



## 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

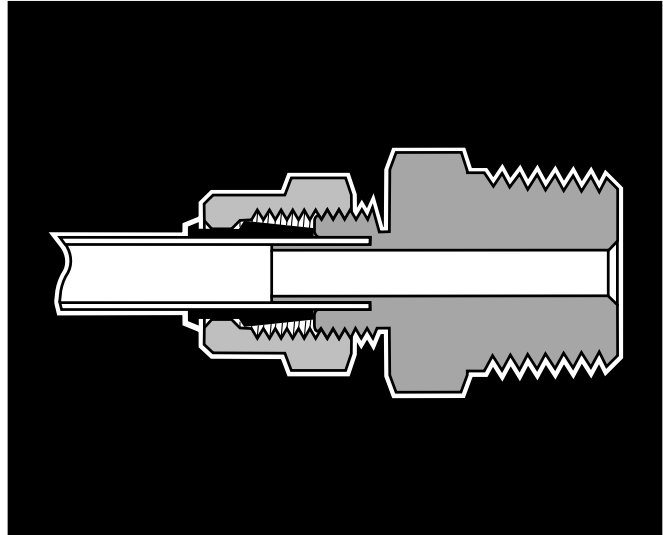
Plastic Sleeves: Acetal Copolymer (Celcon®).

## 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.

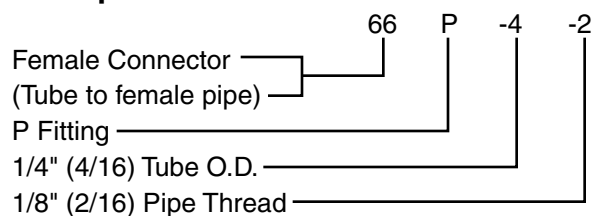
### Maximum allowable metal tube wall thickness for use with P fittings:

1/8", 3/16", O.D. — no limitation, 1/4" O.D. — 0.035  
5/16", 3/8", 1/2" O.D. — 0.049.

## 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**



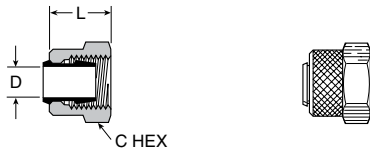
Part No.	Tube Size	A	L
59P-4	1/4	0.247	0.50
59P-5	5/16	0.307	0.53
59P-6	3/8	0.372	0.56
59P-8	1/2	0.497	0.63

**60P Acetal Plastic Sleeve**



Part No.	Tube Size	A	D	L
60P-4	1/4	0.334	0.261	0.338
60P-5	5/16	0.405	0.321	0.340
60P-6	3/8	0.465	0.381	0.367
60P-8	1/2	0.628	0.514	0.399

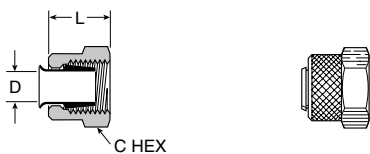
**61P Nut and Sleeve Assembly**



Part No.	Tube Size	Straight Thread	C Hex	D	L
61P-2*	1/8	5/16-24	3/8	0.130	0.34
61P-3*	3/16	3/8-24	7/16	0.192	0.37
61P-4	1/4	3/8-24	7/16	0.261	0.38
61P-5	5/16	7/16-24	1/2	0.321	0.34
61P-6	3/8	1/2-24	9/16	0.380	0.38
61P-8	1/2	11/16-20	3/4	0.514	0.44

\*Brass Sleeve

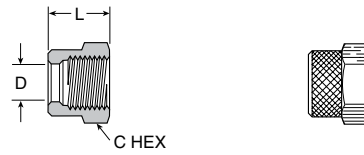
**61PB\* Nut and Sleeve Assembly**



Part No.	Tube Size	Straight Thread	C Hex	D	L
61PB-4	1/4	3/8-24	7/16	0.255	0.38
61PB-5	5/16	7/16-24	1/2	0.318	0.34
61PB-6	3/8	1/2-24	9/16	0.382	0.38
61PB-8	1/2	11/16-20	3/4	0.507	0.44

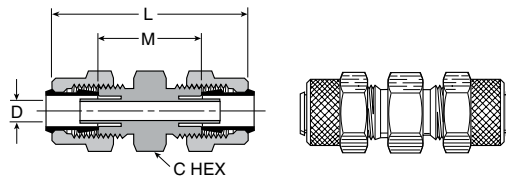
\*Brass Sleeve

**61PN Nut**



Part No.	Tube Size	Straight Thread	C Hex	L
61PN-2	1/8	5/16-24	3/8	0.34
61PN-3	3/16	3/8-24	7/16	0.37
61PN-4	1/4	3/8-24	7/16	0.38
61PN-5	5/16	7/16-24	1/2	0.34
61PN-6	3/8	1/2-24	9/16	0.38
61PN-8	1/2	11/16-20	3/4	0.44

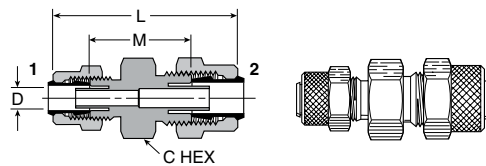
**62P Union**



Part No.	Tube Size	Straight Thread	C Hex	L	M	Flow Dia. D
62P-2*	1/8	5/16-24	5/16	1.08	0.64	0.094
62P-3*	3/16	3/8-24	3/8	1.16	0.73	0.125
62P-4	1/4	3/8-24	3/8	1.17	0.96	0.125
62P-5	5/16	7/16-24	7/16	1.16	0.96	0.144
62P-6	3/8	1/2-24	1/2	1.23	0.99	0.204
62P-8	1/2	11/16-20	11/16	1.47	1.24	0.323

\*Brass Sleeve, No Tube Support

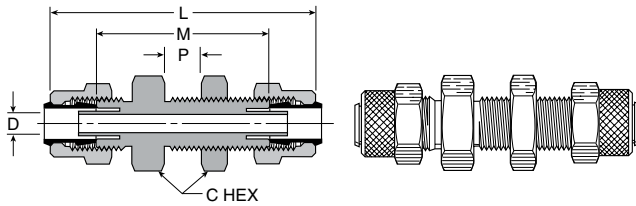
**62P Union Reducer**



Part No.	1 Tube Size	2 Tube Size	1 Straight Thread	2 Straight Thread	C Hex	L	M	Flow Dia. D
62P-6-4	1/4	3/8	3/8-24	1/2-24	1/2	1.22	0.99	0.125

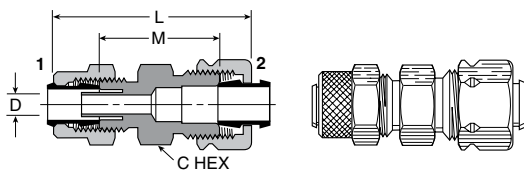
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**62PBH Bulkhead Union**



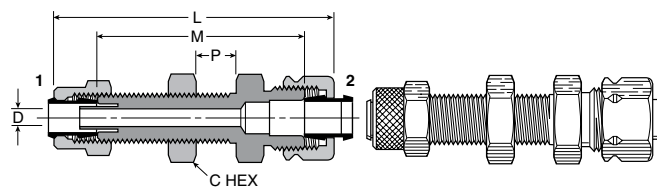
Part No.	Tube Size	Straight Thread	C Hex	P Max.	L	M	Bulkhead Hole Dia.	Flow Dia. D
62PBH-4	1/4	3/8-24	9/16	0.38	1.75	1.53	3/8	0.125
62PBH-5	5/16	7/16-24	5/8	0.38	1.71	1.52	7/16	0.144
62PBH-6	3/8	1/2-24	11/16	0.47	1.89	1.65	1/2	0.204
62PBH-8	1/2	11/16-20	7/8	0.63	2.28	2.05	11/16	0.323

**62PCA Union (Tube to CA Fitting)**



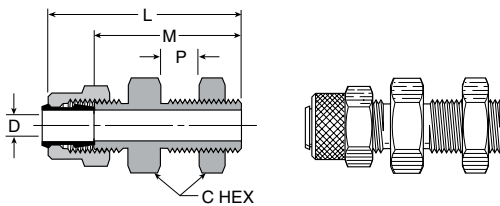
Part No.	Tube Size	Straight Thread 1	Straight Thread 2	C Hex	L	M	Flow Dia. D
62PCA-4	1/4	3/8-24	7/16-24	7/16	1.25	0.89	0.125
62PCA-5	5/16	7/16-24	1/2-24	1/2	1.30	0.92	0.144
62PCA-6	3/8	1/2-24	9/16-24	9/16	1.37	0.98	0.204

**62PCABH Bulkhead Union (Tube to CA Fitting)**



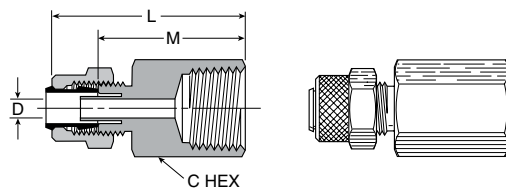
Part No.	Tube Size	Straight Thread 1	Straight Thread 2	C Hex	P Max.	L	M	Bulkhead Hole Dia.	Flow Dia. D
62PCABH-4	1/4	3/8-24	7/16-24	9/16	0.38	1.81	1.45	3/8	0.125
62PCABH-6	3/8	1/2-24	9/16-24	11/16	0.47	2.03	1.64	1/2	0.204

**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	0.31	1.19	0.93	3/8	0.260
62PTBH-5	5/16	7/16-24	5/8	0.31	1.19	0.93	7/16	0.323
62PTBH-6	3/8	1/2-24	11/16	0.34	1.26	0.99	1/2	0.387

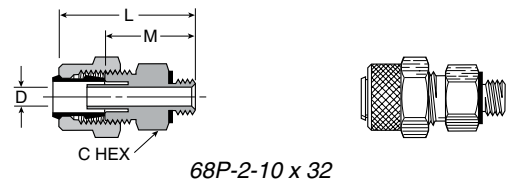
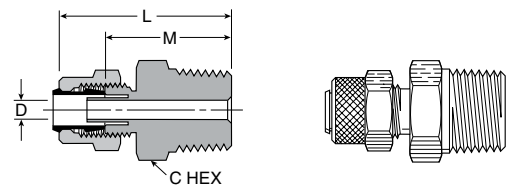
**66P Female Connector**



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	0.97	0.75	0.094
66P-3-2*	3/16	1/8	3/8-24	9/16	1.00	0.78	0.125
66P-3-4*	3/16	1/4	3/8-24	11/16	1.18	0.96	0.125
66P-4-2	1/4	1/8	3/8-24	1/2	0.97	0.86	0.125
66P-4-4	1/4	1/4	3/8-24	5/8	1.18	1.07	0.125
66P-5-2	5/16	1/8	7/16-24	1/2	0.97	0.86	0.144
66P-6-4	3/8	1/4	1/2-24	5/8	1.18	1.07	0.204
66P-8-6	1/2	3/8	11/16-20	13/16	1.31	1.20	0.323

\*Brass Sleeve, No Tube Support

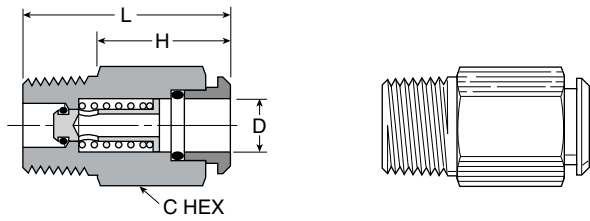
**68P Male Connector**



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	0.78	0.094
68P-2-2*	1/8	1/8	5/16-24	7/16	0.99	0.77	0.094
68P-3-1	3/16	1/16	3/8-24	7/16	1.09	0.84	0.094
68P-3-2*	3/16	1/8	3/8-24	7/16	1.06	0.84	0.125
68P-3-4*	3/16	1/4	3/8-24	9/16	1.25	1.03	0.125
68P-4-1	1/4	1/16	3/8-24	3/8	1.06	0.95	0.125
68P-4-2	1/4	1/8	3/8-24	7/16	1.06	0.95	0.125
68P-4-4	1/4	1/4	3/8-24	9/16	1.25	1.14	0.125
68P-4-6	1/4	3/8	3/8-24	11/16	1.28	1.17	0.125
68P-5-2	5/16	1/8	7/16-24	7/16	1.05	0.95	0.144
68P-5-4	5/16	1/4	7/16-24	9/16	1.24	1.14	0.144
68P-6-2	3/8	1/8	1/2-24	1/2	1.10	0.98	0.204
68P-6-4	3/8	1/4	1/2-24	9/16	1.29	1.17	0.204
68P-6-6	3/8	3/8	1/2-24	11/16	1.29	1.17	0.204
68P-8-4	1/2	1/4	11/16-20	11/16	1.46	1.29	0.320
68P-8-6	1/2	3/8	11/16-20	11/16	1.37	1.29	0.323
68P-2-10 x 32*	1/8	10-32	5/16-24	3/8	0.86	0.64	0.094
68P-4-10 x 32	1/4	10-32	3/8-24	3/8	0.86	0.75	0.094

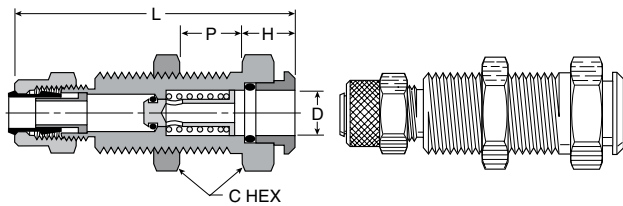
\*Brass Sleeve, No Tube Support

**391P Pipe Coupler Body** (Chrome Plated)



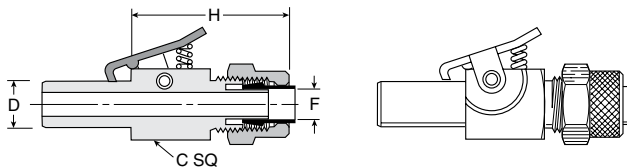
Part No.	D Insert Dia.	Pipe Thread	C Hex	H	L
391P-4-2	1/4	1/8	1/2	0.91	1.29
391P-4-4	1/4	1/4	9/16	0.73	1.29
391P-6-4	3/8	1/4	5/8	0.85	1.41

**392P Bulkhead Coupler Body** (Chrome Plated)



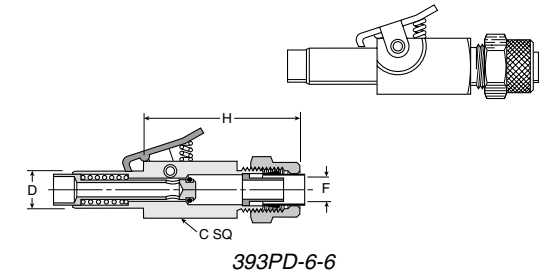
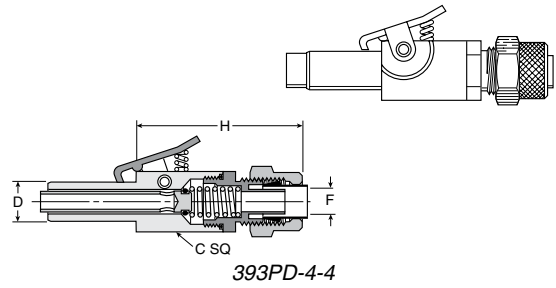
Part No.	Tube Size	D Insert Dia.	Straight Thread	C Hex	P Max.	H	L	Bulkhead Hole Dia.
392P-4-4	1/4	1/4	1/2-24	5/8	0.84	0.39	2.13	1/2
392P-6-6	3/8	3/8	11/16-24	13/16	0.93	0.37	2.01	11/16

**393P Through Type Insert** (Chrome Plated)



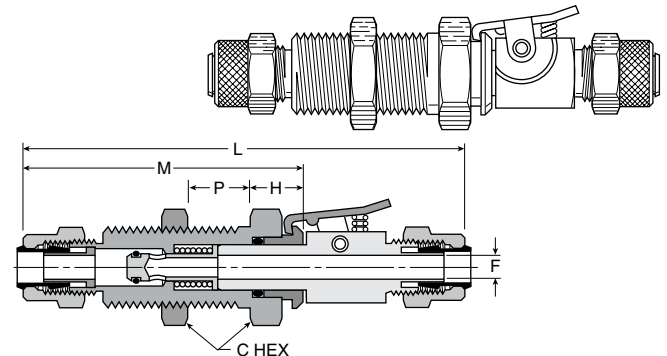
Part No.	Tube Size	D Insert Dia.	Straight Thread	C Square	H	Flow Dia. F
393P-4-4	1/4	1/4	3/8-24	7/16	1.12	0.125
393P-6-6	3/8	3/8	1/2-24	1/2	1.34	0.203

**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	0.110
393PD-6-6	3/8	3/8	1/2-24	1/2	1.45	0.187

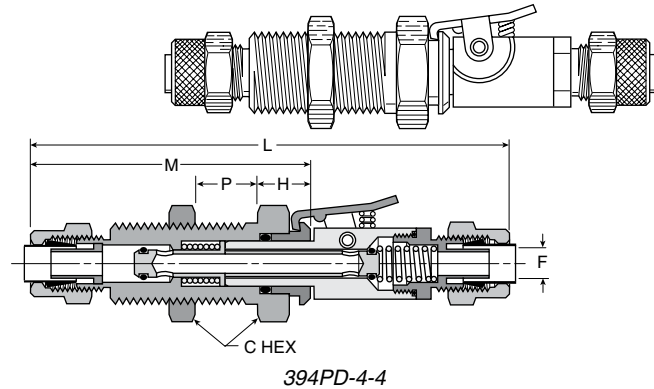
**394P Single End Shut-off Bulkhead Quick Coupler<sup>‡</sup>** (Chrome Plated)



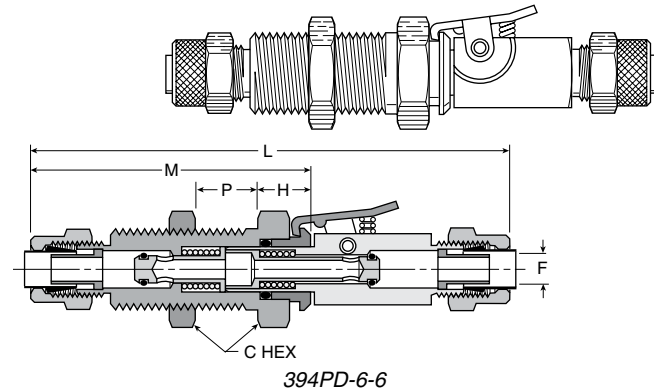
Part No.	Tube Size	Straight Thread	C Hex	P Max.	H	L	M	Bulkhead Hole Dia.	Flow Dia. F
394P-4-4	1/4	1/2 - 24	5/8	0.84	0.39	3.28	2.13	1/2	0.125
394P-6-6	3/8	11/16-24	13/16	0.93	0.37	3.41	2.01	11/16	0.203

<sup>‡</sup> Same as 392P-\*\*-\* and 393P-\*\*-\* Assembled.

**394PD Double End Shut-off Bulkhead Quick Coupler<sup>‡</sup> (Chrome Plated)**



394PD-4-4

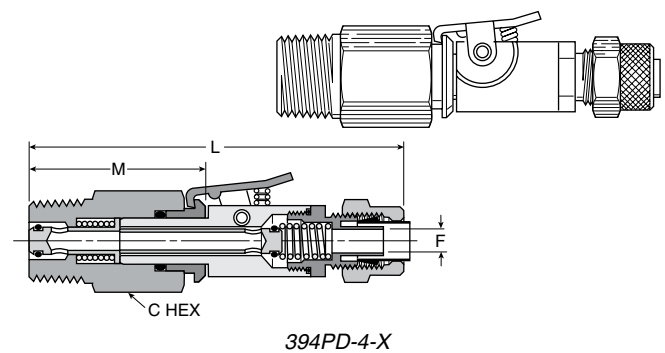


394PD-6-6

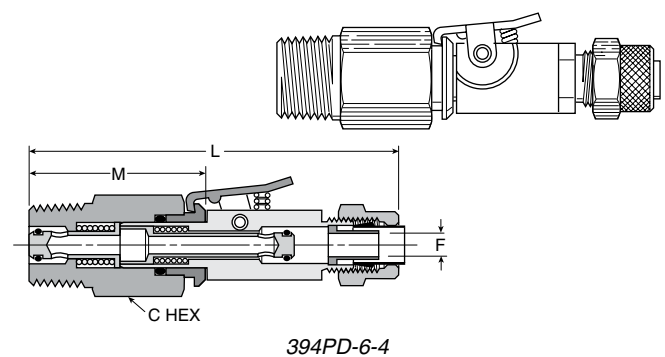
Part No.	Tube Size	Straight Thread	C Hex	P Max.	H	L	M	Bulk-head Hole Dia.	Flow Dia. F
394PD-4-4	1/4	1/2-24	5/8	0.84	0.39	3.77	2.13	1/2	0.125
394PD-6-6	3/8	11/16-24	13/16	0.93	0.47	3.48	2.01	11/16	0.204

‡ Same as 393PD-\*-\* and 392P-\*-\* Assembled.

**398PD Double End Shut-off Pipe Connector Quick Coupler<sup>‡</sup> (Chrome Plated)**



394PD-4-X

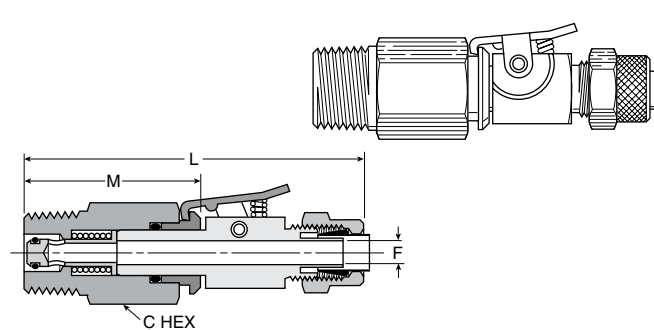


394PD-6-4

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	0.125
398PD-4-4	1/4	1/4	3/8-24	9/16	2.93	1.32	0.125
398PD-6-4	3/8	1/4	1/2-24	5/8	3.10	1.43	0.204

‡ Same as 391P-\*-\* and 393PD-\*-\* Assembled.

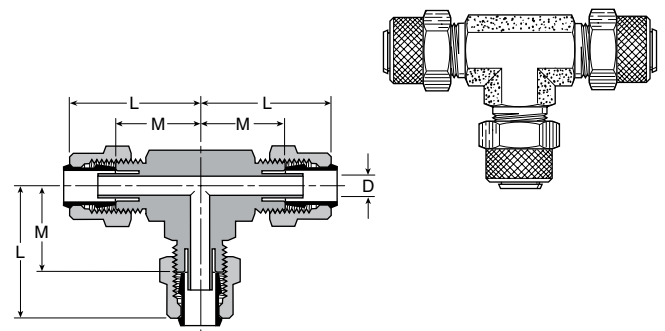
**398P Single End Shut-off Pipe Connector Quick Coupler<sup>‡</sup> (Chrome Plated)**



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	0.125
398P-4-4	1/4	1/4	3/8-24	9/16	2.45	1.32	0.125
398P-6-4	3/8	1/4	1/2-24	5/8	2.80	1.46	0.203

‡ Same as 391P-\*-\* and 393P-\*-\* Assembled.

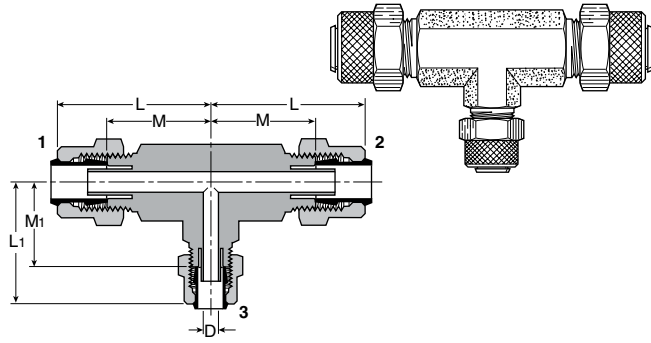
**164P-264P Union Tee**



Part No.	Tube Size	Straight Thread	L	M	Flow Dia. D
164P-2*	1/8	5/16-24	0.83	0.61	0.094
264P-3*	3/16	3/8-24	0.83	0.61	0.125
164P-4	1/4	3/8-24	0.84	0.73	0.125
164P-5	5/16	7/16-24	0.83	0.73	0.144
164P-6	3/8	1/2-24	0.98	0.86	0.203
164P-8	1/2	11/16-20	1.12	1.04	0.323

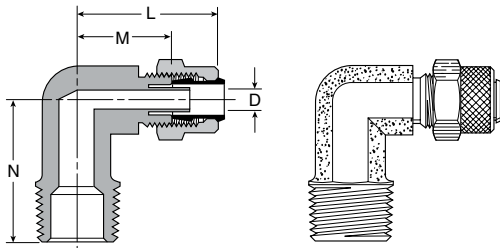
\*Brass Sleeve, No Tube Support

164P Union Tee Combination Size



Part No.	1 Tube Size	2 Tube Size	3 Tube Size	L	L <sub>1</sub>	M	M <sub>1</sub>	Flow Dia. D
164P-6-4A	3/8	3/8	1/4	0.98	0.90	0.86	0.79	0.125

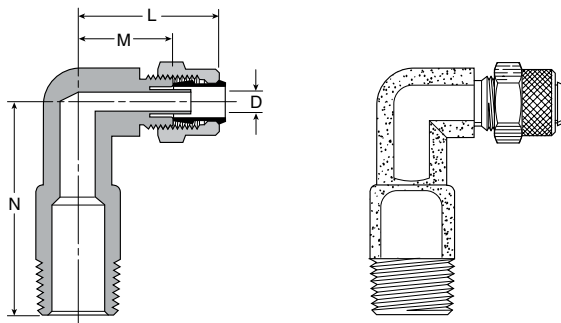
169P-269P Male Elbow



Part No.	Tube Size	Pipe Thread	Straight Thread	L	M	N	Flow Dia. D
169P-2-1	1/8	1/16	5/16-24	0.88	0.63	0.69	0.094
269P-2-2*	1/8	1/8	5/16-24	0.83	0.61	0.67	0.094
169P-3-1	3/16	1/16	3/8-24	0.88	0.63	0.69	0.094
169P-3-2*	3/16	1/8	3/8-24	0.83	0.61	0.69	0.125
169P-3-4*	3/16	1/4	3/8-24	0.85	0.63	0.94	0.125
169P-4-1	1/4	1/16	3/8-24	0.92	0.58	0.67	0.130
169P-4-2	1/4	1/8	3/8-24	0.84	0.73	0.75	0.121
169P-4-4	1/4	1/4	3/8-24	0.90	0.79	0.92	0.125
169P-4-6	1/4	3/8	3/8-24	0.93	0.84	1.08	0.125
169P-5-2	5/16	1/8	7/16-24	0.87	0.73	0.68	0.144
169P-6-2	3/8	1/8	1/2-24	0.93	0.81	0.73	0.203
169P-6-4	3/8	1/4	1/2-24	0.98	0.86	1.05	0.203
169P-6-6	3/8	3/8	1/2-24	0.98	0.86	1.08	0.203
169P-8-6	1/2	3/8	11/16-20	1.12	1.04	1.13	0.323

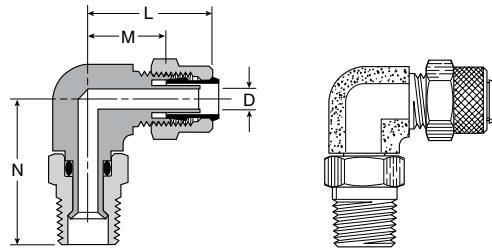
\*Brass Sleeve, No Tube Support

169LP Long Male Elbow



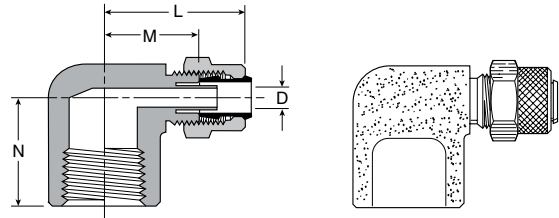
Part No.	Tube Size	Pipe Thread	Straight Thread	L	M	N	Flow Dia. D
169LP-4-4	1/4	1/4	3/8-24	0.90	0.79	1.38	0.125

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	0.81	0.59	0.86	0.121
169PS-4-4	1/4	1/4	3/8-24	9/16	9/16	0.91	0.69	1.22	0.125
169PS-6-2	3/8	1/8	1/2-24	7/16	7/16	0.88	0.63	0.90	0.203
169PS-6-4	3/8	1/4	1/2-24	9/16	9/16	0.94	0.69	1.22	0.203
169PS-6-6	3/8	3/8	1/2-24	9/16	11/16	0.86	0.60	1.19	0.203
169PS-8-6	1/2	3/8	11/16-20	1/2	11/16	1.03	0.78	1.22	0.323

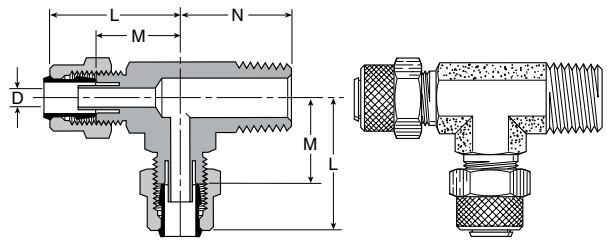
170P Female Elbow



Part No.	Tube Size	Pipe Thread	Straight Thread	L	M	N	Flow Dia. D
170P-2-2*	1/8	1/8	5/16-24	0.91	0.69	0.56	0.094
170P-3-2*	3/16	1/8	3/8-24	0.91	0.69	0.56	0.125
170P-4-2	1/4	1/8	3/8-24	0.90	0.79	0.56	0.125
170P-4-4	1/4	1/4	3/8-24	1.00	0.89	0.69	0.125
170P-6-4	3/8	1/4	1/2-24	1.01	0.89	0.69	0.204
170P-8-6	1/2	3/8	11/16-20	1.19	1.11	1.13	0.323

\*Brass Sleeve, No Tube Support

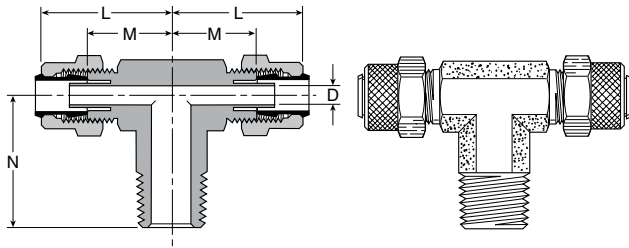
171P Male Run Tee



Part No.	Tube Size	Pipe Thread	Straight Thread	L	M	N	Flow Dia. D
171P-2-2*	1/8	1/8	5/16-24	0.82	0.60	0.67	0.094
171P-3-2*	3/16	1/8	3/8-24	0.82	0.60	0.67	0.125
171P-4-2	1/4	1/8	3/8-24	0.84	0.73	0.72	0.125
171P-4-4	1/4	1/4	3/8-24	0.92	0.81	0.92	0.125
171P-5-2	5/16	1/8	7/16-24	0.83	0.73	0.72	0.144
171P-6-4	3/8	1/4	1/2-24	0.98	0.86	1.03	0.203
171P-8-6	1/2	3/8	11/16-20	1.12	1.04	1.13	0.323

\*Brass Sleeve, No Tube Support

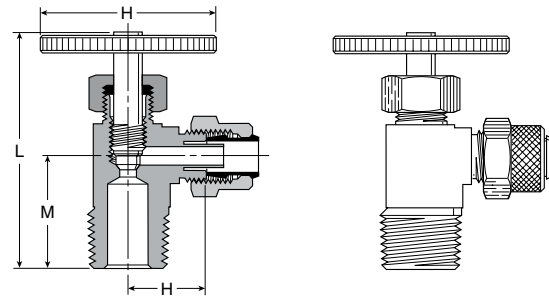
172P Male Branch Tee



Part No.	Tube Size	Pipe Thread	Straight Thread	L	M	N	Flow Dia. D
172P-2-2*	1/8	1/8	5/16-24	0.82	0.60	0.67	0.094
172P-3-2*	3/16	1/8	3/8-24	0.82	0.60	0.67	0.125
172P-4-2	1/4	1/8	3/8-24	0.84	0.73	0.72	0.125
172P-4-4	1/4	1/4	3/8-24	0.92	0.81	0.92	0.125
172P-5-2	5/16	1/8	7/16-24	0.83	0.73	0.72	0.144
172P-6-2	3/8	1/8	1/2-24	0.88	0.86	0.74	0.204
172P-6-4	3/8	1/4	1/2-24	0.98	0.86	1.03	0.204
172P-8-6	1/2	3/8	1 1/16-20	1.12	1.04	1.13	0.323

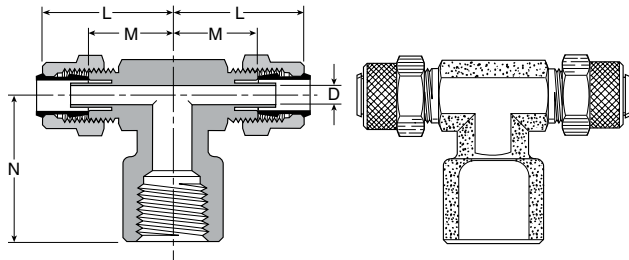
\*Brass Sleeve, No Tube Support

NV312P Angle Needle Valve



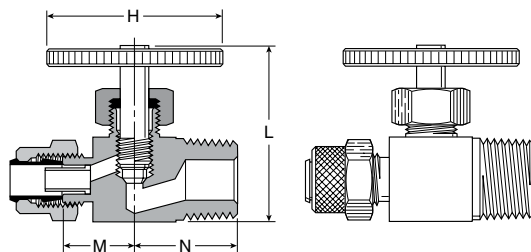
Part No.	Tube Size	Pipe Thread	H	L		M	N
				Open	Closed		
NV312P-4-2	1/4	1/8	1.06	1.70	1.50	0.63	0.68
NV312P-4-4	1/4	1/4	1.06	2.07	1.82	0.71	0.86
NV312P-6-4	3/8	1/4	1.06	2.00	1.75	0.74	0.86

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	0.92	0.81	0.88	0.125
177P-4-4	1/4	1/4	3/8-24	0.92	0.81	1.03	0.125
177P-4-6	1/4	3/8	3/8-24	1.03	0.92	1.13	0.125

NV311P Needle Valve



Part No.	Tube Size	Pipe Thread	H	L		M	N
				Open	Closed		
NV311P-4-2	1/4	1/8	1.06	1.36	1.16	0.64	0.63
NV311P-4-4	1/4	1/4	1.06	1.38	1.18	0.64	0.72
NV311P-6-4	3/8	1/4	1.06	1.38	1.18	0.64	0.72