No.	Nominal Pipe Size		'A'		'B'		'C'	
B3252-1 ^{1/2}	1 ^{1/2} "	(40)	5 ^{1/2} "	(139.7)	8 ^{1/2} "	(215.9)	1"	(25.4)
B3252-2	2"	(50)	6"	(152.4)	9"	(228.6)	1 ^{3/16} "	(30.2)
B3252-2 ^{1/2}	2 ^{1/2} "	(65)	6 ^{1/2} "	(165.1)	9 ^{1/2} "	(241.3)	1 ^{7/16} "	(36.5)
B3252-3	3"	(80)	7 ^{1/2} "	(190.5)	10 ^{13/16} "	(274.6)	1 ^{3/4} "	(44.4)
B3252-3 ^{1/2}	3 ^{1/2} "	(90)	8"	(203.2)	11 ^{5/16} "	(287.3)	2"	(50.8)
B3252-4	4"	(100)	9"	(228.6)	12 ^{5/16} "	(312.7)	2 ^{1/4} "	(57.1)
B3252-5	5"	(125)	10"	(254.0)	13 ^{5/16} "	(338.1)	2 ^{3/4} "	(69.8)
B3252-6	6"	(150)	11"	(279.4)	14 ^{5/16} "	(363.5)	3 ^{3/8} "	(85.7)
B3252-8	8"	(200)	13"	(330.2)	16 ^{5/16} "	(414.3)	4 ^{1/8} "	(104.8)
B3252-10	10"	(250)	15"	(381.0)	18 ^{5/16} "	(465.1)	5 ^{3/8} "	(136.5)
B3252-12	12"	(300)	17"	(431.8)	20 ^{5/16} "	(515.9)	6 ^{3/8} "	(161.9)
B3252-14	14"	(350)	19"	(482.6)	22 ^{5/16} "	(566.7)	7"	(177.8)
B3252-16	16"	(400)	21"	(533.4)	24 ^{9/16} "	(623.8)	8"	(203.2)
B3252-18	18"	(450)	23"	(584.2)	26 ^{9/16} "	(674.7)	9"	(228.6)
B3252-20	20"	(500)	25"	(635.0)	28 ^{9/16} "	(725.5)	10"	(254.0)
B3252-24	24"	(600)	29"	(736.6)	32 ^{9/16} "	(827.1)	12"	(304.8)
B3252-30	30"	(750)	35"	(889.0)	38 ^{15/16} "	(989.0)	15"	(381.0)

Part No.	'R'		'T'		Slotted Hole Size		Wt./C	
							Lbs.	kg
B3252-1 ^{1/2}	1 ^{1/8} "	(38.1)	1/4"	(6.3)	1 ^{5/16} " x 1 ^{15/16} "	(23.8 x 49.2)	219	(99.3)
B3252-2	1 ^{5/16} "	(33.3)	1/4"	(6.3)	1 ^{5/16} " x 1 ^{15/16} "	(23.8 x 49.2)	241	(109.3)
B3252-2 ^{1/2}	1 ^{9/16} "	(39.7)	1/4"	(6.3)	1 ^{5/16} " x 1 ^{15/16} "	(23.8 x 49.2)	269	(122.0)
B3252-3	1 ^{7/8} "	(47.6)	3/8"	(9.5)	1 ^{3/16} " x 2 ^{3/16} "	(30.2 x 55.6)	457	(207.3)
B3252-3 ^{1/2}	2 ^{1/8} "	(54.0)	3/8"	(9.5)	1 ^{3/16} " x 2 ^{3/16} "	(30.2 x 55.6)	498	(225.9)
B3252-4	2 ^{3/8} "	(60.3)	3/8"	(9.5)	1 ^{3/16} " x 2 ^{3/16} "	(30.2 x 55.6)	548	(248.6)
B3252-5	2 ^{15/16} "	(74.6)	3/8"	(9.5)	1 ^{3/16} " x 2 ^{3/16} "	(30.2 x 55.6)	639	(289.8)
B3252-6	3 ^{7/16} "	(87.3)	3/8"	(9.5)	1 ^{3/16} " x 2 ^{3/16} "	(30.2 x 55.6)	729	(330.7)
B3252-8	4 ^{7/16} "	(112.7)	3/8"	(9.5)	1 ^{3/16} " x 2 ^{3/16} "	(30.2 x 55.6)	876	(397.3)
B3252-10	5 ^{1/2} "	(139.7)	3/8"	(9.5)	1 ^{3/16} " x 2 ^{3/16} "	(30.2 x 55.6)	1058	(479.9)
B3252-12	6 ^{1/2} "	(165.1)	3/8"	(9.5)	1 ^{3/16} " x 2 ^{3/16} "	(30.2 x 55.6)	1224	(555.2)
B3252-14	7 ^{1/8} "	(181.0)	3/8"	(9.5)	1 ^{3/16} " x 2 ^{3/16} "	(30.2 x 55.6)	1352	(613.2)
B3252-16	8 ^{1/8} "	(206.4)	3/8"	(9.5)	1 ^{7/16} " x 2 ^{7/16} "	(36.5 x 61.9)	1504	(682.2)
B3252-18	9 ^{1/8} "	(231.8)	3/8"	(9.5)	1 ^{7/16} " x 2 ^{7/16} "	(36.5 x 61.9)	1668	(756.6)
B3252-20	10 ^{1/8} "	(257.2)	3/8"	(9.5)	1 ^{7/16} " x 2 ^{7/16} "	(36.5 x 61.9)	1832	(831.0)
B3252-24	12 ^{1/8} "	(308.0)	3/8"	(9.5)	1 ^{7/16} " x 2 ^{7/16} "	(36.5 x 61.9)	2161	(980.2)
B3252-30	15 ^{1/8} "	(384.2)	1/2"	(12.7)	1 ^{7/16} " x 2 ^{7/16} "	(36.5 x 61.9)	3526	(1599.4)

Supports, Guides, Shields & Saddles

Pipe Supports, Guides, Shields & Saddles

Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed as a base plate for B3252 Pipe Guide.

Ordering: Specify part number and finish.

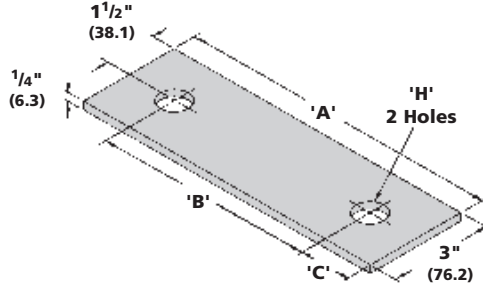
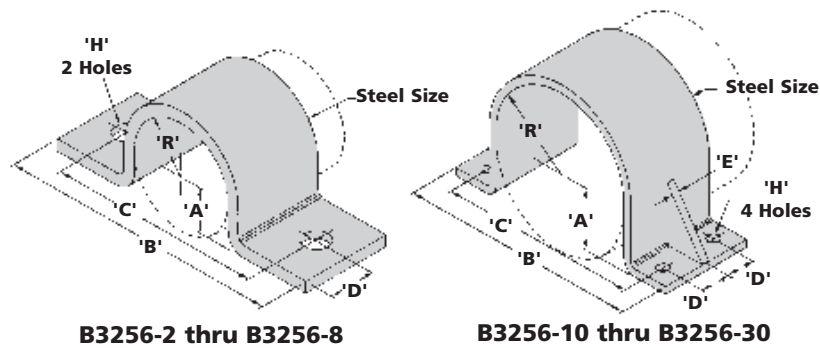


Figure B3253 Base Plate

Part No.	Nominal Pipe Size		'A'		'B'		'C'		'H'		Wt./C	
		(mm)		(mm)		(mm)		(mm)		(mm)	Lbs.	kg
B3253-1 ¹ / ₂	1 ¹ / ₂ "	(40)	8 ¹ / ₂ "	(215.9)	5 ¹ / ₂ "	(139.7)	1 ¹ / ₂ "	(38.1)	1 ⁵ / ₁₆ "	(23.8)	171	(77.5)
B3253-2	2"	(50)	9"	(228.6)	6"	(152.4)	1 ¹ / ₂ "	(38.1)	1 ⁵ / ₁₆ "	(23.8)	182	(82.5)
B3253-2 ¹ / ₂	2 ¹ / ₂ "	(65)	9 ¹ / ₂ "	(241.3)	6 ¹ / ₂ "	(165.1)	1 ¹ / ₂ "	(38.1)	1 ⁵ / ₁₆ "	(23.8)	192	(87.1)
B3253-3	3"	(80)	10 ¹³ / ₁₆ "	(274.6)	7 ¹ / ₂ "	(190.5)	1 ²¹ / ₃₂ "	(42.0)	1 ³ / ₁₆ "	(30.2)	213	(96.6)
B3253-3 ¹ / ₂	3 ¹ / ₂ "	(90)	11 ⁵ / ₁₆ "	(287.3)	8"	(203.2)	1 ²¹ / ₃₂ "	(42.0)	1 ³ / ₁₆ "	(30.2)	224	(101.6)
B3253-4	4"	(100)	12 ⁵ / ₁₆ "	(312.7)	9"	(228.6)	1 ²¹ / ₃₂ "	(42.0)	1 ³ / ₁₆ "	(30.2)	245	(111.1)
B3253-5	5"	(125)	13 ⁵ / ₁₆ "	(338.1)	10"	(254.0)	1 ²¹ / ₃₂ "	(42.0)	1 ³ / ₁₆ "	(30.2)	266	(120.6)
B3253-6	6"	(150)	14 ⁵ / ₁₆ "	(363.5)	11"	(279.4)	1 ²¹ / ₃₂ "	(42.0)	1 ³ / ₁₆ "	(30.2)	287	(130.2)
B3253-8	8"	(200)	16 ⁵ / ₁₆ "	(414.3)	13"	(330.2)	1 ²¹ / ₃₂ "	(42.0)	1 ³ / ₁₆ "	(30.2)	330	(149.7)
B3253-10	10"	(250)	18 ⁵ / ₁₆ "	(465.1)	15"	(381.0)	1 ²¹ / ₃₂ "	(42.0)	1 ³ / ₁₆ "	(30.2)	372	(168.7)
B3253-12	12"	(300)	20 ⁵ / ₁₆ "	(515.9)	17"	(431.8)	1 ²¹ / ₃₂ "	(42.0)	1 ³ / ₁₆ "	(30.2)	415	(188.2)
B3253-14	14"	(350)	22 ⁵ / ₁₆ "	(566.7)	19"	(482.6)	1 ²¹ / ₃₂ "	(42.0)	1 ³ / ₁₆ "	(30.2)	458	(207.7)
B3253-16	16"	(400)	24 ⁹ / ₁₆ "	(623.9)	21"	(533.4)	1 ²⁵ / ₃₂ "	(45.2)	1 ⁷ / ₁₆ "	(36.5)	493	(223.6)
B3253-18	18"	(450)	26 ⁹ / ₁₆ "	(674.7)	23"	(584.2)	1 ²⁵ / ₃₂ "	(45.2)	1 ⁷ / ₁₆ "	(36.5)	535	(242.7)
B3253-20	20"	(500)	28 ⁹ / ₁₆ "	(725.5)	25"	(635.0)	1 ²⁵ / ₃₂ "	(45.2)	1 ⁷ / ₁₆ "	(36.5)	578	(262.2)
B3253-24	24"	(600)	32 ⁹ / ₁₆ "	(827.1)	29"	(736.6)	1 ²⁵ / ₃₂ "	(45.2)	1 ⁷ / ₁₆ "	(36.5)	663	(300.7)
B3253-30	30"	(750)	38 ¹⁵ / ₁₆ "	(989.0)	35"	(889.0)	1 ³¹ / ₃₂ "	(50.0)	1 ⁷ / ₁₆ "	(36.5)	791	(358.8)

Pipe Supports, Guides, Shields & Saddles



Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed to prevent longitudinal or lateral movement of pipe where pipe is anchored to concrete piers or other supporting structures.

Ordering: Specify part number and finish.

B3256-2 thru B3256-8

B3256-10 thru B3256-30

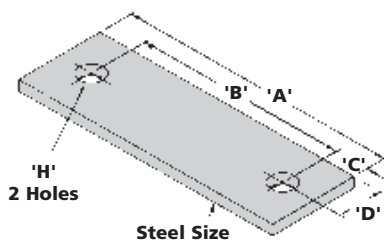
Figure B3256 Hold-Down Anchor Clamp

Part No.	Nominal Pipe Size		'A'		'B'		'C'		'D'		'E'	
B3256-2	2" (50)		1 ⁵ / ₁₆ " (23.8)		8 ¹ / ₈ " (206.4)		5 ⁷ / ₈ " (149.2)		1 ¹ / ₂ " (38.1)	-	-	
B3256-2 ¹ / ₂	2 ¹ / ₂ " (65)		1 ³ / ₁₆ " (30.2)		8 ⁵ / ₈ " (219.1)		6 ³ / ₈ " (161.9)		1 ¹ / ₂ " (38.1)	-	-	
B3256-3	3" (80)		1 ¹ / ₂ " (38.1)		9 ¹ / ₄ " (234.9)		7" (177.8)		1 ¹ / ₂ " (38.1)	-	-	
B3256-3 ¹ / ₂	3 ¹ / ₂ " (90)		1 ³ / ₄ " (44.4)		9 ³ / ₄ " (247.6)		7 ¹ / ₂ " (190.5)		1 ¹ / ₂ " (38.1)	-	-	
B3256-4	4" (100)		2" (50.8)		10 ¹ / ₄ " (260.3)		8" (203.2)		1 ¹ / ₂ " (38.1)	-	-	
B3256-5	5" (125)		2 ⁹ / ₁₆ " (65.1)		11 ⁵ / ₁₆ " (287.3)		9 ¹ / ₁₆ " (230.2)		1 ¹ / ₂ " (38.1)	-	-	
B3256-6	6" (150)		3 ¹ / ₁₆ " (77.8)		13 ⁹ / ₁₆ " (346.1)		10 ⁵ / ₈ " (269.9)		3" (76.2)	-	-	
B3256-8	8" (200)		4 ¹ / ₁₆ " (103.2)		15 ³ / ₄ " (396.9)		12 ⁵ / ₈ " (320.7)		3" (76.2)	-	-	
B3256-10	10" (250)		5 ¹ / ₈ " (130.2)		18 ³ / ₄ " (476.2)		15 ¹ / ₄ " (387.3)		2 ¹ / ₂ " (63.5)	1 ¹ / ₂ " (12.7)		
B3256-12	12" (300)		6 ¹ / ₈ " (155.6)		20 ³ / ₄ " (527.0)		17 ¹ / ₄ " (438.1)		2 ¹ / ₂ " (63.5)	1 ¹ / ₂ " (12.7)		
B3256-14	14" (350)		6 ³ / ₄ " (171.4)		22" (558.8)		18 ¹ / ₂ " (469.9)		3" (76.2)	1 ¹ / ₂ " (12.7)		
B3256-16	16" (400)		7 ³ / ₄ " (196.8)		24" (609.6)		20 ¹ / ₂ " (520.7)		3" (76.2)	1 ¹ / ₂ " (12.7)		
B3256-18	18" (450)		8 ³ / ₄ " (222.2)		26" (660.4)		22 ¹ / ₂ " (571.2)		3 ¹ / ₂ " (88.9)	1 ¹ / ₂ " (12.7)		
B3256-20	20" (500)		9 ³ / ₄ " (247.6)		28" (711.2)		24 ¹ / ₂ " (622.3)		3 ¹ / ₂ " (88.9)	1 ¹ / ₂ " (12.7)		
B3256-24	24" (600)		11 ³ / ₄ " (298.4)		32" (812.8)		28 ¹ / ₂ " (723.9)		3 ¹ / ₂ " (88.9)	1 ¹ / ₂ " (12.7)		
B3256-30	30" (750)		14 ³ / ₄ " (374.6)		38" (965.2)		34 ¹ / ₂ " (876.3)		3 ¹ / ₂ " (88.9)	1 ¹ / ₂ " (12.7)		

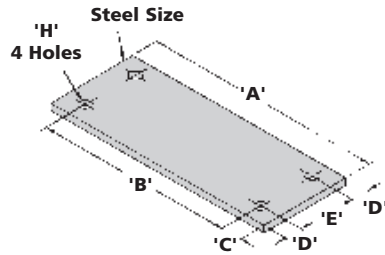
Part No.	'H'		'R'		Steel Size		Wt./C	
							Lbs.	kg
B3256-2	7/8"	(22.2)	1 ³ / ₁₆ "	(30.2)	3/8" x 3"	(9.5 x 76.2)	342	(155.1)
B3256-2 ¹ / ₂	7/8"	(22.2)	1 ⁷ / ₁₆ "	(36.5)	3/8" x 3"	(9.5 x 76.2)	386	(175.1)
B3256-3	7/8"	(22.2)	1 ³ / ₄ "	(44.4)	3/8" x 3"	(9.5 x 76.2)	434	(196.8)
B3256-3 ¹ / ₂	7/8"	(22.2)	2"	(50.8)	3/8" x 3"	(9.5 x 76.2)	478	(216.8)
B3256-4	7/8"	(22.2)	2 ¹ / ₄ "	(57.1)	3/8" x 3"	(9.5 x 76.2)	518	(234.9)
B3256-5	7/8"	(22.2)	2 ¹³ / ₁₆ "	(71.4)	3/8" x 3"	(9.5 x 76.2)	610	(276.7)
B3256-6	1"	(25.4)	3 ⁵ / ₁₆ "	(84.1)	1/2" x 6"	(12.7 x 152.4)	1961	(889.5)
B3256-8	1"	(25.4)	4 ⁵ / ₁₆ "	(109.5)	1/2" x 6"	(12.7 x 152.4)	2397	(1087.3)
B3256-10	1 ¹ / ₈ "	(28.6)	5 ³ / ₈ "	(136.5)	1/2" x 8"	(12.7 x 203.2)	4155	(1884.7)
B3256-12	1 ¹ / ₈ "	(28.6)	6 ³ / ₈ "	(161.9)	1/2" x 8"	(12.7 x 203.2)	4789	(2172.3)
B3256-14	1 ¹ / ₈ "	(28.6)	7"	(177.8)	1/2" x 10"	(12.7 x 254.0)	6421	(2912.5)
B3256-16	1 ¹ / ₈ "	(28.6)	8"	(203.2)	1/2" x 10"	(12.7 x 254.0)	7210	(3270.4)
B3256-18	1 ¹ / ₈ "	(28.6)	9"	(228.6)	1/2" x 12"	(12.7 x 304.8)	9509	(4313.3)
B3256-20	1 ¹ / ₈ "	(28.6)	10"	(254.0)	1/2" x 12"	(12.7 x 304.8)	10434	(4732.8)
B3256-24	1 ¹ / ₈ "	(28.6)	12"	(304.8)	1/2" x 12"	(12.7 x 304.8)	12295	(5577.0)
B3256-30	1 ¹ / ₈ "	(28.6)	15"	(381.0)	1/2" x 12"	(12.7 x 304.8)	15082	(6841.2)

All dimensions in charts and on drawings are in inches. Dimensions shown in parentheses are in millimeters unless otherwise specified.

Pipe Supports, Guides, Shields & Saddles



B3257-2 thru B3257-8



B3257-10 thru B3257-30

Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed as a base plate for B3256 Pipe Anchor.

Ordering: Specify part number and finish.

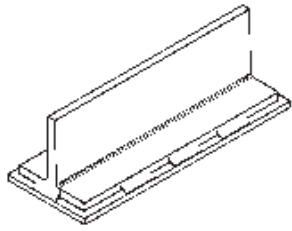
Figure B3257 Base Plate

Part No.	Nominal Pipe Size		'A'		'B'		'C'		'D'	
B3257-2	2"	(50)	8 ¹ / ₈ "	(206.4)	5 ⁷ / ₈ "	(149.2)	1 ¹ / ₈ "	(28.6)	1 ¹ / ₂ "	(38.1)
B3257-2 ¹ / ₂	2 ¹ / ₂ "	(65)	8 ⁵ / ₈ "	(219.1)	6 ³ / ₈ "	(161.9)	1 ¹ / ₈ "	(28.6)	1 ¹ / ₂ "	(38.1)
B3257-3	3"	(80)	9 ¹ / ₄ "	(234.9)	7"	(177.8)	1 ¹ / ₈ "	(28.6)	1 ¹ / ₂ "	(38.1)
B3257-3 ¹ / ₂	3 ¹ / ₂ "	(90)	9 ³ / ₄ "	(247.6)	7 ¹ / ₂ "	(190.5)	1 ¹ / ₈ "	(28.6)	1 ¹ / ₂ "	(38.1)
B3257-4	4"	(100)	10 ¹ / ₄ "	(260.3)	8"	(203.2)	1 ¹ / ₈ "	(28.6)	1 ¹ / ₂ "	(38.1)
B3257-5	5"	(125)	11 ⁵ / ₁₆ "	(287.3)	9 ¹ / ₁₆ "	(230.2)	1 ¹ / ₈ "	(28.6)	1 ¹ / ₂ "	(38.1)
B3257-6	6"	(150)	13 ⁵ / ₈ "	(346.1)	10 ⁵ / ₈ "	(269.9)	1 ¹ / ₂ "	(38.1)	3"	(76.2)
B3257-8	8"	(200)	15 ⁵ / ₈ "	(396.9)	12 ⁵ / ₈ "	(320.7)	1 ¹ / ₂ "	(38.1)	3"	(76.2)
B3257-10	10"	(250)	18 ³ / ₄ "	(476.2)	15 ¹ / ₄ "	(387.3)	1 ³ / ₄ "	(44.4)	1 ¹ / ₂ "	(38.1)
B3257-12	12"	(300)	20 ³ / ₄ "	(527.0)	17 ¹ / ₄ "	(438.1)	1 ³ / ₄ "	(44.4)	1 ¹ / ₂ "	(38.1)
B3257-14	14"	(350)	22"	(558.8)	18 ¹ / ₂ "	(469.9)	1 ³ / ₄ "	(44.4)	2"	(50.8)
B3257-16	16"	(400)	24"	(609.6)	20 ¹ / ₂ "	(520.7)	1 ³ / ₄ "	(44.4)	2"	(50.8)
B3257-18	18"	(450)	26"	(660.4)	22 ¹ / ₂ "	(571.5)	1 ³ / ₄ "	(44.4)	2 ¹ / ₂ "	(63.5)
B3257-20	20"	(500)	28"	(711.2)	24 ¹ / ₂ "	(622.3)	1 ³ / ₄ "	(44.4)	2 ¹ / ₂ "	(63.5)
B3257-24	24"	(600)	32"	(812.8)	28 ¹ / ₂ "	(723.9)	1 ³ / ₄ "	(44.4)	2 ¹ / ₂ "	(63.5)
B3257-30	30"	(750)	38"	(965.2)	34 ¹ / ₂ "	(876.3)	1 ³ / ₄ "	(44.4)	2 ¹ / ₂ "	(63.5)

Part No.	'E'		'H'		Steel Size		Wt./C	
							Lbs.	kg
B3257-2	-	-	7 ⁷ / ₈ "	(22.2)	3 ³ / ₈ " x 3"	(9.5 x 76.2)	246	(111.6)
B3257-2 ¹ / ₂	-	-	7 ⁷ / ₈ "	(22.2)	3 ³ / ₈ " x 3"	(9.5 x 76.2)	262	(118.8)
B3257-3	-	-	7 ⁷ / ₈ "	(22.2)	3 ³ / ₈ " x 3"	(9.5 x 76.2)	282	(127.9)
B3257-3 ¹ / ₂	-	-	7 ⁷ / ₈ "	(22.2)	3 ³ / ₈ " x 3"	(9.5 x 76.2)	298	(135.2)
B3257-4	-	-	7 ⁷ / ₈ "	(22.2)	3 ³ / ₈ " x 3"	(9.5 x 76.2)	314	(142.4)
B3257-5	-	-	7 ⁷ / ₈ "	(22.2)	3 ³ / ₈ " x 3"	(9.5 x 76.2)	348	(157.8)
B3257-6	-	-	1"	(25.4)	1 ¹ / ₂ " x 6"	(12.7 x 152.4)	1137	(515.7)
B3257-8	-	-	1"	(25.4)	1 ¹ / ₂ " x 6"	(12.7 x 152.4)	1307	(592.8)
B3257-10	5"	(127.0)	1 ¹ / ₈ "	(28.6)	1 ¹ / ₂ " x 8"	(12.7 x 203.2)	2071	(939.4)
B3257-12	5"	(127.0)	1 ¹ / ₈ "	(28.6)	1 ¹ / ₂ " x 8"	(12.7 x 203.2)	2298	(1042.4)
B3257-14	6"	(152.4)	1 ¹ / ₈ "	(28.6)	1 ¹ / ₂ " x 10"	(12.7 x 254.0)	3064	(1389.8)
B3257-16	6"	(152.4)	1 ¹ / ₈ "	(28.6)	1 ¹ / ₂ " x 10"	(12.7 x 254.0)	3347	(1518.2)
B3257-18	7"	(177.8)	1 ¹ / ₈ "	(28.6)	1 ¹ / ₂ " x 12"	(12.7 x 304.8)	4368	(1981.3)
B3257-20	7"	(177.8)	1 ¹ / ₈ "	(28.6)	1 ¹ / ₂ " x 12"	(12.7 x 304.8)	4709	(2136.0)
B3257-24	7"	(177.8)	1 ¹ / ₈ "	(28.6)	1 ¹ / ₂ " x 12"	(12.7 x 304.8)	5389	(2444.4)
B3257-30	7"	(177.8)	1 ¹ / ₈ "	(28.6)	1 ¹ / ₂ " x 12"	(12.7 x 304.8)	6410	(2907.6)

Pipe Supports, Guides, Shields & Saddles

Figure B3891 - B3897 Pipe Slide Assembly Series



Material: Tee - Carbon Steel;
Facing Plate - Stainless Steel Type 304;
Base - Carbon Steel with teflon® slide pads.

Finish: Black paint.

Service: Designed to support pipe where horizontal movement from expansion and contraction is present. Fits up to 3" insulation thickness.

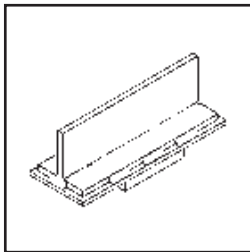
Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 35.

Operating Temperature Rating:
400°F (204°C) maximum

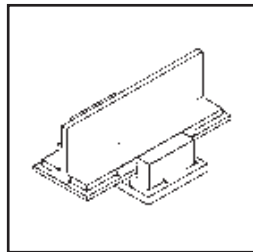
Loading: Capable of supporting constant loads up to 2000 Psi at 70°F.

B3891 - 10 - CL		
Base Style	Travel	Options
1	04" (101) (except B3897)	Standard Slide = Blank
2	10" (254) (except B3897)	W/ End Plates = EP - Pipe Size
3	2 1/2" (63) (B3897 only)	W/ B3140 Clamps = CL - Pipe Size
4		
5		
6		
7		

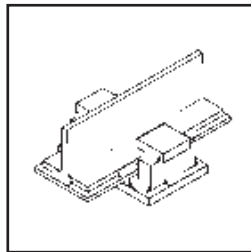
Supports, Guides, Shields & Saddles



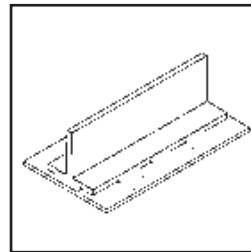
B3891



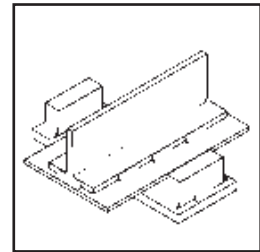
B3892



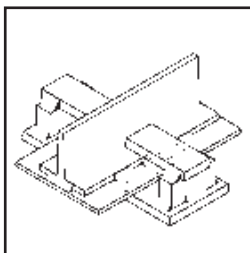
B3893



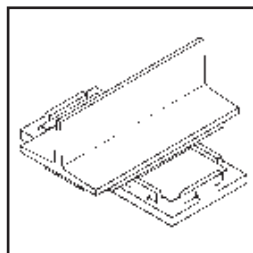
B3894



B3895



B3896



B3897

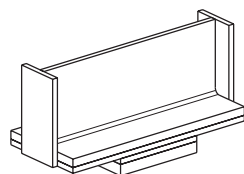
Notes:

B3891, B3892 and B3893 are designed for longitudinal movement only.

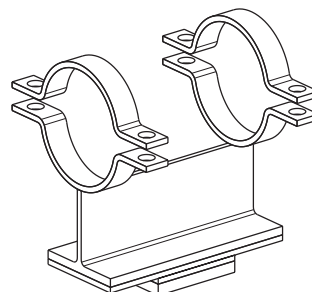
B3894, B3895 and B3896 are designed for longitudinal and limited transverse movement.

B3897 is designed for up to 5 inches (127mm) of horizontal movement in any direction, depending on the installed position.

Options:



End Plates



B3140 Clamps

Pipe Supports, Guides, Shields & Saddles

Figure B3891 - B3897 Pipe Slide Assembly Series

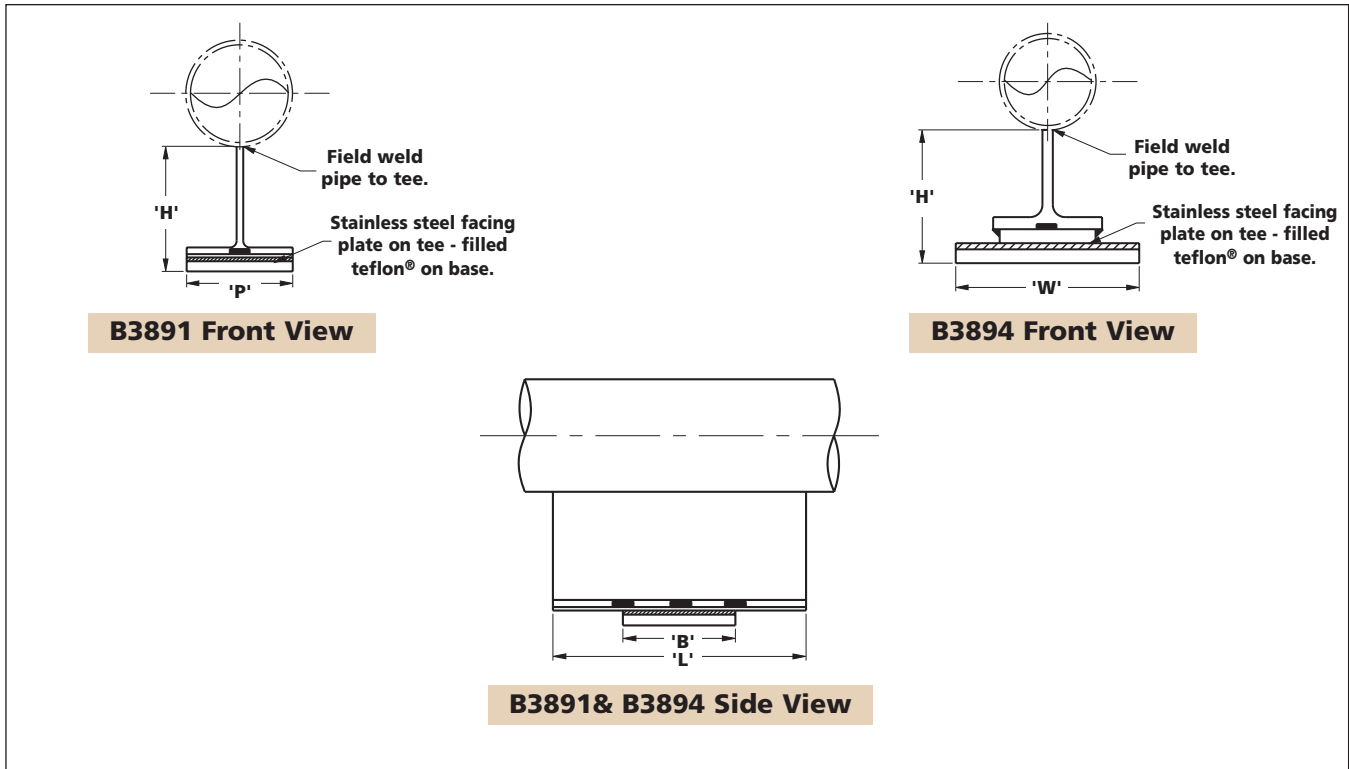
Pipe Size	Travel		Part No.	Height 'H'		Length 'L'		Depth 'B'		Diameter 'D'	
	In.	mm		In.	mm	In.	mm	In.	mm	In.	mm
1" to 24" (25 to 600)	2 1/2"	(63.5)	B3897	5 5/16"	(134.9)	9 1/2"	(241.3)	5"	(127.0)	4"	(101.6)
	4"	(127.0)	B3891	4 5/8"	(117.5)	6"	(152.4)	2"	(50.8)	N/A	N/A
			B3892	5 1/8"	(130.2)	6"	(152.4)	4"	(101.6)	N/A	N/A
			B3893	5 1/8"	(130.2)	6"	(152.4)	4"	(101.6)	N/A	N/A
			B3894	4 5/8"	(117.5)	6"	(152.4)	2"	(50.8)	N/A	N/A
			B3895	5 1/8"	(130.2)	6"	(152.4)	4"	(101.6)	N/A	N/A
			B3896	5 1/8"	(130.2)	6"	(152.4)	4"	(101.6)	N/A	N/A
	10"	(254.0)	B3891	4 5/8"	(117.5)	12"	(304.8)	2"	(50.8)	N/A	N/A
			B3892	5 1/8"	(130.2)	12"	(304.8)	4"	(101.6)	N/A	N/A
			B3893	5 1/8"	(130.2)	12"	(304.8)	4"	(101.6)	N/A	N/A
			B3894	4 5/8"	(117.5)	12"	(304.8)	2"	(50.8)	N/A	N/A
			B3895	5 1/8"	(130.2)	12"	(304.8)	4"	(101.6)	N/A	N/A
			B3896	5 1/8"	(130.2)	12"	(304.8)	4"	(101.6)	N/A	N/A

Pipe Size	Travel		Part No.	Width 'P'		Width 'W'		Max Recommended Load	
	In.	mm		In.	mm	In.	mm	Lbs.	kN
1" to 24" (25 to 600)	2 1/2"	(63.5)	B3897	N/A	N/A	9 1/2"	(241.3)	16000	(71.2)
	4"	(127.0)	B3891	4"	(101.6)	N/A	N/A	12000	(53.4)
			B3892	4"	(101.6)	7"	(177.8)	12000	(53.4)
			B3893	4"	(101.6)	7"	(177.8)	12000	(53.4)
			B3894	N/A	N/A	6"	(152.4)	12000	(53.4)
			B3895	6"	(152.4)	10"	(254.0)	24000	(106.8)
			B3896	6"	(152.4)	10"	(254.0)	24000	(106.8)
	10"	(254.0)	B3891	4"	(101.6)	N/A	N/A	12000	(53.4)
			B3892	4"	(101.6)	7"	(177.8)	12000	(53.4)
			B3893	4"	(101.6)	7"	(177.8)	12000	(53.4)
			B3894	N/A	N/A	6"	(152.4)	12000	(53.4)
			B3895	6"	(152.4)	10"	(254.0)	24000	(106.8)
			B3896	6"	(152.4)	10"	(254.0)	24000	(106.8)

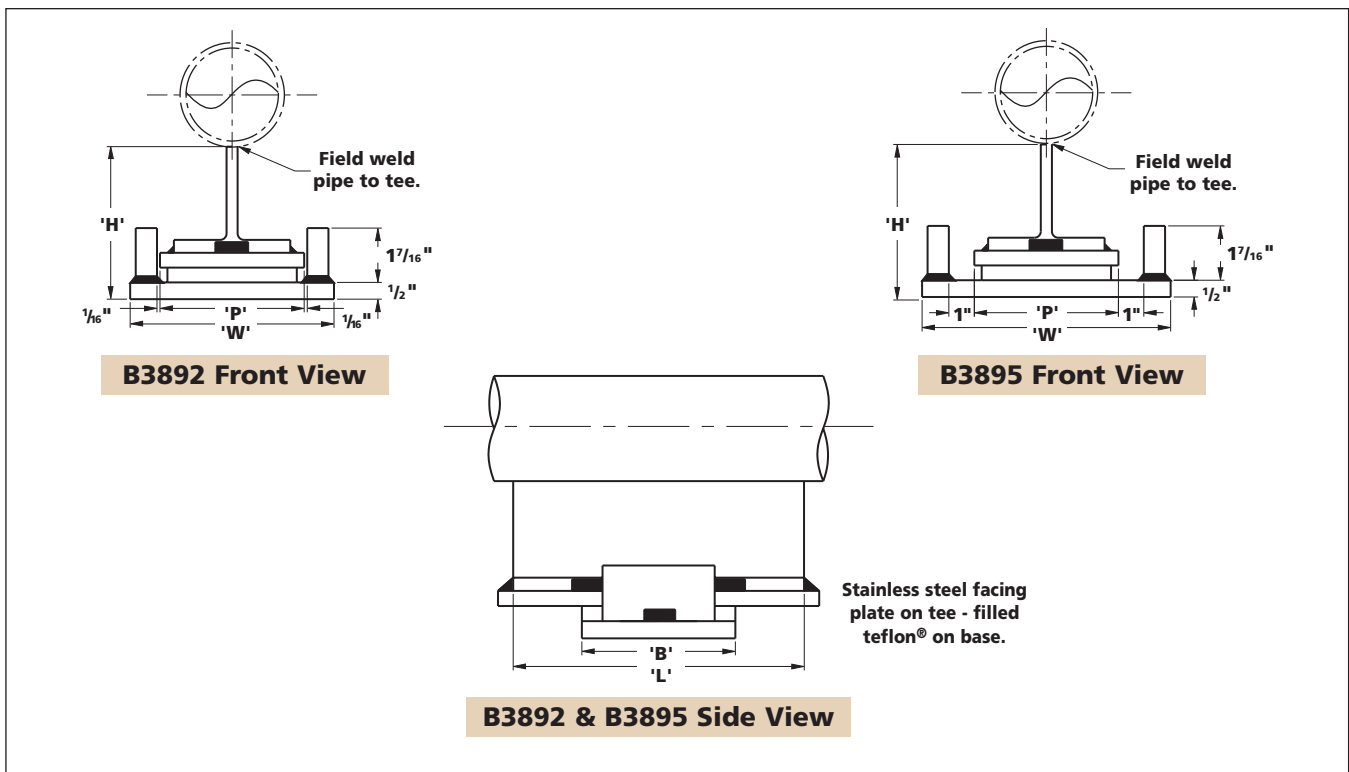
*Based on teflon® of 500 psi.

Pipe Supports, Guides, Shields & Saddles

Figure B3891 - B3897 Pipe Slide Assembly Series



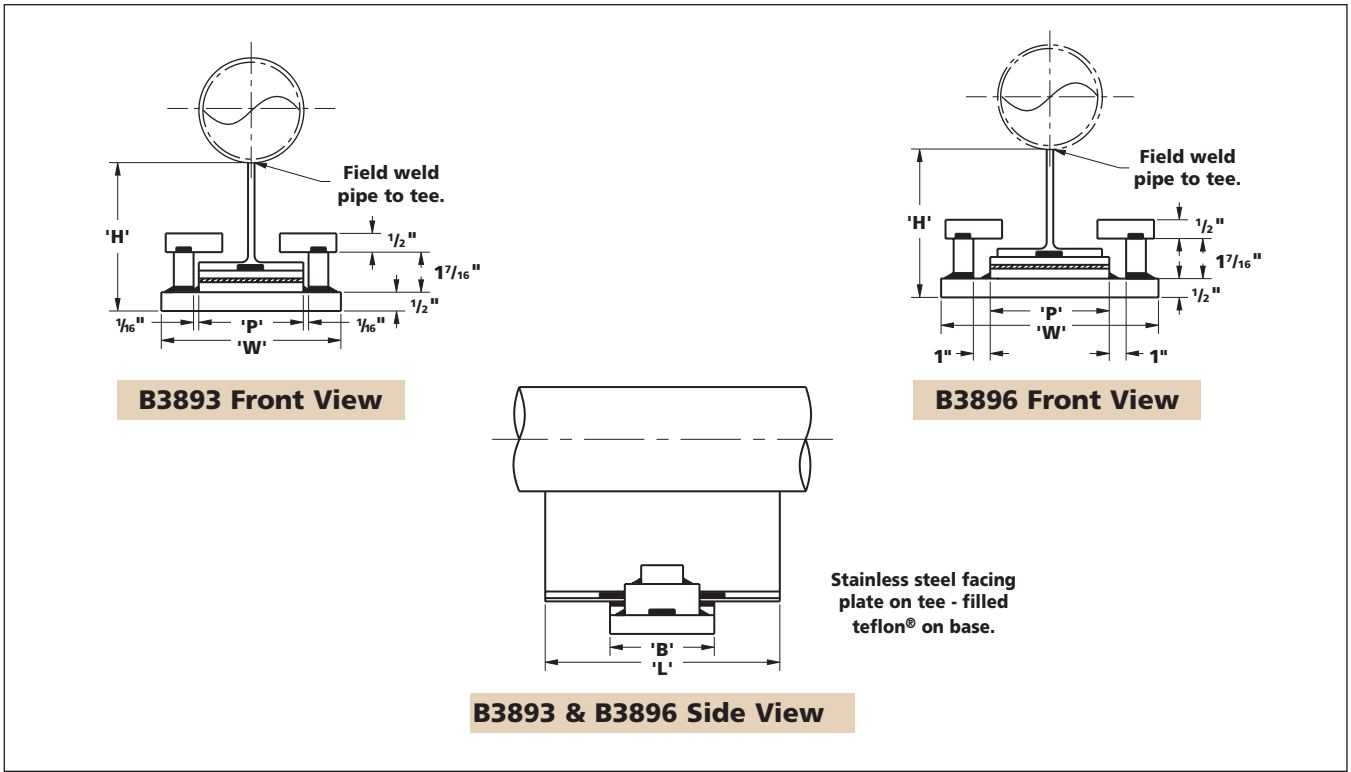
Supports, Guides, Shields & Saddles



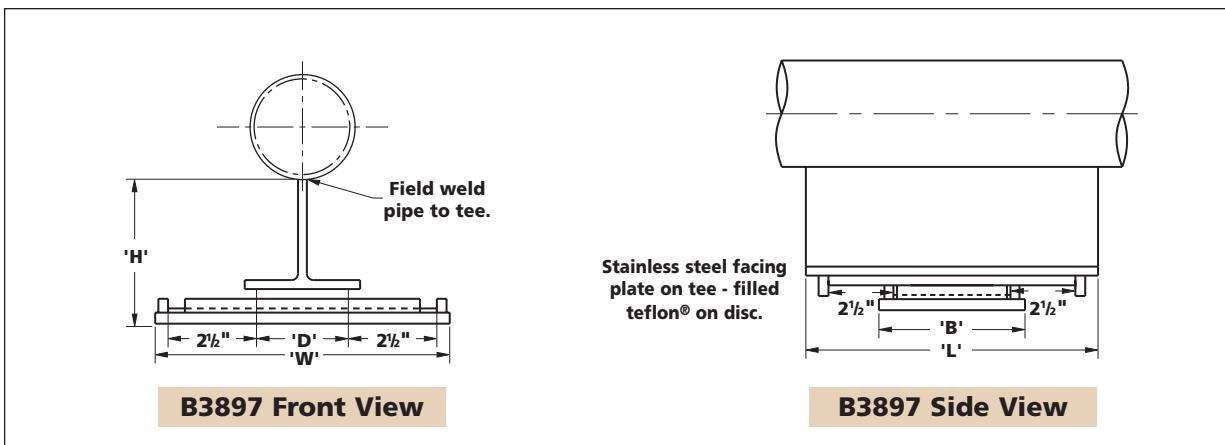
Note: All teflon® is 3/32" (2.4mm) thick.

Pipe Supports, Guides, Shields & Saddles

Figure B3891 - B3897 Pipe Slide Assembly Series



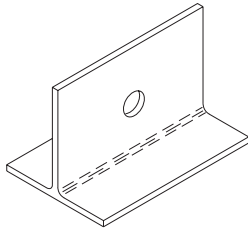
Supports, Guides, Shields & Saddles



Note: All teflon[®] is 3/32" (2.4mm) thick.

Pipe Supports, Guides, Shields & Saddles

Figure B3991 - B3991B Pipe Slide Assembly Series



Material: Tee & H Slides - Carbon Steel with Heat Cured PTFE modified coating at slide plate.
Base - Carbon Steel with teflon® slide pads.

Finish: Black paint.

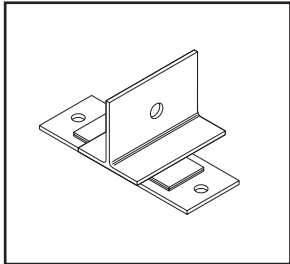
Service: Designed to support pipe where horizontal movement from expansion and contraction is present.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 35.

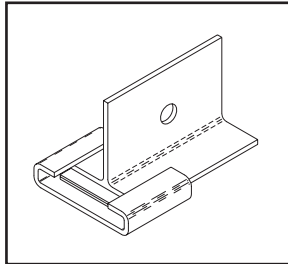
Operating Temperature Rating:
400°F (204°C) maximum at base

Loading: Capable of supporting constant loads up to 2000 Psi at 70°F (21°C)

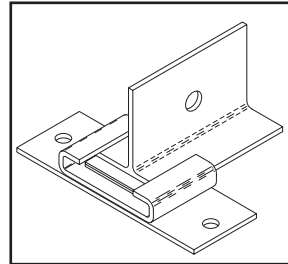
B3991 - 1- 04 - CL			
Base Style	Pipe Size	Travel	Options
1	1 = 1" (25) - 4" (100)	04 = 4" (100)	Standard Slide = Blank
3	5 = 5" (125) - 8" (200)	10 = 10" (250)	W/ End Plates = EP - Pipe Size
3B	10 = 10" (250) - 24" (600)		W/ B3140 Clamps = CL - Pipe Size



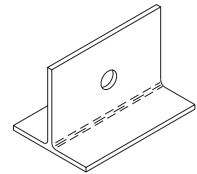
B3991-1 & B3991-5



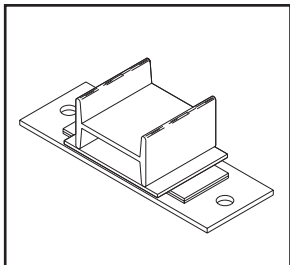
B3993-1 & B3993-5



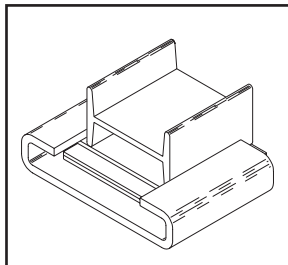
B3993B-1 & B3993B-5



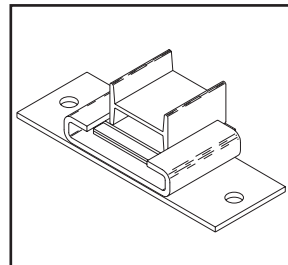
T-Slide



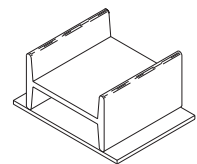
B3991-10



B3993-10

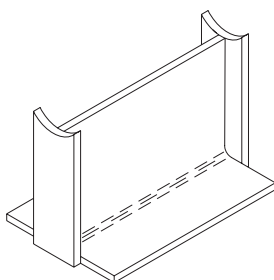


B3993B-10

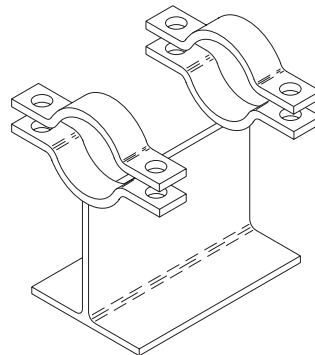


H-Slide

Options:



EP (standard slide with end plates)



CL (standard slide with B3140 clamps)

Pipe Supports, Guides, Shields & Saddles

Figure B3991 - B3993B Pipe Slide Assembly Series

Pipe Size	Travel		Part No.	Height 'H'		Length 'L'		Depth 'B'		Width 'C'	
	In.	mm		In.	mm	In.	mm	In.	mm	In.	mm
1" to 24" (25 to 600)	4"	(101.6)	B3991-1	2 ¹⁵ / ₁₆ "	(74.6)	6"	(152.4)	3"	(76.2)	8 ¹ / ₂ "	(215.9)
			B3993-1	2 ¹⁵ / ₁₆ "	(74.6)	6"	(152.4)	3"	(76.2)	N/A	N/A
			B3993B-1	3 ³ / ₁₆ "	(81.0)	6"	(152.4)	3"	(76.2)	8 ¹ / ₂ "	(215.9)
			B3991-5	4 ⁷ / ₁₆ "	(112.7)	6"	(152.4)	3"	(76.2)	8 ¹ / ₂ "	(215.9)
			B3993-5	4 ⁷ / ₁₆ "	(112.7)	6"	(152.4)	3"	(76.2)	N/A	N/A
			B3993B-5	4 ¹¹ / ₁₆ "	(119.1)	6"	(152.4)	3"	(76.2)	8 ¹ / ₂ "	(215.9)
			B3991-10	4 ⁷ / ₈ "	(123.8)	6"	(152.4)	4"	(101.6)	14 ¹ / ₂ "	(368.3)
			B3993-10	4 ⁷ / ₈ "	(123.8)	6"	(152.4)	4"	(101.6)	N/A	N/A
			B3993B-10	5 ¹ / ₈ "	(130.2)	6"	(152.4)	4"	(101.6)	14 ¹ / ₂ "	(368.3)
	10"	(254.0)	B3991-1	2 ¹⁵ / ₁₆ "	(74.6)	12"	(304.8)	3"	(76.2)	8 ¹ / ₂ "	(215.9)
			B3993-1	2 ¹⁵ / ₁₆ "	(74.6)	12"	(304.8)	3"	(76.2)	N/A	N/A
			B3993B-1	3 ³ / ₁₆ "	(81.0)	12"	(304.8)	3"	(76.2)	8 ¹ / ₂ "	(215.9)
			B3991-5	4 ⁷ / ₁₆ "	(112.7)	12"	(304.8)	3"	(76.2)	8 ¹ / ₂ "	(215.9)
			B3993-5	4 ⁷ / ₁₆ "	(112.7)	12"	(304.8)	3"	(76.2)	N/A	N/A
			B3993B-5	4 ¹¹ / ₁₆ "	(119.1)	12"	(304.8)	3"	(76.2)	8 ¹ / ₂ "	(215.9)
			B3991-10	4 ⁷ / ₈ "	(123.8)	12"	(304.8)	4"	(101.6)	14 ¹ / ₂ "	(368.3)
			B3993-10	4 ⁷ / ₈ "	(123.8)	12"	(304.8)	4"	(101.6)	N/A	N/A
			B3993B-10	5 ¹ / ₈ "	(130.2)	12"	(304.8)	4"	(101.6)	14 ¹ / ₂ "	(368.3)

Pipe Size	Travel		Part No.	Width 'P'		Width 'W'		Max Recommended Load	
	In.	mm		In.	mm	In.	mm	Lbs.	kN
1" to 24" (25 to 600)	4"	(101.6)	B3991-1	6"	(152.4)	N/A	N/A	10000	(44.5)
			B3993-1	2"	(50.8)	3"	(76.2)	12000	(53.4)
			B3993B-1	2"	(50.8)	3"	(76.2)	12000	(53.4)
			B3991-5	6"	(152.4)	N/A	N/A	16000	(71.2)
			B3993-5	2"	(50.8)	4 ¹ / ₂ "	(114.3)	12000	(53.4)
			B3993B-5	2"	(50.8)	4 ¹ / ₂ "	(114.3)	12000	(53.4)
			B3991-10	12"	(304.8)	N/A	N/A	32000	(142.3)
			B3993-10	6"	(152.4)	8 ¹¹ / ₁₆ "	(220.7)	24000	(106.8)
			B3993B-10	6"	(152.4)	8 ¹¹ / ₁₆ "	(220.7)	24000	(106.8)
	10"	(254.0)	B3991-1	6"	(152.4)	N/A	N/A	10000	(44.5)
			B3993-1	2"	(50.8)	3"	(76.2)	12000	(53.4)
			B3993B-1	2"	(50.8)	3"	(76.2)	12000	(53.4)
			B3991-5	6"	(152.4)	N/A	N/A	16000	(71.2)
			B3993-5	2"	(50.8)	4 ¹ / ₂ "	(114.3)	12000	(53.4)
			B3993B-5	2"	(50.8)	4 ¹ / ₂ "	(114.3)	12000	(53.4)
			B3991-10	12"	(304.8)	N/A	N/A	32000	(142.3)
			B3993-10	6"	(152.4)	8 ¹¹ / ₁₆ "	(220.7)	24000	(106.8)
			B3993B-10	6"	(152.4)	8 ¹¹ / ₁₆ "	(220.7)	24000	(106.8)

*Based on teflon® of 2000 psi.

Supports, Guides, Shields & Saddles

Pipe Supports, Guides, Shields & Saddles

Figure B3991 Pipe Slide Assembly Series dimensional drawings

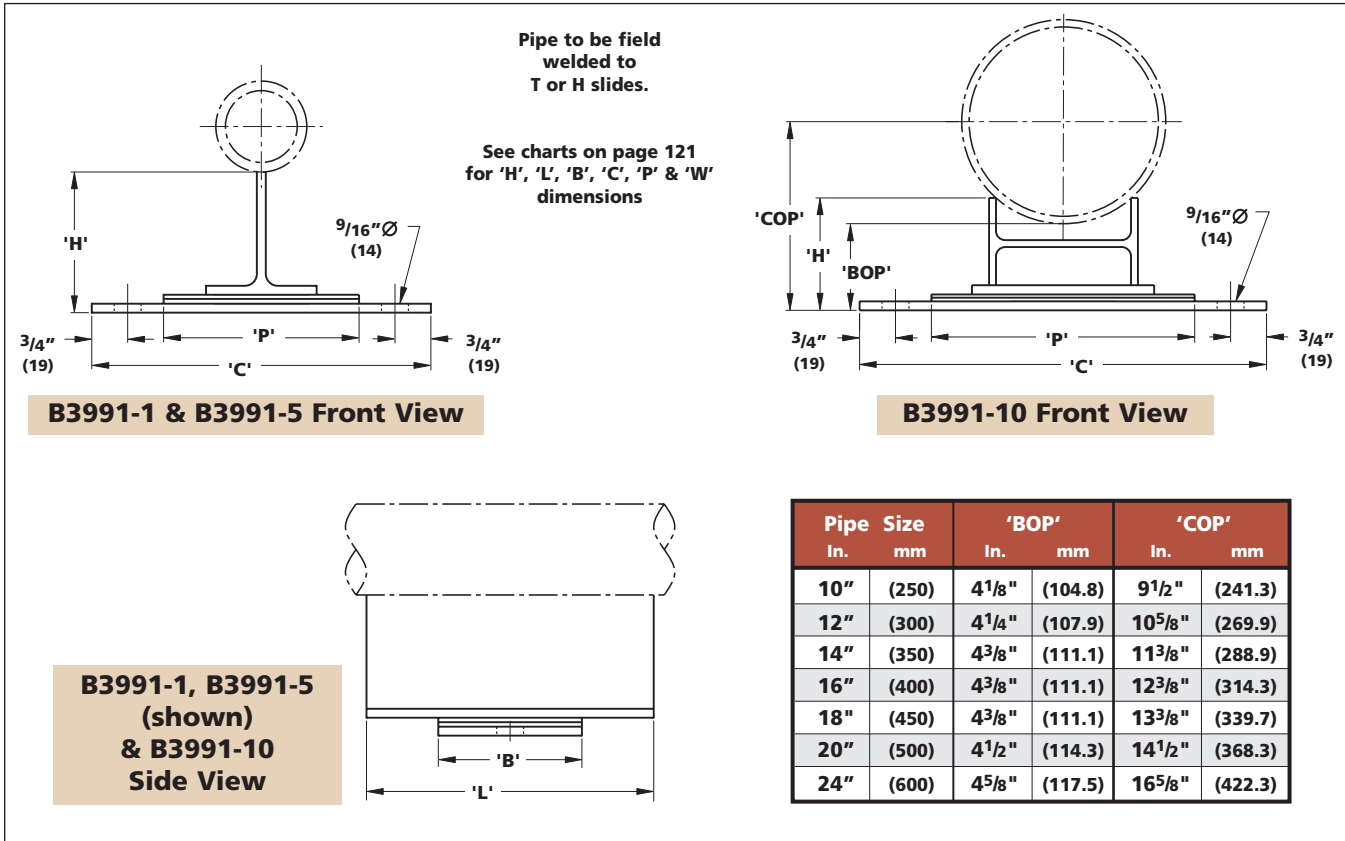
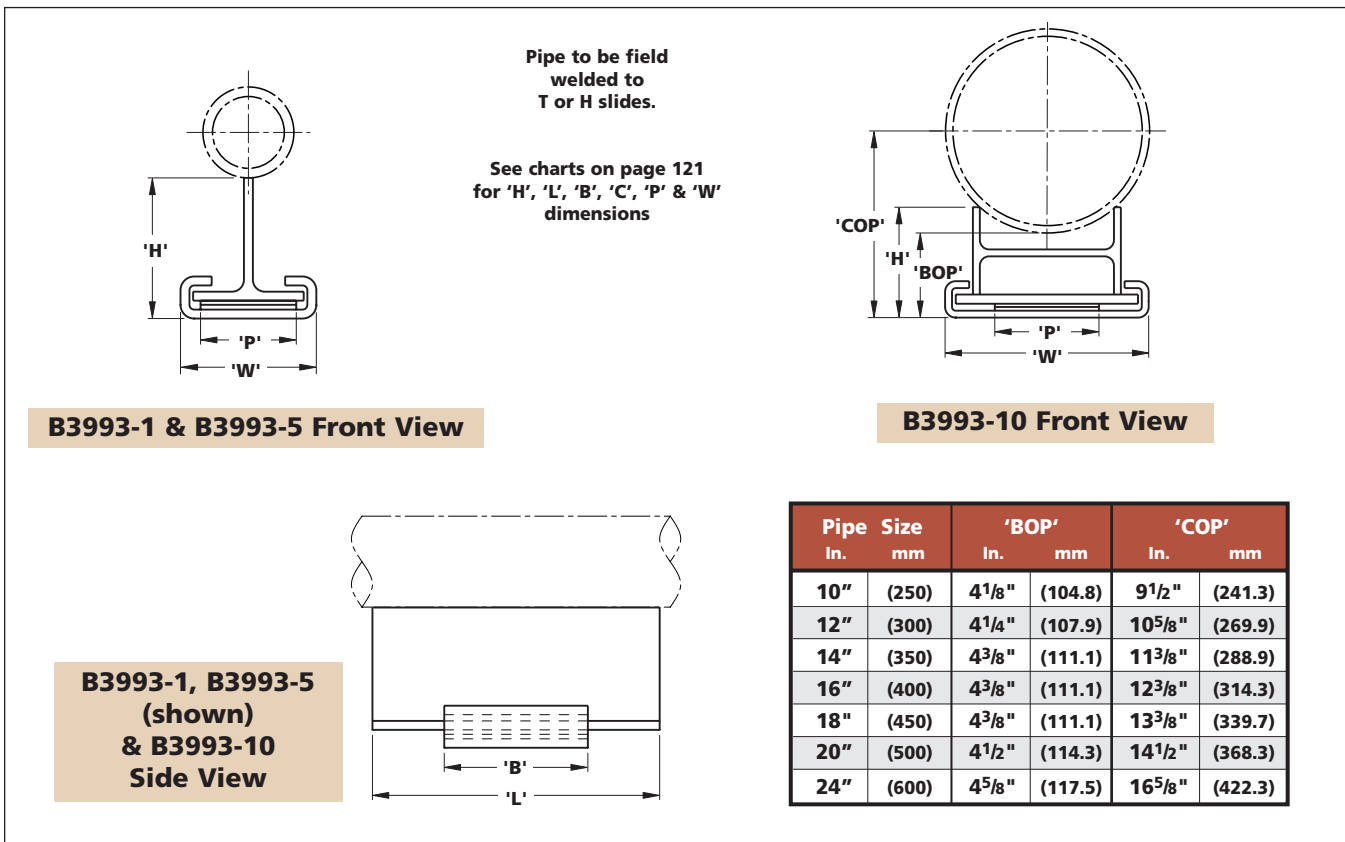


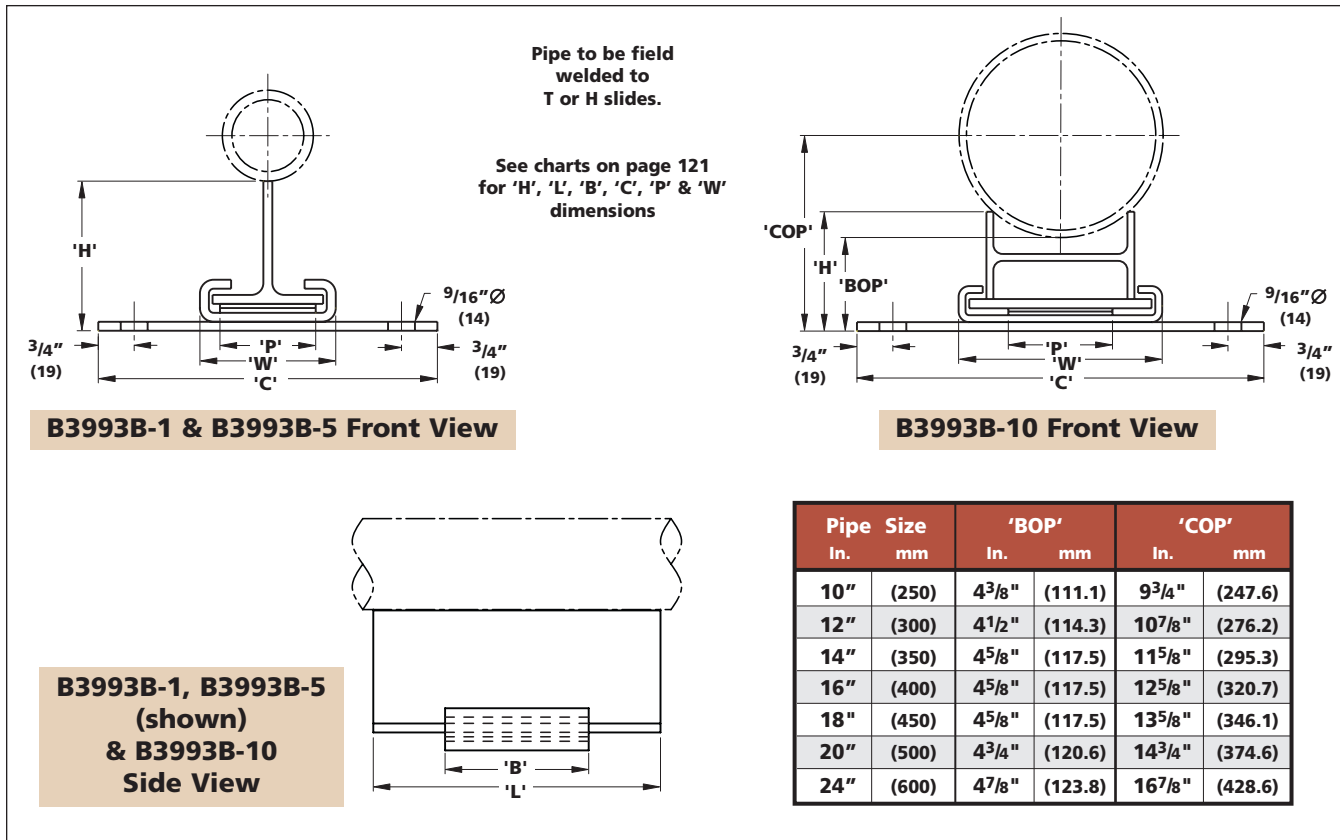
Figure B3993 Pipe Slide Assembly Series dimensional drawings



Note: All teflon® is 3/32" (2.4mm) thick.

Pipe Supports, Guides, Shields & Saddles

Figure B3993B Pipe Slide Assembly Series dimensional drawings



Supports, Guides, Shields & Saddles

Pipe Supports, Guides, Shields & Saddles

Insulation Protection Shields

Selection Tables for:

Figure B3151 Insulation Protection Shield (Page 125)

Figure B3152 360° Insulation Protection Shield (Page 127)

Figure B3153 Insulation Protection Shield with 'Loc' Tabs (Page 125)

Figure B3154 Short Insulation Protection Shield (Page 126)

Figure B3155 Short Insulation Protection Shield with 'Loc' Tabs (Page 126)

Shield Size Selection Table

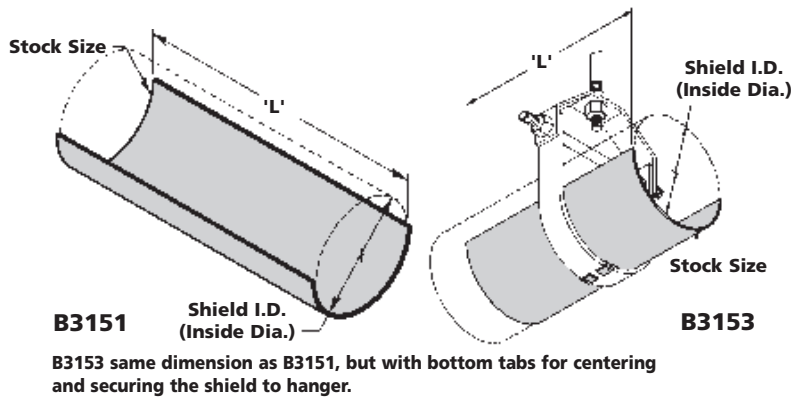
Nominal Pipe or Tubing Size		Insulation Thickness							
		1/2" (12.7)	3/4" (19.0)	1" (25.4)	1 1/2" (38.1)	2" (50.8)	2 1/2" (63.5)	3" (76.2)	4" (101.6)
1/2"	(15)	1X	2X	3X	5X	7X	--	--	--
3/4"	(20)	2X	3X	3X	5X	7X	--	--	--
1"	(25)	2X	3X	4X	6X	8X	--	--	--
1 1/4"	(32)	3X	4X	4X	7X	8X	--	--	--
1 1/2"	(40)	3X	4X	5X	7X	9X	--	--	--
2"	(50)	4X	5X	6X	8X	9X	10X*	11X*	--
2 1/2"	(65)	5X	6X	7X	9X	10X*	11X*	11X*	13Y*
3"	(80)	6X	7X	8X	9X	10X*	11X*	12Y*	14Z
3 1/2"	(90)	7X	8X	9X	10X*	11X*	12Y*	13Y*	15Z
4"	(100)	8X	9X	9X	10X*	11X*	12Y*	13Y*	15Z
5"	(125)	--	--	10Y*	11Y*	12Y*	13Y*	14Z	16Z
6"	(150)	--	--	11Y*	12Y*	13Y*	14Z	15Z	17Z
8"	(200)	--	--	13Y*	14Z	15Z	16Z	17Z	19Z
10"	(250)	--	--	15Z	16Z	17Z	18Z	19Z	21Z
12"	(300)	--	--	17Z	18Z	19Z	20Z	21Z	23Z
14"	(350)	--	--	18Z	19Z	20Z	21Z	22Z	24Z
16"	(400)	--	--	20Z	21Z	22Z	23Z	24Z	26Z
18"	(450)	--	--	22Z	23Z	24Z	25Z	26Z	28Z
20"	(500)	--	--	24Z	25Z	26Z	27Z	28Z	30Z
24"	(600)	--	--	28Z	29Z	30Z	31Z	32Z	33Z

*When selecting B3154 or B3155, replace 'X' or 'Y' designation with 'Z'.

Pipe Hanger Size Selection Table

Nominal Pipe or Tubing Size		Insulation Thickness							
		1/2" (12.7)	3/4" (19.0)	1" (25.4)	1 1/2" (38.1)	2" (50.8)	2 1/2" (63.5)	3" (76.2)	4" (101.6)
1/2"	(15)	1 1/2	2	2 1/2	3 1/2	5	--	--	--
3/4"	(20)	2	2 1/2	2 1/2	3 1/2	5	--	--	--
1"	(25)	2	2 1/2	3	4	5	--	--	--
1 1/4"	(32)	2 1/2	3	3	5	5	--	--	--
1 1/2"	(40)	2 1/2	3	3 1/2	5	6	--	--	--
2"	(50)	3	3 1/2	4	5	6	8	8	--
2 1/2"	(65)	3 1/2	4	5	6	8	8	10	10
3"	(80)	4	5	5	6	8	8	10	12
3 1/2"	(90)	5	5	6	8	8	10	10	12
4"	(100)	5	6	6	8	8	10	10	12
5"	(125)	--	--	8	8	10	10	12	14
6"	(150)	--	--	8	10	10	12	12	16
8"	(200)	--	--	10	12	12	14	16	18
10"	(250)	--	--	12	14	16	16	18	20
12"	(300)	--	--	14	16	18	18	20	22
14"	(350)	--	--	16	18	18	20	20	22
16"	(400)	--	--	18	20	20	22	22	24
18"	(450)	--	--	20	22	22	24	24	26
20"	(500)	--	--	22	24	24	26	26	28
24"	(600)	--	--	26	28	28	30	30	32

Pipe Supports, Guides, Shields & Saddles



Material: Steel (Stainless steel available)

Standard Finish: Pre-Galvanized

Service: Designed to protect pipe insulation when used with hangers.

Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 41 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 40.

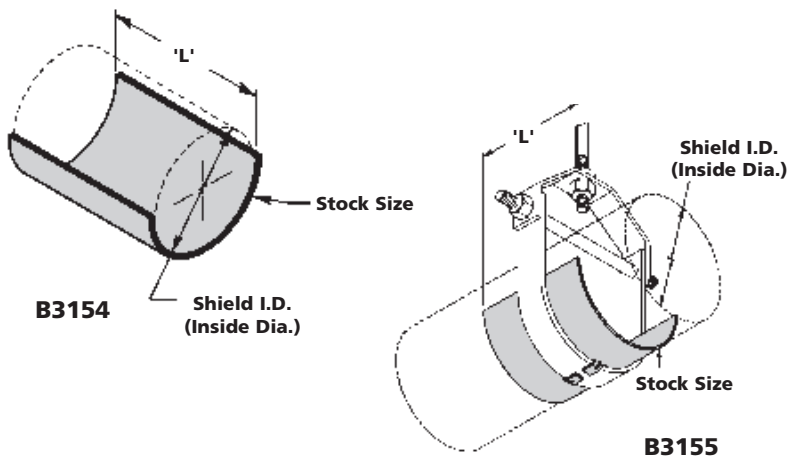
Note: See Selection Tables on page 124 for proper sizing.

Figure B3151 Insulation Protection Shield
Figure B3153 Insulation Protection Shield with "Loc" Tabs

Part No.	Part No.	Stock Size		'L'		Shield 'I.D.'		Wt./C		Required Pipe Hanger Size	
		Ga.	(mm)	"	(mm)	Lbs.	kg	"	(mm)		
B3151-1X	B3153-1X	18 Ga.	(1.2)	12"	(304.8)	1.90	(48.2)	50	(22.7)	1 1/2"	(40)
B3151-2X	B3153-2X	18 Ga.	(1.2)	12"	(304.8)	2.38	(60.4)	62	(28.1)	2"	(50)
B3151-3X	B3153-3X	18 Ga.	(1.2)	12"	(304.8)	2.88	(73.1)	75	(34.0)	2 1/2"	(65)
B3151-4X	B3153-4X	18 Ga.	(1.2)	12"	(304.8)	3.50	(88.9)	92	(41.7)	3"	(80)
B3151-5X	B3153-5X	18 Ga.	(1.2)	12"	(304.8)	4.00	(101.6)	104	(47.2)	3 1/2"	(90)
B3151-6X	B3153-6X	18 Ga.	(1.2)	12"	(304.8)	4.50	(114.3)	118	(53.5)	4"	(100)
B3151-7X	B3153-7X	18 Ga.	(1.2)	12"	(304.8)	5.00	(127.0)	129	(58.5)	5"	(125)
B3151-8X	B3153-8X	18 Ga.	(1.2)	12"	(304.8)	5.56	(141.2)	147	(66.7)	5"	(125)
B3151-9X	B3153-9X	16 Ga.	(1.5)	12"	(304.8)	6.64	(168.6)	219	(99.3)	6"	(150)
B3151-10X	B3153-10X	16 Ga.	(1.5)	12"	(304.8)	7.64	(194.0)	253	(114.7)	8"	(200)
B3151-11X	B3153-11X	16 Ga.	(1.5)	12"	(304.8)	8.64	(219.4)	286	(129.7)	8"	(200)
B3151-10Y	B3153-10Y	16 Ga.	(1.5)	18"	(457.2)	7.64	(194.0)	377	(171.0)	8"	(200)
B3151-11Y	B3153-11Y	16 Ga.	(1.5)	18"	(457.2)	8.64	(219.4)	424	(192.3)	8"	(200)
B3151-12Y	B3153-12Y	16 Ga.	(1.5)	18"	(457.2)	9.64	(244.8)	475	(215.4)	10"	(250)
B3151-13Y	B3153-13Y	16 Ga.	(1.5)	18"	(457.2)	10.76	(273.3)	529	(239.9)	10"	(250)
B3151-14Z	B3153-14Z	14 Ga.	(1.9)	24"	(609.6)	11.76	(298.7)	964	(437.3)	12"	(300)
B3151-15Z	B3153-15Z	14 Ga.	(1.9)	24"	(609.6)	12.76	(324.1)	1045	(474.0)	12"	(300)
B3151-16Z	B3153-16Z	14 Ga.	(1.9)	24"	(609.6)	14.00	(355.6)	1146	(519.8)	14"	(350)
B3151-17Z	--	14 Ga.	(1.9)	24"	(609.6)	15.00	(381.0)	1227	(556.5)	16"	(400)
B3151-18Z	--	14 Ga.	(1.9)	24"	(609.6)	16.00	(406.4)	1308	(593.3)	16"	(400)
B3151-19Z	--	14 Ga.	(1.9)	24"	(609.6)	17.00	(431.8)	1393	(631.8)	18"	(450)
B3151-20Z	--	12 Ga.	(2.6)	24"	(609.6)	18.00	(457.2)	2064	(936.2)	18"	(450)
B3151-21Z	--	12 Ga.	(2.6)	24"	(609.6)	19.00	(482.6)	2178	(987.9)	20"	(500)
B3151-22Z	--	12 Ga.	(2.6)	24"	(609.6)	20.00	(508.0)	2292	(1039.6)	20"	(500)
B3151-23Z	--	12 Ga.	(2.6)	24"	(609.6)	21.00	(533.4)	2406	(1091.3)	24"	(600)
B3151-24Z	--	12 Ga.	(2.6)	24"	(609.6)	22.00	(558.8)	2520	(1143.1)	24"	(600)
B3151-25Z	--	12 Ga.	(2.6)	24"	(609.6)	23.00	(584.2)	2634	(1194.8)	24"	(600)
B3151-26Z	--	12 Ga.	(2.6)	24"	(609.6)	24.00	(609.6)	2753	(1248.7)	24"	(600)
B3151-27Z	--	12 Ga.	(2.6)	24"	(609.6)	25.00	(635.0)	2862	(1298.2)	30"	(750)
B3151-28Z	--	12 Ga.	(2.6)	24"	(609.6)	26.00	(660.4)	2980	(1351.7)	30"	(750)
B3151-29Z	--	12 Ga.	(2.6)	24"	(609.6)	27.00	(685.8)	3094	(1403.4)	30"	(750)
B3151-30Z	--	12 Ga.	(2.6)	24"	(609.6)	28.00	(711.2)	3208	(1455.1)	30"	(750)
B3151-31Z	--	12 Ga.	(2.6)	24"	(609.6)	29.00	(736.6)	3322	(1506.8)	30"	(750)
B3151-32Z	--	12 Ga.	(2.6)	24"	(609.6)	30.00	(762.0)	3436	(1558.5)	30"	(750)
B3151-33Z	--	12 Ga.	(2.6)	24"	(609.6)	32.00	(812.8)	3664	(1662.0)	36"	(900)

Supports, Guides, Shields & Saddles

Pipe Supports, Guides, Shields & Saddles



Material: Steel (Stainless steel available)

Standard Finish: Pre-Galvanized

Service: Designed for protection of foam, fiberglass, or high density insulation when used with pipe hangers.

Ordering: Specify part number and finish.

Note: See Selection Tables on page 124 for proper sizing.

B3155 same dimension as B3154 but with bottom tabs for centering and securing the shield to hanger.

Figure B3154 Short Insulation Protection Shield
Figure B3155 Short Insulation Protection Shield with "Loc" Tabs

Part No.	Part No.	Stock Size		'L'		Shield 'I.D.'		Wt./C		Required Pipe Hanger Size	
								Lbs.	kN		
B3154-1X	B3155-1X	18 Ga.	(1.2)	8"	(203.2)	1.90	(48.2)	36	(16.3)	1 1/2"	(40)
B3154-2X	B3155-2X	18 Ga.	(1.2)	8"	(203.2)	2.38	(60.4)	45	(20.4)	2"	(50)
B3154-3X	B3155-3X	18 Ga.	(1.2)	8"	(203.2)	2.88	(73.1)	54	(24.5)	2 1/2"	(65)
B3154-4X	B3155-4X	18 Ga.	(1.2)	8"	(203.2)	3.50	(88.9)	66	(29.9)	3"	(80)
B3154-5X	B3155-5X	18 Ga.	(1.2)	8"	(203.2)	4.00	(101.6)	75	(34.0)	3 1/2"	(90)
B3154-6X	B3155-6X	18 Ga.	(1.2)	8"	(203.2)	4.50	(114.3)	84	(38.1)	4"	(100)
B3154-7X	B3155-7X	18 Ga.	(1.2)	8"	(203.2)	5.00	(127.0)	93	(42.2)	5"	(125)
B3154-8X	B3155-8X	18 Ga.	(1.2)	8"	(203.2)	5.56	(141.2)	105	(47.6)	5"	(125)
B3154-9X	B3155-9X	18 Ga.	(1.2)	8"	(203.2)	6.64	(168.6)	126	(57.1)	6"	(150)
B3154-10Z	B3155-10Z	18 Ga.	(1.2)	12"	(304.8)	7.64	(194.0)	218	(98.9)	8"	(200)
B3154-11Z	B3155-11Z	18 Ga.	(1.2)	12"	(304.8)	8.64	(219.4)	247	(112.0)	8"	(200)
B3154-12Z	B3155-12Z	18 Ga.	(1.2)	12"	(304.8)	9.64	(244.8)	273	(123.8)	10"	(250)
B3154-13Z	B3155-13Z	18 Ga.	(1.2)	12"	(304.8)	10.76	(273.3)	304	(137.9)	10"	(250)
B3154-14Z	B3155-14Z	18 Ga.	(1.2)	12"	(304.8)	11.76	(298.7)	332	(150.6)	12"	(300)
B3154-15Z	B3155-15Z	18 Ga.	(1.2)	12"	(304.8)	12.76	(324.1)	360	(163.3)	12"	(300)
B3154-16Z	B3155-16Z	18 Ga.	(1.2)	12"	(304.8)	14.00	(355.6)	395	(179.2)	14"	(350)
B3154-17Z	--	18 Ga.	(1.2)	12"	(304.8)	15.00	(381.0)	423	(191.9)	16"	(400)
B3154-18Z	--	18 Ga.	(1.2)	12"	(304.8)	16.00	(406.4)	451	(204.6)	16"	(400)
B3154-19Z	--	18 Ga.	(1.2)	12"	(304.8)	17.00	(431.8)	481	(218.2)	18"	(450)
B3154-20Z	--	18 Ga.	(1.2)	12"	(304.8)	18.00	(457.2)	509	(230.9)	18"	(450)
B3154-21Z	--	18 Ga.	(1.2)	12"	(304.8)	19.00	(482.6)	537	(243.6)	20"	(500)
B3154-22Z	--	18 Ga.	(1.2)	12"	(304.8)	20.00	(508.0)	565	(256.3)	20"	(500)
B3154-23Z	--	18 Ga.	(1.2)	12"	(304.8)	21.00	(533.4)	593	(269.0)	24"	(600)

Pipe Supports, Guides, Shields & Saddles

Material: Steel

Standard Finish: Pre-Galvanized

Service: Designed to protect pipe insulation when used with hangers.

Ordering: Specify part number and finish.

Note: See Selection Tables on page 124 for proper sizing.

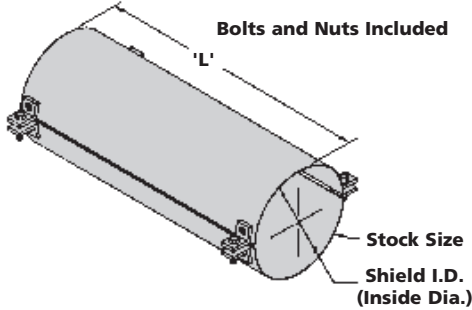
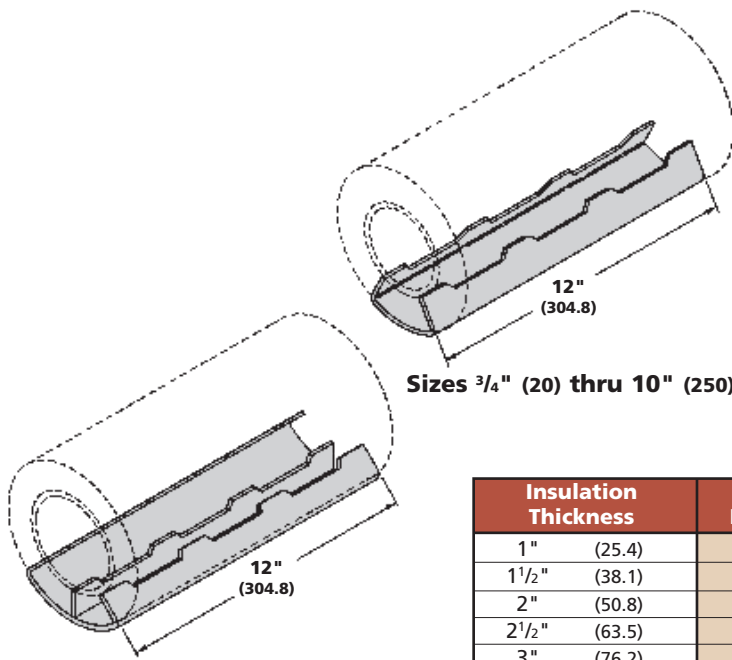


Figure B3152 360° Insulation Protection Shields

Part No.	Stock Size		'L'		Shield 'I.D.'		Wt./C		Required Pipe Hanger Size	
	Ga.	(mm)	"	(mm)	"	(mm)	Lbs.	kN	"	(mm)
B3152-1X	18 Ga.	(1.2)	12"	(304.8)	1.90	(48.2)	121	(54.9)	1 1/2"	(40)
B3152-2X	18 Ga.	(1.2)	12"	(304.8)	2.38	(60.4)	146	(66.2)	2"	(50)
B3152-3X	18 Ga.	(1.2)	12"	(304.8)	2.88	(73.1)	171	(77.5)	2 1/2"	(65)
B3152-4X	18 Ga.	(1.2)	12"	(304.8)	3.50	(88.9)	205	(93.0)	3"	(80)
B3152-5X	18 Ga.	(1.2)	12"	(304.8)	4.00	(101.6)	232	(105.2)	3 1/2"	(90)
B3152-6X	18 Ga.	(1.2)	12"	(304.8)	4.50	(114.3)	258	(117.0)	4"	(100)
B3152-7X	18 Ga.	(1.2)	12"	(304.8)	5.00	(127.0)	280	(127.0)	5"	(125)
B3152-8X	18 Ga.	(1.2)	12"	(304.8)	5.56	(141.2)	319	(144.7)	5"	(125)
B3152-9X	16 Ga.	(1.5)	12"	(304.8)	6.64	(168.6)	456	(206.8)	6"	(150)
B3152-10X	16 Ga.	(1.5)	12"	(304.8)	7.64	(194.0)	523	(237.2)	8"	(200)
B3152-11X	16 Ga.	(1.5)	12"	(304.8)	8.64	(219.4)	591	(268.1)	8"	(200)
B3152-10Y	16 Ga.	(1.5)	18"	(457.2)	7.64	(194.0)	764	(346.5)	8"	(200)
B3152-11Y	16 Ga.	(1.5)	18"	(457.2)	8.64	(219.4)	858	(389.2)	8"	(200)
B3152-12Y	16 Ga.	(1.5)	18"	(457.2)	9.64	(244.8)	960	(435.4)	10"	(250)
B3152-13Y	16 Ga.	(1.5)	18"	(457.2)	10.76	(273.3)	1081	(490.3)	10"	(250)
B3152-14Z	14 Ga.	(1.9)	24"	(609.6)	11.76	(298.7)	1922	(871.8)	12"	(300)
B3152-15Z	14 Ga.	(1.9)	24"	(609.6)	12.76	(324.1)	2084	(945.3)	12"	(300)
B3152-16Z	14 Ga.	(1.9)	24"	(609.6)	14.00	(355.6)	2286	(1036.9)	14"	(350)
B3152-17Z	14 Ga.	(1.9)	24"	(609.6)	15.00	(381.0)	2449	(1110.8)	16"	(400)
B3152-18Z	14 Ga.	(1.9)	24"	(609.6)	16.00	(406.4)	2612	(1184.8)	16"	(400)
B3152-19Z	14 Ga.	(1.9)	24"	(609.6)	17.00	(431.8)	2781	(1261.4)	18"	(450)
B3152-20Z	12 Ga.	(2.6)	24"	(609.6)	18.00	(457.2)	4108	(1863.4)	18"	(450)
B3152-21Z	12 Ga.	(2.6)	24"	(609.6)	19.00	(482.6)	4354	(1975.0)	20"	(500)
B3152-22Z	12 Ga.	(2.6)	24"	(609.6)	20.00	(508.0)	4564	(2070.2)	20"	(500)
B3152-23Z	12 Ga.	(2.6)	24"	(609.6)	21.00	(533.4)	4791	(2173.2)	24"	(600)
B3152-24Z	12 Ga.	(2.6)	24"	(609.6)	22.00	(558.8)	5019	(2276.6)	24"	(600)
B3152-25Z	12 Ga.	(2.6)	24"	(609.6)	23.00	(584.2)	5247	(2380.0)	24"	(600)
B3152-26Z	12 Ga.	(2.6)	24"	(609.6)	24.00	(609.6)	5484	(2487.5)	24"	(600)
B3152-27Z	12 Ga.	(2.6)	24"	(609.6)	25.00	(635.0)	5721	(2595.0)	30"	(750)
B3152-28Z	12 Ga.	(2.6)	24"	(609.6)	26.00	(660.4)	5940	(2694.4)	30"	(750)
B3152-29Z	12 Ga.	(2.6)	24"	(609.6)	27.00	(685.8)	6168	(2797.8)	30"	(750)
B3152-30Z	12 Ga.	(2.6)	24"	(609.6)	28.00	(711.2)	6396	(2901.2)	30"	(750)
B3152-31Z	12 Ga.	(2.6)	24"	(609.6)	29.00	(736.6)	6623	(3004.2)	30"	(750)
B3152-32Z	12 Ga.	(2.6)	24"	(609.6)	30.00	(762.0)	6851	(3107.6)	30"	(750)
B3152-33Z	12 Ga.	(2.6)	24"	(609.6)	32.00	(812.8)	7307	(3314.4)	36"	(900)

Supports, Guides, Shields & Saddles

Pipe Supports, Guides, Shields & Saddles



Sizes 3/4" (20) thru 10" (250)

Sizes 12" (300) and larger

Insulation Thickness	Part Number
1" (25.4)	B3160
1 1/2" (38.1)	B3161
2" (50.8)	B3162
2 1/2" (63.5)	B3163
3" (76.2)	B3164
4" (101.6)	B3165

Material: Carbon Steel; Stainless Steel available

Standard Finish: Plain or Electro-Plated

Service: Designed to protect pipe insulation on high temperature pipe lines. Saddles are 12" (304.8) long. Center rib is furnished on all saddle sizes 12" (300) and above.

Ordering: Specify part number and finish. Select Part Number by insulation thickness and add nominal pipe size (Ex: B3161-1 1/4 PLN).

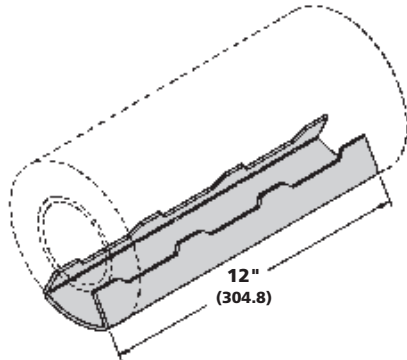
Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 40A and Type 40B and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 39A and Type 39B.

Pipe Covering Protection Saddle

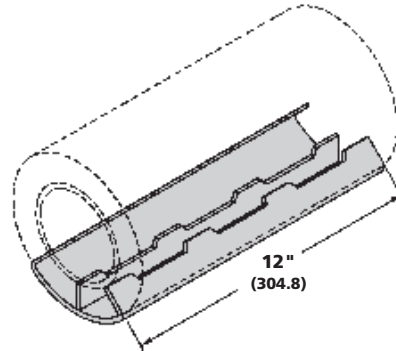
Part No.	Nominal Pipe Size		Size For Roller Part Number			Design Load		Wt./C	
			B3114 B3120 B3122 B3122A	B3117SL B3118SL B3119SL B3124 B3126	B3110	Lbs.	kN	Lbs.	kg
B3160-3/4	3/4"	(20)	2	2-3 1/2	2 1/2	1200	(5.34)	122	(55.3)
B3161-3/4			3	2-3 1/2	3 1/2	1200	(5.34)	228	(103.4)
B3162-3/4			4	2-3 1/2	5	1200	(5.34)	297	(134.7)
B3160-1	1"	(25)	2 1/2	2-3 1/2	3	1200	(5.34)	156	(70.7)
B3161-1			3	2-3 1/2	4	1200	(5.34)	228	(103.4)
B3162-1			4	2-3 1/2	5	1200	(5.34)	297	(134.7)
B3160-1 1/4	1 1/4"	(32)	2 1/2	2-3 1/2	3	1200	(5.34)	156	(70.7)
B3161-1 1/4			3 1/2	2-3 1/2	5	1200	(5.34)	228	(103.4)
B3162-1 1/4			4	2-3 1/2	5	1200	(5.34)	297	(134.7)
B3163-1 1/4			5	4-6	6	1200	(5.34)	342	(155.1)
B3160-1 1/2	1 1/2"	(40)	3	2-3 1/2	3 1/2	1200	(5.34)	172	(78.0)
B3161-1 1/2			3 1/2	2-3 1/2	5	1200	(5.34)	239	(108.4)
B3162-1 1/2			5	4-6	6	1800	(8.00)	311	(141.0)
B3163-1 1/2			6	4-6	8	1800	(8.00)	417	(189.1)
B3160-2	2"	(50)	3 1/2	2-3 1/2	4	1200	(5.34)	172	(78.0)
B3161-2			4	2-3 1/2	5	1200	(5.34)	239	(108.4)
B3162-2			5	4-6	6	1800	(8.00)	311	(141.0)
B3163-2			6	4-6	8	1800	(8.00)	417	(189.1)
B3164-2			8	4-6	8	1800	(8.00)	441	(200.0)
B3160-2 1/2	2 1/2"	(65)	3 1/2	2-3 1/2	5	1200	(5.34)	210	(95.2)
B3161-2 1/2			5	4-6	6	1200	(5.34)	268	121.5)
B3162-2 1/2			6	4-6	8	1800	(8.00)	358	(162.4)
B3163-2 1/2			8	4-6	8	1800	(8.00)	417	(189.1)
B3164-2 1/2			8	4-6	10	1800	(8.00)	459	(208.2)

Supports, Guides, Shields & Saddles

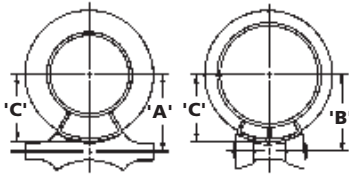
Pipe Supports, Guides, Shields & Saddles



Sizes 3/4" (20) thru 10" (250)



Sizes 12" (300) and larger



Insulation Thickness		Part Number
1"	(25.4)	B3160
1 1/2"	(38.1)	B3161
2"	(50.8)	B3162
2 1/2"	(63.5)	B3163
3"	(76.2)	B3164
4"	(101.6)	B3165

Pipe Covering Protection Saddle (Continued)

Part No.	Nominal Pipe Size		Centerline of Pipe to Centerline of Roll					Centerline of Pipe to Outside of Saddle 'C'	Thickness of Covering (Per ASTM C 585)			
			'A'		'B'		'A'					
			B3114 B3120 B3122 B3122A		B3117SL B3118SL B3119SL B3124 B3126		B3110					
B3160-3/4	3/4"	(20)	2"	(50.8)	2 1/4"	(57.1)	2"	(50.8)	1 9/16"	(39.7)	7/8"	(22.2)
B3161-3/4			2 7/16"	(61.9)	2 7/8"	(73.0)	2 3/4"	(69.8)	2 3/16"	(55.6)	1 1/2"	(38.1)
B3162-3/4			3 5/16"	(84.1)	3 7/16"	(87.3)	3 3/8"	(85.7)	2 3/4"	(69.8)	1 15/16"	(49.2)
B3160-1	1"	(25)	2 5/16"	(58.7)	2 1/2"	(63.5)	2 5/16"	(58.7)	1 13/16"	(46.0)	1 1/16"	(27.0)
B3161-1			2 7/8"	(73.0)	3"	(76.2)	2 7/8"	(73.0)	2 5/16"	(58.7)	1 9/16"	(39.7)
B3162-1			3 7/16"	(87.3)	3 5/8"	(92.1)	3 1/2"	(88.9)	2 7/8"	(73.0)	2 1/8"	(54.0)
B3160-1 1/4	1 1/4"	(32)	2 9/16"	(65.1)	2 1 1/16"	(68.3)	2 1/2"	(63.5)	2"	(50.8)	1 5/16"	(23.8)
B3161-1 1/4			3 1/8"	(79.4)	3 1/4"	(82.5)	3 1/8"	(79.4)	2 9/16"	(65.1)	1 7/16"	(36.5)
B3162-1 1/4			3 11/16"	(93.7)	3 13/16"	(96.8)	3 7/16"	(87.3)	3 1/16"	(77.8)	2 1/8"	(54.0)
B3163-1 1/4			4 1/16"	(103.2)	4 1/8"	(104.8)	4 1/16"	(103.2)	3 7/16"	(87.3)	2 7/16"	(61.9)
B3160-1 1/2	1 1/2"	(40)	2 11/16"	(68.3)	2 7/8"	(73.0)	2 7/16"	(61.9)	2 1/8"	(54.0)	1 1/32"	(26.2)
B3161-1 1/2			3 3/16"	(81.0)	3 5/16"	(84.1)	3 3/16"	(81.0)	2 9/16"	(65.1)	1 17/32"	(38.9)
B3162-1 1/2			3 9/16"	(90.5)	3 13/16"	(96.8)	3 13/16"	(96.8)	3 1/8"	(79.4)	2"	(50.8)
B3163-1 1/2			4 7/16"	(112.7)	4 3/8"	(111.1)	4 1/2"	(114.3)	3 5/8"	(92.1)	2 27/32"	(72.2)
B3160-2	2"	(50)	2 15/16"	(74.6)	3 1/8"	(79.4)	2 15/16"	(74.6)	2 3/8"	(60.3)	1 1/16"	(27.0)
B3161-2			3 7/16"	(87.3)	3 5/8"	(92.1)	3 1/2"	(88.9)	2 7/8"	(73.0)	1 19/32"	(40.5)
B3162-2			4 1/8"	(104.8)	4 1/8"	(104.8)	4 1/16"	(103.2)	3 7/16"	(87.3)	2 1/8"	(54.0)
B3163-2			4 11/16"	(119.1)	4 1 1/16"	(119.1)	4 3/4"	(120.6)	3 15/16"	(100.0)	2 5/8"	(66.7)
B3164-2			5 1/4"	(133.3)	5 3/16"	(131.8)	5 1/4"	(133.3)	4 1/2"	(114.3)	3 1/8"	(79.4)
B3160-2 1/2	2 1/2"	(65)	3 1/4"	(82.5)	3 3/8"	(85.7)	3 1/4"	(82.5)	2 5/8"	(66.7)	1 1/16"	(27.0)
B3161-2 1/2			3 7/8"	(98.4)	3 15/16"	(100.0)	3 7/8"	(98.4)	3 1/4"	(82.5)	1 7/8"	(47.6)
B3162-2 1/2			4 9/16"	(115.9)	4 9/16"	(115.9)	4 5/8"	(117.5)	3 7/8"	(98.4)	2 5/16"	(58.7)
B3163-2 1/2			5 1/8"	(130.2)	5"	(127.0)	5 1/8"	(130.2)	4 1/4"	(107.9)	2 1/8"	(73.0)
B3164-2 1/2			5 7/16"	(138.1)	5 5/16"	(134.9)	5 1/2"	(139.7)	4 9/16"	(115.9)	3 1/16"	(77.8)

Supports, Guides, Shields & Saddles

Pipe Supports, Guides, Shields & Saddles

Insulation Thickness	Part Number
1" (25.4)	B3160
1½" (38.1)	B3161
2" (50.8)	B3162

Insulation Thickness	Part Number
2½" (63.5)	B3163
3" (76.2)	B3164
4" (101.6)	B3165

Pipe Covering Protection Saddle (Continued)

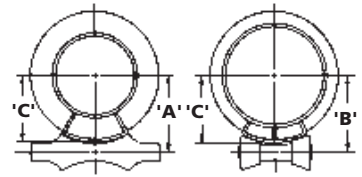
Part No.	Nominal Pipe Size		Size For Roller Part Number			Design Load		Wt./C	
			B3114 B3120 B3122 B3122A	B3117SL B3118SL B3119SL B3124 B3126	B3110	Lbs.	kN	Lbs.	kg
B3160-3	3"	(80)	4	2-3½	5	1800	(8.00)	210	(95.2)
B3161-3			5	4-6	6	1800	(8.00)	268	(166.9)
B3162-3			6	4-6	8	1800	(8.00)	358	(162.4)
B3163-3			8	4-6	8	1800	(8.00)	417	(189.1)
B3164-3			8	8-10	10	1800	(8.00)	459	(208.2)
B3160-3½	3½"	(90)	5	4-6	6	1200	(5.34)	226	(102.5)
B3161-3½			6	4-6	8	1800	(8.00)	289	(131.1)
B3162-3½			8	4-6	8	1800	(8.00)	364	(165.1)
B3163-3½			8	8-10	10	1800	(8.00)	422	(191.4)
B3164-3½			10	8-10	10	1800	(8.00)	488	(221.3)
B3160-4	4"	(100)	5	4-6	6	1800	(8.00)	226	(102.5)
B3161-4			6	4-6	8	1800	(8.00)	289	(131.1)
B3162-4			8	8-10	8	1800	(8.00)	364	(165.1)
B3163-4			8	8-10	10	1800	(8.00)	422	(191.4)
B3164-4			10	8-10	10	1800	(8.00)	488	(221.3)
B3165-4			10	8-10	12	1800	(8.00)	616	(279.4)
B3160-5	5"	(125)	6	4-6	8	1800	(8.00)	250	(113.4)
B3161-5			8	4-6	8	1800	(8.00)	289	(131.1)
B3162-5			8	8-10	10	1800	(8.00)	364	(165.1)
B3163-5			10	8-10	10	1800	(8.00)	422	(191.4)
B3164-5			10	8-10	12	1800	(8.00)	488	(221.3)
B3165-5			12	8-10	14	1800	(8.00)	643	(291.6)
B3160-6	6"	(150)	8	8-10	8	1800	(8.00)	387	(175.5)
B3161-6			8	8-10	10	1800	(8.00)	498	(225.9)
B3162-6			10	8-10	10	1800	(8.00)	594	(269.4)
B3163-6			10	8-10	12	1800	(8.00)	694	(314.8)
B3164-6			12	8-10	12	1800	(8.00)	794	(360.1)
B3165-6			14	12-14	16	1800	(8.00)	1009	(457.7)
B3160-8	8"	(200)	10	8-10	12	1800	(8.00)	478	(216.8)
B3161-8			10	8-10	12	1800	(8.00)	554	(251.3)
B3162-8			10	8-10	12	1800	(8.00)	674	(305.7)
B3163-8			12	8-10	14	1800	(8.00)	782	(354.7)
B3164-8			14	12-14	16	1800	(8.00)	893	(405.0)
B3165-8			16	12-14	18	1800	(8.00)	1089	(494.0)
B3160-10	10"	(250)	12	12-14	14	1800	(8.00)	546	(247.6)
B3161-10			12	12-14	14	1800	(8.00)	642	(291.2)
B3162-10			14	16-20	16	1800	(8.00)	750	(340.2)
B3163-10			14	16-20	16	1800	(8.00)	850	(385.5)
B3164-10			16	16-20	18	1800	(8.00)	957	(434.1)
B3165-10			18	16-20	20	1800	(8.00)	1137	(515.7)

Supports, Guides, Shields & Saddles

Pipe Supports, Guides, Shields & Saddles

Insulation Thickness	Part Number
1" (25.4)	B3160
1½" (38.1)	B3161
2" (50.8)	B3162

Insulation Thickness	Part Number
2½" (63.5)	B3163
3" (76.2)	B3164
4" (101.6)	B3165



Pipe Covering Protection Saddle (Continued)

Part No.	Nominal Pipe Size	Centerline of Pipe to Centerline of Roll			Centerline of Pipe to Outside of Saddle 'C'	Thickness of Covering (Per ASTM C 585)
		'A'	'B'	'A'		
B3160-3	3" (80)	B3114 B3120 B3122 B3122A	B3117SL B3118SL B3119SL B3124 B3126	B3110		
B3161-3						
B3162-3						
B3163-3						
B3164-3						
B3160-3½	3½" (90)					
B3161-3½						
B3162-3½						
B3163-3½						
B3164-3½						
B3160-4	4" (100)					
B3161-4						
B3162-4						
B3163-4						
B3164-4						
B3165-4						
B3160-5	5" (125)					
B3161-5						
B3162-5						
B3163-5						
B3164-5						
B3165-5						
B3160-6	6" (150)					
B3161-6						
B3162-6						
B3163-6						
B3164-6						
B3165-6						
B3160-8	8" (200)					
B3161-8						
B3162-8						
B3163-8						
B3164-8						
B3165-8						
B3160-10	10" (250)					
B3161-10						
B3162-10						
B3163-10						
B3164-10						
B3165-10						

Supports, Guides, Shields & Saddles

Pipe Supports, Guides, Shields & Saddles

Insulation Thickness		Part Number
1"	(25.4)	B3160
1½"	(38.1)	B3161
2"	(50.8)	B3162

Insulation Thickness		Part Number
2½"	(63.5)	B3163
3"	(76.2)	B3164
4"	(101.6)	B3165

Pipe Covering Protection Saddle (Continued)

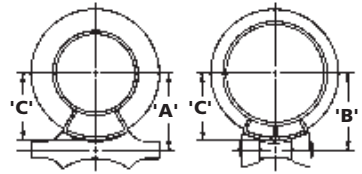
Part No.	Nominal Pipe Size		Size For Roller Part Number			Design Load		Wt./C	
			B3114 B3120 B3122 B3122A	B3117SL B3118SL B3119SL B3124 B3126	B3110	Lbs.	kN	Lbs.	kg
B3160-12	12"	(300)	14	12-14	16	5000	(22.24)	688	(312.1)
B3161-12			14	12-14	16	5000	(22.24)	836	(379.2)
B3162-12			16	16-20	18	5000	(22.24)	963	(436.8)
B3163-12			16	16-20	18	5000	(22.24)	1091	(494.9)
B3164-12			18	16-20	20	5000	(22.24)	1218	(552.5)
B3165-12			20	16-20	24	5000	(22.24)	1462	(663.1)
B3161-14	14"	(350)	16	16-20	18	5000	(22.24)	828	(375.6)
B3162-14			16	16-20	18	5000	(22.24)	963	(436.8)
B3163-14			18	16-20	20	5000	(22.24)	1099	(498.5)
B3164-14			18	16-20	20	5000	(22.24)	1230	(557.9)
B3165-14			20	24	24	5000	(22.24)	1486	(674.0)
B3161-16	16"	(400)	18	16-20	20	5000	(22.24)	907	(411.4)
B3162-16			18	16-20	20	5000	(22.24)	1039	(471.3)
B3163-16			20	16-20	24	7200	(32.02)	1163	(527.5)
B3164-16			20	24	24	7200	(32.02)	1298	(588.8)
B3165-16			24	24	24	7200	(32.02)	1554	(704.9)
B3161-18	18"	(450)	20	16-20	24	5000	(22.24)	979	(444.1)
B3162-18			20	24	24	7200	(32.02)	1107	(502.1)
B3163-18			24	24	24	7200	(32.02)	1230	(557.9)
B3164-18			24	24	24	7200	(32.02)	1362	(617.8)
B3165-18			24	24	-	7200	(32.02)	1617	(733.5)
B3161-20	20"	(500)	24	24	24	7200	(32.02)	1043	(473.1)
B3162-20			24	24	24	7200	(32.02)	1171	(531.1)
B3163-20			24	24	-	7200	(32.02)	1294	(586.9)
B3164-20			24	24	-	7200	(32.02)	1430	(648.6)
B3165-20			30	30	-	7200	(32.02)	1689	(766.1)
B3161-24	24"	(600)	30	30	-	7200	(32.02)	1179	(534.8)
B3162-24			30	30	-	7200	(32.02)	1306	(592.4)
B3163-24			30	30	-	7200	(32.02)	1442	(654.1)
B3164-24			30	30	-	7200	(32.02)	1562	(708.5)
B3165-24			30	30	-	7200	(32.02)	1821	(826.0)
B3161-30	30"	(750)	-	36-42	-	7200	(32.02)	1370	(621.4)
B3162-30			-	36-42	-	7200	(32.02)	1502	(681.3)
B3163-30			-	36-42	-	7200	(32.02)	1640	(743.9)
B3164-30			-	36-42	-	7200	(32.02)	1761	(798.8)
B3165-30			-	36-42	-	7200	(32.02)	2008	(910.8)
B3161-36	36"	(900)	-	36-42	-	7200	(32.02)	1574	(713.9)
B3162-36			-	36-42	-	7200	(32.02)	1701	(771.6)
B3163-36			-	36-42	-	7200	(32.02)	1857	(842.3)
B3164-36			-	36-42	-	7200	(32.02)	1961	(889.5)
B3165-36			-	36-42	-	7200	(32.02)	2216	(1005.2)

Supports, Guides, Shields & Saddles

Pipe Supports, Guides, Shields & Saddles

Insulation Thickness	Part Number
1" (25.4)	B3160
1½" (38.1)	B3161
2" (50.8)	B3162

Insulation Thickness	Part Number
2½" (63.5)	B3163
3" (76.2)	B3164
4" (101.6)	B3165

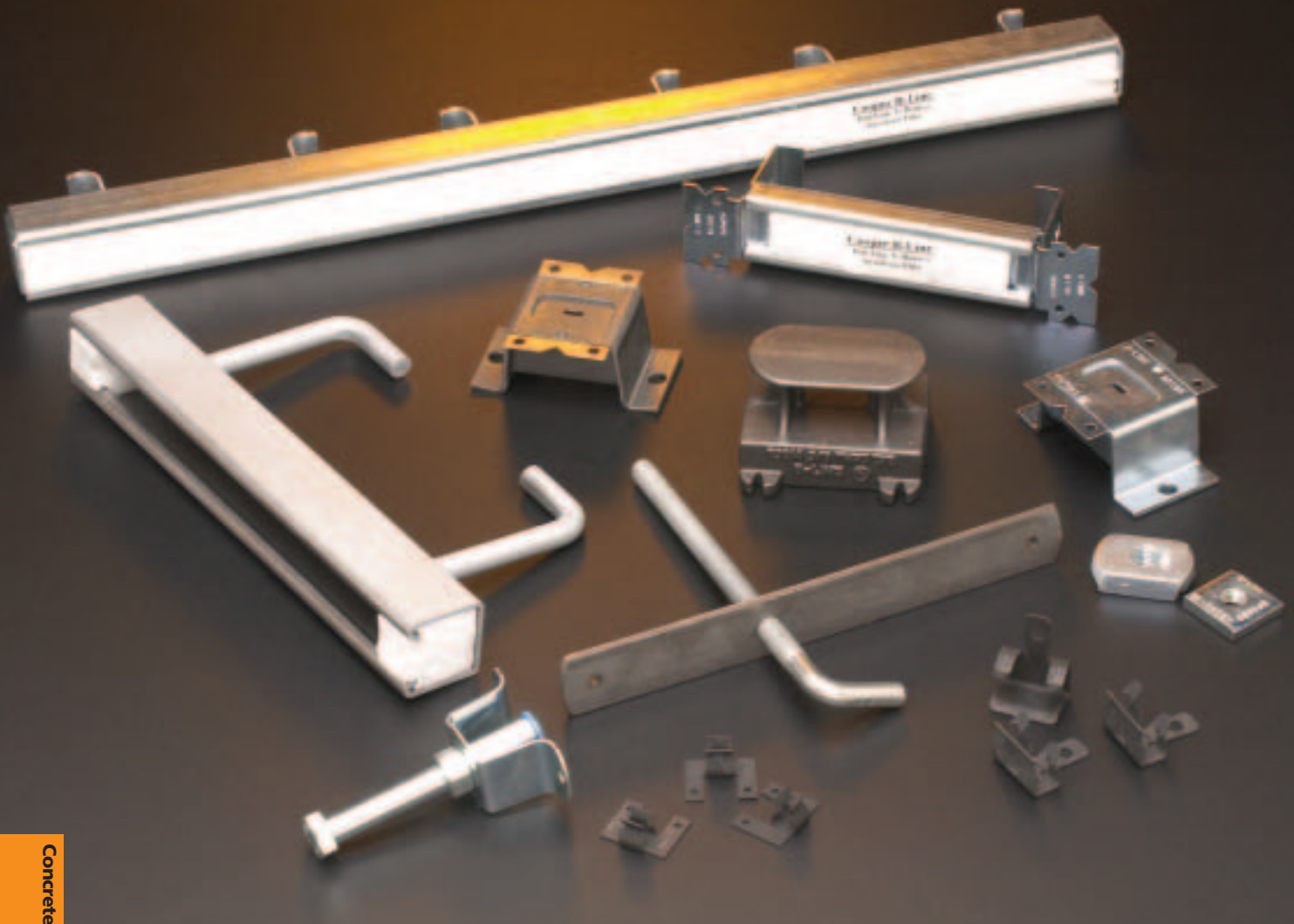


Pipe Covering Protection Saddle (Continued)

Part No.	Nominal Pipe Size	Centerline of Pipe to Centerline of Roll			Centerline of Pipe to Outside of Saddle 'C'	Thickness of Covering (Per ASTM C 585)
		'A'	'B'	'A'		
		B3114 B3120 B3122 B3122A	B3117SL B3118SL B3119SL B3124 B3126	B3110		
B3160-12	12" (300)	8 ¹⁵ / ₁₆ " (227.0)	8 ¹³ / ₁₆ " (223.8)	8 ⁷ / ₈ " (225.4)	7 ⁵ / ₈ " (193.7)	1 ¹ / ₁₆ " (27.0)
B3161-12		9 ⁹ / ₁₆ " (242.9)	9 ⁷ / ₁₆ " (239.7)	9 ¹ / ₂ " (241.3)	8 ³ / ₁₆ " (208.0)	1 ⁵ / ₈ " (41.3)
B3162-12		10 ¹ / ₁₆ " (255.6)	10 ¹ / ₈ " (257.2)	10 ¹ / ₈ " (257.2)	8 ³ / ₄ " (222.2)	2 ¹ / ₈ " (54.0)
B3163-12		10 ⁵ / ₈ " (269.9)	10 ⁵ / ₈ " (269.9)	10 ⁵ / ₈ " (269.9)	9 ¹ / ₄ " (234.9)	2 ⁵ / ₈ " (66.7)
B3164-12		11 ³ / ₁₆ " (284.2)	11 ³ / ₁₆ " (284.2)	11 ¹ / ₄ " (285.7)	9 ¹¹ / ₁₆ " (246.1)	3 ¹ / ₈ " (79.4)
B3165-12		12 ⁵ / ₁₆ " (312.7)	12 ⁵ / ₁₆ " (309.6)	12 ⁵ / ₁₆ " (312.7)	10 ³ / ₄ " (273.0)	4 ¹ / ₈ " (104.8)
B3161-14	14" (350)	10 ¹ / ₁₆ " (255.6)	9 ¹⁵ / ₁₆ " (252.4)	10 ¹ / ₁₆ " (255.6)	8 ¹¹ / ₁₆ " (220.7)	1 ¹ / ₂ " (38.1)
B3162-14		10 ⁵ / ₈ " (269.9)	10 ⁵ / ₈ " (269.9)	10 ⁵ / ₈ " (269.9)	9 ³ / ₁₆ " (233.4)	2" (50.8)
B3163-14		11 ³ / ₁₆ " (284.2)	11 ³ / ₁₆ " (284.2)	11 ¹ / ₄ " (285.7)	9 ³ / ₄ " (247.6)	2 ¹ / ₂ " (63.5)
B3164-14		11 ³ / ₄ " (298.4)	11 ¹¹ / ₁₆ " (296.9)	11 ³ / ₄ " (298.4)	10 ¹ / ₄ " (260.3)	3" (76.2)
B3165-14		12 ⁷ / ₈ " (327.0)	12 ⁷ / ₁₆ " (315.9)	12 ⁷ / ₈ " (327.0)	11 ³ / ₁₆ " (284.2)	4" (101.6)
B3161-16		16" (400)	11 ¹ / ₈ " (282.6)	11 ¹ / ₈ " (282.6)	11 ³ / ₁₆ " (284.2)	9 ¹¹ / ₁₆ " (246.1)
B3162-16	11 ¹³ / ₁₆ " (300.0)		11 ¹¹ / ₁₆ " (296.9)	11 ³ / ₄ " (298.4)	10 ¹ / ₄ " (260.3)	2" (50.8)
B3163-16	12 ⁵ / ₁₆ " (312.7)		12 ¹ / ₈ " (308.0)	12 ⁵ / ₁₆ " (312.7)	10 ¹¹ / ₁₆ " (271.5)	2 ¹ / ₂ " (63.5)
B3164-16	12 ⁷ / ₈ " (327.0)		12 ⁹ / ₁₆ " (319.1)	12 ⁷ / ₈ " (327.0)	11 ¹ / ₄ " (285.7)	3" (76.2)
B3165-16	13 ¹⁵ / ₁₆ " (354.0)		13 ⁹ / ₁₆ " (344.5)	13 ¹⁵ / ₁₆ " (354.0)	12 ¹ / ₄ " (311.1)	4" (101.6)
B3161-18	18" (450)		12 ¹ / ₄ " (311.1)	12 ¹ / ₈ " (308.0)	12 ¹ / ₄ " (311.1)	10 ¹¹ / ₁₆ " (271.5)
B3162-18		12 ⁷ / ₈ " (327.0)	12 ¹ / ₂ " (317.5)	12 ⁷ / ₈ " (327.0)	11 ¹ / ₄ " (285.7)	2" (50.8)
B3163-18		13 ³ / ₈ " (339.7)	13" (330.2)	13 ³ / ₈ " (339.7)	11 ¹¹ / ₁₆ " (296.9)	2 ¹ / ₂ " (63.5)
B3164-18		13 ¹⁵ / ₁₆ " (354.0)	13 ⁹ / ₁₆ " (344.5)	13 ¹⁵ / ₁₆ " (354.0)	12 ¹ / ₄ " (311.1)	3" (76.2)
B3165-18		15" (381.0)	14 ⁹ / ₁₆ " (369.9)	--	13 ¹ / ₄ " (336.5)	4" (101.6)
B3161-20		20" (500)	13 ³ / ₈ " (339.7)	13" (330.2)	13 ³ / ₈ " (339.7)	11 ¹¹ / ₁₆ " (296.9)
B3162-20	13 ¹⁵ / ₁₆ " (354.0)		13 ¹ / ₂ " (342.9)	13 ¹⁵ / ₁₆ " (354.0)	12 ³ / ₁₆ " (309.6)	2" (50.8)
B3163-20	14 ⁷ / ₁₆ " (366.7)		14" (355.6)	--	12 ¹¹ / ₁₆ " (322.3)	2 ¹ / ₂ " (63.5)
B3164-20	14 ¹⁵ / ₁₆ " (379.4)		14 ⁹ / ₁₆ " (369.9)	--	13 ³ / ₁₆ " (350.8)	3" (76.2)
B3165-20	16 ¹ / ₄ " (412.7)		15 ⁷ / ₈ " (403.2)	--	14 ¹ / ₄ " (361.9)	4" (101.6)
B3161-24	24" (600)		15 ¹¹ / ₁₆ " (398.5)	15 ⁵ / ₁₆ " (388.9)	--	13 ¹¹ / ₁₆ " (347.7)
B3162-24		16 ¹ / ₄ " (412.8)	15 ⁷ / ₈ " (403.2)	--	14 ³ / ₁₆ " (360.4)	2" (50.8)
B3163-24		16 ³ / ₄ " (425.4)	16 ⁵ / ₁₆ " (414.3)	--	14 ⁵ / ₈ " (377.8)	2 ¹ / ₂ " (63.5)
B3164-24		17 ³ / ₈ " (441.3)	16 ⁷ / ₈ " (428.6)	--	15 ¹ / ₄ " (387.3)	3" (76.2)
B3165-24		18 ⁷ / ₁₆ " (468.3)	17 ¹⁵ / ₁₆ " (455.6)	--	16 ¹ / ₄ " (412.7)	4" (101.6)
B3161-30		30" (750)	--	18 ⁷ / ₈ " (479.4)	--	16 ¹¹ / ₁₆ " (423.9)
B3162-30	--		19 ³ / ₈ " (492.1)	--	17 ³ / ₁₆ " (436.6)	2" (50.8)
B3163-30	--		19 ¹⁵ / ₁₆ " (506.4)	--	17 ¹¹ / ₁₆ " (449.3)	2 ¹ / ₂ " (63.5)
B3164-30	--		20 ¹ / ₂ " (520.7)	--	18 ³ / ₁₆ " (462.0)	3" (76.2)
B3165-30	--		21 ¹ / ₂ " (546.1)	--	19 ³ / ₁₆ " (487.4)	4" (101.6)
B3161-36	36" (900)		--	22 ¹ / ₈ " (562.0)	--	19 ¹¹ / ₁₆ " (500.1)
B3162-36		--	22 ⁵ / ₈ " (574.7)	--	20 ³ / ₁₆ " (512.8)	2" (50.8)
B3163-36		--	23 ³ / ₁₆ " (589.0)	--	20 ¹¹ / ₁₆ " (525.5)	2 ¹ / ₂ " (63.5)
B3164-36		--	23 ¹¹ / ₁₆ " (601.7)	--	21 ³ / ₁₆ " (538.2)	3" (76.2)
B3165-36		--	24 ¹¹ / ₁₆ " (627.1)	--	22 ³ / ₁₆ " (563.6)	4" (101.6)

Supports, Guides, Shields & Saddles

Concrete Inserts



Concrete Inserts

Concrete inserts offered in this section are designed to provide a pre-set support point in concrete ceilings, walls, and floors. A range of inserts with varying design loads are available.

Materials

Carbon Steel and Malleable Iron are used in the manufacture of concrete inserts. Stainless Steel and other materials are available.

Finishes

The standard finishes for mechanical supports are plain steel (oil coated) sometimes referred to as black and Electro-Plated Zinc (ASTM B 633 SC3). Hot-Dip Galvanized After Fabrication (ASTM A 123), Red Primer, Plastic Coating, Dura-Green® and other special coatings are available upon request.

Approvals (as noted)

Items in this section are Underwriters' Laboratories Listed, comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society MSS SP-69 & SP-58.

Concrete Inserts

Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for installation in metal deck forms for attachment of hanger rod.

Ordering: Specify part number and finish.

Note: Design load is based off of rod sizes. Before installation ensure that concrete is sufficient to carry the load.

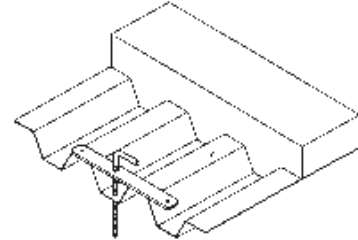
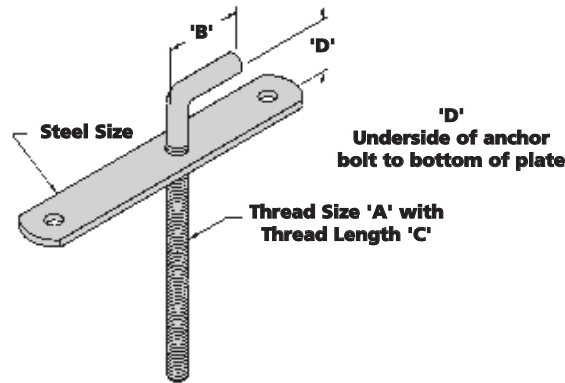


Figure B3019 Adjustable Metal Deck Ceiling Bolt

Part No.	Thread Size 'A'	'B'	Thread Length 'C'		'D'	Steel Size		Design Load		Wt./C			
						Lbs	kN	Lbs.	kg				
B3019-3/8	3/8"-16	2 1/2"	(63.5)	6 3/8"	(161.9)	1 1/4"	(31.7)	7 Ga. x 1 1/4" x 10"	(4.5 x 31.7 x 254.0)	730	(3.25)	80	(36.3)
B3019-1/2	1/2"-13	2 1/2"	(63.5)	6 1/2"	(165.1)	1 1/4"	(31.7)	7 Ga. x 1 1/4" x 10"	(4.5 x 31.7 x 254.0)	1350	(6.00)	99	(44.9)
B3019-5/8	5/8"-11	2 1/2"	(63.5)	6 3/4"	(171.4)	1 1/4"	(31.7)	7 Ga. x 1 1/4" x 10"	(4.5 x 31.7 x 254.0)	2160	(9.61)	129	(58.5)
B3019-3/4	3/4"-10	2 1/2"	(63.5)	6 7/16"	(157.2)	2 1/4"	(57.1)	1/4" x 3" x 10"	(6.3 x 76.2 x 254.0)	3230	(14.37)	238	(107.9)

For maximum load rating, install plate on top of deck ribs.

Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed to be embedded in concrete for attachment of 1/4"-20 to 1/2"-13 hanger rods.

Ordering: Specify part number, size and finish.

How to Install: Locate and nail to form. Pour concrete and strip forms when set. Remove color coded plug, install rod and lock with jam nut.

Note: Design load is based off of rod sizes. Before installation ensure that concrete is sufficient to carry the load.

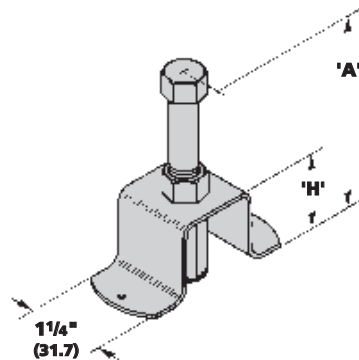


Figure B2501 Light Duty Spot Insert

Part No.	Rod Size	'A'		'H'		Design Load		Wt./C	
						Lbs.	kN	Lbs.	kg
B2501-1/4	1/4"-20	2 7/16"	(61.9)	7/8"	(22.2)	250	(1.11)	16	(7.2)
B2501-3/8	3/8"-16	3 1/16"	(77.8)	1 7/8"	(47.6)	730	(3.25)	22	(10.0)
B2501-1/2	1/2"-13	4 1/8"	(104.8)	1 7/8"	(47.6)	1350	(6.00)	26	(11.8)

Concrete Inserts

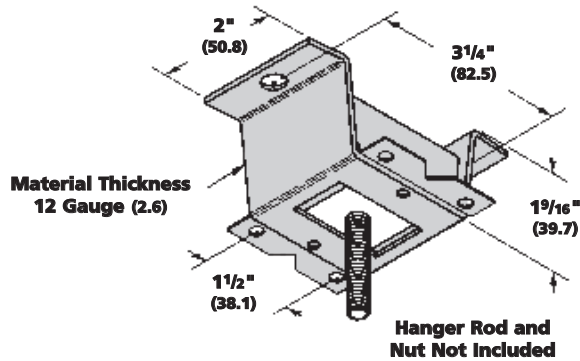


Figure B2500 Light Duty Spot Insert

Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed to be embedded in concrete to attach 1/4"-20 to 7/8"-9 hanger rods.

How to Install: Attach concrete insert to forms and install reinforcing rods as required. After forms are dismantled, the knockout can be removed from the insert. The N2500 Insert Nut can be installed and the rod fastened to the nut. The rod should touch the inside top of the insert but should not be forced further to avoid damaging the insert.

Ordering: Specify part number and finish. (Order N2500 nuts separately).

Weight: Wt./C 46 Lbs. (20.8 kg)

Approvals: Underwriters' Laboratories Listed for maximum pipe size 6" (150). Complies with Federal Specification WW-H-171E & A-A-1192A Type 19 and Manufacturers Standardization Society SP-69 & SP-58 Type 18.

Design Load: Loading based on a straight pull of 600 Lbs. (2.67 kN).

Note: Before installation ensure that concrete is sufficient to carry the load.

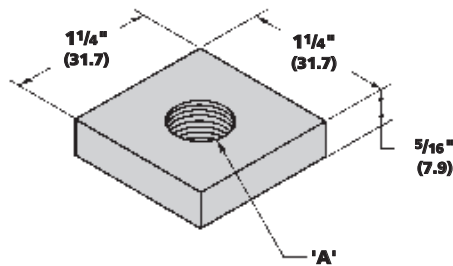


Figure N2500 Steel Insert Nut

Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for use with B2500 Spot Insert.

Ordering: Specify part number and finish.

Part No.	Tap Size 'A'	Wt./C	
		Lbs.	kg
N2500-1/4	1/4"-20	14	(6.3)
N2500-3/8	3/8"-16	13	(5.9)
N2500-1/2	1/2"-13	12	(5.4)
N2500-5/8	5/8"-11	11	(5.0)
N2500-3/4	3/4"-10	11	(5.0)
N2500-7/8	7/8"-9	10	(4.5)

Concrete Inserts

Material: Malleable Iron

Standard Finish: Plain or Electro-Plated

Service: Designed to be embedded in concrete to attach $\frac{3}{8}$ "-16 to $\frac{7}{8}$ "-9 hanger rods.

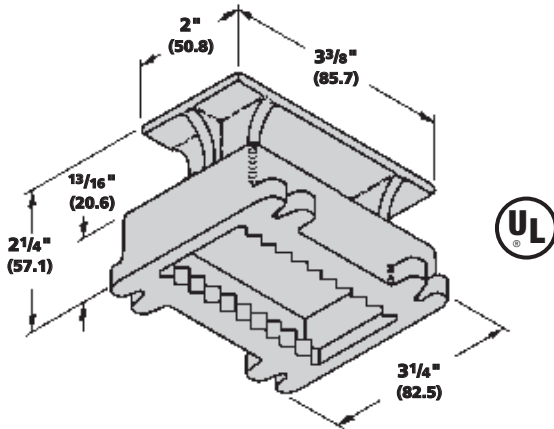
Note: Design Loads based on B3014N Malleable Iron Insert Nut below.

How to Install: Attach concrete insert to forms and install reinforcing rods as required. After forms are dismantled, the B3014N nut can be installed and the rod fastened to the nut. The rod should touch the inside top of the insert.

Ordering: Specify part number and finish. Order B3014N Insert Nut (sold separately) from below.

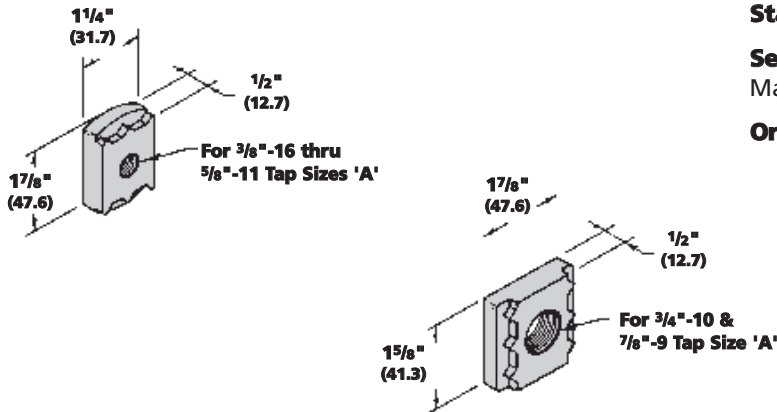
Weight: Wt./C 166 Lbs. (75.3 kg)

Approvals: Underwriters' Laboratories Listed when used with B3014N Insert Nut. Complies with Federal Specification WW-H-171E & A-A-1192A Type 18 and Manufacturers Standardization Society SP-69 & SP-58 Type 18.



Horizontal Adjustment:
 For $\frac{3}{8}$ "-16, $\frac{1}{2}$ "-13, $\frac{5}{8}$ "-11 rods - Adjustment is $1\frac{3}{4}$ " (44.4)
 For $\frac{3}{4}$ "-10, $\frac{7}{8}$ "-9 rods - Adjustment is $1\frac{3}{16}$ " (30.2)

Figure B3014 Malleable Iron Insert



Material: Malleable Iron

Standard Finish: Plain or Electro-Plated

Service: Designed for use with the B3014 Malleable Iron Insert.

Ordering: Specify part number and finish.

Figure B3014N Malleable Iron Insert Nut

Part No.	Tap Size 'A'	UL Max. Pipe Size	Design Load*		Wt./C	
			Lbs.	kN	Lbs.	kg
B3014N- $\frac{3}{8}$	$\frac{3}{8}$ "-16	4"	730	(3.25)	22	(10.0)
B3014N- $\frac{1}{2}$	$\frac{1}{2}$ "-13	8"	1350	(6.00)	22	(10.0)
B3014N- $\frac{5}{8}$	$\frac{5}{8}$ "-11	10"	1400	(6.23)	20	(9.1)
B3014N- $\frac{3}{4}$	$\frac{3}{4}$ "-10	10"	1400	(6.23)	29	(13.1)
B3014N- $\frac{7}{8}$	$\frac{7}{8}$ "-9	10"	1400	(6.23)	29	(13.1)

* When used with B3014 Malleable Iron Insert.

Concrete Inserts

Concrete Inserts

Material: Steel (Stainless steel available on B2505 only)

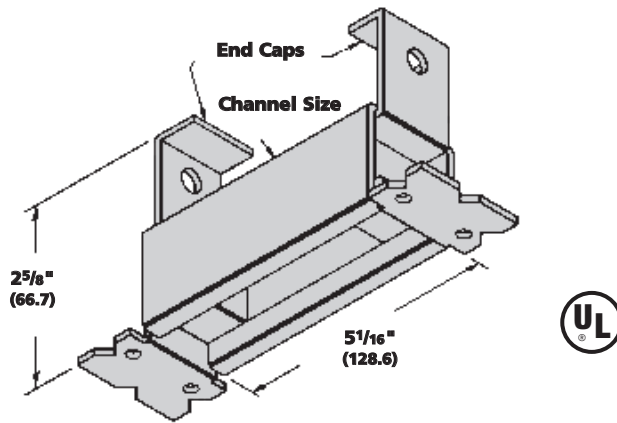
Standard Finish: Plain or Pre-Galvanized

Service: Designed to be embedded in concrete to attach 1/4"-20 to 7/8"-9 hanger rods.

Note: For appropriate channel nut selection, see page 14.

Ordering: Specify part number and finish. When supporting 10" (254) pipe, order B2505 Insert with 5/8"-11 Channel Nuts.

Approvals: Underwriters' Laboratories Listed. Complies with Manufacturers Standardization Society SP-69 & SP-58 Type 18.



Styrofoam Filled

Figure B2505 thru B2508 Spot Insert

Part No.	Channel Size	End Cap Part No.	Design Load		Maximum Pipe Size		Wt./C	
			Lbs.	kN			Lbs.	kg
B2505	B22	B3322	1200	(5.34)	10"	(250)	96	(43.5)
B2506	B32	B3332	1000	(4.45)	8"	(200)	88	(39.9)
B2507	B42	B3342	1000	(4.45)	8"	(200)	77	(34.9)
B2508	B52	B3352	1000	(4.45)	8"	(200)	69	(31.3)

Concrete Inserts

Material: Steel

Standard Finish: Electro-Plated

Weight: Wt./C 42 Lbs. (19.0 kg)

Service: Designed to be embedded in concrete where heavy loads are required in curtain wall applications. Styrofoam end caps prevent concrete seepage into the channel.

Ordering: Specify part number and finish. Channel nuts are sold separately, see page 14 for appropriate selection.

Design Load: 5000 Lbs. (22.2 kN).
Loading based on two N225 channel nuts spaced 3" (76.2 mm) on center and a minimum of 2" (50.8 mm) from the end of the insert.

Approvals: Complies with Manufacturers Standardization Society SP-69 & SP-58 Type 18.

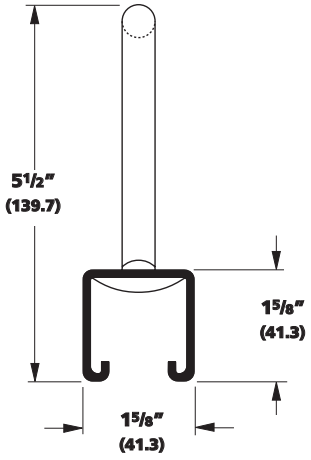
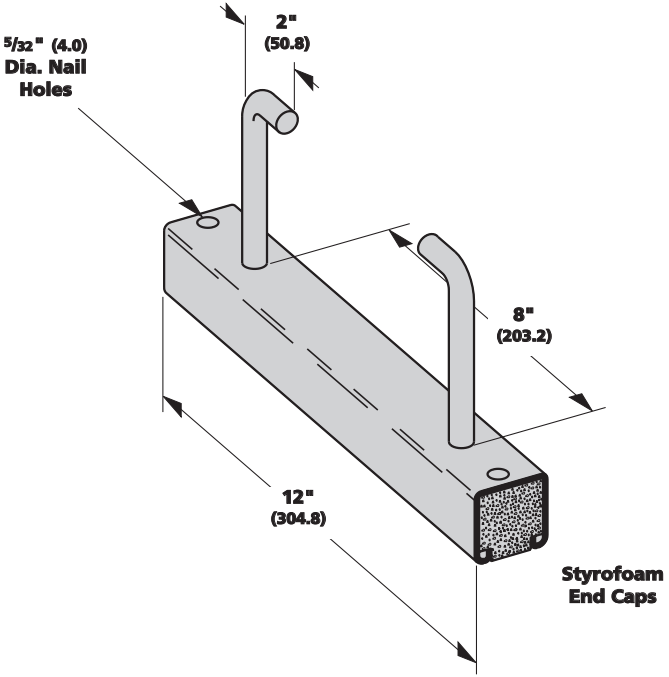
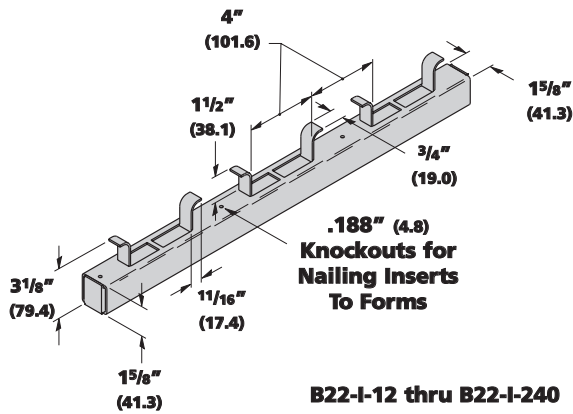
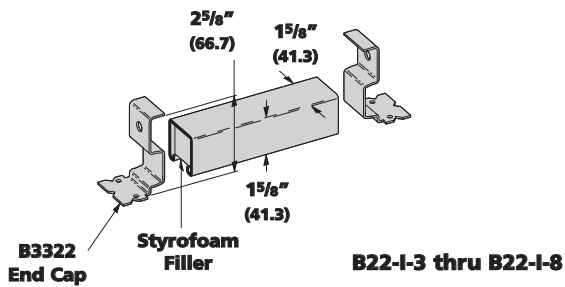


Figure B2503 Heavy Duty Spot Insert

Concrete Inserts

Concrete Inserts



Material: Steel

Standard Finish: Plain, Pre-Galvanized or Hot-Dip Galvanized

Service: Concrete insert should be secured to forms on 16" (406.4 mm) to 24" (609.6 mm) intervals.

Note: For appropriate channel nut selection, see page 14.

Ordering: Specify part number and finish. To order inserts without styrofoam and end caps add insert only to the part number.

Design Load: 2000 Lbs. (8.89 kN) per foot for B22-I-12 thru B22-I-240 in 3000 psi concrete. Loads concentrated within the last 2" (50.8 mm) of inserts 8" (203.2 mm) and longer should not exceed 1000 Lbs. (4.45 kN).

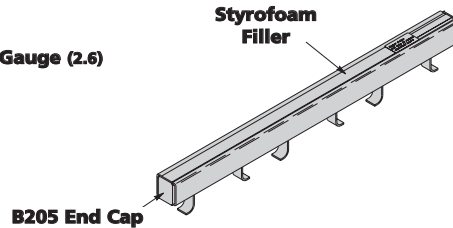


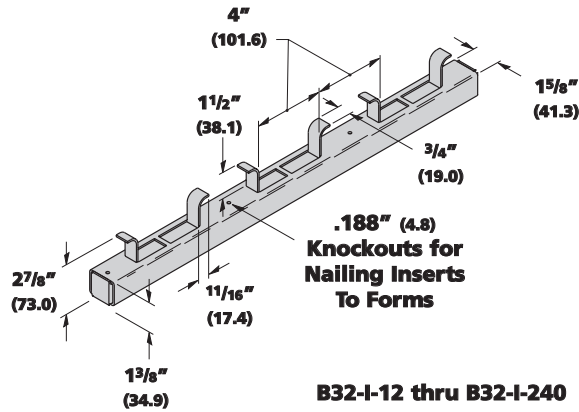
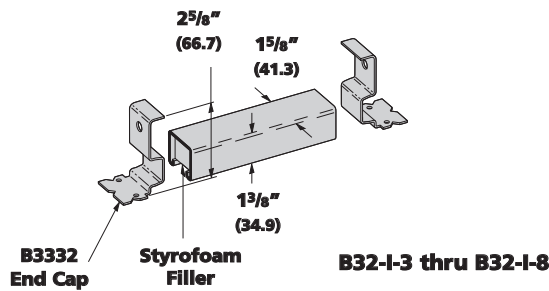
Figure B22I Continuous Concrete Insert

Part No.	Length		Wt./C		Design Load	
			Lbs.	kg	Lbs.	kN
B22-I-3	3"	(76)	72	(32.6)	500	(2.22)
B22-I-4	4"	(101)	88	(39.9)	800	(3.56)
B22-I-6	6"	(152)	120	(54.4)	1000	(4.45)
B22-I-8	8"	(203)	152	(68.9)	1200	(5.34)

Part No.	Length		Wt./C	
			Lbs.	kg
B22-I-12	12"	(305)	224	(101.6)
B22-I-16	16"	(406)	289	(131.1)
B22-I-20	20"	(508)	353	(160.1)
B22-I-24	24"	(609)	420	(190.5)
B22-I-32	32"	(813)	553	(250.8)
B22-I-36	36"	(914)	620	(281.2)
B22-I-40	40"	(1016)	686	(311.1)
B22-I-48	48"	(1219)	820	(371.9)
B22-I-60	60"	(1524)	1018	(461.7)
B22-I-72	72"	(1829)	1218	(552.5)
B22-I-84	84"	(2133)	1417	(642.7)
B22-I-96	96"	(2438)	1616	(733.0)
B22-I-108	108"	(2743)	1816	(823.7)
B22-I-120	120"	(3048)	2016	(914.4)
B22-I-144	144"	(3657)	2416	(1095.9)
B22-I-168	168"	(4267)	2816	(1277.3)
B22-I-192	192"	(4877)	3216	(1458.7)
B22-I-216	216"	(5486)	3616	(1640.2)
B22-I-240	240"	(6096)	4016	(1821.6)

Concrete Inserts

Concrete Inserts



Material: Steel

Standard Finish: Plain, Pre-Galvanized or Hot-Dip Galvanized

Service: Concrete insert should be secured to forms on 16" (406.4 mm) to 24" (609.6 mm) intervals.

Note: For appropriate channel nut selection, see page 14.

Ordering: Specify part number and finish. To order inserts without styrofoam and end caps add insert only to the part number.

Design Load: 2000 Lbs. (8.89 kN) per foot for B32-I-12 thru B32-I-240 in 3000 psi concrete. Loads concentrated within the last 2" (50.8 mm) of inserts 8" (203.2 mm) and longer should not exceed 1000 Lbs. (4.45 kN).

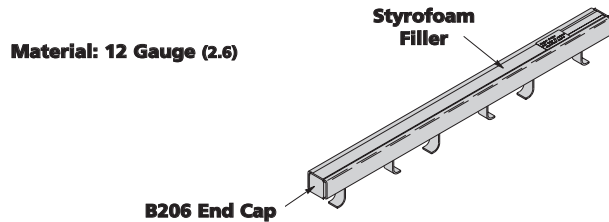
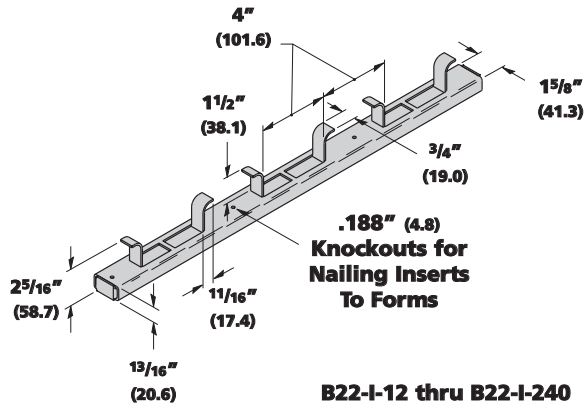
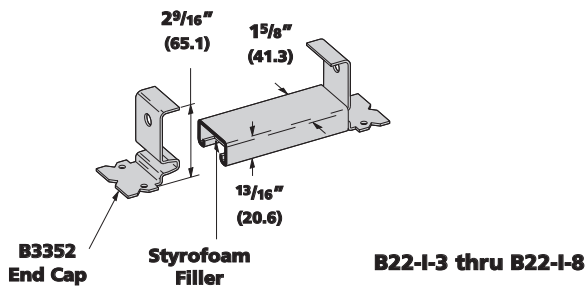


Figure B32I Continuous Concrete Insert

Part No.	Length		Wt./C		Design Load	
	Lbs.	kg	Lbs.	kg	Lbs.	kN
B32-I-3	3"	(76)	65	(29.5)	500	(2.22)
B32-I-4	4"	(101)	80	(36.3)	800	(3.56)
B32-I-6	6"	(152)	108	(49.0)	1000	(4.45)
B32-I-8	8"	(203)	137	(62.1)	1200	(5.34)

Part No.	Length		Wt./C	
	Lbs.	kg	Lbs.	kg
B32-I-12	12"	(305)	202	(91.6)
B32-I-16	16"	(406)	262	(118.8)
B32-I-20	20"	(508)	316	(143.3)
B32-I-24	24"	(609)	376	(170.5)
B32-I-32	32"	(813)	496	(225.0)
B32-I-36	36"	(914)	556	(252.2)
B32-I-40	40"	(1016)	616	(279.4)
B32-I-48	48"	(1219)	736	(333.8)
B32-I-60	60"	(1524)	915	(415.0)
B32-I-72	72"	(1829)	1095	(496.7)
B32-I-84	84"	(2133)	1274	(577.9)
B32-I-96	96"	(2438)	1453	(659.0)
B32-I-108	108"	(2743)	1633	(740.7)
B32-I-120	120"	(3048)	1813	(822.3)
B32-I-144	144"	(3657)	2173	(985.6)
B32-I-168	168"	(4267)	2533	(1148.9)
B32-I-192	192"	(4877)	2893	(1312.2)
B32-I-216	216"	(5486)	3253	(1475.5)
B32-I-240	240"	(6096)	3613	(1638.8)

Concrete Inserts



Material: Steel

Standard Finish: Plain, Pre-Galvanized or Hot-Dip Galvanized

Service: Concrete insert should be secured to forms on 16" (406.4 mm) to 24" (609.6 mm) intervals.

Note: For appropriate channel nut selection, see page 14.

Ordering: Specify part number and finish. To order inserts without styrofoam and end caps add insert only to the part number.

Design Load: 1500 Lbs. (6.67 kN) per foot for B52-I-12 thru B52-I-240 in 3000 psi concrete. Loads concentrated within the last 2" (50.8 mm) of inserts 8" (203.2 mm) and longer should not exceed 750 Lbs. (3.33 kN).

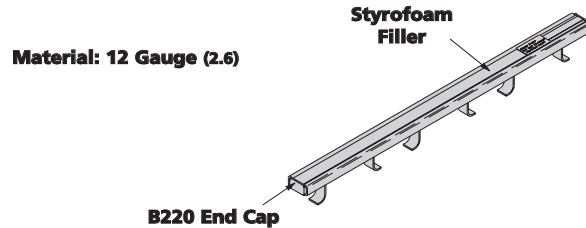


Figure B52I Continuous Concrete Insert

Part No.	Length		Wt./C		Design Load	
	Lbs.	kg	Lbs.	kg	Lbs.	kN
B52-I-3	3"	(76)	53	(24.0)	400	(1.78)
B52-I-4	4"	(101)	63	(28.6)	500	(2.22)
B52-I-6	6"	(152)	85	(38.5)	750	(3.33)
B52-I-8	8"	(203)	106	(48.1)	1000	(4.45)

Part No.	Length		Wt./C	
	Lbs.	kg	Lbs.	kg
B52-I-12	12"	(305)	157	(71.2)
B52-I-16	16"	(406)	202	(91.6)
B52-I-20	20"	(508)	237	(107.5)
B52-I-24	24"	(609)	282	(127.9)
B52-I-32	32"	(813)	373	(169.2)
B52-I-36	36"	(914)	419	(190.0)
B52-I-40	40"	(1016)	464	(210.4)
B52-I-48	48"	(1219)	556	(252.2)
B52-I-60	60"	(1524)	692	(313.9)
B52-I-72	72"	(1829)	829	(376.0)
B52-I-84	84"	(2133)	965	(437.7)
B52-I-96	96"	(2438)	1107	(502.1)
B52-I-108	108"	(2743)	1237	(561.1)
B52-I-120	120"	(3048)	1374	(623.2)
B52-I-144	144"	(3657)	1648	(747.5)
B52-I-168	168"	(4267)	1922	(871.8)
B52-I-192	192"	(4877)	2196	(996.1)
B52-I-216	216"	(5486)	2470	(1120.4)
B52-I-240	240"	(6096)	2744	(1244.6)

Concrete Inserts

Concrete Inserts

Material: Steel
Standard Finish: Zinc Phosphate
Service: Designed to attach pipe sleeves to wall or floor forms before concrete pours.
Ordering: Specify part number and finish.

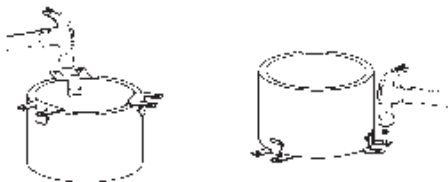
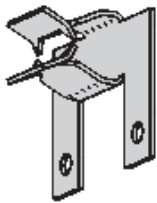


Figure BD40 Pipe Sleeve Fastener

Part No.	Sleeve Diameter	Wall Thickness	Wt./C	
			Lbs.	kg
BD40	All Diameters	5/16" (7.9) and under Schedule 40 Pipe	1.5	(.68)
	2" (50.8) to 6" (152.4)			

Material: Steel
Standard Finish: Zinc Phosphate
Service: Designed to attach pipe sleeves to wall or floor forms before concrete pours.
Ordering: Specify part number and finish.

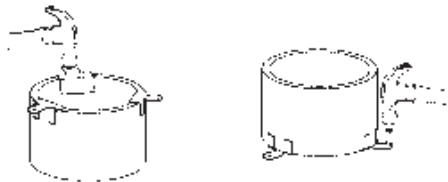
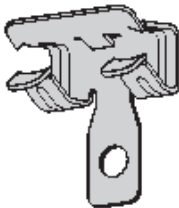
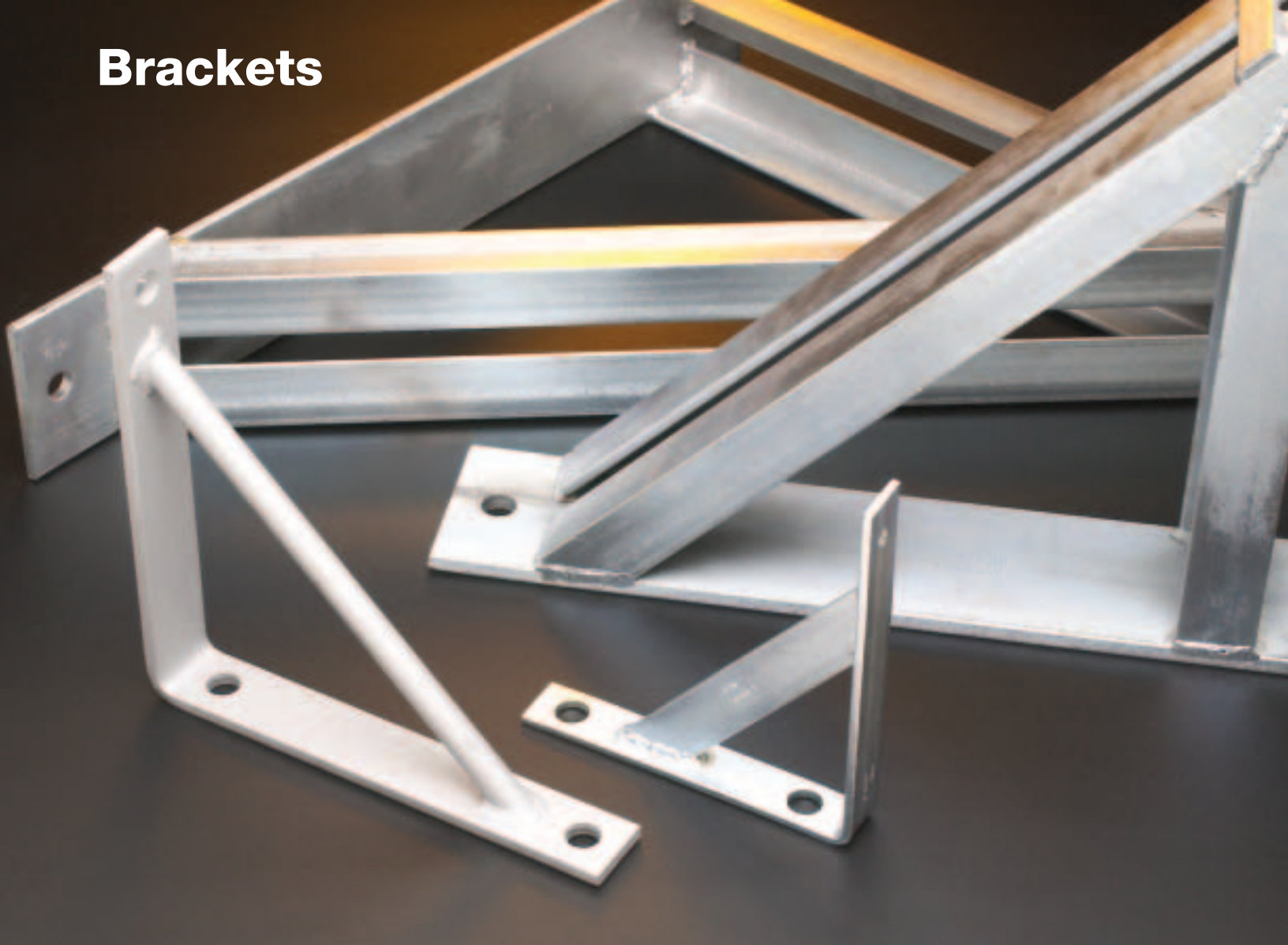


Figure BE-5-8 and BE-9-12 Pipe Sleeve Fastener

Part No.	Sleeve Diameter		Wall Thickness	Wt./C	
				Lbs.	kg
BE-5-8	6"	(152.4)	Schedule 80 Pipe Schedule 40 Pipe	3.5	(1.6)
	8" to 10"	(203.2 to 254.0)			
BE-9-12	9" to 14"	(228.6 to 355.6)	Schedule 80 Pipe	4.0	(1.8)

Concrete Inserts

Brackets



Brackets offered in this section are designed for support of pipe or hanger rod attachments. Brackets offer a convenient means of supporting pipe from a vertical surface.

Materials

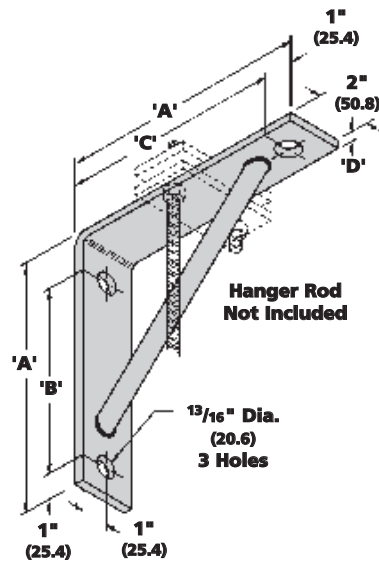
Carbon Steel material is mig-welded into bracket assemblies. Stainless Steel and other materials are available.

Finishes

The standard finishes for mechanical supports are plain steel (oil coated) sometimes referred to as black and Electro-Plated Zinc (ASTM B 633 SC3). Hot-Dip Galvanized After Fabrication (ASTM A 123), Red Primer, Plastic Coating, Dura-Green® and other special coatings are available upon request.

Approvals (as noted)

Items in this section comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society MSS SP-69 & SP-58.



Material: Steel

Standard Finish: Plain or Electro-Plated

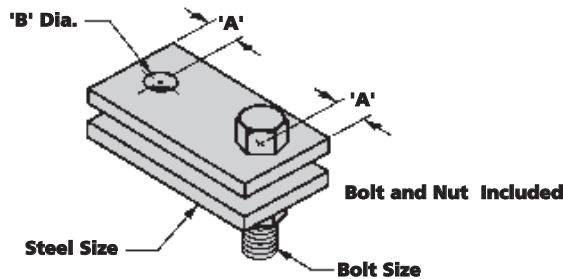
Service: Designed to suspend hanger rod for support of light loads under 750 Lbs. (3.33 kN) from a wall or structure.

Ordering: Specify part number and finish. Order B3063CP Clips separately. See below.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 32 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 31.

Figure B3063 Light Welded Steel Bracket

Part No.	'A'		'B'		'C'		'D'		Wt./C	
	in.	mm.	in.	mm.	in.	mm.	in.	mm.	Lbs.	kg
B3063-1	9"	(228.6)	6 ¹ / ₂ "	(165.1)	8"	(203.2)	3/8"	(9.5)	409	(185.5)
B3063-2	13"	(330.2)	10 ¹ / ₂ "	(266.7)	12"	(304.8)	3/8"	(9.5)	620	(281.2)
B3063-3	19"	(482.6)	16 ¹ / ₂ "	(419.1)	18"	(457.2)	3/8"	(9.5)	936	(424.5)



Material: Steel

Standard Finish: Plain or Electro-Plated

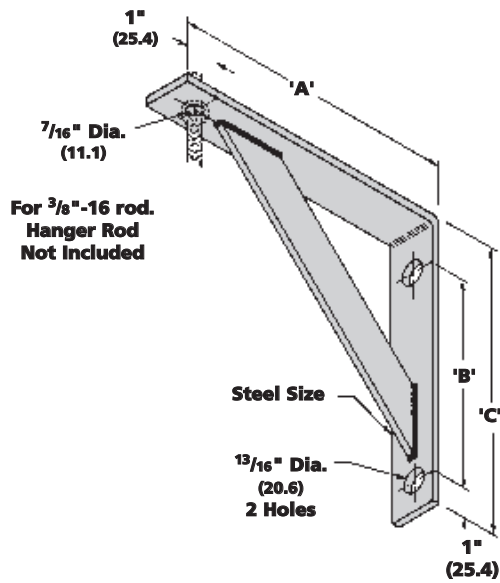
Service: Designed to suspend hanger rod when used with the B3063 Light Welded Steel Bracket.

Ordering: Specify part number and finish.

Figure B3063CP Clip for B3063 Bracket

Part No.	For Rod Size	'A'		Dia. 'B'		Bolt Size	Steel Size		Wt./C	
		in.	mm.	in.	mm.		in.	mm.	Lbs.	kg
B3063CP-3/8	3/8"-16	9/16"	(14.3)	7/16"	(11.1)	3/8"-16 x 1 ³ / ₄ "	3/8" x 2" x 3 ⁵ / ₈ "	(9.5 x 50.8 x 92.1)	156	(70.7)
B3063CP-1/2	1/2"-13	7/8"	(22.2)	9/16"	(14.3)	1/2"-13 x 2"	3/8" x 2" x 4 ³ / ₈ "	(9.5 x 50.8 x 111.1)	194	(88.0)
B3063CP-5/8	5/8"-11	1"	(25.4)	1 ¹ / ₁₆ "	(17.5)	5/8"-11 x 2"	3/8" x 2" x 4 ¹ / ₂ "	(9.5 x 50.8 x 114.3)	206	(93.4)

Brackets



Material: Steel

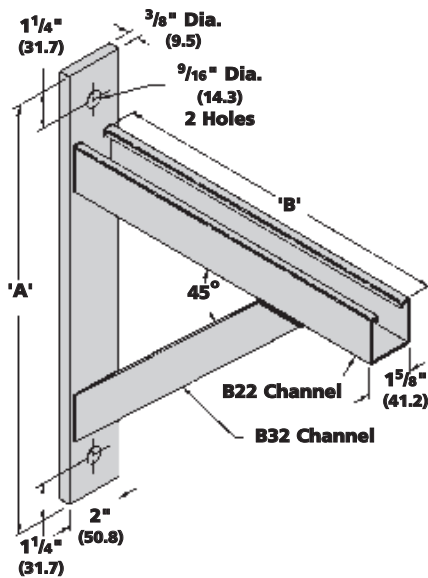
Standard Finish: Plain or Electro-Plated

Service: Designed for suspending light loads at fixed distances from walls or structures.

Ordering: Specify part number and finish.

Figure B3068 Light Duty Welded Bracket

Part No.	'A'		'B'		'C'		Steel Size		Design Load		Wt./C	
	in.	mm.	in.	mm.	in.	mm.	in.	mm.	Lbs.	kN	Lbs.	kg
B3068-1	10"	(254.0)	6 1/2"	(165.1)	9"	(228.6)	1/4" x 1 1/2"	(6.3 x 38.1)	730	(3.25)	284	(128.8)
B3068-2	14"	(355.6)	10 1/2"	(266.7)	13"	(330.2)	1/4" x 1 1/2"	(6.3 x 38.1)	730	(3.25)	429	(194.6)
B3068-3	20"	(508.0)	16 1/2"	(419.1)	19"	(482.6)	3/8" x 2"	(9.5 x 50.8)	730	(3.25)	1279	(580.1)



Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for supporting pipe from walls or structures where lateral adjustment is required.

Ordering: Specify part number and finish.

Figure B3064 Adjustable Strut Bracket

Part No.	'A'		'B'		Design Load		Wt./C	
	in.	mm.	in.	mm.	Lbs.	kN	Lbs.	kg
B3064-1	15"	(381.0)	12"	(304.8)	1200	(5.34)	660	(299.4)
B3064-2	21"	(533.4)	18"	(457.2)	800	(3.56)	1004	(455.4)
B3064-3	27"	(685.8)	24"	(609.6)	600	(2.67)	1346	(610.5)

Brackets

Material: Steel (Stainless steel available)

Standard Finish: Plain or Electro-Plated

Service: Designed for suspending medium loads at fixed distances from walls or structures.

Ordering: Specify part number and finish.

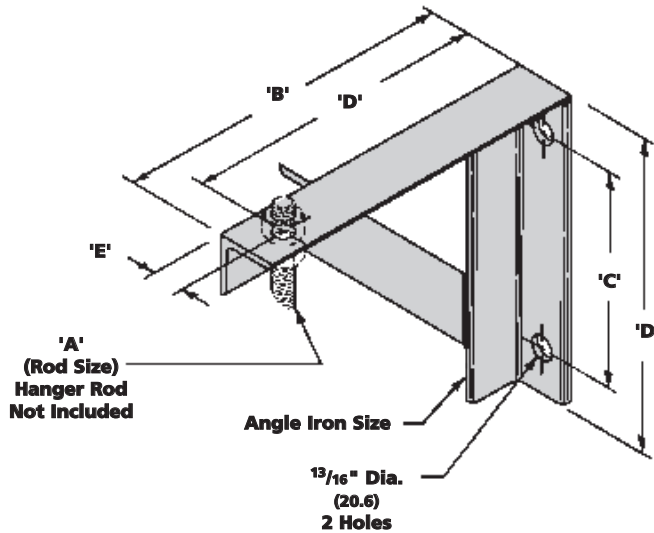
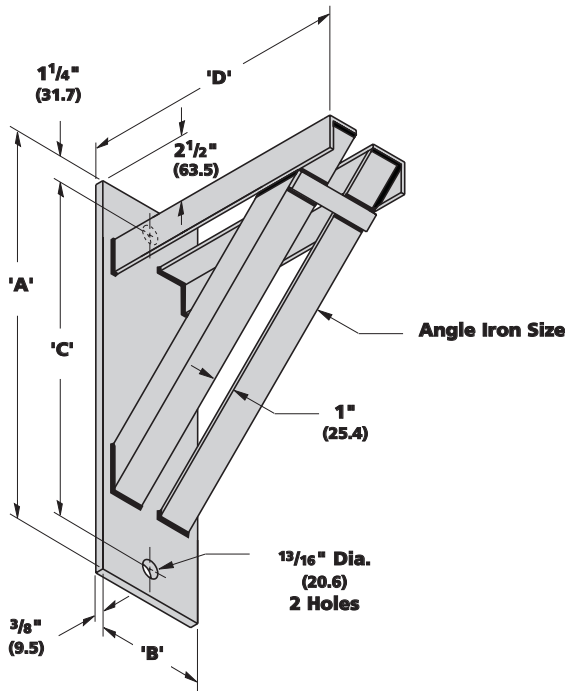


Figure B3065 Angle Iron Bracket

Part No.	For Rod Size 'A'	'B'	'C'	'D'	'E'
B3065-1	5/8"-11	11 1/4" (285.7)	7" (177.8)	10" (254.0)	1 1/8" (28.6)
B3065-2	5/8"-11	13 1/4" (336.5)	9" (228.6)	12" (304.8)	1 1/8" (28.6)
B3065-3	3/4"-10	15 1/4" (387.3)	11" (279.4)	14" (355.6)	1 3/8" (34.9)
B3065-4	1"-8	19 3/4" (501.6)	15" (381.0)	18" (457.2)	1 3/4" (44.4)

Part No.	Angle Iron Size	Design Load		Wt./C	
		Lbs.	kN	Lbs.	kg
B3065-1	1/4" x 2" x 2"	1200	(5.34)	793	(359.7)
B3065-2	1/4" x 2" x 2"	1200	(5.34)	974	(441.8)
B3065-3	1/4" x 2 1/2" x 2 1/2"	1200	(5.34)	1480	(671.3)
B3065-4	1/4" x 3" x 3"	1200	(5.34)	2343	(1062.8)

Brackets



Material: Steel; (Stainless Steel available)

Standard Finish: Plain or Electro-Plated

Service: Designed for suspending pipe loads under 1500 Lbs. (6.67 kN) from walls or structures.

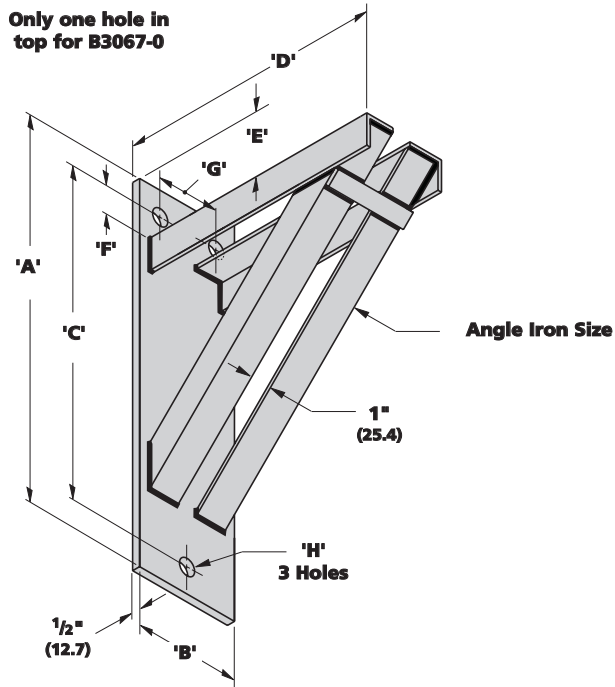
Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 33 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 32.

Figure B3066 Medium Duty Angle Bracket

Part No.	'A'		'B'		'C'		'D'	
B3066-0	18"	(457.2)	5"	(127.0)	15 1/2"	(393.7)	12"	(304.8)
B3066-1	24"	(609.6)	5"	(127.0)	21 1/2"	(546.1)	18"	(457.2)
B3066-2	30"	(762.0)	6"	(152.5)	27 1/2"	(698.5)	24"	(609.6)

Part No.	Angle Iron Size		Design Load		Wt./C	
			Lbs.	kN	Lbs.	kg
B3066-0	3/16" x 1 1/2" x 1 1/2"	(4.8 x 38.1 x 38.1)	1500	(6.67)	1819	(825.1)
B3066-1	3/16" x 1 3/4" x 1 3/4"	(4.8 x 44.4 x 44.4)	1500	(6.67)	1803	(1271.4)
B3066-2	1/4" x 2" x 2"	(6.3 x 50.8 x 50.8)	1500	(6.67)	4973	(2255.7)



Material: Steel (Stainless steel available)

Standard Finish: Plain or Electro-Plated

Service: Designed for suspending pipe loads under 3000 Lbs. (13.34kN) from walls or structures.

Ordering: Specify part number and finish.

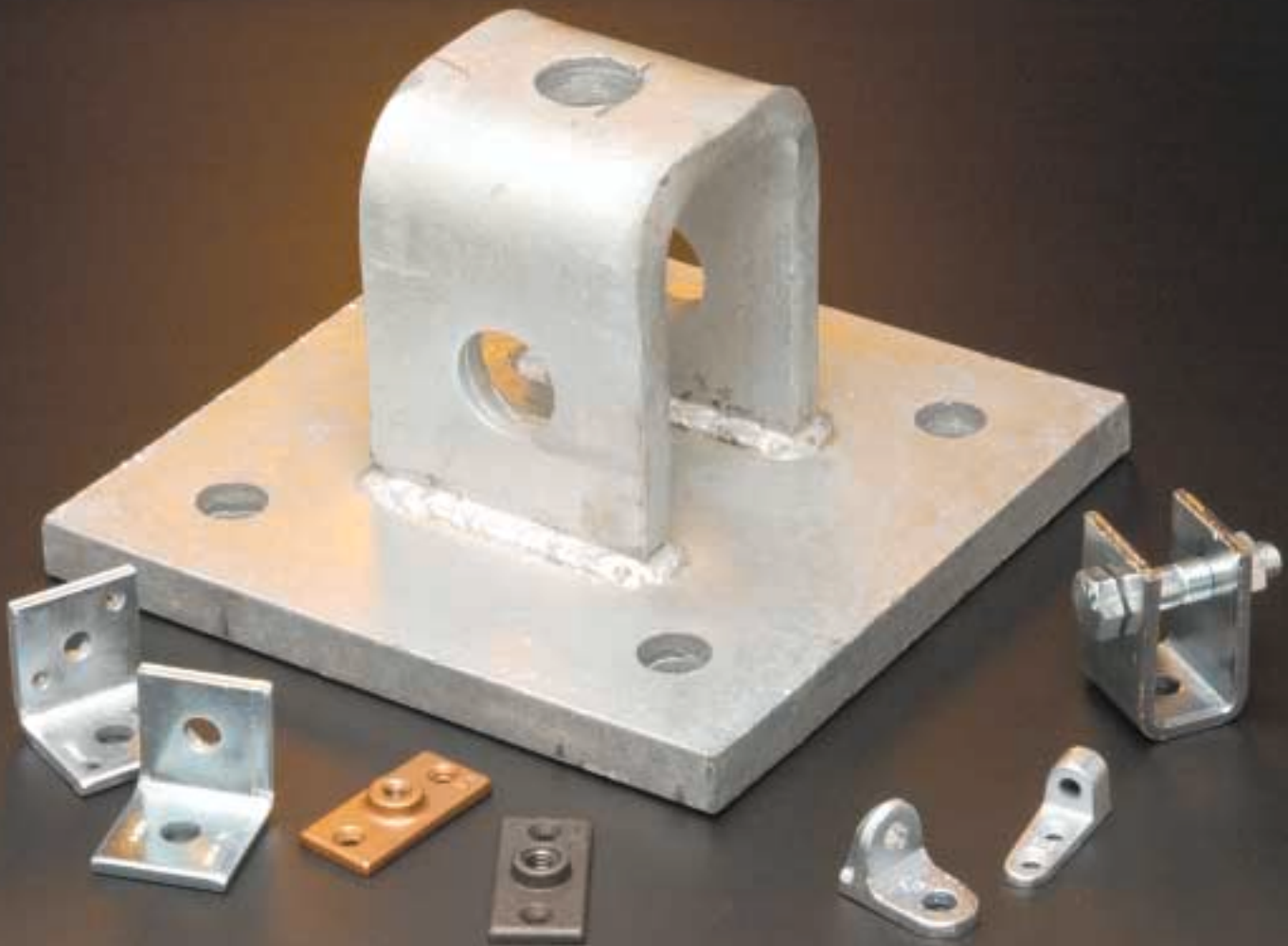
Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 34 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 33.

Figure B3067 Heavy Duty Angle Bracket

Part No.	'A'		'B'		'C'		'D'		'E'	
B3067-0	18"	(457.2)	5"	(127.0)	15 ¹ / ₄ "	(387.3)	12"	(304.8)	2 ³ / ₄ "	(69.8)
B3067-1	24"	(609.6)	6"	(152.4)	21 ³ / ₈ "	(542.9)	18"	(457.2)	2 ³ / ₄ "	(69.8)
B3067-2	30"	(762.0)	6"	(152.4)	27 ¹ / ₂ "	(698.5)	24"	(609.6)	2 ³ / ₄ "	(69.8)
B3067-3	36"	(914.4)	6"	(152.4)	33 ¹ / ₄ "	(844.5)	30"	(762.0)	3"	(76.2)
B3067-4	42"	(1066.8)	7"	(177.8)	39"	(990.6)	36"	(914.4)	3"	(76.2)
B3067-5	50"	(1270.0)	7"	(177.8)	46"	(1168.4)	42"	(1066.8)	3 ¹ / ₂ "	(88.9)

Part No.	'F'		'G'		'H'		Angle Iron Size		Design Load		Wt./C	
	Lbs.	mm	Lbs.	mm	Lbs.	mm	Lbs.	kN	Lbs.	kg		
B3067-0	1 ³ / ₈ "	(34.9)	-	-	1 ³ / ₁₆ "	(20.6)	1 ¹ / ₄ " x 1 ¹ / ₂ " x 2"	(4.8 x 38.1 x 50.8)	3000	(13.34)	2584	(1172.1)
B3067-1	1 ⁷ / ₁₆ "	(36.5)	2 ³ / ₄ "	(69.8)	1 ⁵ / ₁₆ "	(23.8)	3 ³ / ₈ " x 2" x 2"	(9.5 x 50.8 x 50.8)	3000	(13.34)	5385	(2442.6)
B3067-2	1 ¹ / ₂ "	(38.1)	2 ¹ / ₂ "	(63.5)	1 ¹ / ₁₆ "	(27.0)	5 ⁵ / ₁₆ " x 2" x 2 ¹ / ₂ "	(7.9 x 50.8 x 63.5)	3000	(13.34)	6841	(3103.1)
B3067-3	1 ⁵ / ₈ "	(41.3)	2 ¹ / ₂ "	(63.5)	1 ¹ / ₁₆ "	(27.0)	5 ⁵ / ₁₆ " x 2" x 2 ¹ / ₂ "	(7.9 x 50.8 x 63.5)	3000	(13.34)	8439	(3827.9)
B3067-4	1 ¹ / ₂ "	(38.1)	3 ¹ / ₂ "	(88.9)	1 ¹ / ₁₆ "	(27.0)	3 ³ / ₈ " x 2 ¹ / ₂ " x 3 ¹ / ₂ "	(9.5 x 63.5 x 88.9)	3000	(13.34)	14497	(6575.8)
B3067-5	1 ¹ / ₂ "	(38.1)	3 ¹ / ₂ "	(88.9)	1 ¹ / ₁₆ "	(27.0)	3 ³ / ₈ " x 2 ¹ / ₂ " x 3 ¹ / ₂ "	(9.5 x 63.5 x 88.9)	3000	(13.34)	17015	(7718.0)

Upper Attachments



Upper attachments offered in this section are designed to suspend hanger rods from beams, concrete, and other structural surfaces by bolting or welding.

Materials

Carbon Steel and Malleable Iron are used in the manufacturing of upper attachments and provide the high strength properties required. Stainless Steel and other materials are available.

Finishes

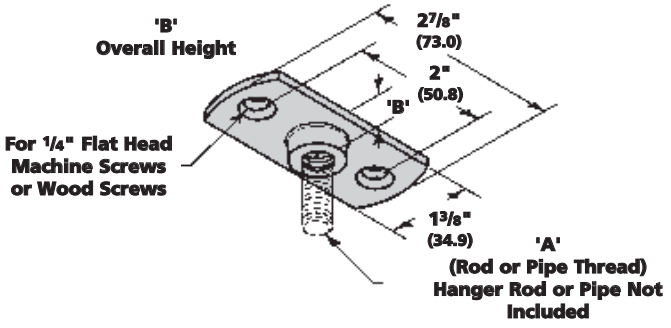
The standard finishes for mechanical supports are plain steel (oil coated) sometimes referred to as black and Electro-Plated Zinc (ASTM B 633 SC3). Hot-Dip Galvanized After Fabrication (ASTM A 123), Red Primer, Plastic Coating, Dura-Green® and other special coatings are available upon request.

Note: Due to the design of some products, (threads, connecting hardware, swivels, etc.) items may or may not be uniformly coated with special finishes. In some cases, the hanger itself may be coated, however, the hardware may be supplied Electro-Plated, copper plated, or in stainless steel.

Approvals (as noted)

Items in this section comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society MSS SP-69 & SP-58.

Upper Attachments

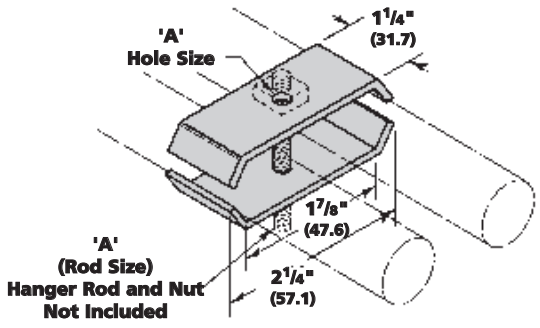


Material: Malleable Iron (Stainless Steel Type 304 available)
Standard Finish: Plain or Electro-Plated
Service: Designed for attaching a hanger or support rod to beams, ceilings, or walls.
Ordering: Specify part number and finish.



Figure B3199 Ceiling Flange
 (Available with Dura-Copper finish as B3199RCT-Size)

Part No.	Thread Size Rod 'A' Pipe	'B'	Design Load		Wt./C	
			Lbs.	kN	Lbs.	kg
B3199P-1/4	-	1/2"	180	(.80)	17	(7.7)
B3199R-3/8	B3199RCT-3/8	7/16"	180	(.80)	13	(5.9)
B3199R-1/2	B3199RCT-1/2	1/2"	180	(.80)	17	(7.7)

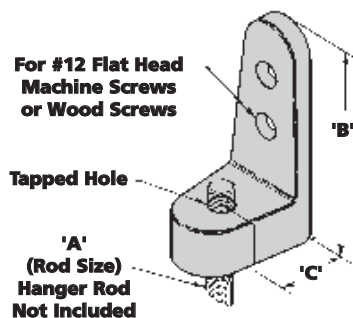


Material: Steel
Standard Finish: Pre-Galvanized
Service: Designed for fastening pipe clamps, fixtures, and outlet boxes to the bottom of a bar joist.
Ordering: Specify part number and finish.

Figure B3059 Bar Joist Washer

Part No.	For Rod Size	Hole Size 'A'	Steel Size		Wt./C	
			Lbs.	kg		
B3059-1/4	1/4"-20	5/16"	16 Ga. x 1 1/4"	(1.5 x 31.7)	5	(2.2)
B3059-3/8	3/8"-16	7/16"	16 Ga. x 1 1/4"	(1.5 x 31.7)	5	(2.2)

Upper Attachments



Material: Malleable Iron

Standard Finish: Plain or Electro-Plated

Service: Designed for attaching hanger rod to the side of beams or walls.

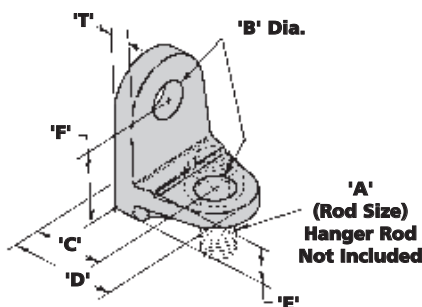
Weight: Wt./C 12 Lbs. (5.4 kg)

Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 35 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 34.

Figure B3058 Side Beam Connector

Part No.	Rod Size 'A'	'B'		'C'		Design Load		Wt./C	
						Lbs.	kN	Lbs.	kg
B3058-3/8	3/8"-16	2 3/8"	(60.3)	9/16"	(14.3)	250	(1.11)	13	(5.9)
B3058-1/2	1/2"-13	2 3/4"	(69.8)	3/4"	(19.0)	480	(2.13)	25	(11.3)



Material: Malleable Iron

Standard Finish: Plain or Electro-Plated

Service: Designed for attaching hanger rod to the side of beams or walls.

Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 35 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 34.

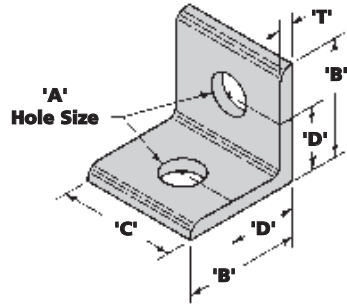
Figure B3062 Side Beam Bracket

Part No.	Rod Size 'A'	For Nominal Pipe Sizes		Design Load				Wt./C	
				With Lag Screw		With Bolt To Steel		Lbs.	kg
				Lbs.	kN	Lbs.	kN		
B3062-3/8	3/8"-16	3/4"-2"	(20-50)	390	(1.73)	730	(3.25)	21	(9.5)
B3062-1/2	1/2"-13	2 1/2"-3 1/2"	(65-95)	640	(2.84)	1350	(6.00)	44	(19.9)
B3062-5/8	5/8"-11	4"-5"	(100-125)	760	(3.38)	2160	(9.71)	81	(36.7)
B3062-3/4	3/4"-10	6"	(150)	830	(3.69)	3230	(14.37)	146	(66.2)
B3062-7/8	7/8"-9	8"-12"	(200-300)	830	(3.69)	4480	(19.93)	252	(114.3)

Part No.	'B'	'C'	'D'	'E'	'F'	'T'
B3062-3/8	7/16" (11.1)	7/8" (22.2)	1 3/8" (34.9)	5/8" (15.9)	1 7/16" (36.5)	1 1/4" (6.3)
B3062-1/2	9/16" (14.3)	1 3/16" (30.2)	1 13/16" (46.0)	3/4" (19.0)	1 7/8" (47.6)	1 1/2" (8.7)
B3062-5/8	3/4" (19.0)	1 7/16" (36.5)	2 3/16" (55.6)	7/8" (22.2)	2 1/8" (54.0)	7/8" (11.1)
B3062-3/4	7/8" (22.2)	1 11/16" (42.9)	2 9/16" (65.1)	1" (25.4)	2 1/2" (63.5)	1 1/2" (12.7)
B3062-7/8	1" (25.4)	2" (50.4)	3" (76.2)	1 3/16" (30.2)	3" (76.2)	1 9/16" (15.1)

All dimensions in charts and on drawings are in inches. Dimensions shown in parentheses are in millimeters unless otherwise specified.

Upper Attachments



Material: Steel (Stainless steel available)

Standard Finish: Plain or Electro-Plated

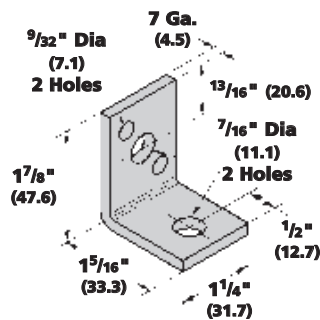
Service: Designed for attaching a hanger rod to the side of beams or walls.

Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 35 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 34.

Figure B3060 Side Beam Angle Clip

Part No.	Hole Size 'A'		'B'		'C'		'D'		'T'		Design Load		Wt./C	
											Lbs.	kN	Lbs.	kg
B3060- ³ / ₈ "	⁷ / ₁₆ "	(11.1)	² / ₃ "	(55.6)	2"	(50.8)	¹ / ₄ "	(31.7)	¹ / ₄ "	(6.3)	305	(1.35)	53	(24.0)
B3060- ¹ / ₂ "	⁹ / ₁₆ "	(14.3)	² / ₃ "	(55.6)	2"	(50.8)	¹ / ₄ "	(31.7)	¹ / ₄ "	(6.3)	565	(2.51)	51	(23.1)
B3060- ⁵ / ₈ "	¹¹ / ₁₆ "	(17.5)	² / ₃ "	(55.6)	2"	(50.8)	¹ / ₄ "	(31.7)	¹ / ₄ "	(6.3)	909	(4.02)	48	(21.8)
B3060- ³ / ₄ "	¹³ / ₁₆ "	(20.6)	3"	(76.2)	3"	(76.2)	¹ / ₂ "	(44.4)	³ / ₈ "	(9.5)	1355	(6.03)	169	(74.8)
B3060- ⁷ / ₈ "	¹⁵ / ₁₆ "	(23.8)	4"	(101.6)	4"	(101.6)	² / ₁ "	(63.5)	³ / ₈ "	(9.5)	1870	(8.32)	312	(141.5)
B3060-1"	¹ / ₁₆ "	(27.0)	4"	(101.6)	4"	(101.6)	² / ₁ "	(63.5)	¹ / ₂ "	(12.7)	2480	(11.03)	402	(182.3)



Material: Steel (Stainless steel available)

Standard Finish: Plain or Electro-Plated

Service: Designed for attaching ³/₈" hanger rod to the side of beams or walls.

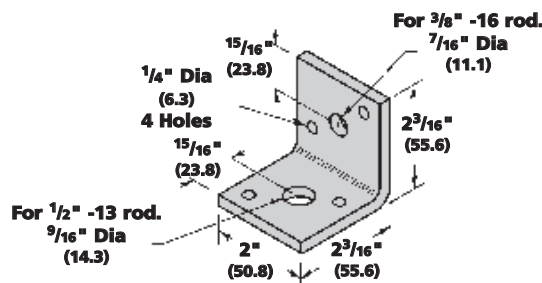
Design Load: 300 Lbs. (1.33kN)

Weight: Wt./C 15 Lbs. (6.8 kg)

Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 35 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 34.

Figure B3060L Light Duty Angle Clip



Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for for attaching hanger rod to the side of beams or walls.

Design Load: 500 Lbs. (2.22 kN) when installed in either direction.

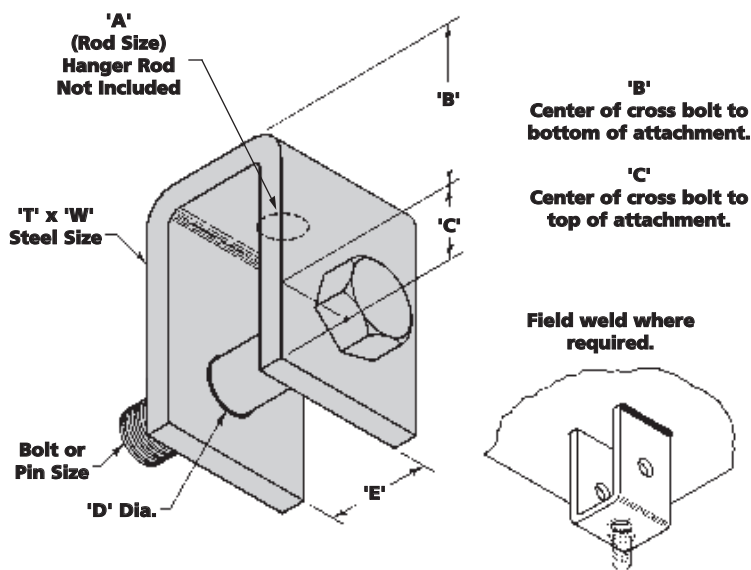
Weight: Wt./C 49 Lbs. (22.2 kg)

Ordering: Specify part number and finish.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 35 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 34.

Figure B3070 Reversible Angle Clip

Upper Attachments



Material: Steel (Stainless steel available)

Standard Finish: Plain or Electro-Plated

Service: Designed for attaching hanger rod to the bottom of structural steel where heavy loads and large hanger rod sizes are required. Can be welded in place in either the upright or inverted position.

Ordering: Specify part number (with or without hardware) and finish.

Note: When ordering with hardware for sizes $\frac{3}{8}$ thru $1\frac{1}{8}$, Hex Head Cap Screws and Hex Nuts will be supplied. For $1\frac{1}{4}$ thru 2, Clevis Pin and Cotter Pins will be supplied. Must be specified with or without hardware.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 22 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 22.

Figure B3083 Welded Beam Attachment
(Available without hardware as B3083WO-Size)

Part No.	Rod Size 'A'	Pin or Bolt Size		Design Load				Wt./C			
				650° F (349° C)		750° F (399° C)		W/O Hardware		With Hardware	
				Lbs.	kN	Lbs.	kN	Lbs.	kg	Lbs.	kg
B3083- $\frac{3}{8}$	$\frac{3}{8}$ "-.16	$\frac{1}{2}$ "	(12.7)	730	(3.25)	572	(2.54)	89	(40.3)	110	(49.9)
B3083- $\frac{1}{2}$	$\frac{1}{2}$ "-.13	$\frac{5}{8}$ "	(15.9)	1350	(6.00)	1057	(4.70)	87	(39.4)	123	(55.8)
B3083- $\frac{5}{8}$	$\frac{5}{8}$ "-.11	$\frac{3}{4}$ "	(19.0)	2160	(9.61)	1692	(7.52)	84	(38.1)	140	(63.5)
B3083- $\frac{3}{4}$	$\frac{3}{4}$ "-.10	$\frac{7}{8}$ "	(22.2)	3230	(14.37)	2530	(11.25)	173	(78.4)	268	(121.5)
B3083- $\frac{7}{8}$	$\frac{7}{8}$ "-.9	1"	(25.4)	4480	(19.93)	3508	(15.60)	234	(106.1)	376	(170.4)
B3083-1	1"-.8	$1\frac{1}{8}$ "	(28.6)	5900	(26.24)	4620	(20.55)	394	(178.6)	596	(270.2)
B3083- $1\frac{1}{8}$	$1\frac{1}{8}$ "-.7	$1\frac{1}{4}$ "	(31.7)	7450	(33.14)	5830	(25.93)	402	(182.2)	680	(308.3)
B3083- $1\frac{1}{4}$	$1\frac{1}{4}$ "-.7	$1\frac{3}{8}$ "	(34.9)	9500	(42.25)	7440	(33.09)	734	(332.7)	955	(432.9)
B3083- $1\frac{1}{2}$	$1\frac{1}{2}$ "-.6	$1\frac{5}{8}$ "	(41.3)	13800	(61.38)	10807	(48.07)	1460	(661.8)	1817	(823.7)
B3083- $1\frac{3}{4}$	$1\frac{3}{4}$ "-.5	$1\frac{7}{8}$ "	(47.6)	18600	(82.73)	14566	(64.79)	1746	(791.5)	2310	(1047.1)
B3083-2	2"-.4 $\frac{1}{2}$	$2\frac{1}{4}$ "	(57.1)	24600	(109.42)	19625	(87.29)	2190	(992.7)	2996	(1358.1)

Part No.	'B'	'C'	Dia. 'D'		'E'		'T' x 'W'	
B3083- $\frac{3}{8}$	2" (50.8)	$\frac{7}{8}$ " (22.2)	$\frac{9}{16}$ " (14.3)	$\frac{11}{16}$ " (17.5)	$\frac{1}{4}$ " (31.7)	$\frac{1}{4}$ " x 2" (6.3 x 50.8)		
B3083- $\frac{1}{2}$	2" (50.8)	$\frac{7}{8}$ " (22.2)	$\frac{11}{16}$ " (17.5)	$\frac{13}{16}$ " (20.6)	$\frac{1}{4}$ " (31.7)	$\frac{1}{4}$ " x 2" (6.3 x 50.8)		
B3083- $\frac{5}{8}$	2" (50.8)	$\frac{7}{8}$ " (22.2)	$\frac{13}{16}$ " (20.6)	$\frac{15}{16}$ " (23.8)	$\frac{1}{4}$ " (31.7)	$\frac{1}{4}$ " x 2" (6.3 x 50.8)		
B3083- $\frac{3}{4}$	2" (50.8)	$1\frac{1}{8}$ " (28.6)	$1\frac{1}{8}$ " (28.6)	$1\frac{1}{2}$ " (38.1)	$\frac{3}{8}$ " x $2\frac{1}{2}$ " (9.5 x 63.5)			
B3083- $\frac{7}{8}$	3" (76.2)	$1\frac{1}{4}$ " (31.7)	$1\frac{1}{8}$ " (28.6)	2" (50.8)	$\frac{3}{8}$ " x $2\frac{1}{2}$ " (9.5 x 63.5)			
B3083-1	3" (76.2)	$1\frac{1}{2}$ " (38.1)	$1\frac{1}{4}$ " (31.7)	2" (50.8)	$\frac{1}{2}$ " x 3" (12.7 x 76.2)			
B3083- $1\frac{1}{8}$	3" (76.2)	$1\frac{1}{2}$ " (38.1)	$1\frac{3}{8}$ " (34.9)	$2\frac{3}{4}$ " (69.8)	$\frac{1}{2}$ " x 3" (12.7 x 76.2)			
B3083- $1\frac{1}{4}$	3" (76.2)	2" (50.8)	$1\frac{1}{2}$ " (38.1)	3" (76.2)	$\frac{5}{8}$ " x 4" (15.9 x 101.6)			
B3083- $1\frac{1}{2}$	4" (101.6)	$2\frac{1}{2}$ " (63.5)	$1\frac{3}{4}$ " (44.4)	$3\frac{1}{2}$ " (88.9)	$\frac{3}{4}$ " x 5" (19.0 x 127.0)			
B3083- $1\frac{3}{4}$	5" (127.0)	$2\frac{3}{4}$ " (69.8)	2" (50.8)	$3\frac{3}{4}$ " (95.2)	$\frac{3}{4}$ " x 5" (19.0 x 127.0)			
B3083-2	5" (127.0)	$3\frac{1}{4}$ " (82.5)	$2\frac{3}{8}$ " (60.3)	$3\frac{3}{4}$ " (95.2)	$\frac{3}{4}$ " x 6" (19.0 x 152.4)			

Upper Attachments

Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for attachment to structural steel. Use with B3201 Forged Steel Clevis.

Ordering: Specify part number and finish.

Approvals: Complies with Manufacturers Standardization Society MSS SP-69 & SP-58 Type 57.

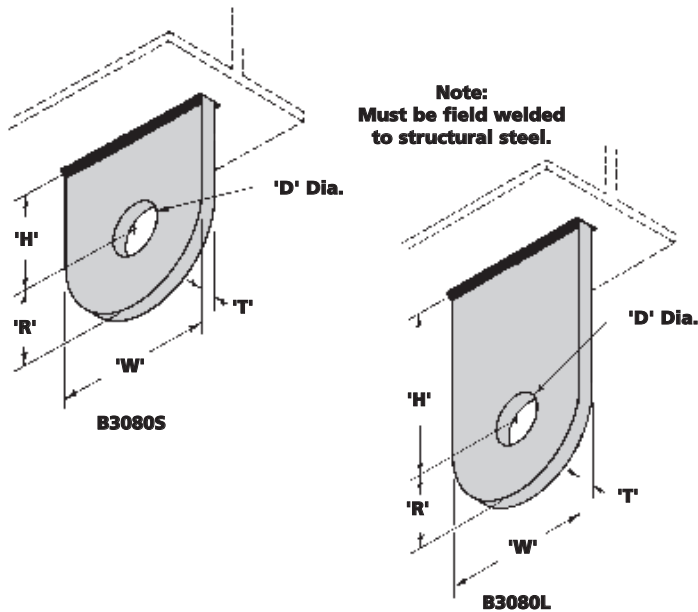


Figure B3080S (Short) Structural Welding Lug
Figure B3080L (Long) Structural Welding Lug

Part No. Short	Part No. Long	For Hanger	Pin or Bolt Size	Design Load		Wt./C			
				Lbs.	kN	Short		Long	
						Lbs.	kg	Lbs.	kg
B3080S-1/2	B3080L-1/2	1/2"-.13	5/8" (15.9)	1350	(6.00)	44	(19.9)	71	(32.2)
B3080S-5/8	B3080L-5/8	5/8"-.11	3/4" (19.0)	2160	(9.61)	44	(19.9)	68	(30.8)
B3080S-3/4	B3080L-3/4	3/4"-.10	7/8" (22.0)	3230	(14.37)	63	(28.6)	100	(45.3)
B3080S-7/8	B3080L-7/8	7/8"-.9	1" (25.4)	4480	(19.93)	71	(32.2)	100	(45.3)
B3080S-1	B3080L-1	1"-.8	1 1/8" (28.6)	5900	(26.24)	126	(57.1)	169	(76.6)
B3080S-1 1/8	B3080L-1 1/8	1 1/8"-.7	1 1/4" (31.7)	7450	(33.14)	166	(75.3)	208	(94.3)
B3080S-1 1/4	B3080L-1 1/4	1 1/4"-.7	1 3/8" (38.1)	9500	(42.25)	310	(140.6)	381	(172.8)
B3080S-1 1/2	B3080L-1 1/2	1 1/2"-.6	1 5/8" (41.3)	13800	(61.38)	503	(228.1)	662	(300.3)
B3080S-1 3/4	B3080L-1 3/4	1 3/4"-.5	1 7/8" (47.6)	18600	(82.73)	487	(220.9)	646	(293.0)
B3080S-2	B3080L-2	2"-.4 1/2	2 1/4" (57.1)	24600	(109.42)	744	(337.5)	808	(366.5)

Part No. Short	Part No. Long	Hole Dia. 'D'	'H'		'R'	'T'	'W'
			Short	Long			
B3080S-1/2	B3080L-1/2	1 1/16" (17.5)	1 1/2" (38.1)	3" (76.2)	1 1/4" (31.7)	1/4" (6.3)	2 1/2" (63.5)
B3080S-5/8	B3080L-5/8	1 3/16" (20.6)	1 1/2" (38.1)	3" (76.2)	1 1/4" (31.7)	1/4" (6.3)	2 1/2" (63.5)
B3080S-3/4	B3080L-3/4	1 5/16" (23.8)	1 1/2" (38.1)	3" (76.2)	1 1/4" (31.7)	3/8" (9.5)	2 1/2" (63.5)
B3080S-7/8	B3080L-7/8	1 1/8" (28.6)	2" (50.8)	3" (76.2)	1 1/4" (31.7)	3/8" (9.5)	2 1/2" (63.5)
B3080S-1	B3080L-1	1 1/4" (31.7)	2" (50.8)	3" (76.2)	1 1/2" (38.1)	1/2" (12.7)	3" (76.2)
B3080S-1 1/8	B3080L-1 1/8	1 3/8" (34.9)	3" (76.2)	4" (101.6)	1 1/2" (38.1)	1/2" (12.7)	3" (76.2)
B3080S-1 1/4	B3080L-1 1/4	1 1/2" (38.1)	3" (76.2)	4" (101.6)	2" (50.8)	5/8" (15.9)	4" (101.6)
B3080S-1 1/2	B3080L-1 1/2	1 3/4" (44.4)	3" (76.2)	4 1/2" (114.3)	2 1/2" (63.5)	3/4" (19.0)	5" (127.0)
B3080S-1 3/4	B3080L-1 3/4	2" (50.8)	3" (76.2)	4 1/2" (114.3)	2 1/2" (63.5)	3/4" (19.0)	5" (127.0)
B3080S-2	B3080L-2	2 3/8" (60.3)	4" (101.6)	4 1/2" (114.3)	3" (76.2)	3/4" (19.0)	6" (152.4)

Upper Attachments

Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for attaching hanger rod to a concrete ceiling. Allows for vertical adjustment of hanger rod.

Ordering: Specify part number and finish.

Note: Design load is based off rod sizes. Before installation ensure that concrete and anchorage are sufficient to carry the load.

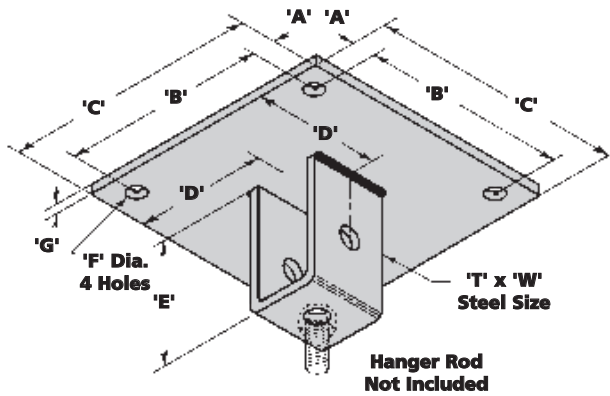


Figure B3085 Rod Attachment Concrete Plate

Part No.	Rod Size	'A'		'B'		'C'		'D'		'E'	
B3085-3/8	3/8"-16	1"	(25.4)	8"	(203.2)	10"	(254.0)	5"	(127.0)	2 7/8"	(73.0)
B3085-1/2	1/2"-13	1"	(25.4)	8"	(203.2)	10"	(254.0)	5"	(127.0)	2 7/8"	(73.0)
B3085-5/8	5/8"-11	1"	(25.4)	8"	(203.2)	10"	(254.0)	5"	(127.0)	2 7/8"	(73.0)
B3085-3/4	3/4"-10	1"	(25.4)	8"	(203.2)	10"	(254.0)	5"	(127.0)	3 1/8"	(79.4)
B3085-7/8	7/8"-9	1"	(25.4)	8"	(203.2)	10"	(254.0)	5"	(127.0)	4 1/4"	(79.4)
B3085-1	1"-8	2"	(50.8)	8"	(203.2)	12"	(304.8)	6"	(152.4)	4 1/2"	(114.3)
B3085-1 1/8	1 1/8"-7	2"	(50.8)	8"	(203.2)	12"	(304.8)	6"	(152.4)	4 3/4"	(120.6)
B3085-1 1/4	1 1/4"-7	2"	(50.8)	8"	(203.2)	12"	(304.8)	6"	(152.4)	5"	(127.0)
B3085-1 1/2	1 1/2"-6	2"	(50.8)	8"	(203.2)	12"	(304.8)	6"	(152.4)	6 1/2"	(165.1)

Part No.	'F'		'G'		'T' x 'W'		Design Load		Wt./C	
	Lbs.	kN	Lbs.	kN	Lbs.	kN	Lbs.	kN	Lbs.	kN
B3085-3/8	9/16"	(14.3)	3/8"	(9.5)	1/4" x 2"	(6.3 x 50.8)	730	(3.25)	1145	(519.4)
B3085-1/2	9/16"	(14.3)	3/8"	(9.5)	1/4" x 2"	(6.3 x 50.8)	1350	(6.00)	1143	(518.4)
B3085-5/8	9/16"	(14.3)	1/2"	(12.7)	1/4" x 2"	(6.3 x 50.8)	2160	(9.61)	1490	(675.8)
B3085-3/4	1 1/16"	(17.5)	1/2"	(12.7)	3/8" x 2 1/2"	(9.5 x 63.5)	3230	(14.37)	1574	(713.9)
B3085-7/8	1 1/16"	(17.5)	1/2"	(12.7)	3/8" x 2 1/2"	(9.5 x 63.5)	4480	(19.93)	1635	(741.6)
B3085-1	1 3/16"	(20.6)	3/4"	(19.0)	1/2" x 3"	(12.7 x 76.2)	5900	(26.24)	3420	(1551.3)
B3085-1 1/8	1 5/16"	(23.8)	3/4"	(19.0)	1/2" x 3"	(12.7 x 76.2)	7450	(33.14)	3413	(1548.1)
B3085-1 1/4	1 5/16"	(23.8)	3/4"	(19.0)	5/8" x 4"	(15.9 x 101.6)	9500	(42.25)	3747	(1699.6)
B3085-1 1/2	1 1/8"	(28.6)	1"	(25.4)	3/4" x 5"	(19.0 x 127.0)	13800	(61.38)	5438	(2466.7)

All dimensions in charts and on drawings are in inches. Dimensions shown in parentheses are in millimeters unless otherwise specified.

Upper Attachments

Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for attachment to concrete ceilings. Use with B3210 or B3211 Welded Eye Rod and B3200 Weldless Eye Nut.

Ordering: Specify part number and finish.
Note: Hardware for sizes $\frac{3}{8}$ thru $\frac{1}{8}$ Hex Head Cap Screws and Hex Nuts will be supplied. For $\frac{1}{4}$ and $\frac{1}{2}$ sizes, Clevis Pin and Cotter Pins will be supplied.

Note: Design load is based off rod sizes. Before installation ensure that concrete and anchorage are sufficient to carry the load.

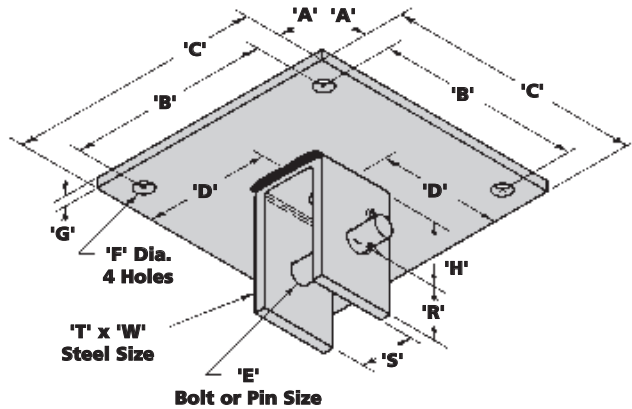


Figure B3086 Clevis Concrete Plate

Part No.	For Hanger Rod Size	'A'		'B'		'C'		'D'		Bolt or Pin Size 'E'		'F'		'G'	
		in	(mm)	in	(mm)	in	(mm)	in	(mm)	in	(mm)	in	(mm)	in	(mm)
B3086- $\frac{3}{8}$	$\frac{3}{8}$ "-.16	1"	(25.4)	8"	(203.2)	10"	(254.0)	5"	(127.0)	$\frac{1}{2}$ "	(12.7)	$\frac{9}{16}$ "	(14.3)	$\frac{3}{8}$ "	(9.5)
B3086- $\frac{1}{2}$	$\frac{1}{2}$ "-.13	1"	(25.4)	8"	(203.2)	10"	(254.0)	5"	(127.0)	$\frac{5}{8}$ "	(15.9)	$\frac{9}{16}$ "	(14.3)	$\frac{3}{8}$ "	(9.5)
B3086- $\frac{5}{8}$	$\frac{5}{8}$ "-.11	1"	(25.4)	8"	(203.2)	10"	(254.0)	5"	(127.0)	$\frac{3}{4}$ "	(19.0)	$\frac{9}{16}$ "	(14.3)	$\frac{1}{2}$ "	(12.7)
B3086- $\frac{3}{4}$	$\frac{3}{4}$ "-.10	1"	(25.4)	8"	(203.2)	10"	(254.0)	5"	(127.0)	$\frac{7}{8}$ "	(22.2)	$\frac{11}{16}$ "	(17.5)	$\frac{1}{2}$ "	(12.7)
B3086- $\frac{7}{8}$	$\frac{7}{8}$ "-.9	1"	(25.4)	8"	(203.2)	10"	(254.0)	5"	(127.0)	1"	(25.4)	$\frac{11}{16}$ "	(17.5)	$\frac{1}{2}$ "	(12.7)
B3086-1	1"-.8	2"	(50.8)	8"	(203.2)	12"	(304.8)	6"	(152.4)	$\frac{1}{8}$ "	(28.6)	$\frac{13}{16}$ "	(20.6)	$\frac{3}{4}$ "	(19.0)
B3086- $1\frac{1}{8}$	$1\frac{1}{8}$ "-.7	2"	(50.8)	8"	(203.2)	12"	(304.8)	6"	(152.4)	$\frac{1}{4}$ "	(31.7)	$\frac{15}{16}$ "	(23.8)	$\frac{3}{4}$ "	(19.0)
B3086- $1\frac{1}{4}$	$1\frac{1}{4}$ "-.7	2"	(50.8)	8"	(203.2)	12"	(304.8)	6"	(152.4)	$\frac{1}{2}$ "	(34.9)	$\frac{15}{16}$ "	(23.8)	$\frac{3}{4}$ "	(19.0)
B3086- $1\frac{1}{2}$	$1\frac{1}{2}$ "-.6	2"	(50.8)	8"	(203.2)	12"	(304.8)	6"	(152.4)	$\frac{5}{8}$ "	(41.3)	$\frac{1}{8}$ "	(28.6)	1"	(25.4)

Part No.	'H'		'R'		'S'		'T' x 'W'		Design Load		Wt./C	
	in	(mm)	in	(mm)	in	(mm)	in	(mm)	Lbs.	kN	Lbs.	kg
B3086- $\frac{3}{8}$	2"	(50.8)	$\frac{7}{8}$ "	(22.2)	$\frac{1}{4}$ "	(31.7)	$\frac{1}{4}$ " x 2"	(6.3 x 50.8)	730	(3.25)	1165	(528.4)
B3086- $\frac{1}{2}$	2"	(50.8)	$\frac{7}{8}$ "	(22.2)	$\frac{1}{4}$ "	(31.7)	$\frac{1}{4}$ " x 2"	(6.3 x 50.8)	1350	(6.00)	1178	(534.4)
B3086- $\frac{5}{8}$	2"	(50.8)	$\frac{7}{8}$ "	(22.2)	$\frac{1}{4}$ "	(31.7)	$\frac{1}{4}$ " x 2"	(6.3 x 50.8)	2160	(9.61)	1546	(701.2)
B3086- $\frac{3}{4}$	2"	(50.8)	$\frac{1}{8}$ "	(28.6)	$\frac{1}{2}$ "	(38.1)	$\frac{3}{8}$ " x 2 $\frac{1}{2}$ "	(9.5 x 63.5)	3230	(14.37)	1673	(758.9)
B3086- $\frac{7}{8}$	3"	(76.2)	$\frac{1}{4}$ "	(31.7)	2"	(50.8)	$\frac{3}{8}$ " x 2 $\frac{1}{2}$ "	(9.5 x 63.5)	4480	(19.93)	1783	(808.7)
B3086-1	3"	(76.2)	$\frac{1}{2}$ "	(38.1)	2"	(50.8)	$\frac{1}{2}$ " x 3"	(12.7 x 76.2)	5900	(26.24)	3636	(1649.3)
B3086- $1\frac{1}{8}$	3"	(76.2)	$\frac{3}{4}$ "	(44.4)	2 $\frac{3}{4}$ "	(69.8)	$\frac{1}{2}$ " x 3"	(12.7 x 76.2)	7450	(33.14)	3708	(1681.9)
B3086- $1\frac{1}{4}$	3"	(76.2)	2"	(50.8)	3"	(76.2)	$\frac{5}{8}$ " x 4"	(15.9 x 101.6)	9500	(42.25)	3986	(1808.0)
B3086- $1\frac{1}{2}$	4"	(101.6)	2 $\frac{1}{2}$ "	(63.5)	3 $\frac{1}{2}$ "	(88.9)	$\frac{3}{4}$ " x 5"	(19.0 x 127.0)	13800	(61.38)	5816	(2638.1)

Upper Attachments

Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for attachment to concrete ceilings. Use with B3201 Forged Steel Clevis.

Ordering: Specify part number and finish.

Note: Design load is based off rod sizes. Before installation ensure that concrete and anchorage are sufficient to carry the load.

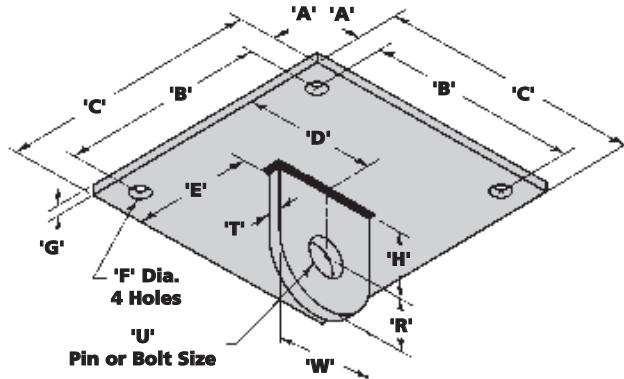


Figure B3084 Single Lug Concrete Plate

Part No.	For Hanger Rod Size	'A'		'B'		'C'		'D'		'E'		'F'		'G'	
B3084-1/2	1/2"-13	1"	(25.4)	8"	(203.2)	10"	(254.0)	5"	(127.0)	4 7/8"	(123.8)	9/16"	(14.3)	3/8"	(9.5)
B3084-5/8	5/8"-11	1"	(25.4)	8"	(203.2)	10"	(254.0)	5"	(127.0)	4 7/8"	(123.8)	9/16"	(14.3)	1/2"	(12.7)
B3084-3/4	3/4"-10	1"	(25.4)	8"	(203.2)	10"	(254.0)	5"	(127.0)	4 13/16"	(122.2)	11/16"	(17.5)	1/2"	(12.7)
B3084-7/8	7/8"-9	1"	(25.4)	8"	(203.2)	10"	(254.0)	5"	(127.0)	4 13/16"	(122.2)	11/16"	(17.5)	3/4"	(19.0)
B3084-1	1"-8	2"	(50.8)	8"	(203.2)	12"	(304.8)	6"	(152.4)	5 3/4"	(146.0)	13/16"	(20.6)	3/4"	(19.0)
B3084-1 1/8	1 1/8"-7	2"	(50.8)	8"	(203.2)	12"	(304.8)	6"	(152.4)	5 3/4"	(146.0)	15/16"	(23.8)	3/4"	(19.0)
B3084-1 1/4	1 1/4"-7	2"	(50.8)	8"	(203.2)	12"	(304.8)	6"	(152.4)	5 11/16"	(144.5)	15/16"	(23.8)	3/4"	(19.0)
B3084-1 1/2	1 1/2"-6	2"	(50.8)	8"	(203.2)	12"	(304.8)	6"	(152.4)	5 5/8"	(142.9)	1 1/8"	(28.6)	1"	(25.4)

Part No.	'H'		'R'		Bolt or Pin Size 'U'		'T' x 'W'		Design Load		Wt./C	
	Lbs.	mm	Lbs.	mm	Lbs.	mm	Lbs.	mm	Lbs.	kN	Lbs.	kg
B3084-1/2	1 1/2"	(38.1)	1 1/4"	(31.7)	5/8"	(15.9)	1/4" x 2 1/2"	(6.3 x 63.5)	1350	(6.00)	1096	(497.1)
B3084-5/8	1 1/2"	(38.1)	1 1/4"	(31.7)	3/4"	(19.0)	1/4" x 2 1/2"	(6.3 x 63.5)	2160	(9.61)	1447	(656.3)
B3084-3/4	1 1/2"	(38.1)	1 1/4"	(31.7)	7/8"	(22.2)	3/8" x 2 1/2"	(9.5 x 63.5)	3230	(14.37)	1459	(661.8)
B3084-7/8	2"	(50.8)	1 1/4"	(31.7)	1"	(25.4)	3/8" x 2 1/2"	(9.5 x 63.5)	4480	(19.93)	2166	(982.5)
B3084-1	2"	(50.8)	1 1/2"	(38.1)	1 1/8"	(28.6)	1/2" x 3"	(12.7 x 76.2)	5900	(26.24)	3145	(1426.6)
B3084-1 1/8	3"	(76.2)	1 1/2"	(38.1)	1 1/4"	(31.7)	1/2" x 3"	(12.7 x 76.2)	7450	(33.14)	3170	(1437.9)
B3084-1 1/4	3"	(76.2)	2"	(50.8)	1 3/8"	(34.9)	5/8" x 4"	(15.9 x 101.6)	9500	(42.25)	4312	(1955.9)
B3084-1 1/2	3"	(76.2)	2 1/2"	(63.5)	1 5/8"	(41.3)	3/4" x 5"	(19.0 x 127.0)	13800	(61.38)	4470	(2027.6)

All dimensions in charts and on drawings are in inches. Dimensions shown in parentheses are in millimeters unless otherwise specified.

Upper Attachments

Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for attaching hanger rod to ceilings or bottom flange of beams. Allows for vertical adjustment of hanger rod.

Ordering: Specify part number and finish.

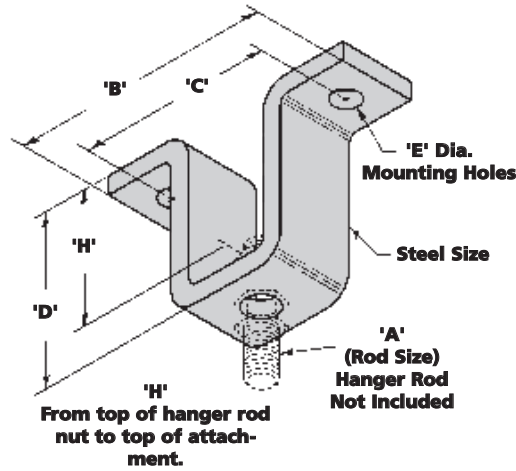


Figure B3082 Rod Beam Attachment

Part No.	Rod Size 'A'	Adjustment 'H'	Design Load				Wt./C	
			With Lag Screws		With Bolts		Lbs.	kg
			Lbs.	kN	Lbs.	kN		
B3082- ³ / ₈	³ / ₈ "-16	2 ³ / ₄ " (69.8)	425	(1.89)	730	(3.25)	64	(29.0)
B3082- ¹ / ₂	¹ / ₂ "-13	2 ³ / ₄ " (69.8)	715	(3.18)	1350	(6.00)	136	(61.7)
B3082- ⁵ / ₈	⁵ / ₈ "-11	2 ¹¹ / ₁₆ " (68.3)	810	(3.60)	2160	(9.61)	176	(79.8)
B3082- ³ / ₄	³ / ₄ "-10	3 ¹ / ₂ " (88.9)	1500	(6.67)	3230	(14.37)	269	(122.0)
B3082- ⁷ / ₈	⁷ / ₈ "-9	3 ⁹ / ₁₆ " (90.5)	1650	(7.34)	4480	(19.93)	393	(178.2)

Part No.	'B'	'C'	'D'	Steel Size		Dia. 'E'	
B3082- ³ / ₈	4" (101.6)	3 ¹ / ₈ " (79.4)	3 ³ / ₈ " (85.7)	¹ / ₄ " x 1"	(6.3 x 25.4)	³ / ₈ "	(9.5)
B3082- ¹ / ₂	5 ³ / ₈ " (136.5)	4 ¹ / ₈ " (104.8)	3 ⁵ / ₈ " (92.1)	³ / ₈ " x 1 ¹ / ₄ "	(9.5 x 31.7)	¹ / ₂ "	(12.7)
B3082- ⁵ / ₈	6" (152.4)	4 ¹ / ₂ " (114.3)	3 ¹¹ / ₁₆ " (93.7)	³ / ₈ " x 1 ¹ / ₂ "	(9.5 x 38.1)	⁹ / ₁₆ "	(14.3)
B3082- ³ / ₄	6 ⁵ / ₈ " (168.3)	4 ³ / ₄ " (117.5)	4 ³ / ₄ " (120.6)	¹ / ₂ " x 1 ¹ / ₂ "	(12.7 x 38.1)	¹¹ / ₁₆ "	(17.5)
B3082- ⁷ / ₈	7" (184.1)	5" (133.3)	4 ¹⁵ / ₁₆ " (125.4)	¹ / ₂ " x 2"	(12.7 x 50.8)	¹³ / ₁₆ "	(20.6)

Threaded Accessories



Threaded accessories offered in this section are designed to reduce installation time. A wide range of types and sizes are available for various applications.

Materials

For maximum loading design, Carbon Steel, Forged Steel, and Malleable Iron are used in the manufacturing of threaded accessories. Stainless Steel and other materials are available.

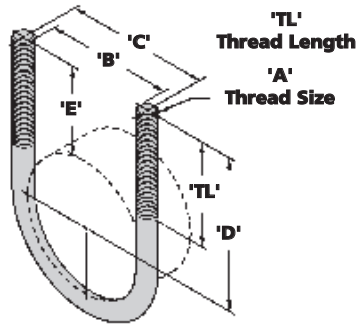
Finishes

The standard finishes for threaded accessories are plain steel (oil coated) sometimes referred to as black and Electro-Plated Zinc (ASTM B 633 SC1). Hot-Dip Galvanized After Fabrication (ASTM A 153) and other special coatings are available upon request.

Approvals (as noted)

Items in this section are Underwriters' Laboratories Listed, comply with Federal Specification WW-H-171E & A-A-1192A or Manufacturers Standardization Society MSS SP-69 SP-58.

Threaded Accessories



Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed as a support, guide or anchor for light-duty pipe.

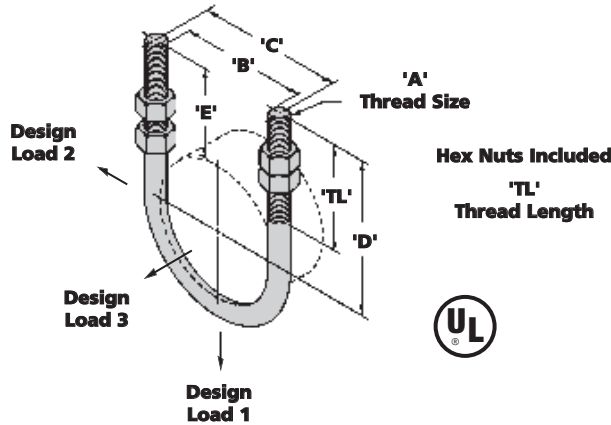
Ordering: Specify part number and finish. (Order Hex Nuts separately).

Figure B3501 Light-Duty U-Bolt

Part No.	Nominal Pipe Size		Thread Size 'A'	Thread Length 'TL'		'B'		'C'	
B3501-1/2	1/2"	(15)	1/4"-20	1 3/4"	(44.4)	1 5/16"	(23.8)	1 3/16"	(30.2)
B3501-3/4	3/4"	(20)	1/4"-20	1 3/4"	(44.4)	1 1/8"	(28.6)	1 3/8"	(34.9)
B3501-1	1"	(25)	1/4"-20	1 3/4"	(44.4)	1 3/8"	(34.9)	1 5/8"	(41.3)
B3501-1 1/4	1 1/4"	(32)	1/4"-20	1 3/4"	(44.4)	1 11/16"	(42.9)	1 15/16"	(49.2)
B3501-1 1/2	1 1/2"	(40)	1/4"-20	1 3/4"	(44.4)	2"	(50.8)	2 1/4"	(57.1)
B3501-2	2"	(50)	1/4"-20	1 3/4"	(44.4)	2 7/16"	(61.9)	2 11/16"	(68.3)
B3501-2 1/2	2 1/2"	(65)	3/8"-16	2"	(50.8)	2 15/16"	(74.6)	3 5/16"	(84.1)
B3501-3	3"	(80)	3/8"-16	2"	(50.8)	3 9/16"	(90.5)	3 15/16"	(100.0)
B3501-3 1/2	3 1/2"	(90)	3/8"-16	2"	(50.8)	4 1/16"	(103.2)	4 7/16"	(112.7)
B3501-4	4"	(100)	3/8"-16	2"	(50.8)	4 9/16"	(115.9)	4 15/16"	(125.4)
B3501-5	5"	(125)	3/8"-16	2 1/4"	(57.1)	5 5/8"	(142.9)	6"	(152.4)
B3501-6	6"	(150)	1/2"-13	2 1/4"	(57.1)	6 3/4"	(171.4)	7 1/4"	(184.1)
B3501-8	8"	(200)	1/2"-13	2 1/4"	(57.1)	8 3/4"	(222.2)	9 1/4"	(234.9)
B3501-10	10"	(250)	5/8"-11	2 1/2"	(63.5)	10 7/8"	(276.2)	11 1/2"	(292.1)
B3501-12	12"	(300)	5/8"-11	2 1/2"	(63.5)	12 7/8"	(327.0)	13 1/2"	(342.9)

Part No.	Tangent 'D'		'E'		Design Load		Wt./C	
					Lbs.	kN	Lbs.	kg
B3501-1/2	1 15/16"	(49.2)	1 1/2"	(38.1)	580	(2.58)	6	(2.7)
B3501-3/4	2 1/16"	(52.4)	1 9/16"	(39.7)	580	(2.58)	7	(3.2)
B3501-1	2 3/16"	(55.6)	1 17/32"	(38.9)	580	(2.58)	7	(3.2)
B3501-1 1/4	2 3/8"	(60.3)	1 17/32"	(38.9)	580	(2.58)	8	(3.6)
B3501-1 1/2	2 7/16"	(61.9)	1 1/2"	(38.1)	580	(2.58)	9	(4.1)
B3501-2	2 11/16"	(68.3)	1 1/2"	(38.1)	580	(2.58)	10	(4.5)
B3501-2 1/2	3 1/16"	(77.8)	1 5/8"	(41.3)	1460	(6.49)	28	(12.7)
B3501-3	3 3/8"	(85.7)	1 5/8"	(41.3)	1460	(6.49)	32	(14.5)
B3501-3 1/2	3 5/8"	(92.1)	1 5/8"	(41.3)	1460	(6.49)	35	(15.9)
B3501-4	3 7/8"	(98.4)	1 5/8"	(41.3)	1460	(6.49)	38	(17.2)
B3501-5	4 9/16"	(115.9)	1 25/32"	(45.2)	1460	(6.49)	45	(20.4)
B3501-6	5 1/16"	(128.6)	1 3/4"	(44.4)	2700	(12.01)	100	(45.3)
B3501-8	6 1/16"	(154.0)	1 3/4"	(44.4)	2700	(12.01)	124	(56.2)
B3501-10	7 1/4"	(184.1)	1 7/8"	(47.6)	4320	(19.21)	237	(107.5)
B3501-12	8 1/4"	(209.5)	1 7/8"	(47.6)	4320	(19.21)	275	(124.7)

Threaded Accessories



Material: Steel (Stainless steel available)

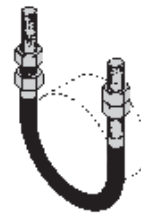
Standard Finish: Plain or Electro-Plated

Service: Designed as a support, guide, or anchor for pipe.

Ordering: Specify part number and finish.

Approvals: Underwriters' Laboratories Listed for 3/4" (20) thru 12" (300). Complies with Federal Specification WW-H-171E & A-A-1192A Type 24 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 24.

B3188NS - Non-standard (NS) U-bolts are available upon request. Specify dimensions other than standard.
B3188DI - For Ductile Iron Pipe.



B3188C
Plastic Coated

Figure B3188 Standard U-Bolt
(Available with plastic coating as B3188C-size)

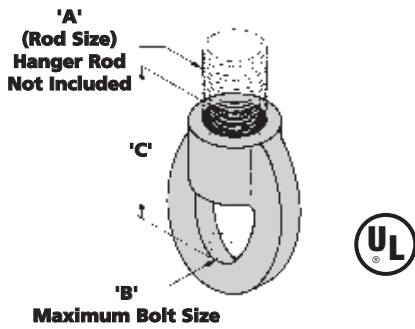
Part No.	Nominal Pipe Size		Thread Size 'A'	Thread Length 'TL'		'B'	
B3188-1/2	1/2"	(15)	1/4"-20	2 1/8"	(54.0)	15/16"	(23.8)
B3188-3/4	3/4"	(20)	1/4"-20	2 1/8"	(54.0)	1 1/8"	(28.6)
B3188-1	1"	(25)	1/4"-20	2 1/8"	(54.0)	1 3/8"	(34.9)
B3188-1 1/4	1 1/4"	(32)	3/8"-16	2 1/8"	(54.0)	1 11/16"	(42.9)
B3188-1 1/2	1 1/2"	(40)	3/8"-16	2 1/2"	(63.5)	2"	(50.8)
B3188-2	2"	(50)	3/8"-16	2 1/2"	(63.5)	2 7/16"	(61.9)
B3188-2 1/2	2 1/2"	(65)	1/2"-13	3"	(76.2)	2 15/16"	(74.6)
B3188-3	3"	(80)	1/2"-13	3"	(76.2)	3 9/16"	(90.5)
B3188-3 1/2	3 1/2"	(90)	1/2"-13	3"	(76.2)	4 1/16"	(103.2)
B3188-4	4"	(100)	1/2"-13	3"	(76.2)	4 9/16"	(115.9)
B3188-5	5"	(125)	1/2"-13	3"	(76.2)	5 21/32"	(143.6)
B3188-6	6"	(150)	5/8"-11	3 3/4"	(95.2)	6 3/4"	(171.4)
B3188-8	8"	(200)	5/8"-11	3 3/4"	(95.2)	8 3/4"	(222.2)
B3188-10	10"	(250)	3/4"-10	4"	(101.6)	10 7/8"	(276.2)
B3188-12	12"	(300)	7/8"-9	4 1/4"	(107.9)	12 7/8"	(327.0)
B3188-14	14"	(350)	7/8"-9	4 1/4"	(107.9)	14 1/8"	(358.8)
B3188-16	16"	(400)	7/8"-9	4 1/4"	(107.9)	16 1/8"	(409.6)
B3188-18	18"	(450)	1"-8	4 3/4"	(120.6)	18 1/8"	(460.4)
B3188-20	20"	(500)	1"-8	4 3/4"	(120.6)	20 1/8"	(511.2)
B3188-24	24"	(600)	1"-8	4 3/4"	(120.6)	24 1/8"	(612.8)
B3188-30	30"	(750)	1"-8	4 3/4"	(120.6)	30 1/8"	(765.2)

Figure B3188 Standard U-Bolt cont.

Part No.	'C'		Tangent 'D'		'E'		Wt./C	
							Lbs.	kg
B3188-1/2	1 ³ / ₁₆ "	(30.2)	2 ³ / ₄ "	(69.8)	2 ⁵ / ₁₆ "	(58.7)	10	(4.5)
B3188-3/4	1 ³ / ₈ "	(34.9)	2 ³ / ₄ "	(69.8)	2 ⁷ / ₃₂ "	(56.3)	11	(5.0)
B3188-1	1 ⁵ / ₈ "	(41.3)	2 ³ / ₄ "	(69.8)	2 ³ / ₃₂ "	(53.2)	11	(5.0)
B3188-1 ¹ / ₄	2 ³ / ₃₂ "	(53.2)	2 ⁷ / ₈ "	(73.0)	2 ¹ / ₃₂ "	(51.6)	28	(12.7)
B3188-1 ¹ / ₂	2 ³ / ₈ "	(60.3)	3"	(76.2)	2 ¹ / ₁₆ "	(52.4)	29	(13.1)
B3188-2	2 ¹³ / ₁₆ "	(71.4)	3 ¹ / ₄ "	(82.5)	2 ¹ / ₁₆ "	(52.4)	31	(14.0)
B3188-2 ¹ / ₂	3 ⁷ / ₁₆ "	(87.3)	3 ³ / ₄ "	(95.2)	2 ⁵ / ₁₆ "	(58.7)	72	(32.6)
B3188-3	4 ¹ / ₁₆ "	(103.2)	4"	(101.6)	2 ¹ / ₄ "	(57.1)	79	(35.8)
B3188-3 ¹ / ₂	4 ⁹ / ₁₆ "	(115.9)	4 ¹ / ₄ "	(107.9)	2 ¹ / ₄ "	(57.1)	84	(38.1)
B3188-4	5 ¹ / ₁₆ "	(128.6)	4 ¹ / ₂ "	(114.3)	2 ¹ / ₄ "	(57.1)	94	(42.6)
B3188-5	6 ⁵ / ₃₂ "	(156.3)	5"	(127.0)	2 ⁷ / ₃₂ "	(56.3)	104	(47.2)
B3188-6	7 ³ / ₈ "	(187.3)	6 ¹ / ₈ "	(155.6)	2 ¹³ / ₁₆ "	(71.4)	203	(92.1)
B3188-8	9 ³ / ₈ "	(238.1)	7 ¹ / ₈ "	(181.0)	2 ¹³ / ₁₆ "	(71.4)	241	(109.3)
B3188-10	11 ⁵ / ₈ "	(295.3)	8 ³ / ₈ "	(212.7)	3"	(76.2)	412	(186.9)
B3188-12	13 ³ / ₄ "	(349.2)	9 ⁵ / ₈ "	(244.5)	3 ¹ / ₄ "	(82.5)	661	(299.8)
B3188-14	15"	(381.0)	10 ¹ / ₄ "	(260.3)	3 ¹ / ₄ "	(82.5)	707	(320.7)
B3188-16	17"	(431.8)	11 ¹ / ₄ "	(285.7)	3 ¹ / ₄ "	(82.5)	782	(354.7)
B3188-18	19 ¹ / ₈ "	(485.8)	12 ⁵ / ₈ "	(320.7)	3 ⁵ / ₈ "	(92.1)	1344	(609.6)
B3188-20	21 ¹ / ₈ "	(536.6)	13 ⁵ / ₈ "	(346.1)	3 ⁵ / ₈ "	(92.1)	1458	(661.3)
B3188-24	25 ¹ / ₈ "	(638.2)	15 ⁵ / ₈ "	(396.9)	3 ⁵ / ₈ "	(92.1)	1687	(765.2)
B3188-30	31 ¹ / ₈ "	(790.6)	18 ⁵ / ₈ "	(473.1)	3 ⁵ / ₈ "	(92.1)	2030	(920.8)

Part No.	Design Load 1				Design Load 2		Design Load 3	
	650°F (343°C)		750°F (399°C)		650°F (343°C)		650°F (343°C)	
	Lbs.	kN	Lbs.	kN	Lbs.	kN	Lbs.	kN
B3188-1/2	580	(2.58)	454	(2.02)	145	(0.64)	180	(0.80)
B3188-3/4	580	(2.58)	454	(2.02)	145	(0.64)	300	(1.33)
B3188-1	580	(2.58)	454	(2.02)	145	(0.64)	480	(2.13)
B3188-1 ¹ / ₄	1460	(6.49)	1144	(5.09)	365	(1.62)	600	(2.67)
B3188-1 ¹ / ₂	1460	(6.49)	1144	(5.09)	365	(1.62)	600	(2.67)
B3188-2	1460	(6.49)	1144	(5.09)	365	(1.62)	720	(3.20)
B3188-2 ¹ / ₂	2700	(12.01)	2114	(9.40)	675	(3.00)	720	(3.20)
B3188-3	2700	(12.01)	2114	(9.40)	675	(3.00)	900	(4.00)
B3188-3 ¹ / ₂	2700	(12.01)	2114	(9.40)	675	(3.00)	900	(4.00)
B3188-4	2700	(12.01)	2114	(9.40)	675	(3.00)	900	(4.00)
B3188-5	2700	(12.01)	2114	(9.40)	675	(3.00)	1080	(4.80)
B3188-6	4320	(19.21)	3382	(15.04)	1080	(4.80)	1080	(4.80)
B3188-8	4320	(19.21)	3382	(15.04)	1080	(4.80)	-	-
B3188-10	6460	(28.73)	5060	(22.50)	1615	(7.18)	-	-
B3188-12	9960	(44.30)	7016	(31.21)	2490	(11.07)	-	-
B3188-14	9960	(44.30)	7016	(31.21)	2490	(11.07)	-	-
B3188-16	9960	(44.30)	7016	(31.21)	2490	(11.07)	-	-
B3188-18	11800	(52.48)	9240	(41.10)	-	-	-	-
B3188-20	11800	(52.48)	9240	(41.10)	-	-	-	-
B3188-24	11800	(52.48)	9240	(41.10)	-	-	-	-
B3188-30	11800	(52.48)	9240	(41.10)	-	-	-	-

Threaded Accessories



Material: Malleable Iron

Standard Finish: Plain or Electro-Plated

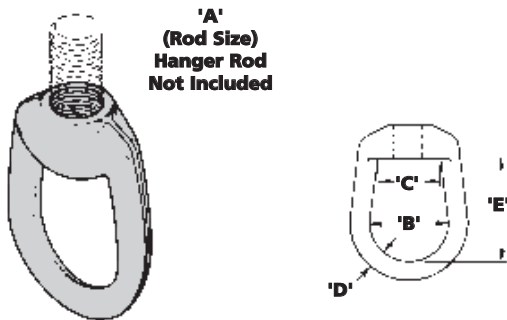
Service: Designed for use with B3175 Ring and Bolt Hanger as a non-adjustable threaded rod connection.

Ordering: Specify part number and finish.

Approvals: Underwriters' Laboratories Listed $\frac{3}{8}$ " - $\frac{3}{4}$ ".
Complies with Federal Specification WW-H-171E & A-A-1192A Type 16 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 16.

Figure B3222 Eye Socket

Part No.	Rod Size 'A'	Max. Bolt Size 'B'	'C'		Design Load		Wt./C	
					Lbs.	kN	Lbs.	kg
B3222- $\frac{1}{4}$	$\frac{1}{4}$ "-20	$\frac{1}{4}$ " (6.3)	$\frac{1}{8}$ "	(28.6)	400	(1.78)	6	(2.7)
B3222- $\frac{3}{8}$	$\frac{3}{8}$ "-16	$\frac{1}{4}$ " (6.3)	$\frac{3}{8}$ "	(34.9)	730	(3.25)	9	(4.1)
B3222- $\frac{1}{2}$	$\frac{1}{2}$ "-13	$\frac{1}{4}$ " (6.3)	$\frac{1}{2}$ "	(38.1)	1350	(6.00)	16	(7.2)
B3222- $\frac{5}{8}$	$\frac{5}{8}$ "-11	$\frac{3}{8}$ " (9.5)	$\frac{3}{4}$ "	(44.4)	1580	(7.03)	21	(9.5)
B3222- $\frac{3}{4}$	$\frac{3}{4}$ "-10	$\frac{1}{2}$ " (12.7)	2"	(50.8)	1900	(8.45)	38	(17.2)



Material: Forged Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for use on high-temperature pipe runs where a flexible connection is required.

Ordering: Specify part number and finish.

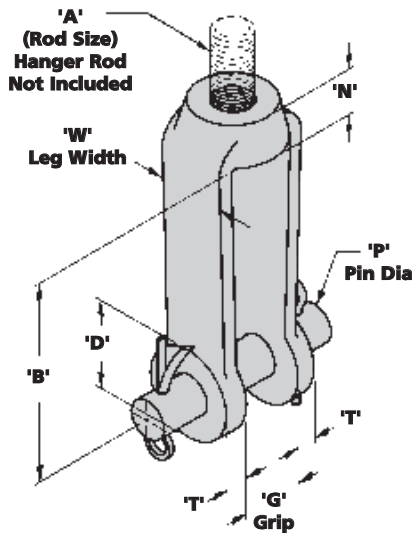
Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 17 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 17.

Figure B3200 Weldless Eye Nut
(Available with left-hand threads as B3200L-size)

Part No.	Rod Size 'A'	'B'	'C'	'D'	'E'	Design Load		Wt./C	
						650°F (343°C) Lbs. kN	750°F (399°C) Lbs. kN	Lbs.	kg
B3200- $\frac{3}{8}$	$\frac{3}{8}$ "-16	$\frac{1}{2}$ " (38.1)	$\frac{1^3}{16}$ " (30.2)	$\frac{1}{2}$ " (12.7)	2" (50.8)	730 (3.25)	572 (2.54)	66 (29.9)	
B3200- $\frac{1}{2}$	$\frac{1}{2}$ "-13	$\frac{1}{2}$ " (38.1)	$\frac{1^3}{16}$ " (30.2)	$\frac{1}{2}$ " (12.7)	2" (50.8)	1350 (6.00)	1057 (4.70)	64 (29.0)	
B3200- $\frac{5}{8}$	$\frac{5}{8}$ "-11	$\frac{1}{2}$ " (38.1)	$\frac{1^3}{16}$ " (30.2)	$\frac{1}{2}$ " (12.7)	2" (50.8)	2160 (9.61)	1692 (7.52)	62 (28.1)	
B3200- $\frac{3}{4}$	$\frac{3}{4}$ "-10	$\frac{1}{2}$ " (38.1)	$\frac{1^3}{16}$ " (30.2)	$\frac{1}{2}$ " (12.7)	2" (50.8)	3230 (14.37)	2530 (11.25)	60 (27.2)	
B3200- $\frac{7}{8}$	$\frac{7}{8}$ "-9	2" (50.8)	$\frac{1^11}{16}$ " (42.9)	$\frac{3}{4}$ " (19.1)	2^5 / ₈ " (66.7)	4480 (19.93)	3508 (15.60)	190 (86.1)	
B3200-1	1"-8	2" (50.8)	$\frac{1^11}{16}$ " (42.9)	$\frac{3}{4}$ " (19.0)	2^5 / ₈ " (66.7)	5900 (33.14)	4620 (20.55)	185 (83.8)	
B3200- $1\frac{1}{8}$	$1\frac{1}{8}$ "-7	$2\frac{1}{2}$ " (63.5)	$\frac{1^13}{16}$ " (46.0)	1" (25.4)	3^3 / ₈ " (85.7)	7450 (33.14)	5830 (25.93)	408 (184.8)	
B3200- $1\frac{1}{4}$	$1\frac{1}{4}$ "-7	$2\frac{1}{2}$ " (63.5)	$\frac{1^13}{16}$ " (46.0)	1" (25.4)	3^3 / ₈ " (85.7)	9500 (42.25)	7440 (33.09)	400 (181.2)	
B3200- $1\frac{1}{2}$	$1\frac{1}{2}$ "-6	$2\frac{1}{2}$ " (63.5)	$\frac{1^13}{16}$ " (46.0)	1" (25.4)	3^3 / ₈ " (85.7)	13800 (61.38)	10807 (48.07)	381 (172.6)	
B3200- $1\frac{3}{4}$	$1\frac{3}{4}$ "-5	4" (101.6)	4" (101.6)	$1\frac{1}{2}$ " (38.1)	6^1 / ₄ " (158.7)	18600 (82.73)	14566 (64.79)	1638 (743.0)	
B3200-2	2"-4 $\frac{1}{2}$	4" (101.6)	4" (101.6)	$1\frac{1}{2}$ " (38.1)	6^1 / ₄ " (158.7)	24600 (109.42)	19265 (87.29)	1859 (842.1)	

All dimensions in charts and on drawings are in inches. Dimensions shown in parentheses are in millimeters unless otherwise specified.

Threaded Accessories



'B'
Center of clevis pin
to underside of top

'D'
Boss Dia.

'N'
Thickness of
threaded top.

Material: Forged Steel

Standard Finish: Plain or Electro-Plated

Service: Designed as an adjustable hanger rod connection for high temperature pipe runs.

Ordering: Specify part number and finish. When ordering with hardware for sizes 3/8" thru 1 1/8", Hex Head Cap Screw and Hex Nut will be supplied. For 1 1/4" thru 2, Clevis Pin and Cotter Pins will be supplied.

Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 14 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 14.

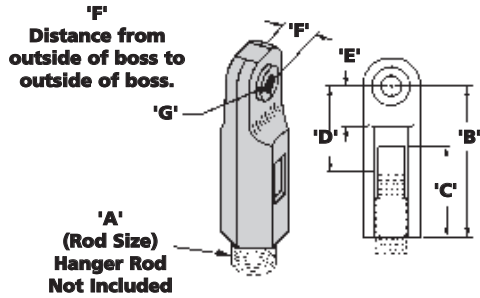
Figure B3201 Forged Steel Clevis

(Available without hardware as B3201WO-size, with left-hand threads as B3201L-size, or without hardware and with left-hand threads as B3201LWO-size)

Part No.	Rod Size 'A'	'B'	'D'	Grip 'G'	'N'	Pin Dia. 'P'
B3201-3/8	3/8"-16	3 9/16" (90.5)	1 7/16" (36.5)	1/2" (12.7)	5/8" (15.9)	1/2" (12.7)
B3201-1/2	1/2"-13	3 9/16" (90.5)	1 7/16" (36.5)	1/2" (12.7)	5/8" (15.9)	5/8" (15.9)
B3201-5/8	5/8"-11	3 9/16" (90.5)	1 7/16" (36.5)	5/8" (15.9)	5/8" (15.9)	3/4" (19.0)
B3201-3/4	3/4"-10	4" (101.6)	2 1/2" (63.5)	3/4" (19.0)	1 1/8" (28.6)	7/8" (22.2)
B3201-7/8	7/8"-9	4" (101.6)	2 1/2" (63.5)	7/8" (22.2)	1 1/8" (28.6)	1" (25.4)
B3201-1	1"-8	5 1/16" (128.6)	3" (76.2)	1" (25.4)	1 1/4" (31.7)	1 1/8" (28.6)
B3201-1 1/8	1 1/8"-7	5 1/16" (128.6)	3" (76.2)	1 1/8" (28.6)	1 1/4" (31.7)	1 1/4" (31.7)
B3201-1 1/4	1 1/4"-7	5 1/16" (128.6)	3" (76.2)	1 1/4" (31.7)	1 1/4" (31.7)	1 3/8" (34.9)
B3201-1 1/2	1 1/2"-6	6" (152.4)	3 1/2" (88.9)	1 1/2" (38.1)	1 1/2" (38.1)	1 5/8" (41.3)
B3201-1 3/4	1 3/4"-5	5 15/16" (150.8)	4" (101.6)	1 1/2" (38.1)	1 3/4" (44.4)	1 7/8" (47.6)
B3201-2	2"-4 1/2	7" (177.8)	5" (127.0)	2 1/2" (63.5)	2 1/4" (57.1)	2 1/4" (57.1)

Part No.	'T'	'W'	Design Load				Wt./C			
			650°F (343°C)		750°F (399°C)		With Pin		Without Pin	
			Lbs.	kN	Lbs.	kN	Lbs.	kg	Lbs.	kg
B3201-3/8	5/16" (7.9)	1 1/16" (27.0)	730	(3.25)	572	(2.54)	102	(46.2)	85	(38.5)
B3201-1/2	5/16" (7.9)	1 1/16" (27.0)	1350	(6.00)	1057	(4.70)	112	(50.8)	82	(37.2)
B3201-5/8	5/16" (7.9)	1 1/16" (27.0)	2160	(9.61)	1692	(7.52)	134	(60.8)	78	(35.4)
B3201-3/4	3/8" (9.5)	1 1/4" (31.7)	3230	(14.37)	2530	(11.25)	250	(113.4)	163	(73.9)
B3201-7/8	3/8" (9.5)	1 1/4" (31.7)	4480	(19.93)	3508	(15.60)	305	(138.3)	161	(73.0)
B3201-1	1/2" (12.7)	1 1/2" (38.1)	5900	(26.24)	4620	(20.55)	656	(297.5)	449	(203.6)
B3201-1 1/8	1/2" (12.7)	1 1/2" (38.1)	7450	(33.14)	5830	(25.93)	718	(325.7)	433	(196.4)
B3201-1 1/4	1/2" (12.7)	1 1/2" (38.1)	9500	(42.25)	7440	(33.09)	603	(273.5)	382	(173.3)
B3201-1 1/2	1/2" (12.7)	1 3/4" (44.4)	13800	(61.38)	10807	(48.07)	952	(431.8)	600	(272.1)
B3201-1 3/4	1/2" (12.7)	2" (50.8)	18600	(82.73)	14566	(64.79)	1357	(615.5)	800	(362.9)
B3201-2	5/8" (15.9)	2 1/2" (63.5)	24600	(109.42)	19625	(87.29)	2403	(1090.0)	1600	(725.7)

Threaded Accessories



Material: Malleable Iron

Standard Finish: Plain

Service: Designed for supporting hanger rod from beam clamps and other attachments allowing for vertical adjustment.

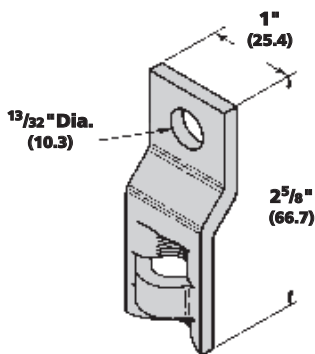
Ordering: Specify part number and finish.

Approvals: Underwriters' Laboratories Listed.

Figure B3203 Extension Piece

Part No.	Rod Size 'A'	For Nominal Pipe Sizes		'B'		'C'		'D'	
B3203-3/8	3/8"-16	3/4" to 2"	(20 to 50)	2 1/16"	(52.4)	1 1/4"	(31.7)	1 1/4"	(31.7)
B3203-1/2	1/2"-13	2 1/2" to 3 1/2"	(65 to 90)	2 1/16"	(58.7)	1 3/8"	(34.9)	1 3/8"	(34.9)
B3203-5/8	5/8"-11	4"-5"	(100 to 125)	2 7/16"	(61.9)	1 1/2"	(38.1)	1 7/16"	(36.5)
B3203-3/4	3/4"-10	6"	(150)	2 7/8"	(73.0)	1 3/4"	(44.4)	1 11/16"	(42.9)
B3203-7/8	7/8"-9	8" to 12"	(200 to 300)	3"	(76.2)	1 7/8"	(47.6)	1 3/4"	(44.4)

Part No.	'E'		'F'		'G'		Design Load		Wt./C	
							Lbs.	kN	Lbs.	kg
B3203-3/8	9/16"	(14.3)	1/2"	(12.7)	1/2"	(12.7)	730	(3.25)	18	(8.1)
B3203-1/2	1 1/16"	(17.5)	5/8"	(15.9)	1/2"	(12.7)	1350	(6.00)	37	(16.8)
B3203-5/8	3/4"	(19.0)	5/8"	(15.9)	1/2"	(12.7)	1550	(6.89)	42	(19.0)
B3203-3/4	7/8"	(22.2)	5/8"	(15.9)	1/2"	(12.7)	2100	(9.34)	56	(25.4)
B3203-7/8	7/8"	(22.2)	3/4"	(19.0)	9/16"	(14.3)	2350	(10.45)	75	(34.0)



Material: Steel

Standard Finish: Electro-Plated

Service: Designed for attachment of 3/8" hanger rod to structure.

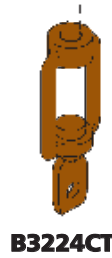
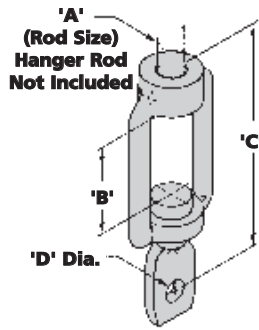
Ordering: Specify part number and finish.

Approvals: Underwriters' Laboratories Listed for up to 2" (50) pipe.

Design Load: 610 lbs (2.71kN)

Figure B3223-3/8" Offset Eye Socket

Threaded Accessories



Material: Malleable Iron

Standard Finish: Plain or Electro-Plated

Service: Designed to provide vertical rod adjustment when used with B3175 Ring and Bolt Hanger.

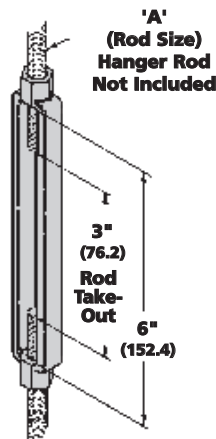
Ordering: Specify part number and finish.

Approvals: Complies with Federal Specifications WW-H-171E & A-A-1192A Type 15 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 15.

Figure B3224 Hanger Adjuster

(Available with Dura-Copper coating as B3224CT-3/8 or 1/2 only)

Part No.	Rod Size 'A'	For Nominal Pipe Sizes		'B'	'C'	'D'	Design Load		Wt./C	
							Lbs.	kN	Lbs.	kg
B3224-1/4	1/4"-20	3/8"	(10)	1 3/4" (44.4)	3 7/8" (98.4)	7/32" (5.5)	230	(1.02)	9	(4.1)
B3224-3/8	3/8"-16	1/2" to 2"	(15 to 50)	1 3/4" (44.4)	3 7/8" (98.4)	13/32" (10.3)	730	(3.25)	28	(12.7)
B3224-1/2	1/2"-13	2 1/2" to 3 1/2"	(65 to 90)	1 3/4" (44.4)	3 7/8" (98.4)	13/32" (10.3)	730	(3.25)	29	(13.1)
B3224-5/8	5/8"-11	4" to 5"	(100 to 125)	2 1/4" (57.1)	5 1/8" (130.2)	1 1/2" (12.7)	730	(3.25)	30	(13.6)
B3224-3/4	3/4"-10	6"	(150)	2 1/4" (57.1)	5 1/8" (130.2)	9/16" (14.3)	860	(3.82)	74	(33.5)



Material: Forged Steel

Standard Finish: Plain or Electro-Plated

Service: Designed as a hanger rod connection with up to 6" (152.4) adjustment.

Ordering: Specify part number and finish.

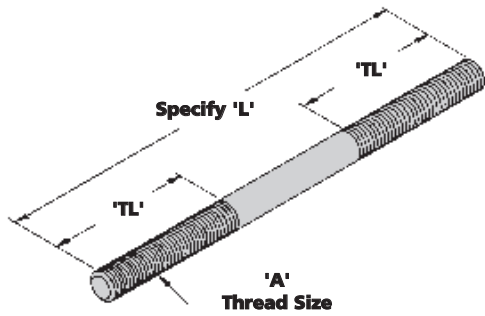
Approvals: Complies with Federal Specification WW-H-171E & A-A-1192A Type 13 and Manufacturers Standardization Society MSS SP-69 & SP-58 Type 13.

Note: 3" (76.2), 9" (228.6) and 12" (304.8) openings are available on special request. Turnbuckle has one end that is right-handed thread, other end is left-handed thread.

Figure B3202 Turnbuckle

Part No.	Rod Size 'A'	Design Load				Wt./C	
		650°F (343°C)		750°F (399°C)		Lbs.	kg
		Lbs.	kN	Lbs.	kN		
B3202-3/8	3/8"-16	730	(3.25)	572	(2.54)	38	(17.2)
B3202-1/2	1/2"-13	1350	(6.00)	1057	(4.70)	54	(24.5)
B3202-5/8	5/8"-11	2160	(9.61)	1692	(7.52)	91	(41.3)
B3202-3/4	3/4"-10	3230	(14.37)	2530	(11.25)	130	(58.9)
B3202-7/8	7/8"-9	4480	(19.93)	3508	(15.60)	202	(91.6)
B3202-1	1"-8	5900	(26.24)	4620	(20.55)	270	(122.5)
B3202-1 1/8	1 1/8"-7	7450	(33.14)	5830	(25.93)	354	(160.6)
B3202-1 1/4	1 1/4"-7	9500	(42.25)	7440	(33.09)	445	(201.8)
B3202-1 1/2	1 1/2"-6	13800	(61.38)	10807	(48.07)	640	(290.3)
B3202-1 3/4	1 3/4"-5	18600	(82.73)	14566	(64.79)	1100	(498.9)
B3202-2	2"-4 1/2	24600	(109.42)	19625	(87.29)	1490	(675.8)

Threaded Accessories



Material: Steel

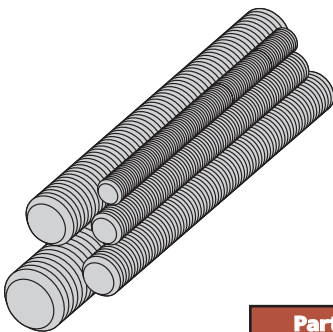
Standard Finish: Plain or Electro-Plated

Service: Designed for use in pipe hanger assemblies.

Ordering: Specify part number, length and finish. (B3205L for left hand threads on one end)

Figure B3205 Threaded Rod (right-hand threads - both ends)
(Available with right & left-hand threads as B3205L-size)

Part No.	Thread Size 'A'	Standard Thread Length 'TL'		Design Load			
				650°F (343°C)		750°F (399°C)	
				Lbs.	kN	Lbs.	kN
B3205-3/8 x 'L'	3/8"-16	2 1/2"	(63.5)	730	(3.25)	572	(2.54)
B3205-1/2 x 'L'	1/2"-13	2 1/2"	(63.5)	1350	(6.00)	1057	(4.70)
B3205-5/8 x 'L'	5/8"-11	2 1/2"	(63.5)	2160	(9.61)	1692	(7.52)
B3205-3/4 x 'L'	3/4"-10	3"	(76.2)	3230	(14.37)	2530	(11.25)
B3205-7/8 x 'L'	7/8"-9	3 1/2"	(88.9)	4480	(19.93)	3508	(15.60)
B3205-1 x 'L'	1"-8	4"	(101.6)	5900	(26.24)	4620	(20.55)
B3205-1 1/8 x 'L'	1 1/8"-7	4 1/2"	(114.3)	7450	(33.14)	5830	(25.93)
B3205-1 1/4 x 'L'	1 1/4"-7	5"	(127.0)	9500	(42.25)	7440	(33.09)
B3205-1 1/2 x 'L'	1 1/2"-6	6"	(152.4)	13800	(61.38)	10807	(48.07)
B3205-1 3/4 x 'L'	1 3/4"-5	7"	(177.8)	18600	(82.73)	14566	(64.79)
B3205-2 x 'L'	2"-4 1/2	8"	(203.2)	24600	(109.42)	19625	(87.29)
B3205-2 1/4 x 'L'	2 1/4"-4 1/2	9"	(228.6)	32300	(143.67)	25295	(112.51)
B3205-2 1/2 x 'L'	2 1/2"-4	10"	(254.0)	39800	(177.03)	31169	(138.64)
B3205-2 3/4 x 'L'	2 3/4"-4	11"	(279.4)	49400	(219.73)	38687	(172.08)
B3205-3 x 'L'	3"-4	12"	(304.8)	60100	(267.32)	47066	(209.35)
B3205-3 1/4 x 'L'	3 1/4"-8UN	13"	(330.2)	71900	(319.81)	56307	(250.45)
B3205-3 1/2 x 'L'	3 1/2"-8UN	14"	(355.6)	84700	(376.74)	66331	(295.04)
B3205-3 3/4 x 'L'	3 3/4"-8UN	15"	(381.0)	98500	(438.13)	77139	(343.11)



Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for use in pipe hanger assemblies.

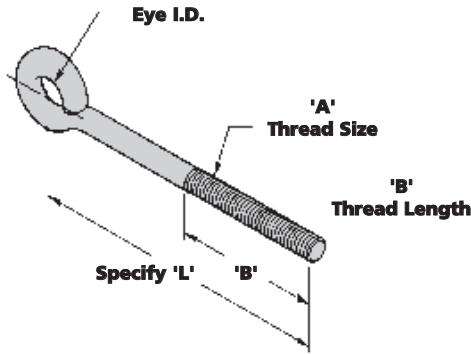
Standard Lengths 'L': 36" (91.4cm), 72" (182.9cm), 120" (304.8cm), 144" (365.7cm)

Ordering: Specify part number, length and finish.

Part No. & Size	Threads Per Inch	Recommended Load		Wt./C Ft.	
		Lbs.	kN	Lbs.	kg
ATR 1/4" x 'L'	20	240	(1.07)	12	(5.44)
ATR 5/16" x 'L'	18	400	(1.78)	19	(8.62)
ATR 3/8" x 'L'	16	730	(3.24)	29	(13.15)
ATR 1/2" x 'L'	13	1350	(6.00)	53	(24.04)
ATR 5/8" x 'L'	11	2160	(9.60)	89	(40.37)
ATR 3/4" x 'L'	10	3230	(14.37)	123	(55.79)
ATR 7/8" x 'L'	9	4480	(19.93)	170	(77.11)
ATR 1" x 'L'	8	5900	(26.24)	225	(102.06)

All dimensions in charts and on drawings are in inches. Dimensions shown in parentheses are in millimeters unless otherwise specified.

Threaded Accessories



Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for use in hanger supports to eliminate possible bending of threaded rod.

Ordering: Specify part number, length and finish.

Figure B3210 Eye Rod (right-hand threads)
(Available with left-hand threads as B3210L-size)

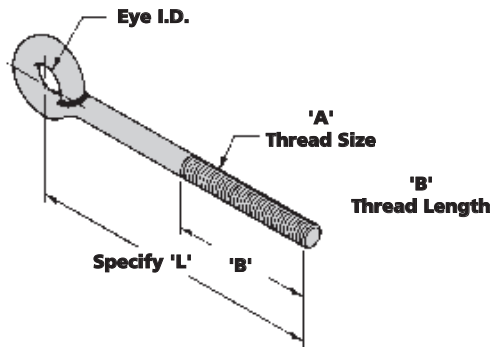


Figure B3211 Welded Eye Rod (right-hand threads)
(Available with left-hand threads as B3211L-size)

Part No.		Thread Size 'A'	Thread Length 'B'	Eye I.D.		Design Load					
						B3210 650°F (343°C)		B3211			
						Lbs.	kN	Lbs.	kN	Lbs.	kN
B3210-3/8 x 'L'	B3211-3/8 x 'L'	3/8"-16	2 1/2" (63.5)	1/2"	(12.7)	240	(1.07)	730	(3.25)	572	(2.54)
B3210-1/2 x 'L'	B3211-1/2 x 'L'	1/2"-13	2 1/2" (63.5)	5/8"	(15.9)	440	(1.96)	1350	(6.00)	1057	(4.70)
B3210-5/8 x 'L'	B3211-5/8 x 'L'	5/8"-11	2 1/2" (63.5)	3/4"	(19.0)	705	(3.13)	2160	(9.61)	1692	(7.52)
B3210-3/4 x 'L'	B3211-3/4 x 'L'	3/4"-10	3" (76.2)	7/8"	(22.2)	1050	(4.67)	3230	(14.37)	2530	(11.25)
B3210-7/8 x 'L'	B3211-7/8 x 'L'	7/8"-9	3 1/2" (88.9)	1"	(25.4)	1470	(6.54)	4480	(19.93)	3508	(15.60)
B3210-1 x 'L'	B3211-1 x 'L'	1"-8	4" (101.6)	1 1/8"	(28.6)	1940	(8.63)	5900	(26.24)	4620	(20.55)
B3210-1 1/8 x 'L'	B3211-1 1/8 x 'L'	1 1/8"-7	4 1/2" (114.3)	1 1/4"	(31.7)	2430	(10.81)	7450	(33.14)	5830	(25.93)
B3210-1 1/4 x 'L'	B3211-1 1/4 x 'L'	1 1/4"-7	5" (127.0)	1 3/8"	(34.9)	3120	(13.88)	9500	(42.25)	7440	(33.09)
B3210-1 1/2 x 'L'	B3211-1 1/2 x 'L'	1 1/2"-6	6" (152.4)	1 5/8"	(41.3)	4650	(20.68)	13800	(61.38)	10807	(48.07)
B3210-1 3/4 x 'L'	B3211-1 3/4 x 'L'	1 3/4"-5	7" (177.8)	2"	(50.8)	6380	(28.38)	18600	(82.73)	14566	(64.79)
B3210-2 x 'L'	B3211-2 x 'L'	2"-4 1/2	8" (203.2)	2 1/4"	(57.1)	8280	(36.83)	24600	(109.42)	19625	(87.29)

Threaded Accessories

Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for use in hanger supports where a movement joint is required.

Ordering: Specify part number, length and finish.

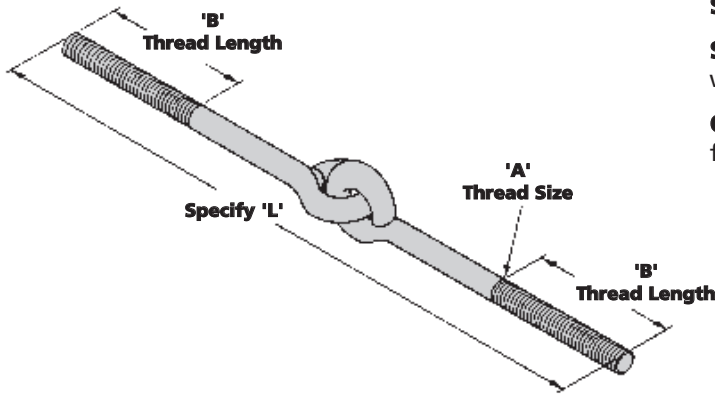


Figure B3210X Linked Eye Rods (Right-hand threads-both ends)
(Available with right & left-hand threads as B3210XL-size)

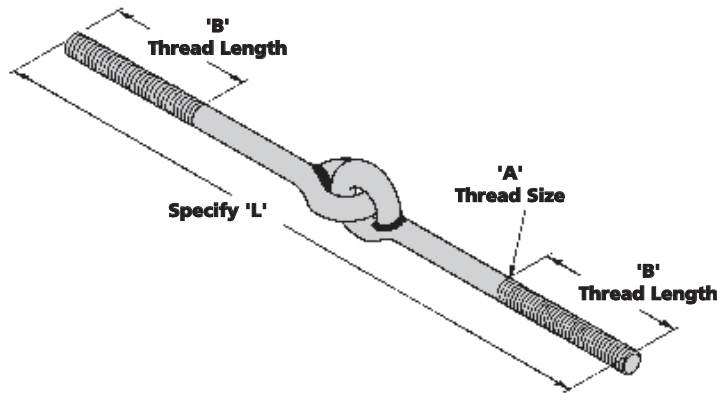
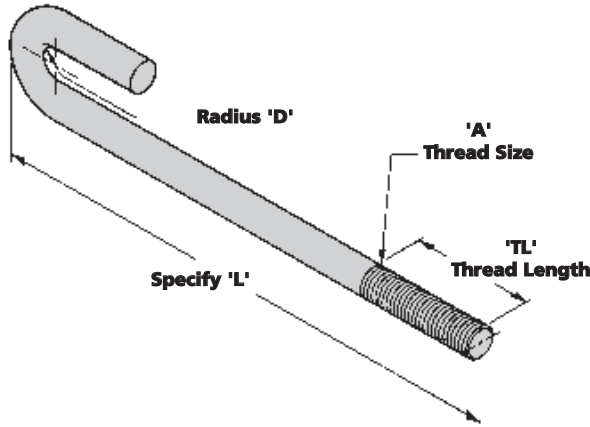


Figure B3211X Welded Linked Eye Rods (Right-hand threads-both ends)
(Available with right & left-hand threads as B3211XL-size)

Part No.		Thread Size 'A'	Thread Length 'B'	Eye I.D.		Design Load					
						B3210X 650°F (343°C)		B3211X 650°F (343°C)		750°F (399°C)	
						Lbs.	kN	Lbs.	kN	Lbs.	kN
B3210X- ³ / ₈ x 'L'	B3211X- ³ / ₈ x 'L'	³ / ₈ "-16	2 ¹ / ₂ " (63.5)	¹ / ₂ " (12.7)		240	(1.07)	730	(3.25)	572	(2.54)
B3210X- ¹ / ₂ x 'L'	B3211X- ¹ / ₂ x 'L'	¹ / ₂ "-13	2 ¹ / ₂ " (63.5)	⁵ / ₈ " (15.9)		440	(1.96)	1350	(6.00)	1057	(4.70)
B3210X- ⁵ / ₈ x 'L'	B3211X- ⁵ / ₈ x 'L'	⁵ / ₈ "-11	2 ¹ / ₂ " (63.5)	³ / ₄ " (19.0)		705	(3.13)	2160	(9.61)	1692	(7.52)
B3210X- ³ / ₄ x 'L'	B3211X- ³ / ₄ x 'L'	³ / ₄ "-10	3" (76.2)	⁷ / ₈ " (22.2)		1050	(4.67)	3230	(14.37)	2530	(11.25)
B3210X- ⁷ / ₈ x 'L'	B3211X- ⁷ / ₈ x 'L'	⁷ / ₈ "-9	3 ¹ / ₂ " (88.9)	1" (25.4)		1470	(6.54)	4480	(19.93)	3508	(15.60)
B3210X-1 x 'L'	B3211X-1 x 'L'	1"-8	4" (101.6)	1 ¹ / ₈ " (28.6)		1940	(8.63)	5900	(26.24)	4620	(20.55)
B3210X-1 ¹ / ₈ x 'L'	B3211X-1 ¹ / ₈ x 'L'	1 ¹ / ₈ "-7	4 ¹ / ₂ " (114.3)	1 ¹ / ₄ " (31.7)		2430	(10.81)	7450	(33.14)	5830	(25.93)
B3210X-1 ¹ / ₄ x 'L'	B3211X-1 ¹ / ₄ x 'L'	1 ¹ / ₄ "-7	5" (127.0)	1 ³ / ₈ " (34.9)		3120	(13.88)	9500	(42.25)	7440	(33.09)
B3210X-1 ¹ / ₂ x 'L'	B3211X-1 ¹ / ₂ x 'L'	1 ¹ / ₂ "-6	6" (152.4)	1 ⁵ / ₈ " (41.3)		4650	(20.68)	13800	(61.38)	10807	(48.07)
B3210X-1 ³ / ₄ x 'L'	B3211X-1 ³ / ₄ x 'L'	1 ³ / ₄ "-5	7" (177.8)	2" (50.8)		6380	(28.38)	18600	(82.73)	14566	(64.79)
B3210X-2 x 'L'	B3211X-2 x 'L'	2"-4 ¹ / ₂	8" (203.2)	2 ¹ / ₄ " (57.1)		8280	(36.83)	24600	(109.42)	19625	(87.29)

Threaded Accessories



Material: Steel

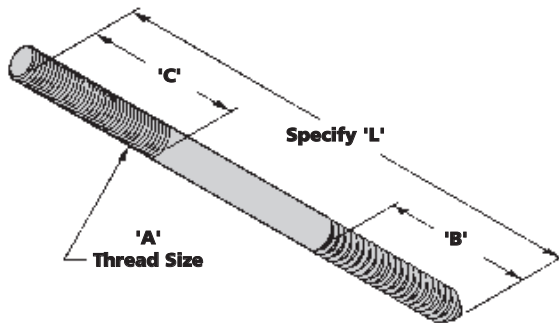
Standard Finish: Plain or Electro-Plated

Service: Designed for attaching to a beam flange or purlin.

Ordering: Specify part number, length and finish.

Figure B3212 J-Bolt

Part No.	Thread Size 'A'	Thread Length 'TL'		Radius 'D'		Design Load	
						Lbs.	kg
B3212- ³ / ₈ x 'L'	³ / ₈ "-16	2"	(50.8)	¹ / ₂ "	(12.7)	240	(1.07)
B3212- ¹ / ₂ x 'L'	¹ / ₂ "-13	2"	(50.8)	⁵ / ₈ "	(15.9)	440	(1.96)
B3212- ⁵ / ₈ x 'L'	⁵ / ₈ "-11	2 ¹ / ₂ "	(63.5)	³ / ₄ "	(19.0)	705	(3.13)
B3212- ³ / ₄ x 'L'	³ / ₄ "-10	2 ¹ / ₂ "	(63.5)	⁷ / ₈ "	(22.2)	1050	(4.67)
B3212- ⁷ / ₈ x 'L'	⁷ / ₈ "-9	2 ¹ / ₂ "	(63.5)	1"	(25.4)	1470	(6.54)



Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for suspending pipe supports from wood structures.

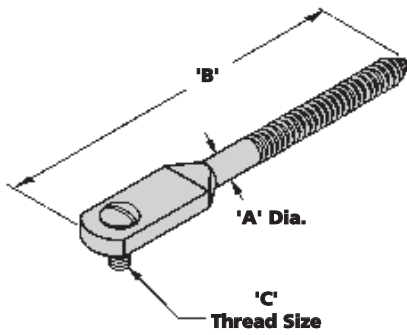
Ordering: Specify part number, rod size, length and finish.

Figure B3213 Coach Screw Rod

Part No.	Thread Size 'A'	Standard Rod Lengths 'L'		Coach Screw Thread Length 'B'		Rod Thread Length 'C'		Design Load	
								Lbs.	kg
B3213- ³ / ₈ x 'L'	³ / ₈ "-16	*3 ¹ / ₂ ", 6", 8", 10", 12"	(88.9, 152.4, 203.2, 254.0, 304.8)	2"	(50.8)	2"	(50.8)	390	(1.73)
B3213- ¹ / ₂ x 'L'	¹ / ₂ "-13	*3 ¹ / ₂ ", 6", 8", 10", 12"	(88.9, 152.4, 203.2, 254.0, 304.8)	2 ¹ / ₂ "	(63.5)	2 ¹ / ₂ "	(63.5)	640	(2.84)

*³/₈ x 3¹/₂ and ¹/₂ x 3¹/₂ will have a coach screw thread length of 2" (50.8) and a rod thread length of 1" (25.4). Design Load is based on proper installation and solid wood.

Threaded Accessories



Material: Steel

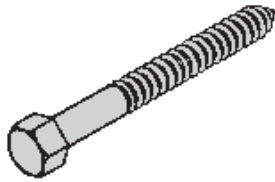
Standard Finish: Plain or Electro-Plated

Service: Designed for attaching light-duty hangers to wood structures.

Ordering: Specify part number, length and finish.

Figure B3227 Flat End Lag Screw

Part No.	'A'		'B'		'C'	Wt./C	
						Lbs.	kg
B3227-1/4	1/4"	(6.3)	3"	(76.2)	#10-24	4	(1.8)
B3227-5/16	5/16"	(7.9)	3"	(76.2)	1/4"-20	6	(2.7)
B3227-3/8	3/8"	(9.5)	4"	(101.6)	1/4"-20	11	(5.0)
B3227-1/2	1/2"	(12.7)	5"	(127.0)	5/16"-18	30	(13.6)
B3227-5/8	5/8"	(15.9)	5 1/2"	(139.7)	3/8"-16	48	(21.8)



Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for use in wood structures.

Ordering: Specify part number and finish.
B3228-Bolt Diameter x Length

Figure B3228 Hex Head Lag Bolt

Length	Bolt Diameter and Wt./C										
	1/4"	(6.3)	3/8"	(9.5)	1/2"	(12.7)	5/8"	(15.9)	3/4"	(19.0)	
1 1/2"	(38.1)	2.3	(1.0)	6.0	(2.7)	11.8	(5.3)	19.4	(8.8)	32.3	(14.6)
2"	(50.8)	2.8	(1.3)	7.0	(3.2)	14.4	(6.5)	23.2	(10.5)	38.3	(17.4)
2 1/2"	(63.5)	3.3	(1.5)	8.3	(3.7)	16.2	(7.3)	27.0	(12.2)	44.0	(19.9)
3"	(76.2)	3.9	(1.7)	9.8	(4.4)	18.6	(8.4)	31.0	(14.0)	47.7	(21.6)
3 1/2"	(88.9)	4.4	(2.0)	11.4	(5.2)	21.2	(9.6)	34.8	(15.8)	56.3	(25.5)
4"	(127.0)	5.0	(2.2)	12.5	(5.7)	23.3	(10.5)	37.6	(17.0)	58.5	(26.5)
4 1/2"	(114.3)	5.7	(2.6)	14.0	(6.3)	26.1	(11.8)	42.6	(19.3)	64.0	(29.0)
5"	(127.0)	6.3	(2.8)	15.4	(7.0)	29.0	(13.1)	45.5	(20.6)	68.0	(30.8)
5 1/2"	(139.7)	7.0	(3.2)	16.4	(7.4)	31.5	(14.3)	49.3	(22.3)	74.0	(33.5)
6"	(152.4)	7.4	(3.3)	18.3	(8.3)	34.0	(15.4)	53.0	(24.0)	77.0	(34.9)



Material: Steel

Standard Finish: Electro-Plated

Service: For fastening light load attachments to wood beams.

Ordering: Specify part number and finish.

Weight: Wt./C 1.1 lbs. (.5kg)

Figure DS 16 x 2 Drive Screw

Threaded Accessories

Figure B655 Steel Rod Coupling

Part No.	Size	Length		Design Load		Wt./C	
				Lbs.	kN	Lbs.	kg
B655-1/4	1/4"-20	7/8"	(22.2)	300	(1.33)	1.9	(.86)
B655-5/16	5/16"-18	7/8"	(22.2)	475	(2.11)	1.8	(.81)
B655-3/8	3/8"-16	1 1/8"	(28.6)	730	(3.25)	3.6	(1.63)
B655-1/2	1/2"-13	1 3/4"	(44.4)	1350	(6.00)	11.3	(5.12)
B655-5/8	5/8"-11	2 1/8"	(54.0)	2160	(9.61)	17.6	(7.98)
B655-3/4	3/4"-10	2 1/4"	(57.1)	3230	(14.37)	28.1	(12.74)
B655-7/8	7/8"-9	2 1/2"	(63.5)	4480	(19.93)	57.2	(25.94)
B655-1	1"-8	2 3/4"	(69.8)	5900	(26.24)	73.7	(33.43)



B655

Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed for coupling two hanger rods of equal or reduced rod sizes.

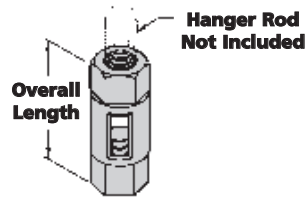
Ordering: Specify part number and finish.

Figure B656 Steel Reducing Rod Coupling

Part No.	Size	Length		Design Load		Wt./C	
				Lbs.	kN	Lbs.	kg
B656-3/8 x 1/4	3/8"-16 & 1/4"-20	1"	(25.4)	300	(1.33)	3.7	(1.68)
B656-1/2 x 3/8	1/2"-13 & 3/8"-16	1 1/4"	(31.7)	730	(3.25)	6.6	(2.99)
B656-5/8 x 1/2	5/8"-11 & 1/2"-13	1 1/4"	(31.7)	1350	(6.00)	11.6	(5.26)
B656-3/4 x 5/8	3/4"-10 & 5/8"-11	1 1/2"	(38.1)	2160	(9.61)	20.6	(9.34)
B656-7/8 x 3/4	7/8"-9 & 3/4"-10	1 3/4"	(44.4)	3230	(14.37)	39.4	(17.87)



B656



Material: Malleable Iron

Standard Finish: Plain or Electro-Plated

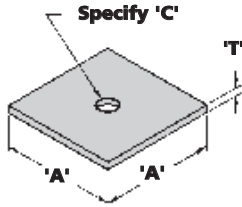
Service: Designed for coupling two hanger rods of equal or reduced rod sizes.

Ordering: Specify part number and finish.

Figure B3220 Rod Coupling

Part No.	For Rod Size	Overall Length		Design Load		Wt./C	
				Lbs.	kN	Lbs.	kg
B3220-1/4	1/4"-20	1 3/8"	(34.9)	300	(1.33)	6	(2.7)
B3220-3/8 x 1/4	3/8"-16 to 1/4"-20	1 5/8"	(41.3)	300	(1.33)	11	(5.0)
B3220-3/8	3/8"-16	1 5/8"	(41.3)	730	(3.25)	10	(4.5)
B3220-1/2 x 3/8	1/2"-13 to 3/8"-16	2 1/8"	(54.0)	730	(3.25)	20	(9.1)
B3220-1/2	1/2"-13	2 1/8"	(54.0)	1350	(6.00)	20	(9.1)
B3220-5/8	5/8"-11	2 1/2"	(63.5)	2160	(9.61)	32	(14.5)
B3220-3/4	3/4"-10	2 5/8"	(66.7)	3230	(14.37)	42	(19.0)
B3220-7/8	7/8"-9	3 3/16"	(55.6)	4480	(19.93)	91	(41.3)
B3220-1	1"-8	2 3/4"	(69.8)	5900	(26.24)	100	(45.3)

Threaded Accessories



Material: Steel

Standard Finish: Plain or Electro-Plated

Service: Designed as a heavy-duty washer to suspend hanger rods.

Ordering: Specify part number, hole size and finish.

Figure B3248 Steel Washer Plate

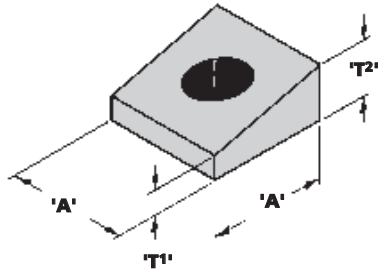
Part No.	'A'		'T'		'C'	Wt./C	
						Lbs.	kg
B3248-2 x 2 x 1/8	2"	(50.8)	1/8"	(3.2)	Specify Hole Size As Shown In Hole Size Chart	14	(6.3)
B3248-3 x 3 x 1/8	3"	(76.2)	1/8"	(3.2)		32	(14.5)
B3248-4 x 4 x 1/8	4"	(101.6)	1/8"	(3.2)		57	(25.8)
B3248-5 x 5 x 1/8	5"	(127.0)	1/8"	(3.2)		87	(39.4)
B3248-6 x 6 x 1/8	6"	(152.4)	1/8"	(3.2)		128	(58.0)
B3248-2 x 2 x 3/16	2"	(50.8)	3/16"	(3.2)		21	(9.5)
B3248-3 x 3 x 3/16	3"	(76.2)	3/16"	(4.8)		48	(21.8)
B3248-4 x 4 x 3/16	4"	(101.6)	3/16"	(4.8)		84	(38.1)
B3248-5 x 5 x 3/16	5"	(127.0)	3/16"	(4.8)		133	(60.3)
B3248-6 x 6 x 3/16	6"	(152.4)	3/16"	(4.8)		191	(86.6)
B3248-2 x 2 x 1/4	2"	(50.8)	1/4"	(6.3)		28	(12.7)
B3248-3 x 3 x 1/4	3"	(76.2)	1/4"	(6.3)		64	(29.0)
B3248-4 x 4 x 1/4	4"	(101.6)	1/4"	(6.3)		113	(51.2)
B3248-5 x 5 x 1/4	5"	(127.0)	1/4"	(6.3)		177	(80.3)
B3248-6 x 6 x 1/4	6"	(152.4)	1/4"	(6.3)		255	(115.6)
B3248-3 x 3 x 3/8	3"	(76.2)	3/8"	(9.5)		96	(43.5)
B3248-4 x 4 x 3/8	4"	(101.6)	3/8"	(9.5)		170	(77.1)
B3248-5 x 5 x 3/8	5"	(127.0)	3/8"	(9.5)		266	(120.6)
B3248-6 x 6 x 3/8	6"	(152.4)	3/8"	(9.5)		383	(173.7)
B3248-4 x 4 x 1/2	4"	(101.6)	1/2"	(12.7)		226	(102.5)
B3248-5 x 5 x 1/2	5"	(127.0)	1/2"	(12.7)	354	(160.6)	
B3248-6 x 6 x 1/2	6"	(152.4)	1/2"	(12.7)	510	(231.3)	
B3248-8 x 8 x 1/2	8"	(203.2)	1/2"	(12.7)	906	(410.9)	

Hole Size Chart

Rod Size	Hole Size	
1/4"	5/16"	(7.9)
5/16"	3/8"	(9.5)
3/8"	7/16"	(11.1)
1/2"	9/16"	(14.3)
5/8"	1 1/16"	(17.4)
3/4"	1 3/16"	(20.6)
7/8"	1 5/16"	(23.8)
1"	1 1/8"	(28.6)
1 1/8"	1 1/4"	(31.7)
1 1/4"	1 3/8"	(34.9)
1 1/2"	1 5/8"	(41.3)
1 3/4"	1 7/8"	(47.6)
2"	2 1/8"	(54.0)

All dimensions in charts and on drawings are in inches. Dimensions shown in parentheses are in millimeters unless otherwise specified.

Threaded Accessories



Material: Malleable Iron

Standard Finish: Plain or Electro-Plated

Service: Designed for attaching bolts to the taper of an I-beam or channel flange.

Ordering: Specify part number and finish.

Figure B3234 Bevel Washer

Part No.	For Bolt Size	'A'		'T ¹ '		'T ² '		Wt./C	
								Lbs.	kg
B3234- ³ / ₈	³ / ₈ "-16	1 ¹ / ₄ "	(31.7)	⁵ / ₃₂ "	(3.9)	¹¹ / ₃₂ "	(8.7)	9	(4.1)
B3234- ¹ / ₂	¹ / ₂ "-13	1 ¹ / ₄ "	(31.7)	⁵ / ₃₂ "	(3.9)	¹¹ / ₃₂ "	(8.7)	9	(4.1)
B3234- ⁵ / ₈	⁵ / ₈ "-11	1 ¹ / ₂ "	(38.1)	⁵ / ₃₂ "	(3.9)	¹³ / ₃₂ "	(10.3)	14	(6.3)
B3234- ³ / ₄	³ / ₄ "-10	1 ¹ / ₂ "	(38.1)	⁷ / ₃₂ "	(5.5)	¹⁵ / ₃₂ "	(11.9)	16	(7.2)
B3234- ⁷ / ₈	⁷ / ₈ "-9	2"	(50.8)	⁷ / ₃₂ "	(5.5)	⁹ / ₁₆ "	(14.3)	33	(14.9)
B3234-1	1"-8	2"	(50.8)	⁷ / ₃₂ "	(5.5)	⁹ / ₁₆ "	(14.3)	31	(14.0)
B3234-1 ¹ / ₈	1 ¹ / ₈ "-7	2 ¹ / ₄ "	(57.1)	⁹ / ₃₂ "	(7.1)	⁵ / ₈ "	(15.9)	48	(21.8)
B3234-1 ¹ / ₄	1 ¹ / ₄ "-7	2 ¹ / ₂ "	(63.5)	⁵ / ₁₆ "	(7.9)	²³ / ₃₂ "	(18.2)	67	(30.4)

Vibra Trol®



To address the ever increasing issue of controlling/dampening vibration in mechanical, refrigeration, and HVAC installations, Cooper B-Line Inc. offers the following vibration and isolation products. It is our continuing effort to offer industry with quality support products that meet the demands of today's construction environment.

The following pages depict isolation and vibration control products that are commonly specified and required on piping and equipment, but not limited to, mechanical rooms. As an aid in choosing the proper vibration control device, the chart shown on the following page is a reference for obtaining Vibration Isolation Efficiency. Considerations must be given to the desired deflection and the amount of disturbing frequency (R.P.M.).

Selection

Disturbing Frequency (RPM)	Isolator Deflection						VIBRATION ISOLATION EFFICIENCY
	1/16"	1/8"	1/4"	1/2"	1"	2"	
250-299	N/R	N/R	N/R	N/R	N/R	N/R	
300-349	N/R	N/R	N/R	N/R	N/R	76%	
350-399	N/R	N/R	N/R	N/R	N/R	83%	
400-449	N/R	N/R	N/R	N/R	74%	87%	
450-499	N/R	N/R	N/R	N/R	79%	90%	
500-599	N/R	N/R	N/R	N/R	83%	92%	
600-699	N/R	N/R	N/R	75%	89%	95%	
700-799	N/R	N/R	N/R	83%	92%	96%	
800-899	N/R	N/R	N/R	87%	94%	97%	
900-999	N/R	N/R	78%	90%	95%	98%	
1000-1099	N/R	N/R	83%	92%	96%	98%	
1100-1199	N/R	N/R	86%	94%	97%	99%	
1200-1299	N/R	83%	89%	95%	97%	99%	
1300-1399	N/R	86%	91%	97%	98%	99%	
1400-1499	N/R	89%	92%	97%	98%	99%	
1500-1599	N/R	90%	93%	97%	99%	99%	
1600-1699	N/R	91%	94%	97%	99%	99%	
1700-1799	75%	93%	95%	97%	99%	99%	
1800-1899	78%	93%	95%	98%	99%	99%	
1900-1999	80%	94%	96%	98%	99%	99%	
2000-2249	82%	95%	96%	98%	99%	99%	
2250-2499	85%	95%	97%	98%	99%	99%	
2500-2999	87%	96%	97%	98%	99%	99%	
3000-3499	88%	97%	98%	99%	99%	99%	
3500-3999	90%	98%	98%	99%	99%	99%	

N/R = Not Recommended

Critical Installations 96% to 99% Vibration Isolation Efficiency recommended (only 1% to 4% of disturbing vibration transmitted).

Typical installations: TV and Radio Broadcast Studios, Concert Halls, Libraries, Churches, Hospitals, Schools and Universities, Hotels, Private Offices, Theaters, Recording Studios

Standard Installations 90% to 95% Vibration Isolation Efficiency recommended (only 5% to 10% of disturbing vibration transmitted).

Typical installations: Computer Equipment Areas, Restaurants, Shopping Malls, Gymnasiums, Health Clubs and Spas, Sports Arenas, Indoor Swimming Pools, Building Service Areas, Night Clubs, General Office Buildings

Non-Critical Installations 75% to 89% Vibration Isolation Efficiency recommended (only 11% to 24% of disturbing vibration transmitted).

Typical installations: In factory Offices, Motor Vehicle Inspection Stations and Facilities, Laundramats, Roller and Ice Skating Rinks, Factory Production Areas

For 1/16" (1.6) deflection: Specify B-Line series NNP Ribbed Neoprene Pads.

For 1/8" (3.2) deflection: Specify B-Line series CNP Combination Cork and Ribbed Neoprene Pads or B-Line Series VRP Pads.

For 1/4" (6.3) deflection: Specify B-Line series N Neoprene Mountings or B-Line series RH Neoprene Hangers.

For 1/2" (12.7) deflection: Specify B-Line series ND Neoprene Mountings or B-Line series RH Neoprene Hangers.

For 1"-2" (25.4-50.8) deflection: Specify B-Line series HM Housed Spring Mountings or B-Line series OM Open Spring Mountings or B-Line series HS Spring Hangers.

For larger deflection requirements, consult factory.

Proper Sizing

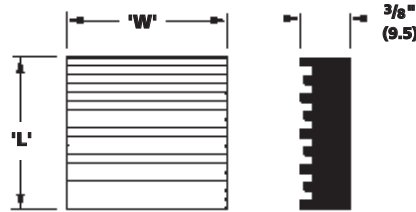
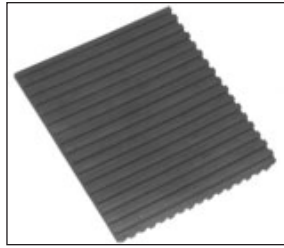
Once it is determined as to what type of vibration dampening device is needed, weight loading is the next crucial step. As a built in safety measure, take the actual weight of supported pipe or equipment (consider all accessories - i.e. valves, insulation, brackets, etc...) and multiply by 1.25. Then refer to the sizing chart for the selected product to determine part number.

Sizing: Divide weight of equipment by points of support to determine load requirement per support.

Example: 240 Lb. (90.7 kg) piece of equipment, 4 support points, take $240 \times 1.25 = 300$ Lbs. (136.1 kg) (safety measure), then take $300 \div 4 = 75$ Lbs. (34.0 kg) Specify appropriate vibration device rated at 75 Lbs. (34.0 kg) for each of the support points.

If weight of equipment is unequally proportionate, select mounts to satisfy the weight distribution.

Vibration Pads



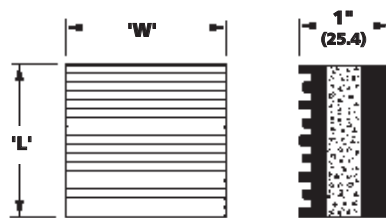
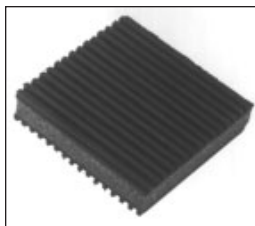
Features: The NNP pad is made of oil-resistant neoprene. The pad has an alternate height rib pattern to minimize slip. Recommended load is 50 Lbs. (.22 kN) per inch² (.0006 m²) with a range of 25-70 Lbs. (.11-31 kN) per inch² (.0006 m²). The NNP type has a deflection of 1/8" (3.1). For greater deflection, use multiple pads in layers.

Typical Applications: Air conditioners, cooling towers, compressors, fans, generators, pumps, piping, process equipment, transformers, etc.

NNP Type - Ribbed Neoprene Pad

Use: Dampen noise and vibration in floor caused by medium and high speed equipment.

Part No.	Rated Load		Dimensions				Std. Pkg.	Wt. Each	
	Lbs.	kN	'L'		'W'			Lbs.	kg
NNP-4	200	(.89)	2"	(50.8)	2"	(50.8)	48	.04	(.02)
NNP-9	450	(2.00)	3"	(76.2)	3"	(76.2)	36	.10	(.05)
NNP-16	800	(3.56)	4"	(101.6)	4"	(101.6)	24	.17	(.08)
NNP-36	1800	(8.00)	6"	(152.4)	6"	(152.4)	24	.39	(.18)
NNP-81	4050	(18.01)	9"	(228.6)	9"	(228.6)	Bulk	.87	(.39)
NNP-324	16200	(72.06)	18"	(457.2)	18"	(457.2)	6	3.50	(1.59)



Features: The CNP pad is made of oil-resistant neoprene. The pad has an alternate height rib pattern to minimize slip. Recommended load is 50 Lbs. (.22 kN) per inch² (.0006 m²) with a range of 25-70 Lbs. (.11-31 kN) per inch² (.0006 m²). The CNP type is rated at 3/16" (4.7) deflection. For greater deflection, use multiple pads in layers.

Typical Applications: Air conditioners, cooling towers, compressors, fans, generators, pumps, piping, process equipment, transformers, etc.

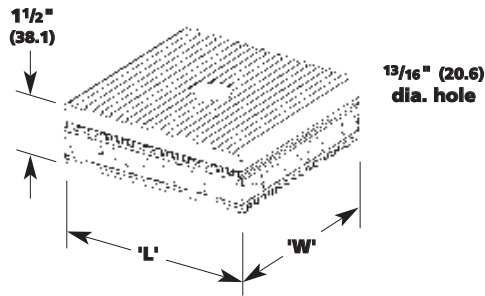
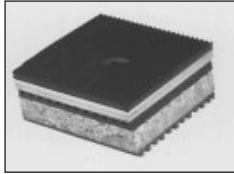
CNP Type - Cork and Ribbed Neoprene Pad

Use: Dampen noise and vibration in floor caused by medium and high speed equipment.

Part No.	Rated Load		Dimensions				Std. Pkg.	Wt. Each	
	Lbs.	kN	'L'		'W'			Lbs.	kg
CNP-4	200	(.89)	2"	(50.8)	2"	(50.8)	48	.07	(.03)
CNP-9	450	(2.00)	3"	(76.2)	3"	(76.2)	36	.16	(.07)
CNP-16	800	(3.56)	4"	(101.6)	4"	(101.6)	24	.28	(.13)
CNP-25	1250	(5.56)	5"	(127.0)	5"	(127.0)	24	.44	(.20)
CNP-36	1800	(8.00)	6"	(152.4)	6"	(152.4)	24	.63	(.29)
CNP-81	4050	(18.01)	9"	(228.6)	9"	(228.6)	Bulk	1.40	(.64)
CNP-324	16200	(72.06)	18"	(457.2)	18"	(457.2)	6	5.60	(2.54)
CNP-3x36	5400	(24.02)	3"	(76.2)	36"	(914.4)	6	1.89	(.86)
CNP-4x36	7200	(32.02)	4"	(101.6)	36"	(914.4)	6	2.52	(1.14)

All dimensions in charts and on drawings are in inches. Dimensions shown in parentheses are in millimeters unless otherwise specified.

Vibration Pads



Features: The CNNK pad is made of oil-resistant neoprene. The pad has an alternate height rib pattern to minimize slip. Recommended load is 50 Lbs. (.22 kN) per inch² (.0006 m²) with a range of 25-70 Lbs. (.11-.31 kN) per inch² (.0006 m²). The CNNK type is rated at 3/16" (4.7) deflection. For greater deflection, use multiple pads in layers.

Typical Applications: Air conditioners, cooling towers, compressors, fans, generators, pumps, piping, process equipment, transformers, etc.

CNNK Type - Cork, Ribbed Neoprene and Steel

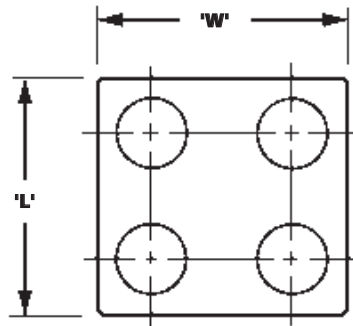
Use: Dampen noise and vibration in floor caused by medium and high speed equipment.

Part No.	Rated Load		Dimensions				Std. Pkg.	Wt. Each	
	Lbs.	kN	'L'		'W'			Lbs.	kg
CNNK-4	200	(.89)	2"	(50.8)	2"	(50.8)	48	.40	(.18)
CNNK-9	450	(2.00)	3"	(76.2)	3"	(76.2)	36	.90	(.41)
CNNK-16	800	(3.56)	4"	(101.6)	4"	(101.6)	24	1.60	(.73)
CNNK-25	1250	(5.56)	5"	(127.0)	5"	(127.0)	24	2.50	(1.13)
CNNK-36	1800	(8.00)	6"	(152.4)	6"	(152.4)	Bulk	3.50	(1.59)
CNNK-64	3200	(14.23)	8"	(203.2)	8"	(203.2)	6	6.20	(2.81)

Note: Has 1/4" (6.3) thick steel plate for even weight distribution. Hole in center will accept up to 3/4" (19.0) bolt.



VRP-16 shown



Features: The VRP pad is made of a natural rubber composition that will withstand a load of 45 Lbs. per 1" square. Rated deflection is 3/16" (4.7). Each square has 4 suction holes (1/2" (12.7) diameter) to provide a non-skid effect. The standard VRP pad has 81 squares that are 2" x 2" (50.8 x 50.8) making the pad itself 18" x 18" (457.2 x 457.2). These squares are easily cut or torn to desired sizes.

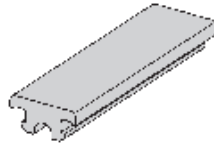
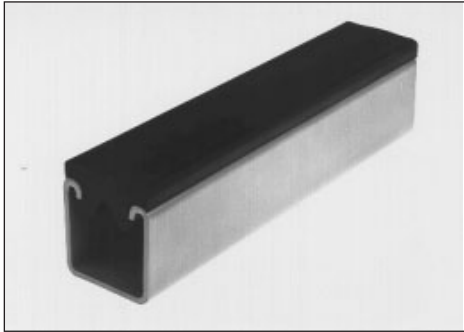


VRP Type - Rubber Cube Pad

Use: Dampen noise and vibration in floor caused by medium and high speed equipment.

Part No.	Rated Load		Dimensions				Std. Pkg.	Wt. Each	
	Lbs.	kN	'L'		'W'			Lbs.	kg
VRP-4	180	(.80)	2"	(50.8)	2"	(50.8)	Bulk	.10	(.05)
VRP-16	720	(3.20)	4"	(101.6)	4"	(101.6)	Bulk	.41	(.19)
VRP-36	1620	(7.20)	6"	(152.4)	6"	(152.4)	Bulk	.90	(.41)
VRP-324	14580	(64.85)	18"	(457.2)	18"	(457.2)	3	8.15	(3.70)

Vibra Strip®



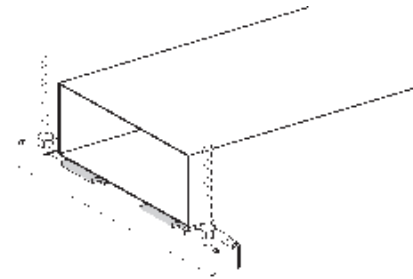
Use: Dampen noise and vibration of equipment when mounted on strut.

Features: Vibra Strip™ is made of 45 durometer neoprene that when inserted in channel slot, provides an excellent isolation medium between equipment, duct, piping, etc., and the support channel. The inherent quality of neoprene offers noise and vibration dampening qualities. Strip is furnished in 12" (304.8) lengths, may be cut to satisfy specific requirement. Longer lengths are available upon request.

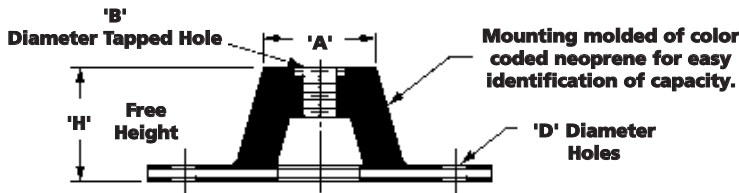
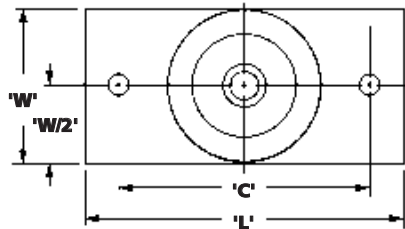
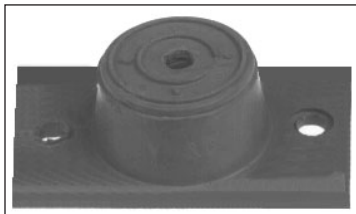
Temperature Range: -20°F to 212°F (continuous)

BVS Type - Vibra Strip™ for 1 5/8" (41.3) wide B-Line channel

Part No.	Max. Load Lbs. per Lineal In.		Length	Std. Pkg.	Wt. Each	
	Lbs.	kg/25.4 mm			Lbs.	kg
BVS-12	40	(18.1)	12" (304.8)	25	.46	(.21)
BVS-120	40	(18.1)	120" (3048.0)	1	4.56	(2.07)



Molded Neoprene Mounts



Use: Double (NVD) deflection mount helps prevent noise and high frequency vibration (1200 RPM or greater) between equipment and solid support structures in non-critical areas.

Features: Color-coded for load identification. All metal parts are encapsulated by oil-resistant neoprene. Base of mount incorporates a non-skid backing that eliminates attachment hardware where no lateral or severe vertical motion is present.

Typical Applications: Air handling units, fans, air conditioners, compressors, pumps, machine tools, motors, business machines, transformers, furnaces, etc.

NVD Type - Double Deflection

Part No.	Color	Rated Load		Isolator Deflection	Dimensions in Inches						Wt. Each		
		Lbs.	kN		'L'	'W'	'H'	'A'	'B'	'C'	'D'	Lbs.	kg
NVD-1-A	Black	25-45	(.11-.20)	.38" (9.53)	3 1/4" (82.5)	1 7/8" (47.6)	1 7/8" (47.6)	1 3/8" (34.9)	3/8" (9.5)	2 1/2" (63.5)	5/16" (7.9)	.19	(.09)
NVD-1-B	Green	45-110	(.20-.49)	.38" (9.53)									
NVD-1-C	Red	110-210	(.49-.93)	.38" (9.53)									
NVD-1-D	Gray	210-340	(.93-1.51)	.38" (9.53)									
NVD-2-C	Green	230-380	(1.02-1.70)	.43" (11.11)	4 1/4" (107.9)	2 1/2" (63.5)	2 1/8" (54.0)	1 7/8" (47.6)	1/2" (12.7)	3 1/4" (82.5)	7/16" (11.1)	.46	(.21)
NVD-2-D	Red	380-700	(1.70-3.11)	.43" (11.11)									
NVD-3-B	Green	550-930	(2.44-4.13)	.48" (11.91)	6" (152.4)	3 1/2" (88.9)	2 3/8" (60.3)	2 7/8" (73.0)	1/2" (12.7)	4 5/8" (117.5)	9/16" (14.3)	1.00	(.45)
NVD-3-C	Black	930-1540	(2.44-4.13)	.48" (11.91)									
NVD-3-D	Red	930-1920	(4.13-8.54)	.48" (11.91)									

* Rated load in compression. Use 25% of rated load when in shear.

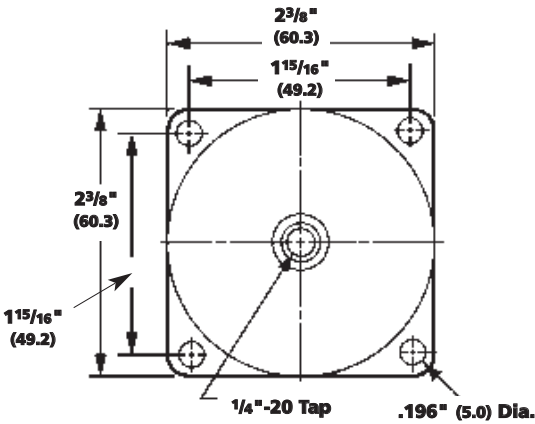
Cup Mounts



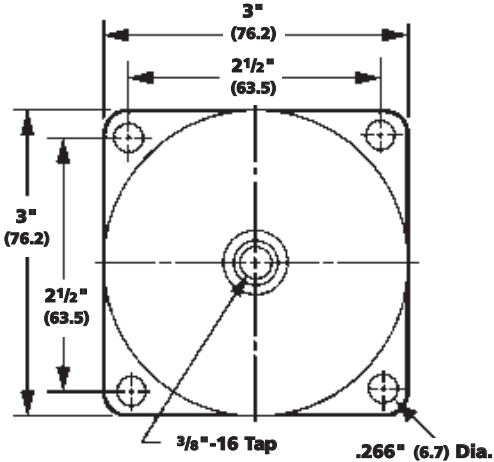
Use: Designed for the protection of sensitive electronic, electrical, and mechanical equipment from high frequency vibration and impact shock.

Features: Cup mounts accommodate multi-directional loading, can support loads radially and axially in both compression and tension. Effectively isolate frequencies above 45 Hz. Metal housing is zinc plated and furnished with either 1/4"-20 or 3/8"-16 tapped hole. The elastomer element is a high grade neoprene with excellent oil and ozone resistance.

Temperature Range: -20°F to 180°F.



CM1 Series

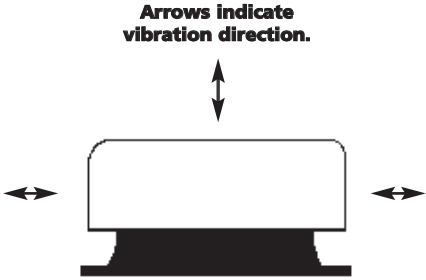


CM2 Series

Ideal for wall or ceiling mounts.

CM Type - Metal Housing and Neoprene

Part Number	Load Range		Tap Size	Wt. Each	
	Lbs.	kN		Lbs.	kg
CM1-14BNT	8 to 14	(.03-.06)	1/4"-20	.60	(.27)
CM1-24BNT	14 to 24	(.06-.10)	1/4"-20	.60	(.27)
CM1-38BNT	24 to 38	(.10-.17)	1/4"-20	.60	(.27)
CM1-60BNT	38 to 60	(.17-.26)	1/4"-20	.60	(.27)
CM2-30BNT	15 to 30	(.07-.13)	3/8"-16	.70	(.32)
CM2-50BNT	30 to 50	(.13-.22)	3/8"-16	.70	(.32)
CM2-80BNT	50 to 80	(.22-.35)	3/8"-16	.70	(.32)
CM2-110BNT	80 to 110	(.35-.49)	3/8"-16	.70	(.32)



Approximate Height
 CM1 Series 1 1/8" (28.6)
 CM2 Series 1 1/2" (38.1)

Free Standing Spring Mount



OML*/OM Type - Spring Mount

Use: The economical OM Series Free Standing Spring Mounts are utilized to isolate floor mounted equipment where transmission of noise and vibration (below 1200RPM) is apparent.

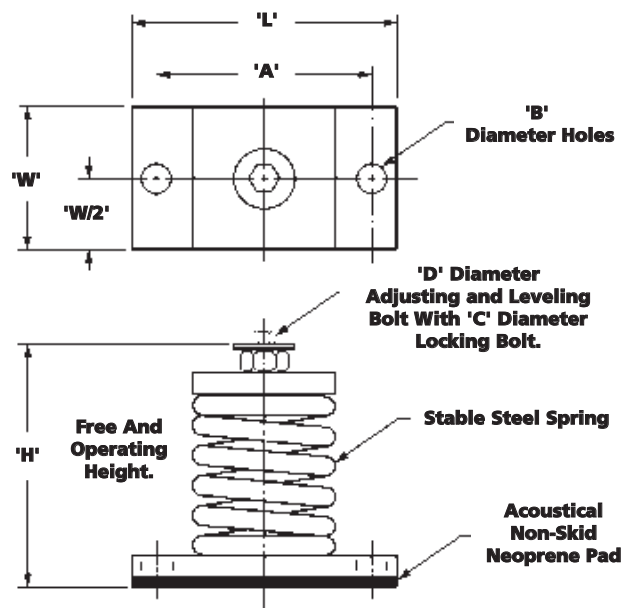
Note: *Not recommended when subject to wind loads and weight changes.*

Features: Spring is welded to lower load plate and upper compression plate. Mounting is facilitated by an adjustable leveling bolt. Base plate is furnished with a skid-resistant neoprene backing, making anchoring optional. Allows up to 2.10" (53.3) deflection (larger deflection mounts available).

Typical Applications: Refrigeration compressors, packaged air handling and refrigeration equipment, centrifugal fans, close coupled and base mounted pumps and similar apparatus. May also be used as a vibration dampening device for pipe risers.

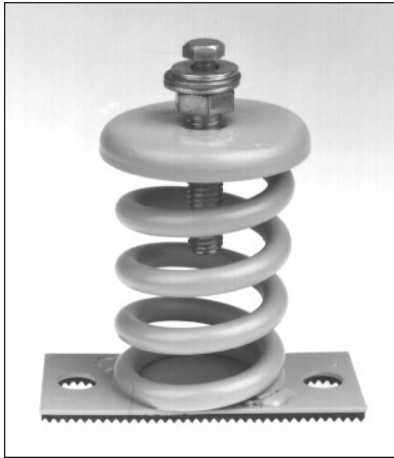
Notes: *To ensure minimum effective vibration control, the spring mount must have a static deflection at least three times (3X) greater than the floor spans deflection.*

Spring devices are stable with a vertical and horizontal spring constant equal to one ($K_x/K_y=1$). A 50% additional run-out from rated capacity to solid load is also characteristic of spring type isolators.



* OML Series are Lower profile.

Free Standing Spring Mount (cont.)



OML*/OM Type - Spring Mount

Part No.	Rated Load		Spring Deflection		Dimensions in Inches						Wt. Each		
	Lbs.	kN			'L'	'W'	'H'	'A'	'B'	'C'	'D'	Lbs.	kg
OML-1-101	25-50	(.11-.22)	1.20"	(30.5)	4 1/2" (114.3)	2" (50.8)	3 5/8" (92.1)	3 1/2" (88.9)	9/16" (14.3)	5/16" (7.9)	1/2" (12.7)	2.0	(.9)
OML-1-102	50-100	(.22-.44)	1.20"	(30.5)									
OML-1-103	100-150	(.44-.67)	1.20"	(30.5)									
OML-1-104	150-250	(.67-1.11)	1.10"	(27.9)									
OML-1-105	250-350	(1.11-1.55)	1.10"	(27.9)									
OML-1-106	350-450	(1.55-2.00)	1.00"	(25.4)									
OML-1-107	450-600	(2.00-2.67)	1.00"	(25.4)									
OM-1-171	75-150	(.33-.67)	1.30"	(33.0)	4 1/2" (114.3)	2" (50.8)	4 3/4" (120.6)	3 1/2" (88.9)	9/16" (14.3)	5/16" (7.9)	1/2" (12.7)	3.0	(1.4)
OM-1-172	150-250	(.67-1.11)	1.30"	(33.0)									
OM-1-173	250-350	(1.11-1.55)	1.30"	(33.0)									
OM-1-174	350-500	(1.55-2.22)	1.30"	(33.0)									
OM-1-175	500-600	(2.22-2.67)	1.10"	(27.9)									
OM-1-176	600-750	(2.67-3.34)	1.10"	(27.9)									
OM-1-177	750-900	(3.34-4.00)	1.10"	(27.9)									
OM-1-178	900-1100	(4.00-4.90)	1.00"	(25.4)									
OM-1-2010	75-150	(.33-.67)	2.10"	(53.3)	6 1/4" (158.7)	4" (101.6)	7 5/8" (193.7)	5" (127.0)	9/16" (14.3)	3/8" (9.5)	3/4" (19.0)	12.0	(5.4)
OM-1-2100	150-275	(.67-1.22)	2.10"	(53.3)									
OM-1-2103	275-425	(1.22-1.90)	2.10"	(53.3)									
OM-1-2200	425-500	(1.90-2.22)	2.10"	(53.3)									
OM-1-2202	500-650	(2.22-2.90)	2.10"	(53.3)									
OM-1-2203	650-775	(2.90-3.44)	2.10"	(53.3)									
OM-1-2300	775-1000	(3.44-4.45)	2.10"	(53.3)									
OM-1-2302	1000-1150	(4.45-5.11)	2.00"	(50.8)									

* OML Series are Lower profile.

Housed - Fail Safe Spring Mount

HMLE*/HME Type - Housed 1" (25.4) & 2" (50.8) Deflection Mounting (External Adjustment Bolt)



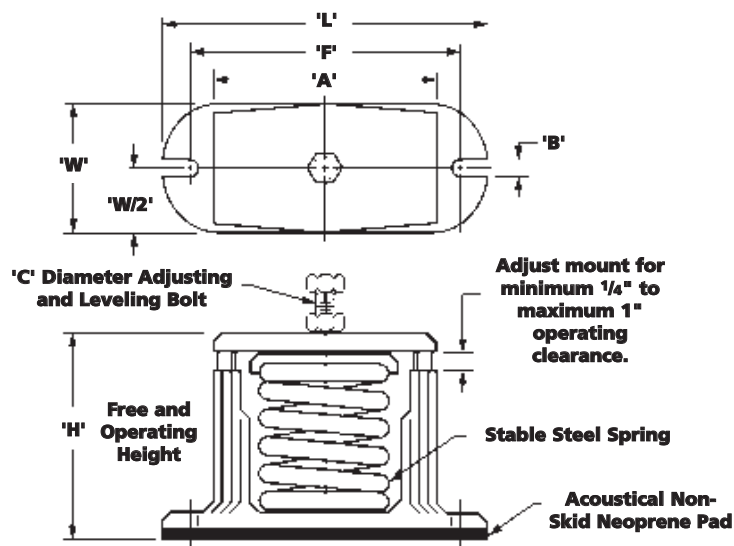
Use: HM Series Housed Spring Mounts are utilized to isolate floor mounted equipment where transmission of noise and vibration (below 1200 RPM) is apparent. This type of mount is most commonly used to support equipment on upper floors where structural deflection may occur.

Features: Telescopic two-piece cast iron housing to stabilize spring where external motion may occur. Slotted mounting holes on base with skid-resistant pad. Mounting is facilitated by an adjustable leveling bolt. (If bolt mount is not required, a skid-resistant pad on top load surface is available in the HMLT/HMT series shown on pages 162 & 163). Springs are color-coded for load identification. Housing components are isolated by rubber acoustical pads. Larger capacity mountings are available.

Typical Applications: Compressors, air handling units, centrifugal fans, pumps and other similar applications. May also be used as a vibration dampening device for pipe risers.

Note: To ensure minimum effective vibration control, the spring mount must have a static deflection at least three times (3X) greater than the floor spans deflection.

Spring devices are stable with a vertical and horizontal spring constant equal to one ($K_x/K_y=1$). A 50% additional run-out from rated capacity to solid load is also characteristic of spring type isolators.



*HMLE Series are Lower profile.

Housed - Fail Safe Spring Mount (cont.)



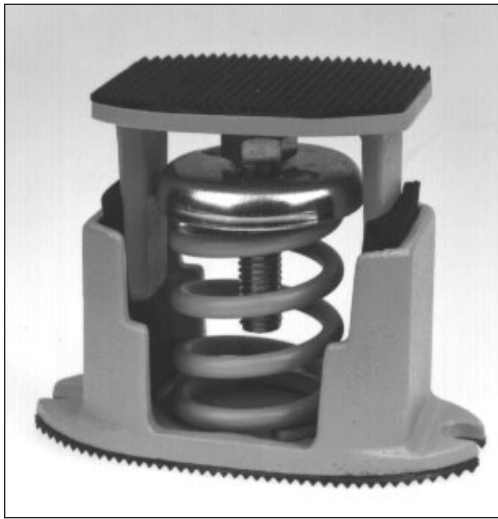
HMLE*/HME Type - Housed 1" (25.4) & 2" (50.8) Deflection Mounting (External Adjustment Bolt)

Part No.	Spring Color	Rated Load		Spring Deflection	Dimensions in Inches						Wt. Each Lbs./kg	
		Lbs.	kN		'L'	'W'	'H'	'F'	'A'	'B'		'C'
HMLE-1-101	Yellow	25-50	(.11-.22)	1.20" (30.5)	5 1/8" (130.2)	2 1/2" (63.5)	3 3/4" (95.2)	4 3/4" (120.6)	3 1/2" (88.9)	7/16" (11.1)	3/8" (9.5)	5.0 (2.3)
HMLE-1-102	Blue	50-100	(.22-.44)	1.20" (30.5)								
HMLE-1-103	Brown	100-150	(.44-.67)	1.20" (30.5)								
HMLE-1-104	Black	150-250	(.67-1.11)	1.00" (25.4)								
HMLE-1-105	Gray	250-350	(1.11-1.55)	1.00" (25.4)								
HMLE-1-106	Red	350-450	(1.55-2.00)	1.00" (25.4)								
HMLE-1-107	Green	450-600	(2.00-2.67)	1.00" (25.4)								
HME-1-121	Black	45-90	(.20-.40)	1.40" (35.5)	6 3/8" (161.9)	2 5/8" (66.7)	5 1/8" (130.2)	5 1/2" (139.7)	4" (101.6)	5/8" (15.9)	1/2" (12.7)	11.0 (5.0)
HME-1-122	Green	90-120	(.40-.53)	1.40" (35.5)								
HME-1-123	Yellow	120-175	(.53-.78)	1.40" (35.5)								
HME-1-124	Brown	175-250	(.78-1.11)	1.30" (33.0)								
HME-1-125	Red	250-330	(1.11-1.47)	1.30" (33.0)								
HME-1-126	Purple	330-450	(1.47-2.00)	1.30" (33.0)								
HME-1-127	Blue	450-600	(2.00-2.67)	1.20" (30.5)								
HME-1-128	Orange	600-750	(2.67-3.34)	1.20" (30.5)								
HME-1-129	Pink	750-900	(3.34-4.00)	1.10" (27.9)								
HME-1-130	Gray	900-1100	(4.00-4.90)	1.00" (25.4)								
HME-1-131	Wht/Blk	1100-1300	(4.90-5.78)	1.00" (25.4)								
HME-1-132	Gold/Blk	1300-1500	(5.78-6.70)	0.90" (22.8)								
HME-1-221	Black	48-90	(.21-.40)	2.00" (50.8)								
HME-1-222	White	90-120	(.40-.53)	2.00" (50.8)								
HME-1-223	Yellow	120-175	(.53-.78)	2.00" (50.8)								
HME-1-224	Brown	175-250	(.78-1.11)	2.00" (50.8)								
HME-1-225	Red	250-330	(1.11-1.47)	2.00" (50.8)								
HME-1-226	Purple	330-450	(1.47-2.00)	2.00" (50.8)								
HME-1-227	Blue/Blk	450-600	(2.00-2.67)	2.00" (50.8)								
HME-1-228	Orn/Blk	600-750	(2.67-3.34)	2.00" (50.8)								
HME-2-225	Red	500-660	(2.22-2.93)	2.00" (50.8)	9 3/4" (247.6)	2 5/8" (66.7)	5 3/4" (146.0)	8 3/4" (222.2)	7 3/8" (187.3)	5/8" (15.9)	5/8" (15.9)	19.0 (8.6)
HME-2-226	Purple	660-900	(2.93-4.00)	2.00" (50.8)								
HME-2-227	Blue/Blk	900-1200	(4.00-5.34)	2.00" (50.8)								
HME-2-228	Orn/Blk	1200-1500	(5.34-6.67)	2.00" (50.8)								

*HMLE Series are Lower profile.

Housed - Fail Safe Spring Mount

HMLT*/HMT Type - Housed 1" (25.4) & 2" (50.8) Deflection Mounting (Skid Resistant Neoprene Top & Internal Adjustment Bolt)



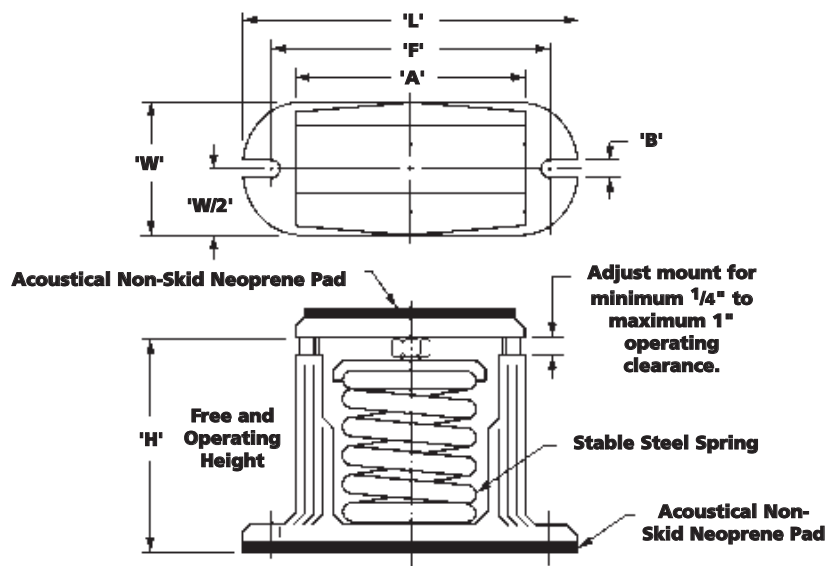
Use: HM Series Housed Spring Mounts are utilized to isolate floor mounted equipment where transmission of noise and vibration (below 1200 RPM) is apparent. This type of mount is most commonly used to support equipment on upper floors where structural deflection may occur.

Features: Telescopic two-piece cast iron housing to stabilize spring where external motion may occur. Slotted mounting holes on base with skid-resistant pad. Mounting is facilitated by an internal adjustable leveling bolt. Springs are color-coded for load identification. Housing components are isolated by rubber acoustical pads. Larger capacity mountings are available.

Typical Applications: Compressors, air handling units, centrifugal fans, pumps and other similar applications. May also be used as a vibration dampening device for pipe risers.

Note: To ensure minimum effective vibration control, the spring mount must have a static deflection at least three times (3X) greater than the floor spans deflection.

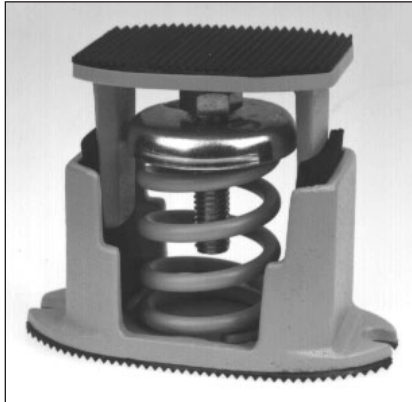
Spring devices are stable with a vertical and horizontal spring constant equal to one ($K_x/K_y=1$). A 50% additional run-out from rated capacity to solid load is also characteristic of spring type isolators.



*HMLT Series are Lower profile.

Housed - Fail Safe Spring Mount (cont.)

HMLT*/HMT Type - Housed 1" (25.4) & 2" (50.8) Deflection Mounting (Skid Resistant Neoprene Top & Internal Adjustment Bolt)



Part No.	Spring Color	Rated Load		Spring Deflection	Dimensions in Inches						Wt. Each	
		Lbs.	kN		'L'	'W'	'H'	'F'	'A'	'B'	Lbs.	kg
HMLT-1-101	Yellow	25-50	(.11-.22)	1.20" (30.5)	5 1/8" (130.2)	2 1/2" (63.5)	4 1/8" (104.8)	4 3/4" (120.6)	3 1/2" (88.9)	7/16" (11.1)	3.0	(1.4)
HMLT-1-102	Blue	50-100	(.22-.44)	1.20" (30.5)								
HMLT-1-103	Brown	100-150	(.44-.67)	1.20" (30.5)								
HMLT-1-104	Black	150-250	(.67-1.11)	1.00" (25.4)								
HMLT-1-105	Gray	250-350	(1.11-1.55)	1.00" (25.4)								
HMLT-1-106	Red	350-450	(1.55-2.00)	1.00" (25.4)								
HMLT-1-107	Green	450-600	(2.00-2.67)	1.00" (25.4)								
HMT-1-121	Black	45-90	(.20-.40)	1.40" (35.5)	6 3/8" (161.9)	2 5/8" (66.7)	5 5/8" (142.9)	5 1/2" (139.7)	4" (101.6)	5/8" (15.9)	8.0	(3.6)
HMT-1-122	Green	90-120	(.40-.53)	1.40" (35.5)								
HMT-1-123	Yellow	120-175	(.53-.78)	1.40" (35.5)								
HMT-1-124	Brown	175-250	(.78-1.11)	1.30" (33.0)								
HMT-1-125	Red	250-330	(1.11-1.47)	1.30" (33.0)								
HMT-1-126	Purple	330-450	(1.47-2.00)	1.30" (33.0)								
HMT-1-127	Blue	450-600	(2.00-2.67)	1.20" (30.5)								
HMT-1-128	Orange	600-750	(2.67-3.34)	1.20" (30.5)								
HMT-1-129	Pink	750-900	(3.34-4.00)	1.10" (27.9)								
HMT-1-130	Gray	900-1100	(4.00-4.90)	1.00" (25.4)								
HMT-1-131	Wht/Blk	1100-1300	(4.90-5.78)	1.00" (25.4)								
HMT-1-132	Gold/Blk	1300-1500	(5.78-6.70)	0.90" (22.8)								

*HMLT Series are Lower profile.

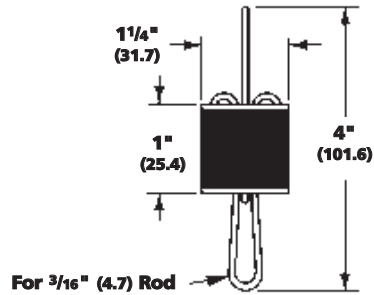
Vibration Hangers



Use: ANH Series Rubber Hangers are designed as an economical hanger to dampen noise and vibration in light duty applications.

Features: Color-coded insert for load identification. Loads up to 200 Lbs. (2.01 kN) at a .20" (5.1) deflection. Steel pressure plates on top and bottom of insert. Hanging device is 11 gauge cold drawn steel wire that accommodates up to 3/16" (4.7) rod or bolt attachments. Specify part number and color for desired load.

Typical Applications: Suspended ceilings and hot or cold air ducts.



ANH Type - Acoustical Hanger

Part No.	Color Code	Rated Load		Rated Deflection		Wt. Each	
		Lbs.	kN			Lbs.	kg
ANH-20	Red	65	(.29)	.20"	(5.1)	.16	(.07)
ANH-40	Black	120	(.53)	.20"	(5.1)	.16	(.07)
ANH-70	Blue	200	(.89)	.20"	(5.1)	.16	(.07)

Vibration Hangers

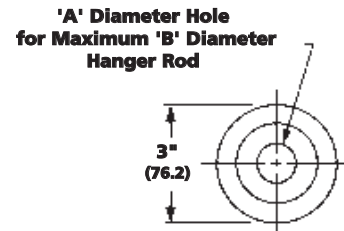
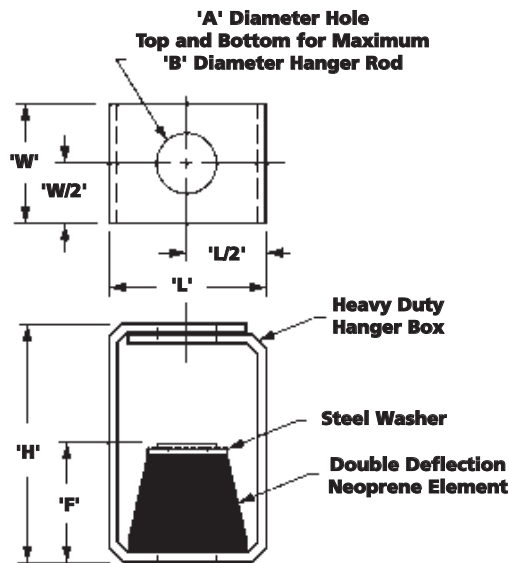


Use: RH Series Neoprene Hangers are suggested to dampen noise and minor vibration from suspended high speed equipment (1200 RPM or greater). To be used in-line with all thread rod for single and trapeze type support systems.

Features: Color-coded neoprene in-shear insert for load identification. Loads to 2000 Lbs. with deflections to .50" (12.7). RH hangers are available with a 30° rod swing (must specify). Hanger units are shipped assembled.

Typical Applications: Suspended mechanical equipment, exhaust fans, ductwork, piping, ceilings, etc. When equipment is suspended from vibration sensitive spans, avoid using RH type hangers. Higher deflection hangers such as the HS and HES series are recommended.

Note: *Vibration hangers should not come in direct contact with equipment being suspended.*



Dimensions of Neoprene Element

RH Type - Neoprene Hanger

Part No.	Rated Load		Isolator Deflection		Dimensions in Inches						Wt. Each	
	Lbs.	kN			'L'	'W'	'H'	'F'	'A'	'B'	Lbs.	kg
RHB-Black	60-100	(.27-.44)	.50"	(12.7)	2 ³ / ₄ "	2"	4 ¹ / ₂ "	2"	3/4"	5/8"	2.0	(.9)
RHB-Red	100-175	(.44-.78)	.50"	(12.7)	(69.8)	(50.8)	(114.3)	(50.8)	(19.0)	(15.9)		
RHC-Green	175-300	(.78-1.33)	.50"	(12.7)	2 ³ / ₄ "	2"	4 ¹ / ₂ "	2"	3/4"	5/8"	3.0	(1.4)
RHC-Purple	300-700	(1.33-3.11)	.50"	(12.7)	(69.8)	(50.8)	(114.3)	(50.8)	(19.0)	(15.9)		
RHD-Yellow	700-1100	(3.11-4.90)	.50"	(12.7)	3"	2"	7"	2"	3/4"	5/8"	4.0	(1.8)
RHD-Pink	1100-2000	(4.90-8.90)	.50"	(12.7)	(76.2)	(50.8)	(177.8)	(50.8)	(19.0)	(15.9)		

Vibration Spring Hangers

HSL*/HS Type - Vibration Spring Hanger

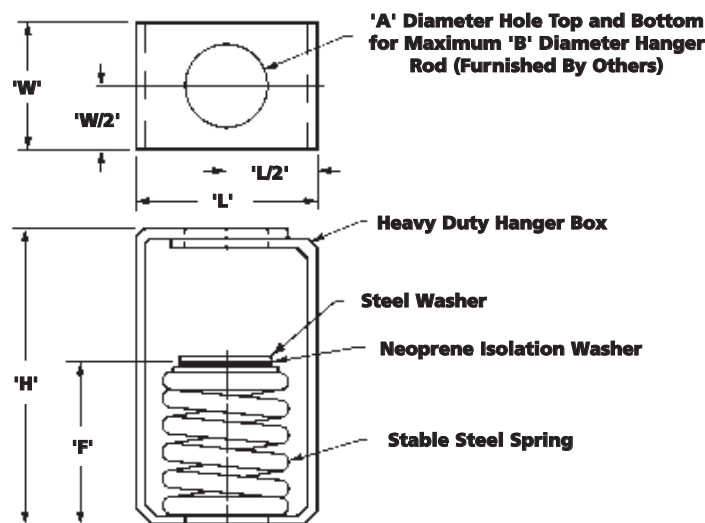


Use: HS Series Spring Hangers should be utilized to minimize damaging vibration from suspended low frequency equipment (below 1200 RPM). Frequency below 600 RPM require springs with deflection 2.0" (50.8) or greater. Hangers also absorb shock and limit noise in critical areas.

Features: Color-coded spring for load identification. Loads up to 1500 Lbs. (6.67 kN), deflections up to 2.10" (53.3). Spring assembly includes neoprene washer for additional noise isolation. Options available include: 30° rod swing; scale with pointer; and positioning plate or pre-compressed spring to hold equipment at fixed elevations (see bottom page 189). Any or all of these options must be specified. Hanger units are shipped assembled.

Typical Applications: Fans, ductwork, piping, suspended ceilings, etc. To be used in-line with all thread rod for single and trapeze type support systems.

Notes: *Vibration hangers should not come in direct contact with equipment being suspended.* Spring devices are stable with a vertical and horizontal spring constant equal to one ($K_x/K_y=1$). A 50% additional run-out from rated capacity to solid load is also characteristic of spring type isolators.



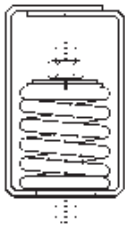
*HSL Series are Lower profile.

Vibration Spring Hangers (cont.)

HSL*/HS Type - Vibration Spring Hanger

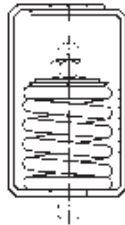
Part No.	Spring Color	Rated Load		Spring Deflection	Dimensions in Inches						Wt. Each	
		Lbs.	kN		'L'	'W'	'H'	'F'	'A'	'B'	Lbs.	kg
HSL-1-101	Yellow	25-50	(.11-.22)	1.20" (30.5)	2 ³ / ₄ " (69.8)	2" (50.8)	4 ¹ / ₂ " (114.3)	3 ¹ / ₈ " (79.4)	7/ ₈ " (22.2)	5/ ₈ " (15.9)	2.0	(0.9)
HSL-1-102	Blue	50-100	(.22-.44)	1.20" (30.5)								
HSL-1-103	Brown	100-150	(.44-.67)	1.20" (30.5)								
HSL-1-104	Black	150-250	(.67-1.11)	1.10" (27.9)								
HSL-1-105	Gray	250-350	(1.11-1.55)	1.10" (25.4)								
HSL-1-106	Red	350-450	(1.55-2.00)	1.00" (25.4)								
HSL-1-107	Green	450-600	(2.00-2.67)	1.00" (25.4)								
HS-1-121	Black	45-90	(.20-.40)	1.40" (35.5)	3" (76.2)	2" (50.8)	7" (177.8)	4 ⁵ / ₈ " (117.5)	1" (25.4)	3/ ₄ " (19.0)	4.5	(2.0)
HS-1-122	Green	90-120	(.40-.53)	1.40" (35.5)								
HS-1-123	Yellow	120-175	(.53-.78)	1.40" (35.5)								
HS-1-124	Brown	175-250	(.78-1.11)	1.30" (33.0)								
HS-1-125	Red	250-330	(1.11-1.47)	1.30" (33.0)								
HS-1-126	Purple	330-450	(1.47-2.00)	1.30" (33.0)								
HS-1-127	Blue	450-600	(2.00-2.67)	1.20" (30.5)								
HS-1-128	Orange	600-750	(2.67-3.33)	1.20" (30.5)								
HS-1-129	Pink	750-900	(3.33-4.00)	1.10" (27.9)								
HS-1-130	Gray	900-1100	(4.00-4.89)	1.00" (25.4)								
HS-1-131	Wht/Blk	1100-1300	(4.89-5.78)	1.00" (25.4)								
HS-1-132	Gold/Blk	1300-1500	(5.78-6.67)	0.90" (22.8)								
HS-1-221	Black	45-90	(.20-.40)	2.00" (50.8)								
HS-1-222	White	90-120	(.40-.53)	2.00" (50.8)								
HS-1-223	Yellow	120-175	(.53-.78)	2.00" (50.8)								
HS-1-224	Brown	175-250	(.78-1.11)	2.00" (50.8)								
HS-1-225	Red	250-330	(1.11-1.47)	2.00" (50.8)								
HS-1-226	Purple	330-450	(1.47-2.00)	2.00" (50.8)								
HS-1-227	Blue/Blk	450-600	(2.00-2.67)	2.00" (50.8)								
HS-1-228	Orn/Blk	600-750	(2.67-3.33)	2.00" (50.8)								
HS-1-204	NA	350-500	(1.55-2.22)	2.10" (53.3)	3 ¹ / ₂ " (88.9)	2" (50.8)	9 ¹ / ₄ " (234.9)	6 ¹ / ₂ " (165.1)	1" (25.4)	3/ ₄ " (19.0)	8.0	(3.6)
HS-1-205	NA	500-800	(2.22-3.56)	2.10" (53.3)								
HS-1-206	NA	800-1200	(3.56-5.34)	2.10" (53.3)								

Ordering information: Specify desired 'option type' after part number.

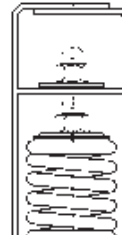


Option 1
Furnished with hanger box to accept 30° rod swing.

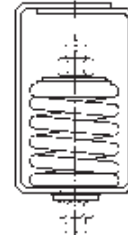
*HSL Series are Lower profile.



Option 2
Furnished with a scale and pointer to insure specified spring deflection.



Option 3
Furnished with a positioning plate to hold equipment at a fixed elevation during installation.



Option 4
Furnished with spring pre-compressed (75%) to hold equipment at a fixed elevation during installation.

Vibration Spring Hangers

HESL*/HES Type - Combination Spring & Neoprene

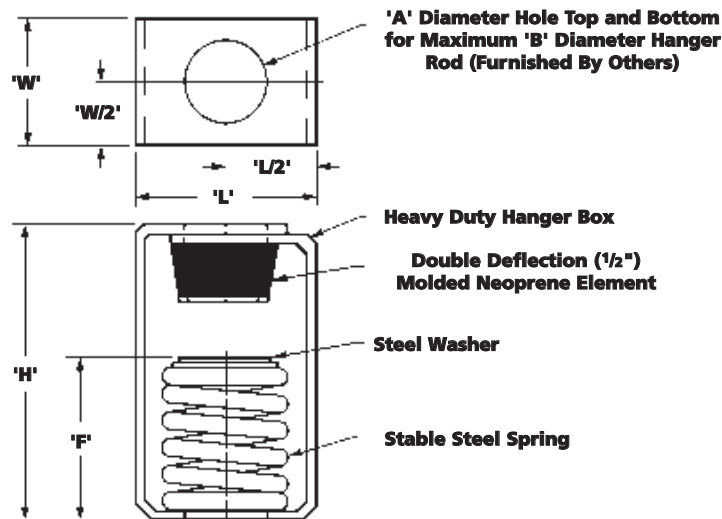


Use: HES Series Vibration Spring Hangers are suited to isolate both high and low frequency vibration generated by mechanical equipment. The high deflection spring addresses the vibration while the neoprene insert dampens noise. HES hangers are recommended for critical areas and with vibration sensitive spans.

Features: Color-coded spring for load identification and double deflection neoprene element. Loads up to 1500 Lbs. (6.67 kN), deflections up to 2.50" (63.5). Options available include: 30° rod swing; scale with pointer; and positioning plate or pre-compressed spring to hold equipment at fixed elevations (see bottom page 191). Any or all of these options must be specified. Hanger units are shipped assembled.

Typical Applications: Fan equipment, ductwork, piping, suspended ceilings, etc. To be used in-line with all thread rod for single and trapeze type support systems.

Note: Vibration hangers *should not* come in direct contact with equipment being suspended. Spring devices are stable with a vertical and horizontal spring constant equal to one ($K_x/K_y=1$). A 50% additional run-out from rated capacity to solid load is also characteristic of spring type isolators.



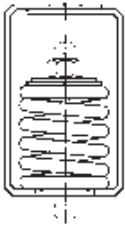
*HESL Series are Lower profile.

Vibration Spring Hangers (cont.)

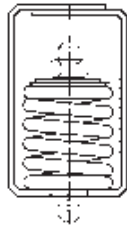
HESL*/HES Type - Combination Spring & Neoprene

Part No.	Spring Color	Rated Load		Spring Deflection	Dimensions in Inches						Wt. Each	
		Lbs.	kN		'L'	'W'	'H'	'F'	'A'	'B'	Lbs.	kg
HESL-1-101	Yellow	25-50	(.11-.22)	1.70" (43.2)	3" (76.2)	2" (50.8)	7" (177.8)	3 1/8" (79.4)	7/8" (22.2)	5/8" (15.9)	4.0	(1.8)
HESL-1-102	Blue	50-100	(.22-.44)	1.70" (43.2)								
HESL-1-103	Brown	100-150	(.44-.67)	1.70" (43.2)								
HESL-1-104	Black	150-250	(.67-1.11)	1.60" (40.6)								
HESL-1-105	Gray	250-350	(1.11-1.55)	1.60" (40.6)								
HESL-1-106	Red	350-450	(1.55-2.00)	1.50" (38.1)								
HESL-1-107	Green	450-600	(2.00-2.67)	1.50" (38.1)								
HES-1-121	Black	45-90	(.20-.40)	1.90" (48.2)	3 1/2" (88.9)	2" (50.8)	9 1/4" (234.9)	4 5/8" (117.5)	1" (25.4)	3/4" (19.0)	11.0	(5.0)
HES-1-122	Green	90-120	(.40-.53)	1.90" (48.2)								
HES-1-123	Yellow	120-175	(.53-.78)	1.90" (48.2)								
HES-1-124	Brown	175-250	(.78-1.11)	1.80" (45.7)								
HES-1-125	Red	250-330	(1.11-1.47)	1.80" (45.7)								
HES-1-126	Purple	330-450	(1.47-2.00)	1.80" (45.7)								
HES-1-127	Blue	450-600	(2.00-2.67)	1.70" (43.2)								
HES-1-128	Orange	600-750	(2.67-3.33)	1.70" (43.2)								
HES-1-129	Pink	750-900	(3.33-4.00)	1.60" (40.6)								
HES-1-130	Gray	900-1100	(4.00-4.89)	1.50" (38.1)								
HES-1-131	Wht/Blk	1100-1300	(4.89-5.78)	1.50" (38.1)								
HES-1-132	Gold/Blk	1300-1500	(5.78-6.67)	1.40" (35.5)								
HES-1-221	Black	45-90	(.20-.40)	2.50" (63.5)	3 1/2" (88.9)	2" (50.8)	9 1/4" (234.9)	5 1/8" (130.2)	1" (25.4)	3/4" (19.0)	12.0	(5.4)
HES-1-222	White	90-120	(.40-.53)	2.50" (63.5)								
HES-1-223	Yellow	120-175	(.53-.78)	2.50" (63.5)								
HES-1-224	Brown	175-250	(.78-1.11)	2.50" (63.5)								
HES-1-225	Red	250-330	(1.11-1.47)	2.50" (63.5)								
HES-1-226	Purple	330-450	(1.47-2.00)	2.50" (63.5)								
HES-1-227	Blue/Blk	450-600	(2.00-2.67)	2.50" (63.5)								
HES-1-228	Orn/Blk	600-750	(2.67-3.33)	2.50" (63.5)								

Ordering information: Specify desired 'option type' after part number.



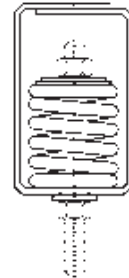
Option 1
Furnished with hanger box to accept 30° rod swing. (Standard)



Option 2
Furnished with a scale and pointer to insure specified spring deflection.



Option 3
Furnished with a positioning plate to hold equipment at a fixed elevation during installation.



Option 4
Furnished with spring pre-compressed (75%) to hold equipment at a fixed elevation during installation.

*HESL Series are Lower profile.

Isolation Spring Hangers (cont.)

SHE Type - Isolation Spring Hanger

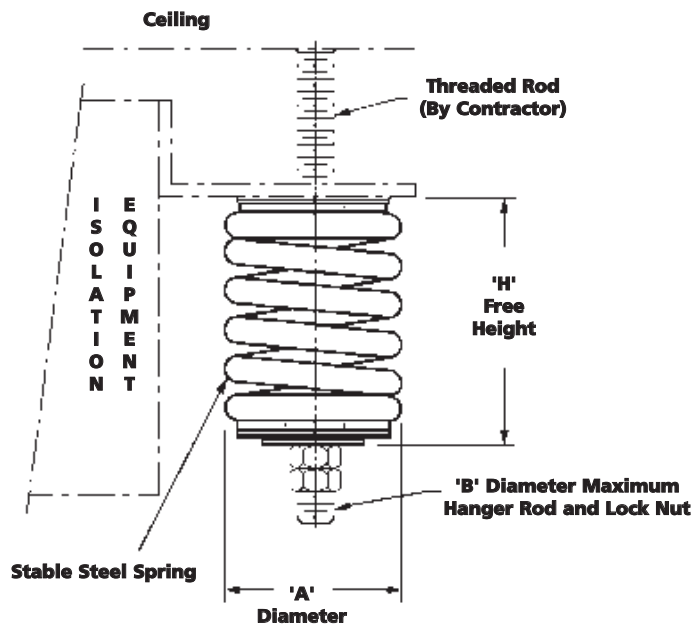


Use: SHE Series Isolation Hangers are general purpose vibration isolation springs. Spring isolators are used on platform and trapeze type support assemblies in non-critical areas for low frequency vibration.

Features: Color-coded spring for load identification. Loads up to 1500 Lbs. (6.67 kN), deflections up to 1.40" (35.5). Spring assembly includes steel load washers with neoprene element for additional noise isolation. Spring units are shipped assembled. Larger loads available upon request.

Typical Applications: Use in-line with hanger rod below strut or angle iron trapeze systems, under two rod pipe rollers, or simply beneath mounting device of suspended mechanical equipment; i.e. fans, piping, ductwork, etc.

Note: Spring devices are stable with a vertical and horizontal spring constant equal to one ($K_x/K_y=1$). A 50% additional run-out from rated capacity to solid load is also characteristic of spring type isolators.



Isolation Spring Hangers (cont.)



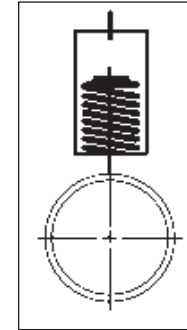
SHE Type - Isolation Spring Hanger

Part No.	Spring Color	Rated Load		Spring Deflection	Dimensions in Inches			Wt. Each	
		Lbs.	kN		'A'	'B'	'H'	Lbs.	kg
SHE-1-101	Yellow	25-50	(.11-.22)	1.20" (30.5)	2" (50.8)	5/8" (15.9)	3 3/8" (85.7)	1.0	(.4)
SHE-1-102	Blue	50-100	(.22-.44)	1.20" (30.5)					
SHE-1-103	Brown	100-150	(.44-.67)	1.20" (30.5)					
SHE-1-104	Black	150-250	(.67-1.11)	1.10" (27.9)					
SHE-1-105	Gray	250-350	(1.11-1.55)	1.10" (27.9)					
SHE-1-106	Red	350-450	(1.55-2.00)	1.00" (25.4)					
SHE-1-107	Green	450-600	(2.00-2.67)	1.00" (25.4)					
SHE-1-121	Black	45-90	(.20-.40)	1.40" (35.5)	2" (50.8)	3/4" (19.0)	4 5/8" (117.5)	2.2	(1.0)
SHE-1-122	Green	90-120	(.40-.53)	1.40" (35.5)					
SHE-1-123	Yellow	120-175	(.53-.78)	1.40" (35.5)					
SHE-1-124	Brown	175-250	(.78-1.11)	1.30" (33.0)					
SHE-1-125	Red	250-330	(1.11-1.47)	1.30" (33.0)					
SHE-1-126	Purple	330-450	(1.47-2.00)	1.30" (33.0)					
SHE-1-127	Blue	450-600	(2.00-2.67)	1.20" (30.5)					
SHE-1-128	Orange	600-750	(2.67-3.33)	1.20" (30.5)					
SHE-1-129	Pink	750-900	(3.33-4.00)	1.10" (27.9)					
SHE-1-130	Gray	900-1100	(4.00-4.89)	1.00" (25.4)					
SHE-1-131	Wht/Blk	1100-1300	(4.89-5.78)	1.00" (25.4)					
SHE-1-132	Gold/Blk	1300-1500	(5.78-6.67)	0.90" (22.8)					

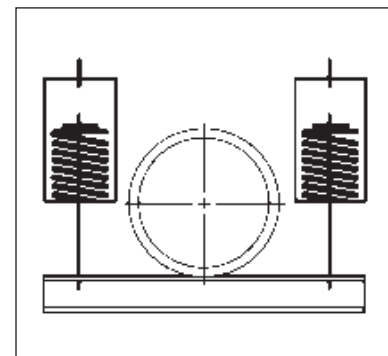
Spring & Neoprene Hanger Selection

B-Line Series HS and HES Spring & Neoprene Hanger selections for trapeze hung water filled piping based on 10 foot spacing between hangers.

Nominal Pipe Size		Weight of Pipe Filled With Water		HS Type Hanger Selection	HES Type Hanger Selection
		Lbs./Ft.	kg/m		
1"	(25)	3	(4.4)	HSL-1-101	HESL-1-101
1 1/4"	(32)	4	(5.9)	HSL-1-102	HESL-1-102
1 1/2"	(40)	5	(7.4)	HSL-1-102	HESL-1-102
2"	(50)	7	(10.4)	HSL-1-102	HESL-1-102
2 1/2"	(65)	10	(14.9)	HSL-1-103	HESL-1-103
3"	(80)	13	(19.3)	HSL-1-104	HESL-1-104
4"	(100)	19	(28.3)	HSL-1-104	HESL-1-104
5"	(125)	27	(40.2)	HSL-1-106	HESL-1-106
6"	(150)	35	(52.1)	HS-1-127	HES-1-127
8"	(200)	56	(83.3)	HS-1-128	HES-1-128
10"	(250)	81	(120.5)	HS-1-130	HES-1-130
12"	(300)	110	(163.7)	HS-1-131	HES-1-131
14"	(350)	125	(186.0)	HS-1-132	HES-1-132



Nominal Pipe Size		Weight of Pipe Filled With Water		HS Type Hanger Selection	HES Type Hanger Selection
		Lbs./Ft.	kg/m		
1"	(25)	3	(4.4)	(2) HSL-1-101	(2) HESL-1-101
1 1/4"	(32)	4	(5.9)	(2) HSL-1-101	(2) HESL-1-101
1 1/2"	(40)	5	(7.4)	(2) HSL-1-101	(2) HESL-1-101
2"	(50)	7	(10.4)	(2) HSL-1-101	(2) HESL-1-101
2 1/2"	(65)	10	(14.9)	(2) HSL-1-102	(2) HESL-1-102
3"	(80)	13	(19.3)	(2) HSL-1-102	(2) HESL-1-102
4"	(100)	19	(28.3)	(2) HSL-1-103	(2) HESL-1-103
5"	(125)	27	(40.2)	(2) HSL-1-104	(2) HESL-1-104
6"	(150)	35	(52.1)	(2) HS-1-124	(2) HES-1-124
8"	(200)	56	(83.3)	(2) HS-1-126	(2) HES-1-126
10"	(250)	81	(120.5)	(2) HS-1-127	(2) HES-1-127
12"	(300)	110	(163.7)	(2) HS-1-128	(2) HES-1-128
14"	(350)	125	(186.0)	(2) HS-1-129	(2) HES-1-129



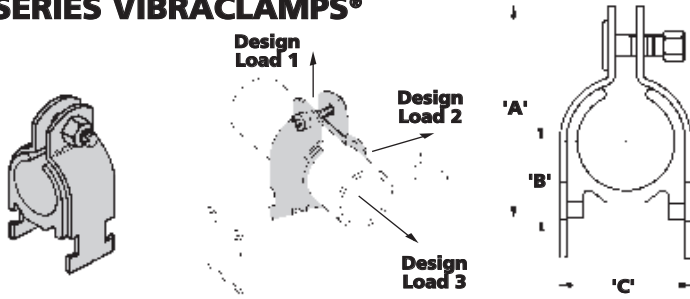
The above charts are for reference only. Applicable codes require different support spans thus selection of spring hanger size may change. Calculate as follows:

$$\text{Wt. per Ft. (Lbs.)} \times \text{Support Span} = \text{Load Requirement}$$

(Refer to hanger sizing charts)

Other Vibration Products

BVT SERIES VIBRACLAMPS®



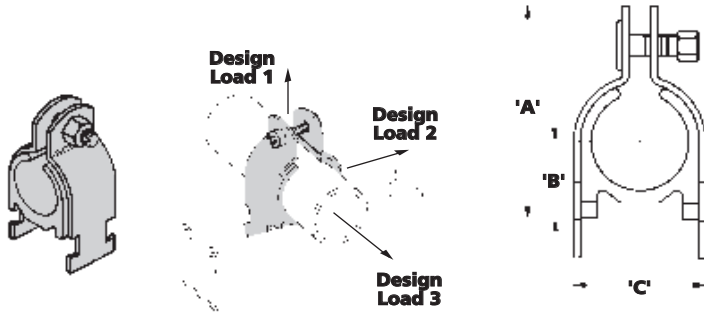
- Easy one tool installation.
- Temperature Range:
-40°F to +300°F
- Dampens vibration and noise.
- Eliminates galvanic corrosion due to metal to metal contact.
- Resists most industrial oils and solvents.
- Secures tubing firmly to strut channel.

Part No.	Copper and Steel Tubing O.D. Size		Copper Tubing Size		Dimensions in Inches						Wt. Each	
					'A'		'B'		'C'		Lbs.	kg
BVT025	1/4"	(6.3)	1/8"	(3)	1.22"	(30.9)	0.19"	(4.8)	0.49"	(12.4)	.11	(.05)
BVT037	3/8"	(9.5)	1/4"	(6)	1.36"	(34.5)	0.25"	(6.3)	0.61"	(15.5)	.12	(.05)
BVT050	1/2"	(12.7)	3/8"	(10)	1.49"	(37.8)	0.31"	(7.8)	0.74"	(18.8)	.14	(.06)
BVT062	5/8"	(15.9)	1/2"	(15)	1.62"	(41.1)	0.38"	(9.6)	0.86"	(21.8)	.15	(.07)
BVT075	3/4"	(19.0)	5/8"	(17)	1.87"	(47.4)	0.50"	(12.7)	1.15"	(29.2)	.19	(.08)
BVT087	7/8"	(22.2)	3/4"	(20)	2.00"	(50.8)	0.56"	(14.2)	1.27"	(32.2)	.21	(.09)
BVT112	1 1/8"	(28.6)	1"	(25)	2.25"	(57.1)	0.69"	(17.5)	1.52"	(38.6)	.26	(.12)
BVT137	1 3/8"	(34.9)	1 1/4"	(32)	2.51"	(63.7)	0.81"	(20.6)	1.78"	(45.2)	.38	(.17)
BVT162	1 5/8"	(41.3)	1 1/2"	(40)	3.00"	(76.2)	1.00"	(25.4)	2.20"	(55.9)	.40	(.18)
BVT212	2 1/8"	(54.0)	2"	(50)	3.52"	(89.4)	1.25"	(31.7)	2.70"	(68.6)	.55	(.25)
BVT262	2 5/8"	(66.6)	2 1/2"	(65)	4.02"	(102.1)	1.50"	(38.1)	3.20"	(81.3)	.55	(.25)
BVT312	3 1/8"	(79.4)	3"	(80)	4.53"	(115.0)	1.75"	(44.4)	3.70"	(93.9)	.64	(.29)
BVT362	3 5/8"	(92.1)	3 1/2"	(90)	5.05"	(128.2)	2.00"	(50.8)	4.23"	(107.4)	.76	(.34)
BVT412	4 1/8"	(104.8)	4"	(100)	5.55"	(140.9)	2.25"	(57.1)	4.73"	(120.1)	.93	(.42)
BVT612	6 1/8"	(155.5)	6"	(150)	7.62"	(193.5)	3.25"	(82.5)	6.74"	(171.1)	1.36	(.61)

Part No.	Design Load 1		Design Load 2		Design Load 3	
	Lbs.	kN	Lbs.	kN	Lbs.	kN
BVT025	400	(1.78)	50	(0.22)	50	(0.22)
BVT037	400	(1.78)	50	(0.22)	50	(0.22)
BVT050	400	(1.78)	50	(0.22)	50	(0.22)
BVT062	400	(1.78)	50	(0.22)	50	(0.22)
BVT075	600	(2.67)	75	(0.33)	75	(0.33)
BVT087	600	(2.67)	75	(0.33)	75	(0.33)
BVT112	600	(2.67)	75	(0.33)	75	(0.33)
BVT137	600	(2.67)	75	(0.33)	75	(0.33)
BVT162	800	(3.56)	125	(0.55)	125	(0.55)
BVT212	800	(3.56)	125	(0.55)	125	(0.55)
BVT262	800	(3.56)	125	(0.55)	125	(0.55)
BVT312	800	(3.56)	125	(0.55)	125	(0.55)
BVT362	1000	(4.45)	200	(0.89)	150	(0.67)
BVT412	1000	(4.45)	200	(0.89)	150	(0.67)
BVT612	1000	(4.45)	200	(0.89)	150	(0.67)

Other Vibration Products

BVP SERIES VIBRACLAMPS®



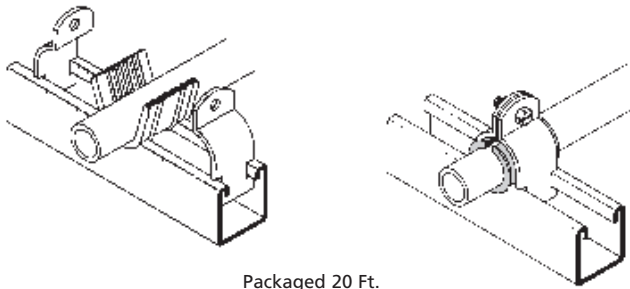
- Easy one tool installation.
- Temperature Range: -40°F to +300°F
- Dampens vibration and noise.
- Eliminates galvanic corrosion due to metal to metal contact.
- Resists most industrial oils and solvents.
- Secures pipe firmly to strut channel.

Part No.	Steel O.D. Size		Nominal Pipe Size		Dimensions in Inches						Wt. Each	
					'A'		'B'		'C'		Lbs.	kg
BVP025	0.540"	(13.7)	1/4"	(6)	1.61"	(39.9)	0.37"	(9.4)	0.87"	(22.1)	.15	(.07)
BVP037	0.675"	(17.1)	3/8"	(10)	1.86"	(47.2)	0.50"	(12.7)	1.15"	(29.2)	.18	(.08)
BVP050	0.875"	(22.2)	1/2"	(15)	1.99"	(50.5)	0.56"	(14.2)	1.27"	(32.3)	.20	(.09)
BVP075	1.050"	(26.7)	3/4"	(20)	2.25"	(57.1)	0.69"	(17.5)	1.52"	(38.6)	.21	(.09)
BVP100	1.312"	(33.3)	1"	(25)	2.51"	(63.8)	0.81"	(20.6)	1.77"	(45.0)	.20	(.09)
BVP125	1.660"	(42.2)	1 1/4"	(32)	3.00"	(76.2)	1.00"	(25.4)	2.21"	(56.1)	.36	(.16)
BVP150	1.900"	(48.3)	1 1/2"	(40)	3.21"	(81.5)	1.12"	(28.4)	2.41"	(61.2)	.40	(.18)
BVP200	2.375"	(60.3)	2"	(50)	3.77"	(95.8)	1.37"	(34.8)	2.96"	(75.2)	.45	(.20)
BVP250	2.875"	(73.0)	2 1/2"	(65)	4.28"	(108.7)	1.62"	(41.1)	3.46"	(87.9)	.54	(.24)
BVP300	3.500"	(88.9)	3"	(80)	5.05"	(128.3)	2.00"	(50.8)	4.24"	(107.7)	.81	(.37)
BVP350	4.000"	(101.6)	3 1/2"	(90)	5.55"	(140.9)	2.25"	(57.1)	4.74"	(120.3)	.87	(.39)
BVP400	4.500"	(114.3)	4"	(100)	6.05"	(153.7)	2.50"	(63.5)	5.24"	(133.1)	1.09	(.49)
BVP500	5.563"	(141.3)	5"	(125)	6.84"	(173.7)	3.00"	(76.2)	6.24"	(158.4)	1.36	(.61)
BVP600	6.625"	(168.3)	6"	(150)	8.24"	(209.3)	3.56"	(90.4)	7.36"	(186.9)	1.63	(.74)

Part No.	Design Load 1		Design Load 2		Design Load 3	
	Lbs.	kN	Lbs.	kN	Lbs.	kN
BVP025	400	(1.78)	50	(0.22)	50	(0.22)
BVP037	600	(2.67)	75	(0.33)	75	(0.33)
BVP050	600	(2.67)	75	(0.33)	75	(0.33)
BVP075	600	(2.67)	75	(0.33)	75	(0.33)
BVP100	600	(2.67)	75	(0.33)	75	(0.33)
BVP125	800	(3.56)	125	(0.55)	125	(0.55)
BVP150	800	(3.56)	125	(0.55)	125	(0.55)
BVP200	800	(3.56)	125	(0.55)	125	(0.55)
BVP250	800	(3.56)	125	(0.55)	125	(0.55)
BVP300	1000	(4.45)	200	(0.89)	150	(0.67)
BVP350	1000	(4.45)	200	(0.89)	150	(0.67)
BVP400	1000	(4.45)	200	(0.89)	150	(0.67)
BVP500	1000	(4.45)	200	(0.89)	150	(0.67)
BVP600	1000	(4.45)	200	(0.89)	150	(0.67)

Other Vibration/Isolation Products

B1999 VIBRA CUSHION®



Packaged 20 Ft.
per carton.

Note: See Strut Catalog for sizing information.

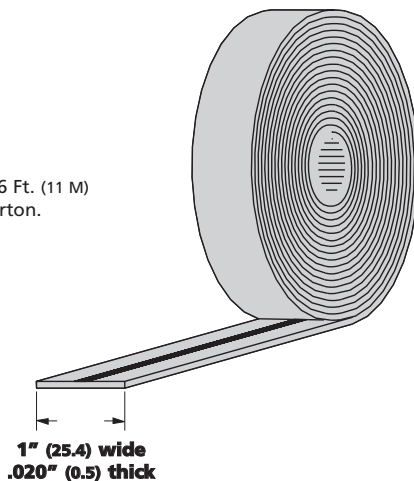
- Ideal Isolation Material
- Inhibits Galvanic Corrosion
- Dampens Sound and Vibration
- Service Temperature Range
-75° F (-60° C) to +375° F (-190° C)

Vibra Cushion® is designed for use with refrigeration lines, HVAC, copper tubing, glass pipe and hydraulic lines. It provides an energy-absorption barrier between the lines and the mounting material and remains flexible thru its entire service range of -75°F (-60° C) to +375°F (-190° C).

This elastomer allows for expansion and contraction within the mounting system and prevents galvanic reaction between dissimilar metals.

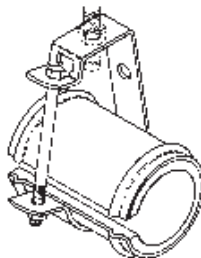
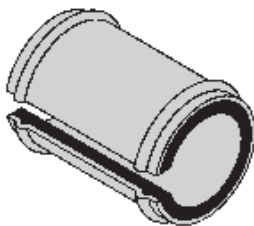
ISO ISO PIPE

Packaged 36 Ft. (11 M)
per carton.



- Non-adhesive rubber tape
- Fuses to itself
- Water resistant
- Prevents galvanic reaction caused by dissimilar metal contact
- Service Temperature Range
-140° F (-95° C) to +395° F (+200° C)

B3195 Series / B3195CT Series FELT ISOLATORS



- Steel and Felt Material
- Pre-Galvanized Finish
- Dampens Sound and Vibration
- Prevents Electrolysis
- Available In Pipe and Copper Tubing Sizes

B3195 Series Felt Isolator sized for Iron Pipe and B3195CT Series Felt Isolator sized for Copper Tubing can be used with B3100 Series Clevis Hangers, B3690 Series J-Hangers, B3170 Series Ring Hangers and B2000 Series or B2400 Series Strut Mounted Clamps.

Reference Data - Metric Conversion Chart

To Convert From	To	Multiply By	To Convert From	To	Multiply By
Angle			Length		
degree	radian (rad)	1.745329×10^{-2}	foot (ft)	meter (m)	3.048000×10^{-1}
radian (rad)	degree	$5.729578 \times 10^{+1}$	inch (in)	meter (m)	2.540000×10^{-2}
Area			mil	meter (m)	2.540000×10^{-5}
foot ²	square meter (m ²)	9.290304×10^{-2}	inch (in)	micrometer (μm)	$2.540000 \times 10^{+4}$
inch ²	square meter (m ²)	6.451600×10^{-4}	meter (m)	foot (ft)	3.280840
circular mil	square meter (m ²)	5.067075×10^{-10}	meter (m)	inch (in)	$3.937008 \times 10^{+1}$
sq. centimeter (cm ²)	square inch (in ²)	1.550003×10^{-1}	meter (m)	mil	$3.937008 \times 10^{+4}$
square meter (m ²)	foot ²	$1.076391 \times 10^{+1}$	micrometer (μm)	inch (in)	3.937008×10^{-5}
square meter (m ²)	inch ²	$1.550003 \times 10^{+3}$	Volume		
square meter (m ²)	circular mil	$1.973525 \times 10^{+9}$	foot ³	cubic meter (m ³)	2.831685×10^{-2}
Temperature			inch ³	cubic meter (m ³)	1.638706×10^{-5}
degree Fahrenheit	degree Celsius	$t^{\circ C} = (t^{\circ F} - 32) / 1.8$	cubic centimeter (cm ³)	cubic inch (in ³)	6.102374×10^{-2}
degree Celsius	degree Fahrenheit	$t^{\circ F} = 1.8 t^{\circ C} + 32$	Section Properties		
Force			cubic meter (m ³)	foot ³	$3.531466 \times 10^{+1}$
pounds-force (lbf)	newtons (N)	4.448222	cubic meter (m ³)	inch ³	$6.102376 \times 10^{+4}$
Section Properties			gallon (U.S. liquid)	cubic meter (m ³)	3.785412×10^{-3}
section modulus S (in ³)	S (m ³)	1.638706×10^{-5}	section modulus S (m ³)	S (in ³)	$6.102374 \times 10^{+4}$
moment of inertia I (in ⁴)	I (m ⁴)	4.162314×10^{-7}	moment of inertia I (m ⁴)	I (in ⁴)	$2.402510 \times 10^{+6}$
modulus of elasticity E (psi)	E (Pa)	$6.894757 \times 10^{+3}$	modulus of elasticity E (Pa)	E (psi)	1.450377×10^{-4}

To Convert From	To	Multiply By	Abbreviations	
Bending Moment or Torque			AISC	= American Institute of Steel Construction
lbf•ft	newton meter (N•m)	1.355818	AISI	= American Iron & Steel Institute
lbf•in	newton meter (N•m)	1.129848×10^{-1}	ANSI	= American National Standards Institute
N•m	lbf•ft	7.375621×10^{-1}	ASTM	= American Society for Testing & Materials
N•m	lbf•in	8.850748	AWWA	= American Water Works Association
Mass			Dia.	= Diameter
ounce (avoirdupois)	kilogram (kg)	2.834952×10^{-2}	Ft.	= Feet
pound (avoirdupois)	kilogram (kg)	4.535924×10^{-1}	Ga.	= Gauge
ton (short, 2000 lb)	kilogram (kg)	$9.071847 \times 10^{+2}$	I.D.	= Inside Diameter
ton (long, 2240 lb)	kilogram (kg)	$1.016047 \times 10^{+3}$	In.	= Inch
kilogram (kg)	ounce (avoirdupois)	$3.527396 \times 10^{+1}$	Lbs.	= Pounds
kilogram (kg)	pound (avoirdupois)	2.204622	Max.	= Maximum
kilogram (kg)	ton (short 2000 lb)	1.102311×10^{-3}	Min.	= Minimum
kilogram (kg)	ton (long 2240 lb)	9.842064×10^{-4}	MSS	= Manufacturers Standardization Society
Mass Per Unit Length			NFPA	= National Fire Protection Association
lb/ft	kilogram per meter (kg/m)	1.488164	O.D.	= Outside Diameter
lb/in	kilogram per meter (kg/m)	$1.785797 \times 10^{+1}$	Oz.	= Ounces
kg/m	lb/ft	6.719689×10^{-1}	Pre-Galv.	= Pre-galvanized
kg/m	lb/in	5.599741×10^{-2}	psi	= Pounds Per Square Inch
Mass Per Unit Volume			PVC	= Poly Vinyl Chloride
lb/ft ³	kilogram per cubic meter (kg/m ³)	$1.601846 \times 10^{+1}$	UL	= Underwriters' Laboratories, Inc.
lb/in ³	kilogram per cubic meter (kg/m ³)	$2.767990 \times 10^{+4}$	UNC	= Unified Course Threads
kg/m ³	lb/ft ³	6.242797×10^{-2}	UNCR	= Unified Course Threads (Rounded Root)
kg/m ³	lb/in ³	3.612730×10^{-5}	Wt./C	= Weight per 100
lbs/ft ³	lbs/in ³	$1.728000 \times 10^{+3}$	Metric Symbols	
Mass Per Area Unit			cm	= centimeter
lb/ft ²	kilogram per square meter (kg/m ²)	4.882428	kg	= kilogram
kg/m ²	pound per square foot (lb/ft ²)	2.048161×10^{-1}	kN	= kilonewton
Pressure or Stress			m	= meter
lbf/in ² (psi)	pascal (Pa)	$6.894757 \times 10^{+3}$	μm	= micrometer
kip/in ² (ksi)	pascal (Pa)	$6.894757 \times 10^{+6}$	mm	= millimeter
lbf/in ² (psi)	megapascals (MPa)	6.894757×10^{-3}	MPa	= megapascal
pascal (Pa)	pound force per sq. inch (psi)	1.450377×10^{-4}	N	= newton
pascal (Pa)	kip per sq. inch (ksi)	1.450377×10^{-7}	Nm	= newton-meter
megapascals (MPa)	lbf/in ² (psi)	$1.450377 \times 10^{+2}$	Pa	= pascal

SCHEDULE 40 STEEL PIPE DATA

Nominal Pipe Size		Pipe O.D.		Wall Thickness		Weight of Pipe		Weight of Pipe Filled With Water		Maximum Span*		Recommended Hanger Rod Sizes
In.	mm	In.	mm	In.	mm	Lbs./Ft.	kg/m	Lbs./Ft.	kg/m	Ft.	Meter	
3/8"	(10)	.675	(17.1)	.091	(2.3)	.6	(.9)	.7	(1.0)	7	(2.13)	3/8"-16
1/2"	(15)	.840	(21.3)	.109	(2.7)	.8	(1.2)	.9	(1.3)	7	(2.13)	3/8"-16
3/4"	(20)	1.050	(26.7)	.113	(2.9)	1.1	(1.7)	1.3	(2.0)	7	(2.13)	3/8"-16
1"	(25)	1.315	(33.4)	.133	(3.4)	1.7	(2.5)	2.1	(3.0)	7	(2.13)	3/8"-16
1 1/4"	(32)	1.660	(42.1)	.140	(3.5)	2.3	(3.4)	2.9	(4.3)	7	(2.13)	3/8"-16
1 1/2"	(40)	1.900	(48.2)	.145	(3.7)	2.7	(4.0)	3.6	(5.3)	9	(2.74)	3/8"-16
2"	(50)	2.375	(60.3)	.154	(3.9)	3.6	(5.4)	5.0	(7.5)	10	(3.05)	3/8"-16
2 1/2"	(65)	2.875	(73.0)	.203	(5.1)	5.8	(8.6)	7.9	(11.7)	11	(3.35)	1/2"-13
3"	(80)	3.500	(88.9)	.216	(5.5)	7.6	(11.2)	10.8	(15.9)	12	(3.66)	1/2"-13
3 1/2"	(90)	4.000	(101.6)	.226	(5.7)	9.1	(13.5)	13.4	(19.8)	13	(3.96)	1/2"-13
4"	(100)	4.500	(114.3)	.237	(6.0)	10.8	(16.0)	16.3	(24.2)	14	(4.27)	5/8"-11
5"	(125)	5.563	(141.3)	.258	(6.5)	14.6	(21.7)	23.2	(34.6)	16	(4.87)	5/8"-11
6"	(150)	6.625	(168.3)	.280	(7.1)	19.0	(28.2)	31.5	(46.8)	17	(5.18)	3/4"-10
8"	(200)	8.625	(219.1)	.322	(8.2)	28.5	(42.5)	50.1	(74.6)	19	(5.79)	3/4"-10
10"	(250)	10.750	(273.0)	.365	(9.3)	40.5	(60.2)	74.6	(110.9)	22	(6.69)	7/8"-9
12"	(300)	12.750	(323.8)	.406	(10.3)	51.1	(75.9)	102.1	(151.9)	23	(7.01)	7/8"-9
14"	(350)	14.000	(355.6)	.437	(11.1)	63.0	(93.7)	121.5	(180.7)	25	(7.62)	1"-8
16"	(400)	16.000	(406.4)	.500	(12.7)	83.0	(123.5)	159.5	(237.3)	27	(8.23)	1"-8
18"	(450)	18.000	(457.2)	.563	(14.3)	105.0	(156.2)	202.2	(300.8)	28	(8.53)	1"-8
20"	(500)	20.000	(508.0)	.593	(15.1)	123.0	(183.0)	243.4	(361.8)	30	(9.14)	1 1/4"-7
24"	(600)	24.000	(609.6)	.687	(17.4)	171.0	(254.5)	345.2	(513.7)	32	(9.75)	1 1/4"-7

SCHEDULE 80 STEEL PIPE DATA

Nominal Pipe Size		Pipe O.D.		Wall Thickness		Weight of Pipe		Weight of Pipe Filled With Water		Maximum Span*		Recommended Hanger Rod Sizes
In.	mm	In.	mm	In.	mm	Lbs./Ft.	kg/m	Lbs./Ft.	kg/m	Ft.	Meter	
3/8"	(10)	.675	(17.1)	.126	(3.2)	.7	(1.1)	.8	(1.2)	7	(2.13)	3/8"-16
1/2"	(15)	.840	(21.3)	.147	(3.7)	1.1	(1.6)	1.2	(1.7)	7	(2.13)	3/8"-16
3/4"	(20)	1.050	(26.7)	.154	(3.9)	1.5	(2.2)	1.7	(2.5)	7	(2.13)	3/8"-16
1"	(25)	1.315	(33.4)	.179	(4.5)	2.2	(3.2)	2.5	(3.6)	7	(2.13)	3/8"-16
1 1/4"	(32)	1.660	(42.1)	.191	(4.8)	3.0	(4.4)	3.5	(5.2)	7	(2.13)	3/8"-16
1 1/2"	(40)	1.900	(48.2)	.200	(5.1)	3.6	(5.4)	4.3	(6.5)	9	(2.74)	3/8"-16
2"	(50)	2.375	(60.3)	.218	(5.5)	5.0	(7.5)	6.3	(9.4)	10	(3.05)	3/8"-16
2 1/2"	(65)	2.875	(73.0)	.276	(7.0)	7.6	(11.4)	9.4	(14.1)	11	(3.35)	1/2"-13
3"	(80)	3.500	(88.9)	.300	(7.6)	10.2	(15.2)	13.0	(19.4)	12	(3.66)	1/2"-13
3 1/2"	(90)	4.000	(101.6)	.318	(8.1)	12.5	(18.6)	16.3	(24.3)	13	(3.96)	1/2"-13
4"	(100)	4.500	(114.3)	.337	(8.5)	15.0	(22.3)	20.0	(29.7)	14	(4.27)	5/8"-11
5"	(125)	5.563	(141.3)	.375	(9.5)	20.8	(30.9)	28.7	(42.6)	16	(4.87)	5/8"-11
6"	(150)	6.625	(168.3)	.432	(11.0)	28.6	(42.5)	39.9	(59.3)	17	(5.18)	3/4"-10
8"	(200)	8.625	(219.1)	.500	(12.7)	43.4	(64.5)	63.1	(93.9)	19	(5.79)	3/4"-10
10"	(250)	10.750	(273.0)	.593	(15.0)	64.4	(95.8)	95.5	(142.1)	22	(6.69)	7/8"-9
12"	(300)	12.750	(323.8)	.687	(17.4)	88.6	(131.8)	132.6	(197.3)	23	(7.01)	7/8"-9
14"	(350)	14.000	(355.6)	.750	(19.0)	107.0	(159.2)	158.2	(235.4)	25	(7.62)	1"-8
16"	(400)	16.000	(406.4)	.843	(21.4)	137.0	(203.9)	206.7	(306.6)	27	(8.23)	1"-8
18"	(450)	18.000	(457.2)	.937	(23.8)	171.0	(254.5)	259.5	(386.2)	28	(8.53)	1"-8
20"	(500)	20.000	(508.0)	1.031	(26.2)	209.0	(311.0)	318.4	(473.8)	30	(9.14)	1 1/4"-7
24"	(600)	24.000	(609.6)	1.218	(30.9)	297.0	(442.0)	455.2	(677.4)	32	(9.75)	1 1/4"-7

Based on ASTM A53-86.
 1 cubic ft. of water weighs 62.41 lbs.
 1 gallon (U.S.) weighs 8.335 lbs.
 1 cubic meter of water weighs 999.97 kg.
 1 liter weighs .999 kg.

Based on MSS SP-69 Table 3 & 4.
 *Many codes require pipe hangers to be spaced every 10' (3.048 meters) regardless of size. Check local codes.
 Spacing and capacities are based on water filled pipe. Closer hanger spacing may be required where additional valves and fittings increase the load.

Reference Data

AWWA DUCTILE IRON PIPE DATA

Nominal Pipe Size		Class	O.D. of Ductile Iron Pipe		Wall Thickness		Weight of Pipe		Weight of Pipe Filled With Water	
In.	mm		In.	mm	In.	mm	Lbs./Ft.	kg/m	Lbs./Ft.	kg/m
3"	(80)	53	3.96	(100.6)	.31	(7.9)	11.2	(16.6)	15.0	(22.2)
4"	(100)	53	4.80	(121.9)	.32	(8.1)	14.2	(21.1)	20.1	(29.9)
6"	(150)	53	6.90	(175.2)	.34	(8.6)	22.0	(32.7)	35.1	(52.2)
8"	(200)	53	9.05	(229.9)	.36	(9.1)	31.0	(46.1)	54.0	(80.3)
10"	(250)	53	11.10	(281.9)	.38	(9.6)	40.4	(60.1)	76.8	(114.2)
12"	(300)	53	13.20	(335.3)	.40	(10.1)	50.7	(75.4)	103.0	(153.2)
14"	(350)	53	15.30	(388.6)	.42	(10.6)	62.4	(92.8)	133.5	(198.6)
16"	(400)	53	17.40	(441.9)	.43	(10.9)	72.8	(108.3)	165.9	(246.8)
18"	(450)	53	19.50	(495.3)	.44	(11.1)	83.6	(124.4)	201.5	(299.8)
20"	(500)	53	21.60	(548.6)	.45	(11.4)	95.2	(141.7)	241.0	(358.7)
24"	(600)	53	25.80	(655.3)	.47	(11.9)	119.2	(177.4)	329.4	(490.2)
30"	(750)	53	32.00	(812.8)	.51	(12.9)	161.3	(240.0)	487.8	(597.1)
36"	(900)	53	38.30	(972.8)	.58	(14.7)	219.5	(326.6)	688.8	(1025.0)
42"	(1050)	53	44.50	(1130.3)	.65	(16.5)	285.2	(424.4)	920.1	(1369.2)
48"	(1200)	53	50.80	(1290.3)	.72	(18.3)	360.3	(536.2)	1189.2	(1769.7)
54"	(1350)	53	57.10	(1450.3)	.81	(20.6)	455.0	(677.1)	1502.2	(2135.5)

Based on AWWA C108-70, Table 8.2.

Add flange weight for flanged cast iron pipe.

Ductile Iron Pipe Size

Ductile Iron Pipe Size		B3110	B3114	B3120	B3122	B3122A	B3124	B3126	B3117SL
In.	mm								
3"	(80)	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	2 to 3 1/2	2 to 3 1/2	2 to 3 1/2
4"	(100)	4	4	4	4	4	4 to 6	4 to 6	4 to 6
6"	(150)	6	6	6	6	6			
8"	(200)	10	8	8	8	8	8 to 10	8 to 10	8 to 10
10"	(250)	12	10	10	10	10			
12"	(300)	12	12	12	12	12	12 to 14	12 to 14	12 to 14
14"	(350)	16	14	14	14	14			
16"	(400)	18	16	16	16	16	16 to 20	16 to 20	16 to 20
18"	(450)	20	18	18	18	18			
20"	(500)	24	20	20	20	20	—	—	24
24"	(600)	30	24	24	24	24			

Ductile Iron Pipe Size		B3118SL	B3119SL	B218	B219	B379	B479	B3114R	B3117R
In.	mm								
3"	(80)	2 to 3 1/2	2 to 3 1/2	B218	B219-1	—	—	3 1/2	2 to 3 1/2
4"	(100)	4 to 6	4 to 6	B218	B219-2	—	—	4	4 to 6
6"	(150)			B218	B219-3	B379	—	6	
8"	(200)	8 to 10	8 to 10	—	B219-4	B379	—	8	8 to 10
10"	(250)			—	B219-4	B379	—	10	
12"	(300)	12 to 14	12 to 14	—	B219-5	B379	—	12	12 to 14
14"	(350)			—	—	B379	—	14	
16"	(400)	16 to 20	16 to 20	—	—	B379	B479	16	16 to 20
18"	(450)			—	—	—	—	B479	
20"	(500)	24	24	—	—	—	B479	20	24
24"	(600)			—	—	—	—	B479	

SERVICE WEIGHT CAST IRON SOIL PIPE DATA (Bell and Spigot Type)

Nominal Pipe Size		O.D. of Cast Iron Pipe		Wall Thickness		Weight of Pipe		Weight of Pipe Filled With Water	
In.	mm	In.	mm	In.	mm	Lbs./Ft.	kg/m	Lbs./Ft.	kg/m
2"	(50)	2.25	(57.1)	.17	(4.3)	4.0	(5.9)	5.5	(8.1)
3"	(80)	3.25	(82.5)	.17	(4.3)	6.0	(8.9)	9.4	(13.9)
4"	(100)	4.25	(107.9)	.18	(4.6)	8.0	(11.9)	14.2	(21.1)
5"	(125)	5.25	(133.3)	.18	(4.6)	10.4	(15.5)	22.7	(33.8)
6"	(150)	6.25	(158.7)	.18	(4.6)	13.0	(19.3)	26.9	(40.0)
8"	(200)	8.38	(212.8)	.23	(5.8)	20.0	(29.7)	45.7	(67.9)
10"	(250)	10.50	(266.7)	.28	(7.1)	29.0	(43.1)	69.6	(103.5)
12"	(300)	12.50	(317.5)	.28	(7.1)	38.0	(56.5)	96.2	(143.1)
15"	(380)	15.62	(396.7)	.31	(7.9)	51.0	(75.9)	147.6	(219.6)

Based on ASTM A74 - Table 2.

EXTRA WEIGHT CAST IRON SOIL PIPE DATA (Bell and Spigot Type)

Nominal Pipe Size		O.D. of Cast Iron Pipe		Wall Thickness		Weight of Pipe		Weight of Pipe Filled With Water	
In.	mm	In.	mm	In.	mm	Lbs./Ft.	kg/m	Lbs./Ft.	kg/m
2"	(50)	2.38	(60.4)	.190	(4.8)	5.0	(7.2)	6.6	(9.5)
3"	(80)	3.50	(88.9)	.250	(6.3)	9.0	(13.0)	12.7	(18.3)
4"	(100)	4.50	(114.3)	.250	(6.3)	12.0	(17.4)	18.5	(26.8)
5"	(125)	5.50	(139.7)	.250	(6.3)	15.0	(21.7)	25.2	(36.5)
6"	(150)	6.50	(165.1)	.250	(6.3)	19.0	(27.5)	33.7	(48.8)
8"	(200)	8.62	(218.9)	.310	(7.9)	30.0	(43.4)	56.1	(81.2)
10"	(250)	10.75	(273.0)	.375	(9.5)	43.0	(62.3)	83.8	(121.4)
12"	(300)	12.75	(323.8)	.375	(9.5)	54.0	(78.2)	112.8	(163.3)
15"	(380)	15.88	(403.3)	.440	(11.2)	75.0	(108.6)	166.8	(241.5)

Based on ASTM A74 - Table 1.

NO-HUB CAST IRON SOIL PIPE DATA

Nominal Pipe Size		O.D. of Cast Iron Pipe		Wall Thickness		Weight of Pipe		Weight of Pipe Filled With Water	
In.	mm	In.	mm	In.	mm	Lbs./Ft.	kg/m	Lbs./Ft.	kg/m
1 1/2"	(40)	1.90	(48.2)	.16	(4.0)	2.7	(4.0)	6.2	(9.2)
2"	(50)	2.35	(59.7)	.16	(4.0)	3.6	(5.3)	8.6	(12.5)
3"	(80)	3.35	(85.1)	.16	(4.0)	5.2	(7.7)	13.5	(20.0)
4"	(100)	4.38	(111.2)	.19	(4.8)	7.4	(11.0)	20.2	(30.0)
5"	(125)	5.30	(134.6)	.19	(4.8)	9.6	(14.3)	27.5	(41.0)
6"	(150)	6.30	(160.0)	.19	(4.8)	11.0	(16.3)	34.0	(50.5)
8"	(200)	8.38	(212.8)	.23	(5.8)	18.0	(26.8)	57.5	(85.6)

Based on Cast Iron Soil Pipe Institute Standards 301-72, Table 1.

Reference Data

COPPER TUBING (TYPE L) DATA

Nominal Tubing Size		O.D. Size		Wall Thickness		Weight of Tubing		Weight of Pipe Filled With Water	
In.	mm	In.	mm	In.	mm	Lbs./Ft.	kg/m	Lbs./Ft.	kg/m
1/4"	(6)	.375	(9.5)	.030	(.7)	.12	(.17)	.15	(.21)
3/8"	(10)	.500	(12.7)	.035	(.9)	.20	(.30)	.26	(.39)
1/2"	(15)	.625	(15.9)	.040	(1.0)	.28	(.41)	.38	(.56)
5/8"	(17)	.750	(19.0)	.042	(1.0)	.36	(.53)	.51	(.75)
3/4"	(20)	.875	(22.2)	.045	(1.1)	.45	(.67)	.66	(.98)
1"	(25)	1.125	(28.6)	.050	(1.3)	.65	(.97)	1.01	(1.50)
1 1/4"	(32)	1.375	(34.9)	.055	(1.4)	.88	(1.31)	1.42	(2.11)
1 1/2"	(40)	1.625	(41.3)	.060	(1.5)	1.14	(1.69)	1.91	(2.83)
2"	(50)	2.125	(54.0)	.070	(1.8)	1.75	(2.60)	3.09	(4.59)
2 1/2"	(65)	2.625	(66.7)	.080	(2.0)	2.48	(3.69)	4.54	(6.75)
3"	(80)	3.125	(79.4)	.090	(2.3)	3.33	(4.95)	6.28	(9.34)
3 1/2"	(90)	3.625	(92.1)	.100	(2.5)	4.29	(6.38)	8.28	(12.32)
4"	(100)	4.125	(104.8)	.110	(2.8)	5.38	(8.00)	10.57	(15.72)
5"	(125)	5.125	(130.2)	.125	(3.2)	7.61	(11.32)	15.69	(23.34)
6"	(150)	6.125	(155.6)	.140	(3.5)	10.20	(15.18)	21.81	(32.46)
8"	(200)	8.125	(206.4)	.200	(5.1)	19.29	(28.70)	39.49	(58.89)

Dimensions taken from ASTM B88-83.

COPPER TUBING (TYPE K) DATA

Nominal Tubing Size		O.D. Size		Wall Thickness		Weight of Tubing		Weight of Pipe Filled With Water	
In.	mm	In.	mm	In.	mm	Lbs./Ft.	kg/m	Lbs./Ft.	kg/m
1/4"	(6)	.375	(9.5)	.035	(.9)	.14	(.21)	.17	(.25)
3/8"	(10)	.500	(12.7)	.049	(1.2)	.27	(.40)	.32	(.47)
1/2"	(15)	.625	(15.9)	.049	(1.2)	.34	(.50)	.43	(.63)
5/8"	(17)	.750	(19.0)	.049	(1.2)	.42	(.62)	.56	(.83)
3/4"	(20)	.875	(22.2)	.065	(1.6)	.64	(.95)	.83	(1.23)
1"	(25)	1.125	(28.6)	.065	(1.6)	.84	(1.25)	1.18	(1.75)
1 1/4"	(32)	1.375	(34.9)	.065	(1.6)	1.04	(1.55)	1.57	(2.34)
1 1/2"	(40)	1.625	(41.3)	.072	(1.8)	1.36	(2.02)	2.10	(3.12)
2"	(50)	2.125	(54.0)	.083	(2.1)	2.06	(3.06)	3.37	(5.01)
2 1/2"	(65)	2.625	(66.7)	.095	(2.4)	2.92	(4.34)	4.92	(7.31)
3"	(80)	3.125	(79.4)	.109	(2.8)	4.00	(5.95)	6.96	(10.35)
3 1/2"	(90)	3.625	(92.1)	.120	(3.0)	5.12	(7.62)	9.02	(13.42)
4"	(100)	4.125	(104.8)	.134	(3.4)	6.51	(9.69)	11.57	(17.22)
5"	(125)	5.125	(130.2)	.160	(4.0)	9.67	(14.39)	17.67	(26.29)
6"	(150)	6.125	(155.6)	.192	(4.9)	13.87	(20.60)	25.07	(37.27)
8"	(200)	8.125	(206.4)	.271	(6.9)	25.90	(38.50)	45.40	(67.52)

Dimensions taken from ASTM B88-83.

1 cubic ft. of water weighs 62.41 lbs.

1 cubic meter of water weighs 999.97 kg.

1 gallon (U.S.) weighs 8.335 lbs.

1 liter weighs .999 kg.

RECOMMENDED HANGER SPACING AND ROD SIZE FOR COPPER TUBING

Nominal Tubing Size		Maximum Span		Recommended Hanger Rod Size
In.	mm	Ft.	Meter	
1/2"	(15)	5	(1.52)	3/8" - 16
3/4"	(20)	5	(1.52)	3/8" - 16
1"	(25)	6	(1.83)	3/8" - 16
1 1/4"	(32)	7	(2.13)	3/8" - 16
1 1/2"	(40)	8	(2.44)	3/8" - 16
2"	(50)	8	(2.44)	3/8" - 16
2 1/2"	(65)	9	(2.74)	1/2" - 13
3"	(80)	10	(3.05)	1/2" - 13
3 1/2"	(90)	11	(3.35)	1/2" - 13
4"	(100)	12	(3.66)	1/2" - 13
5"	(125)	13	(3.96)	1/2" - 13
6"	(150)	14	(4.27)	5/8" - 11
8"	(200)	16	(4.87)	3/4" - 10

Based on MSS-SP-69, Table 3 & 4.

GLASS PIPE DATA

Regular Schedule

Nominal Pipe Size		O.D. Size		Wall Thickness		Weight of Pipe		Weight of Pipe Filled With Water	
In.	mm	In.	mm	In.	mm	Lbs./Ft.	kg/m	Lbs./Ft.	kg/m
1 1/2"	(40)	1.84	(46.7)	.12	(3.0)	.6	(.9)	1.5	(2.2)
2"	(50)	2.34	(59.4)	.14	(3.5)	.9	(1.4)	2.3	(3.5)
3"	(80)	3.41	(86.6)	.17	(4.3)	1.6	(2.4)	4.8	(7.1)
4"	(100)	4.53	(115.0)	.20	(5.1)	2.6	(3.8)	8.4	(12.4)
6"	(150)	6.66	(169.1)	.24	(6.1)	4.7	(7.0)	17.5	(26.0)

Consult manufacturer for support spacing requirements.

Heavy Schedule

Nominal Pipe Size		O.D. Size		Wall Thickness		Weight of Pipe		Weight of Pipe Filled With Water	
In.	mm	In.	mm	In.	mm	Lbs./Ft.	kg/m	Lbs./Ft.	kg/m
1"	(25)	1.31	(33.3)	.16	(4.0)	.6	(.9)	.9	(1.4)
1 1/2"	(40)	1.84	(46.7)	.17	(4.3)	.8	(1.3)	1.5	(2.4)
2"	(50)	2.34	(59.4)	.17	(4.3)	1.1	(1.6)	2.4	(3.6)
3"	(80)	3.41	(86.6)	.20	(5.1)	2.0	(3.0)	5.0	(7.5)
4"	(100)	4.53	(115.0)	.26	(6.6)	3.4	(5.0)	8.8	(13.1)
6"	(150)	6.66	(169.1)	.33	(8.4)	6.3	(9.4)	18.7	(27.9)

Consult manufacturer for support spacing requirements.

- 1 cubic ft. of water weighs 62.41 lbs.
- 1 cubic meter of water weighs 999.97 kg.
- 1 gallon (U.S.) weighs 8.335 lbs.
- 1 liter weighs .999 kg.

Reference Data

SCHEDULE 40 PVC PLASTIC PIPE DATA

Nominal Pipe Size		Pipe O.D.		Wall Thickness		Weight of Pipe		Weight of Pipe Filled With Water	
In.	mm	In.	mm	In.	mm	Lbs./Ft.	kg/m	Lbs./Ft.	kg/m
1/8"	(3)	.405	(10.3)	.068	(1.7)	.04	(.06)	.06	(.09)
1/4"	(6)	.540	(13.7)	.088	(2.2)	.07	(.11)	.11	(.17)
3/8"	(10)	.675	(17.1)	.091	(2.3)	.10	(.14)	.18	(.26)
1/2"	(15)	.840	(21.3)	.109	(2.7)	.15	(.20)	.25	(.40)
3/4"	(20)	1.050	(26.7)	.113	(2.9)	.20	(.30)	.40	(.60)
1"	(25)	1.315	(33.4)	.133	(3.4)	.30	(.40)	.70	(.90)
1 1/4"	(32)	1.660	(42.1)	.140	(3.5)	.40	(.60)	1.00	(1.50)
1 1/2"	(40)	1.900	(48.2)	.145	(3.7)	.50	(.70)	1.40	(2.00)
2"	(50)	2.375	(60.3)	.154	(3.9)	.60	(.90)	2.00	(3.00)
2 1/2"	(65)	2.875	(73.0)	.203	(5.1)	1.00	(1.50)	3.10	(4.51)
3"	(80)	3.500	(88.9)	.216	(5.5)	1.30	(2.00)	4.50	(6.70)
3 1/2"	(90)	4.000	(101.6)	.226	(5.7)	1.60	(2.40)	5.90	(8.70)
4"	(100)	4.500	(114.3)	.237	(6.0)	1.90	(2.80)	7.40	(11.00)
5"	(125)	5.563	(141.3)	.258	(6.5)	2.80	(4.10)	11.40	(17.00)
6"	(150)	6.625	(168.3)	.280	(7.1)	3.30	(4.90)	15.40	(23.00)
8"	(200)	8.625	(219.1)	.322	(8.2)	5.30	(7.80)	26.90	(39.90)
10"	(250)	10.750	(273.0)	.366	(9.3)	7.50	(11.10)	41.60	(61.80)
12"	(300)	12.750	(323.8)	.406	(10.3)	10.00	(14.90)	58.50	(87.00)

SCHEDULE 80 PVC PLASTIC PIPE DATA

Nominal Pipe Size		Pipe O.D.		Wall Thickness		Weight of Pipe		Weight of Pipe Filled With Water	
In.	mm	In.	mm	In.	mm	Lbs./Ft.	kg/m	Lbs./Ft.	kg/m
1/8"	(3)	.405	(10.3)	.095	(2.4)	.05	(.08)	.06	(.10)
1/4"	(6)	.540	(13.7)	.119	(3.0)	.09	(.14)	.12	(.18)
3/8"	(10)	.675	(17.1)	.126	(3.2)	.10	(.19)	.16	(.28)
1/2"	(15)	.840	(21.3)	.147	(3.7)	.10	(.20)	.20	(.30)
3/4"	(20)	1.050	(26.7)	.154	(3.9)	.20	(.40)	.40	(.70)
1"	(25)	1.315	(33.4)	.179	(4.5)	.40	(.50)	.70	(.90)
1 1/4"	(32)	1.660	(42.1)	.191	(4.8)	.50	(.80)	1.00	(1.60)
1 1/2"	(40)	1.900	(48.2)	.200	(5.1)	.60	(.90)	1.30	(2.00)
2"	(50)	2.375	(60.3)	.218	(5.5)	.90	(1.30)	2.20	(3.20)
2 1/2"	(65)	2.875	(73.0)	.276	(7.0)	1.30	(2.00)	3.10	(4.70)
3"	(80)	3.500	(88.9)	.300	(7.6)	1.80	(2.70)	4.60	(6.90)
3 1/2"	(90)	4.000	(101.6)	.318	(8.1)	2.20	(3.20)	6.00	(8.90)
4"	(100)	4.500	(114.3)	.337	(8.5)	2.60	(3.90)	7.60	(11.30)
5"	(125)	5.563	(141.3)	.375	(9.5)	4.10	(6.10)	12.00	(17.80)
6"	(150)	6.625	(168.3)	.432	(11.0)	5.00	(7.50)	16.30	(24.30)
8"	(200)	8.625	(219.1)	.500	(12.7)	8.00	(11.90)	27.80	(41.30)
10"	(250)	10.750	(273.0)	.593	(15.0)	11.90	(17.70)	43.20	(77.60)
12"	(300)	12.750	(323.8)	.687	(17.4)	16.30	(24.30)	60.30	(89.80)

1 cubic ft. of water weighs 62.41 lbs.
 1 cubic meter of water weighs 999.97 kg.
 1 gallon (U.S.) weighs 8.335 lbs.
 1 liter weighs .999 kg.

SPACING OF HANGERS FOR SCHEDULE 40 PVC PLASTIC PIPE

Temperature		Support Spacing in Ft. (Meter) For Pipe Sizes of											
		1/2"-3/4" (15-20)	1"-1 1/4" (25-32)	1 1/2"-2" (40-50)	2 1/2" (65)	3" (80)	4" (100)	6" (150)					
20°F (-6.6°C)		5.00 (1.52)	5.50 (1.67)	5.80 (1.77)	6.66 (2.03)	6.80 (2.07)	7.33 (2.23)	7.80 (2.38)					
40°F (4.4°C)		4.75 (1.45)	5.25 (1.60)	5.50 (1.67)	6.33 (1.93)	6.50 (1.98)	7.00 (2.13)	7.50 (2.28)					
60°F (15.5°C)		4.50 (1.37)	5.00 (1.52)	5.25 (1.60)	6.00 (1.83)	6.25 (1.90)	6.50 (1.98)	7.00 (2.13)					
80°F (26.6°C)		4.25 (1.29)	4.66 (1.42)	5.00 (1.52)	5.50 (1.67)	5.80 (1.77)	6.25 (1.90)	6.80 (2.07)					
100°F (37.8°C)		4.00 (1.22)	4.33 (1.32)	4.66 (1.42)	5.25 (1.60)	5.50 (1.67)	5.80 (1.77)	6.33 (1.93)					
110°F (43.3°C)		3.75 (1.14)	4.00 (1.22)	4.33 (1.32)	4.80 (1.46)	5.25 (1.60)	5.50 (1.67)	5.80 (1.77)					
120°F (48.9°C)		3.33 (1.01)	3.75 (1.14)	3.80 (1.16)	4.50 (1.37)	4.75 (1.45)	5.00 (1.52)	5.33 (1.62)					
130°F (54.4°C)		3.00 (.91)	3.33 (1.01)	3.50 (1.06)	4.00 (1.22)	4.25 (1.29)	4.50 (1.37)	4.80 (1.46)					
140°F (60.0°C)		2.66 (.81)	2.80 (.85)	3.00 (.91)	3.50 (1.06)	3.66 (1.11)	3.80 (1.16)	4.25 (1.29)					
150°F (65.5°C)		2.00 (.61)	2.25 (.68)	2.50 (.76)	2.80 (.85)	3.00 (.91)	3.25 (.99)	3.50 (1.06)					

SPACING OF HANGERS FOR SCHEDULE 80 PVC PLASTIC PIPE

Temperature		Support Spacing in Ft. (Meter) For Pipe Sizes of											
		1/2"-3/4" (15-20)	1" (25)	1 1/4"-1 1/2" (32-40)	2" (50)	2 1/2" (65)	3" (80)	4" (100)	6" (150)				
20°F (-6.6°C)		5.75 (1.75)	6.33 (1.93)	6.66 (2.03)	7.00 (2.13)	7.80 (2.38)	8.20 (2.50)	8.66 (2.64)	9.80 (2.99)				
40°F (4.4°C)		5.50 (1.67)	6.00 (1.83)	6.33 (1.93)	6.50 (1.98)	7.50 (2.28)	7.75 (2.36)	8.25 (2.51)	9.33 (2.84)				
60°F (15.5°C)		5.25 (1.60)	5.75 (1.75)	6.00 (1.83)	6.25 (1.90)	7.00 (2.13)	7.33 (2.23)	7.80 (2.38)	8.80 (2.68)				
80°F (26.6°C)		4.80 (1.46)	5.33 (1.62)	5.66 (1.72)	6.00 (1.83)	6.66 (2.03)	7.00 (2.13)	7.33 (2.23)	8.33 (2.54)				
100°F (37.8°C)		4.50 (1.37)	5.00 (1.52)	5.25 (1.60)	5.50 (1.67)	6.33 (1.93)	6.50 (1.98)	6.80 (2.07)	7.80 (2.38)				
110°F (43.3°C)		4.33 (1.32)	4.60 (1.40)	4.80 (1.46)	5.12 (1.56)	5.80 (1.77)	6.00 (1.83)	6.33 (1.93)	7.33 (2.23)				
120°F (48.9°C)		3.80 (1.16)	4.33 (1.32)	4.50 (1.37)	4.75 (1.45)	5.33 (1.62)	5.50 (1.67)	5.80 (1.77)	6.50 (1.98)				
130°F (54.4°C)		3.50 (1.06)	3.80 (1.16)	4.00 (1.22)	4.33 (1.32)	4.75 (1.45)	5.00 (1.52)	5.25 (1.60)	6.00 (1.83)				
140°F (60.0°C)		3.00 (.91)	3.33 (1.01)	3.50 (1.06)	3.66 (1.11)	4.25 (1.29)	4.33 (1.32)	4.66 (1.42)	5.12 (1.56)				
150°F (65.5°C)		2.50 (.76)	2.75 (.84)	3.00 (.91)	3.12 (.95)	3.33 (1.01)	3.50 (1.06)	3.75 (1.14)	4.25 (1.29)				

Hanger spacing for PVC plastic Pipe assumes fluid loads up to 1.35 specific gravity [85 Lbs./Ft.³ (136.5 kg/m³)] but not concentrated heavy loads.

Rod Size As Determined By Steel Pipe Size For Fire Protection

Steel Pipe Size	Maximum Span	Rod Size	
			In.
1"-1 1/4"	12 (3.66)	3/8"-16	
1 1/2"-4"	15 (4.57)	3/8"-16	
5"-8"	15 (4.57)	1/2"-13	
10"-12"	15 (4.57)	5/8"-11	

Based on NFPA 13-1999, Table 6-2.2 & Table 6-1.4.1

Rod Size As Determined By Copper Tubing Size For Fire Protection

Copper Tubing Size	Maximum Span	Rod Size	
			In.
3/4"-1"	8 (2.44)	3/8"-16	
1 1/4"-1 1/2"	15 (3.05)	3/8"-16	
2"-3"	15 (3.66)	3/8"-16	
3 1/4"-4"	15 (4.57)	3/8"-16	
5"-8"	15 (4.57)	1/2"-13	

Based on NFPA 13-1999, Table 6-2.2 & Table 6-1.4.1

LOAD CHART FOR THREADED ROD (ATR)

Rod Size	Root Area Thread		Maximum Safe Loads			
	In. ²	cm ²	650°F (349°C)		750°F (399°C)	
			Lbs.	kN	Lbs.	kN
3/8"-16	0.0678	(.43)	730	(3.24)	572	(2.54)
1/2"-13	0.126	(.81)	1350	(6.00)	1057	(4.70)
5/8"-11	0.202	(1.30)	2160	(9.60)	1692	(7.52)
3/4"-10	0.302	(1.95)	3230	(14.37)	2530	(11.25)
7/8"-9	0.419	(2.70)	4480	(19.93)	3508	(15.60)
1"-8	0.551	(3.55)	5900	(26.24)	4620	(20.55)
1 1/8"-7	0.693	(4.47)	7450	(33.14)	5830	(25.93)
1 1/4"-7	0.890	(5.74)	9500	(42.25)	7440	(33.09)
1 1/2"-6	1.29	(8.32)	13800	(61.38)	10807	(48.07)
1 3/4"-5	1.74	(11.22)	18600	(82.73)	14566	(64.79)
2"-4 1/2	2.30	(14.84)	24600	(109.42)	19625	(87.29)
2 1/4"-4 1/2	3.02	(19.48)	32300	(143.67)	25295	(112.51)
2 1/2"-4	3.72	(24.00)	39800	(177.03)	31169	(138.64)
2 3/4"-4	4.62	(29.80)	49400	(219.73)	38687	(172.08)
3"-4	5.62	(36.26)	60100	(267.32)	47066	(209.35)
3 1/4"-8UN	6.72	(43.35)	71900	(319.81)	56307	(250.45)
3 1/2"-8UN	7.92	(51.09)	84700	(376.74)	66331	(295.04)
3 3/4"-8UN	9.21	(59.42)	98500	(438.13)	77139	(338.64)

Extracted from MSS SP-58, 2002, with permission of the publisher, the Manufacturers Standardization Society.

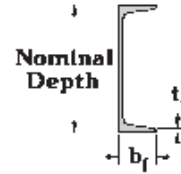
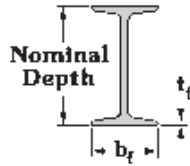
Reference Data

TRAPEZE HANGERS USING B-LINE STRUT OR ANGLE IRON

Trapeze Length		Nominal Pipe Size			
		2 1/2" (65) or less	3" (80)	3 1/2" (90)	4" (100)
18"	(457.2)	1 1/2" x 1 1/2" x 3/16" B26SH	1 1/2" x 1 1/2" x 3/16" B26SH	1 1/2" x 1 1/2" x 3/16" B26SH	2" x 1 1/2" x 3/16" B22SH
24"	(609.6)	1 1/2" x 1 1/2" x 3/16" B26SH	2" x 1 1/2" x 3/16" B22SH	2" x 1 1/2" x 3/16" B22SH	2" x 1 1/2" x 3/16" B22SH
30"	(762.0)	2" x 1 1/2" x 3/16" B22SH	2" x 1 1/2" x 3/16" B22SH	2" x 1 1/2" x 3/16" B22SH	2" x 1 1/2" x 3/16" B22SH
36"	(914.4)	2" x 1 1/2" x 3/16" B22SH	2" x 1 1/2" x 3/16" B22SH	2 1/2" x 1 1/2" x 3/16" B12SH	2 1/2" x 1 1/2" x 3/16" B12SH
48"	(1219.2)	2 1/2" x 1 1/2" x 3/16" B12SH	2 1/2" x 1 1/2" x 3/16" B12SH	2 1/2" x 1 1/2" x 3/16" B12SH	3" x 2" x 3/16" B11SH
60"	(1524.0)	2 1/2" x 1 1/2" x 3/16" B12SH	2 1/2" x 1 1/2" x 3/16" B12SH	3" x 2" x 3/16" B11SH	3" x 2" x 3/16" B11SH
72"	(1828.8)	2 1/2" x 1 1/2" x 3/16" B12SH	3" x 2" x 3/16" B11SH	3" x 2" x 3/16" B11SH	3" x 2" x 1/4" B11SH
84"	(2133.6)	3" x 2" x 3/16" B11SH	3" x 2" x 3/16" B11SH	3" x 2" x 1/4" B11SH	3" x 2" x 1/4" B11SH
96"	(2438.4)	3" x 2" x 3/16" B11SH	3" x 2" x 1/4" B11SH	3" x 2" x 1/4" B11SH	3 1/2" x 2 1/2" x 5/16" B12SHA
108"	(2743.2)	3" x 2" x 3/16" B11SH	3" x 2" x 1/4" B11SH	3 1/2" x 2 1/2" x 5/16" B12SHA	3 1/2" x 2 1/2" x 5/16" B12SHA
120"	(3048.0)	3" x 2" x 1/4" B11SH	3" x 2" x 1/4" B11SH	3 1/2" x 2 1/2" x 5/16" B12SHA	3 1/2" x 2 1/2" x 5/16" B12SHA

Trapeze Length		Nominal Pipe Size			
		5" (125)	6" (150)	8" (200)	10" (250)
18"	(457.2)	2" x 1 1/2" x 3/16" B22SH	2 1/2" x 1 1/2" x 3/16" B12SH	3" x 2" x 3/16" B11SH	3" x 2" x 1/4" B11SH
24"	(609.6)	2 1/2" x 1 1/2" x 3/16" B12SH	2 1/2" x 1 1/2" x 3/16" B12SH	3" x 2" x 3/16" B11SH	3" x 2" x 1/4" B11SH
30"	(762.0)	2 1/2" x 1 1/2" x 3/16" B12SH	3" x 2" x 3/16" B11SH	3" x 2" x 1/4" B11SH	3" x 2" x 1/4" B11SH
36"	(914.4)	3" x 2" x 3/16" B11SH	3" x 2" x 3/16" B11SH	3 1/2" x 2 1/2" x 1/4" B12SHA	3 1/2" x 2 1/2" x 5/16" B12SHA
48"	(1219.2)	3" x 2" x 3/16" B11SH	3" x 2" x 1/4" B11SH	3 1/2" x 2 1/2" x 5/16" B12SHA	4" x 3" x 5/16" B12SHA
60"	(1524.0)	3" x 2" x 1/4" B11SH	3 1/2" x 2 1/2" x 5/16" B12SHA	4" x 3" x 5/16" B12SHA	5" x 3 1/2" x 5/16" B11SHA
72"	(1828.8)	3 1/2" x 2 1/2" x 5/16" B12SHA	4" x 3" x 5/16" B12SHA	4" x 3" x 5/16" B12SHA	5" x 3 1/2" x 5/16" B11SHA
84"	(2133.6)	3 1/2" x 2 1/2" x 5/16" B12SHA	4" x 3" x 5/16" B12SHA	5" x 3 1/2" x 5/16" B11SHA	6" x 4" x 1/4" B12SHA4
96"	(2438.4)	3 1/2" x 2 1/2" x 5/16" B12SHA	4" x 3" x 5/16" B12SHA	5" x 3 1/2" x 5/16" B11SHA	6" x 4" x 1/4" B12SHA4
108"	(2743.2)	3 1/2" x 2 1/2" x 5/16" B12SHA	4" x 3" x 5/16" B12SHA	5" x 3 1/2" x 5/16" B11SHA	6" x 4" x 3/8" B11SHA4
120"	(3048.0)	4" x 3" x 5/16" B12SHA	5" x 3 1/2" x 5/16" B11SHA	6" x 4" x 1/4" B12SHA4	6" x 4" x 3/8" B11SHA4

Based on NFPA 13-1999, Table 6-1.1.3 (a) & Table 6-1.1.3 (b).



AMERICAN STANDARD 'S' SHAPE I-BEAMS

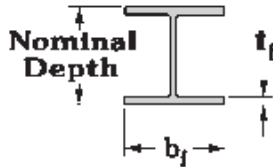
Designation Nominal Depth & Weight In. x Lbs./Ft. (mm x kg/m)		Flange Width b_f		Flange Thickness t_f	
S3 x 5.7	(S75 x 8.5)	2 ³ / ₈ "	(59)	0.260	(6.6)
S3 x 7.5	(S75 x 11.2)	2 ¹ / ₂ "	(63)	0.260	(6.6)
S4 x 7.7	(S100 x 11.5)	2 ⁵ / ₈ "	(68)	0.293	(7.4)
S4 x 9.5	(S100 x 14.1)	2 ³ / ₄ "	(71)	0.293	(7.4)
S5 x 10	(S130 x 15)	3"	(76)	0.326	(8.3)
S5 x 14.75	(S130 x 22)	3 ¹ / ₄ "	(83)	0.326	(8.3)
S6 x 12.5	(S150 x 18.6)	3 ³ / ₈ "	(85)	0.359	(9.1)
S6 x 17.25	(S150 x 25.7)	3 ¹¹ / ₁₆ "	(91)	0.359	(9.1)
S7 x 15.3	(S180 x 22.8)	3 ⁵ / ₈ "	(93)	0.392	(10.0)
S7 x 20	(S180 x 29.8)	3 ⁷ / ₈ "	(98)	0.392	(10.0)
S8 x 18.4	(S200 x 27.4)	4"	(102)	0.425	(10.8)
S8 x 23	(S200 x 34)	4 ¹ / ₈ "	(106)	0.425	(10.8)
S10 x 25.4	(S250 x 37.8)	4 ⁵ / ₈ "	(118)	0.491	(12.5)
S10 x 35	(S250 x 52)	4 ¹⁵ / ₁₆ "	(126)	0.491	(12.5)
S12 x 31.8	(S310 x 47.3)	5"	(127)	0.544	(13.8)
S12 x 35	(S310 x 52)	5 ¹ / ₁₆ "	(129)	0.544	(13.8)
S12 x 40.8	(S310 x 60.7)	5 ¹ / ₄ "	(133)	0.659	(16.7)
S12 x 50	(S310 x 74)	5 ¹ / ₂ "	(139)	0.659	(16.7)
S15 x 42.9	(S380 x 64)	5 ¹ / ₂ "	(140)	0.622	(15.8)
S15 x 50	(S380 x 74)	5 ⁵ / ₈ "	(143)	0.622	(15.8)
S18 x 54.7	(S460 x 81.4)	6"	(152)	0.691	(17.6)
S18 x 70	(S460 x 104)	6 ¹ / ₄ "	(159)	0.691	(17.6)
S20 x 66	(S510 x 98.2)	6 ¹ / ₄ "	(159)	0.795	(20.2)
S20 x 75	(S510 x 112)	6 ³ / ₈ "	(162)	0.795	(20.2)
S20 x 86	(S510 x 128)	7 ¹ / ₁₆ "	(179)	0.920	(23.4)
S20 x 96	(S510 x 143)	7 ³ / ₁₆ "	(183)	0.920	(23.4)
S24 x 80	(S610 x 119)	7"	(178)	0.870	(22.1)
S24 x 90	(S610 x 134)	7 ¹ / ₈ "	(181)	0.870	(22.1)
S24 x 100	(S610 x 149)	7 ¹ / ₄ "	(184)	0.870	(22.1)
S24 x 106	(S610 x 158)	7 ⁷ / ₈ "	(200)	1.090	(27.7)
S24 x 121	(S610 x 180)	8 ¹ / ₁₆ "	(204)	1.090	(27.7)

Dimensions taken from ASTM A6-86.

AMERICAN STANDARD 'C' SHAPE CHANNELS

Designation Nominal Depth & Weight In. x Lbs./Ft. (mm x kg/m)		Flange Width b_f		Flange Thickness t_f	
C3 x 4.1	(C75 x 6.1)	1 ³ / ₈ "	(35)	0.273	(6.9)
C3 x 5	(C75 x 7.4)	1 ¹ / ₂ "	(37)	0.273	(6.9)
C3 x 6	(C75 x 8.9)	1 ⁵ / ₈ "	(40)	0.273	(6.9)
C4 x 5.4	(C100 x 8)	1 ⁹ / ₁₆ "	(40)	0.296	(7.5)
C4 x 7.25	(C100 x 10.8)	1 ³ / ₄ "	(44)	0.296	(7.5)
C5 x 6.7	(C130 x 10)	1 ³ / ₄ "	(44)	0.320	(8.1)
C5 x 9	(C130 x 13.4)	1 ⁷ / ₈ "	(47)	0.320	(8.1)
C6 x 8.2	(C150 x 12.2)	1 ¹⁵ / ₁₆ "	(48)	0.343	(8.7)
C6 x 10.5	(C150 x 15.6)	2"	(51)	0.343	(8.7)
C6 x 13	(C150 x 19.3)	2 ¹ / ₈ "	(54)	0.343	(8.7)
C7 x 9.8	(C180 x 14.6)	2 ¹ / ₁₆ "	(53)	0.366	(9.3)
C7 x 12.25	(C180 x 18.2)	2 ³ / ₁₆ "	(55)	0.366	(9.3)
C7 x 14.75	(C180 x 22)	2 ¹ / ₄ "	(57)	0.366	(9.3)
C8 x 11.5	(C200 x 17.1)	2 ¹ / ₄ "	(57)	0.390	(9.9)
C8 x 13.75	(C200 x 20.5)	2 ³ / ₈ "	(59)	0.390	(9.9)
C8 x 18.75	(C200 x 27.9)	2 ¹ / ₂ "	(63)	0.390	(9.9)
C9 x 13.4	(C230 x 19.9)	2 ⁷ / ₁₆ "	(61)	0.413	(10.5)
C9 x 15	(C230 x 22)	2 ¹ / ₂ "	(63)	0.413	(10.5)
C9 x 20	(C230 x 30)	2 ⁵ / ₈ "	(67)	0.413	(10.5)
C10 x 15.3	(C250 x 22.8)	2 ⁵ / ₈ "	(67)	0.436	(11.1)
C10 x 20	(C250 x 30)	2 ³ / ₄ "	(69)	0.436	(11.1)
C10 x 25	(C250 x 37)	2 ⁷ / ₈ "	(73)	0.436	(11.1)
C10 x 30	(C250 x 45)	3"	(76)	0.436	(11.1)
C12 x 20.7	(C310 x 30.8)	2 ¹⁵ / ₁₆ "	(74)	0.501	(12.7)
C12 x 25	(C310 x 37)	3"	(76)	0.501	(12.7)
C12 x 30	(C310 x 45)	3 ¹ / ₈ "	(80)	0.501	(12.7)
C15 x 33.9	(C380 x 50.4)	3 ³ / ₈ "	(86)	0.650	(16.5)
C15 x 40	(C380 x 60)	3 ¹ / ₂ "	(89)	0.650	(16.5)
C15 x 50	(C380 x 74)	3 ³ / ₄ "	(94)	0.650	(16.5)
C18 x 42.7	(C460 x 63.5)	4"	(102)	0.625	(15.8)
C18 x 45.8	(C460 x 68.1)	4"	(102)	0.625	(15.8)
C18 x 51.9	(C460 x 77.2)	4 ¹ / ₈ "	(106)	0.625	(15.8)
C18 x 58	(C460 x 86.3)	4 ¹ / ₄ "	(112)	0.625	(15.8)

Reference Data



WIDE FLANGE I-BEAMS

Designation Nominal Depth & Weight In. x Lbs./Ft. (mm x kg/m)		Flange Width b _f		Flange Thickness t _f	
W4 x 13	(W100 x 19.3)	4 ¹ / ₁₆ "	(103)	0.345	(8.8)
W5 x 16	(W130 x 23.8)	5"	(127)	0.360	(9.1)
W5 x 19	(W130 x 28.1)	5"	(128)	0.430	(10.9)
W6 x 9	(W150 x 13.5)	3 ¹⁵ / ₁₆ "	(100)	0.215	(5.5)
W6 x 12	(W150 x 18.0)	4"	(101)	0.280	(7.1)
W6 x 16	(W150 x 24.0)	4"	(101)	0.405	(10.3)
W6 x 20	(W150 x 29.8)	6"	(153)	0.365	(9.3)
W6 x 25	(W150 x 37.1)	6 ¹ / ₁₆ "	(154)	0.455	(11.6)
W8 x 10	(W200 x 15.0)	3 ¹⁵ / ₁₆ "	(100)	0.205	(5.2)
W8 x 13	(W200 x 19.3)	4"	(101)	0.255	(6.5)
W8 x 15	(W200 x 22.5)	4"	(101)	0.315	(8.0)
W8 x 18	(W200 x 26.6)	5 ¹ / ₄ "	(133)	0.330	(8.4)
W8 x 21	(W200 x 31.3)	5 ¹ / ₄ "	(133)	0.400	(10.2)
W8 x 24	(W200 x 35.9)	6 ¹ / ₂ "	(165)	0.400	(10.2)
W8 x 28	(W200 x 41.7)	6 ¹ / ₂ "	(166)	0.465	(11.8)
W8 x 31	(W200 x 46.1)	8"	(203)	0.435	(11.0)
W8 x 35	(W200 x 52)	8"	(203)	0.495	(12.6)
W8 x 40	(W200 x 59)	8 ¹ / ₁₆ "	(205)	0.560	(14.2)
W8 x 48	(W200 x 71)	8 ¹ / ₈ "	(206)	0.685	(17.4)
W8 x 58	(W200 x 86)	8 ¹ / ₄ "	(209)	0.810	(20.6)
W8 x 67	(W200 x 100)	8 ¹ / ₄ "	(210)	0.935	(23.7)
W10 x 12	(W250 x 17.9)	4"	(101)	0.210	(5.3)
W10 x 15	(W250 x 22.3)	4"	(101)	0.270	(6.9)
W10 x 17	(W250 x 25.3)	4"	(101)	0.330	(8.4)
W10 x 19	(W250 x 28.4)	4"	(101)	0.395	(10.0)
W10 x 22	(W250 x 32.7)	5 ³ / ₄ "	(146)	0.360	(9.1)
W10 x 26	(W250 x 38.5)	5 ³ / ₄ "	(147)	0.440	(11.2)
W10 x 30	(W250 x 44.8)	5 ¹³ / ₁₆ "	(148)	0.510	(13.0)
W10 x 33	(W250 x 49.1)	7 ¹⁵ / ₁₆ "	(202)	0.435	(11.0)
W10 x 39	(W250 x 58)	8"	(203)	0.530	(13.5)
W10 x 45	(W250 x 67)	8"	(203)	0.620	(15.7)
W10 x 49	(W250 x 73)	10"	(254)	0.560	(14.2)
W10 x 54	(W250 x 80)	10 ¹ / ₁₆ "	(255)	0.615	(15.6)
W10 x 60	(W250 x 89)	10 ¹ / ₁₆ "	(256)	0.680	(17.3)
W10 x 68	(W250 x 101)	10 ¹ / ₈ "	(257)	0.770	(19.6)
W10 x 77	(W250 x 115)	10 ³ / ₁₆ "	(259)	0.870	(22.1)
W10 x 88	(W250 x 131)	10 ¹ / ₄ "	(261)	0.990	(25.1)
W10 x 100	(W250 x 149)	10 ³ / ₈ "	(263)	1.120	(28.4)
W10 x 112	(W250 x 167)	10 ⁷ / ₁₆ "	(265)	1.250	(31.8)

Designation Nominal Depth & Weight In. x Lbs./Ft. (mm x kg/m)		Flange Width b _f		Flange Thickness t _f	
W12 x 14	(W310 x 21.0)	4"	(101)	0.225	(5.7)
W12 x 16	(W310 x 23.8)	4"	(101)	0.265	(6.7)
W12 x 19	(W310 x 28.3)	4"	(101)	0.350	(8.9)
W12 x 22	(W310 x 32.7)	4"	(101)	0.425	(10.8)
W12 x 26	(W310 x 38.7)	6 ¹ / ₂ "	(165)	0.380	(9.7)
W12 x 30	(W310 x 44.5)	6 ¹ / ₂ "	(165)	0.440	(11.2)
W12 x 35	(W310 x 52)	6 ⁹ / ₁₆ "	(167)	0.520	(13.2)
W12 x 40	(W310 x 60)	8"	(203)	0.515	(13.1)
W12 x 45	(W310 x 67)	8 ¹ / ₁₆ "	(205)	0.575	(14.6)
W12 x 50	(W310 x 74)	8 ¹ / ₁₆ "	(205)	0.640	(16.3)
W12 x 53	(W310 x 79)	10"	(254)	0.575	(14.6)
W12 x 58	(W310 x 86)	10"	(254)	0.640	(16.3)
W12 x 65	(W310 x 97)	12"	(306)	0.605	(15.4)
W12 x 72	(W310 x 107)	12"	(306)	0.670	(17.0)
W12 x 79	(W310 x 117)	12 ¹ / ₁₆ "	(307)	0.735	(18.7)
W12 x 87	(W310 x 129)	12 ¹ / ₈ "	(308)	0.810	(20.6)
W12 x 96	(W310 x 143)	12 ¹ / ₈ "	(308)	0.900	(22.9)
W12 x 106	(W310 x 158)	12 ¹ / ₄ "	(310)	0.990	(25.1)
W12 x 120	(W310 x 179)	12 ⁵ / ₁₆ "	(313)	1.105	(28.1)
W12 x 136	(W310 x 202)	12 ³ / ₈ "	(315)	1.250	(31.8)
W12 x 152	(W310 x 226)	12 ¹ / ₂ "	(317)	1.400	(35.6)
W12 x 170	(W310 x 253)	12 ⁹ / ₁₆ "	(319)	1.560	(39.6)
W12 x 190	(W310 x 283)	12 ¹¹ / ₁₆ "	(322)	1.735	(44.1)
W12 x 210	(W310 x 313)	12 ³ / ₄ "	(325)	1.900	(48.3)
W12 x 230	(W310 x 342)	12 ⁷ / ₈ "	(328)	2.070	(52.6)
W12 x 252	(W310 x 375)	13"	(330)	2.250	(57.2)
W14 x 22	(W360 x 32.9)	5"	(127)	0.335	(8.5)
W14 x 26	(W360 x 39.0)	5"	(127)	0.420	(10.7)
W14 x 30	(W360 x 44.8)	6 ³ / ₄ "	(172)	0.385	(9.8)
W14 x 34	(W360 x 51)	6 ³ / ₄ "	(172)	0.455	(11.6)
W14 x 38	(W360 x 57)	6 ³ / ₄ "	(172)	0.515	(13.1)
W14 x 43	(W360 x 64)	8"	(203)	0.530	(13.5)
W14 x 48	(W360 x 72)	8"	(203)	0.595	(15.1)
W14 x 53	(W360 x 79)	8 ¹ / ₁₆ "	(205)	0.660	(16.8)
W14 x 61	(W360 x 91)	10"	(254)	0.645	(16.4)
W14 x 68	(W360 x 101)	10"	(254)	0.720	(18.3)
W14 x 74	(W360 x 110)	10 ¹ / ₁₆ "	(256)	0.785	(19.9)
W14 x 82	(W360 x 122)	10 ¹ / ₈ "	(257)	0.855	(21.7)
W14 x 90	(W360 x 134)	14 ¹ / ₂ "	(369)	0.710	(18.0)

Dimensions taken from ASTM A6-86.

(Continued on next page)

WIDE FLANGE I-BEAMS (Continued)

Designation Nominal Depth & Weight In. x Lbs./Ft.		Flange Width b_f		Flange Thickness t_f	
(mm x kg/m)					
W14 x 99	(W360 x 147)	14 ⁹ / ₁₆ "	(370)	0.780	(19.8)
W14 x 109	(W360 x 162)	14 ⁵ / ₈ "	(371)	0.860	(21.8)
W14 x 120	(W360 x 179)	14 ¹¹ / ₁₆ "	(373)	0.940	(23.9)
W14 x 132	(W360 x 196)	14 ³ / ₄ "	(374)	1.030	(26.2)
W14 x 145	(W360 x 216)	15 ¹ / ₂ "	(394)	1.090	(27.7)
W14 x 159	(W360 x 237)	15 ⁹ / ₁₆ "	(395)	1.190	(30.2)
W14 x 176	(W360 x 262)	15 ⁵ / ₈ "	(397)	1.310	(33.3)
W14 x 193	(W360 x 287)	15 ³ / ₄ "	(400)	1.440	(36.6)
W14 x 211	(W360 x 314)	15 ³ / ₄ "	(400)	1.560	(39.6)
W14 x 233	(W360 x 347)	15 ⁷ / ₈ "	(403)	1.720	(43.7)
W14 x 257	(W360 x 382)	16"	(406)	1.890	(48.0)
W14 x 283	(W360 x 421)	16 ¹ / ₈ "	(409)	2.070	(52.6)
W14 x 311	(W360 x 463)	16 ¹ / ₄ "	(413)	2.260	(57.4)
W14 x 342	(W360 x 509)	16 ³ / ₈ "	(416)	2.470	(62.7)
W14 x 370	(W360 x 551)	16 ¹ / ₂ "	(419)	2.660	(67.6)
W14 x 398	(W360 x 592)	16 ⁹ / ₁₆ "	(421)	2.845	(72.3)
W14 x 426	(W360 x 634)	16 ¹¹ / ₁₆ "	(424)	3.035	(77.1)
W16 x 26	(W410 x 38.8)	5 ¹ / ₂ "	(140)	0.345	(8.8)
W16 x 31	(W410 x 46.1)	5 ¹ / ₂ "	(140)	0.440	(11.2)
W16 x 36	(W410 x 53)	7"	(178)	0.430	(10.9)
W16 x 40	(W410 x 60)	7"	(178)	0.505	(12.8)
W16 x 45	(W410 x 67)	7"	(178)	0.565	(14.4)
W16 x 50	(W410 x 75)	7 ¹ / ₁₆ "	(179)	0.630	(16.0)
W16 x 57	(W410 x 85)	7 ¹ / ₈ "	(181)	0.715	(18.2)
W16 x 67	(W410 x 100)	10 ¹ / ₄ "	(260)	0.665	(16.9)
W16 x 77	(W410 x 114)	10 ⁵ / ₁₆ "	(262)	0.760	(19.3)
W16 x 89	(W410 x 132)	10 ³ / ₈ "	(263)	0.875	(22.2)
W16 x 100	(W410 x 149)	10 ⁷ / ₁₆ "	(265)	0.985	(25.0)
W18 x 35	(W460 x 52)	6"	(152)	0.425	(10.8)
W18 x 40	(W460 x 60)	6"	(152)	0.525	(13.3)
W18 x 46	(W460 x 68)	6 ¹ / ₁₆ "	(154)	0.605	(15.4)
W18 x 50	(W460 x 74)	7 ¹ / ₂ "	(190)	0.570	(14.5)
W18 x 55	(W460 x 82)	7 ¹ / ₂ "	(190)	0.630	(16.0)
W18 x 60	(W460 x 89)	7 ⁹ / ₁₆ "	(192)	0.695	(17.7)
W18 x 65	(W460 x 97)	7 ⁹ / ₁₆ "	(192)	0.750	(19.0)
W18 x 71	(W460 x 106)	7 ⁵ / ₈ "	(193)	0.810	(20.6)
W18 x 76	(W460 x 113)	11"	(279)	0.680	(17.3)
W18 x 86	(W460 x 128)	11 ¹ / ₁₆ "	(281)	0.770	(19.6)
W18 x 97	(W460 x 144)	11 ¹ / ₈ "	(282)	0.870	(22.1)
W18 x 106	(W460 x 158)	11 ³ / ₁₆ "	(284)	0.940	(23.9)
W18 x 119	(W460 x 177)	11 ¹ / ₄ "	(286)	1.060	(26.9)
W21 x 44	(W530 x 66)	6 ¹ / ₂ "	(165)	0.450	(11.4)
W21 x 50	(W530 x 74)	6 ¹ / ₂ "	(165)	0.535	(13.6)
W21 x 57	(W530 x 85)	6 ⁹ / ₁₆ "	(167)	0.650	(16.5)
W21 x 62	(W530 x 92)	8 ¹ / ₄ "	(209)	0.615	(15.6)
W21 x 68	(W530 x 101)	8 ¹ / ₄ "	(209)	0.685	(17.4)

Designation Nominal Depth & Weight In. x Lbs./Ft.		Flange Width b_f		Flange Thickness t_f	
(mm x kg/m)					
W21 x 73	(W530 x 109)	8 ¹ / ₄ "	(209)	0.740	(18.8)
W21 x 83	(W530 x 123)	8 ⁷ / ₈ "	(213)	0.835	(21.2)
W21 x 93	(W530 x 138)	8 ⁷ / ₁₆ "	(214)	0.930	(23.6)
W21 x 101	(W530 x 150)	12 ¹ / ₄ "	(311)	0.800	(20.3)
W21 x 111	(W530 x 165)	12 ³ / ₈ "	(314)	0.875	(22.2)
W21 x 122	(W530 x 182)	12 ³ / ₈ "	(314)	0.960	(24.4)
W21 x 132	(W530 x 196)	12 ⁷ / ₁₆ "	(316)	0.035	(26.3)
W21 x 147	(W530 x 219)	12 ¹ / ₂ "	(317)	0.150	(29.2)
W24 x 55	(W610 x 82)	7"	(178)	0.505	(12.8)
W24 x 62	(W610 x 92)	7 ¹ / ₁₆ "	(179)	0.590	(15.0)
W24 x 68	(W610 x 101)	8 ¹⁵ / ₁₆ "	(227)	0.585	(14.9)
W24 x 76	(W610 x 113)	9"	(228)	0.680	(17.3)
W24 x 84	(W610 x 125)	9"	(228)	0.770	(19.6)
W24 x 94	(W610 x 140)	9 ¹ / ₁₆ "	(230)	1.875	(22.2)
W24 x 104	(W610 x 155)	12 ³ / ₄ "	(324)	1.750	(19.0)
W24 x 117	(W610 x 174)	12 ³ / ₄ "	(324)	0.850	(21.6)
W24 x 131	(W610 x 195)	12 ⁷ / ₈ "	(327)	0.960	(24.4)
W24 x 146	(W610 x 217)	12 ⁷ / ₈ "	(327)	1.090	(27.7)
W24 x 162	(W610 x 241)	12 ¹⁵ / ₁₆ "	(328)	1.220	(31.0)
W27 x 84	(W690 x 125)	9 ¹⁵ / ₁₆ "	(252)	0.640	(16.3)
W27 x 94	(W690 x 140)	10"	(254)	0.745	(18.9)
W27 x 102	(W690 x 152)	10"	(254)	0.830	(21.1)
W27 x 114	(W690 x 170)	10 ¹ / ₁₆ "	(255)	0.930	(23.6)
W27 x 146	(W690 x 217)	13 ¹⁵ / ₁₆ "	(354)	0.975	(24.8)
W27 x 161	(W690 x 240)	14"	(355)	1.080	(27.4)
W27 x 178	(W690 x 265)	14 ¹ / ₁₆ "	(357)	1.190	(30.2)
W30 x 99	(W760 x 147)	10 ⁷ / ₁₆ "	(265)	0.670	(17.0)
W30 x 108	(W760 x 161)	10 ¹ / ₂ "	(267)	0.760	(19.3)
W30 x 116	(W760 x 173)	10 ¹ / ₂ "	(267)	0.850	(21.6)
W30 x 124	(W760 x 185)	10 ¹ / ₂ "	(267)	0.930	(23.6)
W30 x 132	(W760 x 196)	10 ⁹ / ₁₆ "	(268)	1.000	(25.4)
W30 x 173	(W760 x 257)	15"	(381)	1.065	(27.1)
W30 x 191	(W760 x 284)	15"	(381)	1.185	(30.1)
W30 x 211	(W760 x 314)	15 ¹ / ₈ "	(384)	1.315	(33.4)
W33 x 118	(W840 x 176)	11 ¹ / ₂ "	(292)	0.740	(18.8)
W33 x 130	(W840 x 193)	11 ¹ / ₂ "	(292)	0.855	(21.7)
W33 x 141	(W840 x 210)	11 ¹ / ₂ "	(292)	0.960	(24.4)
W33 x 152	(W840 x 226)	11 ⁹ / ₁₆ "	(294)	1.055	(26.8)
W33 x 201	(W840 x 299)	15 ³ / ₄ "	(400)	1.150	(29.2)
W36 x 135	(W920 x 201)	11 ¹⁵ / ₁₆ "	(303)	0.790	(20.1)
W36 x 150	(W920 x 223)	12"	(305)	0.940	(23.9)
W36 x 160	(W920 x 238)	12"	(305)	1.020	(25.9)
W36 x 170	(W920 x 253)	12"	(305)	1.100	(27.9)
W36 x 182	(W920 x 271)	12 ¹ / ₁₆ "	(306)	1.180	(30.0)
W36 x 194	(W920 x 289)	12 ¹ / ₈ "	(308)	1.260	(32.0)
W36 x 210	(W920 x 313)	12 ³ / ₁₆ "	(309)	1.360	(34.5)

Dimensions taken from ASTM A6-86.

Reference Data

MSS TO B-LINE & FEDERAL SPECIFICATION CROSS REFERENCE

MSS SP-69 MSS SP-58	B-Line Part No.	A-A-1192A WW-H-171E
Type 1	B3100	Type 1
Type 1	B3100C	Type 1
Type 1	B3100F	Type 1
Type 1	B3102	Type 1
Type 1*	B3104	Type 12
Type 1	B3104CT	Type 12
Type 1	B3105	-
Type 1	B3106	-
Type 1	B3108	Type 1
Type 1	B3109	-
Type 3	B3144	Type 3
Type 3	B3146	Type 3
Type 4	B3140	Type 4
Type 4	B3142	Type 4
Type 5	B3690	-
Type 5	B3690C	-
Type 5	B3690F	-
Type 6	B3171	Type 6
Type 7	B3172	Type 7
Type 7	B3172C	Type 7
Type 7	B3172CT	Type 7
Type 7	B3172CTC	Type 7
Type 7	B3172F	Type 7
Type 8	B3373	Type 8
Type 8	B3373C	Type 8
Type 8	B3373CT	Type 8
Type 8	B3373CTC	Type 8
Type 10	B3170	Type 10
Type 10	B3170CT	Type 10
Type 10	B3170CTC	Type 10
Type 10	B3170NF	Type 10
Type 10	B3170NFC	Type 10
Type 10	B3170NFF	Type 10
Type 11	B3225	-
Type 11	B3225CT	-
Type 12	B3198H	Type 25
Type 12	B3198HCT	Type 25
Type 12	B3198R	Type 25
Type 12	B3198RCT	Type 25
Type 13	B3202	Type 13
Type 14	B3201	Type 14
Type 15	B3224	Type 15
Type 15	B3224CT	Type 15
Type 16	B3222	Type 16
Type 17	B3200	Type 17
Type 18	B2500	Type 19
Type 18	B25003	-
Type 18	B2505-B2508	-
Type 18	B3014	Type 18
Type 19	B303-B309	Type 19

* For all finishes excluding plain.

MSS SP-69 MSS SP-58	B-Line Part No.	A-A-1192A WW-H-171E
Type 19	B321	Type 19
Type 19	B3031	Type 19
Type 19 & 23	B3033	Type 19 & 23
Type 19 & 23	B3034	Type 19 & 23
Type 21	B3050	Type 21
Type 21	B3055	Type 21
Type 22	B3083	Type 22
Type 23	B351L	Type 23
Type 23	B3036L	Type 23
Type 23	B3037	Type 23
Type 24	B3188	Type 24
Type 24	B3188C	Type 24
Type 25	B3045	Type 53
Type 26	B2400	-
Type 26	B3180	Type 26
Type 27	B3040	Type 54
Type 28	B3291, B3292 B3294, B3296 B3298	Type 28
Type 29	B3293, B3295 B3297	Type 29
Type 30	B3054	Type 30
Type 31	B3063	Type 32
Type 32	B3066	Type 33
Type 33	B3067	Type 34
Type 34	B3058	Type 35
Type 34	B3060	Type 35
Type 34	B3060L	Type 35
Type 34	B3062	Type 35
Type 34	B3070	Type 35
Type 35	B3891-B3897	Type 35
Type 35	B3991 & B3993	Type 35
Type 36	B3095	Type 37
Type 37	B3090	Type 38
Type 37	B3092	Type 38
Type 37	B3097	Type 38
Type 38	B3091	Type 39
Type 38	B3093	Type 39
Type 38	B3096	Type 39
Type 39A & 39B	B3160-B3165	Type 40A & 40B
Type 40	B3151	Type 41
Type 41	B3114	Type 42
Type 41	B3122	Type 42
Type 41	B3122A	Type 42
Type 43	B3110	Type 44
Type 44	B3117SL	Type 45
Type 44	B3120	Type 45
Type 45	B3119SL	Type 46
Type 46	B3118SL	Type 47
Type 48	B3262	Type 49
Type 49	B3264	Type 50
Type 57	B3080S & L	-

FEDERAL SPECIFICATION TO B-LINE & MSS CROSS REFERENCE

A-A-1192A WW-H-171E	B-Line Part No.	MSS SP-69 MSS SP-58
Type 1	B3100	Type 1
Type 1	B3100C	Type 1
Type 1	B3100F	Type 1
Type 1	B3102	Type 1
Type 1	B3104	Type 1
Type 1	B3106	Type 1
Type 1	B3108	Type 1
Type 3	B3144	Type 3
Type 3	B3146	Type 3
Type 4	B3140	Type 4
Type 4	B3142	Type 4
Type 5	B3690	Type 5
Type 5	B3690C	Type 5
Type 5	B3690F	Type 5
Type 6	B3171	Type 6
Type 7	B3172	Type 7
Type 7	B3172C	Type 7
Type 7	B3172CT	Type 7
Type 7	B3172CTC	Type 7
Type 7	B3172F	Type 7
Type 8	B3373	Type 8
Type 8	B3373C	Type 8
Type 8	B3373CT	Type 8
Type 8	B3373CTC	Type 8
Type 10	B3170	Type 10
Type 10	B3170CT	Type 10
Type 10	B3170CTC	Type 10
Type 10	B3170NF	Type 10
Type 10	B3170NFC	Type 10
Type 10	B3170NFF	Type 10
Type 12	B3104	Type 1*
Type 12	B3104C	-
Type 12	B3104CT	Type 1
Type 12	B3104CTC	-
Type 12	B3104F	-
Type 13	B3202	Type 13
Type 14	B3201	Type 14
Type 15	B3224	Type 15
Type 15	B3224CT	Type 15
Type 16	B3222	Type 16
Type 17	B3200	Type 17
Type 18	B3014	Type 18
Type 19	B303-B309	Type 19
Type 19	B321	Type 19
Type 19	B2500	Type 18
Type 19	B3031	Type 19
Type 19 & 23	B3033	Type 19 & 23
Type 19 & 23	B3034	Type 19 & 23
Type 21	B3050	Type 21
Type 21	B3055	Type 21

* For all finishes excluding plain.

A-A-1192A WW-H-171E	B-Line Part No.	MSS SP-69 MSS SP-58
Type 22	B3083	Type 22
Type 23	B351L	Type 23
Type 23	B3036L	Type 23
Type 23	B3037	Type 23
Type 24	B3188	Type 24
Type 24	B3188C	Type 24
Type 25	B3198H	Type 12
Type 25	B3198HCT	Type 12
Type 25	B3198R	Type 12
Type 25	B3198RCT	Type 12
Type 26	B3180	Type 26
Type 28	B3291, B3292 B3294, B3296 B3298	Type 28
Type 29	B3293, B3295 B3297	Type 29
Type 30	B3054	Type 30
Type 32	B3063	Type 31
Type 33	B3066	Type 32
Type 34	B3067	Type 33
Type 35	B3058	Type 34
Type 35	B3060	Type 34
Type 35	B3060L	Type 34
Type 35	B3062	Type 34
Type 35	B3070	Type 34
Type 35	B3891-B3897	Type 35
Type 35	B3991 & B3993	Type 35
Type 37	B3095	Type 36
Type 38	B3090	Type 37
Type 38	B3092	Type 37
Type 38	B3097	Type 37
Type 39	B3091	Type 38
Type 39	B3093	Type 38
Type 39	B3096	Type 38
Type 40A & 40B	B3160-3165	Type 39A & 39B
Type 41	B3151	Type 40
Type 42	B3114	Type 41
Type 42	B3122	Type 41
Type 42	B3122A	Type 41
Type 44	B3110	Type 43
Type 45	B3117SL	Type 44
Type 45	B3120	Type 44
Type 46	B3119SL	Type 45
Type 47	B3118SL	Type 46
Type 49	B3262	Type 48
Type 50	B3264	Type 49
Type 53	B3045	Type 25
Type 54	B3040	Type 27

Reference Data

B-LINE COMPLIANCES & APPROVALS

Part No.	MSS SP-69 MSS SP-58	A-A-1192A WW-H-171E	UL Listed
B351L	Type 23	Type 23	³ / ₈ "-16 thru ³ / ₄ "-10
B2400	Type 26	-	³ / ₄ "- 8"
B2500	Type 18	Type 19	Max. Pipe Size 6" (150)
B2503	Type 18	-	-
B2505-B2508	Type 18	-	Yes
B3014	Type 18	Type 18	Yes
B3031	Type 19	Type 19	Yes (Top Flange Only)
B3033	Type 19 & 23	Type 19 & 23	³ / ₈ "-16 thru ³ / ₄ "-10
B3034	Type 19 & 23	Type 19 & 23	³ / ₈ "-16 & ¹ / ₂ "-13
B3036L	Type 23	Type 23	³ / ₈ "-16 thru ³ / ₄ "-10
B3037	Type 23	Type 23	Yes
B3040	Type 27	Type 27	-
B3045	Type 25	Type 53	-
B3050	Type 21	Type 21	-
B3054	Type 30	Type 30	³ / ₈ "-16 thru ⁷ / ₈ "-9
B3055	Type 21	Type 21	-
B3058	Type 34	Type 35	-
B3060	Type 34	Type 35	-
B3060L	Type 34	Type 35	-
B3062	Type 34	Type 35	-
B3063	Type 31	Type 32	-
B3066	Type 32	Type 33	-
B3067	Type 33	Type 34	-
B3070	Type 34	Type 35	-
B3080S & L	Type 57	-	-
B3083	Type 22	Type 22	-
B3090	Type 37	Type 38	-
B3091	Type 38	Type 39	-
B3093	Type 38	Type 39	-
B3095	Type 36	Type 37	-
B3096	Type 38	Type 39	-
B3097	Type 37	Type 38	-
B3100	Type 1	Type 1	³ / ₄ " (20) thru 12" (300)
B3100C	Type 1	Type 1	-
B3100F	Type 1	Type 1	³ / ₄ " (20) thru 12" (300)
B3102	Type 1	-	-
B3104	Type 1*	Type 12	³ / ₄ " (20) thru 4" (100)
B3104C	Type 1*	Type 12	-
B3104CT	Type 1	Type 12	-
B3104CTC	Type 1	Type 12	-
B3104F	Type 1*	Type 12	³ / ₄ " (20) thru 4" (100)
B3105	Type 1	-	-
B3106	Type 1	-	-
B3108	Type 1	Type 1	-
B3109	Type 1	-	-
B3110	Type 43	Type 44	-
B3114	Type 41	Type 42	-
B3117SL	Type 44	Type 45	-
B3118SL	Type 46	Type 47	-
B3119SL	Type 45	Type 46	-
B3120	Type 44	Type 45	-
B3122	Type 41	Type 42	-
B3122A	Type 41	Type 42	-

* For all finishes excluding plain.

All dimensions in charts and on drawings are in inches. Dimensions shown in parentheses are in millimeters unless otherwise specified.

B-LINE COMPLIANCES & APPROVALS

Part No.	MSS SP-69 MSS SP-58	A-A-1192A WW-H-171E	UL Listed
B3140	Type 4	Type 4	³ / ₄ " (20) thru 12" (300)
B3142	Type 4	Type 4	—
B3144	Type 3	Type 3	—
B3146	Type 3	Type 3	—
B3151	Type 40	Type 41	—
B3160-B3165	Type 39A & 39B	Type 40A & 40B	—
B3170	Type 10	Type 10	—
B3170CT	Type 10	Type 10	—
B3170CTC	Type 10	Type 10	—
B3170NF	Type 10	Type 10	¹ / ₂ " (15) thru 4" (100)
B3170NFC	Type 10	Type 10	—
B3170NFF	Type 10	Type 10	—
B3171	Type 6	Type 6	—
B3172	Type 7	Type 7	—
B3172C	Type 7	Type 7	—
B3172CT	Type 7	Type 7	—
B3172CTC	Type 7	Type 7	—
B3172F	Type 7	Type 7	—
B3180	Type 26	Type 26	—
B3188	Type 24	Type 24	³ / ₄ " (20) thru 12" (300)
B3188C	Type 24	Type 24	—
B3198H	Type 12	Type 25	—
B3198HCT	Type 12	Type 25	—
B3198R	Type 12	Type 25	—
B3198RCT	Type 12	Type 25	—
B3200	Type 17	Type 17	—
B3201	Type 14	Type 14	—
B3202	Type 13	Type 13	—
B3203	—	—	³ / ₈ "-16 thru ⁷ / ₈ "-9
B3222	Type 16	Type 16	³ / ₈ "-16 thru ⁷ / ₈ "-9
B3223	—	—	Up To 2" (50) Pipe
B3224	Type 15	Type 15	—
B3224CT	Type 15	Type 15	—
B3262	Type 48	Type 49	—
B3264	Type 49	Type 50	—
B3291, B3292 B3294, B3296 B3297	Type 28	Type 28	—
B3293, B3295 B3297	Type 29	Type 29	—
B3373	Type 8	Type 8	³ / ₄ " (20) thru 8" (200)
B3373C	Type 8	Type 8	—
B3373CT	Type 8	Type 8	—
B3373CTC	Type 8	Type 8	—
B3690	Type 5	—	—
B3690C	Type 5	—	—
B3690F	Type 5	—	—
B3891-B3897	Type 35	—	—
B3991	Type 35	—	—
B3993	Type 35	—	—
B3993A	Type 35	—	—

Additional Cooper B-Line® Support Literature

Call or write for any of these brochures or catalogs.



HangerCAD Brochure

B-Line's HangerCAD® System contains over 90 details of typical pipe support assemblies, including Plumbing, Industrial, HVAC, Sprinklers and Strut Mounted Systems. HangerCad is available on 3 1/2" diskettes in AutoCAD and Intergraph formats. These details can be used for either engineering design drawings or contractor shop drawings. For more information contact B-Line Systems, Inc. home office.



Seismic Brochure

B-Line's seismic restraints are designed to resist movement of mechanical/electrical systems in the event of an earthquake. This guideline is based on the California Code of Regulations Title 24, Part 2 requirements for hospitals and essential facilities in seismic zone 4. Essential facilities are those structures which are necessary for emergency post-earthquake operations.



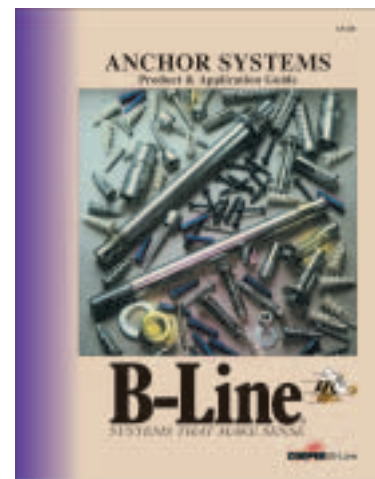
Fasteners

B-Line's spring steel fastener line includes over 450 items for the construction industry. Included are metal stud fasteners, conduit and cable fasteners, acoustical tee fasteners, beam fasteners, hangers (strap, rod, 'Z' purlin, flange, etc.), and miscellaneous accessories.



Strut

B-Line's rigid metal framing support system is used in electrical and mechanical construction. Strut is fully adjustable and reusable - designed to eliminate welding or drilling.



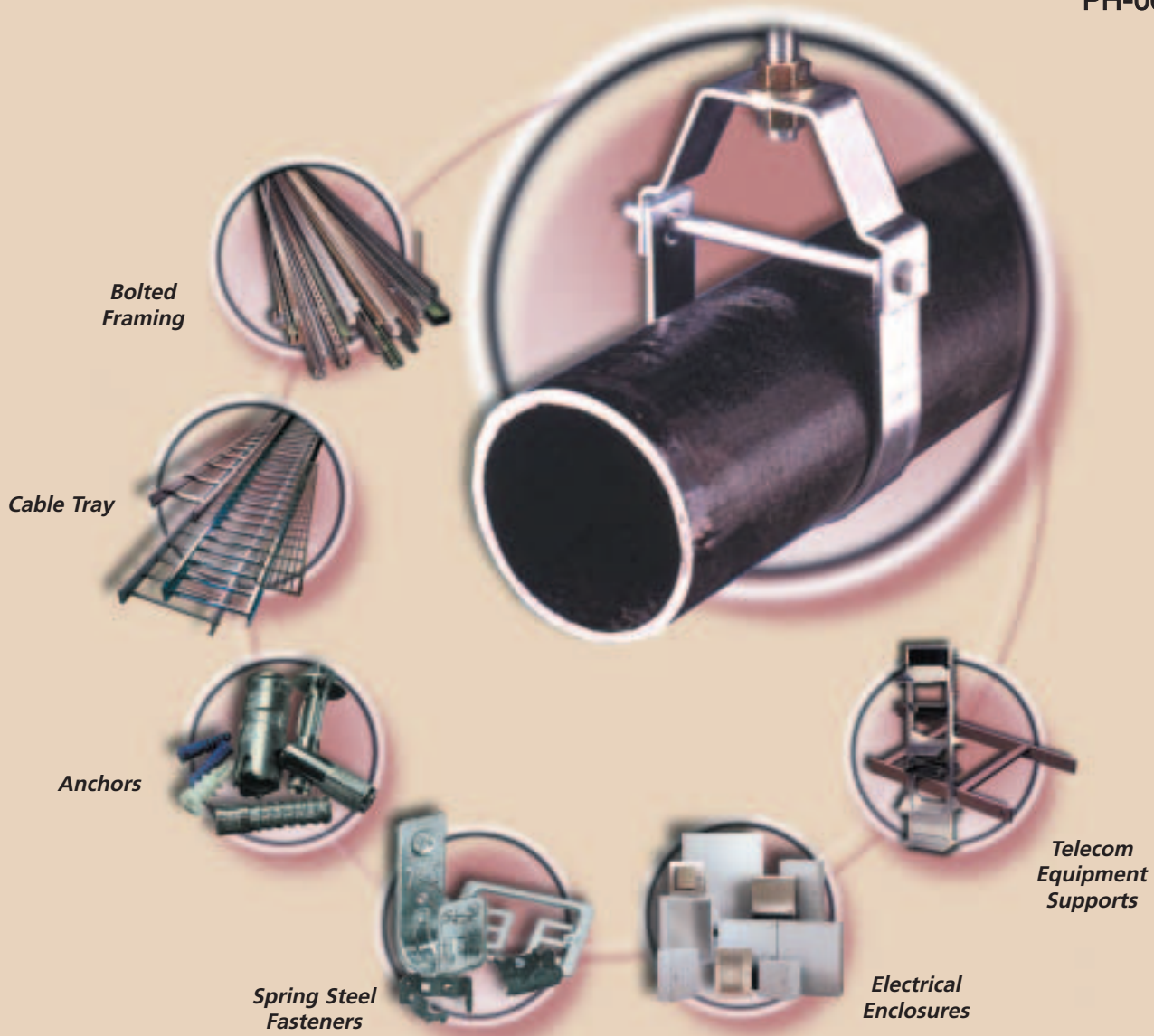
Anchors

B-Line offers a complete line of anchors; including hollow wall, plastic screw, split bolt, single and double expansion, lag screws, toggle bolts and more. This product and application guide provides features, application charts, and installation tips.

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