

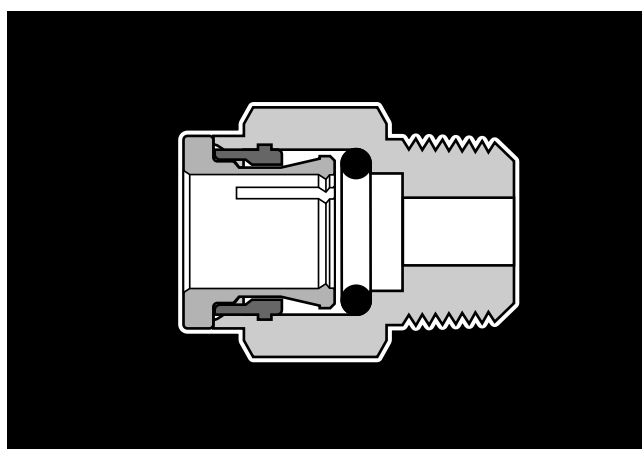
Fittings & Tubing

**Microlok, Prestolok / Prestolok II,
P & DB Fittings,
Nylon & Polyethylene Tubing**

Section X



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Advantages

Ready-to-use miniature one piece fitting for use with most thermoplastic and soft copper tubing. This fitting was designed to meet the needs of the motion control industry where fast assembly, disassembly and reassembly is important. No special tools needed for assembly; just insert the tubing until it bottoms. Microlok is designed to be used without a tube support to provide full flow through the tubing. The collet design of Microlok grips the tubing securely to provide tubing retention. The Microlok fitting comes in externally threaded hex and round straight fitting body styles and in a range of shaped configurations. Microlok straight fittings have a nickel plated brass body and shaped fittings have a composite body with nickel plated brass componentry. Microlok external pipe threads come with a pre-applied white acrylic sealant. Positional external pipe threaded ends are featured on shapes for installation in compact areas and for precise positioning. Microlok should not be used for live swivel applications.

Materials

Microlok Straights: CA360, CA345 (nickel plated)

Microlok Shape Bodies: Reinforced Polyphenylene Oxide (PPO)

O-Ring: Nitrile (other compounds available on request)

Collet: Nickel Plated Brass

Applications

Use with Series "U", "LU" and "HU" polyurethane tubing, series "E" polyethylene tubing or series "N" nylon tubing. Microlok was designed to meet the needs of the motion control industry. Consult the factory with any questions regarding special product applications. All applications should be carefully tested through the range of conditions which may be encountered prior to use.

Working Pressure and Temperature Ranges

32° to +150°F at up to 150 PSI depending on tubing being used. Vacuum applications are dependent upon temperature and type of tubing used.

Assembly Instructions

1. Cut thermoplastic tubing squarely, using tube cutter. Metal tubing should be cut squarely and free of burrs. Be certain the port or mating part is clean and free of debris.
2. Insert tubing into fitting until it bottoms. A slight twisting motion will ease the insertion. Pull on tubing to verify it is properly retained in the fitting.
3. To disassemble, simply push the collet against the body and remove tubing.

Order

By part number and name.

Nomenclature

Part numbers are constructed from symbols that identify the style and size of the fitting. The first series of numbers and letters identify the style and type fitting. The second series of numbers describe the size.

Note: 0 indicates 10-32 UNF Thread

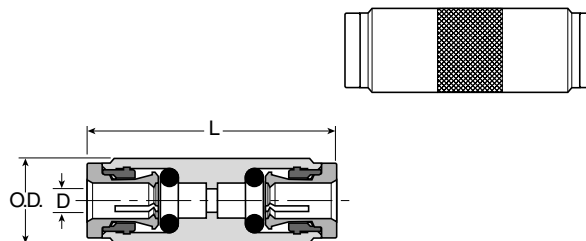
Example	W	68	ML	-4	-2
White Acrylic	_____	_____	_____	_____	_____
Thread Sealant	_____	_____	_____	_____	_____
Male Connector	_____	_____	_____	_____	_____
Microlok	_____	_____	_____	_____	_____
1/4" (4/16) Tube O.D.	_____	_____	_____	_____	_____
1/8" (2/16) Pipe Thread	_____	_____	_____	_____	_____

Sizes

Tube sizes are determined by the number of sixteenths of an inch in the tube O.D..

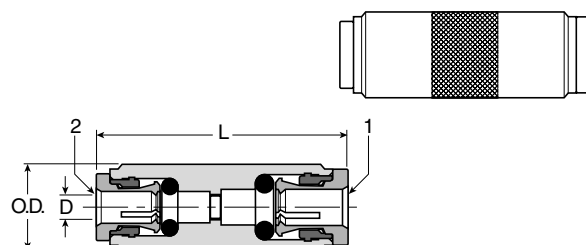
62ML Equal Union

Part No.	Tube Size	O.D.	L	Flow Dia. D.
62ML-2	1/8	.34	1.02	.093
62ML-5/32	5/32	.38	1.03	.110
62ML-4	1/4	.47	1.10	.190
62ML-6	3/8	.63	1.32	.312
62ML-8	1/2	.75	1.43	.406



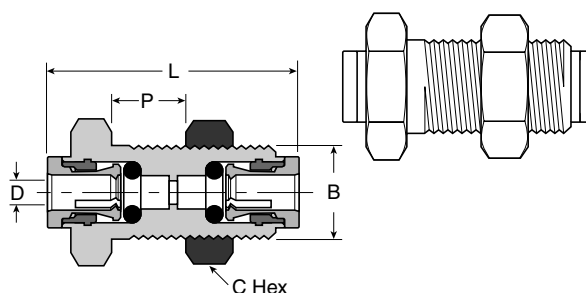
62ML Unequal Union

Part No.	Tube Size 1	Tube Size 2	O.D.	L	Flow Dia. D.
62ML-5/32-2	5/32	1/8	.38	1.03	.093
62ML-4-2	1/4	1/8	.47	1.09	.093
62ML-4-5/32	1/4	5/32	.47	1.09	.110
62ML-4-6	1/4	3/8	.63	1.23	.190
62ML-6-8	3/8	1/2	.75	1.37	.312



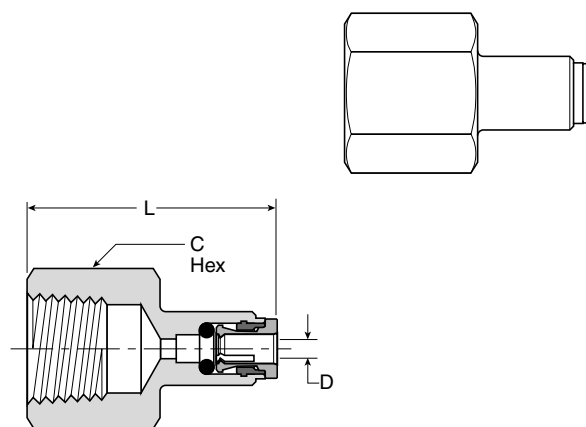
62MLBH Bulkhead Union

Part No.	Tube Size	B	C Hex	P Max.	L	Flow Dia. D.
62MLBH-2	1/8	3/8	1/8	.51	1.02	.093
62MLBH-5/32	5/32	7/16	1/2	.51	1.03	.110
62MLBH-4	1/4	1/2	5/8	.55	1.10	.190
62MLBH-6	3/8	5/8	3/4	.55	1.32	.312
62MLBH-8	1/2	3/4	7/8	.60	1.43	.406



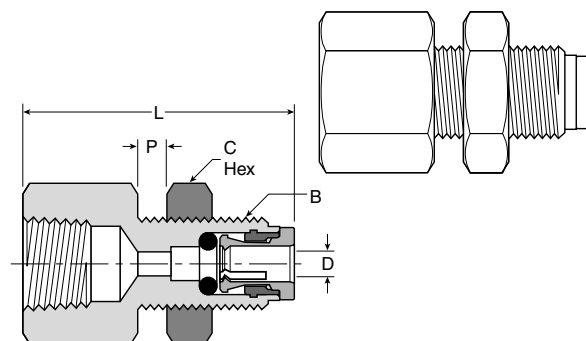
66ML Female Connector

Part No.	Tube Size	Pipe Thread NPTF	C Hex	L	Flow Dia. D.
66ML-2-2	1/8	1/8	9/16	.99	.093
66ML-2-4	1/8	1/4	11/16	1.22	.093
66ML-5/32-2	5/32	1/8	9/16	.98	.110
66ML-5/32-4	5/32	1/4	11/16	1.19	.110
66ML-4-2	1/4	1/8	9/16	.99	.190
66ML-4-4	1/4	1/4	11/16	1.20	.190
66ML-4-6	1/4	3/8	13/16	1.24	.190
66ML-6-4	3/8	1/4	11/16	1.28	.312
66ML-6-6	3/8	3/8	13/16	1.28	.312
66ML-6-8	3/8	1/2	1	1.44	.312
66ML-8-6	1/2	3/8	13/16	1.35	.406
66ML-8-8	1/2	1/2	1	1.58	.406



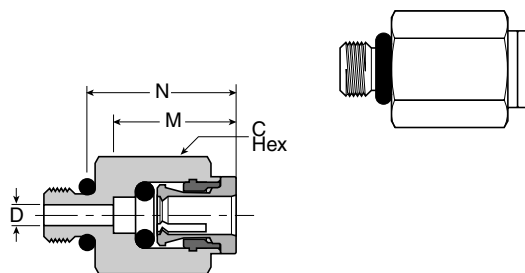
66MLBH Female Bulkhead 66

Part No.	Tube Size	Pipe Thread NPTF	B Thread	C Hex	P Max.	L	Flow Dia. D.
66MLBH-2-4	1/8	1/4	3/8-24	11/16	.31	1.22	.093
66MLBH-5/32-2	5/32	1/8	7/16-24	9/16	.36	1.07	.110
66MLBH-5/32-4	5/32	1/4	7/16-24	9/16	.36	1.29	.110
66MLBH-4-2	1/4	1/8	1/2-24	9/16	.36	1.06	.190
66MLBH-4-4	1/4	1/4	1/2-24	11/16	.36	1.25	.190
66MLBH-6-6	3/8	3/8	5/8-18	13/16	.36	1.34	.312
66MLBH-8-6	1/2	3/8	3/4-16	13/16	.36	1.41	.406
66MLBH-8-8	1/2	1/2	3/4-16	1	.36	1.64	.406

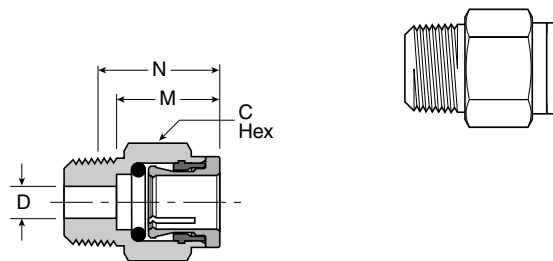


W68ML Microlok Male Connector

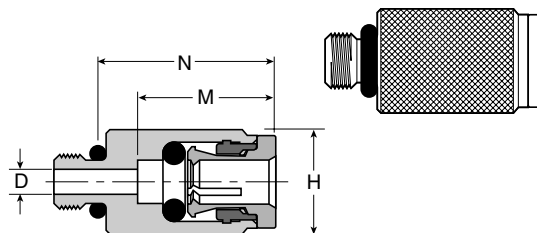
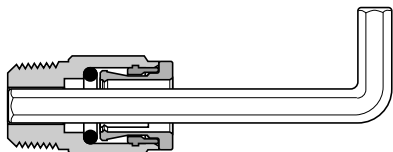
Part No.	Tube Size	Pipe Thread	C Hex	Assm. Ht.		Flow Dia. D
				N	M	
W68ML-2-1	1/8	1/16	3/8	.50	.49	.094
W68ML-2-2	1/8	1/8	7/16	.46	.49	.094
68ML-2-0	1/8	10-32	3/8	.58	.49	.078
W68ML-5/32-1	5/32	1/16	7/16	.53	.49	.094
W68ML-5/32-2	5/32	1/8	7/16	.33	.49	.110
W68ML-5/32-4	5/32	1/4	5/8	.45	.49	.110
68ML-5/32-0	5/32	10-32	7/16	.60	.49	.078
W68ML-4-1	1/4	1/16	7/16	.64	.52	.140
W68ML-4-2	1/4	1/8	1/2	.52	.52	.220
W68ML-4-4	1/4	1/4	5/8	.46	.52	.220
W68ML-4-6	1/4	3/8	11/16	.50	.52	.220
68ML-4-0	1/4	10-32	7/16	.60	.52	.078
W68ML-6-2	3/8	1/8	5/8	.81	.63	.220
W68ML-6-4	3/8	1/4	5/8	.73	.63	.312
W68ML-6-6	3/8	3/8	11/16	.54	.63	.312
W68ML-6-8	3/8	1/2	7/8	.63	.63	.312
W68ML-8-4	1/2	1/4	3/4	.94	.68	.314
W68ML-8-6	1/2	3/8	3/4	.78	.68	.440
W68ML-8-8	1/2	1/2	7/8	.63	.68	.440



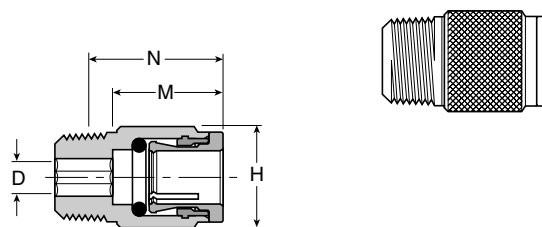
68ML-X-0

**W68MLR Microlok Round Body Male Connector**

Part No.	Tube Size	Pipe Thread	Body Dia. H	Assm.		Flow Dia. D
				Internal Hex	Ht. N M	
68MLR-2-0	1/8	10-32	.34	—	.57 .49	.078
W68MLR-5/32-1	5/32	1/16	.38	1/8	.55 .49	.126
W68MLR-5/32-2	5/32	1/8	.43	1/8	.56 .49	.126
68MLR-5/32-0	5/32	10-32	.38	—	.57 .49	.078
W68MLR-4-1	1/4	1/16	.47	5/32	.68 .52	.156
W68MLR-4-2	1/4	1/8	.47	3/16	.59 .52	.188
W68MLR-4-4	1/4	1/4	.59	3/16	.51 .52	.188
68MLR-4-0	1/4	10-32	.47	—	.58 .52	.094



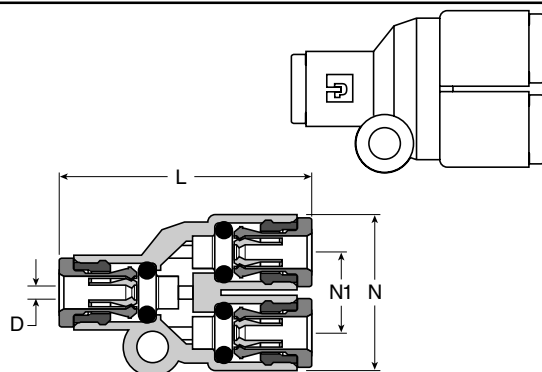
68MLR-X-0



5/32" and larger straight Microlok round body Male Connectors with Pipe Threads have an internal hex for the use of an Allen Key to allow the fitting to be mounted in any position. This also permits close porting not possible with a standard wrench.

362ML Union Y Connector

Part No.	Tube Size	Mounting Hole Dia.	L	N	N1	Flow Dia. D
362ML-2	1/8	.13	1.02	.64	.33	.060
362ML-5/32	5/32	.13	1.08	.71	.38	.080
362ML-4	1/4	.13	1.23	.90	.48	.130

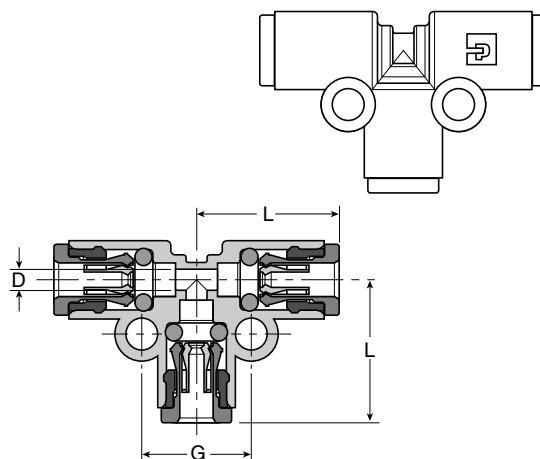


364ML Union Tee

Composite Body

Part No.	Tube Size	Mounting Hole Dia.	L	G	Flow Dia. D
364ML-2	1/8	.13	.56	.43	.081
364ML-5/32	5/32	.13	.58	.46	.110
364ML-4	1/4	.13	.67	.53	.190
364ML-6*	3/8	—	.96	—	.250
364ML-8*	1/2	—	1.11	—	.370

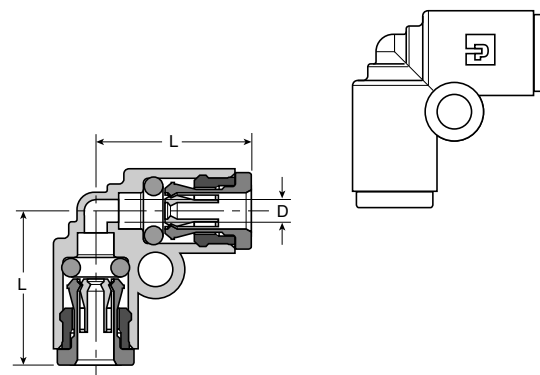
* 3/8 & 1/2 have no mounting hole

**365ML Union Elbow 365**

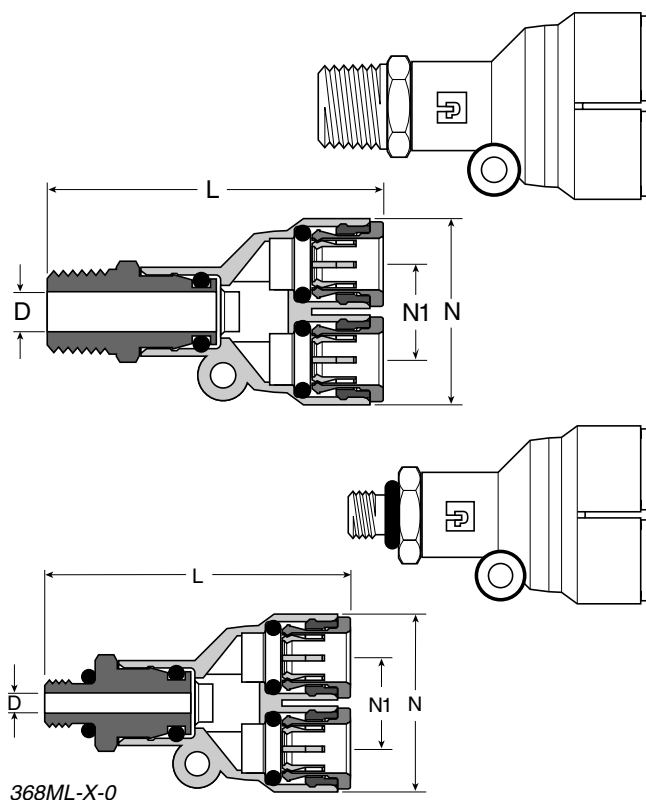
Composite Body

Part No.	Tube Size	Mounting Hole Dia.	L	Flow Dia. D
365ML-2	1/8	.13	.56	.081
365ML-5/32	5/32	.13	.58	.110
365ML-4	1/4	.13	.67	.190
365ML-6*	3/8	—	.96	.250
365ML-8*	1/2	—	1.09	.370

* 3/8 & 1/2 have no mounting hole

**368ML Union Y Male Connector**

Part No.	Tube Size	Pipe Thread	Mounting Hole Dia.	L	N	N1	Flow Dia. D
368ML-2-0	1/8	10-32	.13	1.28	.64	.33	.060
W368ML-2-1	1/8	1/16	.13	1.42	.64	.33	.060
W368ML-2-2	1/8	1/8	.13	1.42	.64	.33	.060
368ML-5/32-0	5/32	10-32	.13	1.35	.71	.38	.078
W368ML-5/32-1	5/32	1/16	.13	1.48	.71	.38	.080
W368ML-5/32-2	5/32	1/8	.13	1.48	.71	.38	.080
368ML-4-0	1/4	10-32	.13	1.48	.90	.47	.078
W368ML-4-1	1/4	1/16	.13	1.62	.90	.47	.130
W368ML-4-2	1/4	1/8	.13	1.62	.90	.47	.130
W368ML-4-4	1/4	1/4	.13	1.96	.90	.47	.130

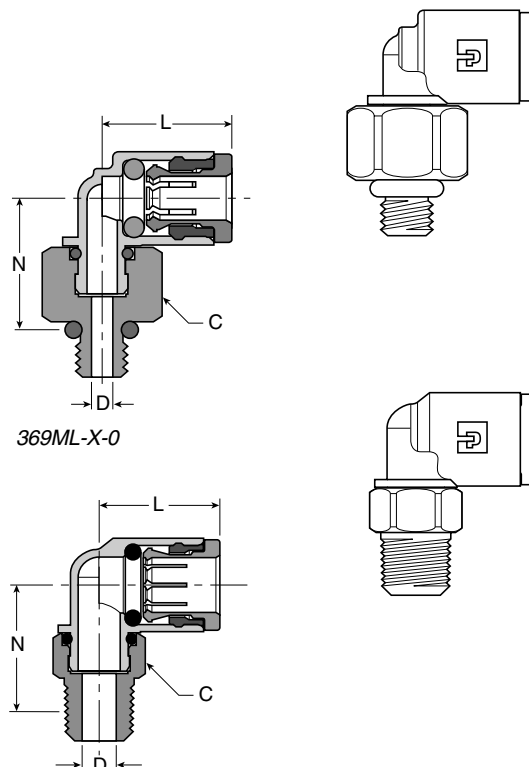


368ML-X-0

W369ML Male Elbow Swivel 90°

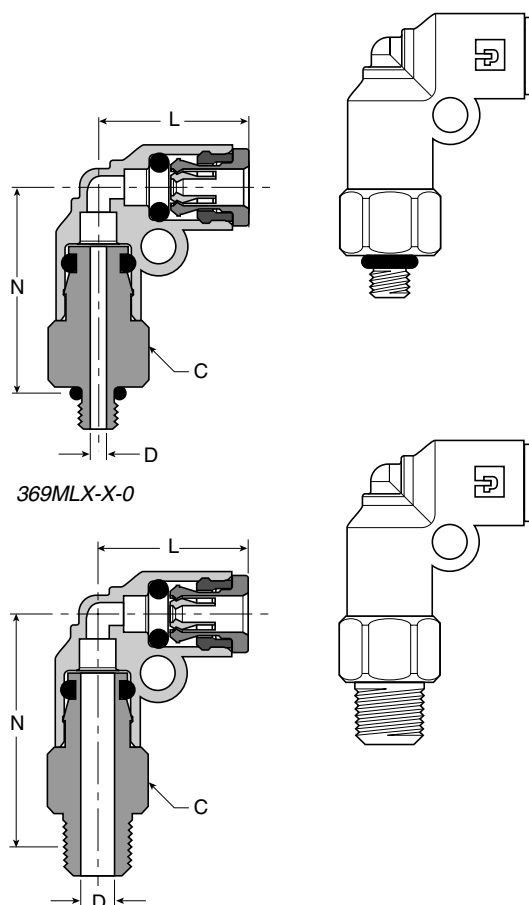
Composite Body

Part No.	Tube Size	Pipe Thread	C Hex	L	Ht. N	Assm. Flow Dia D
369ML-2-0	1/8	10-32	3/8	.56	.45	.078
W369ML-2-1	1/8	1/16	3/8	.56	.48	.110
W369ML-2-2	1/8	1/8	7/16	.56	.40	.110
W369ML-2-4	1/8	1/4	9/16	.46	.54	.110
369ML-5/32-0	5/32	10-32	3/8	.58	.45	.078
W369ML-5/32-1	5/32	1/16	3/8	.58	.48	.110
W369ML-5/32-2	5/32	1/8	7/16	.58	.40	.110
W369ML-5/32-4	5/32	1/4	5/8	.58	.49	.110
369ML-4-0	1/4	10-32	3/8	.67	.54	.078
W369ML-4-1	1/4	1/16	3/8	.67	.57	.156
W369ML-4-2	1/4	1/8	7/16	.67	.49	.195
W369ML-4-4	1/4	1/4	9/16	.67	.57	.195
W369ML-4-6	1/4	3/8	11/16	.55	.68	.195
W369ML-6-2	3/8	1/8	3/4	.96	.87	.220
W369ML-6-4	3/8	1/4	3/4	.96	.87	.250
W369ML-6-6	3/8	3/8	3/4	.96	.93	.250
W369ML-6-8	3/8	1/2	7/8	.96	1.04	.250
W369ML-8-4	1/2	1/4	15/16	1.09	1.04	.313
W369ML-8-6	1/2	3/8	15/16	1.09	1.05	.375
W369ML-8-8	1/2	1/2	1	1.09	1.12	.376

**W369MLX Extended Male Elbow Swivel**

Part No.	Tube Size	Pipe Thread	Mounting Hole Dia.	C Hex	L	Assm. Flow Dia D
369MLX-2-0	1/8	10-32	.13	3/8	.56	.84 .078
W369MLX-2-1	1/8	1/16	.13	3/8	.56	.85 .081
W369MLX-2-2	1/8	1/8	.13	7/16	.56	.77 .081
369MLX-5/32-0	5/32	10-32	.13	3/8	.58	.86 .078
W369MLX-5/32-1	5/32	1/16	.13	3/8	.58	.86 .106
W369MLX-5/32-2	5/32	1/8	.13	7/16	.58	.78 .106
W369MLX-5/32-4	5/32	1/4	.13	9/16	.58	.86 .106
369MLX-4-0	1/4	10-32	.13	3/8	.70	1.00 .078
W369MLX-4-1	1/4	1/16	.13	3/8	.67	1.05 .156
W369MLX-4-2	1/4	1/8	.13	7/16	.67	.93 .190
W369MLX-4-4	1/4	1/4	.13	9/16	.67	1.00 .190
W369MLX-6-4*	3/8	1/4	—	3/4	.96	1.62 .250
W369MLX-6-6*	3/8	3/8	—	3/4	.96	1.62 .250
W369MLX-6-8*	3/8	1/2	—	7/8	.96	1.79 .250
W369MLX-8-4*	1/2	1/4	—	15/16	1.09	1.79 .313
W369MLX-8-6*	1/2	3/8	—	15/16	1.09	1.95 .375
W369MLX-8-8*	1/2	1/2	—	1	1.09	2.02 .376

* 3/8 & 1/2 have no mounting hole

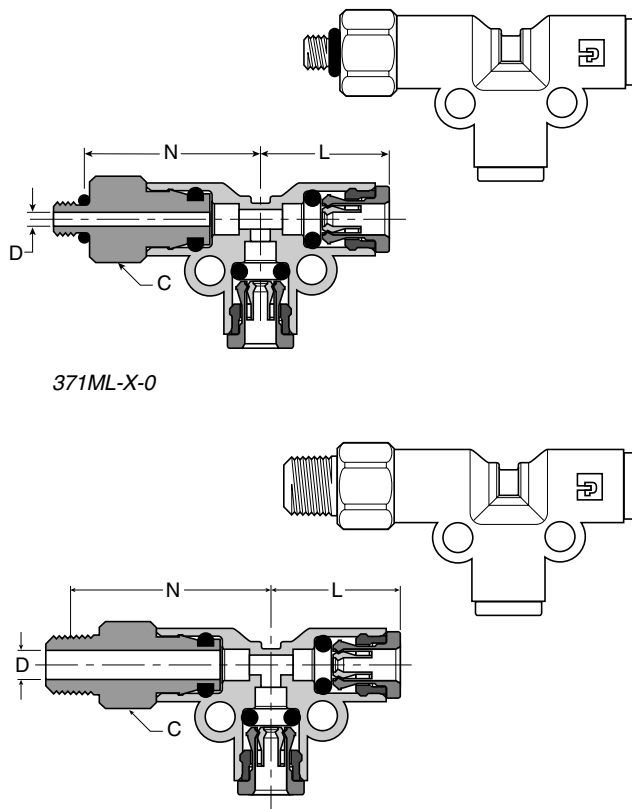


W371ML Male Run Tee Swivel

Composite Body

Part No.	Tube Size	Pipe Thread	Mounting Hole Dia.	C Hex	L	Assm.		Flow Dia D
						Ht. N		
371ML-2-0	1/8	10-32	.13	3/8	.56	.85		.078
W371ML-2-1	1/8	1/16	.13	3/8	.56	.85		.081
W371ML-2-2	1/8	1/8	.13	7/16	.56	.77		.081
371ML-5/32-0	5/32	10-32	.13	3/8	.58	.85		.078
W371ML-5/32-1	5/32	1/16	.13	3/8	.58	.86		.106
W371ML-5/32-2	5/32	1/8	.13	7/16	.58	.78		.106
371ML-4-0*	1/4	10-32	—	3/8	.67	1.00		.078
W371ML-4-1*	1/4	1/16	—	3/8	.67	1.05		.156
W371ML-4-2*	1/4	1/8	—	7/16	.67	.93		.190
W371ML-4-4*	1/4	1/4	—	9/16	.67	1.00		.190
W371ML-6-4*	3/8	1/4	—	3/4	.96	.97		.250
W371ML-6-6*	3/8	3/8	—	3/4	.96	.94		.250
W371ML-6-8*	3/8	1/2	—	7/8	.96	1.05		.250
W371ML-8-4*	1/2	1/4	—	15/16	1.11	1.07		.313
W371ML-8-6*	1/2	3/8	—	15/16	1.11	1.08		.375
W371ML-8-8*	1/2	1/2	—	1	1.11	1.15		.376

* 1/4, 3/8 & 1/2 have no mounting hole

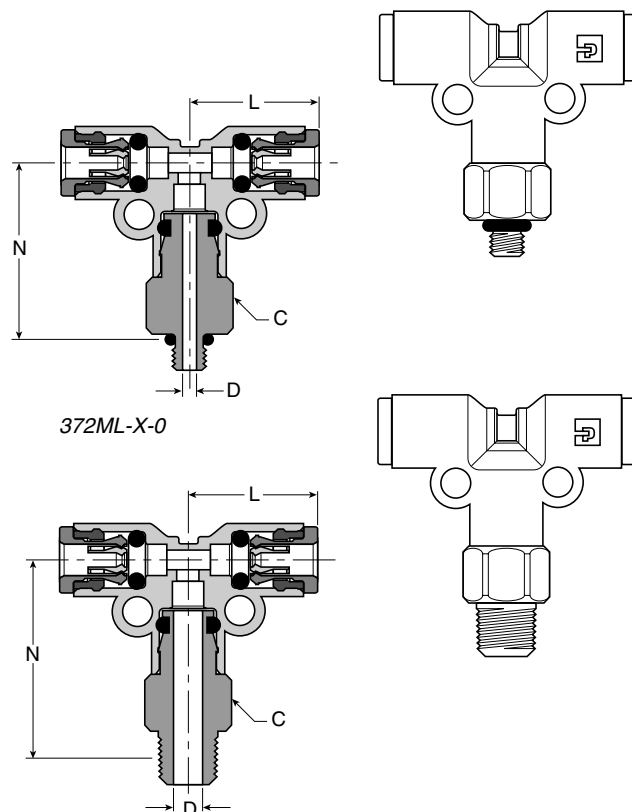


W372ML Male Branch Tee Swivel W372ML

Composite Body

Part No.	Tube Size	Pipe Thread	Mounting Hole Dia.	C Hex	L	Assm.		Flow Dia D
						Ht. N		
372ML-2-0	1/8	10-32	.13	3/8	.56	.85		.078
W372ML-2-1	1/8	1/16	.13	3/8	.56	.85		.081
W372ML-2-2	1/8	1/8	.13	7/16	.56	.77		.081
372ML-5/32-0	5/32	10-32	.13	3/8	.58	.85		.078
W372ML-5/32-1	5/32	1/16	.13	3/8	.58	.86		.106
W372ML-5/32-2	5/32	1/8	.13	7/16	.58	.78		.106
372ML-4-0*	1/4	10-32	—	3/8	.67	1.00		.078
W372ML-4-1*	1/4	1/16	—	3/8	.67	1.05		.156
W372ML-4-2*	1/4	1/8	—	7/16	.67	.93		.190
W372ML-4-4*	1/4	1/4	—	9/16	.67	1.00		.190
W372ML-6-2*	3/8	1/8	—	3/4	.96	.91		.220
W372ML-6-4*	3/8	1/4	—	3/4	.96	1.00		.250
W372ML-6-6*	3/8	3/8	—	3/4	.96	.97		.250
W372ML-6-8*	3/8	1/2	—	7/8	.96	1.08		.250
W372ML-8-4*	1/2	1/4	—	15/16	1.11	1.04		.313
W372ML-8-6*	1/2	3/8	—	15/16	1.11	1.05		.375
W372ML-8-8*	1/2	1/2	—	1	1.11	1.12		.376

* 1/4, 3/8 & 1/2 have no mounting hole



X



Advantages

Ready-to-use compact one-piece fitting for use with most thermoplastic and copper tubing. This fitting is specially designed for low pressure circuits where fast assembly, disassembly and reassembly is important. No special tools are needed for assembly; just insert the tubing until it bottoms. Prestolok/Prestolok II is designed to be used with no tube support. Radial claws on the stainless steel grab ring grip the tubing securely to provide retention. Brass Male pipe threads come standard with a white acrylic sealant pre-applied ("W" prefix) swivels are featured on all male pipe threaded shapes for installation in tight places and for precise positioning. Prestolok/Prestolok II should not be used for live swivel applications. The outside diameter of the tubing to be used with the fitting is marked on the release button. The removable release button can be color coded for ease of identification. Standard release button is green.

Materials

Prestolok Bodies: CA377, CA360, CA345

Prestolok II Bodies: Glass Filled Nylon

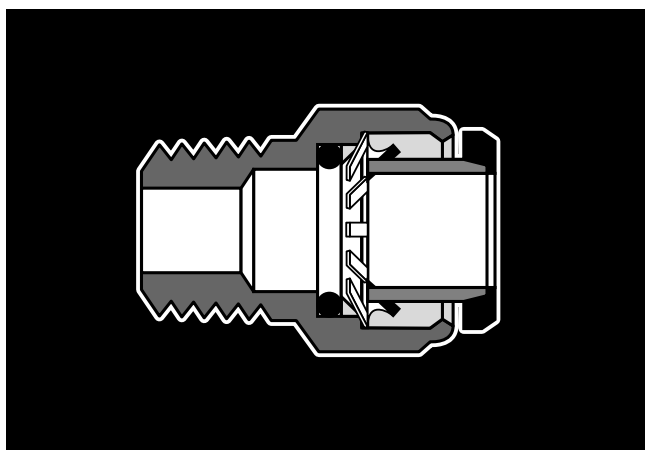
O-Ring: Nitrile (other compounds available on request)

Release Button: Polyacetal

Grab Ring: Stainless Steel

Applications

Use with Parker Parflex series "E" polyethylene tubing, series "N" nylon tubing, series "U" polyurethane tubing or copper tubing. Perfectly adapted for use in a large variety of industries, Prestolok II was designed as an economical alternative for pneumatic applications that do not require the higher pressure capacity of the standard prestolok fittings, consult the factory with any questions regarding special product applications. All applications should be carefully tested through the range of conditions which may be encountered prior to use. For inch O.D. tubing



Working Pressure and Temperature Ranges

Prestolok: Zero to 200°F at up to 300 PSI depending on tubing being used.

Prestolok II: Zero to 150°F at up to 150 PSI depending on tubing being used.

Vacuum applications are dependent upon temperature and type of tubing used.

Assembly Instructions

1. Cut thermoplastic tubing squarely, using Parker Tube Cutter PTC 001. Metal tubing should be cut squarely and free of burrs. Be certain the port or mating part is clean and free of debris.
2. Insert tubing into fitting until it bottoms. A slight twisting motion will ease the insertion. Pull on tubing to verify it is properly retained in the fitting.
3. To disassemble, simply push the release button against the body and remove tubing.

Order

By part number and name.

Nomenclature

Part numbers are constructed from symbols that identify the style and size of the fitting. The first series of numbers and letters identify the style and type fitting. The second series of numbers describe the size.

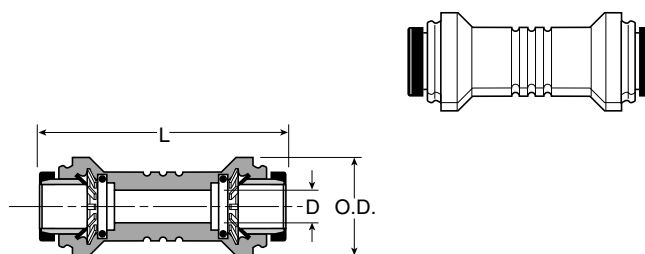
Example	69	PL	-4	-2
Male Connector	_____	_____	_____	_____
Prestolok	_____	_____	_____	_____
1/4" (4/16) Tube O.D.	_____	_____	_____	_____
1/8" (2/16) Pipe Thread	_____	_____	_____	_____

Sizes

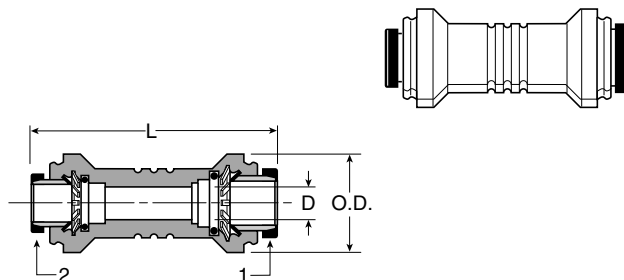
Tube sizes are determined by the number of sixteenths of an inch in the tube O.D.

32PL Equal Union

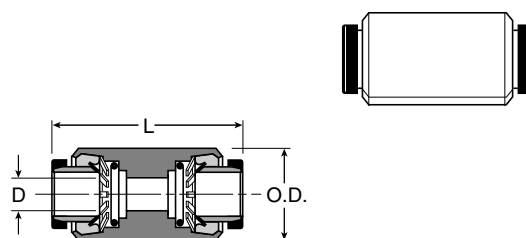
Part No.	Tube Size	O.D.	L	Flow Dia. D
32PL-2	1/8	.51	1.32	.09
32PL-5/32	5/32	.51	1.32	.12
32PL-3	3/16	.59	1.37	.16
32PL-4	1/4	.59	1.37	.19
32PL-5	5/16	.67	1.49	.25
32PL-6	3/8	.83	1.76	.31

**32PL Unequal Union**

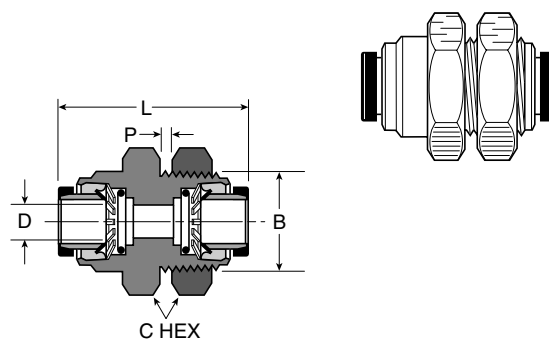
Part No.	1 Tube Size	2 Tube Size	O.D.	L	Flow Dia. D
32PL-5/32-2	5/32	1/8	.51	1.32	.09
32PL-4-2	1/4	1/8	.59	1.37	.09
32PL-5-4	5/16	1/4	.67	1.47	.19
32PL-6-4	3/8	1/4	.82	1.75	.19

**62PL Union**

Part No.	Tube Size	O.D.	L	D
62PL-2	1/8	.406	1.44	.094
62PL-3	3/16	.437	1.35	.156
62PL-5/32	5/32	.406	1.49	.125
62PL-4	1/4	.500	1.51	.188
62PL-5	5/16	.562	1.68	.250
62PL-6	3/8	.625	1.68	.312
62PL-8	1/2	.750	1.86	.375

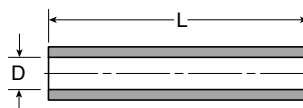
**62PLBH Bulkhead Union**

Part No.	Tube Size	B	C Hex	P Max.	L	D
62PLBH-2	1/8	7/16	9/16	.39	1.44	.094
62PLBH-5/32	5/32	7/16	9/16	.39	1.44	.125
62PLBH-4	1/4	9/16	11/16	.29	1.51	.188
62PLBH-5	5/16	5/8	3/4	.60	1.68	.250
62PLBH-6	3/8	3/4	7/8	.54	1.68	.312
62PLBH-8	1/2	7/8	1	.66	2.07	.375

**63PL Double Male Union**

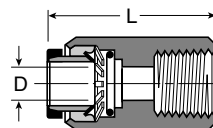
Plastic Body

Part No.	Tube Size	L	D
63PL-2	1/8	1.49	.078
63PL-5/32	5/32	1.49	.106
63PL-4	1/4	1.61	.188
63PL-5	5/16	1.61	.236
63PL-6	3/8	2.00	.295
63PL-8	1/2	2.12	.374

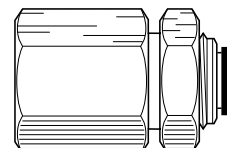
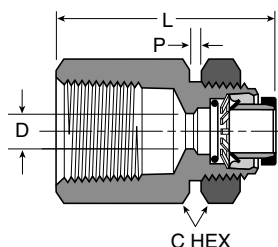


66PL Female Connector

Part No.	Tube Size	Pipe Thread (NPTF)	L	D
66PL-2-2	1/8	1/8	1.18	.094
66PL-3-2	3/16	1/8	1.16	.156
66PL-5/32-2	5/32	1/8	1.18	.125
66PL-5/32-4	5/32	1/4	1.39	.125
66PL-4-2	1/4	1/8	1.21	.188
66PL-4-4	1/4	1/4	1.42	.188
66PL-5-2	5/16	1/8	1.27	.250
66PL-5-4	5/16	1/4	1.47	.250
66PL-6-4	3/8	1/4	1.46	.312
66PL-6-6	3/8	3/8	1.51	.312

**66PLBH Female Bulkhead**

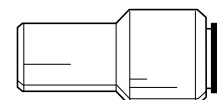
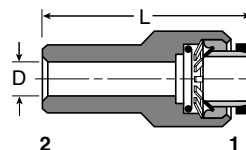
Part No.	Tube Size	Pipe Thread (NPTF)	C Hex	P Max.	L	Flow Dia. D
66PLBH-5/32-4	5/32	1/4	11/16	.24	1.38	.13
66PLBH-4-4	1/4	1/4	11/16	.19	1.35	.18
66PLBH-6-6	3/8	3/8	1	.22	1.44	.31
66PLBH-8-6	1/2	3/8	1 1/4	.35	1.57	.34

**67PPL Tube End Reducer**

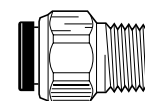
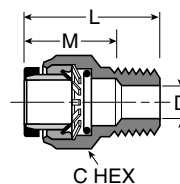
Plastic Body

Part No.	1 Tube Size	2 Tube Size	L	D
67PPL-2-5/32	1/8	5/32	1.48	.078
67PPL-2-4	1/8	1/4	1.48	.078
67PPL-5/32-4 *	5/32	1/4	1.48	.118
67PPL-5/32-5 *	5/32	5/16	1.41	.118
67PPL-5/32-6 *	5/32	3/8	1.63	.118
67PPL-4-5	1/4	5/16	1.52	.177
67PPL-4-6	1/4	3/8	1.64	.177
67PPL-4-8	1/4	1/2	1.72	.177
67PPL-5-6 *	5/16	3/8	1.79	.236
67PPL-6-8	3/8	1/2	1.92	.295

* Parts supplied with black bodies and black release buttons

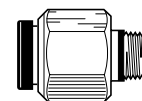
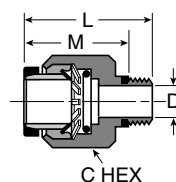
**W68PL Male Connector**

Part No.	Tube Size	Pipe Thread (NPTF)	C Hex	L	M	D
W68PL-2-1	1/8	1/16	3/8	.85	.68	.094
W68PL-2-2	1/8	1/8	7/16	.85	.68	.094
W68PL-2-4	1/8	1/4	9/16	1.10	.68	.094
W68PL-3-2	3/16	1/8	7/16	.92	.63	.156
W68PL-3-4	3/16	1/4	9/16	1.10	.64	.156
W68PL-5/32-2	5/32	1/8	7/16	.85	.69	.125
W68PL-5/32-4	5/32	1/4	9/16	1.10	.69	.125
W68PL-4-1	1/4	1/16	1/2	1.15	.71	.140
W68PL-4-2	1/4	1/8	1/2	.97	.71	.188
W68PL-4-4	1/4	1/4	9/16	1.10	.71	.188
W68PL-4-6	1/4	3/8	3/4	1.14	.71	.188
W68PL-5-2	5/16	1/8	9/16	1.23	.78	.234
W68PL-5-4	5/16	1/4	9/16	1.11	.78	.250
W68PL-5-6	5/16	3/8	11/16	1.12	.79	.250
W68PL-6-2	3/8	1/8	11/16	1.26	.78	.234
W68PL-6-4	3/8	1/4	11/16	1.14	.78	.312
W68PL-6-6	3/8	3/8	11/16	1.09	.79	.312
W68PL-6-8	3/8	1/2	7/8	1.34	.78	.312
W68PL-8-4	1/2	1/4	13/16	1.52	.87	.344
W68PL-8-6	1/2	3/8	13/16	1.31	.87	.344
W68PL-8-8	1/2	1/2	7/8	1.43	.87	.375

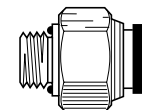
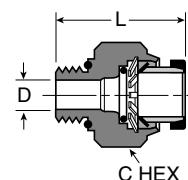


68PL-X-10x32 Male connector

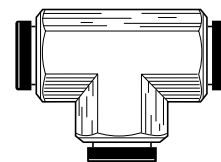
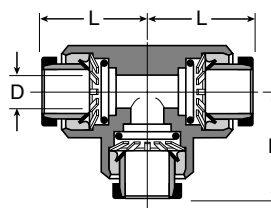
Part No.	Tube Size	Thread (UNF)	C Hex	L	M	D	Internal Broach
68PL-2-10X32	1/8	10-32	3/8	.93	.68	.094	.094
68PL-5/32-10X32	5/32	10-32	13/32	.95	.69	.094	.094
68PL-4-10X32	1/4	10-32	1/2	1.00	.71	.094	.094

**PLHBF4-B BSPP Male Connector**

Part No.	Tube Size	Pipe Thread (BSPP)	C Hex	L	D
3-1/8PLHBF4-B	3/16	1/8-28	11/16	.96	.156
3-1/4PLHBF4-B	3/16	1/4-19	3/4	.97	.156
4-1/8PLHBF4-B	1/4	1/8-28	11/16	1.13	.188
4-1/4PLHBF4-B	1/4	1/4-19	3/4	1.13	.188
4-3/8PLHBF4-B	1/4	3/8-19	7/8	1.13	.188
6-1/4PLHBF4-B	3/8	1/4-19	3/4	1.26	.256
6-3/8PLHBF4-B	3/8	3/8-19	7/8	1.26	.312
6-1/2PLHBF4-B	3/8	1/2-14	1-1/16	1.26	.312
8-3/8PLHBF4-B	1/2	3/8-19	7/8	1.41	.452
8-1/2PLHBF4-B	1/2	1/2-14	1-1/16	1.37	.452

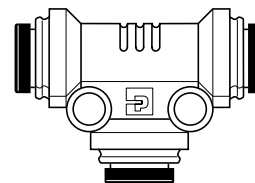
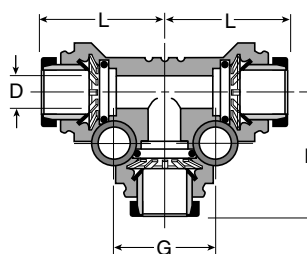
**164PL Union Tee**

Part No.	Tube Size	L	D
164PL-2	1/8	.78	.094
164PL-3	3/16	.79	.156
164PL-5/32	5/32	.81	.125
164PL-4	1/4	.94	.188
164PL-5	5/16	.99	.250
164PL-6	3/8	1.04	.312
164PL-8	1/2	1.17	.375

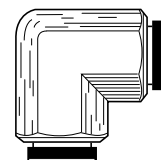
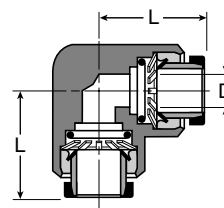
**364PL Union Tee**

Composite Body

Part No.	Tube Size	Mounting Hole Dia.	L	G	D
364PL-2	1/8	.13	.71	.52	.094
364PL-5/32	5/32	.13	.71	.52	.125
364PL-3	3/16	.17	.76	.64	.156
364PL-4	1/4	.17	.76	.64	.188
364PL-5	5/16	.17	.84	.71	.250
364PL-6	3/8	.17	1.04	.83	.312
364PL-8	1/2	.17	1.30	.99	.344

**165PL Union Elbow**

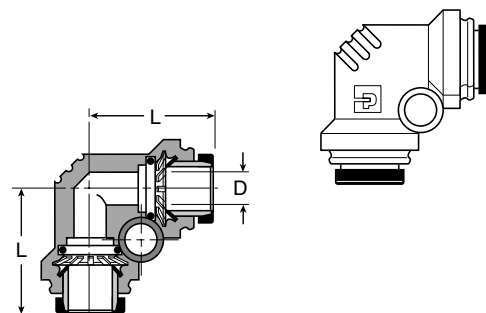
Part No.	Tube Size	L	D
165PL-2	1/8	.77	.094
165PL-5/32	5/32	.79	.125
165PL-4	1/4	.86	.188
165PL-5	5/16	.97	.250
165PL-6	3/8	1.03	.312
165PL-8	1/2	1.17	.375

**X**

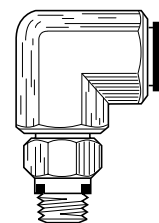
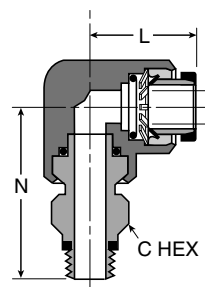
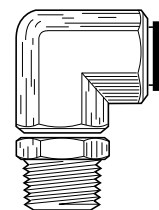
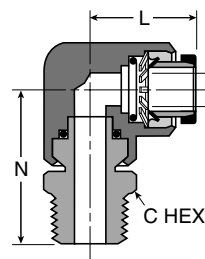
365PL Union Elbow

Composite Body

Part No.	Tube Size	Mounting Hole Dia.	L	D
365PL-2	1/8	.13	.71	.094
365PL-3	3/16	.17	.76	.156
365PL-5/32	5/32	.13	.71	.125
365PL-4	1/4	.17	.76	.188
365PL-5	5/16	.17	.84	.250
365PL-6	3/8	.17	1.04	.312
365PL-8	1/2	.17	1.03	.344

**W169PL Male Elbow Swivel 90°**

Part No.	Tube Size	Pipe Thread (NPTF)	C Hex	L	N	D
W169PL-2-2	1/8	1/8	7/16	.78	1.22	.094
169PL-2-10X32	1/8	10-32	3/8	.78	1.02	.094
W169PL-2-4	1/8	1/4	9/16	.78	1.40	.094
W169PL-3-2	3/16	1/8	7/16	.79	1.16	.156
W169PL-5/32-2	5/32	1/8	7/16	.80	1.24	.109
W169PL-5/32-4	5/32	1/4	9/16	.81	1.42	.109
169PL-5/32-10X32	5/32	10-32	3/8	.81	1.04	.094
W169PL-4-2	1/4	1/8	7/16	.86	1.13	.172
W169PL-4-4	1/4	1/4	9/16	.86	1.31	.172
W169PL-4-6	1/4	3/8	3/4	.86	1.35	.172
169PL-4-10X32	1/4	10-32	7/16	.86	.94	.094
W169PL-5-2	5/16	1/8	1/2	.99	1.42	.234
W169PL-5-4	5/16	1/4	9/16	.99	1.60	.234
W169PL-6-2	3/8	1/8	9/16	1.04	1.49	.297
W169PL-6-4	3/8	1/4	9/16	1.04	1.66	.297
W169PL-6-6	3/8	3/8	11/16	1.04	1.70	.297
W169PL-6-8	3/8	1/2	7/8	1.04	1.89	.297
W169PL-8-4	1/2	1/4	11/16	1.17	1.74	.344
W169PL-8-6	1/2	3/8	3/4	1.17	1.77	.375
W169PL-8-8	1/2	1/2	7/8	1.16	1.97	.375

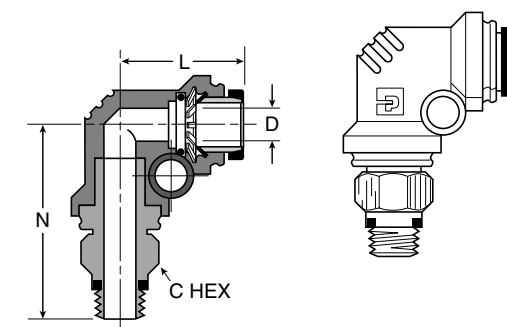
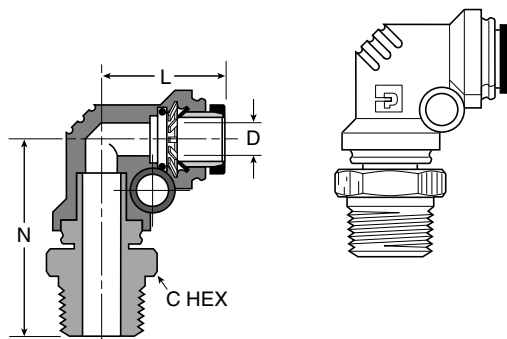


169PL-X-10/32

W369PL Male Elbow Swivel 90°

Composite Body

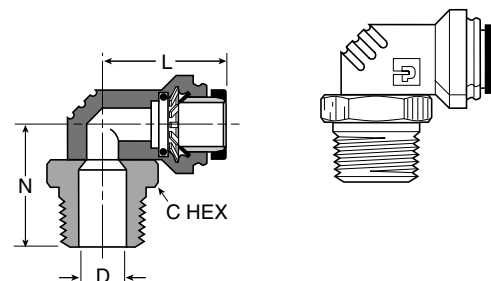
Part No.	Tube Size	Pipe Thread (NPTF)	C Hex	Mounting Hole Dia.	L	N	D
W369PL-2-1	1/8	1/16	3/8	.13	.71	1.08	.078
W369PL-2-2	1/8	1/8	7/16	.13	.71	1.14	.078
369PL-2-10X32	1/8	10-32	3/8	.13	.71	.94	.078
W369PL-2-4	1/8	1/4	9/16	.13	.71	1.32	.078
W369PL-3-2	3/16	1/8	7/16	.17	.76	1.20	.147
W369PL-3-4	3/16	1/4	9/16	.17	.76	1.44	.147
W369PL-5/32-2	5/32	1/8	7/16	.13	.74	1.14	.094
W369PL-5/32-4	5/32	1/4	9/16	.13	.74	1.32	.094
369PL-5/32-10X32	5/32	10-32	3/8	.13	.74	.94	.094
W369PL-4-1	1/4	1/16	7/16	.17	.76	1.20	.094
W369PL-4-2	1/4	1/8	7/16	.17	.76	1.20	.172
W369PL-4-4	1/4	1/4	9/16	.17	.77	1.38	.172
W369PL-4-6	1/4	3/8	11/16	.17	.77	1.42	.172
369PL-4-10X32	1/4	10-32	7/16	.17	.76	1.05	.094
W369PL-5-2	5/16	1/8	1/2	.17	.84	1.23	.234
W369PL-5-4	5/16	1/4	9/16	.17	.84	1.46	.234
W369PL-6-2	3/8	1/8	9/16	.17	1.04	1.48	.234
W369PL-6-4	3/8	1/4	5/8	.17	1.04	1.66	.234
W369PL-6-6	3/8	3/8	11/16	.17	1.04	1.66	.297
W369PL-6-8	3/8	1/2	7/8	.17	1.05	1.85	.297
W369PL-8-4	1/2	1/4	3/4	.17	1.03	1.80	.314
W369PL-8-6	1/2	3/8	3/4	.17	1.03	1.80	.375
W369PL-8-8	1/2	1/2	7/8	.17	1.03	1.99	.375



369PL-X-10/32

W369PLC Compact Elbow

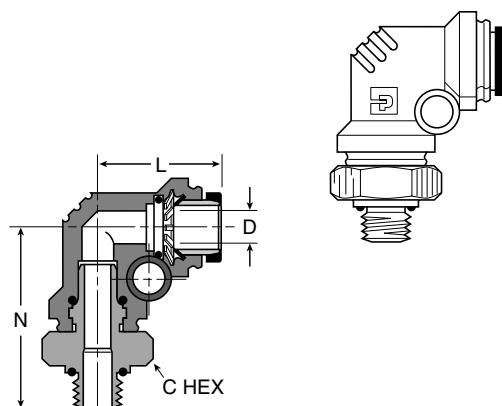
Part No.	Tube Size	Pipe Thread (NPTF)	C Hex	L	N	Flow Dia. D
W369PLC-2-2	1/8	1/8	7/16	.81	.71	.08
W369PLC-5/32-2	5/32	1/8	7/16	.83	.71	.08
W369PLC-5/32-4	5/32	1/4	9/16	.83	.89	.08
W369PLC-3-2	3/16	1/8	7/16	.86	.81	.08
W369PLC-4-2	1/4	1/8	7/16	.86	.81	.08
W369PLC-4-4	1/4	1/4	9/16	.86	.99	.08
W369PLC-5-4	5/16	1/4	9/16	.94	.97	.11
W369PLC-6-4	3/8	1/4	5/8	1.13	1.07	.20
W369PLC-6-6	3/8	3/8	3/4	1.13	1.15	.20

**X**

PLE2BF4-K BSPP Male Elbow Swivel

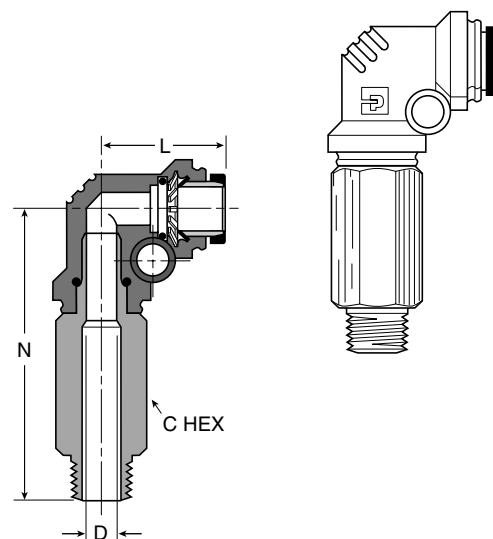
Composite Body

Part No.	Tube Size	Pipe		C Hex	Mounting		D
		Thread (BSPP)	Hole Dia.		L	N	
3-1/8PLE2BF4-K	3/16	1/8-28	11/16	.17	.76	1.17	.147
3-1/4PLE2BF4-K	3/16	1/4-19	3/4	.17	.76	1.31	.147
4-1/8PLE2BF4-K	1/4	1/8-28	11/16	.17	.76	1.06	.180
4-1/4PLE2BF4-K	1/4	1/4-19	3/4	.17	.76	1.31	.172
4-3/8PLE2BF4-K	1/4	3/8-19	7/8	.17	.76	1.31	.182
6-1/4PLE2BF4-K	3/8	1/4-19	3/4	.17	1.04	1.57	.297
6-3/8PLE2BF4-K	3/8	3/8-19	7/8	.17	1.04	1.68	.297
6-1/2PLE2BF4-K	3/8	1/2-14	1-1/16	.17	1.04	1.83	.297
8-3/8PLE2BF4-K	1/2	3/8-19	7/8	.17	1.03	1.63	.406
8-1/2PLE2BF4-K	1/2	1/2-19	1-1/16	.17	1.03	1.78	.406

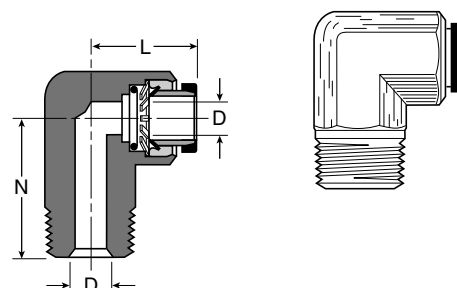
**W369PLX Male Elbow Swivel 90°**

Composite Body

Part No.	Tube Size	Pipe		C Hex	Mounting		D
		Thread (NPTF)	Hole Dia.		L	N	
W369PLX-2-2	1/8	1/8	7/16	.13	.73	1.74	.080
W369PLX-2-4	1/8	1/4	9/16	.13	.73	1.74	.080
W369PLX-3-2	3/16	1/8	7/16	.17	.76	1.88	.150
W369PLX-3-4	3/16	1/4	9/16	.17	.76	1.88	.150
W369PLX-3-6	3/16	3/8	11/16	.17	.76	1.88	.150
W369PLX-4-2	1/4	1/8	7/16	.17	.76	1.88	.170
W369PLX-4-4	1/4	1/4	9/16	.17	.76	1.88	.170
W369PLX-4-6	1/4	3/8	11/16	.17	.76	1.88	.170
W369PLX-5/32-0	5/32	10-32	3/8	.13	.73	1.54	.090
W369PLX-5/32-2	5/32	1/8	7/16	.13	.73	1.54	.090
W369PLX-5/32-4	5/32	1/4	9/16	.13	.73	1.54	.090
W369PLX-5-2	5/16	1/8	9/16	.17	.84	1.99	.223
W369PLX-5-4	5/16	1/4	9/16	.17	.84	1.99	.230
W369PLX-5-6	5/16	3/8	11/16	.17	.84	1.99	.230
W369PLX-6-4	3/8	1/4	5/8	.17	1.04	2.56	.223
W369PLX-6-6	3/8	3/8	11/16	.17	1.04	2.56	.330
W369PLX-6-8	3/8	1/2	7/8	.17	1.04	2.56	.300
W369PLX-8-4	1/2	1/4	3/4	.17	1.03	2.80	.310
W369PLX-8-6	1/2	3/8	3/4	.17	1.03	2.80	.340
W369PLX-8-8	1/2	1/2	7/8	.17	1.03	2.80	.340

**W169PLNS Male Elbow 90°**

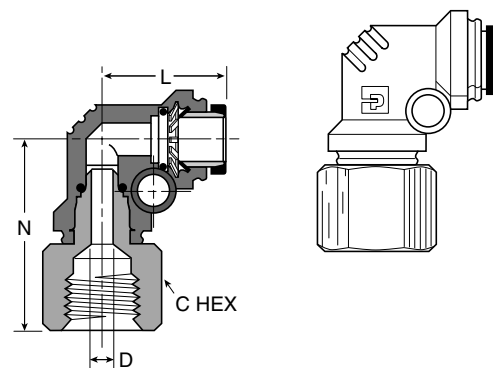
Part No.	Tube Size	Pipe		L	N	D
		Thread (NPTF)	Hole Dia.			
W169PLNS-2-2	1/8	1/8	.78	.68	.094	
W169PLNS-5/32-2	5/32	1/8	.81	.68	.125	
W169PLNS-5/32-4	5/32	1/4	.81	.89	.125	
W169PLNS-4-2	1/4	1/8	.86	.69	.188	
W169PLNS-4-4	1/4	1/4	.96	.89	.188	
W169PLNS-5-2	5/16	1/8	.98	.78	.234	
W169PLNS-5-4	5/16	1/4	1.02	.97	.250	
W169PLNS-6-4	3/8	1/4	1.04	.97	.312	
W169PLNS-6-6	3/8	3/8	1.11	1.09	.312	
W169PLNS-6-8	3/8	1/2	1.20	1.26	.312	
W169PLNS-8-6	1/2	3/8	1.31	1.15	.375	
W169PLNS-8-8	1/2	1/2	1.31	1.31	.375	



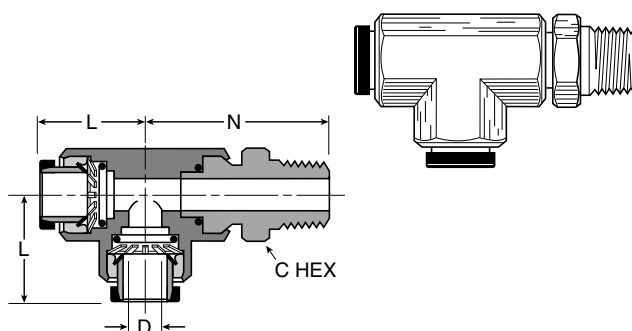
370PL Female Elbow Swivel

Composite Body

Part No.	Tube Size	Pipe Thread (NPTF)	Mounting Hole		L	N	D
			C Hex	Dia.			
370PL-2-2	1/8	1/8	9/16	.13	.71	1.01	.078
370PL-5/32-2	5/32	1/8	9/16	.13	.73	1.01	.090
370PL-5/32-4	5/32	1/4	3/4	.13	.73	1.23	.090
370PL-4-10x32	1/4	10x32	7/16	.17	.76	1.02	.159
370PL-4-2	1/4	1/8	9/16	.17	.76	1.07	.170
370PL-4-4	1/4	1/4	3/4	.17	.76	1.29	.170
370PL-5-4	5/16	1/4	3/4	.17	.84	1.37	.230
370PL-6-4	3/8	1/4	3/4	.17	1.04	1.57	.297
370PL-8-6	1/2	3/8	7/8	.17	1.03	1.57	.340

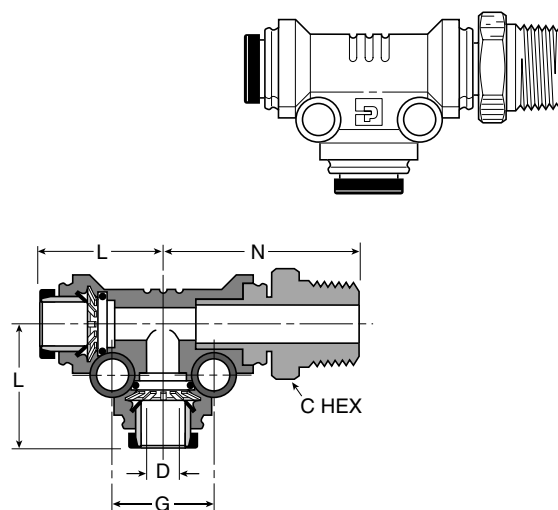
**W171PL Male Run Tee Swivel**

Part No.	Tube Size	Pipe Thread (NPTF)	C Hex	L	N	D
W171PL-2-2	1/8	1/8	7/16	.78	1.22	.078
W171PL-5/32-2	5/32	1/8	7/16	.80	1.24	.109
W171PL-4-2	1/4	1/8	7/16	.96	1.29	.188
W171PL-4-4	1/4	1/4	9/16	.96	1.47	.188
W171PL-5-2	5/16	1/8	1/2	.99	1.42	.234
W171PL-5-4	5/16	1/4	9/16	.99	1.60	.234
W171PL-6-4	3/8	1/4	9/16	1.04	1.66	.297
W171PL-6-6	3/8	3/8	11/16	1.04	1.70	.297
W171PL-8-6	1/2	3/8	3/4	1.19	1.79	.375
W171PL-8-8	1/2	1/2	7/8	1.19	1.98	.375

**W371PL Male Run Tee Swivel**

Composite Body

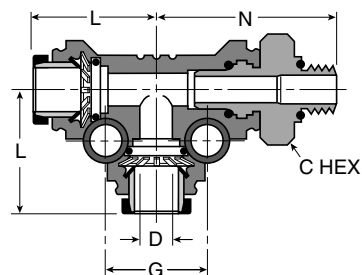
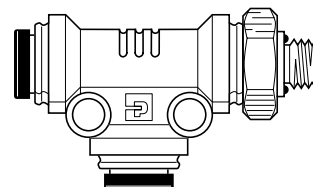
Part No.	Tube Size	Pipe Thread (NPTF)	Mounting Hole		L	N	G	D
			C Hex	Dia.				
W371PL-2-1	1/8	1/16	3/8	.13	.71	1.08	.52	.078
W371PL-2-2	1/8	1/8	7/16	.13	.71	1.14	.52	.078
W371PL-2-4	1/8	1/4	9/16	.13	.71	1.32	.52	.080
371PL-2-10x32	1/8	10-32	3/8	.13	.71	.94	.52	.078
W371PL-3-2	3/16	1/8	7/16	.17	.76	1.20	.64	.150
W371PL-3-4	3/16	1/4	9/16	.17	.76	1.40	.64	.147
W371PL-5/32-2	5/32	1/8	7/16	.13	.71	1.14	.52	.094
W371PL-5/32-4	5/32	1/4	9/16	.13	.71	1.14	.52	.094
371PL-5/32-10x32	5/32	10-32	3/8	.13	.71	.94	.52	.090
W371PL-4-1	1/4	1/16	7/16	.17	.76	1.20	.64	.094
W371PL-4-2	1/4	1/8	7/16	.17	.76	1.20	.64	.170
W371PL-4-4	1/4	1/4	9/16	.17	.76	1.38	.64	.170
371PL-4-10x32	1/4	10-32	7/16	.13	.76	1.05	.64	.094
W371PL-4-6	1/4	3/8	11/16	.17	.76	1.42	.64	.170
W371PL-5-2	5/16	1/8	9/16	.17	.84	1.28	.71	.220
W371PL-5-4	5/16	1/4	9/16	.17	.84	1.46	.71	.234
W371PL-6-2	3/8	1/8	9/16	.13	1.04	1.48	.83	.230
W371PL-6-4	3/8	1/4	5/8	.17	1.04	1.66	.83	.297
W371PL-6-6	3/8	3/8	11/16	.17	1.04	1.70	.83	.297
W371PL-6-8	3/8	1/2	7/8	.13	1.04	1.85	.83	.300
W371PL-8-4	1/2	1/4	3/4	.17	1.30	2.07	1.00	.310
W371PL-8-6	1/2	3/8	3/4	.17	1.30	1.68	1.00	.344
W371PL-8-8	1/2	1/2	7/8	.17	1.30	2.26	1.00	.344

**X**

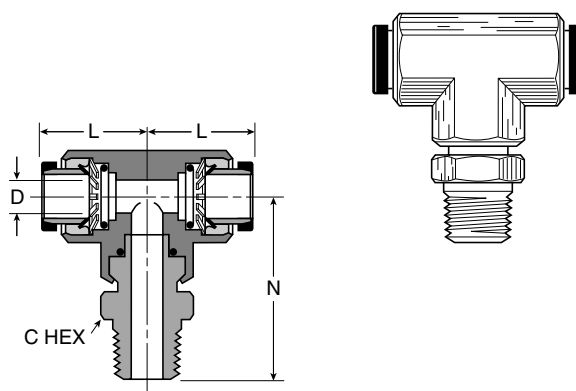
PLR2BF4-K BSPP Male Run Tee Swivel

Composite Body

Part No.	Tube Size	Pipe Thread	C Hex	Mounting Hole Dia.	L	N	G	D
		(BSPP)						
3-1/4PLR2BF4-K	3/16	1/4-19	3/4	.17	.76	1.31	.64	.150
4-1/8PLR2BF4-K	1/4	1/8-28	11/16	.17	.76	1.06	.64	.170
4-1/4PLR2BF4-K	1/4	1/4-19	3/4	.17	.76	1.31	.64	.170
6-1/4PLR2BF4-K	3/8	1/4-19	3/4	.17	1.04	1.52	.83	.300
6-3/8PLR2BF4-K	3/8	3/8-19	7/8	.17	1.04	1.68	.83	.300
8-3/8PLR2BF4-K	1/2	3/8-19	7/8	.17	1.30	1.90	.99	.340
8-1/2PLR2BF4-K	1/2	1/2-19	1-1/16	.17	1.30	2.05	.99	.340

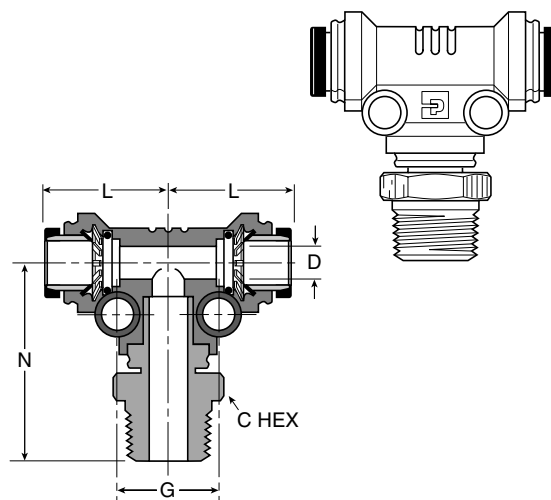
**W172PL Male Branch Tee Swivel**

Part No.	Tube Size	Pipe Thread	C Hex	L	N	D
		(NPTF)				
W172PL-2-2	1/8	1/8	7/16	.78	1.22	.078
W172PL-3-2	3/16	1/8	7/16	.78	1.17	.156
W172PL-5/32-2	5/32	1/8	7/16	.80	1.24	.109
W172PL-4-2	1/4	1/8	7/16	.96	1.26	.188
W172PL-4-4	1/4	1/4	9/16	.96	1.44	.188
W172PL-5-2	5/16	1/8	1/2	.99	1.42	.234
W172PL-5-4	5/16	1/4	9/16	.99	1.60	.234
W172PL-6-4	3/8	1/4	9/16	1.04	1.66	.297
W172PL-6-6	3/8	3/8	11/16	1.04	1.70	.297
W172PL-8-6	1/2	3/8	3/4	1.19	1.79	.375
W172PL-8-8	1/2	1/2	7/8	1.19	1.98	.375



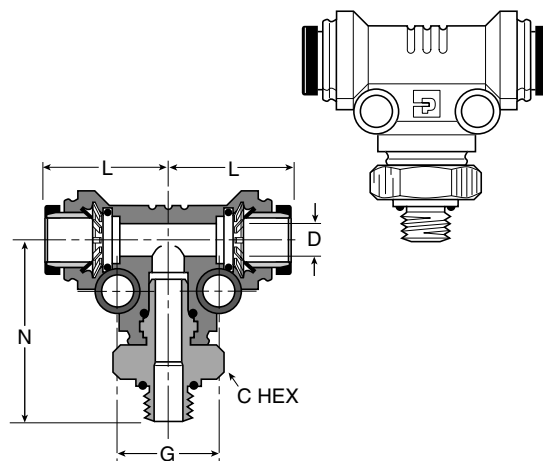
W372PL Male Branch Tee Swivel

Part No.	Tube Size	Pipe	Mounting		L	N	G	D
		Thread (NPTF)	C Hex	Hole Dia.				
W372PL-2-1	1/8	1/16	3/8	.13	.71	1.08	.52	.078
W372PL-2-2	1/8	1/8	7/16	.13	.71	1.14	.52	.078
W372PL-2-4	1/8	1/4	9/16	.13	.70	1.32	.52	.080
372PL-2-10X32	1/8	10-32	3/8	.13	.70	.94	.52	.080
W372PL-3-2	3/16	1/8	7/16	.17	.76	1.20	.64	.147
W372PL-3-4	3/16	1/4	9/16	.17	.76	1.40	.64	.147
W372PL-5/32-2	5/32	1/8	7/16	.13	.71	1.14	.52	.094
W372PL-5/32-4	5/32	1/4	9/16	.13	.68	1.32	.52	.090
372PL-5/32-10x32	5/32	10-32	3/8	.13	.70	.94	.52	.090
W372PL-4-1	1/4	1/16	7/16	.17	.76	1.20	.64	.094
W372PL-4-2	1/4	1/8	7/16	.17	.76	1.20	.64	.170
W372PL-4-4	1/4	1/4	9/16	.17	.76	1.38	.64	.170
372PL-4-10x32	1/4	10-32	7/16	.17	.76	1.05	.64	.090
W372PL-4-6	1/4	3/8	11/16	.17	.76	1.42	.64	.170
W372PL-5-2	5/16	1/8	9/16	.17	.84	1.28	.71	.234
W372PL-5-4	5/16	1/4	9/16	.17	.84	1.23	.71	.234
W372PL-6-2	3/8	1/8	9/16	.17	1.03	1.48	.83	.230
W372PL-6-4	3/8	1/4	5/8	.17	1.04	1.66	.83	.297
W372PL-6-6	3/8	3/8	11/16	.17	1.04	1.66	.83	.297
W372PL-6-8	3/8	1/2	7/8	.17	1.03	1.85	.83	.300
W372PL-8-4	1/2	1/4	3/4	.17	1.30	2.07	.99	.310
W372PL-8-6	1/2	3/8	3/4	.17	1.30	2.07	.99	.344
W372PL-8-8	1/2	1/2	7/8	.17	1.30	2.26	.99	.344

**PLS2BF4-K BSPP Male Branch Tee Swivel**

Composite Body

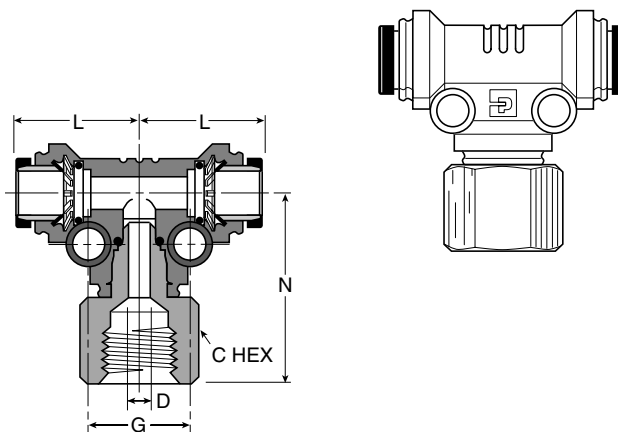
Part No.	Tube Size	Pipe	Mounting		L	N	G	D
		Thread (BSPP)	C Hex	Hole Dia.				
3-1/8PLS2BF4-K	3/16	1/8-28	11/16	.17	.76	1.05	.64	.150
3-1/4PLS2BF4-K	3/16	1/4-19	3/4	.17	.76	1.31	.64	.150
4-1/8PLS2BF4-K	1/4	1/8-28	11/16	.17	.76	1.06	.64	.180
4-1/4PLS2BF4-K	1/4	1/4-19	3/4	.17	.76	1.31	.64	.170
6-1/4PLS2BF4-K	3/8	1/4-19	3/4	.17	1.04	1.57	.83	.300
6-3/8PLS2BF4-K	3/8	3/8-19	7/8	.17	1.04	1.68	.83	.300
6-1/2PLS2BF4-K	3/8	1/2-14	1-1/16	.17	1.04	1.83	.83	.300
8-3/8PLS2BF4-K	1/2	3/8-19	7/8	.17	1.30	1.90	.99	.410



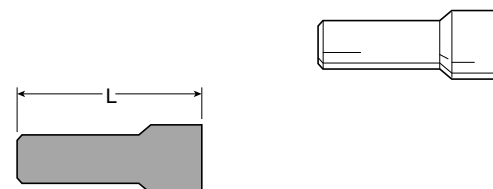
377PL Female Branch Tee Swivel

Composite Body

Part No.	Tube Size	Pipe Thread	Mounting		L	N	G	D
		(NPTF)	C Hex	Hole Dia.				
377PL-2-2	1/8	1/8	9/16	.17	.70	1.01	.52	.080
377PL-5/32-2	5/32	1/8	9/16	.13	.70	1.01	.52	.090
377PL-5/32-4	5/32	1/4	3/4	.13	.70	1.23	.52	.090
377PL-4-2	1/4	1/8	9/16	.17	.76	1.07	.64	.170
377PL-4-4	1/4	1/4	3/4	.17	.76	1.29	.64	.170
377PL-5-4	5/16	1/4	3/4	.17	.84	1.37	.72	.230
377PL-6-4	3/8	1/4	3/4	.17	1.04	1.57	.83	.300
377PL-8-6	1/2	3/8	7/8	.17	1.30	1.84	.99	.410

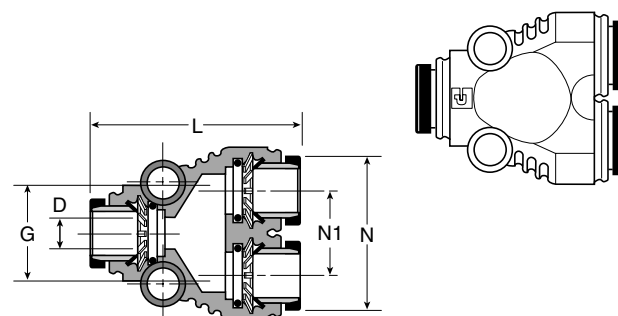
**639PL Plug**

Part No.	Tube Size	L
639PL-2	1/8	1.30
639PL-5/32	5/32	1.34
639PL-4	1/4	1.34
639PL-5	5/16	1.28
639PL-6	3/8	1.50
639PL-8	1/2	1.69

**362PL Union Y Connector**

Composite Body

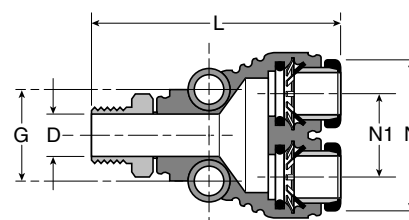
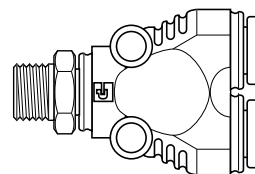
Part No.	Tube Size	Mounting		L	N	N1	G	D
		Hole Dia.						
362PL-2	1/8	.13	1.38	.92	.41	.57	.130	
362PL-5/32	5/32	.13	1.36	.92	.41	.57	.160	
362PL-3	3/16	.17	1.49	1.13	.54	.67	.200	
362PL-4	1/4	.17	1.49	1.13	.53	.67	.260	
362PL-5	5/16	.17	1.49	1.21	.54	.72	.320	
362PL-6	3/8	.17	1.88	1.54	.71	.76	.380	



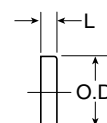
W368PL Union Y Male Connector

Composite Body

Part No.	Tube Size	Pipe Size	G	Mounting Hole Dia.	L	N	N1	D
W368PL-2-2	1/8	1/8	.57	.13	1.81	.91	.41	.080
W368PL-2-4	1/8	1/4	.57	.13	1.98	.91	.41	.080
368PL-5/32-10x32	5/32	10-32	.57	.13	1.60	.92	.41	.090
W368PL-5/32-2	5/32	1/8	.57	.13	1.80	.92	.41	.090
W368PL-5/32-4	5/32	1/4	.57	.13	1.98	.92	.41	.090
368PL-3-10x32	3/16	10-32	.67	.17	1.77	1.13	.54	.094
W368PL-3-2	3/16	1/8	.67	.17	1.92	1.13	.54	.150
W368PL-3-4	3/16	1/4	.67	.17	2.16	1.13	.54	.150
W368PL-3-6	3/16	3/8	.67	.17	2.16	1.13	.54	.147
368PL-4-10x32	1/4	10-32	.67	.17	1.78	1.13	.53	.090
W368PL-4-2	1/4	1/8	.67	.17	1.93	1.13	.53	.172
W368PL-4-4	1/4	1/4	.67	.17	2.11	1.13	.53	.170
W368PL-4-6	1/4	3/8	.67	.17	2.15	1.13	.53	.170
W368PL-5-2	5/16	1/8	.72	.17	1.87	1.20	.54	.230
W368PL-5-4	5/16	1/4	.72	.17	2.10	1.20	.54	.230
W368PL-5-6	5/16	3/8	.72	.17	2.04	1.20	.54	.234
W368PL-6-4	3/8	1/4	.76	.17	2.50	1.53	.71	.300
W368PL-6-6	3/8	3/8	.76	.17	2.50	1.53	.71	.300
W368PL-6-8	3/8	1/2	.76	.17	2.69	1.53	.71	.300

**PLB Color Release Buttons**

Part No.	Tube Size	O.D.	L
2PLB-X	1/8"	.14	.11
5/32PLB-X	5/32"	.37	.11
3PLB-X	3/16"	.40	.11
4PLB-X	1/4"	.46	.11
5PLB-X	5/16"	.52	.11
6PLB-X	3/8"	.65	.11
8PLB-X	1/2"	.77	.11



Note: when ordering color release buttons please specify button color by replacing the "X" with the appropriate color abbreviation.

EXAMPLE: 2PLB-BU

COLORS: BU-Blue, G-Green, O-Orange, P-Purple, R-Red Y-Yellow

X



Advantages

A compact brass compression fitting designed to speed any installation. Body, nut and sleeve are furnished preassembled, ready for installation. An exclusive acetal copolymer sleeve holds plastic tubing where it belongs, even when the system pressure exceeds the tubing burst point. P fitting sleeves have superior resilience to resist creeping and stress caused from compression. The black acetal copolymer sleeve also resists ultra-violet ray attack and has excellent dimensional stability. P fitting nuts will rotate around the sleeve as it tightens to prevent twisting and weakening of the plastic tubing. P fittings can be assembled and disassembled repeatedly.

Materials

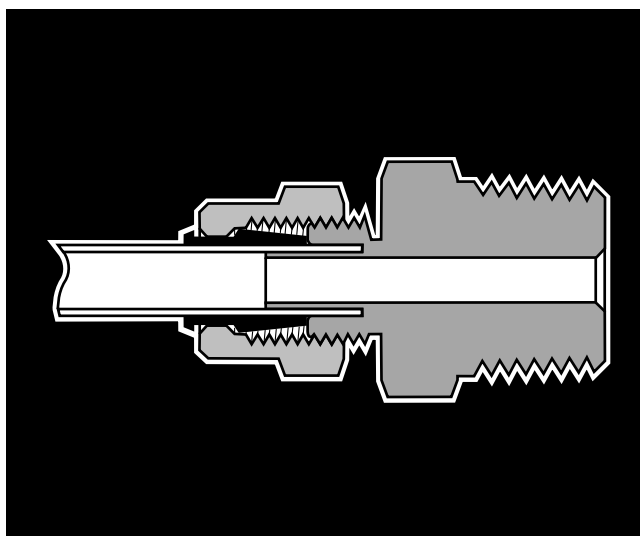
Elbows and Tees: Brass Forgings: CA 377
 Connectors, Unions, Nuts: CA 360, CA 345
 Plastic Sleeves: Acetal Copolymer (Celcon®).

Applications

Use with Parker or other high-quality thermoplastic tubing for pneumatic instrumentation circuits, lubricant and coolant lines, and applications with other gases and liquids. For use with soft metal tubing and nylon thermoplastic tubing, use brass sleeve and nut assembly 61PB.

Working Pressure and Temperature Ranges

Up to 150 PSI from 0° to + 150°F. with thermoplastic tubing. Up to 300 PSI from 0° to +175°F. with soft metal tubing.



Assembly Instructions

Polyethylene, polypropylene and vinyl tubing:

1. Cut tubing squarely - maximum of 15° angle allowable.
2. Check that port or mating part is clean and free of debris.
3. Insert tube end until it bottoms in the fitting and tighten knurl / hex nut finger tight - plus one wrench turn.

Copper, aluminum and nylon tubing:

Brass sleeves are recommended. Insert tube until it bottoms in the P fitting and tighten one wrench turn past finger-tight.

Maximum allowable metal tube wall

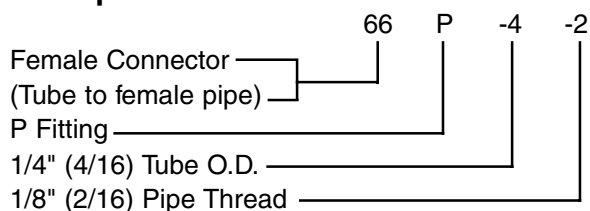
thickness for use with P fittings:

1/8", 3/16", O.D. — no limitation, 1/4" O.D. — .035
 5/16", 3/8", 1/2" O.D. — .049.

Nomenclature

Part numbers are constructed from symbols that identify the style and size of the fitting. The first series of numbers and letters identifies the style and type fitting. The second series of numbers describes the size.

Example:

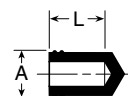


Sizes

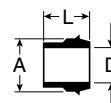
Tube sizes are determined by the number of sixteenths of an inch in the tube O.D.

59P Plastic Cap

Part No.	Tube Size	A	L
59P-4	1/4	.247	.50
59P-5	5/16	.307	.53
59P-6	3/8	.372	.56
59P-8	1/2	.497	.63

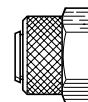
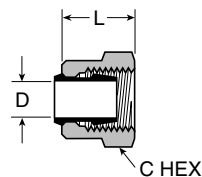
**60P Acetal Plastic Sleeve**

Part No.	Tube Size	A	D	L
60P-4	1/4	.334	.261	.338
60P-5	5/16	.405	.321	.340
60P-6	3/8	.465	.381	.367
60P-8	1/2	.628	.514	.399

**61P Nut and Sleeve Assembly**

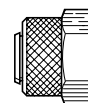
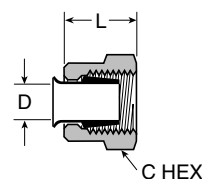
Part No.	Tube Size	Straight Thread	C Hex	D	L
61P-2*	1/8	5/16-24	3/8	.130	.34
61P-3*	3/16	3/8-24	7/16	.192	.37
61P-4	1/4	3/8-24	7/16	.261	.38
61P-5	5/16	7/16-24	1/2	.321	.34
61P-6	3/8	1/2-24	9/16	.380	.38
61P-8	1/2	11/16-20	3/4	.514	.44

*Brass Sleeve

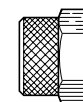
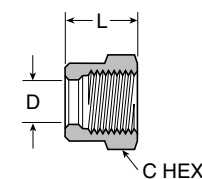
**61PB* Nut and Sleeve Assembly**

Part No.	Tube Size	Straight Thread	C Hex	D	L
61PB-4	1/4	3/8-24	7/16	.255	.38
61PB-5	5/16	7/16-24	1/2	.318	.34
61PB-6	3/8	1/2-24	9/16	.382	.38
61PB-8	1/2	11/16-20	3/4	.507	.44

*Brass Sleeve

**61PN Nut**

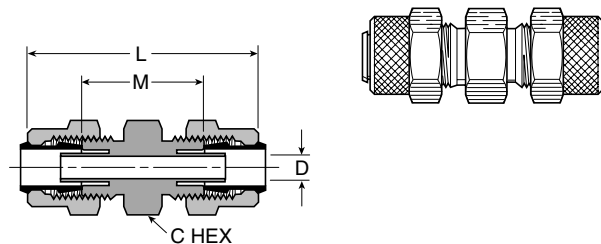
Part No.	Tube Size	Straight Thread	C Hex	L
61PN-2	1/8	5/16-24	3/8	.34
61PN-3	3/16	3/8-24	7/16	.37
61PN-4	1/4	3/8-24	7/16	.38
61PN-5	5/16	7/16-24	1/2	.34
61PN-6	3/8	1/2-24	9/16	.38
61PN-8	1/2	11/16-20	3/4	.44

**X**

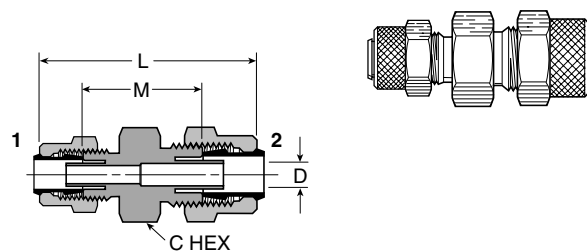
62P Union

Part No.	Tube Size	Straight Thread	C Hex	L	M	Flow Dia. D
62P-2*	1/8	5/16-24	5/16	1.08	.64	.094
62P-3*	3/16	3/8-24	3/8	1.16	.73	.125
62P-4	1/4	3/8-24	3/8	1.17	.96	.125
62P-5	5/16	7/16-24	7/16	1.16	.96	.144
62P-6	3/8	1/2-24	1/2	1.23	.99	.204
62P-8	1/2	1 1/16-20	1 1/16	1.47	1.24	.323

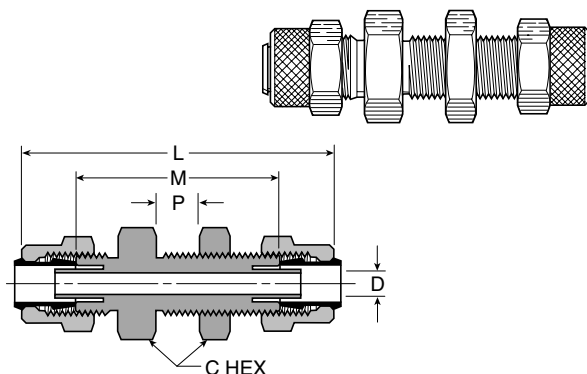
*Brass Sleeve, No Tube Support

**62P Union Reducer**

Part No.	Tube Size 1	Tube Size 2	Straight Thread 1	Straight Thread 2	C Hex	L	M	Flow Dia. D
62P-6-4	1/4	3/8	3/8-24	1/2-24	1/2	1.22	.99	.125

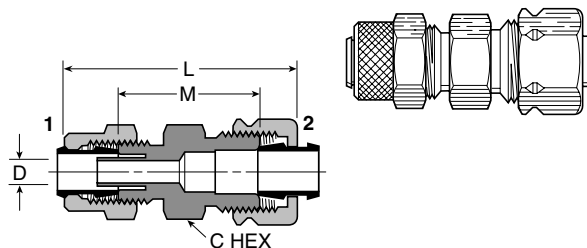
**62PBH Bulkhead Union**

Part No.	Tube Size	Straight Thread	C Hex	P Max.	L	M	Bulkhead Hole Dia.	Flow Dia. D
62PBH-4	1/4	3/8-24	9/16	.38	1.75	1.53	3/8	.125
62PBH-5	5/16	7/16-24	5/8	.38	1.71	1.52	7/16	.144
62PBH-6	3/8	1/2-24	11/16	.47	1.89	1.65	1/2	.204
62PBH-8	1/2	1 1/16-20	7/8	.63	2.28	2.05	1 1/16	.323

**62PCA Union**

(Tube to CA Fitting)

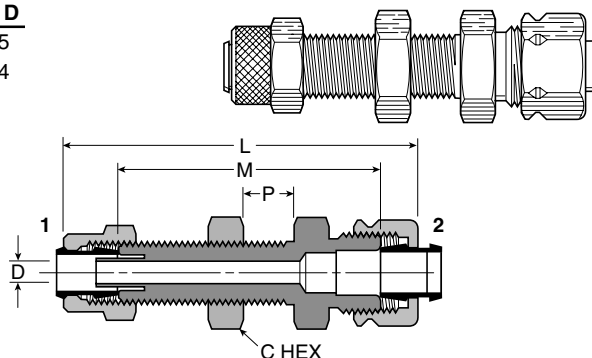
Part No.	Tube Size	Straight Thread 1	Straight Thread 2	C Hex	L	M	Flow Dia. D
62PCA-4	1/4	3/8-24	7/16-24	7/16	1.25	.89	.125
62PCA-5	5/16	7/16-24	1/2-24	1/2	1.30	.92	.144
62PCA-6	3/8	1/2-24	9/16-24	9/16	1.37	.98	.204



62PCABH Bulkhead Union

(Tube to CA Fitting)

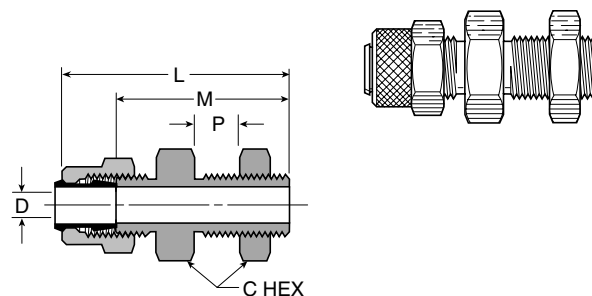
Part No.	Tube Size	1 Straight Thread	2 Straight Thread	C Hex	P Max.	L	M	Bulkhead Hole Dia.	Flow Dia. D
62PCABH-4	1/4	3/8-24	7/16-24	9/16	.38	1.81	1.45	3/8	.125
62PCABH-6	3/8	1/2-24	9/16-24	11/16	.47	2.03	1.64	1/2	.204



62PTBH Bulkhead Union

(Straight Through)

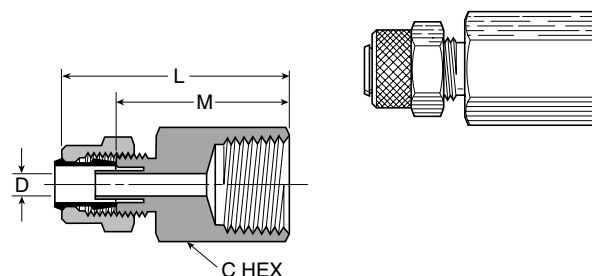
Part No.	Tube Size	Straight Thread	C Hex	P Max.	L	M	Bulkhead Hole Dia.	Flow Dia. D
62PTBH-4	1/4	3/8-24	9/16	.31	1.19	.93	3/8	.260
62PTBH-5	5/16	7/16-24	5/8	.31	1.19	.93	7/16	.323
62PTBH-6	3/8	1/2-24	11/16	.34	1.26	.99	1/2	.387



66P Female Connector

Part No.	Tube Size	Pipe Thread	Straight Thread	C Hex	L	M	Flow Dia. D
66P-2-2*	1/8	1/8	5/16-24	9/16	.97	.75	.094
66P-3-2*	3/16	1/8	3/8-24	9/16	1.00	.78	.125
66P-3-4*	3/16	1/4	3/8-24	11/16	1.18	.96	.125
66P-4-2	1/4	1/8	3/8-24	1/2	.97	.86	.125
66P-4-4	1/4	1/4	3/8-24	5/8	1.18	1.07	.125
66P-5-2	5/16	1/8	7/16-24	1/2	.97	.86	.144
66P-6-4	3/8	1/4	1/2-24	5/8	1.18	1.07	.204
66P-8-6	1/2	3/8	11/16-20	13/16	1.31	1.20	.323

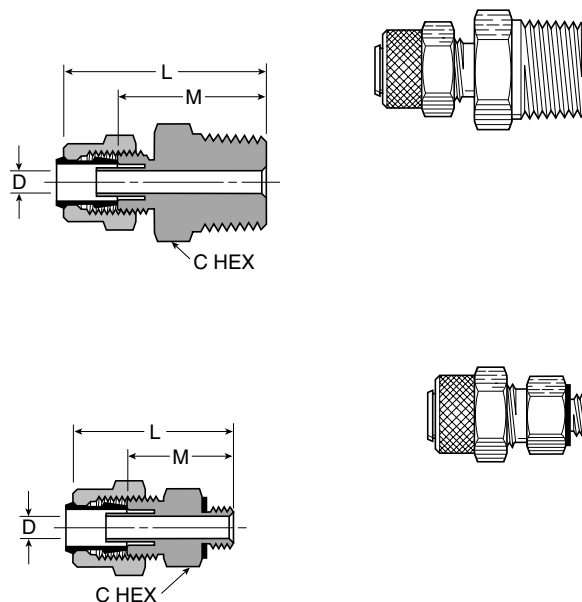
*Brass Sleeve, No Tube Support



68P Male Connector

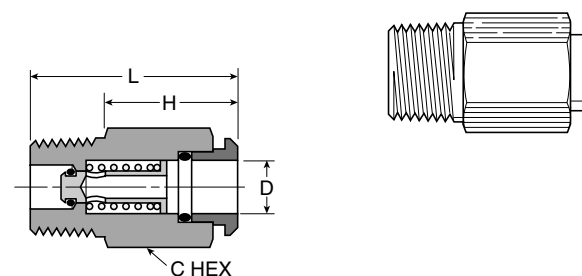
Part No.	Tube Size	Pipe Thread	Straight Thread	C Hex	L	M	Flow Dia. D
68P-2-1*	1/8	1/16	5/16-24	11/32	1.00	.78	.094
68P-2-2*	1/8	1/8	5/16-24	7/16	.99	.77	.094
68P-3-1	3/16	1/16	3/8-24	7/16	1.09	.84	.094
68P-3-2*	3/16	1/8	3/8-24	7/16	1.06	.84	.125
68P-3-4*	3/16	1/4	3/8-24	9/16	1.25	1.03	.125
68P-4-1	1/4	1/16	3/8-24	3/8	1.06	.95	.125
68P-4-2	1/4	1/8	3/8-24	7/16	1.06	.95	.125
68P-4-4	1/4	1/4	3/8-24	9/16	1.25	1.14	.125
68P-4-6	1/4	3/8	3/8-24	11/16	1.28	1.17	.125
68P-5-2	5/16	1/8	7/16-24	7/16	1.05	.95	.144
68P-5-4	5/16	1/4	7/16-24	9/16	1.24	1.14	.144
68P-6-2	3/8	1/8	1/2-24	1/2	1.10	.98	.204
68P-6-4	3/8	1/4	1/2-24	9/16	1.29	1.17	.204
68P-6-6	3/8	3/8	1/2-24	11/16	1.29	1.17	.204
68P-8-4	1/2	1/4	11/16-20	11/16	1.46	1.29	.320
68P-8-6	1/2	3/8	11/16-20	11/16	1.37	1.29	.323
68P-2-10 x 32*	1/8	10-32	5/16-24	3/8	.86	.64	.094
68P-4-10 x 32	1/4	10-32	3/8-24	3/8	.86	.75	.094

*Brass Sleeve, No Tube Support

**391P Pipe Coupler Body**

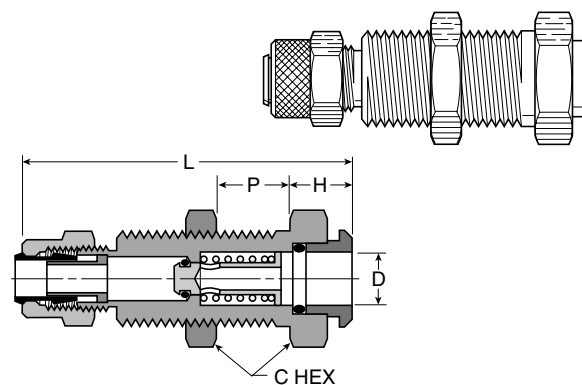
(Chrome Plated)

Part No.	D Insert Dia.	Pipe Thread	C Hex	H	L
391P-4-2	1/4	1/8	1/2	.91	1.29
391P-4-4	1/4	1/4	9/16	.73	1.29
391P-6-4	3/8	1/4	5/8	.85	1.41

**392P Bulkhead Coupler Body**

(Chrome Plated)

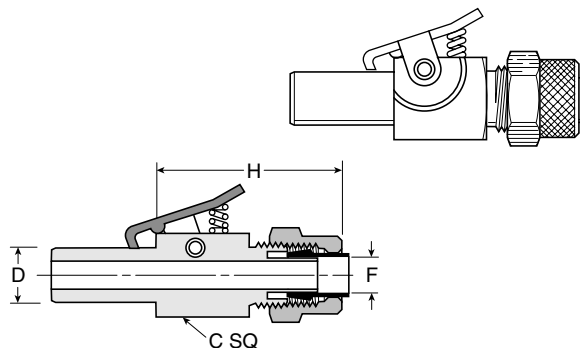
Part No.	Tube Size	D Insert Dia.	Straight Thread	C Hex	P Max.	H	L	Bulkhead Hole Dia.
392P-4-4	1/4	1/4	1/2-24	5/8	.84	.39	2.13	1/2
392P-6-6	3/8	3/8	11/16-24	13/16	.93	.37	2.01	11/16



393P Through Type Insert

(Chrome Plated)

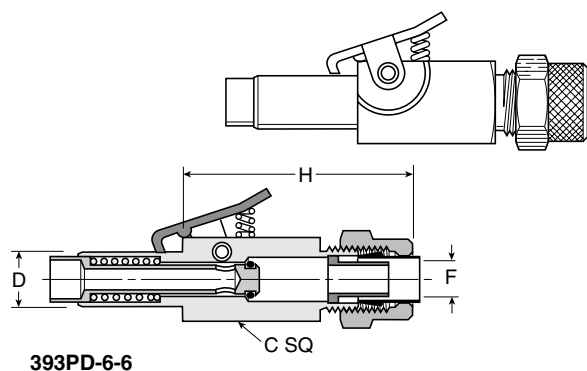
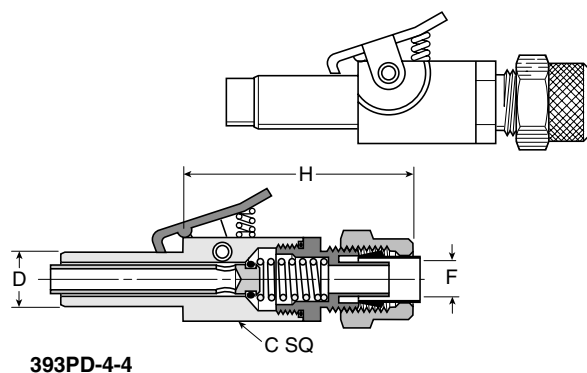
Part No.	Tube Size	D Insert Dia.	Straight Thread	C Square	H	Flow Dia. F
393P-4-4	1/4	1/4	3/8-24	7/16	1.12	.125
393P-6-6	3/8	3/8	1/2-24	1/2	1.34	.203



393PD Shut-off Type Insert

(Chrome Plated)

Part No.	Tube Size	D Insert Dia.	Straight Thread	C Square	H	Flow Dia. F
393PD-4-4	1/4	1/4	3/8-24	7/16	1.61	.110
393PD-6-6	3/8	3/8	1/2-24	1/2	1.45	.187

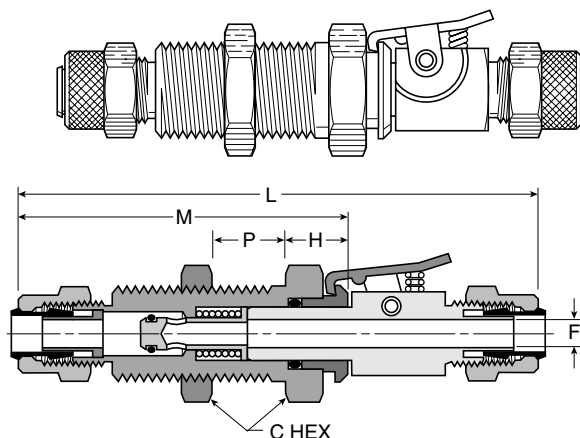


394P Single End Shut-off Bulkhead Quick Coupler†

(Chrome Plated)

Part No.	Tube Size	Straight Thread	C Hex	P Max.	H	L	M	Bulkhead Hole Dia.	Flow Dia. F
394P-4-4	1/4	1/2 - 24	5/8	.84	.39	3.28	2.13	1/2	.125
394P-6-6	3/8	11/16-24	13/16	.93	.37	3.41	2.01	11/16	.203

† Same as 392P-*-* and 393P-*-* Assembled.

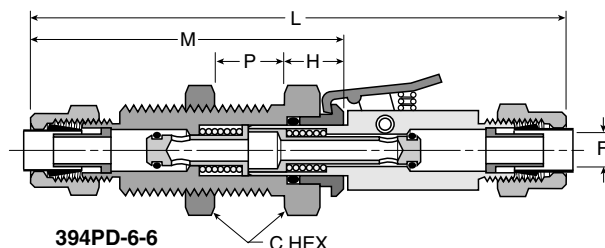
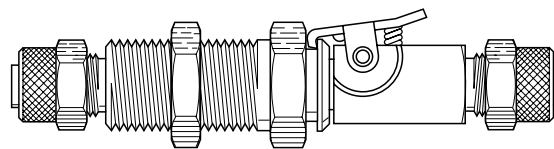
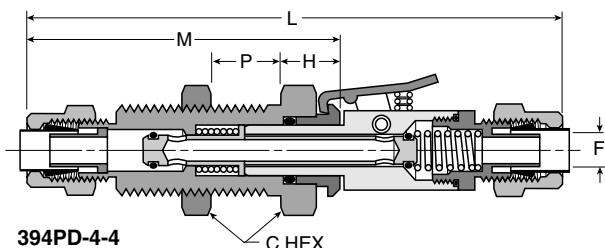
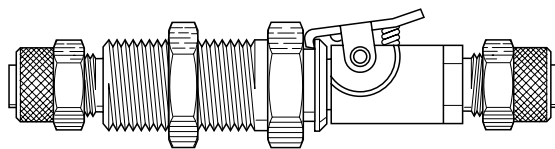


394PD Double End Shut-off Bulkhead Quick Coupler†

(Chrome Plated)

Part No.	Tube Size	Straight Thread	C Hex	P Max.	H	L	M	Bulkhead Hole Dia.	Flow Dia. F
394PD-4-4	1/4	1/2-24	5/8	.84	.39	3.77	2.13	1/2	.125
394PD-6-6	3/8	11/16-24	13/16	.93	.47	3.48	2.01	11/16	.204

† Same as 393PD-*-* and 392P-*-* Assembled.

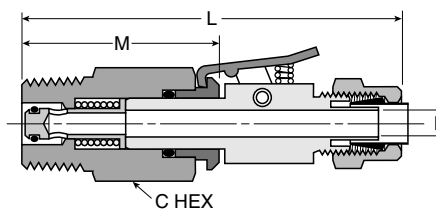
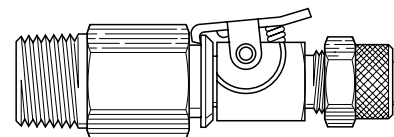


398P Single End Shut-off Pipe Connector Quick Coupler†

(Chrome Plated)

Part No.	Tube Size	Pipe Thread	Straight Thread	C Hex	L	M	Flow Dia. F
398P-4-2	1/4	1/8	3/8-24	1/2	2.45	1.32	.125
398P-4-4	1/4	1/4	3/8-24	9/16	2.45	1.32	.125
398P-6-4	3/8	1/4	1/2-24	5/8	2.80	1.46	.203

† Same as 391P-*-* and 393P-*-* Assembled.

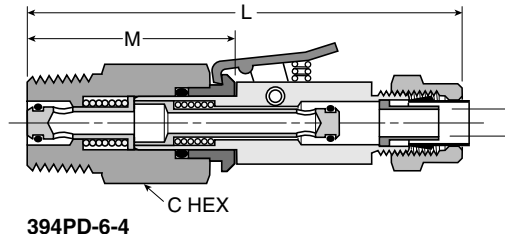
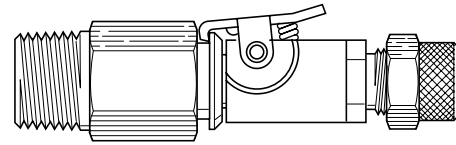
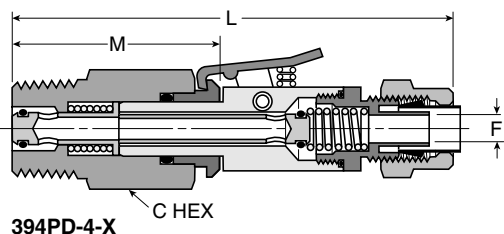
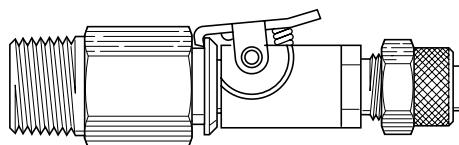


398PD Double End Shut-off Pipe Connector Quick Coupler†

(Chrome Plated)

Part No.	Tube Size	Pipe Thread	Straight Thread	C Hex	L	M	Flow Dia. F
398PD-4-2	1/4	1/8	3/8-24	1/2	2.93	1.31	.125
398PD-4-4	1/4	1/4	3/8-24	9/16	2.93	1.32	.125
398PD-6-4	3/8	1/4	1/2-24	5/8	3.10	1.43	.204

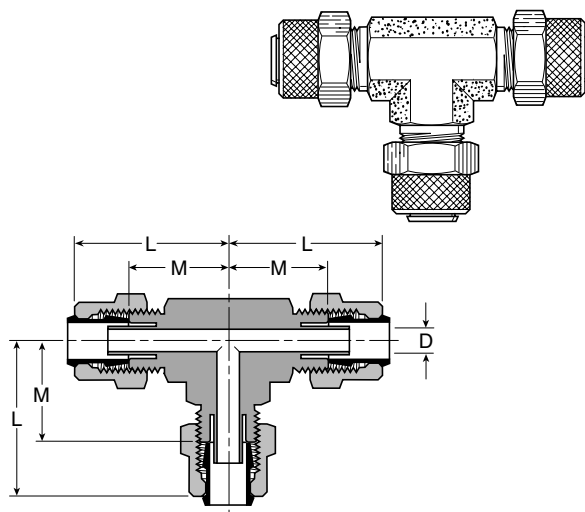
† Same as 391P-*-* and 393PD-*-* Assembled.



164P-264P Union Tee

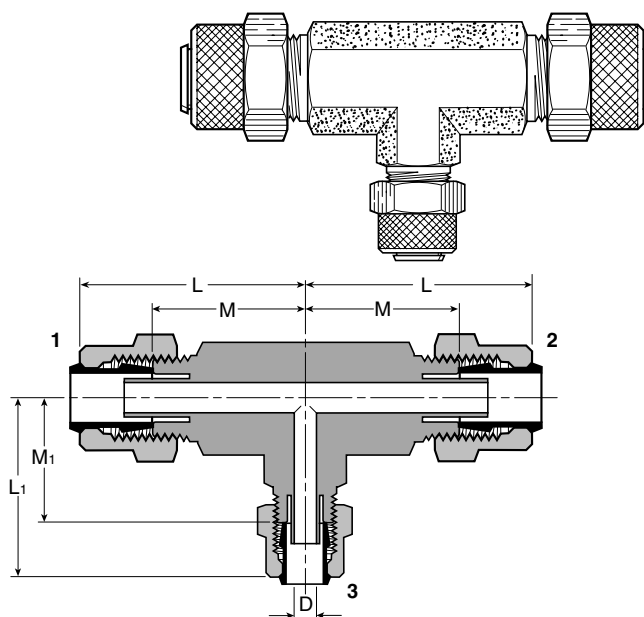
Part No.	Tube Size	Straight Thread	L	M	Flow Dia. D
164P-2*	1/8	5/16-24	.83	.61	.094
264P-3*	3/16	3/8-24	.83	.61	.125
164P-4	1/4	3/8-24	.84	.73	.125
164P-5	5/16	7/16-24	.83	.73	.144
164P-6	3/8	1/2-24	.98	.86	.203
164P-8	1/2	11/16-20	1.12	1.04	.323

*Brass Sleeve, No Tube Support



164P Union Tee Combination Size

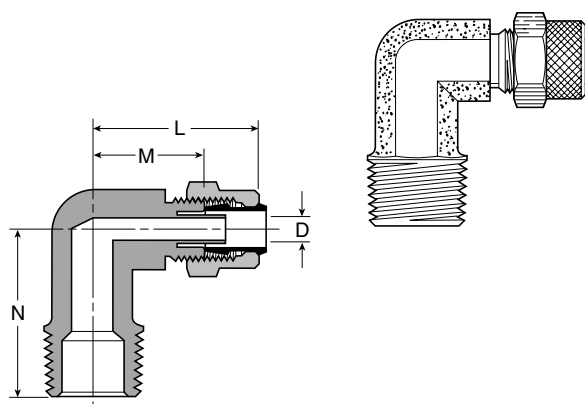
Part No.	1 Tube Size	2 Tube Size	3 Tube Size	L	L ₁	M	M ₁	Flow Dia. D
164P-6-4A	3/8	3/8	1/4	.98	.90	.86	.79	.125



169P-269P Male Elbow

Part No.	Tube Size	Pipe Thread	Straight Thread	L	M	N	Flow Dia. D
169P-2-1	1/8	1/16	5/16-24	.88	.63	.69	.094
269P-2-2*	1/8	1/8	5/16-24	.83	.61	.67	.094
169P-3-1	3/16	1/16	3/8-24	.88	.63	.69	.094
169P-3-2*	3/16	1/8	3/8-24	.83	.61	.69	.125
169P-3-4*	3/16	1/4	3/8-24	.85	.63	.94	.125
169P-4-1	1/4	1/16	3/8-24	.92	.58	.67	.130
169P-4-2	1/4	1/8	3/8-24	.84	.73	.75	.121
169P-4-4	1/4	1/4	3/8-24	.90	.79	.92	.125
169P-4-6	1/4	3/8	3/8-24	.93	.84	1.08	.125
169P-5-2	5/16	1/8	7/16-24	.87	.73	.68	.144
169P-6-2	3/8	1/8	1/2-24	.93	.81	.73	.203
169P-6-4	3/8	1/4	1/2-24	.98	.86	1.05	.203
169P-6-6	3/8	3/8	1/2-24	.98	.86	1.08	.203
169P-8-6	1/2	3/8	11/16-20	1.12	1.04	1.13	.323

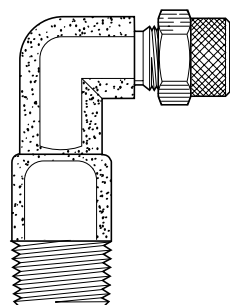
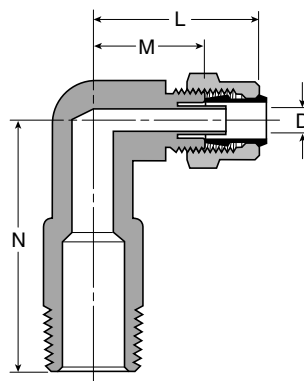
*Brass Sleeve, No Tube Support



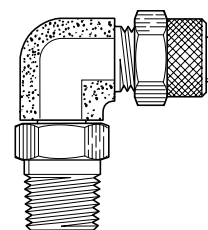
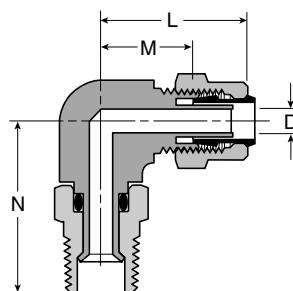
X

169LP Long Male Elbow

Part No.	Tube Size	Pipe Thread	Straight Thread	L	M	N	Flow Dia. D
169LP-4-4	1/4	1/4	3/8-24	.90	.79	1.38	.125

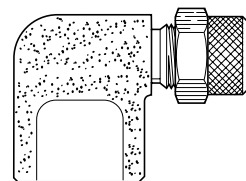
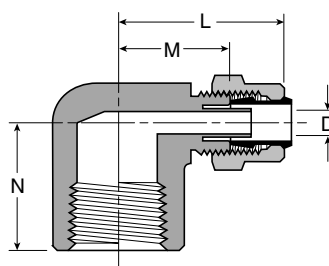
**169PS Male Elbow Swivel**

Part No.	Tube Size	Pipe Thread	Straight Thread	C Hex	E Hex	L	M	N	Flow Dia. D
169PS-4-2	1/4	1/8	3/8-24	3/8	7/16	.81	.59	.86	.121
169PS-4-4	1/4	1/4	3/8-24	9/16	9/16	.91	.69	1.22	.125
169PS-6-2	3/8	1/8	1/2-24	7/16	7/16	.88	.63	.90	.203
169PS-6-4	3/8	1/4	1/2-24	9/16	9/16	.94	.69	1.22	.203
169PS-6-6	3/8	3/8	1/2-24	9/16	11/16	.86	.60	1.19	.203
169PS-8-6	1/2	3/8	11/16-20	1/2	11/16	1.03	.78	1.22	.323

**170P Female Elbow**

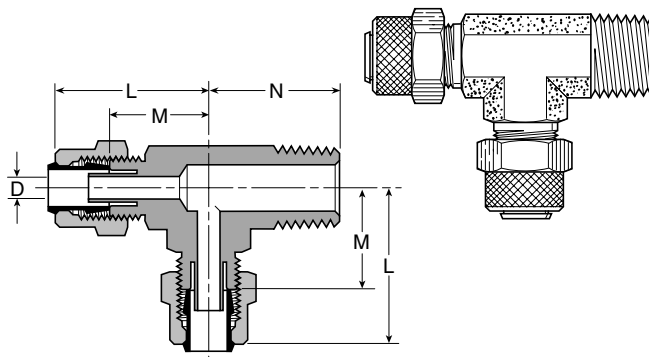
Part No.	Tube Size	Pipe Thread	Straight Thread	L	M	N	Flow Dia. D
170P-2-2*	1/8	1/8	5/16-24	.91	.69	.56	.094
170P-3-2*	3/16	1/8	3/8-24	.91	.69	.56	.125
170P-4-2	1/4	1/8	3/8-24	.90	.79	.56	.125
170P-4-4	1/4	1/4	3/8-24	1.00	.89	.69	.125
170P-6-4	3/8	1/4	1/2-24	1.01	.89	.69	.204
170P-8-6	1/2	3/8	11/16-20	1.19	1.11	1.13	.323

*Brass Sleeve, No Tube Support

**171P Male Run Tee**

Part No.	Tube Size	Pipe Thread	Straight Thread	L	M	N	Flow Dia. D
171P-2-2*	1/8	1/8	5/16-24	.82	.60	.67	.094
171P-3-2*	3/16	1/8	3/8-24	.82	.60	.67	.125
171P-4-2	1/4	1/8	3/8-24	.84	.73	.72	.125
171P-4-4	1/4	1/4	3/8-24	.92	.81	.92	.125
171P-5-2	5/16	1/8	7/16-24	.83	.73	.72	.144
171P-6-4	3/8	1/4	1/2-24	.98	.86	1.03	.203
171P-8-6	1/2	3/8	11/16-20	1.12	1.04	1.13	.323

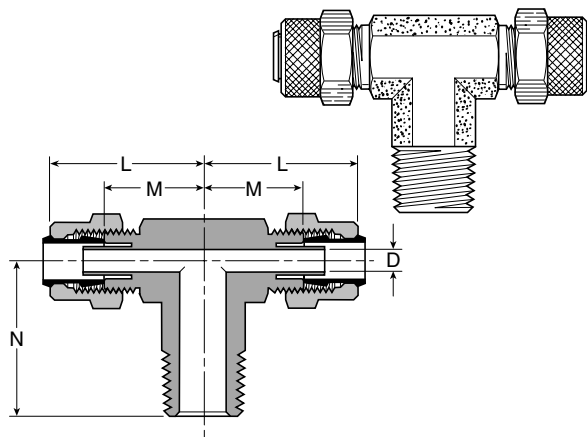
*Brass Sleeve, No Tube Support



172P Male Branch Tee

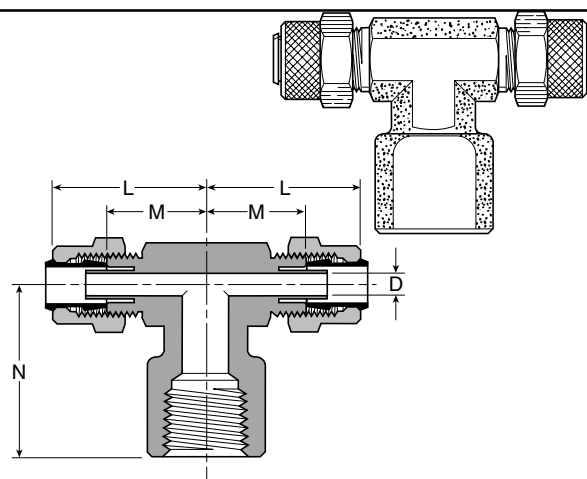
Part No.	Tube Size	Pipe Thread	Straight Thread	L	M	N	Flow Dia. D
172P-2-2*	1/8	1/8	5/16-24	.82	.60	.67	.094
172P-3-2*	3/16	1/8	3/8-24	.82	.60	.67	.125
172P-4-2	1/4	1/8	3/8-24	.84	.73	.72	.125
172P-4-4	1/4	1/4	3/8-24	.92	.81	.92	.125
172P-5-2	5/16	1/8	7/16-24	.83	.73	.72	.144
172P-6-2	3/8	1/8	1/2-24	.88	.86	.743	.204
172P-6-4	3/8	1/4	1/2-24	.98	.86	1.03	.204
172P-8-6	1/2	3/8	11/16-20	1.12	1.04	1.13	.323

*Brass Sleeve, No Tube Support



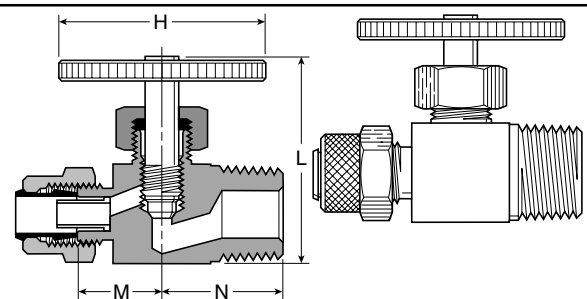
177P Female Branch Tee

Part No.	Tube Size	Pipe Thread	Straight Thread	L	M	N	Flow Dia. D
177P-4-2	1/4	1/8	3/8-24	.92	.81	.88	.125
177P-4-4	1/4	1/4	3/8-24	.92	.81	1.03	.125
177P-4-6	1/4	3/8	3/8-24	1.03	.92	1.13	.125



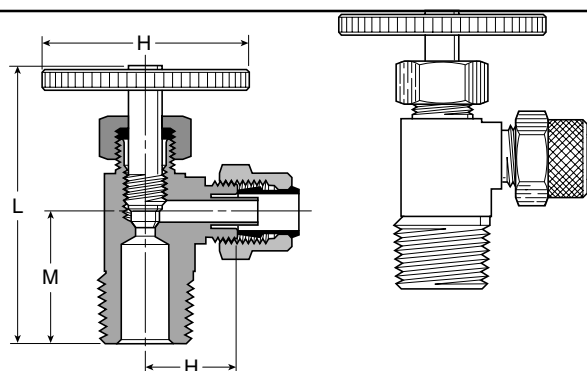
NV311P Needle Valve

Part No.	Tube Size	Pipe Thread	H	L Open	L Closed	M	N
NV311P-4-2	1/4	1/8	1.06	1.36	1.16	.64	.63
NV311P-4-4	1/4	1/4	1.06	1.38	1.18	.64	.72
NV311P-6-4	3/8	1/4	1.06	1.38	1.18	.64	.72

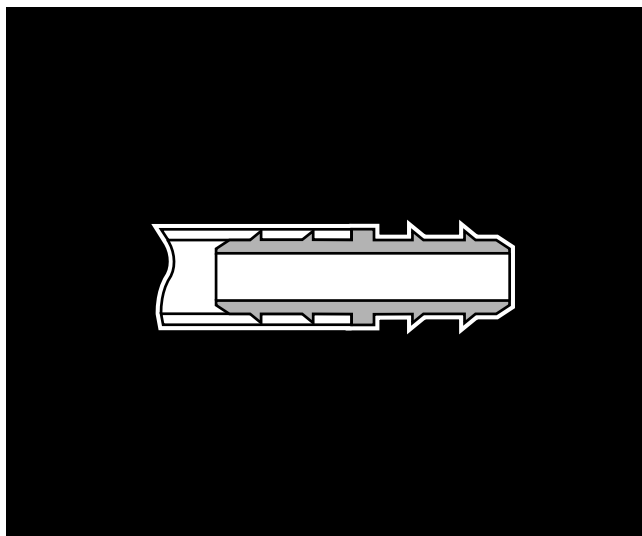


NV312P Angle Needle Valve

Part No.	Tube Size	Pipe Thread	H	L Open	L Closed	M	N
NV312P-4-2	1/4	1/8	1.06	1.70	1.50	.63	.68
NV312P-4-4	1/4	1/4	1.06	2.07	1.82	.71	.86
NV312P-6-4	3/8	1/4	1.06	2.00	1.75	.74	.86



X



Advantages

Compact one piece, push-on barbed fitting for a quick, economical way to connect polyethylene tubing. Extruded from CA 360 or CA 345 brass rod.

Applications

Because of the many available variations in qualities of polyethylene tubing DB fittings are recommended for use with Parker polyethylene tubing (or an equal grade). Parker tubing is highly resistant to environmental stress cracking which is necessary for long life when coupled with expansion fittings.

Working Pressure and Temperature Ranges

In tube sizes 1/4 to 3/8 working pressures up to 150 psi are practical at temperatures ranging from - 65° to +90°F. On 1/2" tube size, working pressures to 100 psi at temperatures ranging from -65° to +75°F.

Assembly Instructions

Simply push tube over the two barbs — be sure tubing is cut square.

Nomenclature

Part numbers are constructed from symbols that identify the style and size of the fitting. The first series of numbers and letters identifies the style and type fitting. The second series of numbers describes the size.

Example:

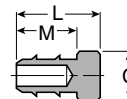
Run Tee (tube to male pipe) _____ 231 -8 -6
1/2" (8/16) Tube O.D. _____
3/8" (6/16) Pipe Thread _____

Sizes

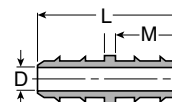
Tube sizes are determined by the number of sixteenths of an inch in the tube O.D.

20 Plug

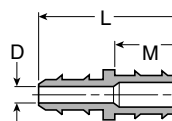
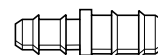
Part No.	Tube O.D.	Tube I.D.	C Dia.	L	M
20-4	1/4	.170	.290	.56	.41
20-6	3/8	.250	.390	.68	.44
20-8	1/2	.377	.577	.81	.56

**22 Union**

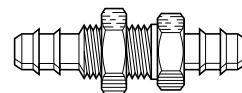
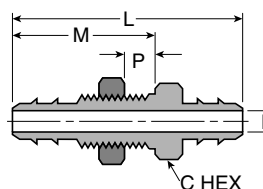
Part No.	Tube O.D.	Tube I.D.	L	M	Flow Dia. D
22-5/32	5/32x5/32	.096x.096	.59	.28	.062
22-4	1/4x1/4	.170x.170	.84	.41	.120
22-6	3/8x3/8	.250x.250	.94	.44	.187
22-8	1/2x1/2	.375x.375	1.19	.56	.312

**22 Union Reducer**

Part No.	Tube O.D.	Tube I.D.	L	M	Flow Dia. D
22-4-5/32	1/4x5/32	.170x.096	.72	.41	.062
22-4-6	1/4x3/8	.170x.250	.88	.44	.120
22-4-8	1/4x1/2	.170x.375	1.06	.56	.120
22-6-8	3/8x1/2	.250x.375	1.06	.56	.187

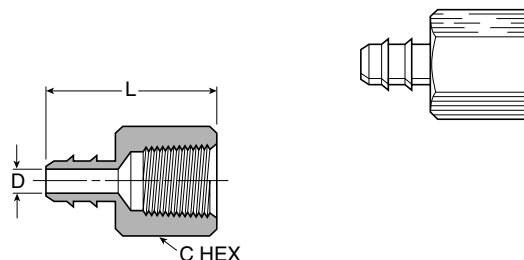
**22BH Bulkhead Union**

Part No.	Tube O.D.	Tube I.D.	Straight Thread	C Hex	P Max.	L	M	Flow Dia. D
22BH-4-4	1/4	.170	5/16-24	7/16	.219	1.38	.78	.120
22BH-6-6	3/8	.250	3/8-24	7/16	.375	1.63	1.00	.187

**X**

26 Female Connector

Part No.	Tube O.D.	Tube I.D.	Pipe Thread	C Hex	L	Flow Dia. D
26-5/32-2	5/32	.096	1/8	1/2	.79	.062
26-4-2	1/4	.170	1/8	1/2	.91	.120
26-6-2	3/8	.250	1/8	1/2	.93	.187
26-6-4	3/8	.250	1/4	11/16	1.06	.187



27 Male Connector

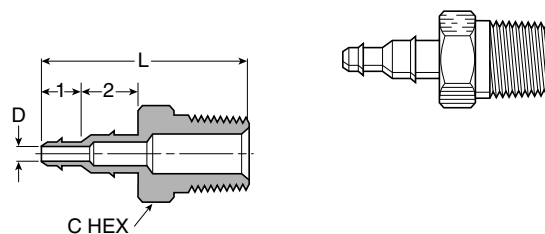
Part No.	Tube O.D.	Tube I.D.	Pipe Thread	C Hex	L	Flow Dia. D
27-1*	1/8	.062	10-32 UNF	1/4	.61	.052
27-2*	1/4	.125	10-32 UNF	1/4	.74	.093

*For vinyl tubing only.



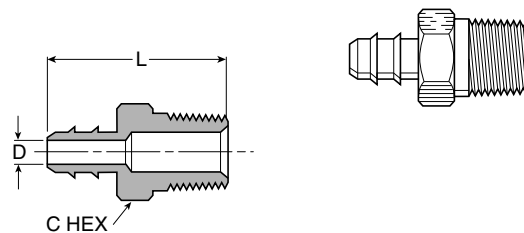
28 Barb to Pipe Adapter

Part No.	Tube O.D. 1	Tube I.D. 1	Tube O.D. 2	Tube I.D. 2	Pipe Thread	C Hex	F	Flow Dia. D
28-4-5/32-2	5/32	.096	1/4	.170	1/8	7/16	1.07	.062



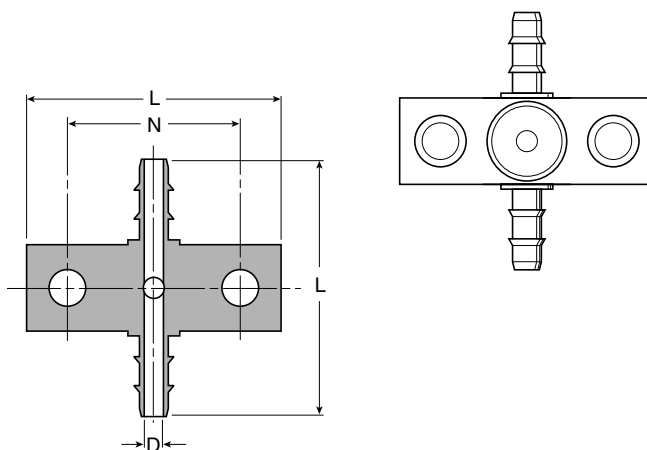
28 Male Connector

Part No.	Tube O.D.	Tube I.D.	Pipe Thread	C Hex	L	Flow Dia. D
28-5/32-2	5/32	.096	1/8	7/16	.84	.062
28-4-1	1/4	.170	1/16	11/32	.93	.120
28-4-2	1/4	.170	1/8	7/16	.97	.120
28-4-4	1/4	.170	1/4	9/16	1.09	.120
28-6-2	3/8	.250	1/8	7/16	1.00	.187
28-6-4	3/8	.250	1/4	9/16	1.13	.187
28-8-4	1/2	.375	1/4	9/16	1.25	.312
28-8-6	1/2	.375	3/8	11/16	1.28	.312
28-8-8	1/2	.375	1/2	7/8	1.44	.312

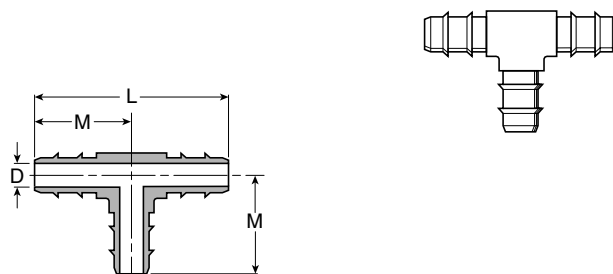


220 Adapter Tee

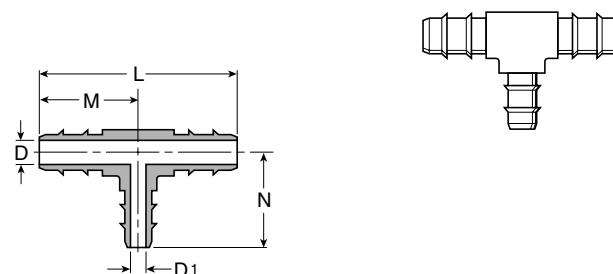
Part No.	Tube O.D.	Tube I.D.	Pipe Thread	L	M	Flow Dia. D
220-4-2	1/4	.170	1/8	1.5	1.0	.120

**224 Union Tee**

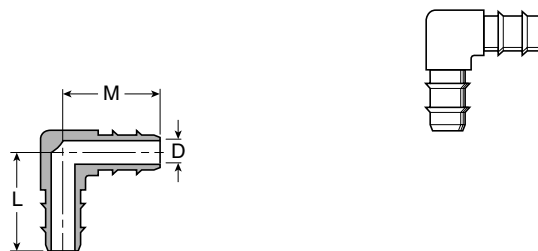
Part No.	Tube O.D.	Tube I.D.	L	M	Flow Dia. D
224-5/32	5/32	.096	1.000	.50	.062
224-4	1/4	.170	1.250	.63	.120
224-6	3/8	.250	1.375	.69	.187
224-8	1/2	.375	1.625	.81	.312

**224 Union Tee (Combination Sizes)**

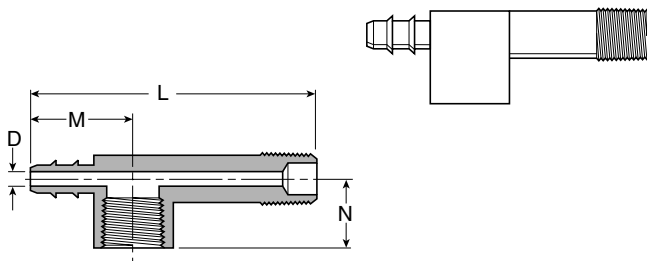
Part No.	Tube O.D.	Tube I.D.	L	M	N	Flow Dia. D	Flow Dia. D ₁
224-4-4-5/32	1/4x5/32	.170x.096	1.25	.63	.50	.120	.062
224-6-6-5/32	3/8x5/32	.250x.096	1.38	.69	.50	.187	.062
224-6-6-4	3/8x1/4	.250x.170	1.38	.69	.62	.187	.120
224-8-8-4	1/2x1/4	.375x.170	1.62	.81	.65	.312	.120
224-8-8-6	1/2x3/8	.375x.250	1.62	.81	.69	.312	.187

**225 Union Elbow**

Part No.	Tube O.D.	Tube I.D.	L	M	Flow Dia. D
225-5/32	5/32	.096	.50	.50	.062
225-4-4	1/4	.170	.63	.63	.120
225-6-6	3/8	.250	.69	.69	.187
225-8-8	1/2	.375	.81	.81	.312

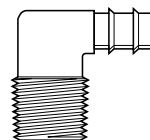
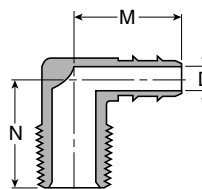
**228 Gauge Tee**

Part No.	Tube O.D.	Tube I.D.	Pipe Thread	L	M	N	Flow Dia. D
228-4-2	1/4	.170	1/8	1.91	.66	.44	.120

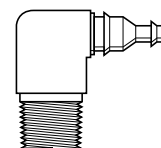
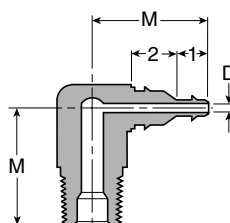


229 Male Elbow

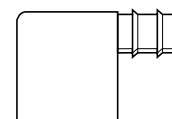
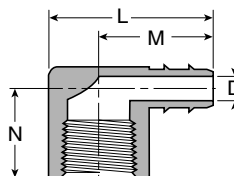
Part No.	Tube O.D.	Tube I.D.	Pipe Thread	M	N	Flow Dia. D
229-5/32-2	5/32	.096	1/8	.56	.63	.062
229-4-1	1/4	.170	1/16	.62	.60	.120
229-4-2	1/4	.170	1/8	.69	.63	.120
229-4-4	1/4	.170	1/4	.72	.72	.120
229-6-2	3/8	.250	1/8	.69	.69	.187
229-6-4	3/8	.250	1/4	.75	.75	.187
229-8-6	1/2	.375	3/8	.94	.81	.312

**229 Barb Adapter Elbow 90°**

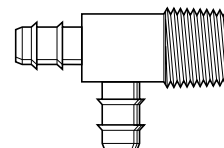
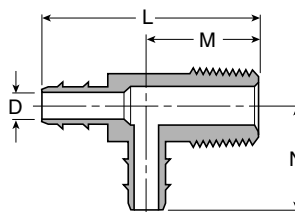
Part No.	Tube O.D. 1	Tube I.D. 1	Tube O.D. 2	Tube I.D. 2	Pipe Thread	M	Flow Dia. D
229-4-5/32-25/32		.096	1/4	.170	1/8	.78	.062

**230 Female Elbow**

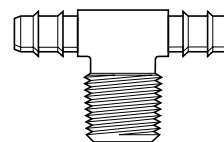
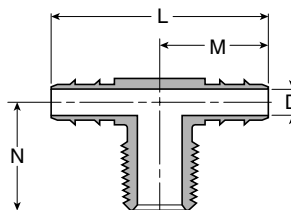
Part No.	Tube O.D.	Tube I.D.	Pipe Thread	L	M	N	Flow Dia. D
230-4-2	1/4	.170	1/8	.91	.66	.44	.120
230-6-4	3/8	.250	1/4	1.12	.78	.63	.187

**231 Male Run Tee**

Part No.	Tube O.D.	Tube I.D.	Pipe Thread	L	M	N	Flow Dia. D
231-4-2	1/4	.170	1/8	1.28	.66	.69	.120
231-6-2	3/8	.250	1/8	1.38	.69	.69	.187
231-6-4	3/8	.250	1/4	1.44	.75	.75	.187

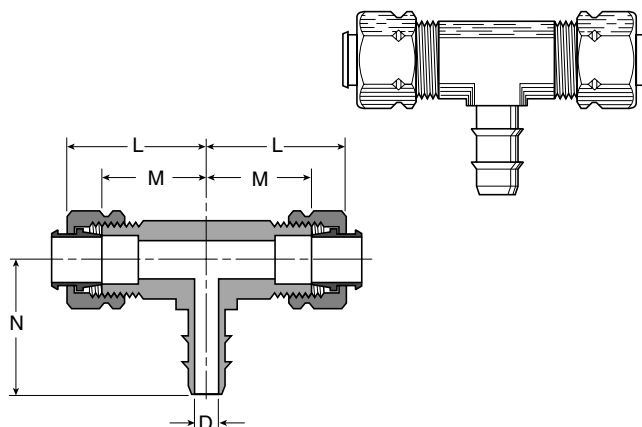
**232 Male Branch Tee**

Part No.	Tube O.D.	Tube I.D.	Pipe Thread	L	M	N	Flow Dia. D
232-4-1	1/4	.170	1/16	1.33	.66	.65	.120
232-4-2	1/4	.170	1/8	1.38	.69	.66	.120
232-6-2	3/8	.250	1/8	1.38	.69	.69	.187
232-6-4	3/8	.250	1/4	1.50	.75	.75	.187



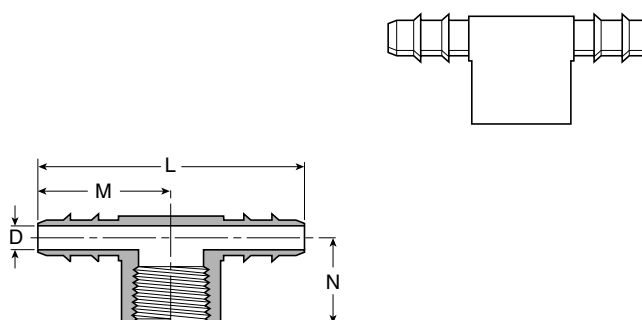
233 Tee

Part No.	Tube O.D.	Tube I.D.	Comp. Tube	L	M	N	Flow Dia. D
233-4-4-4	1/4	.170	1/4	.73	.53	.74	.120
233-6-6-4	1/4	.170	3/8	.87	.59	.80	.120



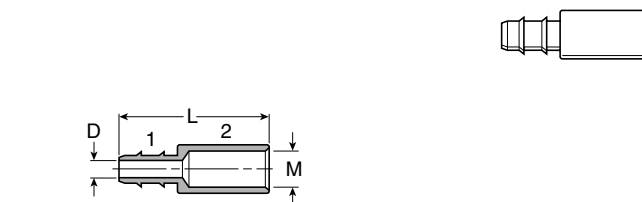
237 Female Branch Tee

Part No.	Tube O.D.	Tube I.D.	Pipe Thread	L	M	N	Flow Dia. D
237-4-2	1/4	.170	1/8	1.34	.67	.49	.120



238 Solder Connector

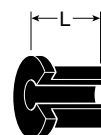
Part No.	Tube O.D. 1	Tube I.D. 2	L	M	Flow Dia. D
238-4-4	1/4	.170	.91	.254	.120



20GT DB Tool*

Part No.	Tube O.D.	L	Thru Dia.
20GT-4	1/4	1.00	.245

*For ease in assembling polyethylene tubing onto DB Fittings.



Advantages

Chemical resistant, flexible, low cost, eight colors, five tube sizes and choice of reel lengths.

Construction

Flexible polyethylene thermoplastic tubing is extruded from high molecular weight resin for increased dimensional stability, uniformity and long-term strength. Its resistance to environmental stress cracking greatly exceeds that of ordinary polyethylene tubing as measured by ASTM D-1693, (10% IGEPAL).

Applications & Approvals

Polyethylene tubing is available in black as well as seven coding colors as recommended by the Instrument Society of America. Black (EB) tubing contains an ultra-violet inhibitor which is recommended for use in sunlit areas. Ingredients of natural and color tubing (except black) listed below meet FDA requirements for food contact applications. All tubing conforms to ASTM D-1248, Type I, Class A, Category 4, Grade E5.

Temperature Range

Suggested operating temperature range is -80°F to 150°F (-62°C to 66°C).

Fitting

Recommendation

- Brass fittings

Nomenclature

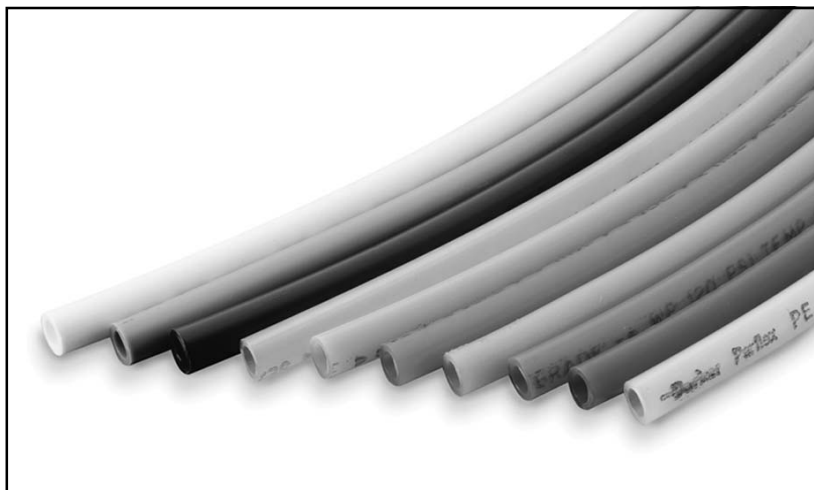
Part numbers are constructed from symbols that identify the style and size of the fitting. Letters identify style and material. Numbers identify size in 1/16's of an inch.

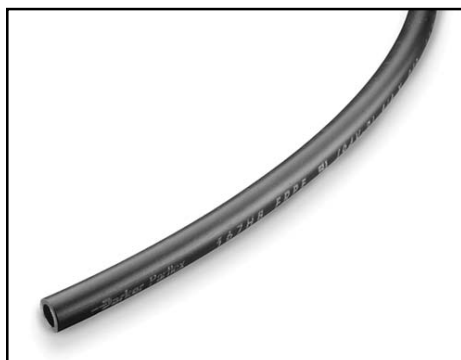
Example:

E - 6 4 - Y - 0500
 Polyethylene _____
 3/8" (6/16) Tube O.D. _____
 1/4" (4/16) Tube I.D. _____
 Color, Yellow _____
 Reel Footage _____

E Instrument Grade Tubing

Part Number	Color	O.D.	I.D.	Wall	Reel Length Feet	Working Pressure psi at 73°F	Min. Burst psi at 73°F	Min. Bend Radius Inches	Weight Per 100 Feet
E-43-0100	Natural	1/4	.170	.040	100	120	625	1	1.1
E-43-0500	Natural	1/4	.170	.040	500	120	625	1	1.1
E-43-1000	Natural	1/4	.170	.040	1000	120	625	1	1.1
EB-43-0100	Black	1/4	.170	.040	100	120	625	1	1.1
EB-43-0500	Black	1/4	.170	.040	500	120	625	1	1.1
EB-43-1000	Black	1/4	.170	.040	1000	120	625	1	1.1
E-43-R-0100	Red	1/4	.170	.040	100	120	625	1	1.1
E-43-R-0500	Red	1/4	.170	.040	500	120	625	1	1.1
E-43-B-0100	Blue	1/4	.170	.040	100	120	625	1	1.1
E-43-B-0500	Blue	1/4	.170	.040	500	120	625	1	1.1
E-43-O-0500	Orange	1/4	.170	.040	500	120	625	1	1.1
E-43-Y-0500	Yellow	1/4	.170	.040	500	120	625	1	1.1
E-43-P-0500	Purple	1/4	.170	.040	500	120	625	1	1.1
E-43-G-0500	Green	1/4	.170	.040	500	120	625	1	1.1
E-53-0500	Natural	5/16	.187	.062	500	145	800	1-1/8	2.1
EB-53-0500	Black	5/16	.187	.062	500	145	800	1-1/8	2.1
E-64-0100	Natural	3/8	.250	.062	100	125	675	1-1/4	2.5
E-64-0500	Natural	3/8	.250	.062	500	125	675	1-1/4	2.5
EB-64-0100	Black	3/8	.250	.062	100	125	675	1-1/4	2.5
EB-64-0500	Black	3/8	.250	.062	500	125	675	1-1/4	2.5
E-64-R-0500	Red	3/8	.250	.062	500	125	675	1-1/4	2.5
E-64-B-0500	Blue	3/8	.250	.062	500	125	675	1-1/4	2.5
E-64-O-0500	Orange	3/8	.250	.062	500	125	675	1-1/4	2.5
E-64-Y-0500	Yellow	3/8	.250	.062	500	125	675	1-1/4	2.5
E-64-P-0500	Purple	3/8	.250	.062	500	125	675	1-1/4	2.5
E-64-G-0500	Green	3/8	.250	.062	500	125	675	1-1/4	2.5
E-86-0100	Natural	1/2	.375	.062	100	90	425	2-1/2	3.6
EB-86-0100	Black	1/2	.375	.062	100	90	425	2-1/2	3.6
E-108-0100	Natural	5/8	.500	.062	100	70	325	4	4.6
EB-108-0100	Black	5/8	.500	.062	Coil	70	325	4	4.6





Construction & Approvals

Flame resistant polyethylene is manufactured from a distinctively formulated compound which meets the UL94 V-2 flame classification. It also meets the flame spread, fuel contribution and smoke density requirements of the ASTM E84-81a tunnel test.

Applications

Parker series FRPE tubing is the preferred product for pneumatic control applications in the heating- ventilating- air conditioning-energy conservation industry. It is also suitable for use in petrochemical plants, petroleum refineries, pulp and paper mills, mines, steel mills and other industries where protection against intermittent flame and hot sparks is necessary.

Temperature Range

Suggested operating temperature range is -85°F to 150°F (-65°C to +66°C).

Nomenclature

Order by tubing part number and name.

Example:

FR PE 4 — 0500
 Flame Resistant _____
 Polyethylene _____
 1/4" (4/16) Tube O. D. _____
 Reel Footage _____

FRPE Flame Resistant Tubing

Part Number	Color	O.D.	I.D.	Wall	Reel Length Feet	Working Pressure psi at 73°F	Min. Burst psi at 73°F	Min. Bend Radius Inches	Weight Per 100 Feet
FRPE2.5-0500	Black	5/32	.096	.030	500	225	900	1/2	.56
FRPE4-0250	Black	1/4	.170	.040	250	160	650	3/4	1.24
FRPE4-0500	Black	1/4	.170	.040	500	160	650	3/4	1.24
FRPE4-1000	Black	1/4	.170	.040	1000	160	650	3/4	1.24
FRPE6-0250	Black	3/8	.250	.062	250	195	780	1-1/2	2.90
FRPE6-0500	Black	3/8	.250	.062	500	195	780	1-1/2	2.90
FRPE8-0250	Black	1/2	.375	.062	250	135	540	1-3/4	4.05

X



Nomenclature

Order by tubing part number and name.

Example:

Nylon N N — 2 — 016
 Color, Natural
 1/8" (2/16) Tube O.D.
 Wall Thickness in thousandths of an inch

Advantages

Flexible nylon tubing is carefully made from high-grade, abrasion-resistant, heat-and light-stabilized nylon. Resistance to stress-cracking greatly exceeds that of ordinary nylon tubing. Extremely low level water absorption.

Chemical-resistant nylon tubing has the additional benefits of better flexibility, lighter weight and resistance to flexural fatigue.

Colors

Available in natural (NN) and black (NB). Black tubing is recommended for use outdoors and in sunlit areas.

Temperature Range

Operating temperatures, depending upon conditions, are -65°F to 200°F (-54°C to 93°C) continuous.

Fitting Recommendations

- Brass fittings

N Flexible Tubing

Nylon Part No.	Color	Nom. Tube O.D.	Nom. Tube I.D.	Average Wall Thick.	*Min. Burst Pressure at 73°F psi	Min. Bend Radius Inches	Std. Reel Length Feet
NN-2-016	Natural	1/8	.093	.016	1000	1/4	250
NB-2-016	Black	1/8	.093	.016	1000	1/4	250
NN-2-031	Natural	1/8	.064	.031	2000	1/4	250
NB-2-031	Black	1/8	.064	.031	2000	1/4	250
NN-2.5-025	Natural	5/32	.106	.025	1200	1/2	250
NB-2.5-025	Black	5/32	.106	.025	1200	1/2	250
NN-3-025	Natural	3/16	.138	.025	1000	5/8	250
NB-3-025	Black	3/16	.138	.025	1000	5/8	250
NN-3-046	Natural	3/16	.096	.046	2000	7/16	250
NB-3-046	Black	3/16	.096	.046	2000	7/16	250
NN-4-035	Natural	1/4	.180	.035	1000	7/8	250
NB-4-035	Black	1/4	.180	.035	1000	7/8	250
NN-4-040	Natural	1/4	.170	.040	1250	7/8	250
NB-4-040	Black	1/4	.170	.040	1250	7/8	250
NN-4-062	Natural	1/4	.127	.062	2000	1/2	250
NB-4-062	Black	1/4	.127	.062	2000	1/2	250
NN-5-040	Natural	5/16	.233	.040	1250	1-1/8	250
NB-5-040	Black	5/16	.233	.049	1250	1-1/8	250
NN-6-050	Natural	3/8	.275	.050	1250	1-1/8	250
NB-6-050	Black	3/8	.275	.050	1250	1-1/8	250
NN-6-093	Natural	3/8	.190	.093	2000	3/4	250
NB-6-093	Black	3/8	.190	.093	2000	3/4	250
NN-8-062	Natural	1/2	.375	.062	1000	1-1/4	250
NB-8-062	Black	1/2	.375	.062	1000	1-1/4	250
NN-8-124	Natural	1/2	.253	.124	2000	1	250
NB-8-124	Black	1/2	.253	.124	2000	1	250

*Suggested working pressure is 1/4 of burst pressure.



- Brass fittings

Nomenclature

Order by tubing part number and name.

Example:

Nylon _____ N B R 2 016
 Color, Black _____
 Rigid _____
 1/8" (2/16) Tube O.D. _____
 Wall Thickness in thousandths of an inch _____

Advantages

Series NR semi-rigid nylon tubing offers better chemical resistance than series N, good resistance to high ambient temperature and low moisture absorption. NR has a high tensile strength which will give excellent coupling retention in high pressure, temperature and vibration environments.

Construction

Parker series NR tubing is manufactured from a semi-rigid nylon II material. The tubing does not contain plasticizers.

Applications & Approvals

NR tubing is specified for machine tool lubricating systems, marine control systems, process lines for chemicals and oils and other applications requiring a high quality nylon tube.

Temperature Range

The recommended operating temperature range for service at rated pressures with compatible fluids is -60°F to 200°F (-51°C to 93°C).

Fitting Recommendations

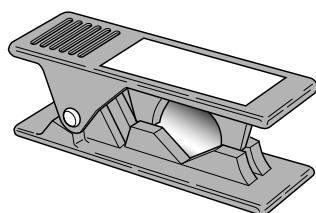
NR Semi-rigid High Strength Tubing

Nylon Part No.	Color	Nom. Tube O.D.	Nom. Tube I.D.	Average Wall Thick.	*Min. Burst Pressure at 73°F psi	Min. Bend Radius Inches	Std. Reel Length Feet
NNR-2-017	Natural	1/8	.091	.017	1700	1/2	500
NBR-2-017	Black	1/8	.091	.017	1700	1/2	500
NNR-2-026	Natural	1/8	.073	.026	2500	3/8	500
NBR-2-026	Black	1/8	.073	.026	2500	3/8	500
NNR-3-024	Natural	3/16	.140	.024	1700	3/4	500
NBR-3-024	Black	3/16	.140	.024	1700	3/4	500
NNR-3-039	Natural	3/16	.110	.039	2500	5/8	500
NBR-3-039	Black	3/16	.110	.039	2500	5/8	500
NNR-4-035	Natural	1/4	.180	.035	1700	1	250
NBR-4-035	Black	1/4	.180	.035	1700	1	250
NNR-4-050	Natural	1/4	.150	.050	2500	7/8	250
NBR-4-050	Black	1/4	.150	.050	2500	7/8	250
NNR-5-040	Natural	5/16	.233	.040	1700	1-1/2	250
NBR-5-040	Black	5/16	.233	.040	1700	1-1/2	250
NNR-6-048	Natural	3/8	.279	.048	1700	1-3/4	250
NBR-6-048	Black	3/8	.279	.048	1700	1-3/4	250
NNR-6-075	Natural	3/8	.225	.075	2500	1-1/2	250
NBR-6-075	Black	3/8	.225	.075	2500	1-1/2	250
NNR-8-062	Natural	1/2	.376	.062	1500	2-3/8	250
NBR-8-062	Black	1/2	.376	.062	1500	2-3/8	250
NNR-8-075	Natural	1/2	.350	.075	2200	2-1/2	250
NBR-8-075	Black	1/2	.350	.075	2200	2-1/2	250

*Suggested working pressure is 1/4 of burst pressure.

PTC Plastic Tube Cutter

Part No. PTC



An easy to handle razor/edged tube cutter, closes automatically, assuring clean and square cuts.

May be used with polyethylene, polypropylene, nylon and other plastic tubing.

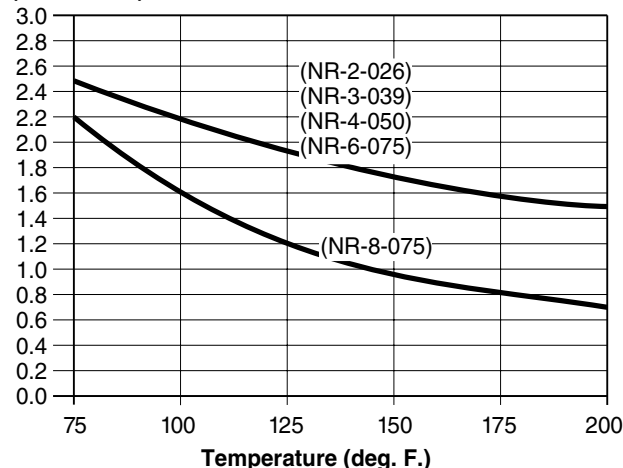
How To Use

Insert plastic tube to desired length, allow tube cutter to close, then apply pressure until tube snaps off.

Nylon Semi-Rigid Tubing

NR Series (NNR, NBR)
 1/8 thru 1/2 O.D. Inches

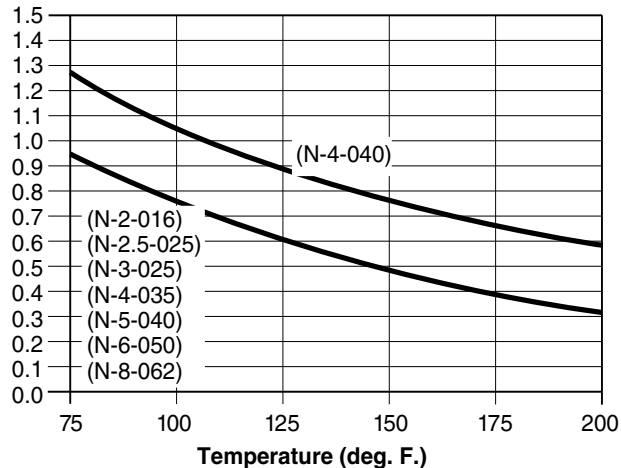
**Minimum
 Burst Pressure
 (psig)
 (Thousands)**



Nylon Flexible Tubing

N Series (NN, NB)
 1/8 thru 1/2 O.D. Inches

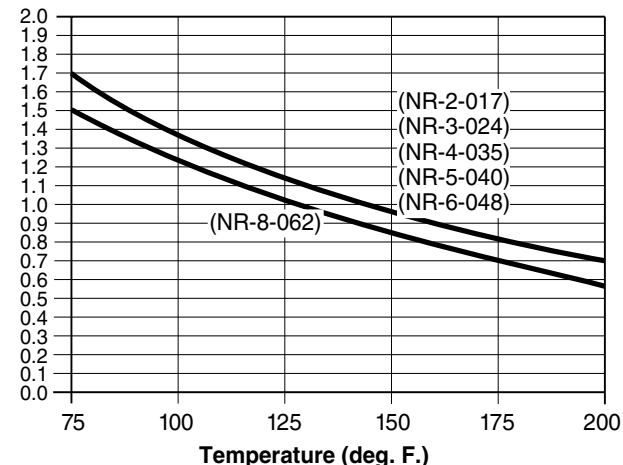
**Minimum
 Burst Pressure
 (psig)**



Nylon Semi-Rigid Tubing

NR Series (NNR, NBR)
 1/8 thru 1/2 O.D. Inches

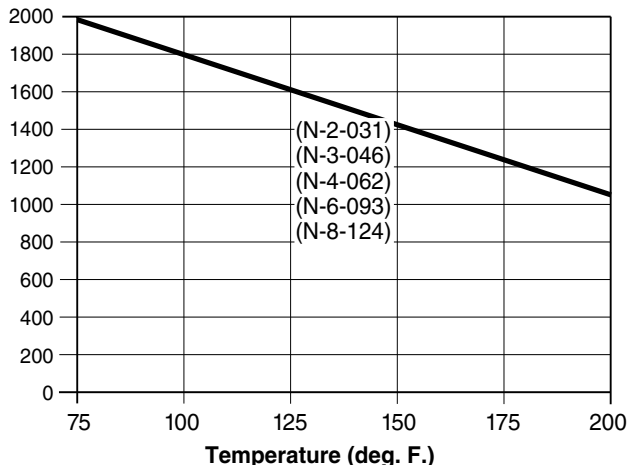
**Minimum
 Burst Pressure
 (psig)
 (Thousands)**



Nylon Flexible Tubing

N Series
 1/8 thru 1/2 O.D. Inches

**Minimum
 Burst Pressure
 (psig)**

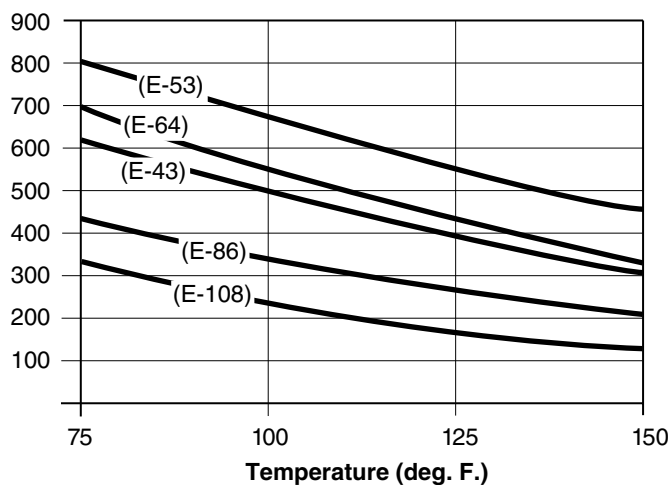


Suggested working pressures are 1/4 of burst pressure at system operating temperature.

Polyethylene Tubing

Laboratory Grade E Series
 1/4 thru 5/8 O.D.

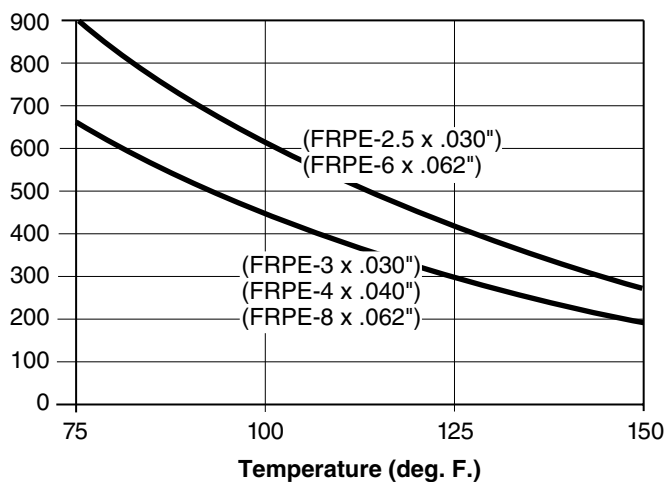
**Minimum
 Burst
 Pressure**



Polyethylene Tubing

Flame Resistant FRPE Series
 5/32 thru 1/2 O.D.

**Minimum
 Burst
 Pressure**



Suggested working pressures are 1/4 of burst pressure at system operating temperature.

X

	All Brass Body Fittings (Except Prestolok) Rating	Prestolok Fitting Rating		All Brass Body Fittings (Except Prestolok) Rating	Prestolok Fitting Rating
Acetic Acid	4	4	Citric Acid	3	3
Acetic Anhydride	4	4	Coffee	1	4
Acetone	1	4	Copper Chloride	4	4
Alum	4	4	Copper Sulfate	4	4
Aluminum Chloride	4	4	Corn Oil	2	2
Aluminum Sulfate	4	4	Cottonseed Oil	2	2
Ammonium Hydroxide	4	4	Creosote	2	2
Ammonium Chloride	4	4	Crude Oil	3	3
Ammonium Nitrate	4	4	Ethers	1	4
Ammonium Sulfate	4	4	Ethyl Acetate	2	4
Amyl Acetate	2	4	Ethyl Chloride	3	3
Aniline	3	4	Ethylene Glycol	2	2
Aniline Dyes	3	4	Ferric Chloride	4	4
Asphalt	1	2	Formaldehyde	3	3
Barium Chloride	4	4	Furfural	3	4
Beer	2	4	Gelatine	1	1
Beet Sugar Syrups	2	2	Glucose	1	1
Benzoic Acid	2	4	Glycerine	1	1
Black Liquor, Sulfate Process	4	4	Hydrobromic Acid	4	4
Bleaching Powder, Wet	4	4	Hydrochloric Acid	4	4
Borax	1	2	Hydrocyanic Acid	4	4
Bordeaux Mixture	2	2	Hydrofluoric Acid	4	4
Boric Acid	2	2	Hydrofluosilicic Acid	4	4
Bromine, Dry	1	4	Hydrogen Peroxide	3	4
Bromine, Moist	4	4	Hydrogen Sulfide, Moist	3	4
Butyric Acid	3	4	Lacquers	1	4
Calcium Bisulfite	4	4	Lacquer Solvents	1	4
Calcium Chloride	4	4	Lactic Acid Cold	3	3
Calcium Hydroxide	2	2	Lime	1	1
Calcium Hypochlorite	4	4	Lime-Sulfur	2	4
Cane Sugar Syrups	2	2	Linseed Oil	2	2
Carbolic Acid	2	4	Magnesium Chloride	4	4
Carbon Dioxide, Dry	1	1	Magnesium Hydroxide	1	2
Carbon Dioxide, Moist	3	3	Magnesium Sulfate	3	3
Carbon Disulfide	1	4	Methyl Chloride, Dry	1	4
Carbon Tetrachloride, Moist	4	4	Milk	2	4
Castor Oil	1	1	Nitric Acid	4	4
Chlorine, Dry	1	4	Nitrogen	1	1
Chlorine, Moist	4	4	Oleic Acid	3	3
Chloroacetic Acid	4	4	Oxalic Acid	3	3
Chloroform, Dry	1	4	Palmitic Acid	3	3

1 — SATISFACTORY

2 — FAIR

3 — RECOMMEND TESTING

4 — UNSATISFACTORY

	All Brass Body Fittings (Except Prestolok) Rating	Prestolok Fitting Rating		All Brass Body Fittings (Except Prestolok) Rating	Prestolok Fitting Rating
Phosphoric Acid	4	4	Sodium Sulfite	4	4
Potassium Chloride	4	4	Sodium Thiosulfate	2	2
Potassium Cyanide	4	4	Steam	3	4
Potassium Dichromate, Acid	4	4	Stearic Acid	3	3
Potassium Hydroxide	3	3	Sulfur, Dry	1	4
Potassium Sulfate	2	2	Sulfur Chloride, Dry	1	4
Sea Water	3	3	Sulfur Dioxide, Dry	1	4
Soap Solutions	2	2	Sulfur Dioxide, Moist	4	4
Sodium Bicarbonate	3	3	Sulfur Trioxide, Dry	1	4
Sodium Bisulfate	4	4	Sulfuric Acid	4	4
Sodium Bisulfite	4	4	Sulfurous Acid	4	4
Sodium Carbonate	2	2	Tar	2	2
Sodium Chloride	4	4	Tartaric Acid	3	3
Sodium Cyanide	4	4	Toluene	1	4
Sodium Hydroxide	3	3	Trichloroacetic Acid	4	4
Sodium Hypochlorite	4	4	Trichlorethylene, Dry	1	3
Sodium Nitrate	3	3	Trichlorethylene, Moist	3	3
Sodium Peroxide	4	4	Vinegar	4	4
Sodium Phosphate	2	2	Zinc Chloride	4	4
Sodium Silicate	2	2	Zinc Sulfate	4	4

1 — SATISFACTORY

2 — FAIR

3 — RECOMMEND TESTING

4 — UNSATISFACTORY

This brass compatibility chart is a ready reference for brass fittings with various media. It is intended as a guide to chemical compatibility and has been compiled from the best available sources. Many factors (concentration, temperature, intermittent or continuous exposure, etc.) have a bearing upon the suitability of any material and, therefore, no guarantee, expressed or implied, is made to compatibility in any specific set of circumstances.

X

Media	E "E" Series Polyethylene	FRPE Flame Resistant Polyethylene	N Nylon "N"	NR Nylon "NR"	Media	E "E" Series Polyethylene	FRPE Flame Resistant Polyethylene	N Nylon "N"	NR Nylon "NR"
Acetaldehyde	L	—	L	G	Glucose	G	G	G	G
Acetates	G	—	L	G	Glycerine	G	G	G	G
Acetic Acid	L	—	L	G	Hydriodic Acid	L	—	P	L
Acetic Anhydride	L	—	P	L	Hydrochloric Acid (Conc.)	L	—	L	L
Acetone	G	L	L	G	Hydrochloric Acid (Med. Conc.)	L	—	L	G
Acetyl Bromide	L	—	L	—	Hydrofluoric Acid	L	—	P	P
Acetyl Chloride	L	—	L	—	Hydrogen Peroxide (Conc.)	L	—	L	G
Air	G	G	G	G	Hydrogen Peroxide (Dil.)	L	—	L	G
Alcohols	G	G	G	G	Hydrogen Sulfide	G	—	G	G
Aluminum Salts	G	G	G	G	Iodine	L	—	G	G
Ammonia	G	L	G	G	Kerosene	L	—	G	G
Amyl Acetate	G	—	L	G	Ketones	G	—	G	G
Aniline	L	—	L	L	Lacquer Solvent	L	—	L	L
Animal Oils	L	—	G	G	Lactic Acid	G	—	G	G
Arsenic Salts	G	G	G	G	Lead Acetate	G	—	G	G
Aromatic Hydrocarbons	P	P	L	G	Linseed Oil	L	—	G	G
Barium Salts	G	G	G	G	Magnesium Salts	G	—	G	G
Benzaldehyde	P	P	L	G	Naphtha	L	G	G	G
Benzene (Benzol)	P	P	L	G	Natural Gas	L	—	G	G
Benzyl Alcohol	P	P	L	L	Nickel Salts	G	—	G	G
Bleaching Liquors	G	—	L	L	Nitric Acid (Conc.)	P	G	P	P
Boric Acid Solutions	G	G	G	G	Nitric Acid (Dil.)	P	P	L	L
Bromine	L	—	L	P	Nitrobenzene	P	P	L	L
Butane	L	—	P	G	Nitrogen Oxides	L	—	L	L
Butanol	G	G	G	G	Nitrous Acid	L	—	L	L
Butyl Acetate	G	G	G	G	Oils (Animal and Mineral)	L	—	G	G
Calcium Salts	G	G	G	G	Oils (Vegetable)	L	—	L	G
Carbon Dioxide	G	G	G	G	Oxygen	G	G	G	G
Carbon Disulfide	L	—	L	G	Perchloric Acid	P	P	P	P
Carbon Tetrachloride	P	P	L	L	Phenol	P	P	P	P
Caustic Potash	G	—	G	G	Potassium Salts	G	G	G	G
Caustic Soda	G	—	G	G	Pyridine	L	—	L	L
Chloracetic Acid	L	—	L	L	Silver Nitrate	G	G	G	G
Chlorine (Dry)	L	—	L	P	Soap Solutions	G	G	G	G
Chlorine (Wet)	L	—	L	P	Sodium Salts	G	G	G	G
Chlorobenzene	P	P	L	L	Stearic Acid	L	—	G	G
Chloroform	P	P	L	L	Sulfur Chloride	L	—	L	L
Chromic Acid	L	—	P	P	Sulfuric Acid (Conc.)	P	P	P	P
Copper Salts	G	G	G	G	Sulfuric Acid (Dil.)	P	P	G	L
Cresol	P	P	L	P	Sulfurous Acid	P	P	L	L
Cyclohexanone	L	—	L	G	Tannic Acid	G	—	G	G
Ethers	L	—	L	G	Tanning Extracts	G	—	G	G
Ethyl Acetate	G	—	L	G	Titanium Salts	G	G	G	G
Ethyl Alcohol	G	G	L	G	Toluene (Toluol)	P	P	L	G
Ethylamine	L	—	L	L	Trichloroacetic Acid	L	—	P	P
Ethyl Bromide	P	P	L	L	Trichlorethylene	P	P	G	L
Ethyl Chloride	P	P	L	L	Turpentine	L	—	G	G
Fatty Acids	L	P	G	G	Urea	G	—	G	G
Ferric Salts	G	—	G	G	Uric Acid	G	—	G	G
Formaldehyde	G	—	L	G	Water	G	G	G	G
Formic Acid	L	G	L	P	Xylene (Xylol)	P	P	L	G
Freon	L	—	L	G	Zinc Chloride	G	—	G	G
Gasoline	P	P	G	G					

Ratings Code (1)

G — Good to excellent. Little or no swelling, tensile or surface changes. Preferred choice.

L — Marginal or conditional. Noticeable effects but not necessarily indicating lack of serviceability. Further testing suggested for specific application. Very long term effects such as stiffening or potential for crazing should be evaluated.

P — Poor or unsatisfactory. Not recommended without extensive and realistic testing.

— — Not tested.