



MANUFACTURERS OF PRECISION-MADE
FLEXIBLE TUBING & SPIRAL RECOIL HOSE



**ADVANCED
TECHNOLOGY
PRODUCTS**

Fax: 937.349.4155

www.atp4pneumatics.com

Imbibe™ - Flowfit™ - Surethane™

NSF Certified Plastic Tubing and Fittings Designed
for the Food, Beverage & Potable Water Markets



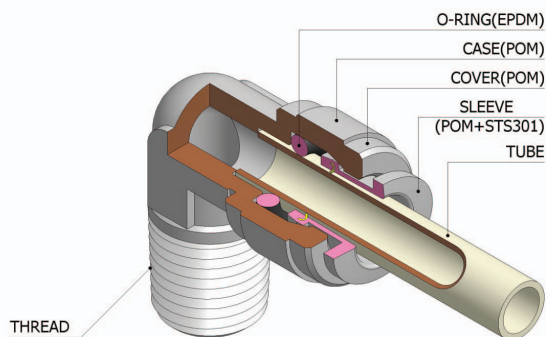


Advanced Technology Products (ATP) opened the doors in 1990 and has been manufacturing plastic tubing and spiral/recoil hose in Ohio since the mid 90's. Initially, the products mostly served the industrial markets. Now, our Surethane™ polyurethane tubing and Imbibe™ linear low density polyethylene tubing are NSF certified to 51 and 61 respectively. ATP has partnered with CDC to provide Flowfit™ plastic push to connect fittings that are also NSF 61 certified for potable water applications. We believe this combination provides a competitive one stop shopping experience for the food, beverage & potable water markets from America's heartland. Please check out the back cover of this brochure or our website at www.atp4pneumatics.com for our entire product line. You can trust ATP to provide affordable quality products.

INDEX

Flowfit™ specifications	P3
Flowfit™ inch fittings	P4
Flowfit™ metric fittings	P6
IMBIBE™ NSF 61® Polyethylene LLDPE	P9
Surethane™ NSF 51® Polyurethane	P11
Conversion Charts	P14
Chemical Resistance	P15

Material/Structure



Applications and Features

Flowfit Products are designed for water, food and air contact but can be used with selected gases, vacuum & liquids. A single action allows the tube to release and connect easily, saving time and expense.

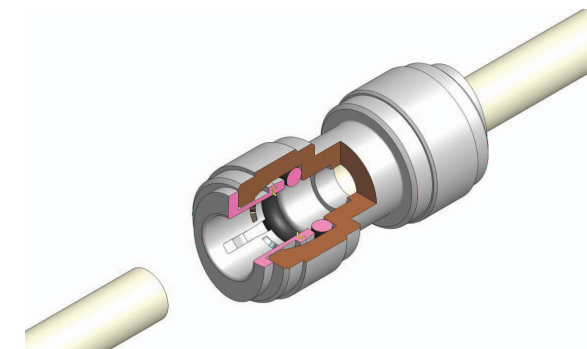
Flowfit products are made from NSF approved non-toxic materials.

Various uses depending on the user's environment and application

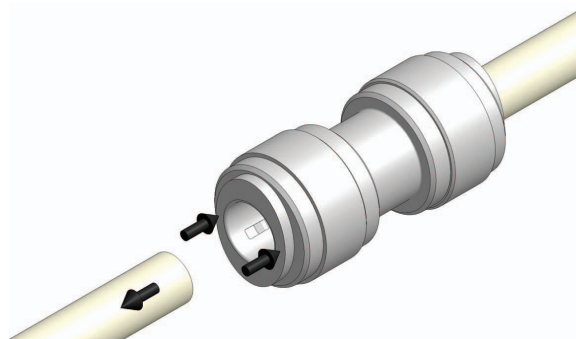
Color Codes

HUT 0606-G G(Gray)	HUT 0606-B B(Black)	HUT 0606-W W(Natural)

Connection & Disconnection



▲ Use a tube cutter for a square cross section



▲ To remove the tube press and hold collet while pulling out tube

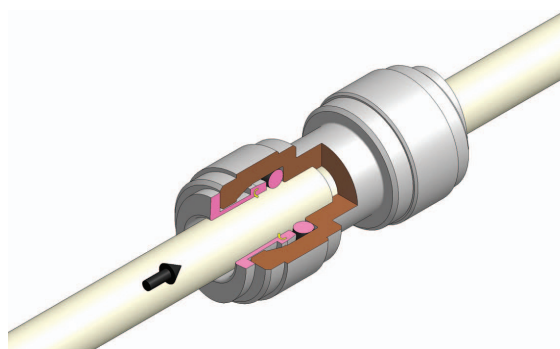
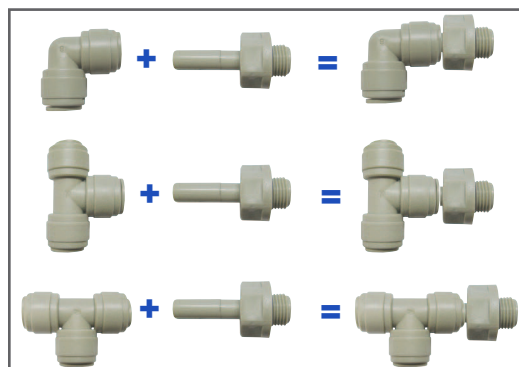
Specifications

Fluid Type	Water, Beverages	
Tube Type	Polyethylene(PE), Polyamid(PA) and Polyurethane (PU)	
Temperature	Working Pressure	
	4mm-8mm	10mm-12mm
1 ° C	16 Bar	16 Bar
25 ° C	16 Bar	16 Bar
70 ° C	10 Bar	10 Bar

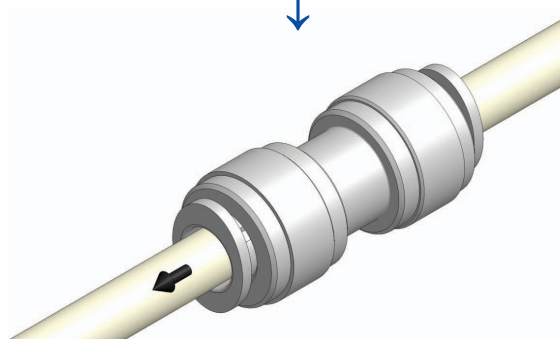
Maximum Torque Values for BSP, BSPT, & NPT Plastic Threads

Threads	1/8	1/4	3/8	1/2
Max. Torque	1.5N.m	1.5N.m	3.0N.m	3.0N.m

Adaptability



▲ Insert tube into the fitting fully to the tube stop

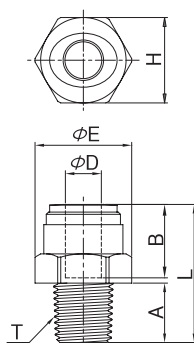


▲ Before use, pull the tube to check that it is secure

Fittings designed for the food, beverage & potable water markets

HPC

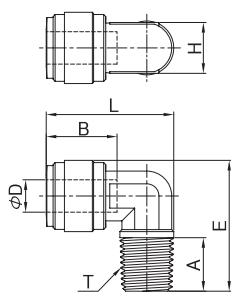
Straight Adaptor



MODEL (inch)	ØD	T(NPTF)	A	B TUBE DEEP	ØE	H(INCH)	L
HPC 5/32-N01	5/32	1/8	9.1	14.8	17.8	15.8(5/8)	22.2
HPC 5/32-N02	5/32	1/4	13.2	14.8	17.8	15.8(5/8)	25.3
HPC 3/16-N01	3/16	1/8	9.1	14.8	17.8	15.8(5/8)	22.2
HPC 3/16-N02	3/16	1/4	13.2	14.8	17.8	15.8(5/8)	25.3
HPC 1/4-N01	1/4	1/8	9.1	16.7	17.8	15.8(5/8)	26.8
HPC 1/4-N02	1/4	1/4	13.2	16.7	17.8	15.8(5/8)	26.8
HPC 1/4-N03	1/4	3/8	13.8	16.7	21.4	19.0(3/4)	25.9
HPC 5/16-N01	5/16	1/8	9.1	17.5	21.4	19.0(3/4)	28.4
HPC 5/16-N02	5/16	1/4	13.2	17.5	21.4	19.0(3/4)	27.8
HPC 5/16-N03	5/16	3/8	13.8	17.5	21.4	19.0(3/4)	26.4
HPC 5/16-N04	5/16	1/2	17.8	17.5	25.0	22.2(7/8)	33.4
HPC 3/8-N01	3/8	1/8	9.1	19.7	23.0	20.6 (3/4)	30.2
HPC 3/8-N02	3/8	1/4	13.2	19.7	23.0	20.6 (3/4)	34.0
HPC 3/8-N03	3/8	3/8	13.8	19.7	23.0	20.6 (3/4)	29.6
HPC 3/8-N04	3/8	1/2	17.8	19.7	25.0	22.2(7/8)	33.6
HPC 1/2-N03	1/2	3/8	13.8	25.2	27.4	25.4(1)	38.3
HPC 1/2-N04	1/2	1/2	17.8	25.2	27.4	25.4(1)	37.8

HPL

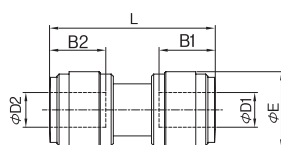
Rigid Elbow



MODEL (inch)	ØD	T(NPTF)	A	B TUBE DEEP	ØE	H(INCH)	L
HPL 3/16-N01	5/32	1/8	9.1	14.8	26.4	11.0(7/16)	25.6
HPL 1/4-N01	1/4	1/8	9.1	16.7	26.4	11.0(7/16)	25.6
HPL 1/4-N02	1/4	1/4	13.2	16.7	31.7	11.0(7/16)	27.0
HPL 1/4-N03	1/4	3/8	13.8	16.7	32.6	11.0(7/16)	28.8
HPL 5/16-N02	5/16	1/4	13.2	17.5	35.2	14.3(9/16)	31.5
HPL 5/16-N03	5/16	3/8	13.8	17.5	35.5	14.3(9/16)	33.1
HPL 3/8-N02	3/8	1/4	13.2	19.7	35.2	14.3(9/16)	31.8
HPL 3/8-N03	3/8	3/8	13.8	19.7	35.5	14.3(9/16)	33.4
HPL 1/2-N03	1/2	3/8	13.8	25.2	39.0	17.4(11/16)	38.8
HPL 1/2-N04	1/2	1/2	17.8	25.2	43.3	17.4(11/16)	41.1

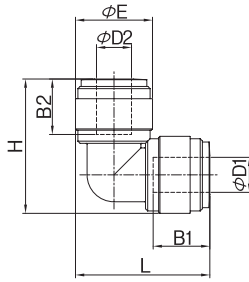
HUC

Equal Straight



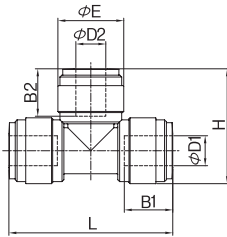
MODEL (inch)	ØD1	ØD2	B1 TUBE DEEP	B2 TUBE DEEP	ØE	L
HUC 5/32-5/32	5/32	5/32	14.8	14.8	13.3	31.9
HUC 3/16-3/16	3/16	3/16	15.3	15.3	13.8	32.9
HUC 1/4-1/4	1/4	1/4	16.7	16.7	15.5	35.8
HUC 5/16-1/4	5/16	1/4	17.5	16.7	17.6	36.6
HUC 5/16-5/16	5/16	5/16	17.5	17.5	17.6	38.2
HUC 3/8-3/8	3/8	3/8	20.1	20.1	20.1	42.7
HUC 1/2-1/2	1/2	1/2	25.6	25.6	23.6	53.0

HUL Equal Elbow



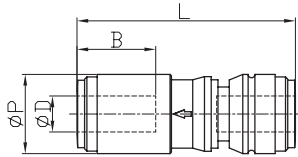
MODEL (inch)	ØD1	ØD2	B1 TUBE DEEP	B2 TUBE DEEP	ØE	H	L
HUL 5/32-5/32	5/32	5/32	14.8	14.8	13.3	24.6	24.6
HUL 3/16-3/16	3/16	3/16	15.3	15.3	13.8	25.7	25.7
HUL 1/4-1/4	1/4	1/4	16.7	16.7	15.5	28.6	28.6
HUL 5/16-5/16	5/16	5/16	17.5	17.5	17.6	30.7	30.7
HUL 3/8-3/8	3/8	3/8	20.1	20.1	20.1	35.8	35.8
HUL 1/2-1/2	1/2	1/2	25.6	25.6	23.6	43.6	43.6

HUT Equal Tee



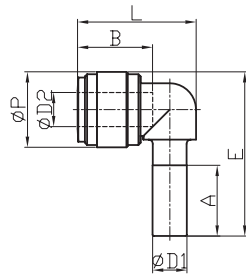
MODEL (inch)	ØD1	ØD2	B1 TUBE DEEP	B2 TUBE DEEP	ØE	H	L
HUT 5/32-5/32	5/32	5/32	14.8	14.8	13.3	24.6	36.0
HUT 3/16-3/16	3/16	3/16	15.3	15.3	13.8	25.7	37.6
HUT 1/4-1/4	1/4	1/4	16.7	16.7	15.5	28.6	41.6
HUT 5/16-5/16	5/16	5/16	17.5	17.5	17.6	30.7	43.8
HUT 3/8-3/8	3/8	3/8	20.1	20.1	20.1	35.8	51.6
HUT 1/2-1/2	1/2	1/2	25.6	25.6	23.6	43.6	64.1

HCVU Single non-return valve



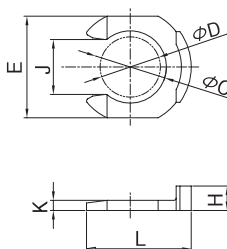
MODEL (inch)	ØD	ØP	L	B TUBE DEEP
HCVU 1/4-1/4	1/4	15.5	45.5	16.1
HCVU 5/16-5/16	5/16	17.6	48.6	17.5
HCVU 3/8-3/8	3/8	20.0	57.6	19.4
HCVU 1/2-1/2	1/2	23.6	67.9	23.9

HLJ Stem Elbow



MODEL (inch)	ØD1	ØD2	ØP	A	B TUBE DEEP	E	L
HLJ 5/32-5/32	5/32	5/32	13.2	18.0	14.8	30.1	22.0
HLJ 3/16-3/16	3/16	3/16	13.8	18.5	15.0	31.4	22.5
HLJ 1/4-1/4	1/4	1/4	15.5	21.0	16.9	34.8	25.1
HLJ 5/16-5/16	5/16	5/16	17.6	22.5	17.5	38.3	27.7
HLJ 3/8-1/4	3/8	1/4	15.5	24.8	16.9	38.6	25.1
HLJ 3/8-5/16	3/8	5/16	20.0	24.8	17.5	43.2	31.0
HLJ 3/8-3/8	3/8	3/8	20.0	24.8	20.1	43.2	31.3
HLJ 1/2-1/2	1/2	1/2	23.6	29.5	24.9	51.2	39.0

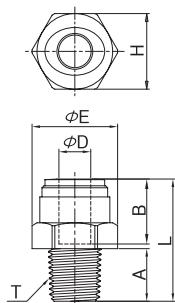
HCP Clip



MODEL (inch)	ØD TUBE DEEP	ØC	E	L	H	J	K
HCP 5/32	5/32	6.2	10.2	11.0	2.8	4.3	1.1
HCP 3/16	3/16	6.2	10.2	11.0	2.8	4.3	1.1
HCP 1/4	1/4	8.0	11.6	11.6	3.1	6.4	1.3
HCP 5/16	5/16	9.6	13.5	13.9	3.3	7.3	1.4
HCP 3/8	3/8	11.8	16.0	16.4	3.4	9.2	1.4
HCP 1/2	1/2	14.4	19.0	19.0	3.6	11.1	1.4

HPC

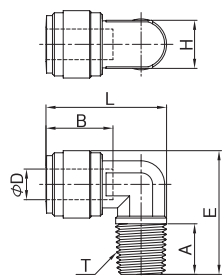
Straight Adaptor



MODEL (mm)	ØD	T(BSPTR)	A	B TUBE DEEP	ØE	H(HEX)	L
HPC 06R01	6	1/8	9.1	16.1	18.5	17.0	26.2
HPC 06R02	6	1/4	13.1	16.1	18.5	17.0	26.8
HPC 08R01	8	1/8	9.1	17.5	21.0	19.0	28.1
HPC 08R02	8	1/4	13.1	17.5	21.0	19.0	30.7
HPC 10R03	10	3/8	13.5	20.1	23.2	21.0	28.8
HPC 10R04	10	1/2	16.3	20.1	24.4	22.0	32.3
HPC 12R03	12	3/8	13.5	24.7	26.5	24.0	32.2
HPC 12R04	12	1/2	16.3	24.7	26.5	24.0	34.5

HPL

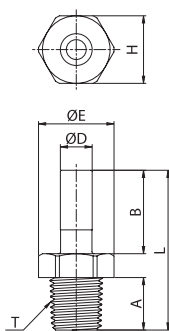
Rigid Elbow



MODEL (mm)	ØD	T(BSPTR)	A	B2 TUBE DEEP	E	H	L
HPL 06R01	6	1/8	9.1	16.1	25.6	10.0	25.3
HPL 06R02	6	1/4	13.1	16.1	30.7	10.0	27.0
HPL 08R02	8	1/4	13.1	17.5	32.3	13.0	31.5
HPL 10R03	10	3/8	13.5	20.1	35.7	14.0	33.9
HPL 12R04	12	1/2	16.3	24.7	41.5	17.0	40.6

HCJ

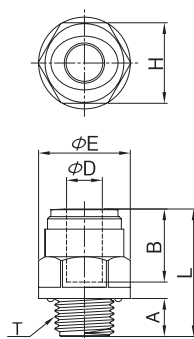
Stem Adaptor



MODEL (mm)	ØD	T(BSPTR)	A	B	ØE	H(HEX)	L
HCJ 04R01	4	1/8	9.1	18.0	14.4	13.0	33.1
HCJ 04R02	4	1/4	13.1	18.0	18.5	17.0	37.2
HCJ 06R01	6	1/8	9.1	19.5	14.4	13.0	34.6
HCJ 06R02	6	1/4	13.1	19.5	18.5	17.0	36.7
HCJ 08R01	8	1/8	9.1	21.0	14.4	13.0	36.1
HCJ 08R02	8	1/4	13.1	21.0	18.5	17.0	40.2
HCJ 08R03	8	3/8	13.5	21.0	23.0	21.0	40.5
HCJ 08R04	8	1/2	16.5	21.0	26.5	24.0	44.0
HCJ 010R02	10	1/4	13.1	24.0	18.5	17.0	43.2
HCJ 010R03	10	3/8	13.5	24.0	23.0	21.0	44.0
HCJ 010R04	10	1/2	16.5	24.0	26.5	24.0	47.0
HCJ 012R03	12	3/8	13.5	28.0	23.0	21.0	48.0
HCJ 012R04	12	1/2	16.5	28.0	26.5	24.0	51.0

HPC

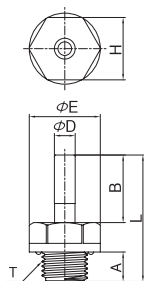
Straight Adaptor



MODEL (mm)	ØD	T(BSPTR)	A	B TUBE DEEP	ØE	H(HEX)	L
HPC 04G01	4	1/8	6.0	14.8	16.6	15.0	22.0
HPC 04G02	4	1/4	8.5	14.8	20.5	18.0	24.0
HPC 06G01	6	1/8	6.0	16.1	16.6	15.0	24.1
HPC 06G02	6	1/4	8.5	16.1	20.5	18.0	24.1
HPC 08G01	8	1/8	6.0	17.5	16.6	15.0	27.0
HPC 08G02	8	1/4	8.5	17.5	20.5	18.0	28.5
HPC 08G03	8	3/8	9.0	17.5	24.2	22.0	26.5
HPC 08G04	8	1/2	12.5	17.5	28.2	26.0	29.5
HPC 010G02	10	1/4	8.5	20.1	21.1	18.0	30.8
HPC 010G03	10	3/8	9.0	20.1	24.2	22.0	26.3
HPC 010G04	10	1/2	12.5	20.1	28.5	26.0	29.8
HPC 012G03	12	3/8	9.0	24.7	24.2	22.0	34.2
HPC 012G04	12	1/2	12.5	24.7	28.5	26.0	32.7

HCJ

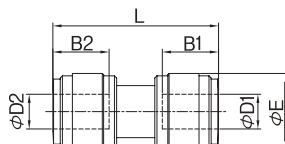
Stem Adaptor



MODEL (mm)	ØD	T(BSPT.R)	A	B	ØE	H(HEX)	L
HCJ 04G01	4	1/8	6.0	18.0	16.6	15.0	33.0
HCJ 04G02	4	1/4	8.5	18.0	20.5	18.0	35.2
HCJ 06G01	6	1/8	6.0	19.5	16.6	15.0	34.3
HCJ 06G02	6	1/4	8.5	19.5	20.5	18.0	36.8
HCJ 08G01	8	1/8	6.0	21.0	16.6	15.0	36.0
HCJ 08G02	8	1/4	8.5	21.0	20.5	18.0	38.4
HCJ 08G03	8	3/8	9.0	21.0	24.2	22.0	38.8
HCJ 010G02	10	1/4	8.5	24.0	20.5	18.0	41.4
HCJ 010G03	10	3/8	9.0	24.0	24.2	22.0	41.7
HCJ 010G04	10	1/2	12.5	24.0	28.5	26.0	44.8
HCJ 012G03	12	3/8	9.0	28.0	24.2	22.0	45.6
HCJ 012G04	12	1/2	12.5	28.0	28.5	26.0	48.8

HUC

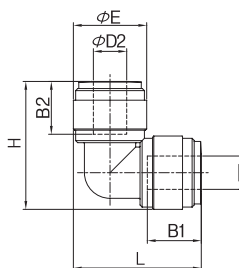
Equal Straight



MODEL (mm)	ØD1	ØD2	B1 TUBE DEEP	B2 TUBE DEEP	ØE	L
HUC 0404	4	4	14.8	14.8	13.3	31.9
HUC 0606	6	6	16.1	16.1	15.1	35.8
HUC 0808	8	8	17.5	17.5	17.6	38.2
HUC 1010	10	10	20.1	20.1	20.1	42.7
HUC 1212	12	12	24.7	24.7	23.1	52.4

HUL

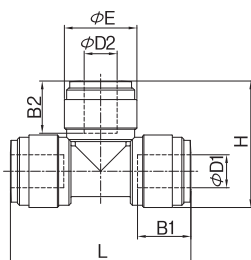
Equal Elbow



MODEL (mm)	ØD1	ØD2	B1 TUBE DEEP	B2 TUBE DEEP	E	H	L
HUL 0404	4	4	14.8	14.8	13.3	24.6	24.6
HUL 0606	6	6	16.1	16.1	15.5	27.6	28.6
HUL 0808	8	8	17.5	17.5	17.6	30.7	30.7
HUL 1010	10	10	20.1	20.1	20.1	35.8	35.8
HUL 1212	12	12	24.7	24.7	23.1	40.3	43.0

HUT

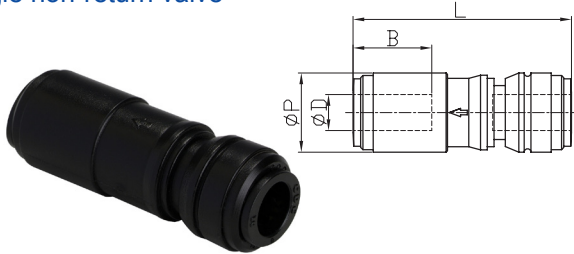
Equal Tee



MODEL (mm)	ØD1	ØD2	B1 TUBE DEEP	B2 TUBE DEEP	E	H	L
HUT 0404	4	4	14.8	14.8	13.3	24.6	36.0
HUT 0606	6	6	16.1	16.1	15.1	27.6	40.2
HUT 0808	8	8	17.5	17.5	17.6	30.7	43.8
HUT 1010	10	10	20.1	20.1	20.1	35.8	51.6
HUT 1212	12	12	24.7	24.7	24.7	40.3	63.4

HCVU

single non-return valve



MODEL (mm)	ØD	ØP	L	B TUBE DEEP
HCVU 0606	6	15.5	45.5	16.1
HCVU 0808	8	17.6	48.6	17.5
HCVU 1010	10	20.0	57.6	19.4
HCVU 1212	12	23.6	67.9	23.9

HLJ

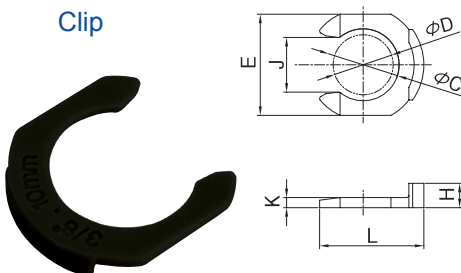
Stem Elbow



MODEL (mm)	ØD	ØD2	ØP	A	B TUBE DEEP	E	L
HLJ 0404	4	4	13.2	18.0	14.8	30.1	22.0
HLJ 0606	6	6	15.5	21.0	16.5	34.8	25.1
HLJ 0808	8	8	17.6	22.5	17.5	38.3	27.7
HLJ 1010	10	10	20.0	24.8	20.1	43.2	31.3
HLJ 1212	12	12	23.6	29.5	24.7	51.2	39.0

HCP

Clip



MODEL (mm)	ØD TUBE DEEP	ØC	E	L	H	J	K
HCP 04	4	6.2	10.2	11.0	2.8	4.3	1.1
HCP 06	6	8.0	11.6	11.6	3.1	6.4	1.3
HCP 08	8	9.6	13.5	13.9	3.3	7.3	1.4
HCP 10	10	11.8	16.0	16.4	3.4	9.2	1.4
HCP 12	12	14.4	19.0	19.0	3.6	11.1	1.4

- ▲ Use each product only for recommended applications.
- ▲ Flowfit Products are originally designed for use with water, food, or beverage products. For other chemicals refer to chemical compatibility data (chart) provided. For unlisted chemicals or media please contact us.
- ▲ Do not disassemble or modify the products. It may cause malfunction, leakage, or failure and voids the product warranty.
- ▲ Do not use the products at temperatures exceeding 80°C. This may cause malfunction, leakage, or failure.
- ▲ Do not use pipe glue or other liquid sealants other than PTFE Tape when sealing threaded fittings.
- ▲ Do not press collet toward body or attempt to pull out tubing when the line is pressured.
- ▲ Use locking clips to prevent unintended separation.
- ▲ When tightening threaded fittings, refer to torque data provided. Over torque may damage the fitting and cause leak or failure.
- ▲ Before disassembling tube connection, verify that the line pressure has been relieved.
- ▲ Flowfit products maybe modified or redesigned as to market requirement for improvement without notice, therefore the actual product may differ from pictures provided.

Tubing designed for the food, beverage & potable water markets

IMBIBE™ NSF-61® LLDPE Tubing

ATP



IMBIBE™ exceeds FDA expectations with its NSF-61 Certification for drinking water applications. Manufactured from 100% non-toxic ingredients, Imbibe is perfect for drinking water, beverage and food applications. With a complete range of sizes, colors and packaged lengths, IMBIBE™ is the perfect one stop shop tubing option. Include NSF-61 Certified Flowfit Push-to-Connect fittings and complete your assembly needs.

Package Lengths

A = 100'
B = 250' (Non-Stock)
C = 500'
D = 1000'

Part Numbering System

DWPE 14 A NA

Polyethylene
Tubing O.D.
Package Length
Tubing color
Insert color designation into
part number when ordering

Stock Color Chart: • = Stock, x = Non Stock

DWPE	BK	B	G	NA	R	W	Y
4mm/ 5/32	•	•	x	•	•	x	x
1/4	•	•	•	•	•	•	•
3/8	•	•	•	•	•	•	•
1/2	•	•	x	•	•	•	x
6mm	•	•	x	•	•	x	x
8mm/5/16	•	•	x	•	•	x	x
10mm	•	•	x	•	•	x	x
12mm	•	•	x	•	•	x	x

BK = Black B = Blue G = Green NA = Natural
R = Red W = White Y = Yellow

Features

Chemically Inert
Chemical Resistant
Lightweight & Flexible
Good Dielectric Properties
Impermeable to Gases
Meets FDA Requirements
NSF-61® Certified

Specifications

Temperature Range:
-50°F To +140°F
Hardness: Shore A 93A
Shore D 45D
Vacuum Rating: To 28" Hg
Tolerances:
1/8" - 1/4" O.D. +/- .004
3/8" - 1/2" O.D. +/- .006

Applications

Food & Beverage
Pneumatic Tools
Pneumatic Piping
Electrical Jacketing
Drain Lines
Instrumentation
Chemical Transfer
Process Control
Laboratories
Water Purification
Water Conditioners
Ice Makers
Misting systems

Fractional Sizes

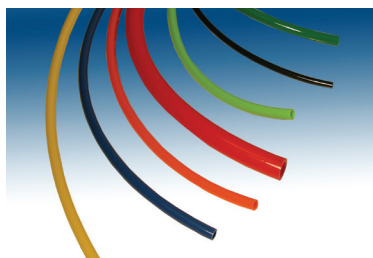
Size	Part number	O.D. (IN)	I.D. (IN)	Wall Thickness (IN)	Bend Radius (IN)	W.P. @ 70° F (PSI)	3:1 Burst Pressure	Package Length	Package Weight (lbs)
4MM 5/32"	DWPE04M/532A_	4mm,5/32	.106	.025	1.000	180	540	100'	.60
	DWPE04M/532B_*	4mm,5/32	.106	.025	1.000	180	540	250'	1.50
	DWPE04M/532C_	4mm,5/32	.106	.025	1.000	180	540	500'	3.00
	DWPE04M/532D_	4mm,5/32	.106	.025	1.000	180	540	1000'	6.00
1/4"	DWPE14A_	.250	.170	.040	1.250	150	450	100'	1.20
	DWPE14B_*	.250	.170	.040	1.250	150	450	250'	3.00
	DWPE14C_	.250	.170	.040	1.250	150	450	500'	6.00
	DWPE14D_	.250	.170	.040	1.250	150	450	1000'	12.00
8MM 5/16"	DWPE08M/5/16A_	.8mm,5/16	.236	.038	1.500	150	450	100'	1.50
	DWPE08M/5/16B_*	8mm,5/16	.236	.038	1.500	150	450	250'	3.75
	DWPE08M/5/16C_	8mm,5/16	.236	.038	1.500	150	450	500'	7.50
	DWPE08M/5/16D_	8mm,5/16	.236	.038	1.500	150	450	1000'	15.00
3/8"	DWPE38A_	.375	.250	.062	2.000	150	450	100'	2.30
	DWPE38B_*	.375	.250	.062	2.000	150	450	250'	5.75
	DWPE38C_	.375	.250	.062	2.000	150	450	500'	11.50
	DWPE38D_	.375	.250	.062	2.000	150	450	1000'	23.00
1/2"	DWPE12A_	.500	.375	.062	2.500	125	375	100'	3.40
	DWPE12B_*	.500	.375	.062	2.500	125	375	250'	8.50
	DWPE12C_	.500	.375	.062	2.500	125	375	500'	17.00
_ Insert color designation into part number when ordering. * = Non Stock Packaged Length									

Metric Sizes

Size	Part number	O.D. (mm)	I.D. (mm)	Wall Thickness (mm)	Bend Radius (mm)	W.P. @ 70° F (PSI)	3:1 Burst Pressure	Package Length	Package Weight (lbs)
6mm	DWPE06MA_	6.0	4.0	1.0	31.8	150	450	100'	1.10
	DWPE06MB_*	6.0	4.0	1.0	31.8	150	450	250'	2.75
	DWPE06MC_	6.0	4.0	1.0	31.8	150	450	500'	5.50
	DWPE06MD_	6.0	4.0	1.0	31.8	150	450	1000'	11.00
10mm	DWPE10MA_	10.0	8.0	1.0	51.0	125	375	100'	2.10
	DWPE10MB_*	10.0	8.0	1.0	51.0	125	375	250'	5.25
	DWPE10MC_	10.0	8.0	1.0	51.0	125	375	500'	10.50
	DWPE10MD_	10.0	8.0	1.0	51.0	125	375	1000'	21.00
12mm	DWPE12MA_	12.0	9.0	1.5	63.5	100	300	100'	2.50
	DWPE12MB_*	12.0	9.0	1.5	63.5	100	300	250'	6.50
	DWPE12MC_	12.0	9.0	1.5	63.5	100	300	500'	13.00
_ Insert color designation into part number when ordering. * = Non Stock Packaged Length									

Surethane™ NSF 51® Polyurethane (Shore A 98)

ATP



ATP Surethane™ NSF 51® polyurethane (PUR) Shore A 98 tubing is made from the highest quality raw materials available. It is ether-based to provide excellent hydrolysis, oil and cold resistance. Surethane™ is strong and flexible and offers superior kink resistance compared to other tubing. It is 5 to 10 times more wear resistant and lighter in weight than any rubber hose.

ATP Surethane™ tubing has an outside diameter made to extremely tight tolerances. It is ideal for use with Technifit™ push-to-connect fittings, as well as barb-type and compression fittings for simple installation.

Package Lengths

A = 100'
B = 250'
C = 500'
D = 1000'
E = 25 Meters
F = 100 Meters

Part Numbering System

PU 18 A BK

Polyurethane Tubing O.D. Package Length Tubing color

Insert color designation into part number when ordering

Features

Strong
Lightweight
Flexible
Abrasion Resistant
Heat & Cold Resistant
Chemical Resistant
Kink Resistant
NSF 51® Certified

Specifications

Temperature Range:
-40°F To +160°F
Hardness: Shore A 98
Vacuum Rating: To 28" Hg
Tolerances:
1/8" - 1/2" O.D. +/- .005
9/16" - 3/4" O.D. +/- .006
RoHS Compliant

Applications

Pneumatic Tools
Pneumatic Piping
Vacuum
Laboratories
Robotics
Motion Control
Instrumentation
Agriculture
Lube Lines
Painting Systems
Food & Beverage

Stock Color Chart: • = Stock, x = Non Stock

PU	BK	C	CB	CG	CR	G	GY	LB	LG	NB	OR	R	Y	W
1/8	•	•	•	x	x	•	x	•	x	•	x	•	•	•
04M/5/32	•	•	•	x	•	•	•	•	x	•	•	•	•	•
3/16	•	•	•	x	x	x	x	x	x	x	x	•	•	•
1/4	•	•	•	x	•	•	•	•	x	•	•	•	•	•
08M/5/16	•	•	•	x	x	•	•	•	x	•	•	•	•	•
3/8	•	•	•	x	•	•	•	•	x	•	•	•	•	•
1/2	•	•	•	x	•	•	•	•	•	•	x	•	•	•
9/16	•	•	•	x	x	x	x	x	x	x	x	x	x	x
5/8	•	•	•	x	x	x	x	x	x	x	x	x	x	x
3/4	•	•	•	x	x	•	x	x	x	•	x	•	•	•
6MM	•	•	•	x	x	•	•	•	x	•	•	•	•	•
10MM	•	•	•	x	x	•	x	•	x	•	x	•	•	•
12MM	•	•	•	x	x	•	x	•	x	•	x	•	•	•
16MM	•	•	•	x	x	•	x	•	x	•	x	•	•	•

BK = Black C = Clear CB = Clear Blue CG = Clear Green CR = Clear Red
G = Green GY = Gray LB = Light Blue LG = Light Green NB = Navy Blue
OR = Orange R = Red Y = Yellow W = White

Fractional Sizes

Size	Part number	O.D. (IN)	I.D. (IN)	Wall Thickness (IN)	Bend Radius (IN)	W.P. @ 70° F (PSI)	3:1 Burst Pressure	Package Length	Package Weight (lbs)
1/8"	PU18A_	.125	.062	.031	.200	240	720	100'	.50
	PU18B_	.125	.062	.031	.200	240	720	250'	1.25
	PU18C_	.125	.062	.031	.200	240	720	500'	2.50
	PU18D_	.125	.062	.031	.200	240	720	1000'	5.00
4mm 5/32"	PU04M/532A_	4mm,5/32	.093	.031	.250	200	600	100'	.70
	PU04M/532B_	4mm,5/32	.093	.031	.250	200	600	250'	1.75
	PU04M/532C_	4mm,5/32	.093	.031	.250	200	600	500'	3.50
	PU04M/532D_	4mm,5/32	.093	.031	.250	200	600	1000'	7.00
	PU04M/532E_	4mm,5/32	.093	.031	.250	200	600	25M	.57
	PU04M/532F_	4mm,5/32	.093	.031	.250	200	600	100M	2.30
3/16"	PU316A_	.187	.125	.031	.339	150	450	100'	1.01
	PU316B_	.187	.125	.031	.339	150	450	250'	2.53
	PU316C_	.187	.125	.031	.339	150	450	500'	5.05
	PU316D_	.187	.125	.031	.339	150	450	1000'	10.10
1/4"	PU14A_	.250	.156	.047	.476	180	540	100'	1.50
	PU14B_	.250	.156	.047	.476	180	540	250'	3.75
	PU14C_	.250	.156	.047	.476	180	540	500'	7.50
	PU14D_	.250	.156	.047	.476	180	540	1000'	15.00
8mm 5/16"	PU08M/516A_	8mm,5/16	.187	.063	.063	175	525	100'	2.60
	PU08M/516B_	8mm,5/16	.187	.063	.063	175	525	250'	6.50
	PU08M/516C_	8mm,5/16	.187	.063	.063	175	525	500'	13.00
	PU08M/516E_	8mm,5/16	.187	.063	.063	175	525	25M	2.13
	PU08M/516F_	8mm,5/16	.187	.063	.063	175	525	100M	8.53
3/8"	PU38A_	.375	.250	.063	.063	150	450	100'	3.40
	PU38B_	.375	.250	.063	.063	150	450	250'	8.50
	PU38C_	.375	.250	.063	.063	150	450	500'	17.00
1/2"	PU12A_	.500	.328	.086	.086	150	450	100'	5.10
	PU12B_	.500	.328	.086	.086	150	450	250'	4.18
	PU12C_	.500	.328	.086	.086	150	450	500'	8.36
9/16"	PU916A_	.562	.375	.093	1.142	140	420	100'	7.50
	PU916B_	.562	.375	.093	1.142	140	420	250'	18.75
5/8"	PU58A_	.625	.406	.109	1.375	150	450	100'	9.50
	PU58B_	.625	.406	.109	1.375	150	450	250'	23.75
3/4"	PU34A_	.750	.500	.125	1.500	140	420	100'	14.90
	PU34B_	.750	.500	.125	1.500	140	420	250'	37.25
_ Insert color designation into part number when ordering.									

Surethane™ Polyurethane Metric sizes on page 13

Metric Sizes

Size	Part number	O.D. (mm)	I.D. (mm)	Wall Thickness (mm)	Bend Radius (mm)	W.P. @ 70° F (PSI)	3:1 Burst Pressure	Package Length	Package Weight (lbs)
6mm	PU06MA_	6.0	4.0	1.000	12	180	540	100'	1.30
	PU06MB_	6.0	4.0	1.000	12	180	540	250'	3.24
	PU06MC_	6.0	4.0	1.000	12	180	540	500'	6.48
	PU06MD_	6.0	4.0	1.000	12	180	540	1000'	13.00
	PU06ME_	6.0	4.0	1.000	12	180	540	25M	1.07
	PU06MF_	6.0	4.0	1.000	12	180	540	100M	4.28
10mm	PU10MA_	10.0	6.5	1.750	25	150	450	100'	3.90
	PU10MB_	10.0	6.5	1.750	25	150	450	250'	9.75
	PU10MC_	10.0	6.5	1.750	25	150	450	500'	19.50
	PU10MD_	10.0	6.5	1.750	25	150	450	1000'	39.00
	PU10ME_	10.0	6.5	1.750	25	150	450	25M	3.23
	PU10MF_	10.0	6.5	1.750	25	150	450	100M	12.76
12mm	PU12MA_	12.0	8.0	2.000	28	150	450	100'	5.30
	PU12MB_	12.0	8.0	2.000	28	150	450	250'	13.25
	PU12MC_	12.0	8.0	2.000	28	150	450	500'	26.50
	PU12ME_	12.0	8.0	2.000	28	150	450	25M	4.39
	PU12MF_	12.0	8.0	2.000	28	150	450	100M	17.34
16mm	PU16MA_	16.0	11.0	2.500	30	150	450	100'	9.5
	PU16MB_	16.0	11.0	2.500	30	150	450	250'	23.75
	PU16ME_	16.0	11.0	2.500	30	150	450	25M	7.79
	PU16MF_	16.0	11.0	2.500	30	150	450	100M	31.16
_ Insert color designation into part number when ordering.									

* 4mm O.D. & 8mm O.D. found on page 12

LIMITED WARRANTY

Advanced Technology Products expressly excludes all warranties, guarantees and representations, expressed or implied, including but not limited to warranties of merchantability, material, workmanship, design and suitability for a specified or intended purpose. Products shall be free from defects in material and workmanship for a period of one (1) year after shipment. If the product purchased is defective in any way during the one (1) year period, please contact ATP for an RGA number to return the product. No unauthorized returns will be accepted. Ship product prepaid to ATP for a full evaluation. If the product is found to be defective, ATP will repair or replace the product at no charge to the customer at ATP's sole discretion.

Decimal & Metric Equivalents

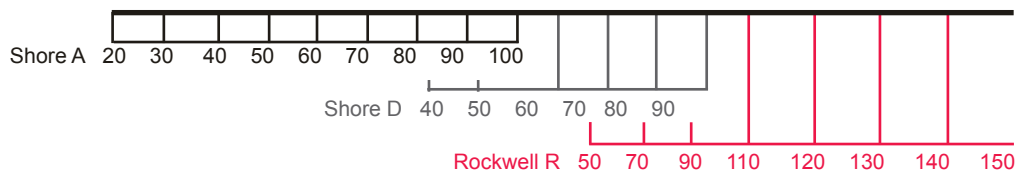
64ths	32nds	16ths	8ths	Decimal	MM
5/64				0.07812	1.864
	3/32			0.09375	2.381
7/64				0.10938	2.778
		1/8		0.12500	3.175
13/64				0.20312	5.195
	7/32			0.21875	5.556
15/64				0.23438	5.953
		1/4		0.25000	6.350
21/64				0.32812	8.334
	11/32			0.34375	8.731
23/64				0.35938	9.128
		3/8		0.37500	9.525
25/64				0.39062	9.922
	13/32			0.40625	10.309
27/64				0.42186	10.716
	7/16			0.43750	11.113
29/64				0.45312	11.509
	15/32			0.46875	11.908
31/64				0.48438	12.303
		1/2		0.50000	12.700

64ths	32nds	16ths	8ths	Decimal	MM
33/64				0.51582	13.097
	17/32			0.53125	13.494
35/64				0.54688	13.891
	9/16			0.56250	14.288
37/64				0.57812	14.684
	19/32			0.59375	15.081
39/64				0.60938	15.478
		5/8		0.62500	15.875
45/64				0.70312	17.859
	23/32			0.71875	18.256
47/64				0.73438	18.653
		3/4		0.75000	19.050
53/64				0.82812	21.034
	27/32			0.84375	21.431
55/64				0.85938	21.823
		7/8		0.87500	22.225
61/64				0.95312	24.209
	31/32			0.96875	24.605
63/64				0.98438	25.003
			1	1.00000	25.400

Measurement Conversion Table

To Convert	Into	Multiply By	To Convert	Into	Multiply By
Centimeters	Inches	.394	Inches	Centimeters	2.54
	Feet	.0382		Feet	.0833
	Meters	.01	Meters	Centimeters	100
	Millimeter	10		Feet	3.281
Feet	Centimeter	30.48		Inches	39.37
	Inches	12.00		Kilometers	.001
	Meters	.3048		Miles	.0006214
	Miles	.0001894		Millimeters	1000
	Yard	.6777		Yards	1.093
Grams	Ounces	.035	Temperature Conversions To convert Fahrenheit degrees into Celsius, subtract 32, multiply by 5, and divide by 9. To convert Celsius into Fahrenheit, multiply by 9, divide by 5, and add 32.		
	Pounds	.002			
	Kilogram	.001			

Hardness Comparison



Chemical Resistance

	Polyurethane	Nylon12	Polyethylene	PVC	PTFE	Weld Tubing Cover
Acids						
Acetic, 3n	B	E	A	A	A	A
Boric, 4%	B	A	A	A	A	A
Chromic, 3n	D	E	A	A	A	—
Citronic, 3n	B	—	A	A	A	—
Formic, 3n	D	A	A	A	A	A
HC1, 3n	A	E	A	A	A	—
Lactic, 3n	C	B	A	A	A	A
Nitric, 3n	D	E	A	A	A	B
Phosphoric, 3n	D	D	A	A	A	A
Sulfuric, <20%	A	B	A	A	A	A
Sulfuric, >20%	B	C	B	A	A	A
Alkalines						
Ammonia, 3n	A	A	—	A	A	A
Potassium Hydroxide, 3n	A	—	A	A	A	A
Sodium Hydroxide, <20%	A	A	A	A	A	A
Sodium Hydroxide, >20%	C	A	—	A	A	A
Aqueous Solution						
Aluminum Chloride, 10%	B	—	A	A	A	A
Ammonium Chloride, 10%	B	A	A	A	A	A
Bleaching Agent, 40%	A	E	—	—	A	A
Bleaching Agent, 100%	B	E	—	—	A	—
Calcium Chloride, 40%	B	A	A	—	A	—
Caustic Soda, 10%	A	A	—	—	A	—
Ferric Chloride, 10%	B	—	A	A	A	A
Hydrogen Peroxide, 3%	A	A	A	A	A	A
Magnesium Chloride, 30%	B	—	A	A	A	—
Potassium Chloride, 40%	B	A	A	—	A	—
Potassium Dichromate, 10%	B	C	A	—	A	—
Potassium Permanganate, 5%	D	D	A	—	A	—
Sea Water	A	A	A	A	A	—
Sodium Bisulfate, 10%	B	A	A	—	A	—
Sodium Chloride, 10%	B	B	A	—	A	—
Sodium Hypochlorite, PH 13	A	B	A	—	A	A
Fuels						
ASTM Fuel A	A	—	—	B	A	—
ASTM Fuel B	C	—	—	C	A	—
ASTM Fuel C	C	—	—	—	A	—
Diesel Fuel	B	A	—	B	A	D
Gasohol (10-15% Methanol)	D	—	—	—	A	—
High-test (Super) Gasoline	D	A	—	—	A	—
Kerosene	A	V	—	B	A	D
Oils						
ASTM Oil #1	A	—	—	B	A	—
ASTM Oil #2	A	—	—	—	A	—
ASTM Oil #3	A	—	—	B	A	—
Brake Fluid (ATE or ATS)	D	A	—	—	A	—
Gear Box Oil (SAE 90)	A	—	—	—	A	—
Hydraulic Fluid	B	—	—	—	A	—
Hydraulic/Water Emulsion	B	—	—	—	A	—
Mineral Oil	A	A	C	A	A	—
Motor Oil	A	A	B	—	A	—
Paraffin Oil	A	A	—	A	A	—
Power Steering Fluid	B	—	—	—	A	—
Skydrol® 500 Oil	D	—	—	—	A	B

	Polyurethane	Nylon12	Polyethylene	PVC	PTFE	Weld Tubing Cover
Greases						
Calcium Grease	A	—	—	—	A	—
Sodium Grease	A	—	—	—	A	—
Teflon® Grease	A	—	—	—	A	—
Miscellaneous						
Diocetyl Phthalate (DOP)	A	—	C	C	A	—
Ethylene Chloride	B	C	D	—	A	D
Ethylene Glycol/Water 50/50	B	—	—	A	A	A
Household Cleaner	B	—	—	—	A	—
Naptha	A	—	A	B	A	D
Silage (Silo) Juice	B	—	—	—	A	—
Natural Perspiration	A	—	—	—	A	—
Tincture of Iodine	D	—	—	—	A	—
Tricresyl Phosphate	D	—	—	C	A	—
Solvents						
Acetone	D	A	D	C	A	B
Aniline	D	B	B	B	A	—
Benzene	D	A	D	C	A	D
Benzyl Alcohol	E	—	—	—	A	B
Butane	B	A	—	—	A	B
Butyl Acetate	D	A	B	C	A	—
Butyl Alcohol	D	A	A	—	A	—
Carbon Tetrachloride	D	A	D	C	A	D
Chlorobenzene	D	C	D	C	A	D
Chloroform	D	C	D	C	A	D
Cyclohexane	C	A	—	A	A	D
Ethanol	C	—	B	—	A	B
Ether	C	A	—	—	A	B
Ethyl Acetate	D	A	C	C	A	A
Freon 11, 12, 22	C	—	—	—	A	D
Glycerine & Glycol	A	A	B	A	A	A
Heptane	B	A	D	B	A	—
Hexane	B	A	—	B	A	—
Isopropyl Alcohol	C	A	—	—	A	—
Methanol	C	—	B	—	A	A
Methyl Acetate	D	—	—	C	A	—
Methyl Ethyl Ketone	C	A	—	C	A	—
Methyl Glycol	D	—	—	—	A	—
Methylene Chloride	D	E	D	C	A	—
N-Methyl Pyrrolidone	E	—	—	—	A	—
Perchloroethylene	D	—	—	C	A	—
Petroleum	B	A	—	—	A	—
Pyridine	E	A	—	—	A	B
Tetrachloroethylene	D	—	—	C	A	—
Tetrahydrofuran	D	B	D	C	A	B
Toluene	D	A	D	C	A	D
Trichloroethylene	D	C	D	C	A	D
Turpentine (Pine Oil)	B	A	C	B	A	B
Xylene	D	A	—	C	A	D

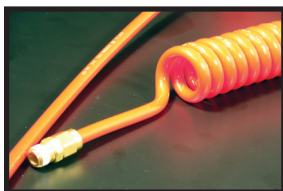
Teflon® is a registered trademark of the Dupont Corporation.
Skydrol® is a registered trademark of Monsanto Company.

A Excellent (0-3%)
B Good (4-15%)
C Fair (16-30%)
D Poor (>30%)
E Dissolves

WARNING:
This table is a general guide based on our testing. Although every effort was made to ensure its accuracy, we cannot guarantee your results due to variables in temperature and application. Therefore, no warranty is expressed or implied, and the user assumes all risk and liability.



ATP has developed the latest technology in tubing, hoses and pneumatic accessories. In keeping with current market demands, our products offer ergonomics and safety to help support assembly and automation applications.



Spiral Hoses

Techniblu[™], Technithane[™] and our industry exclusives— the “Strong[™]” and “Strong-Plus[™].” A tighter coil ID gives our Strong hoses better memory retention. The “Plus” is a lightweight, ergonomic, hose whip providing surface protection and operator comfort. Custom models are our specialty.



Technifit[™] Push-To-Connect Fitting

All are made to extremely tight tolerances and work with ATP tubing to eliminate leaks. Our variety of fittings represents a large selection of the most common models, sizes and materials. Additional models and sizes - including stainless materials and Viton[®] seals are available as special order.



Technibond[®]

Thermally-bonded, polyurethane tube groupings available in straight and spiral configurations. Wire can be added to carry electric. Custom configurations welcome with no minimum quantities.



ARMOR-AIR[™] Contractors Air Hose

Lightweight, flexible and much more abrasion-resistant than traditional rubber air hoses. A must-have for contractors, and anyone who owns an air compressor. Available with varying hardness and many colors. Reinforced with nylon for greater working pressures. Standard & custom assemblies and spirals.



Free Angle[®] Swivel Fitting

The rubber boot has been replaced by an exclusive steel cover giving it a much longer service life. Our two rotation points make this superior to the imitators. The ergonomic, patented 360° circular rotation and 45° angled rotation makes this fitting indispensable for air tool and assembly applications.



Hose & Cable Balancers

Durable cases and high-quality internal components make up our balancers. Ideal for workstation ergonomics.



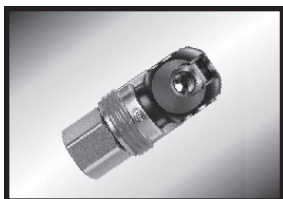
Oetiker[®] Clamps

The Oetiker[®] Clamp creates a spring effect when the hose material expands or contracts in response to thermal or mechanical influences such as temperature, vibration, etc. Single ear, double ear and stepless in both carbon steel and stainless steel.



Brass Fittings

ATP offers a full line of brass fittings to meet your connection needs. We offer hose fittings, hose barbs, pipe fittings, and mufflers in both fractional and metric sizes. Available in NPT or BSPT.



Oetiker[®] Swing Couplers

ATP carries and recommends Oetiker[®] Swing Couplings. The coupling design allows a full flow with safety vent feature. Use Oetiker[®] Swing Couplings with ATP Free Angle Swivel Fittings. The ultimate pairing where safety and ergonomics are concerned.



TechniGripp[®]

The world's first hydraulic push-to-connect fitting. Does not require use of a crimper to make medium pressure hydraulic hose lines. Allows on-site fabrication to eliminate costly down time. Compatible with SAE100R7 hose specifications.

Viton[®] is a registered trademark of the E.L. DuPont Co.

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