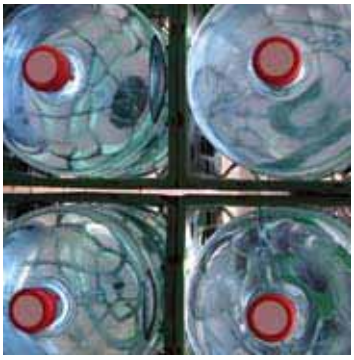

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The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.

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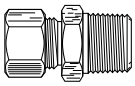
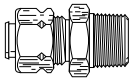
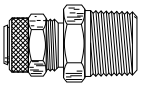
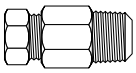
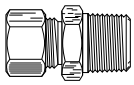
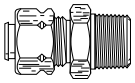
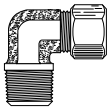
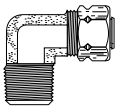
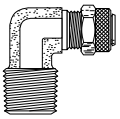
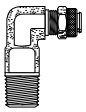
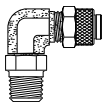
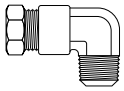
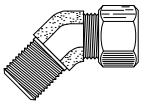
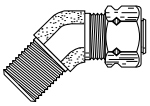
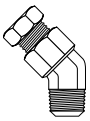
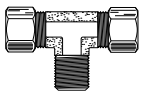
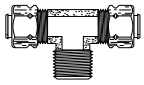
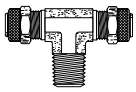
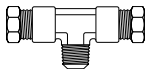
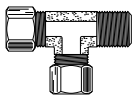
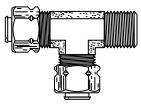
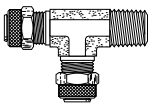
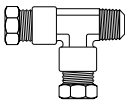
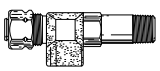
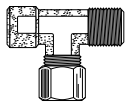
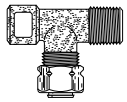
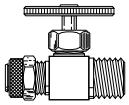
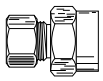
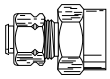
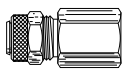
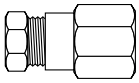
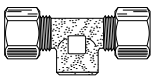
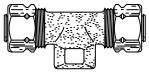
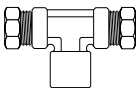
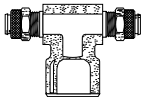
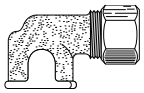
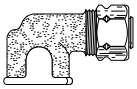
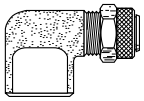
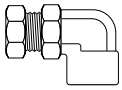
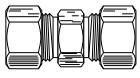
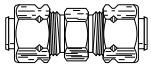
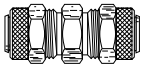
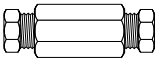
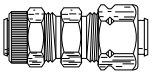
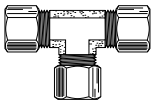
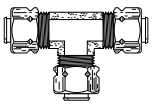
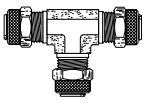
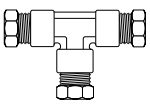
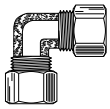
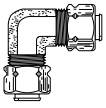
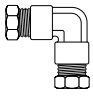
Tube to Male NPTF	**68C** Male Connector  Page A8	**68CA** Male Connector  Page A16	**68P** Male Connector  Page A34	**68HD** Male Connector  Page A44	**682C** Tank Fitting  Page A12	**682CA** Tank Fitting  Page A19
169C-269C Male Elbow  Page A10	**169CA-269CA** Male Elbow  Page A17	**169P/269P** Male Elbow  Page A39	**169LP** Long Elbow  Page A39	**169PS** Male Elbow  Page A39	**169HD** Male Elbow  Page A44	**179C** 45° Male Elbow  Page A11
179CA 45° Male Elbow  Page A19	**179HD** 45° Male Elbow  Page A45	**172C** Male Branch Tee  Page A11	**172CA** Male Branch Tee  Page A18	**172P** Male Branch Tee  Page A40	**172HD** Male Branch Tee  Page A45	**171C** Male Run Tee  Page A10
171CA Male Run Tee  Page A18	**171P** Male Run Tee  Page A40	**171HD** Male Run Tee  Page A45	**168C** Gauge Tee  Page A9	**168CA** Gauge Tee  Page A17	**176C** Adaptor  Page A11	**176CA** Adaptor  Page A18
NV311P Needle Valve  Page A41	**NV312P** Needle Valve  Page A41	**Tube to Female NPT**	**66C** Female Connector  Page A8	**66CA** Female Connector  Page A15	**66P** Female Connector  Page A33	**66HD** Female Connector  Page A44
177C Female Tee  Page A11	**177CA** Female Tee  Page A18	**177HD** Female Tee  Page A46	**177P** Female Tee  Page A40	**170C-270C** Female Elbow  Page A10	**170CA-270CA** Female Elbow  Page A18	**170P** Female Elbow  Page A40
170HD Female Elbow  Page A45	**Tube to Tube**	**62C** Union  Page A7	**62CA** Union  Page A14	**62P** Union  Page A32	**62HD** Union  Page A43 & 44	**62PCA** Union  Page A15, A32
164C-264C Union Tee  Page A9	**164CA-264CA** Union Tee  Page A16	**164P** Union Tee  Page A38	**164HD** Union Tee  Page A43	**165C-265C** Union Elbow  Page A9	**165CA-265CA** Union Elbow  Page A17	**165HD** Union Elbow  Page A43

Parker Hannifin Corporation
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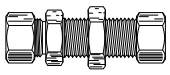
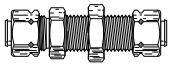
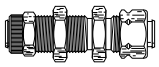
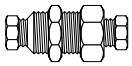
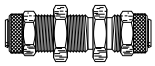
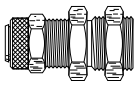
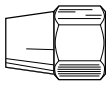
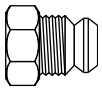
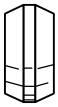
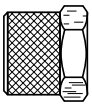
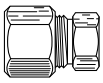
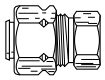
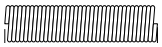
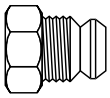
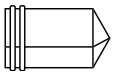
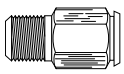
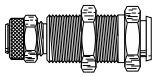
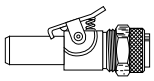
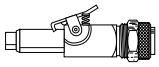
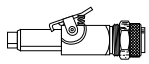
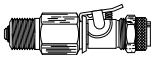
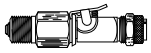
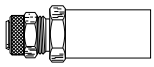
Bulkhead Unions	**62CBH** Bulkhead Union  Page A7	**62CABH** Bulkhead Union  Page A14	**62PCABH** Bulkhead Union  Page A15, A33	**62HDBH** Bulkhead Union  Page A43	**62PBH** Bulkhead Union  Page A32	**62PTBH** Bulkhead Union  Page A33
Auxiliary Components	**61C** Nut  Page A6	**61CL** Long Nut  Page A6	**61CA** Nut/Sleeve  Page A14	**61HD** Nut/Sleeve  Page A43	**61P** Nut/Plastic Sleeve  Page A31	**61PB** Nut/Brass Sleeve  Page A31
61PN Nut Only  Page A31	**60C** Sleeve  Page A6	**60PT** Plastic Sleeve  Page A6	**60P** Plastic Sleeve  Page A31	**60PB** Brass Sleeve  Page A31	**61PSGN** Spring Gaurd Nut  Page A32	**63PT** Tube Support  Page A7, A15
639C Seal Plug  Page A12	**59CA** Plug  Page A14	**639CA** Seal Plug  Page A19	**56PSG** Spring Gaurd  Page A31	**59HD** Plug  Page A46	**59P** Plug  Page A31	
Couplers	**391P & 391PSS** Coupler Body  Page A34	**392P & 392PSS** Bulkhead Body  Page A35	**393P & 393PSS** Through Insert  Page A35	**393PD & 393PDSS** Shutoff Insert  Page A35, A36	**394P & 394PSS** Single Shutoff  Page A36	**394PD & 394PDSS** Double Shutoff  Page A36, A37
398P & 398PSS Single Shutoff  Page A37	**398PD & 398PDSS** Double Shutoff  Page A38	**Tube Stub**	**97P** Tube End Reducer  Page A34			

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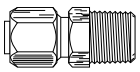
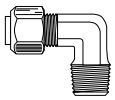
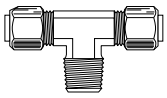
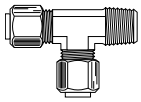
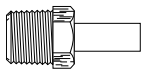
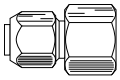
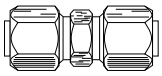
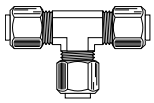
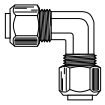
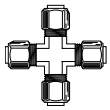
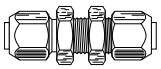
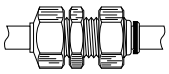
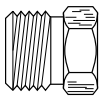
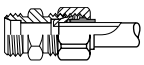
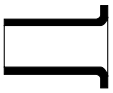
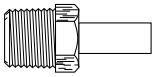
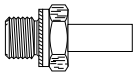
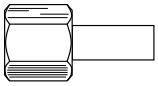
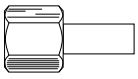
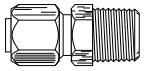
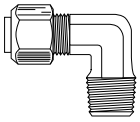
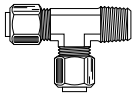
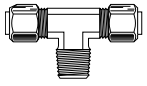
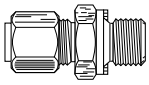
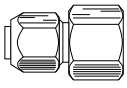
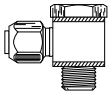
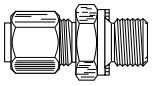
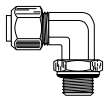
Metric Tube to Male NPTF	**FBMB** Male Connector  Page A21	**CBMB** Male Elbow  Page A23	**SBMB** Male Branch Tee  Page A25	**RBMB** Male Run Tee  Page A24	**T2HFB** Tube End Adaptor  Page A26	
Metric Tube to Female NPT	**GBMB** Female Connector  Page A22	**Metric Tube to Metric Tube**	**HBMB** Union  Page A22	**JBMB** Union Tee  Page A24	**EBMB** Union Elbow  Page A24	**KBMB** Union Cross  Page A25
Metric Bulkhead Unions	**WBMB** Bulkhead Union  Page A22	**WBMPB** Bulkhead Union  Page A23	**Metric Auxiliary Components**	**BMB** Nut  Page A27	**BTMB** Nut/Sleeve  Page A28	**TMB** Sleeve  Page A28
FNMB Cap  Page A28	**PNMB** Plug  Page A28	**TRBMB** Tube End Reducer  Page A29	**T23UB** Tube Support  Page A29	**Metric Tube Stubs**	**T23HFB** Tube Stub/BSPT  Page A26	**T28HFB** Tube Stub Metric Straight Thread  Page A26
T2HGB Female Tube Stub  Page A27	**T24HGB** Female BSPP  Page A27	**Metric Tube to BSPT**	**F3BMB** Male Connector  Page A21	**C3BMB** Male Elbow  Page A23	**R3BMB** Male Run Tee  Page A24	**S3BMB** Male Branch Tee  Page A25
Metric Tube to BSPP	**F4BMB** Male Connector  Page A21	**G4BMB** Female Connector  Page A22	**COR4BMB** Single Banjo  Page A25	**Metric Tube to Metric Straight Thread**	**F8BMB** Male Connector  Page A21	**C8BMB** Male Elbow  Page A23

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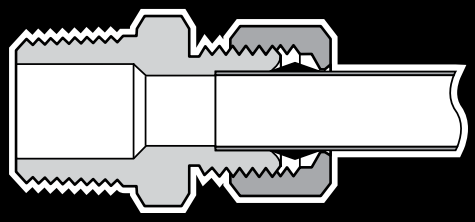


Compression Fittings

Advantages
No flaring, soldering or other preparation of tubing necessary to assemble. This economical fitting is readily available in a broad selection of styles. Manufactured from CA 360, CA 345 or CA 377 brass.

Specifications
Listed with Underwriter's Laboratories for flammable liquid. Compression fittings meet functional requirements of SAE J-512. Refer to list of UL listed fittings on page M10 for specific configurations.

Applications
Use with annealed copper, aluminum, and Parflex thermoplastic tubing. Not recommended for steel tubing. Manufactured for low and medium pressure tubing connection work where excessive vibration or tube movement is not involved.

Working Pressure Ranges
Temperature and type of tubing used are important factors. However, the following table is a good guide for proper selection. Temperature 73°F. For thermoplastic tubing, see manufacturers recommendation for pressure range.

PSI	Tube O.D. (Inches)	Tube Wall (Inches)
400	1/8	.030
400	3/16	.030
300	1/4	.030
300	5/16	.032
200	3/8	.032
200	1/2	.032
150	5/8	.035
100	3/4	.035
75	7/8	.035

Temperature Ranges
From -65° to +250°F with soft metal tubing. For thermoplastic tubing, see manufacturers recommendation for tubing temperature range.

Vibration
Fair resistance to vibration or tube movement, depending on applications involved. Use long nut for additional resistance to vibration.

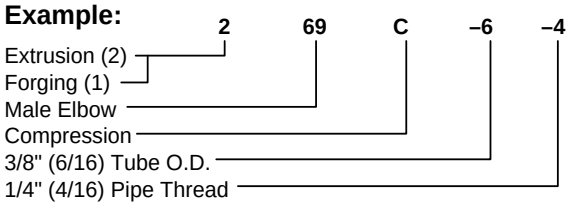
Assembly Instructions
1. Slide nut, then sleeve onto tubing. The thread end of the nut must face out.
2. Insert the tube into the fitting. Be sure the tube is bottomed on the fitting shoulder.
3. Assemble nut to body, and tighten "hand-tight". Then follow the number of wrench turns as indicated in the following table.

Order
By part number and name.

Fitting Size	Tube Size	Turns required to seal from hand-tight	
		60C with soft metal tubing	60PT with thermoplastic tubing
2	1/8	1-1/4	—
3	3/16	1-1/4	—
4	1/4	1-1/4	2
5	5/16	1-1/4	2
6	3/8	2-1/4	2
8	1/2	2-1/4	2
10	5/8	2-1/4	2
12	3/4	2-1/4	2
14	7/8	2-1/4	—

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:



Note: To order compression assemblies with long nuts, add the letter "L" after the letter "C". Example: 62C-4 with short nut,62CL-4 with long nut

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

Special Fittings
Fitting configurations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry. Special UL stamped fittings are available. Please consult price list.

Pricing
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Sleeve 60C

Ref. SAE 060115

PART NO.	TUBE SIZE	A	D	L
60C-2	1/8	.187	.130	.19
60C-3	3/16	.266	.192	.22
60C-4	1/4	.344	.255	.25
60C-5	5/16	.406	.318	.25
60C-6	3/8	.469	.382	.25
60C-7	7/16	.531	.444	.31
60C-8	1/2	.594	.507	.38
60C-10	5/8	.719	.632	.38
60C-12	3/4	.875	.758	.44
60C-14	7/8	1.000	.883	.41

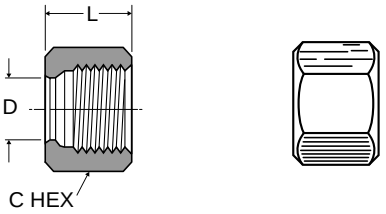
Delrin Sleeve 60PT

PART NO.	PLASTIC TUBE WALL	TUBE WALL	A	D	L
60PT-4	1/4	.040	.375	.254	.19
60PT-5	5/16	.062	.438	.317	.19
60PT-6	3/8	.062	.500	.379	.19
60PT-8	1/2	.062	.631	.507	.25
60PT-10	5/8	.062	.747	.632	.22
60PT-12	3/4	.062	.931	.760	.25

Nut 61C

Ref. SAE 060110

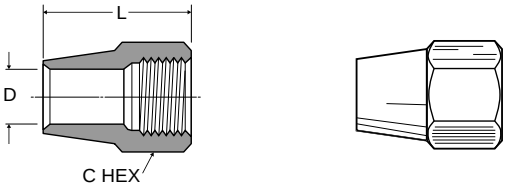
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
61C-2	1/8	5/16-24	3/8	.130	.38
61C-3	3/16	3/8-24	7/16	.192	.41
61C-4	1/4	7/16-24	1/2	.255	.44
61C-5	5/16	1/2-24	9/16	.318	.44
61C-6	3/8	9/16-24	5/8	.382	.47
61C-7	7/16	5/8-24	11/16	.444	.50
61C-8	1/2	11/16-20	13/16	.507	.62
61C-10	5/8	13/16-18	15/16	.632	.62
61C-12	3/4	1-18	1-3/16	.758	.69
61C-14	7/8	1-1/8-18	1-1/4	.890	.62



Long Nut 61CL

Ref. SAE 060111

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
61CL-4	1/4	7/16-24	1/2	.255	.75
61CL-5	5/16	1/2-24	9/16	.318	.84
61CL-6	3/8	9/16-24	5/8	.382	.97
61CL-8	1/2	11/16-20	13/16	.507	1.06
61CL-10	5/8	13/16-18	15/16	.632	1.19
61CL-12	3/4	1-18	1-3/16	.758	1.38

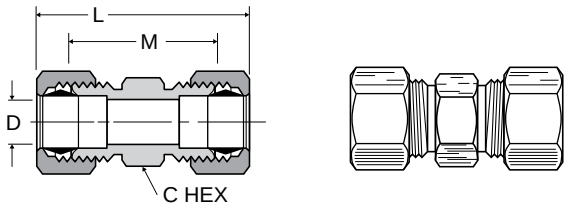


Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Union 62C

Ref. SAE 060101 BA

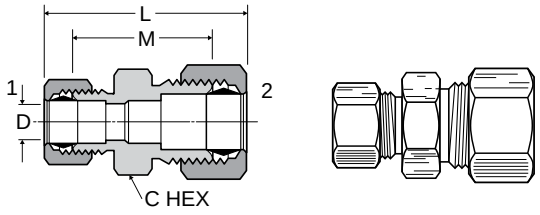
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
62C-2	1/8	5/16-24	5/16	1.05	.64	.094
62C-3	3/16	3/8-24	3/8	1.21	.72	.125
62C-4	1/4	7/16-24	7/16	1.33	.79	.188
62C-5	5/16	1/2-24	1/2	1.39	.85	.250
62C-6	3/8	9/16-24	9/16	1.52	.97	.312
62C-7	7/16	5/8-24	5/8	1.70	1.02	.312
62C-8	1/2	11/16-20	11/16	1.90	1.08	.406
62C-10	5/8	13/16-18	13/16	2.06	1.23	.500
62C-12	3/4	1-18	1	2.37	1.41	.562
62C-14	7/8	1-1/8-18	1-1/8	2.07	1.19	.766



Union Reducers 62C

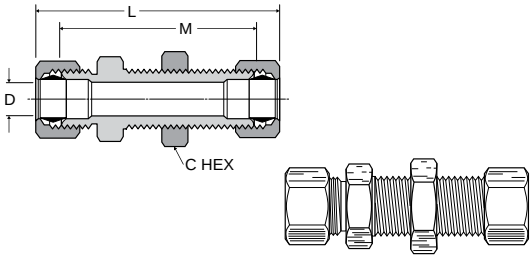
Ref. SAE 060101 BA

PART NO.	1 TUBE SIZE	2 TUBE SIZE	1 STRAIGHT THREAD	2 STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
62C-4-3	3/16	1/4	3/8-24	7/16-24	7/16	1.29	.78	.125
62C-6-4	1/4	3/8	7/16-24	9/16-24	9/16	1.46	.91	.188
62C-8-6	3/8	1/2	9/16-24	11/16-20	11/16	1.71	1.03	.312
62C-10-6	3/8	5/8	9/16-24	13/16-18	13/16	1.82	1.13	.312



Bulkhead Union 62CBH

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M	BULKHEAD HOLE DIA.	FLOW DIA. D
62CBH-4	1/4	7/16-24	9/16	2.29	1.75	7/16	.188
62CBH-6	3/8	9/16-24	11/16	2.42	1.88	9/16	.312

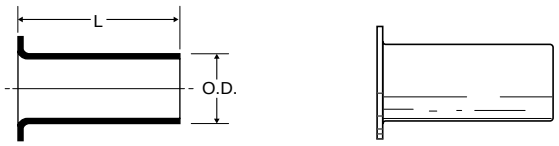


Brass Insert 63PT

(For industrial grade plastic tubing)

PART NO.	TUBE O.D.	TUBE WALL	L	O.D.
63PT-2-16	1/8	.016	.46	.080
63PT-2-23	1/8	.023	.45	.073
63PT-2-32	1/8	.032	.31	.061
63PT-3-25	3/16	.025	.45	.135
63PT-3-40	3/16	.040	.52	.095
63PT-4-40	1/4	.040	.50	.163
63PT-4-62	1/4	.062	.33	.110
63PT-5-40	5/16	.040	.50	.232
63PT-5-62	5/16	.062	.53	.187
63PT-6-62	3/8	.062	.56	.250
63PT-8-62	1/2	.062	.72	.370
63PT-10-62	5/8	.062	.72	.483

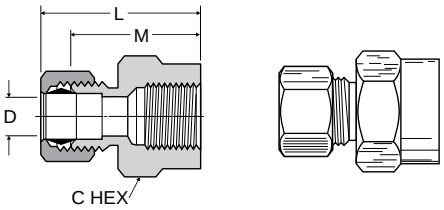
For plastic tubing
Derlin Sleeve 60PT and Brass Insert 63PT converts standard compression fittings for use with industrial grades of thermoplastic tubing.



Female Connector 66C

Ref. SAE 060103 BA

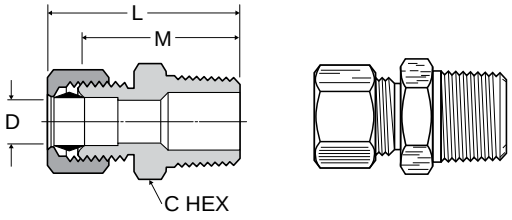
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
66C-2-2	1/8	1/8	5/16-24	9/16	.95	.75	.094
66C-3-2	3/16	1/8	3/8-24	9/16	1.02	.78	.125
66C-3-4	3/16	1/4	3/8-24	11/16	1.20	.96	.125
66C-4-2	1/4	1/8	7/16-24	9/16	1.02	.78	.188
66C-4-4	1/4	1/4	7/16-24	11/16	1.24	1.00	.188
66C-5-2	5/16	1/8	1/2-24	9/16	1.07	.81	.250
66C-5-4	5/16	1/4	1/2-24	11/16	1.29	1.03	.250
66C-6-2	3/8	1/8	9/16-24	9/16	1.06	.78	.312
66C-6-4	3/8	1/4	9/16-24	11/16	1.34	1.06	.312
66C-6-6	3/8	3/8	9/16-24	13/16	1.34	1.06	.312
66C-6-8	3/8	1/2	9/16-24	1	1.54	1.27	.312
66C-7-6	7/16	3/8	5/8-24	13/16	1.43	1.09	.312
66C-8-4	1/2	1/4	11/16-20	11/16	1.49	1.09	.406
66C-8-6	1/2	3/8	11/16-20	13/16	1.52	1.12	.406
66C-8-8	1/2	1/2	11/16-20	1	1.71	1.31	.406
66C-10-8	5/8	1/2	13/16-18	1	1.80	1.38	.500



Male Connector 68C

Ref. SAE 060102 BA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
68C-2-1	1/8	1/16	5/16-24	11/32	.99	.78	.095
68C-2-2	1/8	1/8	5/16-24	7/16	.97	.77	.094
68C-3-1	3/16	1/16	3/8-24	3/8	1.08	.84	.125
68C-3-2	3/16	1/8	3/8-24	7/16	1.08	.84	.125
68C-3-4	3/16	1/4	3/8-24	9/16	1.27	1.03	.125
68C-4-2	1/4	1/8	7/16-24	7/16	1.10	.86	.188
68C-4-4	1/4	1/4	7/16-24	9/16	1.30	1.06	.188
68C-4-6	1/4	3/8	7/16-24	11/16	1.27	1.03	.188
68C-4-8	1/4	1/2	7/16-24	7/8	1.55	1.31	.188
68C-5-2	5/16	1/8	1/2-24	1/2	1.15	.89	.234
68C-5-4	5/16	1/4	1/2-24	9/16	1.33	1.07	.250
68C-6-2	3/8	1/8	9/16-24	9/16	1.25	.97	.250
68C-6-4	3/8	1/4	9/16-24	9/16	1.42	1.14	.312
68C-6-6	3/8	3/8	9/16-24	11/16	1.44	1.16	.312
68C-6-8	3/8	1/2	9/16-24	7/8	1.53	1.25	.312
68C-7-4	7/16	1/4	5/8-24	5/8	1.50	1.17	.312
68C-8-4	1/2	1/4	11/16-20	11/16	1.60	1.20	.312
68C-8-6	1/2	3/8	11/16-20	11/16	1.60	1.20	.406
68C-8-8	1/2	1/2	11/16-20	7/8	1.71	1.31	.406
68C-10-6	5/8	3/8	13/16-18	13/16	1.73	1.31	.406
68C-10-8	5/8	1/2	13/16-18	7/8	1.90	1.48	.500
68C-10-12	5/8	3/4	13/16-18	1-1/16	1.98	1.56	.500
68C-12-8	3/4	1/2	1-18	1	2.05	1.60	.562
68C-12-12	3/4	3/4	1-18	1-1/16	2.08	1.63	.656
68C-14-12	7/8	3/4	1-1/8-18	1-1/8	1.76	1.41	.750

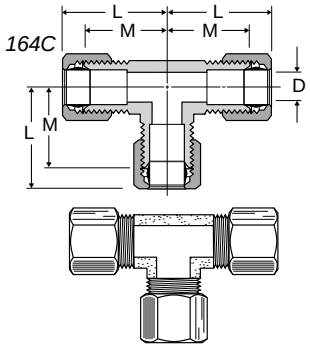


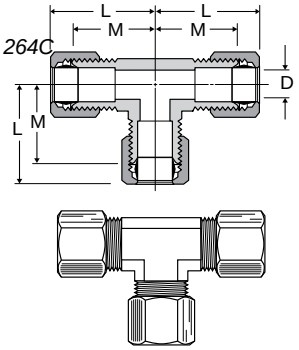
Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Union Tee 164C-264C

Ref. SAE 060401 BA

PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
164C-2	1/8	5/16-24	.82	.61	.094
264C-3	3/16	3/8-24	.84	.60	.125
164C-4	1/4	7/16-24	.86	.61	.188
264C-4	1/4	7/16-24	.84	.60	.188
164C-5	5/16	1/2-24	.98	.71	.250
164C-6	3/8	9/16-24	1.03	.74	.312
164C-8	1/2	11/16-20	1.34	.93	.406
164C-10	5/8	13/16-18	1.54	1.08	.500
164C-12	3/4	1.00-18	1.65	1.17	.560

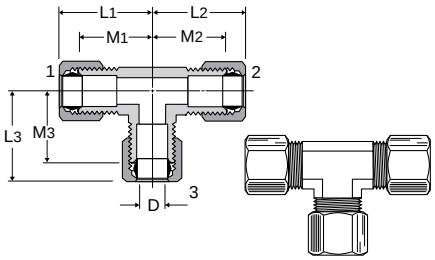




Union Tee 164C-264C Combination Sizes

Ref. SAE 060401 BA

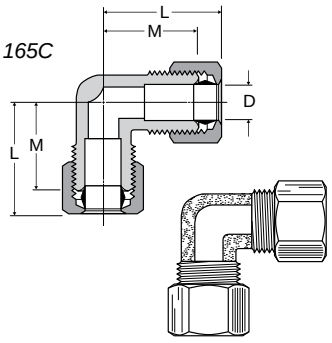
PART NO.	1 TUBE SIZE	2 TUBE SIZE	3 TUBE SIZE	L1	L2	L3	M1	M2	M3	FLOW DIA. D
164C-6-4-4	3/8	1/4	1/4	1.03	.96	.96	.75	.72	.72	.188
164C-6-6-4	3/8	3/8	1/4	1.03	.96	.96	.75	.75	.72	.188
164C-8-8-6	1/2	1/2	3/8	1.34	1.16	1.16	.94	.94	.88	.312

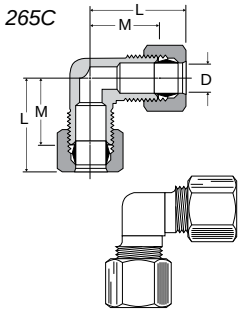


Union Elbow 165C-265C

Ref. SAE 060201 BA

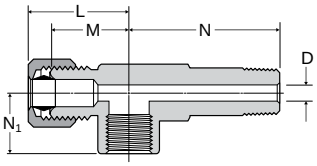
PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
165C-2	1/8	5/16-24	.82	.61	.094
165C-3	3/16	3/8-24	.87	.61	.125
165C-4	1/4	7/16-24	.88	.61	.188
265C-4	1/4	7/16-24	.84	.60	.188
165C-5	5/16	1/2-24	.95	.71	.250
165C-6	3/8	9/16-24	1.03	.74	.312
165C-7	7/16	5/3-24	1.16	.82	.312
165C-8	1/2	11/16-20	1.34	.93	.406
165C-10	5/8	13/16-18	1.48	1.05	.500
165C-12	3/4	1-18	1.65	1.17	.560

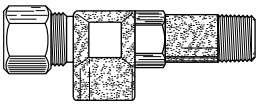




Compression Gage Tee 168C

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	N1	FLOW DIA. D
168C-4-2	1/4	1/8	7/16-24	.96	.72	1.41	.56	.188



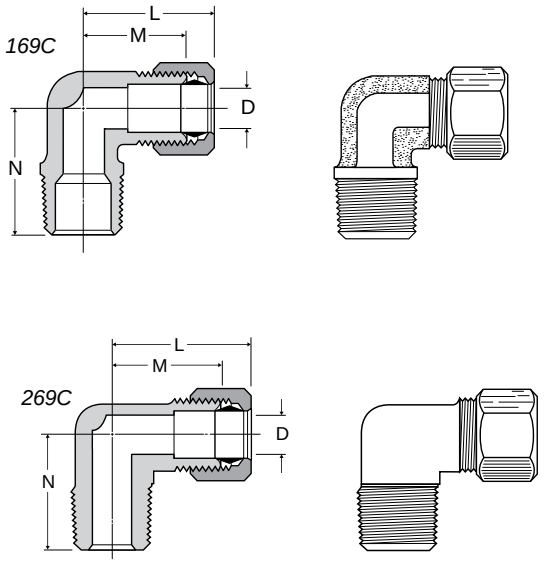


Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Male Elbow 169C-269C

Ref. SAE 060202 BA

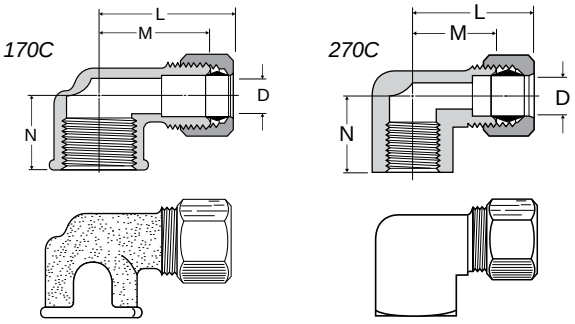
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
169C-2-1	1/8	1/16	5/16-24	.81	.60	.67	.095
269C-2-2	1/8	1/8	5/16-24	.80	.60	.67	.094
169C-3-1	3/16	1/16	3/8-24	.85	.61	.67	.126
169C-3-2	3/16	1/8	3/8-24	.84	.61	.69	.125
269C-3-2	3/16	1/8	3/8-24	.84	.60	.67	.125
169C-3-4	3/16	1/4	3/8-24	.86	.64	.93	.125
169C-4-2	1/4	1/8	7/16-24	.86	.61	.74	.188
269C-4-2	1/4	1/8	7/16-24	.84	.60	.73	.188
169C-4-4	1/4	1/4	7/16-24	.86	.62	.94	.188
269C-4-4	1/4	1/4	7/16-24	.84	.60	.79	.188
169C-4-6	1/4	3/8	7/16-24	.93	.68	1.00	.188
169C-5-2	5/16	1/8	1/2-24	.88	.61	.74	.234
269C-5-2	5/16	1/8	1/2-24	.86	.60	.73	.250
169C-5-4	5/16	1/4	1/2-24	.95	.71	.93	.250
269C-5-4	5/16	1/4	1/2-24	.93	.67	.82	.250
169C-5-6	5/16	3/8	1/2-24	1.01	.75	1.00	.250
169C-6-2	3/8	1/8	9/16-24	1.03	.74	.74	.234
269C-6-2	3/8	1/8	9/16-24	.97	.69	.75	.220
169C-6-4	3/8	1/4	9/16-24	1.03	.74	.93	.312
269C-6-4	3/8	1/4	9/16-24	1.01	.73	.92	.312
169C-6-6	3/8	3/8	9/16-24	1.03	.75	1.00	.312
269C-6-6	3/8	3/8	9/16-24	1.12	.84	.97	.312
169C-6-8	3/8	1/2	9/16-24	1.22	.94	1.27	.312
269C-7-6	7/16	3/8	5/8-24	1.16	.82	.98	.312
169C-8-4	1/2	1/4	11/16-20	1.34	.94	1.00	.312
169C-8-6	1/2	3/8	11/16-20	1.34	.93	1.11	.406
169C-8-8	1/2	1/2	11/16-20	1.48	1.00	1.37	.406
169C-10-8	5/8	1/2	13/16-18	1.48	1.06	1.31	.500
169C-12-8	3/4	1/2	1-18	1.64	1.18	1.49	.562
169C-12-12	3/4	3/4	1-18	1.70	1.27	1.58	.562



Female Elbow 170C-270C

Ref. SAE 060203 BA

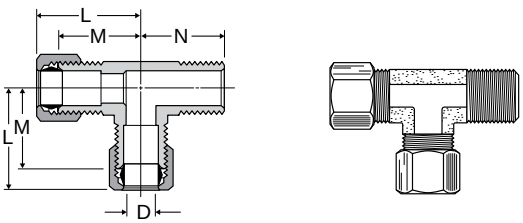
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
170C-2-2	1/8	1/8	5/16-24	.89	.69	.56	.094
170C-3-2	3/16	1/8	3/8-24	.98	.73	.56	.125
170C-4-2	1/4	1/8	7/16-24	.93	.69	.56	.188
270C-4-2	1/4	1/8	7/16-24	.91	.67	.54	.188
170C-4-4	1/4	1/4	7/16-24	1.02	.78	.70	.188
170C-6-4	3/8	1/4	9/16-24	1.06	.79	.73	.312
170C-6-6	3/8	3/8	9/16-24	1.22	.94	.69	.312
170C-7-4	7/16	1/4	5/8-24	1.27	.93	.73	.312
170C-8-6	1/2	3/8	11/16-20	1.34	1.00	.69	.406
170C-8-8	1/2	1/2	11/16-20	1.56	1.15	.97	.408
170C-12-12	3/4	3/4	1-18	2.06	1.58	1.58	.560



Male Run Tee 171C

Ref. SAE 060424 BA

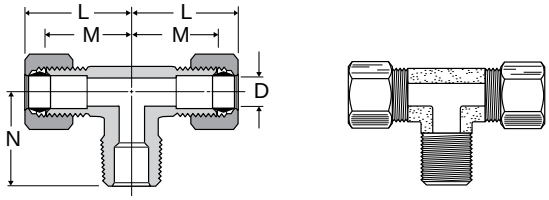
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
171C-2-2	1/8	1/8	5/16-24	.82	.61	.71	.094
171C-3-2	3/16	1/8	3/8-24	.86	.61	.71	.125
171C-4-2	1/4	1/8	7/16-24	.90	.64	.75	.188
171C-4-4	1/4	1/4	7/16-24	.93	.69	.92	.188
171C-6-4	3/8	1/4	9/16-24	1.09	.81	1.03	.312



Male Branch Tee 172C

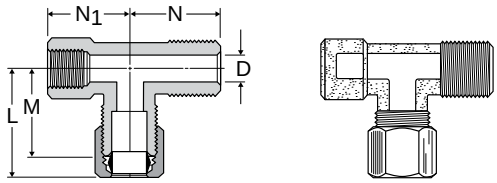
Ref. SAE 060425 BA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
172C-2-2	1/8	1/8	5/16-24	.82	.61	.71	.094
172C-3-2	3/16	1/8	3/8-24	.86	.61	.71	.125
172C-4-2	1/4	1/8	7/16-24	.86	.61	.74	.188
172C-4-4	1/4	1/4	7/16-24	.93	.69	.92	.188
172C-6-2	3/8	1/8	9/16-24	1.03	.75	.75	.234
172C-6-4	3/8	1/4	9/16-24	1.09	.77	1.03	.312
172C-6-6	3/8	3/8	9/16-24	1.09	.81	1.00	.312
172C-8-6	1/2	3/8	11/16-20	1.34	.93	1.10	.406



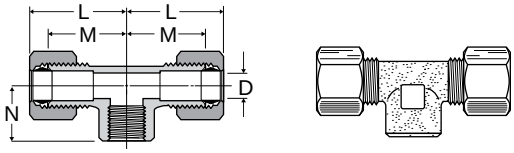
Adapter Tee 176C

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	N1	FLOW DIA. D
176C-4-2	1/4	1/8	7/16-24	.93	.69	.75	.66	.188



Female Branch Tee 177C

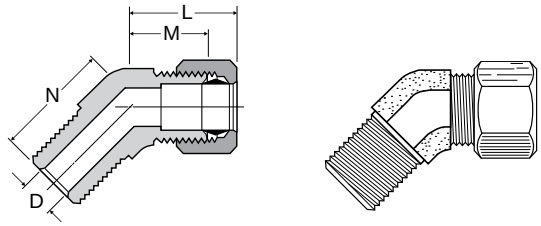
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
177C-4-2	1/4	1/8	7/16-24	.86	.63	.53	.188



45° Elbow 179C

Compression to male pipe

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
179C-4-2	1/4	1/8	7/16-24	.90	.66	.56	.188
179C-4-4	1/4	1/4	7/16-24	.80	.56	.84	.188
179C-6-2	3/8	1/8	9/16-24	.90	.63	.65	.234
179C-6-4	3/8	1/4	9/16-24	.90	.63	.84	.312
179C-6-6	3/8	3/8	9/16-24	.97	.75	.95	.312
179C-8-6	1/2	3/8	11/16-24	1.15	.81	.95	.406



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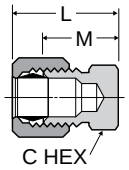
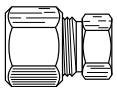
Seal Plug 639C

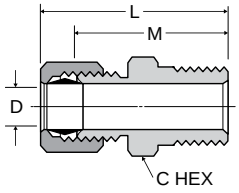
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M
639C-4	1/4	7/16-24	7/16	.74	.50

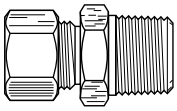




Straight Through Tank Fitting 682C

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
682C-3-2	3/16	1/8	3/8-24	7/16	1.06	0.84	.195
682C-6-6	3/8	3/8	9/16-24	11/16	1.44	1.16	.387
682C-8-8	1/2	1/2	11/16-20	7/8	1.90	1.31	.516





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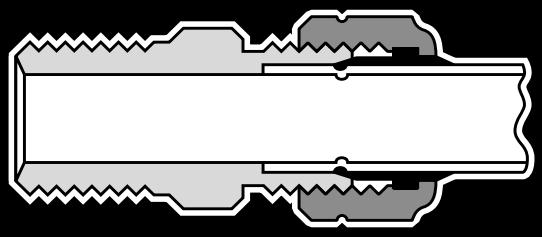

Compress-Align® Fittings

Advantages
No flaring, soldering or other preparation of tubing is necessary. Pre-assembled fitting, with captive sleeve. Sleeve is always oriented for correct installation, visible for inspection before and after installation. Heavy-duty fitting aligns to seal even out-of-round tubing. More quickly assembled than either flare or standard tapered sleeve compression fittings. Compress-Align bodies are interchangeable with standard compression fitting bodies. This economical fitting is available in straights, tees and elbows 1/8 in. O.D. through 1 in. O.D. tube size. Manufactured from CA 360, CA 345 or CA 377 brass.

Specifications
Listed with Underwriter's Laboratories for flammable liquids. Consult list of UL listed fittings on page M10 for specific configurations.

Applications
Use with annealed copper, brass, aluminum and thermoplastic tubing. Manufactured for low and medium pressure tubing connections.

PSI	Tube O.D. (in.)	Tube Wall (in.)
2800	1/8	.030
1900	3/16	.030
1400	1/4	.030
1200	5/16	.032
1000	3/8	.032
750	1/2	.032
650	5/8	.035
550	3/4	.035
450	7/8	.035
350	1	.035

Temperature Ranges
From -65° to +250°F.

Vibration
Fair resistance to minimal vibration or tube movement.

Assembly Instructions
With nut finger tight on fitting body, insert tubing until it bottoms in the fitting. Complete the seal with one wrench turn on all sizes.

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 identifies the style and type fitting. The second series of numbers describes the size.

Example:

2	69	CA	–6	–4

- 2 — Extrusion (2) / Forging (1)
- 69 — Male Elbow
- CA — Compress-Align
- –6 — 3/8" (6/16) Tube O.D.
- –4 — 1/4" (4/16) Pipe Thread

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

Special Fittings
Fitting configurations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry.

Pricing
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

Remake Instructions
Tighten to original make-up position plus 1/16 turn to reseat sleeve. Approximately 8 remakes are possible using this reassembly method.

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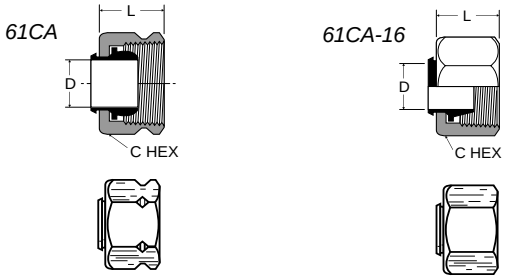
Plug 59CA

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L
59CA-4	1/4	7/16-24	1/2	.40
59CA-6	3/8	9/16-24	5/8	.45
59CA-8	1/2	11/16-20	13/16	.50

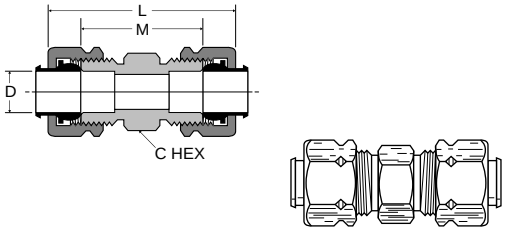
Nut and Sleeve Assembly 61CA

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
61CA-2	1/8	5/16-24	3/8	.130	.36
61CA-3	3/16	3/8-24	7/16	.194	.38
61CA-4	1/4	7/16-24	1/2	.255	.40
61CA-5	5/16	1/2-24	9/16	.318	.42
61CA-6	3/8	9/16-24	5/8	.382	.45
61CA-8	1/2	11/16-20	13/16	.507	.50
61CA-10	5/8	13/16-18	15/16	.632	.53
61CA-12	3/4	1-18	1-3/16	.760	.56
61CA-14	7/8	1-1/8-18	1-3/8	.885	.68
61CA-16	1	1-1/4-18	1-1/2	1.012	.63



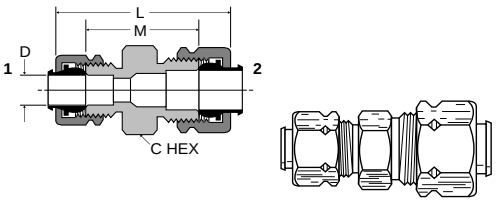
Union 62CA

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
62CA-2	1/8	5/16-24	5/16	1.12	.64	.094
62CA-3	3/16	3/8-24	3/8	1.19	.72	.125
62CA-4	1/4	7/16-24	7/16	1.26	.79	.188
62CA-5	5/16	1/2-24	1/2	1.32	.85	.250
62CA-6	3/8	9/16-24	9/16	1.42	.97	.312
62CA-8	1/2	11/16-20	11/16	1.53	1.08	.406
62CA-10	5/8	13/16-18	13/16	1.71	1.23	.500
62CA-12	3/4	1-18	1	2.20	1.41	.562
62CA-14	7/8	1-1/8-18	1-1/8	2.08	1.19	.766



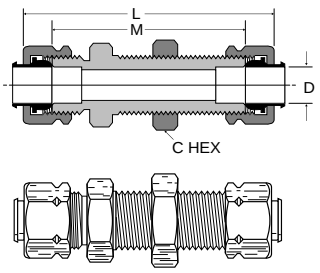
Union Reducers 62CA

PART NO.	1 TUBE SIZE	2 TUBE SIZE	1 STRAIGHT THREAD	2 STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
62CA-4-3	3/16	1/4	3/8-24	7/16-24	7/16	1.25	.78	.125
62CA-6-4	1/4	3/8	7/16-24	9/16-24	9/16	1.37	.91	.188
62CA-8-6	3/8	1/2	9/16-24	11/16-20	11/16	1.48	1.03	.312
62CA-10-6	3/8	5/8	9/16-24	13/16-18	13/16	1.59	1.13	.312



Bulkhead Union 62CABH

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M	BULKHEAD HOLE DIA.	FLOW DIA. D
62CABH-4	1/4	7/16-24	9/16	2.22	1.75	7/16	.188
62CABH-6	3/8	9/16-24	11/16	2.32	1.88	9/16	.312



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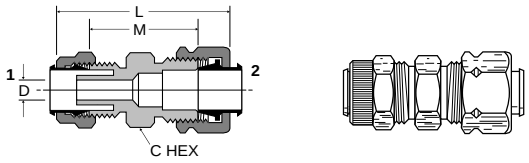
Otsego, Michigan

Union 62PCA

(Poly-Tite to Compress-Align)

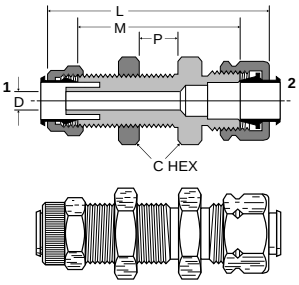
PART NO.	TUBE SIZE	1 STRAIGHT THREAD	2 STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
62PCA-4	1/4	3/8-24	7/16-24	7/16	1.24	.89	.125
62PCA-5	5/16	7/16-24	1/2-24	1/2	1.26	.92	.144
62PCA-6	3/8	1/2-24	9/16-24	9/16	1.32	.98	.204



Bulkhead Union 62PCABH

(Poly-Tite to Compress-Align)

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	1.80	1.45	3/8	.125
62PCABH-6	3/8	1/2-24	9/16-24	11/16	.47	1.98	1.64	1/2	.204



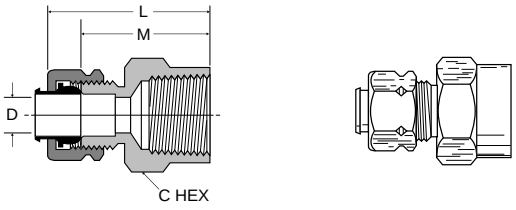
Brass Insert 63PT

(For industrial grade plastic tubing)

PART NO.	TUBE SIZE	TUBE WALL	L	O.D.
63PT-2-16	1/8	.016	.46	.080
63PT-2-23	1/8	.023	.45	.073
63PT-2-32	1/8	.032	.31	.061
63PT-3-25	3/16	.025	.45	.135
63PT-3-40	3/16	.040	.52	.095
63PT-4-40	1/4	.040	.50	.163
63PT-4-62	1/4	.062	.33	.110
63PT-5-40	5/16	.040	.50	.232
63PT-5-62	5/16	.062	.53	.187
63PT-6-62	3/8	.062	.56	.250
63PT-8-62	1/2	.062	.72	.370
63PT-10-62	5/8	.062	.72	.483

Female Connector 66CA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
66CA-2-2	1/8	1/8	5/16-24	9/16	.99	.75	.094
66CA-3-2	3/16	1/8	3/8-24	9/16	1.01	.78	.125
66CA-3-4	3/16	1/4	3/8-24	11/16	1.19	.96	.125
66CA-4-2	1/4	1/8	7/16-24	9/16	1.02	.78	.188
66CA-4-4	1/4	1/4	7/16-24	11/16	1.24	1.00	.188
66CA-5-2	5/16	1/8	1/2-24	9/16	1.05	.81	.250
66CA-5-4	5/16	1/4	1/2-24	11/16	1.27	1.03	.250
66CA-6-2	3/8	1/8	9/16-24	9/16	1.00	.78	.312
66CA-6-4	3/8	1/4	9/16-24	11/16	1.28	1.06	.312
66CA-6-6	3/8	3/8	9/16-24	13/16	1.29	1.06	.312
66CA-6-8	3/8	1/2	9/16-24	1	1.49	1.27	.312
66CA-8-4	1/2	1/4	11/16-20	11/16	1.32	1.09	.406
66CA-8-6	1/2	3/8	11/16-20	13/16	1.35	1.12	.406
66CA-8-8	1/2	1/2	11/16-20	1	1.54	1.31	.406
66CA-10-8	5/8	1/2	13/16-18	1	1.62	1.38	.500



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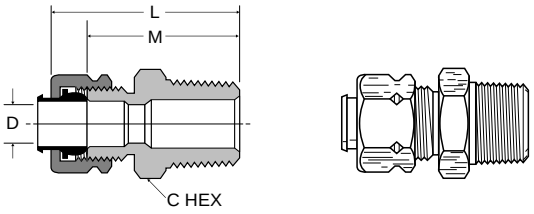
Otsego, Michigan

Male Connector 68CA

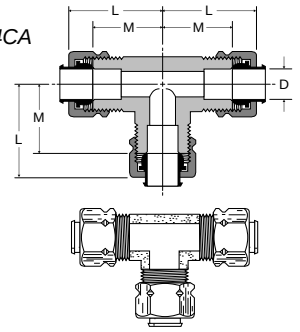
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
68CA-2-1	1/8	1/16	5/16-24	11/32	1.02	.78	.095
68CA-2-2	1/8	1/8	5/16-24	7/16	1.01	.77	.094
68CA-3-1	3/16	1/16	3/8-24	3/8	1.07	.84	.125
68CA-3-2	3/16	1/8	3/8-24	7/16	1.07	.84	.125
68CA-3-4	3/16	1/4	3/8-24	9/16	1.26	1.03	.125
68CA-4-2	1/4	1/8	7/16-24	7/16	1.10	.86	.188
68CA-4-4	1/4	1/4	7/16-24	9/16	1.31	1.06	.188
68CA-4-6	1/4	3/8	7/16-24	11/16	1.28	1.03	.188
68CA-4-8	1/4	1/2	7/16-24	7/8	1.56	1.31	.188
68CA-5-2	5/16	1/8	1/2-24	1/2	1.13	.89	.234
68CA-5-4	5/16	1/4	1/2-24	9/16	1.35	1.07	.250
68CA-6-2	3/8	1/8	9/16-24	9/16	1.19	.97	.250
68CA-6-4	3/8	1/4	9/16-24	9/16	1.36	1.14	.312
68CA-6-6	3/8	3/8	9/16-24	11/16	1.43	1.16	.312
68CA-6-8	3/8	1/2	9/16-24	7/8	1.52	1.25	.312
68CA-8-4	1/2	1/4	11/16-20	11/16	1.45	1.22	.312
68CA-8-6	1/2	3/8	11/16-20	11/16	1.43	1.20	.406
68CA-8-8	1/2	1/2	11/16-20	7/8	1.54	1.31	.406
68CA-10-6	5/8	3/8	13/16-18	13/16	1.55	1.31	.406
68CA-10-8	5/8	1/2	13/16-18	7/8	1.72	1.48	.500
68CA-10-12	5/8	3/4	13/16-18	1-1/16	1.80	1.56	.500
68CA-12-8	3/4	1/2	1-18	1	1.99	1.60	.562
68CA-12-12	3/4	3/4	1-18	1-1/16	2.02	1.63	.656
68CA-14-12	7/8	3/4	1-1/8-18	1-1/8	1.85	1.41	.750
68CA-16-12	1	3/4	1-1/4-18	1-1/4	1.83	1.39	.750
68CA-16-16	1	1	1-1/4-18	1-3/8	2.02	1.58	.875



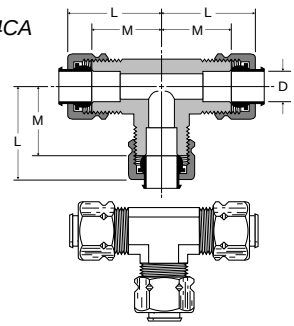
Union Tee 164CA-264CA

PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
164CA-2	1/8	5/16-24	.84	.61	.093
264CA-3	3/16	3/8-24	.83	.60	.125
164CA-4	1/4	7/16-24	.84	.61	.188
264CA-4	1/4	7/16-24	.84	.60	.188
164CA-5	5/16	1/2-24	.95	.71	.250
164CA-6	3/8	9/16-24	.96	.74	.312
164CA-8	1/2	11/16-20	1.15	.93	.406
164CA-10	5/8	13/16-18	1.32	1.08	.500
164CA-12	3/4	1.00-18	1.56	1.17	.560

164CA

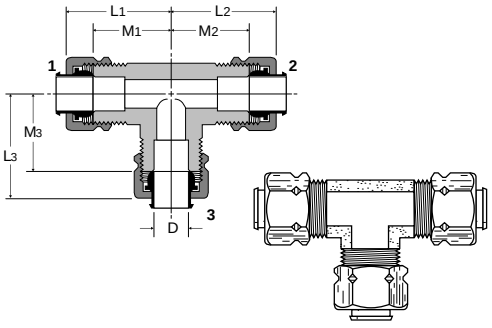


264CA



Union Tee 164CA combination sizes

PART NO.	1 TUBE SIZE	2 TUBE SIZE	3 TUBE SIZE	L1	L2	L3	M1	M2	M3	FLOW DIA. D
164CA-6-4-4	3/8	1/4	1/4	.97	.96	.96	.75	.72	.72	.188
164CA-6-6-4	3/8	3/8	1/4	.97	.97	.96	.75	.75	.72	.188
164CA-8-8-6	1/2	1/2	3/8	1.17	1.17	1.10	.94	.94	.88	.312



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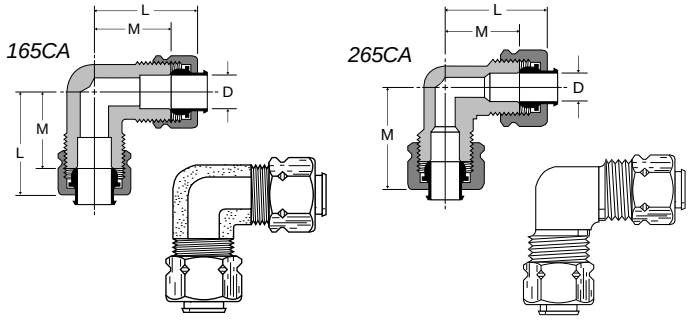
Parker Brass Products Division
Otsego, Michigan

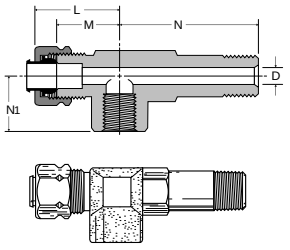
Union Elbow 165CA-265CA

PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
165CA-2	1/8	5/16-24	.84	.61	.094
165CA-3	3/16	3/8-24	.84	.61	.125
165CA-4	1/4	7/16-24	.84	.61	.188
265CA-4	1/4	7/16-24	.84	.60	.188
165CA-5	5/16	1/2-24	.94	.71	.250
165CA-6	3/8	9/16-24	.96	.74	.312
165CA-8	1/2	11/16-20	1.15	.93	.406
165CA-10	5/8	13/16-18	1.29	1.05	.500
165CA-12	3/4	1-18	1.56	1.17	.560
165CA-16	1	1-1/4-18	1.63	1.19	.877



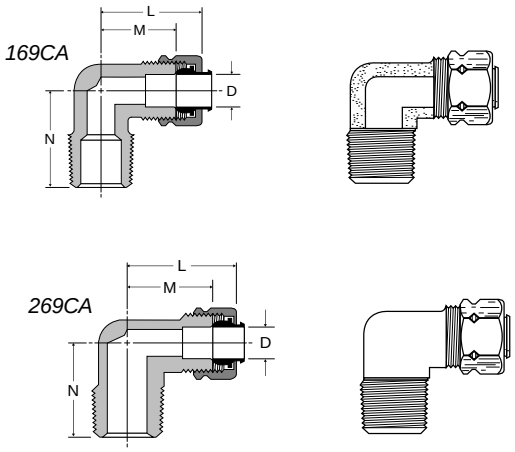
Gage Tee 168CA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	N1	FLOW DIA. D
168CA-4-2	1/4	1/8	7/16-24	.96	.72	1.41	.56	.188



Male Elbow 169CA-269CA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
169CA-2-1	1/8	1/16	5/16-24	.84	.60	.67	.095
269CA-2-2	1/8	1/8	5/16-24	.84	.60	.67	.094
169CA-3-1	3/16	1/16	3/8-24	.84	.61	.67	.126
169CA-3-2	3/16	1/8	3/8-24	.84	.61	.69	.125
269CA-3-2	3/16	1/8	3/8-24	.83	.60	.67	.125
169CA-3-4	3/16	1/4	3/8-24	.87	.64	.93	.125
169CA-4-2	1/4	1/8	7/16-24	.84	.61	.74	.188
269CA-4-2	1/4	1/8	7/16-24	.84	.60	.73	.188
169CA-4-4	1/4	1/4	7/16-24	.86	.62	.94	.188
269CA-4-4	1/4	1/4	7/16-24	.84	.60	.79	.188
169CA-4-6	1/4	3/8	7/16-24	.92	.68	1.00	.188
169CA-5-2	5/16	1/8	1/2-24	.84	.61	.74	.234
269CA-5-2	5/16	1/8	1/2-24	.84	.60	.73	.250
169CA-5-4	5/16	1/4	1/2-24	.94	.71	.93	.250
269CA-5-4	5/16	1/4	1/2-24	.91	.67	.82	.250
169CA-5-6	5/16	3/8	1/2-24	.99	.75	1.00	.250
169CA-6-2	3/8	1/8	9/16-24	.96	.74	.74	.234
269CA-6-2	3/8	1/8	9/16-24	.96	.69	.75	.220
169CA-6-4	3/8	1/4	9/16-24	.96	.74	.93	.312
269CA-6-4	3/8	1/4	9/16-24	.95	.73	.92	.312
169CA-6-6	3/8	3/8	9/16-24	.97	.75	1.00	.312
269CA-6-6	3/8	3/8	9/16-24	1.06	.84	.97	.312
169CA-6-8	3/8	1/2	9/16-24	1.16	.94	1.27	.312
169CA-8-4	1/2	1/4	11/16-20	1.17	.94	1.00	.312
169CA-8-6	1/2	3/8	11/16-20	1.15	.93	1.11	.406
169CA-8-8	1/2	1/2	11/16-20	1.23	1.00	1.37	.406
169CA-10-6	5/8	3/8	13/16-18	1.30	1.06	1.15	.406
169CA-10-8	5/8	1/2	13/16-18	1.30	1.06	1.31	.500
169CA-12-8	3/4	1/2	1-18	1.57	1.18	1.49	.562
169CA-12-12	3/4	3/4	1-18	1.66	1.27	1.58	.562
169CA-16-12	1	3/4	1-1/4-18	1.63	1.19	1.60	.875



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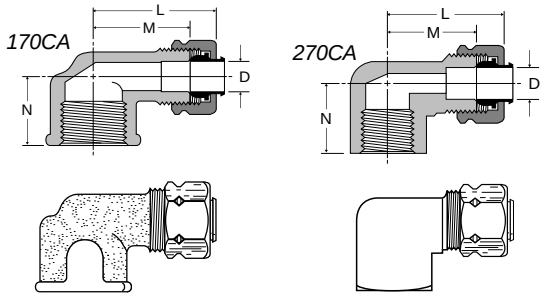
Otsego, Michigan

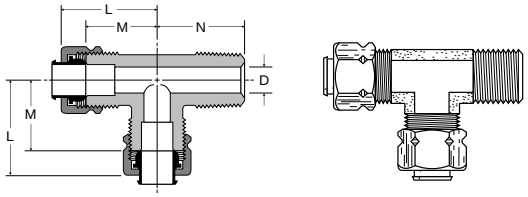
Female Elbow 170CA-270CA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
170CA-2-2	1/8	1/8	5/16-24	.93	.69	.56	.094
170CA-3-2	3/16	1/8	3/8-24	.98	.69	.56	.125
170CA-4-2	1/4	1/8	7/16-24	.98	.69	.56	.188
270CA-4-2	1/4	1/8	7/16-24	.91	.67	.54	.188
170CA-4-4	1/4	1/4	7/16-24	1.02	.78	.70	.188
170CA-6-4	3/8	1/4	9/16-24	1.09	.79	.73	.312
170CA-6-6	3/8	3/8	9/16-24	1.16	.94	.69	.312
170CA-8-6	1/2	3/8	11/16-20	1.23	1.00	.69	.406
170CA-8-8	1/2	1/2	11/16-20	1.38	1.15	.97	.408
170CA-12-12	3/4	3/4	1-18	1.97	1.58	1.58	.560



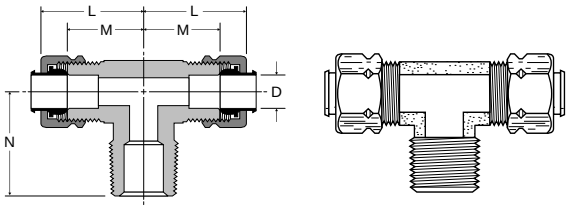
Male Run Tee 171CA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
171CA-2-2	1/8	1/8	5/16-24	.84	.61	.71	.094
171CA-3-2	3/16	1/8	3/8-24	.83	.61	.71	.125
171CA-4-2	1/4	1/8	7/16-24	.88	.64	.75	.188
171CA-4-4	1/4	1/4	7/16-24	.93	.69	.92	.188
171CA-6-4	3/8	1/4	9/16-24	1.03	.81	1.03	.312



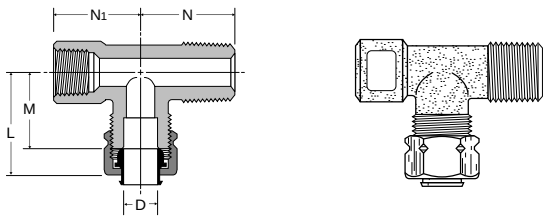
Male Branch Tee 172CA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
172CA-2-2	1/8	1/8	5/16-24	.84	.61	.71	.093
172CA-3-2	3/16	1/8	3/8-24	.83	.61	.71	.125
172CA-4-2	1/4	1/8	7/16-24	.84	.61	.74	.188
172CA-4-4	1/4	1/4	7/16-24	.93	.69	.92	.188
172CA-6-2	3/8	1/8	9/16-24	.97	.75	.75	.234
172CA-6-4	3/8	1/4	9/16-24	.99	.77	1.03	.312
172CA-6-6	3/8	3/8	9/16-24	1.03	.81	1.00	.312
172CA-8-6	1/2	3/8	11/16-20	1.15	.93	1.10	.406
172CA-12-12	3/4	3/4	1-18	1.67	1.27	1.50	.562



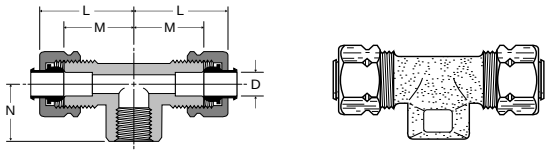
Adapter Tee 176CA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	N1	FLOW DIA. D
176CA-4-2	1/4	1/8	7/16-24	.92	.69	.75	.66	.188



Female Branch Tee 177CA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
177CA-4-2	1/4	1/8	7/16-24	.86	.63	.53	.188



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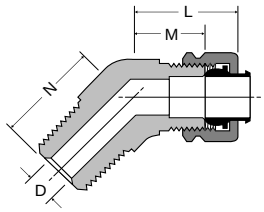
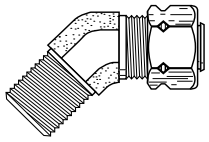
Otsego, Michigan

45° Elbow 179CA

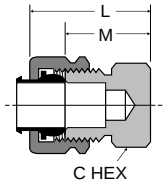
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
179CA-4-2	1/4	1/8	7/16-24	.89	.66	.56	.188
179CA-4-4	1/4	1/4	7/16-24	.80	.56	.84	.188
179CA-6-2	3/8	1/8	9/16-24	.85	.63	.65	.234
179CA-6-4	3/8	1/4	9/16-24	.85	.63	.84	.281
179CA-6-6	3/8	3/8	9/16-24	.97	.75	.95	.312
179CA-8-6	1/2	3/8	11/16-20	1.03	.81	.95	.406

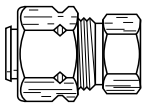




Seal Plug 639CA

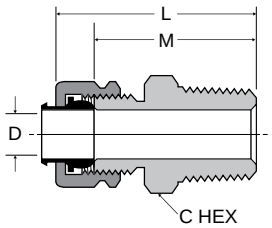
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M
639CA-4	1/4	7/16-24	7/16	.74	.50

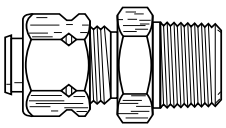




Straight Through Tank Fitting 682CA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
682CA-3-2	3/16	1/8	3/8-24	7/16	1.07	.84	.194





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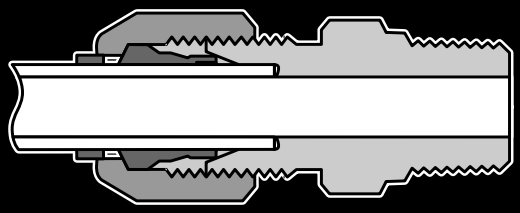


Parker Metru-Lok™ Fittings

Advantages
Metru-Lok™ is a one-piece, ready-to-use, bite-type fitting for use with either copper or plastic tubing. The ferrule is held captive in the nut. The fitting is designed to permit tube entry and fitting makeup without removal of the nut and ferrule, avoiding the assembly of the fitting components prior to use.

Fitting ready to use
- Compact fully assembled fitting, timesaving at makeup.
- Captive snap in ferrule.
- Simplified handling and stock-keeping.
- No presetting of the ferrule necessary.

Positive sealing and bite
- The wedging action of the nut when tightened causes the ferrule to bite into the outside diameter of the tube wall for a leakproof connection.
- With flexible tubing (polyurethane, PEBA or polyethylene), it is recommended to use a tube insert for a positive holding of the tube.

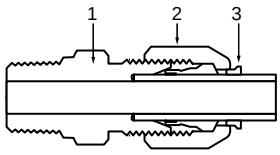
Safety
- Visible ferrule (extending to rear of nut) allows quality control checks for correct assembly.

Excellent vibration resistance
- Vibration is contained by the rear compression of the ferrule extending outside the nut.
- The tube is held at the bottom of the fitting.
- The tube is thus held between the above two points so that vibration running along the tube does not affect the sealing and bite area.

How to Use: Assembly
- Cut the tube square.
- De-burr (copper tube).
- Insert the tube through the nut and ferrule until it bottoms.
- Finger tighten the nut.
- Wrench tighten the nut one turn, or one and one half turns, according to size.

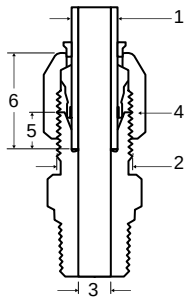
Disassembly - remake
- The Metru-Lok™ fitting can be assembled and disassembled at least 15 times. At each remake, hand tighten the nut, then wrench tighten 1/16 of a turn.

Technical Features



MATERIAL			WORKING TEMP.	WORKING PRESSURE* DEPENDING ON TUBE O.D.							
1	2	3									
BODY BRASS	NUT BRASS	FERRULE BRASS	FROM -65° TO +250° F	TUBE O.D. MM	4	6	8	10	12	14	16 to 20
				PSI	2600	2600	1800	1500	1300	1000	800

Fitting Dimensions

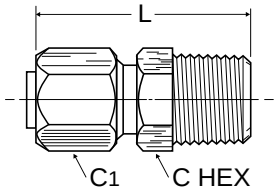


1 TUBE O.D. MM	2 METRIC STRAIGHT THREAD	3 INSIDE DIAMETER MM	4 HEX OF NUT MM	5 TUBE ENTRY BODY MM	6 TUBE ENTRY COMPL. FITTING MM	WRENCH TIGHTENING IN TURNS
4	M8x1	2	10	4	12	1 1/2
6	M10x1	4	12	5	13	1 1/2
8	M12x1	6	14	6	14	1 1/2
10	M14x1	8	17	6	14	1 1/2
12	M16x1	10	19	7	15	1 1/2
14	M18x1	12	22	8	16	1 1/2
16	M22x1.50	14	27	8	16	1
18	M24x1.50	16	30	9	21	1
20	M26x1.50	18	32	9	21	1
22	M28x1.50	20	36	10	22	1

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

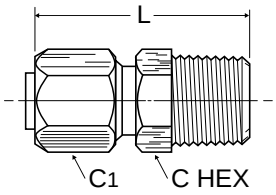
FBMB Male Connector NPT

PART NO.	TUBE SIZE	NPT THREAD	C HEX	C1	L
FBMB4-1/16	4	1/16	8	10	26
FBMB4-1/8	4	1/8	11	10	27
FBMB6-1/8	6	1/8	11	12	28
FBMB6-1/4	6	1/4	14	12	32
FBMB8-1/8	8	1/8	12	14	29
FBMB8-1/4	8	1/4	14	14	33
FBMB10-1/4	10	1/4	14	17	33
FBMB10-3/8	10	3/8	19	17	34
FBMB12-3/8	12	3/8	19	19	35
FBMB12-1/2	12	1/2	22	19	40
FBMB14-3/8	14	3/8	19	22	36
FBMB14-1/2	14	1/2	22	22	41
FBMB16-1/2	16	1/2	22	27	40
FBMB18-1/2	18	1/2	24	30	46
FBMB20-3/4	20	3/4	27	32	47
FBMB22-3/4	22	3/4	30	36	49



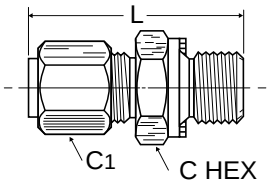
F3BMB Male Connector BSPT

PART NO.	TUBE SIZE	BSPT THREAD	C HEX	C1	L
F3BMB4-1/8	4	1/8	10	10	25
F3BMB6-1/8	6	1/8	11	12	27
F3BMB6-1/4	6	1/4	14	12	31
F3BMB8-1/8	8	1/8	12	14	29
F3BMB8-1/4	8	1/4	14	14	32
F3BMB8-3/8	8	3/8	17	17	34
F3BMB10-1/4	10	1/4	14	17	32
F3BMB10-3/8	10	3/8	17	17	33
F3BMB12-3/8	12	3/8	17	19	34
F3BMB12-1/2	12	1/2	22	19	39
F3BMB14-3/8	14	3/8	19	22	35
F3BMB14-1/2	14	1/2	22	22	40
F3BMB16-3/8	16	3/8	22	27	36
F3BMB16-1/2	16	1/2	22	27	39
F3BMB18-1/2	18	1/2	24	30	45
F3BMB20-3/4	20	3/4	27	32	46
F3BMB22-3/4	22	3/4	30	36	48



F4BMB Male Connector BSPP

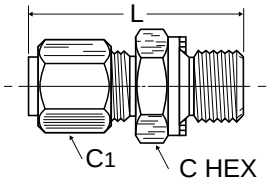
PART NO.	TUBE SIZE	BSPP THREAD	C HEX	C1	L
F4BMB4-1/8	4	1/8	14	10	29
F4BMB6-1/8	6	1/8	14	12	30
F4BMB6-1/4	6	1/4	19	12	32
F4BMB8-1/4	8	1/4	19	14	33
F4BMB10-1/4	10	1/4	19	17	33



F8BMB Male Connector Metric Straight Thread

PART NO.	TUBE SIZE	MM THREAD	C HEX	C1	L
F8BMB4M5	4	M5x0.8	8	10	24
F8BMB12M16	12	M16x1.5	22	19	37
F8BMB12M22	12	M22x1.5	27	19	40
F8BMB14M16	14	M16x1.5	22	22	38
F8BMB14M22	14	M22x1.5	27	22	41
F8BMB16M16	16	M16x1.5	22	27	37
F8BMB16M22	16	M22x1.5	27	27	40

These parts are supplied with a copper seal.



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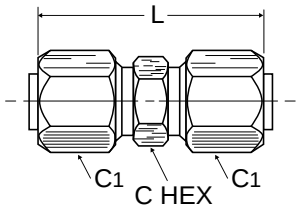
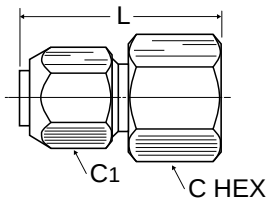
HBMB Equal Union

PART NO.	TUBE SIZE	C HEX	C1	L
HBMB4	4	8	10	31
HBMB6	6	10	12	34
HBMB8	8	12	14	37
HBMB10	10	14	17	37
HBMB12	12	17	19	39
HBMB14	14	19	22	41
HBMB16	16	22	27	41
HBMB18	18	24	30	51
HBMB20	20	27	32	51
HBMB22	22	30	36	54



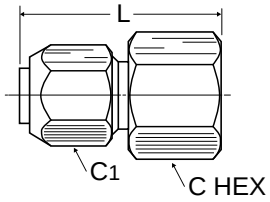
GBMB Female Connector NPT

PART NO.	TUBE SIZE	NPT THREAD	C HEX	C1	L
GBMB6-1/8	6	1/8	14	12	29
GBMB6-1/4	6	1/4	19	12	32
GBMB8-1/8	8	1/8	14	14	30
GBMB8-1/4	8	1/4	19	14	33
GBMB10-1/4	10	1/4	19	17	33
GBMB10-3/8	10	3/8	22	17	35
GBMB12-3/8	12	3/8	22	19	36
GBMB12-1/2	12	1/2	27	19	38
GBMB14-3/8	14	3/8	22	22	37
GBMB14-1/2	14	1/2	27	27	39
GBMB16-1/2	16	1/2	27	27	39



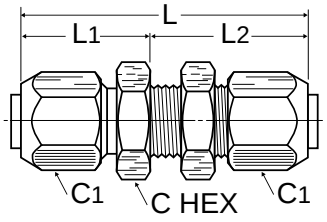
G4BMB Female Connector BSPP

PART NO.	TUBE SIZE	BSPP THREAD	C HEX	C1	L
G4BMB4-1/8	4	1/8	14	10	26
G4BMB6-1/8	6	1/8	14	12	27
G4BMB6-1/4	6	1/4	19	12	29
G4BMB8-1/8	8	1/8	14	14	28
G4BMB8-1/4	8	1/4	19	14	30
G4BMB10-1/4	10	1/4	19	17	30
G4BMB10-3/8	10	3/8	22	17	32
G4BMB12-3/8	12	3/8	22	19	33
G4BMB12-1/2	12	1/2	27	19	36
G4BMB14-3/8	14	3/8	22	22	34
G4BMB14-1/2	14	1/2	27	22	37
G4BMB16-1/2	14	1/2	27	27	37
G4BMB18-1/2	18	1/2	27	30	41



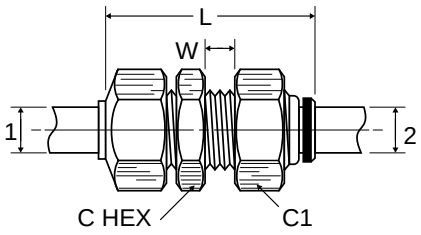
WBMB Bulkhead Union

PART NO.	TUBE SIZE	MM THREAD	C HEX	C1	L	L1	L2	BULKHEAD HOLE DIA.
WBMB4	4	M8x1	12	10	47	19	28	8mm
WBMB6	6	M10x1	14	12	49	20	29	10mm
WBMB8	8	M12x1	16	14	52	21	31	12mm
WBMB10	10	M14x1	19	17	53	22	31	14mm
WBMB12	12	M16x1	22	19	56	24	32	16mm
WBMB14	14	M18x1	24	22	60	26	34	18mm
WBMB16	16	M22x1.5	27	27	58	25	33	22mm
WBMB18	18	M24x1.5	30	30	70	31	39	24mm
WBMB20	20	M26x1.5	32	32	70	31	39	26mm
WBMB22	22	M28x1.5	36	36	74	33	41	28mm



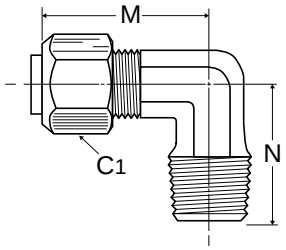
WBMPB Mixed Bulkhead Union

PART NO.	TUBE SIZE 1	TUBE SIZE 2	MM THREAD	C1	C HEX	L	W	BULKHEAD HOLE DIA.
WBMPB4	4	4	M8x1	10	12	34	5	8mm
WBMPB6	6	6	M10x1	12	12	37	5	10mm
WBMPB8	8	8	M12x1	14	16	39	5	12mm
WBMPB10	10	10	M14x1	17	19	45	5	14mm
WBMPB12	12	12	M16x1	19	22	49	5	16mm
WBMPB14	14	14	M18x1	22	22	52	7	18mm



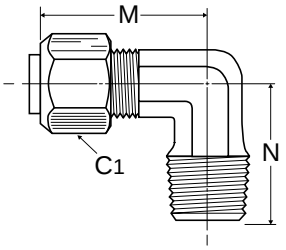
CBMB 90° Male Elbow NPT

PART NO.	TUBE SIZE	NPT THREAD	C1	M	N
CBMB4-1/8	4	1/8	10	22	17
CBMB6-1/8	6	1/8	12	24	18
CBMB6-1/4	6	1/4	12	24	22
CBMB8-1/8	8	1/8	14	26	19
CBMB8-1/4	8	1/4	14	26	23
CBMB10-1/4	10	1/4	17	27	24
CBMB10-3/8	10	3/8	17	28	25
CBMB12-3/8	12	3/8	19	32	27
CBMB12-1/2	12	1/2	19	32	31
CBMB14-3/8	14	3/8	22	32	26
CBMB14-1/2	14	1/2	22	33	31
CBMB16-1/2	16	1/2	27	35	34
CBMB18-1/2	18	1/2	30	41	35
CBMB20-3/4	20	3/4	32	45	40
CBMB22-3/4	22	3/4	36	46	40



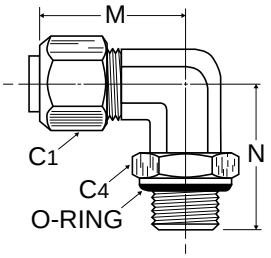
C3BMB 90° Male Elbow BSPT

PART NO.	TUBE SIZE	BSPT THREAD	C1	M	N
C3BMB4-1/8	4	1/8	10	22	17
C3BMB6-1/8	6	1/8	12	24	18
C3BMB6-1/4	6	1/4	12	24	22
C3BMB8-1/8	8	1/8	14	26	19
C3BMB8-1/4	8	1/4	14	26	23
C3BMB10-1/4	10	1/4	17	27	24
C3BMB10-3/8	10	3/8	17	28	25
C3BMB12-3/8	12	3/8	19	32	27
C3BMB12-1/2	12	1/2	19	32	31
C3BMB14-3/8	14	3/8	22	32	26
C3BMB14-1/2	14	1/2	22	32	31
C3BMB16-1/2	16	1/2	27	35	34
C3BMB18-1/2	18	1/2	30	41	35
C3BMB22-3/4	22	3/4	36	46	40



C8BMB 90° Adjustable Male Elbow Metric Straight Thread

PART NO.	TUBE SIZE	MM THREAD	C1	C4	M	N
C8BMB12M16	12	M16x1.5	19	22	32	35
C8BMB12M22	12	M22x1.5	19	30	35	39
C8BMB14M16	14	M16x1.5	22	22	32	33
C8BMB14M22	14	M22x1.5	22	30	35	39
C8BMB16M16	16	M16x1.5	24	22	35	36
C8BMB16M22	16	M22x1.5	27	30	36	39



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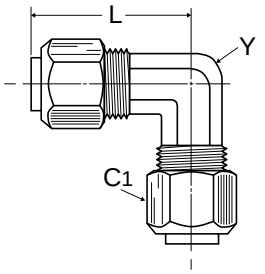
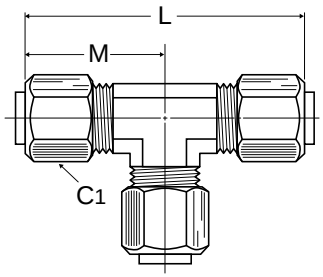
EBMB 90° Union Elbow

PART NO.	TUBE SIZE	C1	L	Y
EBMB4	4	10	22	7
EBMB6	6	12	24	8
EBMB8	8	14	26	10
EBMB10	10	17	27	12
EBMB12	12	19	32	14
EBMB14	14	22	32	16
EBMB16	16	27	35	18
EBMB18	18	30	41	20
EBMB20	20	32	45	24



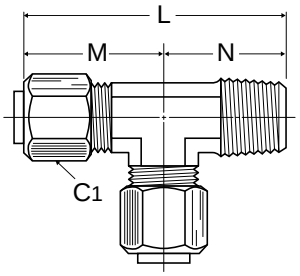
JBMB Union Tee

PART NO.	TUBE SIZE	C1	L	M
JBMB4	4	10	47	23.5
JBMB6	6	12	48	24.0
JBMB8	8	14	52	26.0
JBMB10	10	17	54	27.0
JBMB12	12	19	63	31.5
JBMB14	14	22	63	31.5
JBMB16	16	27	69	34.5
JBMB18	18	30	82	41.0
JBMB20	20	32	89	44.5
JBMB22	22	36	91	45.5



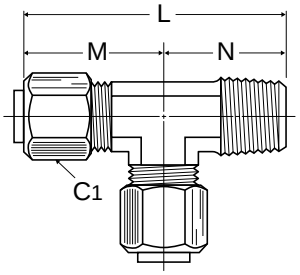
RBMB Male Run Tee NPT

PART NO.	TUBE SIZE	NPT THREAD	C1	L	M	N
RBMB6-1/4	6	1/4	12	48	25	23
RBMB8-1/8	8	1/8	14	45	26	19
RBMB8-1/4	8	1/4	14	49	26	23
RBMB10-1/4	10	1/4	17	51	27	24
RBMB10-3/8	10	3/8	17	52	28	24
RBMB12-3/8	12	3/8	19	59	32	27
RBMB12-1/2	12	1/2	19	63	32	31
RBMB14-3/8	14	3/8	22	60	33	28
RBMB14-1/2	14	1/2	22	64	33	31
RBMB16-1/2	16	1/2	22	69	35	34



R3BMB Male Run Tee BSPT

PART NO.	TUBE SIZE	BSPT THREAD	C1	L	M	N
R3BMB6-1/8	6	1/8	12	42	24	18
R3BMB6-1/4	6	1/4	12	48	25	23
R3BMB8-1/8	8	1/8	14	45	26	19
R3BMB8-1/4	8	1/4	14	49	26	23
R3BMB10-1/4	10	1/4	17	51	27	24
R3BMB10-3/8	10	3/8	17	52	28	24
R3BMB12-3/8	12	3/8	19	59	32	27
R3BMB12-1/2	12	1/2	19	63	32	31
R3BMB14-3/8	14	3/8	22	59	32	28
R3BMB14-1/2	14	1/2	22	63	33	31
R3BMB16-1/2	16	1/2	27	69	35	34



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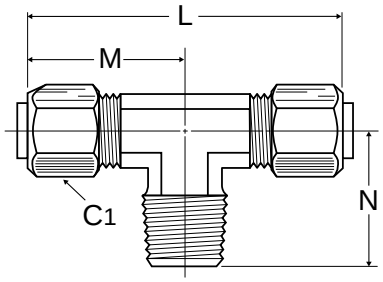
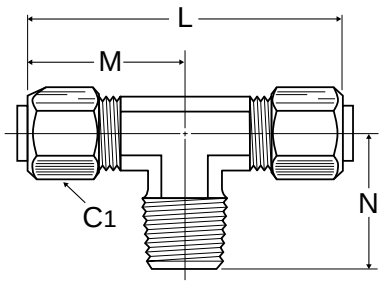
SBMB Male Branch Tee NPT

PART NO.	TUBE SIZE	NPT THREAD	C1	L	M	N
SBMB6-1/8	6	1/8	12	48	24.0	18
SBMB6-1/4	6	1/4	12	50	25.0	23
SBMB8-1/8	8	1/8	14	52	26.0	19
SBMB8-1/4	8	1/4	14	52	26.0	23
SBMB10-1/4	10	1/4	17	56	28.0	24
SBMB10-3/8	10	3/8	17	56	28.0	24
SBMB12-3/8	12	3/8	19	63	31.5	25
SBMB12-1/2	12	1/2	19	63	31.5	31
SBMB14-3/8	14	3/8	22	63	31.5	28
SBMB14-1/2	14	1/2	22	65	32.5	31
SBMB16-1/2	16	1/2	27	69	34.5	34



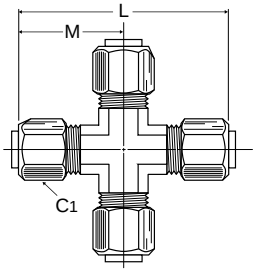
S3BMB Male Branch Tee BSPT

PART NO.	TUBE SIZE	BSPT THREAD	C1	L	M	N
S3BMB6-1/8	6	1/8	12	48	24.0	18
S3BMB6-1/4	6	1/4	12	49	24.5	23
S3BMB8-1/8	8	1/8	14	52	26.0	19
S3BMB8-1/4	8	1/4	14	52	26.0	23
S3BMB10-1/4	10	1/4	17	54	27.0	24
S3BMB10-3/8	10	3/8	17	56	28.0	24
S3BMB12-3/8	12	3/8	19	63	31.5	27
S3BMB12-1/2	12	1/2	19	63	31.5	31
S3BMB14-3/8	14	3/8	22	63	31.5	28
S3BMB14-1/2	14	1/2	22	65	32.5	31
S3BMB16-1/2	16	1/2	27	69	34.5	34



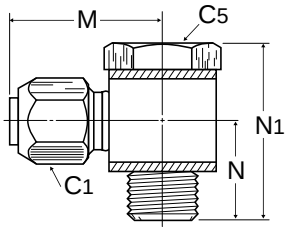
KBMB Union Cross

PART NO.	TUBE SIZE	C1	L	M
KBMB6	6	12	48	24.0
KBMB8	8	14	52	26.0
KBMB10	10	17	54	27.0
KBMB12	12	19	63	31.5
KBMB14	14	22	65	32.5



COR4BMB Single Banjo BSPP

PART NO.	TUBE SIZE	BSPP THREAD	C1	C5	M	N	N1
COR4BMB4-1/8	4	1/8	10	14	23	15	27
COR4BMB6-1/4	6	1/4	12	19	26	18	29
COR4BMB8-1/4	8	1/4	14	19	27	20	35
COR4BMB14-1/2	14	1/2	22	27	34	27	48
COR4BMB16-1/2	16	1/2	27	27	33	27	48
COR4BMB18-1/2	18	1/2	30	27	38	29	54
COR4BMB20-3/4	20	3/4	32	32	41	33	60
COR4BMB22-3/4	22	3/4	36	32	43	38	70



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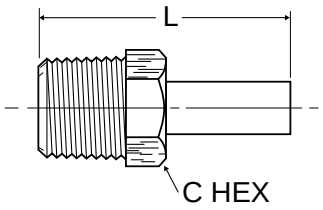
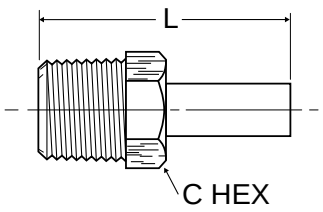
T2HFB Tube End Male Adapter NPT

PART NO.	TUBE SIZE	NPT THREAD	C HEX	L
T2HFB6-1/8	6	1/8	11	31
T2HFB6-1/4	6	1/4	14	36
T2HFB8-1/8	8	1/8	11	32
T2HFB8-1/4	8	1/4	14	36
T2HFB10-1/4	10	1/4	14	37
T2HFB10-3/8	10	3/8	19	38
T2HFB12-3/8	12	3/8	19	38
T2HFB12-1/2	12	1/2	22	43
T2HFB14-3/8	14	3/8	19	39
T2HFB14-1/2	14	1/2	22	44
T2HFB16-1/2	16	1/2	22	46
T2HFB18-1/2	18	1/2	22	50
T2HFB20-3/4	20	3/4	27	51
T2HFB22-3/4	22	3/4	27	54



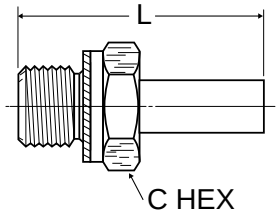
T23HFB Tube End Male Adapter BSPT

PART NO.	TUBE SIZE	BSPT THREAD	C HEX	L
T23HFB6-1/8	6	1/8	10	30
T23HFB6-1/4	6	1/4	14	34
T23HFB8-1/8	8	1/8	10	30
T23HFB8-1/4	8	1/4	14	35
T23HFB10-1/4	10	1/4	14	36
T23HFB10-3/8	10	3/8	17	36
T23HFB12-3/8	12	3/8	17	37
T23HFB12-1/2	12	1/2	22	40
T23HFB14-3/8	14	3/8	17	38
T23HFB14-1/2	14	1/2	22	41
T23HFB16-1/2	16	1/2	22	43
T23HFB18-1/2	18	1/2	22	47
T23HFB20-3/4	20	3/4	27	49
T23HFB22-3/4	22	3/4	27	51



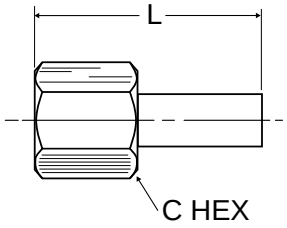
T28HFB Tube Adapter Metric Straight Thread

PART NO.	TUBE SIZE	MM THREAD	C HEX	L
T28HFB12M14	12	M14x1.5	19	39
T28HFB12M16	12	M16x1.5	22	40
T28HFB12M18	12	M18x1.5	24	40
T28HFB12M22	12	M22x1.5	27	43
T28HFB14M16	14	M16x1.5	22	41
T28HFB14M22	14	M22x1.5	27	44
T28HFB16M16	16	M16x1.5	22	43
T28HFB16M18	16	M18x1.5	24	43
T28HFB16M22	16	M22x1.5	27	46



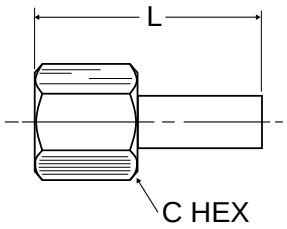
T2HGB Tube End Female Adapter NPT

PART NO.	TUBE SIZE	NPT THREAD	C HEX	L
T2HGB6-1/8	6	1/8	14	32
T2HGB6-1/4	6	1/4	19	35
T2HGB8-1/8	8	1/8	14	33
T2HGB8-1/4	8	1/4	19	36
T2HGB10-1/4	10	1/4	19	37
T2HGB10-1/2	10	1/2	27	41
T2HGB12-3/8	12	3/8	22	39
T2HGB12-1/2	12	1/2	27	41
T2HGB14-3/8	14	3/8	22	40
T2HGB14-1/2	14	1/2	27	42
T2HGB16-1/2	16	1/2	27	44
T2HGB18-1/2	18	1/2	27	48
T2HGB20-3/4	20	3/4	32	49
T2HGB22-3/4	22	3/4	32	51



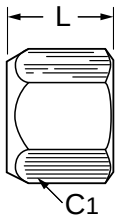
T24HGB Tube End Female Adapter BSPP

PART NO.	TUBE SIZE	BSPP THREAD	C HEX	L
T24HGB6-1/8	6	1/8	14	30
T24HGB6-1/4	6	1/4	19	32
T24HGB8-1/8	8	1/8	14	31
T24HGB8-1/4	8	1/4	19	33
T24HGB10-1/4	10	1/4	19	34
T24HGB10-3/8	10	3/8	22	36
T24HGB12-3/8	12	3/8	22	36
T24HGB12-1/2	12	1/2	27	40
T24HGB14-3/8	14	3/8	22	37
T24HGB14-1/2	14	1/2	27	41
T24HGB16-1/2	16	1/2	27	42
T24HGB18-1/2	18	1/2	27	46
T24HGB20-3/4	20	3/4	32	47
T24HGB22-3/4	22	3/4	32	49



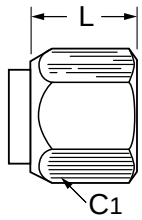
BMB Nut

PART NO.	TUBE SIZE	C1	L
BMB4	4	10	11
BMB6	6	12	12
BMB8	8	14	13
BMB10	10	17	13
BMB12	12	19	14
BMB14	14	22	15
BMB16	16	27	15
BMB18	18	30	19
BMB20	20	32	19
BMB22	22	36	20



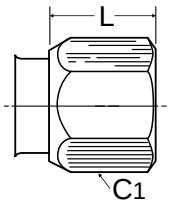
BTMB Nut and Ferrule

PART NO.	TUBE SIZE	C1	L
BTMB4	4	10	12
BTMB6	6	12	13
BTMB8	8	14	14
BTMB10	10	17	14
BTMB12	12	19	15
BTMB14	14	22	16
BTMB16	16	27	16
BTMB18	18	30	21
BTMB20	20	32	21
BTMB22	22	36	22



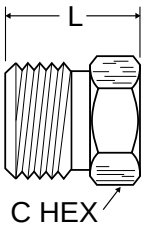
FNMB Fitting Body Cap

PART NO.	TUBE SIZE	C1	L
FNMB4	4	10	14
FNMB6	6	12	15
FNMB8	8	14	16
FNMB10	10	17	16
FNMB12	12	19	17
FNMB14	14	22	18
FNMB16	16	27	18
FNMB18	18	30	23
FNMB20	20	32	23
FNMB22	22	36	24



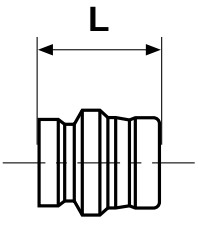
PNMB Tube Plug

PART NO.	TUBE SIZE	C HEX	L
PNMB4	4	8	11
PNMB6	6	10	13
PNMB8	8	12	15
PNMB10	10	14	15
PNMB12	12	17	16
PNMB14	14	19	17
PNMB16	16	22	18
PNMB18	18	24	20
PNMB20	20	27	20
PNMB22	22	30	22



TMB Ferrule

PART NO.	TUBE SIZE	L
TMB4A	4	10
TMB6A	6	10
TMB8A	8	10
TMB10A	10	10
TMB12A	12	10
TMB14A	14	10
TMB16A	16	10
TMB18A	18	14
TMB20A	20	14
TMB22A	22	14



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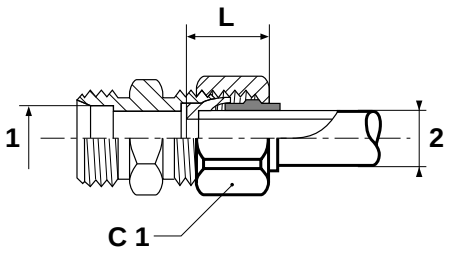
Otsego, Michigan

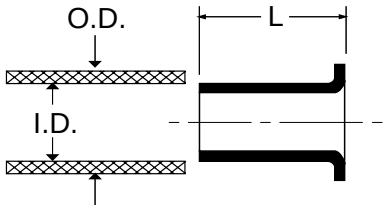
TRBMB Tube End Reducer

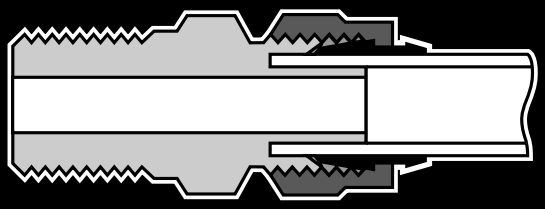
PART NO.	TUBE 1	TUBE 2	C1	L
TRBMB6-4	6	4	12	14
TRBMB8-4	8	4	14	15
TRBMB8-6	8	6	14	15
TRBMB10-6	10	6	17	16
TRBMB10-8	10	8	17	16
TRBMB12-8	12	8	19	16
TRBMB12-10	12	10	19	16
TRBMB14-10	14	10	22	18
TRBMB14-12	14	12	22	18
TRBMB16-12	16	12	27	19
TRBMB16-14	16	14	27	19
TRBMB18-14	18	14	30	21
TRBMB20-16	20	16	32	21
TRBMB22-18	22	18	36	21



T23UB Tube Insert

PART NO.	TUBE I.D.	TUBE O.D.	L
T23UB4	4	6	10
T23UB6	6	8	15
T23UB8	8	10	15
T23UB10	10	12	15
T23UB12	12	14	15





Poly-Tite Fittings

Advantages
A compact brass compression fitting designed to speed any installation. Body, nut and sleeve are furnished pre-assembled, ready for installation. An exclusive acetal copolymer sleeve holds plastic tubing where it belongs, even when the system pressure exceeds the tubing burst point. Poly-Tite 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. Poly-Tite nuts will rotate around the sleeve as it tightens to prevent twisting and weakening of the plastic tubing. Poly-Tite fittings can be assembled and disassembled repeatedly.

Materials
Bodies and Nuts: CA 377, CA 360, CA 345, 316 Stainless Steel
Plastic Sleeves: Acetal Copolymer.
O-rings: Buna N on chrome plated couplings
Viton on stainless steel couplings

Applications
Use with Parker Parflex® 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 Poly-Tite 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 Poly-Tite fitting and tighten one wrench turn past finger-tight.

Maximum allowable metal tube wall thickness for use with Poly-Tite fittings:
1/8", 3/16" O.D. — no limitation, 1/4" O.D. — .035
5/16", 3/8", 1/2" O.D. — .049

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 identifies the style and type fitting. The second series of numbers describes the size.

Example:

66	P	–4	–2
Female Connector (Tube to female pipe)	Poly-Tite	1/4" (4/16) Tube O.D.	1/8" (2/16) Pipe Thread

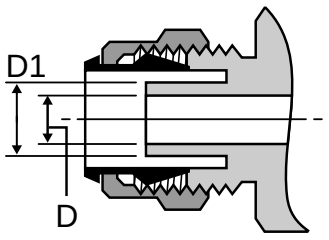
Sizes
Tube sizes are determined by the number of sixteenths of an inch in the tube O.D.

Special Fittings
Fitting configurations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry.

Pricing
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for nonstock items furnished on request for specified quantity.

Tube Support O.D.

Tube Size Inches	* D1 Tube Support O.D.
1/4	.168
5/16	.185
3/8	.248
1/2	.373



* Note: No tube support for sizes 1/8" and 3/16"

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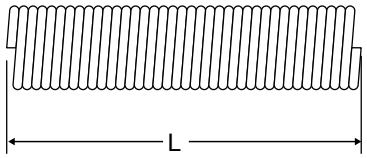
Otsego, Michigan

Spring Guard 56PSG

PART NO.	TUBE O.D.	L
56PSG-4	1/4	3.000
56PSG-5	5/16	3.000
56PSG-6	3/8	3.000

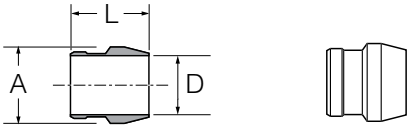


Plastic Cap 59P

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

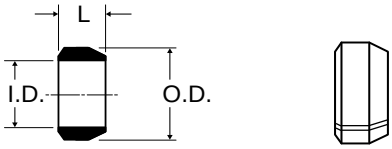
Acetal Plastic Sleeve 60P

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



Sleeve 60PB

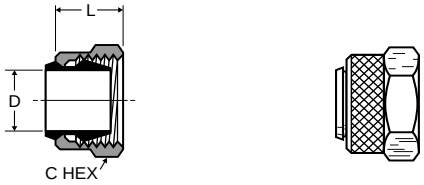
PART NO.	L	O.D.	I.D.
60PB-2	.187	.265	.130
60PB-3	.187	.322	.192
60PB-4	.187	.336	.255
60PB-5	.187	.400	.318
60PB-6	.218	.460	.382
60PB-8	.250	.620	.507



Nut and Plastic Sleeve Assembly 61P

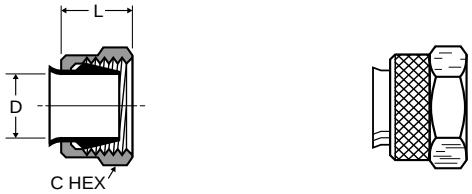
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
61P-2*	1/8	5/16-24	3/8	.130	.34
61P-3*	3/16	3/8-24	7/16	.192	.37
61P-4	1/4	3/8-24	7/16	.261	.38
61P-5	5/16	7/16-24	1/2	.321	.34
61P-6	3/8	1/2-24	9/16	.380	.38
61P-8	1/2	11/16-20	3/4	.514	.44

* Brass Sleeve



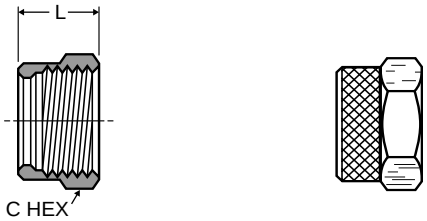
Nut and Brass Sleeve Assembly 61PB

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



Nut 61PN

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



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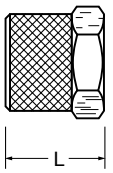
Otsego, Michigan

Nut only for use with Spring Gaurd 61PSGN

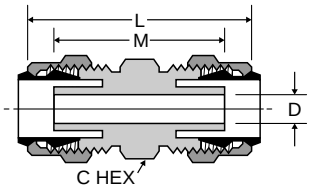
PART NO.	TUBE O.D.	L	C HEX
61PSGN-4	1/4	.625	.437
61PSGN-5	5/16	.625	.500
61PSGN-6	3/8	.656	.562

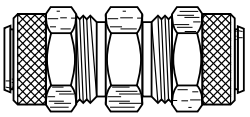


Union 62P

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	11/16-20	11/16	1.47	1.24	.323

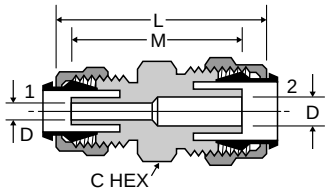
* Brass Sleeve, No Tube Support

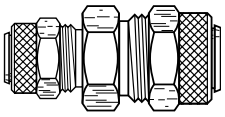




Union Reducer 62P

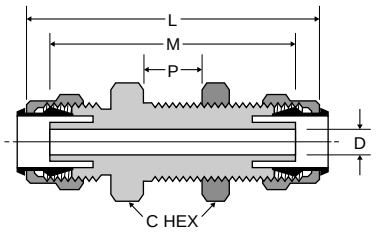
PART NO.	1 TUBE SIZE	2 TUBE SIZE	1 STRAIGHT THREAD	2 STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
62P-6-4	1/4	3/8	3/8-24	1/2-24	1/2	1.22	.99	.125

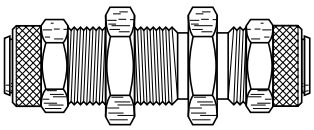




Bulkhead Union 62PBH

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	11/16-20	7/8	.63	2.28	2.05	11/16	.323

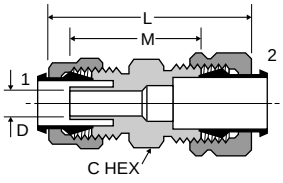


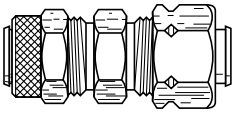


Union 62PCA

(Tube to Compress-Align)

PART NO.	TUBE SIZE	1 STRAIGHT THREAD	2 STRAIGHT THREAD	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

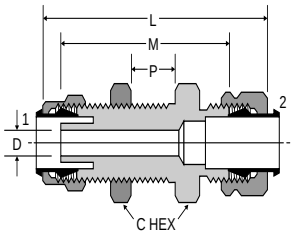


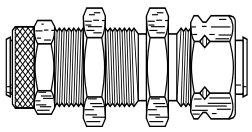


Bulkhead Union 62PCABH

(Tube to Compress-Align)

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

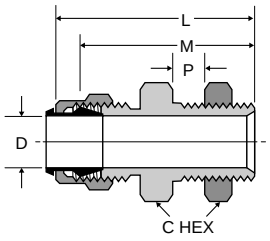


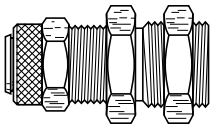


Bulkhead Union 62PTBH

(Straight Through)

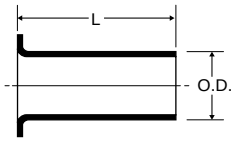
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	P MAX.	L	M	BULKHEAD HOLE DIA.	FLOW DIA. D
62PTBH-4	1/4	3/8-24	9/16	.31	1.19	.93	3/8	.260
62PTBH-5	5/16	7/16-24	5/8	.31	1.19	.93	7/16	.323
62PTBH-6	3/8	1/2-24	11/16	.34	1.26	.99	1/2	.387





Brass Insert 63PT

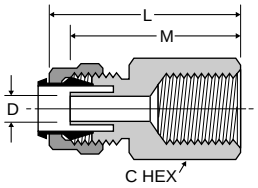
PART NO.	TUBE SIZE	L	O.D.
63PT-2-16	1/8	.46	.080
63PT-2-32	1/8	.31	.061
63PT-3-25	3/16	.45	.135
63PT-3-40	3/16	.52	.095

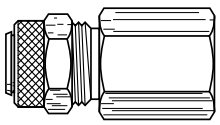


Female Connector 66P

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





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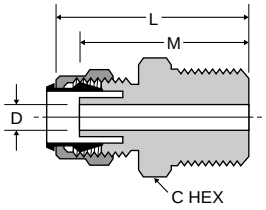
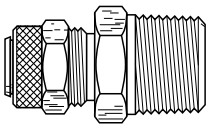
Parker Brass Products Division
Otsego, Michigan

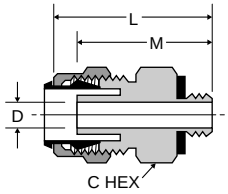
Male Connector 68P

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-2-10X32*	1/8	10-32	5/16-24	3/8	.86	.64	.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-4-10X32	1/4	10-32	3/8-24	3/8	.86	.75	.094
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

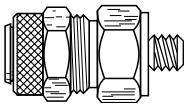
*Brass Sleeve, No Tube Support





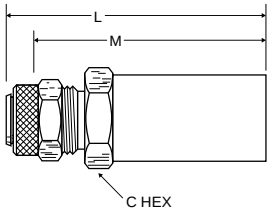


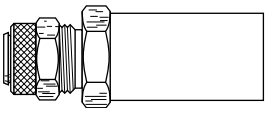
68P-X-10/32



Tube End Reducer 97P

PART NO.	TUBE O.D.	L	M	C HEX
97P-4-6	3/8 X 1/4	1.718	1.625	.437
97P-6-8	1/2 X 3/8	1.875	1.781	.562

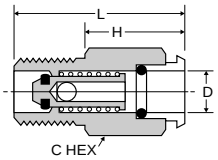


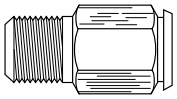


Pipe Coupler Body 391P

(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

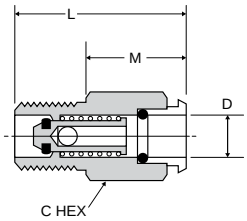


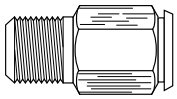


Pipe Coupler Body 391PSS

(Stainless Steel)

PART NO.	D INSERT DIA.	PIPE THREAD	L	C HEX	M
391PSS-4-2	1/4	1/8	1.271	.500	.900
391PSS-4-4	1/4	1/4	1.271	.562	.710
391PSS-6-4	3/8	1/4	1.40	.625	.840



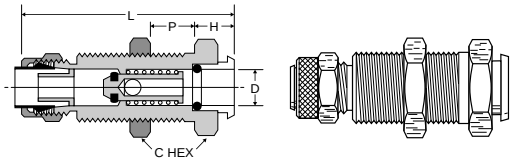


Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Bulkhead Coupler Body 392P

(Chrome Plated)

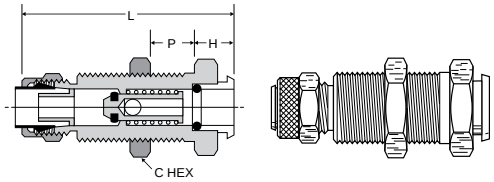
PART NO.	TUBE SIZE	D-INSERT DIA.	STRAIGHT THREAD	C HEX	P MAX.	H	L	BULKHEAD HOLE DIA.
392P-4-4	1/4	1/4	1/2-24	5/8	.84	.39	2.13	1/2
392P-6-6	3/8	3/8	11/16-24	13/16	.93	.37	2.01	11/16



Bulkhead Coupler Body 392PSS

(Stainless Steel)

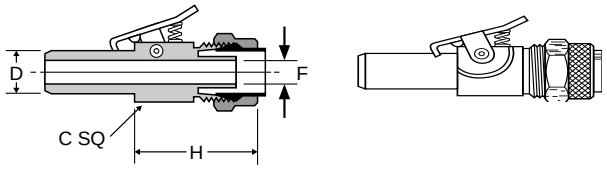
PART NO.	TUBE O.D.	BULKHEAD THREAD	L	C HEX	H	P MAX	BULKHEAD HOLE DIA.
392PSS-4-4	1/4	1/2-24	2.03	.625	.28	.84	1/2
392PSS-6-6	3/8	11/16-24	2.20	.812	.31	.93	11/16



Through Type Insert 393P

(Chrome Plated)

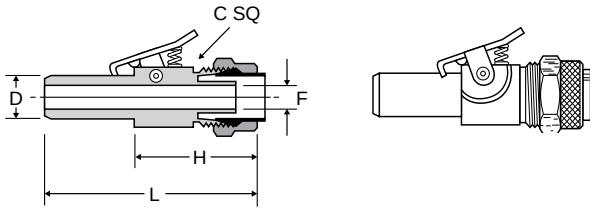
PART NO.	TUBE SIZE	D-INSERT DIA.	STRAIGHT THREAD	C SQUARE	H	FLOW DIA.F
393P-4-4	1/4	1/4	3/8-24	7/16	1.12	.125
393P-6-6	3/8	3/8	1/2-24	1/2	1.34	.203



Through Type Insert 393PSS

(Stainless Steel)

PART NO.	TUBE O.D.	D-INSERT DIA.	L	C SQUARE	H	FLOW DIA.F
393PSS-4-4	1/4	1/4	1.677	.500	.99	.125
393PSS-6-6	3/8	3/8	2.030	.500	1.27	.203

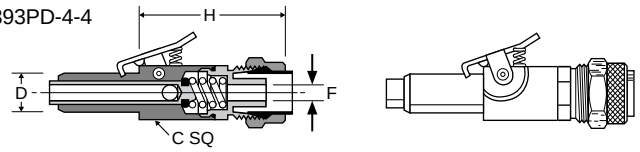


Shutoff Type Insert 393PD

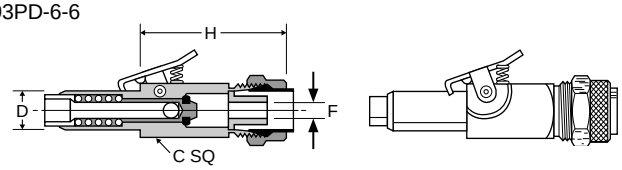
(Chrome Plated)

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

393PD-4-4



393PD-6-6

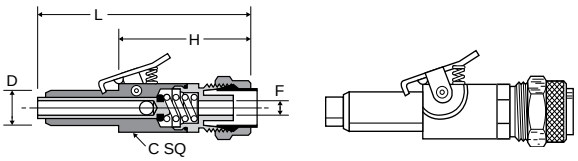


Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Shut-Off Type Insert 393PDSS

(Stainless Steel)

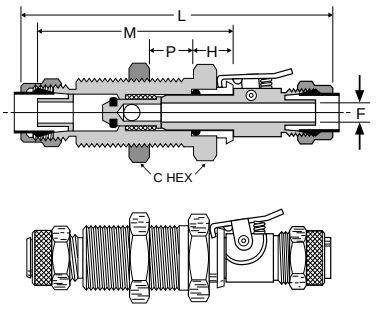
PART NO.	TUBE O.D.	D-INSERT DIA.	L	C SQUARE	H	FLOW DIA.F
393PDSS-4-4	1/4	1/4	2.46	.500	1.62	.116
393PDSS-6-6	3/8	3/8	2.60	.500	1.67	.157



Single End Shutoff Bulkhead Quick Coupler 394P

(Chrome Plated)

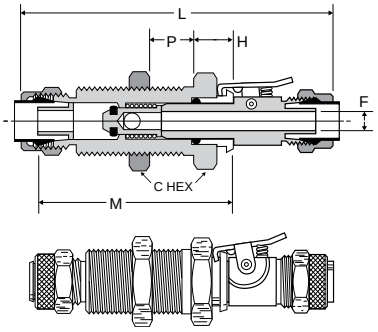
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	P MAX.	H	L	M	BULKHEAD HOLE DIA.	FLOW DIA.F
394P-4-4	1/4	1/2-24	5/8	.84	.39	3.28	2.13	1/2	.125
394P-6-6	3/8	11/16-24	13/16	.93	.37	3.41	2.01	11/16	.203



Coupler Single End Shut-Off Bulkhead 394PSS

(Stainless Steel)

PART NO.	TUBE O.D.	BULKHEAD THREAD	L	M	C HEX	H	P MAX	FLOW DIA. F
394PSS-4-4	1/4	1/2-24	3.05	2.06	.625	.31	.84	.125
394PSS-6-6	3/8	11/16-24	3.50	2.23	.812	.34	.93	.203

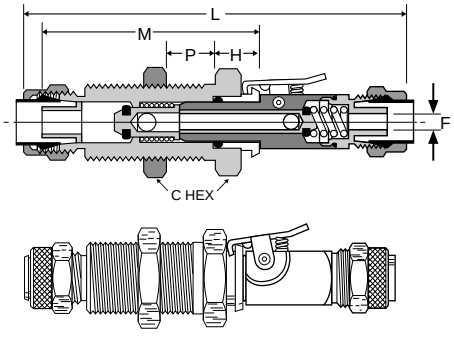


Double End Shutoff Bulkhead Quick Coupler 394PD

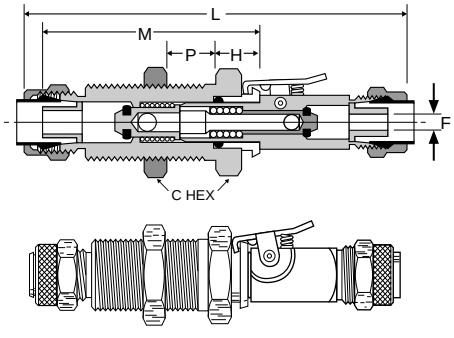
(Chrome Plated)

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	.37	3.48	2.01	11/16	.204

394PD-4-4



394PD-6-6

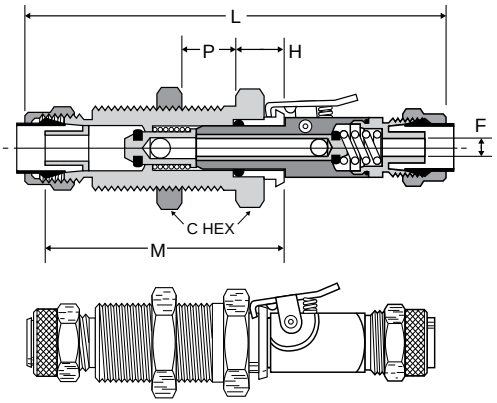


Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Double End Shut-Off Bulkhead Quick Coupler 394PDSS

(Stainless Steel)

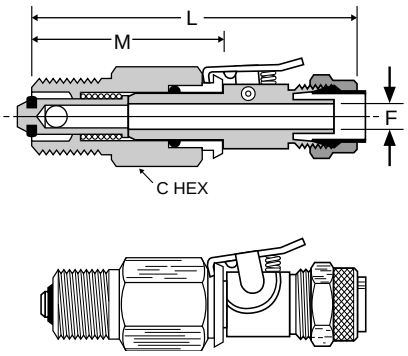
PART NO.	TUBE O.D.	BULKHEAD THREAD	L	M	C HEX	H	P MAX	FLOW DIA. F
394PDSS-4-4	1/4	1/2-24	3.69	2.67	.625	.32	.84	.125
394PDSS-6-6	3/8	11/16-24	3.91	2.24	.812	.34	.93	.203



Single End Shutoff Pipe Connector Quick Coupler 398P

(Chrome Plated)

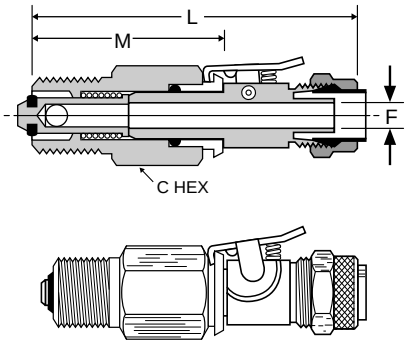
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA.F
398P-4-2	1/4	1/8	3/8-24	1/2	2.45	1.32	.125
398P-4-4	1/4	1/4	3/8-24	9/16	2.45	1.32	.125
398P-6-4	3/8	1/4	1/2-24	5/8	2.80	1.46	.203



Single End Shut-Off Connector Quick Coupler 398PSS

(Stainless Steel)

PART NO.	TUBE O.D.	PIPE THREAD	L	M	C HEX	FLOW DIA. F
398PSS-4-2	1/4	1/8	2.30	1.32	.500	.125
398PSS-4-4	1/4	1/4	2.30	1.32	.562	.125
398PSS-6-4	3/8	1/4	2.70	1.43	.625	.203



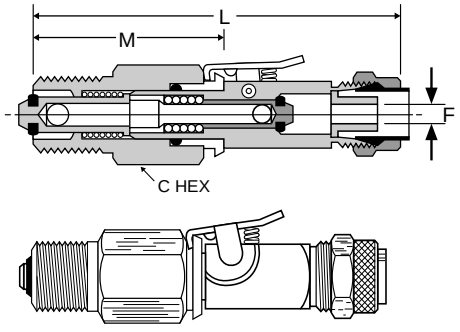
Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Double End Shutoff Pipe Connector Quick Coupler 398PD

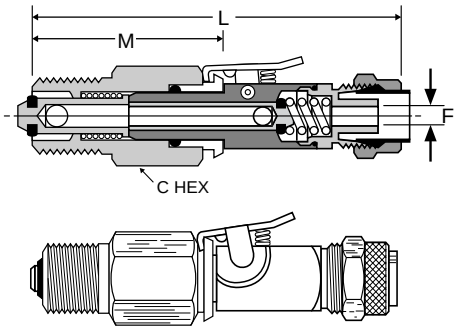
(Chrome Plated)

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	2.88	1.43	.204

398PD-6-4



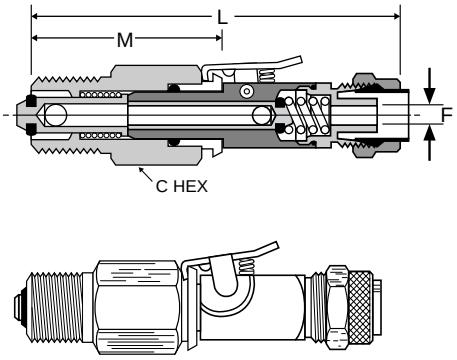
398PD-4-X



Double End Shut-Off Pipe Connector Quick Coupler 398PDSS

(Stainless Steel)

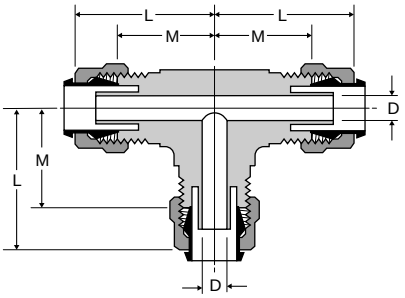
PART NO.	TUBE O.D.	PIPE THREAD	L	M	C HEX	FLOW DIA. D
398PDSS-4-2	1/4	1/8	2.93	1.31	.500	.125
398PDSS-4-4	1/4	1/4	2.93	1.31	.562	.125
398PDSS-6-4	3/8	1/4	3.10	1.43	.625	.125

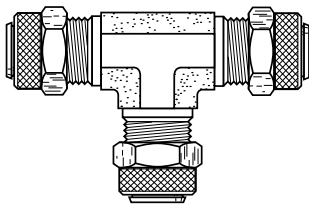


Union Tee 164P

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

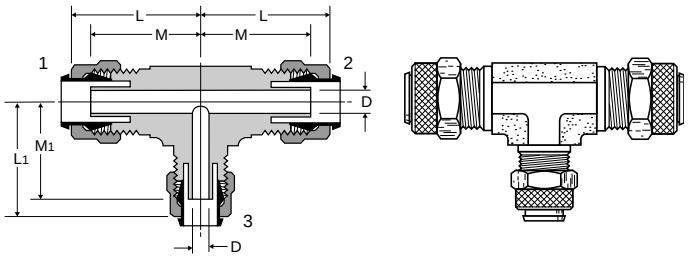
*Brass Sleeve, No Tube Support





Union Tee 164P combination size

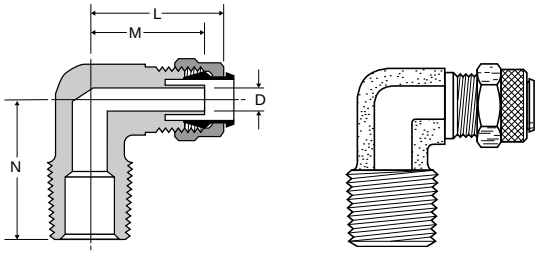
PART NO.	1 TUBE SIZE	2 TUBE SIZE	3 TUBE SIZE	L	L1	M	M1	FLOW DIA.D
164P-6-4	3/8	3/8	1/4	.98	.90	.86	.79	.125



Male Elbow 169P/269P

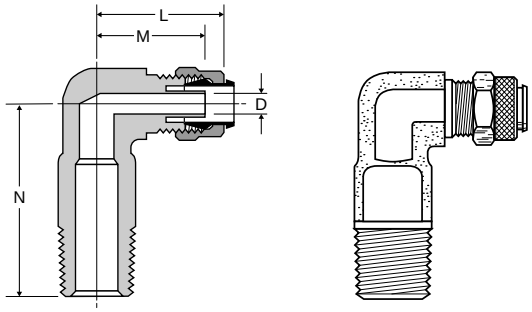
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA.D
169P-2-1	1/8	1/16	5/16-24	.88	.63	.69	.094
269P-2-2*	1/8	1/8	5/16-24	.83	.61	.67	.094
169P-3-1	3/16	1/16	3/8-24	.88	.63	.69	.094
169P-3-2*	3/16	1/8	3/8-24	.83	.61	.69	.125
169P-3-4*	3/16	1/4	3/8-24	.85	.63	.94	.125
169P-4-1	1/4	1/16	3/8-24	.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



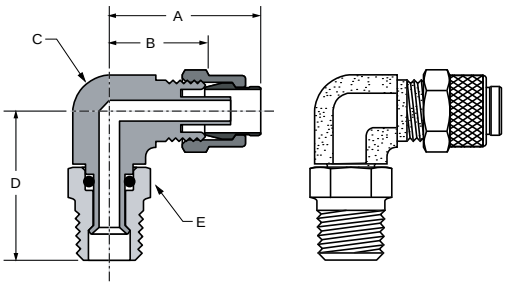
Long Male Elbow 169LP

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



Male Elbow Swivel 169PS

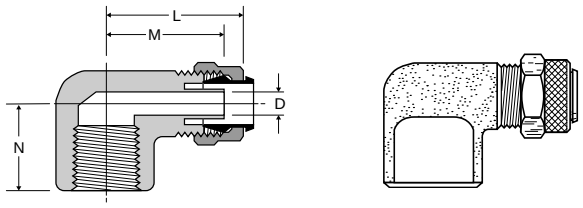
PART NO.	TUBE O.D.	PIPE THREAD	A	B	C HEX	D	E
169PS-4-2	1/4	1/8	.812	.594	.375	.862	.437
169PS-4-4	1/4	1/4	.906	.688	.562	1.218	.562
169PS-6-2	3/8	1/8	.875	.625	.437	.904	.437
169PS-6-4	3/8	1/4	.937	.685	.562	1.218	.562
169PS-6-6	3/8	3/8	.859	.602	.562	1.190	.687
169PS-8-6	1/2	3/8	1.031	.782	.500	1.218	.687



Female Elbow 170P

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

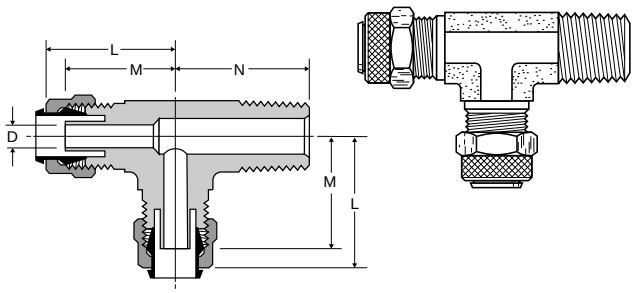
*Brass Sleeve, No Tube Support



Male Run Tee 171P

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

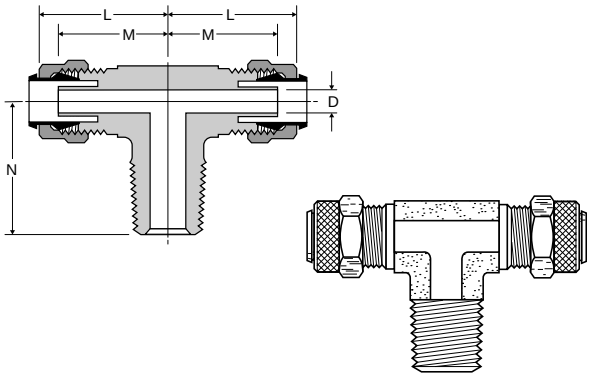
*Brass Sleeve, No Tube Support



Male Branch Tee 172P

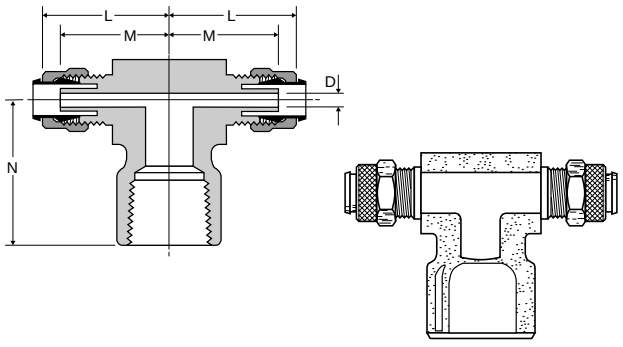
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA.D
172P-2-2*	1/8	1/8	5/16-24	.82	.60	.67	.094
172P-3-2*	3/16	1/8	3/8-24	.82	.60	.67	.125
172P-4-2	1/4	1/8	3/8-24	.84	.73	.72	.125
172P-4-4	1/4	1/4	3/8-24	.92	.81	.92	.125
172P-5-2	5/16	1/8	7/16-24	.83	.73	.72	.144
172P-6-2	3/8	1/8	1/2-24	.88	.86	.74	.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



Female Branch Tee 177P

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



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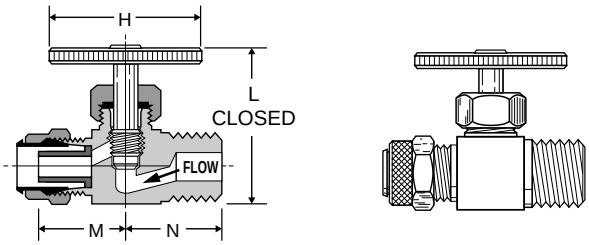
Otsego, Michigan

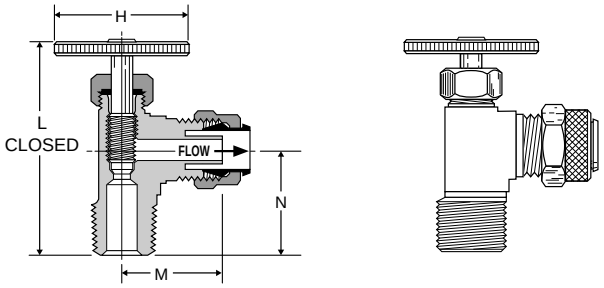
Needle Valve NV311P

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

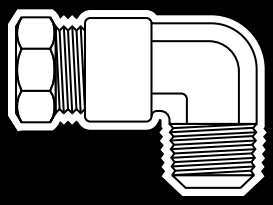


Angle Needle Valve NV312P

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



Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan



Hi-Duty Flareless Tube Fittings

Advantages
No flaring, soldering or other preparation of tubing is necessary. Pre-assembled brass fitting, with sleeve machined onto nut. This two piece flareless compression design is available in a broad selection of configurations from 1/8" through 5/8" OD. tube size.

Applications
Use with copper, brass, seamless steel and thermoplastic tubing for instrumentation systems, farm and mobile construction equipment, hydraulic and pneumatic controls, process control systems and laboratory equipment.

Steel tubing must be cold drawn and annealed seamless low-carbon steel tubing per SAE J524 with a maximum hardness of Rockwell B 65. Brass insert 63PT is recommended for use with thermoplastic tubing.

Working Pressure Range
Up to 4,300 psi depending on tubing being used

Maximum Recommended Working Pressue

Tube O.D.	PSI
1/8	4,300
3/16	2,850
1/4	2,100
5/16	1,800
3/8	1,500
1/2	1,150
5/8	1,000

Assembly Instructions
1. Cut tube squarely and cleanly removing all burrs.
2. Grasp fitting. Do not remove nut.
3. Insert tube in fitting through nut until tube seats firmly against tube shoulder in body.
4. Grip tube firmly to prevent turning and tighten nut to finger-tight. Continue to tighten nut for one and three-quarter additional turns (one and one-half turns for 1/2" size tube fittings) for a positive, leak proof seal. During tightening a slight “give” will be felt. This “give” indicates the sleeve has been sheared from the nut. It is not necessary to tighten the nut all the way down.

To Reconnect:
1. Reinsert tubing
2. Tighten nut one-eighth of a turn more than previous make-up.

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 identifies the style and type of fitting. The second series of numbers describes the size.

Example:

1	69	HD	–6	–4
Forging (1)				
	Male Elbow			
		Hi-Duty		
			3/8" Tube O.D.	
				1/4" Pipe Thread

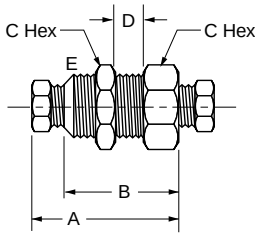
Special Fittings
Fitting configurations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry.

Pricing
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

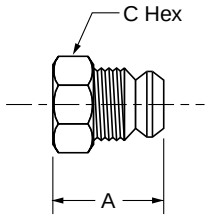
Bulkhead Union 62HDBH

PART NO.	TUBE SIZE	MIN. ORIFICE SIZE	A	B	C	D	E
62HDBH-2	1/8	.093	1.781	1.156	.562	.625	7/16-24
62HDBH-4	1/4	.187	1.968	1.156	.687	.625	9/16-24



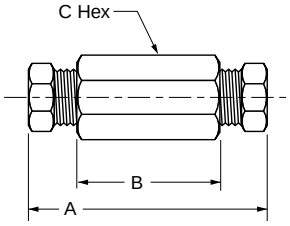
Nut/Sleeve 61HD

PART NO.	TUBE SIZE	PIPE THREAD	A	C
61HD-2	1/8	5/16-24	.656	.312
61HD-3	3/16	3/8-24	.687	.375
61HD-4	1/4	7/16-24	.734	.437
61HD-5	5/16	1/2-20	.765	.500
61HD-6	3/8	9/16-20	.843	.562
61HD-8	1/2	11/16-16	.921	.688
61HD-10	5/8	7/8-18	1.078	.875



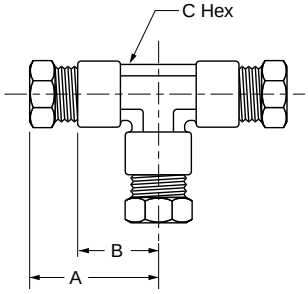
Union 62HD

PART NO.	TUBE SIZE	MIN. ORIFICE SIZE	A	B	C
62HD-2	1/8	.093	1.687	1.062	.375
62HD-3	3/16	.125	1.781	1.031	.437
62HD-4	1/4	.187	1.906	1.093	.562
62HD-6	3/8	.312	2.187	1.375	.625
62HD-8	1/2	.437	2.437	1.562	.812
62HD-10	5/8	.500	2.937	1.812	1.062



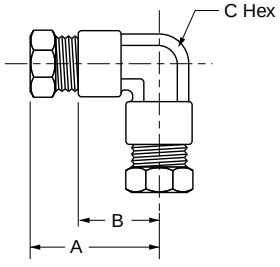
Union Tee 164HD

PART NO.	TUBE SIZE	MIN. ORIFICE SIZE	A	B	C HEX
164HD-4	1/4	.187	1.082	.687	.500
164HD-6	3/8	.312	1.357	.970	.562
164HD-8	1/2	.437	1.481	1.060	.750



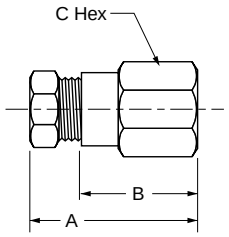
Union Elbow 165HD

PART NO.	TUBE SIZE	MIN. ORIFICE SIZE	A	B	C HEX
165HD-4	1/4	.187	1.084	.690	.552
165HD-6	3/8	.312	1.376	.970	.615
165HD-8	1/2	.437	1.546	1.060	.750



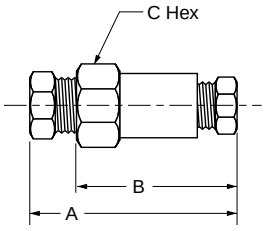
Female Connector 66HD

PART NO.	TUBE SIZE	PIPE THREAD	MIN. ORIFICE SIZE	A	B	C HEX
66HD-2-2	1/8	1/8	.093	1.312	1.000	.500
66HD-4-2	1/4	1/8	.187	1.406	1.000	.562
66HD-4-4	1/4	1/4	.187	1.593	1.187	.687
66HD-6-2	3/8	1/8	.312	1.531	1.125	.625
66HD-6-4	3/8	1/4	.312	1.718	1.312	.625
66HD-6-6	3/8	3/8	.312	1.750	1.343	.812



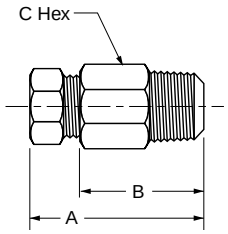
Reducing Union 62HD

PART NO.	TUBE SIZE	MIN. ORIFICE SIZE	A	B	C HEX
62HD-6-4	3/8 X 1/4	.187	2.000	1.187	.625
62HD-8-4	1/2 X 1/4	.187	2.125	1.281	.812
62HD-8-6	1/2 X 3/8	.312	2.656	1.406	.812



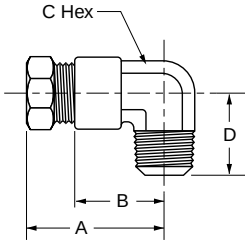
Male Connector 68HD

PART NO.	TUBE SIZE	PIPE THREAD	MIN. ORIFICE SIZE	A	B	C HEX
68HD-2-2	1/8	1/8	.093	1.062	.750	.437
68HD-3-2	3/16	1/8	.125	1.140	.765	.437
68HD-4-2	1/4	1/8	.187	1.343	.937	.562
68HD-4-4	1/4	1/4	.187	1.468	1.062	.562
68HD-4-6	1/4	3/8	.187	1.343	.937	.687
68HD-4-8	1/4	1/2	.187	1.531	1.125	.875
68HD-5-2	5/16	1/8	.218	1.406	1.000	.562
68HD-5-4	5/16	1/4	.218	1.500	1.093	.562
68HD-6-2	3/8	1/8	.218	1.531	1.125	.625
68HD-6-4	3/8	1/4	.312	1.656	1.250	.625
68HD-6-6	3/8	3/8	.312	1.531	1.125	.687
68HD-6-8	3/8	1/2	.312	1.531	1.125	.875
68HD-8-4	1/2	1/4	.312	1.813	1.375	.812
68HD-8-6	1/2	3/8	.406	1.750	1.312	.812
68HD-8-8	1/2	1/2	.437	1.812	1.375	.875
68HD-8-12	1/2	3/4	.437	1.625	1.187	1.062
68HD-10-6	5/8	3/8	.406	2.031	1.468	1.062
68HD-10-8	5/8	1/2	.500	2.156	1.593	1.062



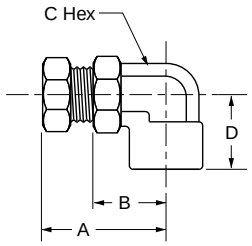
Male Elbow 169HD

PART NO.	TUBE SIZE	PIPE THREAD	MIN. ORIFICE SIZE	A	B	C HEX	D
169HD-2-2	1/8	1/8	.093	.975	.656	.438	.720
169HD-3-2	3/16	1/8	.125	1.056	.687	.437	.750
169HD-4-2	1/4	1/8	.187	1.084	.687	.500	.750
169HD-4-4	1/4	1/4	.187	1.144	.750	.500	.937
169HD-5-2	5/16	1/8	.218	1.144	.750	.562	.810
169HD-5-4	5/16	1/4	.250	1.206	.812	.562	1.000
169HD-6-2	3/8	1/8	.218	1.281	.875	.562	.875
169HD-6-4	3/8	1/4	.312	1.281	.875	.562	1.000
169HD-6-6	3/8	3/8	.312	1.376	.970	.615	1.031
169HD-6-8	3/8	1/2	.312	1.526	1.120	.687	1.310
169HD-8-4	1/2	1/4	.312	1.421	1.000	.678	1.062
169HD-8-6	1/2	3/8	.406	1.421	1.000	.678	1.062
169HD-8-8	1/2	1/2	.437	1.481	1.060	.740	1.420
169HD-10-6	5/8	3/8	.406	1.818	1.270	.875	1.340
169HD-10-8	5/8	1/2	.500	1.818	1.270	.875	1.480



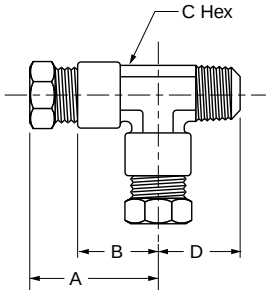
Female Elbow 170HD

PART NO.	TUBE SIZE	PIPE THREAD	MIN. ORIFICE SIZE	A	B	C HEX	D
170HD-2-2	1/8	1/8	.093	1.005	.690	.500	.750
170HD-4-2	1/4	1/8	.187	1.084	.687	.500	.750
170HD-4-4	1/4	1/4	.187	1.234	.843	.562	.875
170HD-6-2	3/8	1/8	.312	1.281	.875	.562	.937
170HD-6-4	3/8	1/4	.312	1.376	.970	.615	1.093
170HD-6-6	3/8	3/8	.312	1.526	1.120	.690	1.150
170HD-8-6	1/2	3/8	.437	1.481	1.062	.740	1.281



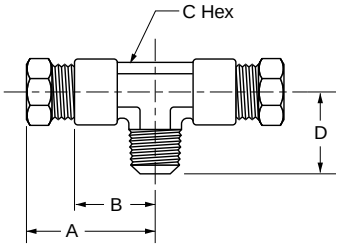
Male Run Tee 171HD

PART NO.	TUBE SIZE	PIPE THREAD	MIN. ORIFICE SIZE	A	B	C HEX	D
171HD-4-2	1/4	1/8	.187	1.144	.750	.500	.780
171HD-4-4	1/4	1/4	.187	1.207	.812	.500	.937
171HD-6-4	3/8	1/4	.312	1.376	.970	.562	1.000



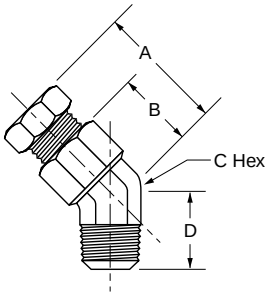
Male Branch Tee 172HD

PART NO.	TUBE SIZE	PIPE THREAD	MIN. ORIFICE SIZE	A	B	C HEX	D
172HD-4-2	1/4	1/8	.187	1.082	.687	.500	.780
172HD-4-4	1/4	1/4	.187	1.269	.875	.500	.937
172HD-6-6	3/8	3/8	.312	1.406	1.000	.562	1.125



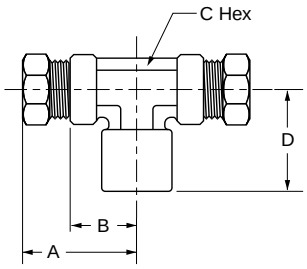
45° Male Elbow 179HD

PART NO.	TUBE SIZE	PIPE THREAD	MIN. ORIFICE SIZE	A	B	C HEX	D
179HD-4-2	1/4	1/8	.187	1.093	.687	.562	.750
179HD-6-4	3/8	1/4	.280	1.138	.710	.550	.850



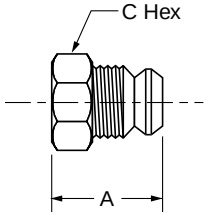
Female Branch Tee 177HD

PART NO.	TUBE SIZE	PIPE THREAD	MIN. ORIFICE SIZE	A	B	C HEX	D
177HD-4-2	1/4	1/8	.187	1.082	.687	.500	.750
177HD-4-4	1/4	1/4	.187	1.144	.750	.562	1.093
177HD-6-4	3/8	1/4	.312	1.376	.970	.562	1.093



Plug 59HD

PART NO.	TUBE SIZE	A	C
59HD-4	1/4	.734	.437



Push to Connect Pneumatic

Prestolok

- Brass & Composite Bodies
- Inch & Metric Sizes
- Swivels on Shaped Male Threads
- Pre-applied Sealant

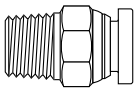
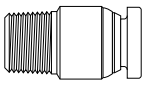
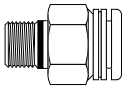
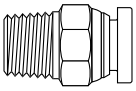
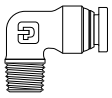
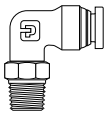
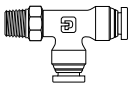
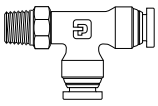
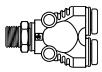
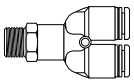
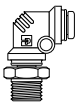
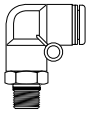
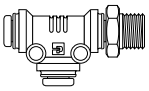
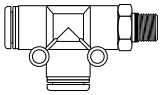
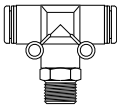
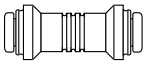
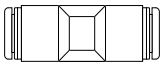
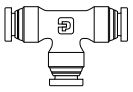
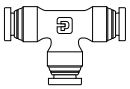
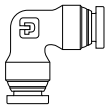
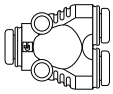
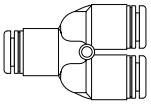
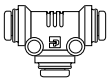
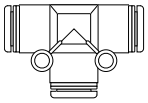
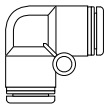
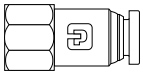
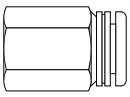
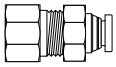
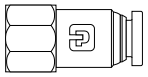
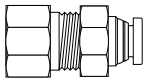
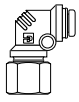
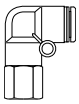
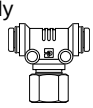
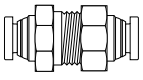
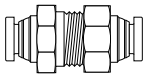
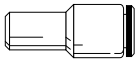
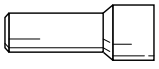
PrestoWeld

- Ease of assembly,
- Flame resistant
- Positive Tube Retention
- Prevents Weld Spatter Build-up

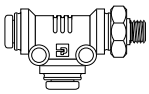
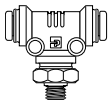
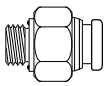
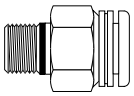
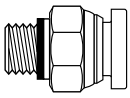
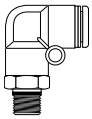
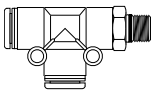
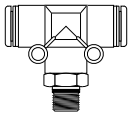
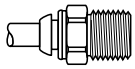
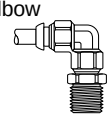
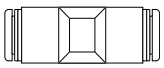
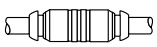
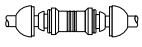
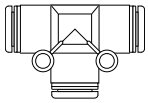
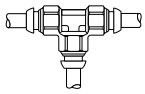
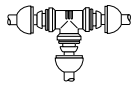
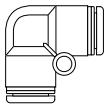
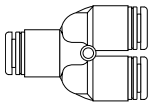
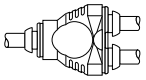
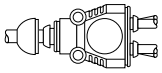
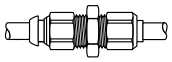
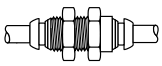
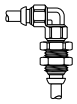
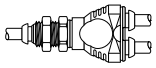
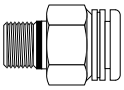
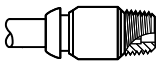
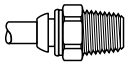
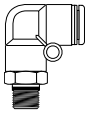
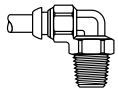
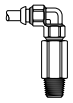
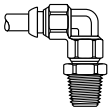
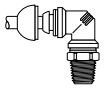
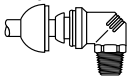
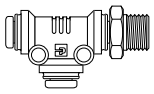
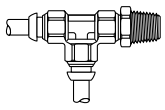
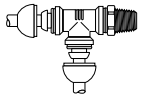
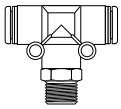
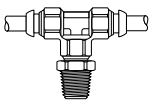
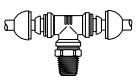
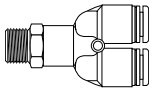
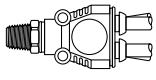
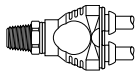
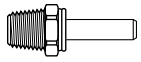
Global Connect

- Economical
- Durable
- Composite Bodies
- Nickel Plated Componentry

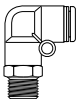
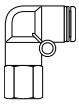
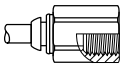
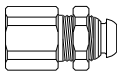
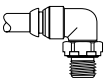
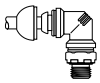
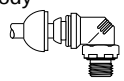
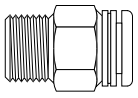
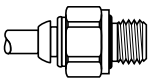
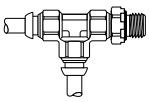
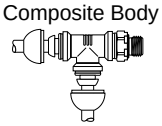
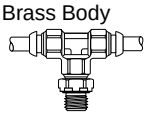
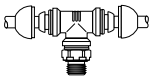
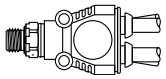
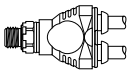
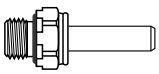
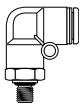
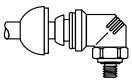
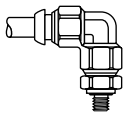
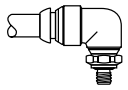
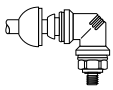
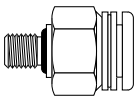
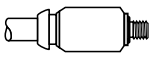
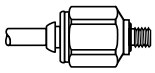
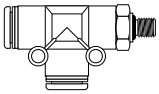
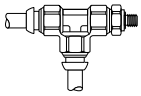
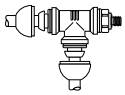
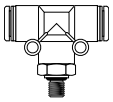
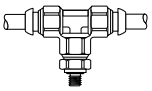
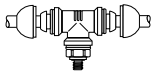
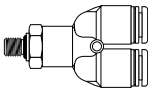
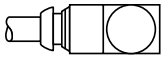
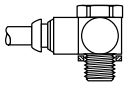
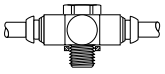
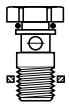
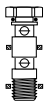
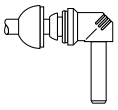
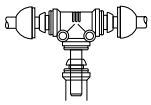
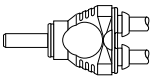
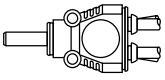
The World Standard

Tube to Male NPTF	**W68PLP** Male Connector  Page B8	**W68PLPR** Round Body Male Connector  Page B9	**W68GC** Male Connector  Page B42	**W68PW** Male Connector  Page B37	**W169PLP** Male Elbow Nickel Plated Body  Page B10	**W169PLPNS** Male Elbow Nickel Plated Body  Page B11
W169PW Male Elbow Swivel  Page B37	**W171PLP** Male Run Tee Nickel Plated Body  Page B12	**W171PW** Male Run Tee Swivel  Page B38	**W172PLP** Male Branch Tee Nickel Plated Body  Page B13	**W172PW** Male Branch Tee Swivel  Page B38	**W368PL** Union Y Connector Composite Body  Page B14	**W368GC** Union Y Connector Composite Body  Page B46
W369PLC Compact Male Elbow Composite Body  Page B11	**W369PL** Male Elbow Composite Body  Page B10	**W369PLX** Long Male Elbow Composite Body  Page B11	**W369GC** Male Elbow Composite Bodyy  Page B43	**W371PL** Male Run Tee Composite Body  Page B12	**W371GC** Male Run Tee Composite Body  Page B44	**W372PL** Male Branch Tee Composite Body  Page B13
W372GC Male Branch Tee Composite Body  Page B45	**Tube to Tube**	**32PL** Union Composite Body  Page B7	**32GC** Union Composite Body  Page B42	**62PLP** Union Nickel Plated Body  Page B7	**62PW** Union Nickel Plated Body  Page B36	**164PLP** Union Tee Nickel Plated Body  Page B9
164PW Union Tee Nickel Plated Body  Page B37	**165PLP** Union Elbow Nickel Plated Body  Page B9	**165PW** Union Elbow Nickel Plated Body  Page B37	**362PL** Union Y Composite Body  Page B14	**362GC** Union Y Composite Body  Page B45	**364PL** Union Tee Composite Body  Page B9	**364GC** Union Tee Composite Body  Page B43
365PL Union Elbow Composite Body  Page B9	**365GC** Union Elbow Composite Body  Page B43	**Tube to Female NPTF**	**66PLP** Female Connector  Page B8	**66GC** Female Connector  Page B42	**66PLPBH** Female Bulkhead  Page B8	**66PW** Female Connector  Page B36
66PWBH Female Bulkhead  Page B36	**370PL** Female Elbow Composite Body  Page B12	**370GC** Female Elbow Composite Body  Page B44	**377PL** Female Branch Tee Composite Body  Page B13	**Bulkhead Unions**	**62PLPBH** Bulkhead Union  Page B7	**62PWBH** Bulkhead Union  Page B36
Auxiliary Components	**67PPL** Tube End Reducer  Page B8	**639PL** Plug  Page B14	**DB** Dust/Weld Spatter Boot  Page B36			

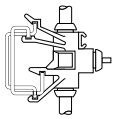
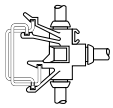
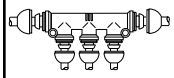
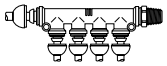
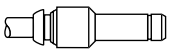
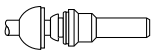
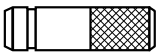
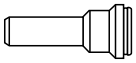
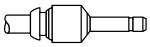
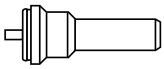
B

Tube to Male BSPP	**PLR2BF4-K** Male Run Tee  Page B24	**PLSBF4-K** Male Branch Tee  Page B26	**PLHBF4-B** Male Connector  Page B17	**PLE2BF4-K** Male Elbow Composite Body  Page B21	**Tube to Male Straight Thread**	**68GC** Male Connector  Page B42
68PLP Male Connector  Page B9	**369GC** Male Elbow Composite Body  Page B43	**371GC** Male Run Tee Composite Body  Page B44	**372GC** Male Branch Tee Composite Body  Page B45	**Metric Tube to Male NPTF**	**FPB** Male Connector  Page B17	**C6PB** Male Elbow Brass Elbow  Page B20
Metric Tube to Metric Tube	**HGC** Metric Union Composite Body  Page B47	**HPB** Metric Union Brass Body  Page B15	**HPK** Metric Union Composite Body  Page B15	**JGC** Metric Union Tee Composite Body  Page B48	**JPB** Metric Union Tee Brass Body  Page B19, 39	**JPK** Metric Union Tee Composite Body  Page B19
EGC Union Elbow Composite Body  Page B48	**EPB** Metric Union Elbow Brass Body  Page B19, 39	**EPK** Metric Union Elbow Composite Body  Page B19	**YJGC** Union Y Composite Body  Page B51	**YJPK** Metric Union Y Composite Body  Page B29	**YJ5PK** Metric Double Y Composite Body  Page B29	
Metric Bulkhead Unions	**WBMPB** Metric Bulkhead Union  Page B15	**WPB** Metric Bulkhead Union  Page B15, 38	**WE6PB** Metric Bulkhead Union Elbow  Page B20	**WE6PK** Metric Bulkhead Union Elbow  Page B20	**WYJ6PK** Metric Bulkhead Union Y  Page B29	
Metric Tube to Male BSPT	**F3GC** Male Connector  Page B47	**F23PB** Male Connector  Page B18	**F3PB** Male Connector  Page B17, 38	**C63GC** Male Elbow Composite Body  Page B48	**C3PB** Compact Male Elbow  Page B23	**C63LPB** Long Male Elbow  Page B24
C63PB Male Elbow  Page B20, 39	**C63LPK** Long Male Elbow Composite Body  Page B24	**C63PK** Male Elbow Composite Body  Page B21	**C63SPK** Compact Male Elbow Composite Body  Page B23	**R63GC** Male Run Tee Composite Body  Page B50	**R63PB** Male Run Tee  Page B25, 39	**R63PK** Male Run Tee Composite Body  Page B25
S63GC Male Branch Tee Composite Body  Page B50	**S63PB** Male Branch Tee  Page B27, 40	**S63PK** Male Branch Tee Composite Body  Page B27	**YJ63GC** Union Y Connector Composite Body  Page B52	**YJ563PK** Double Union Y Composite Body  Page B30	**YJ63PK** Male Union Y Composite Body  Page B30	**T23FPK** Tube End Male Adaptor  Page B33

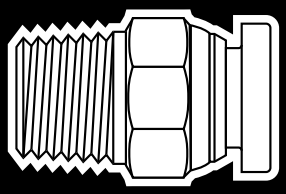
Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Metric Tube to Female BSPT	**CF63GC** Female Elbow Composite Body  Page B49	**Metric Tube to Female Metric Straight Thread**	**CF68GC** Female Elbow Composite Body  Page B49	**Metric Tube to Female BSPP**	**G4PB** Female Connector  Page B16	**WG4PB** Female Bulkhead  Page B16
Metric Tube to Male BSPP	**C64GC** Male Elbow Composite Body  Page B49	**C64PB** Male Elbow Brass Body  Page B21	**C64SPB** Compact Male Elbow Brass Body  Page B22	**C64PK** Male Elbow Composite Elbow  Page B22	**C64SPK** Compact Male Elbow Composite Body  Page B23	**F4GC** Male Connector  Page B47
F4PB Male Connector  Page B18	**R64PB** Male Run Tee Brass Body  Page B25	**R64PK** Male Run Tee Composite Body  Page B26	**S64PB** Male Branch Tee Brass Body  Page B27	**S64PK** Male Branch Tee Composite Tee  Page B28	**YJ564PK** Union Double Y Composite Body  Page B30	**YJ64PK** Male Y Composite Body  Page B30
T24FPK Tube End Male Adaptor  Page B33	**Metric Tube to Metric Straight Thread**	**C68GC** Male Elbow Composite Body  Page B49	**C68SPK** Compact Male Elbow Composite Body  Page B23	**C68PB** Male Elbow  Page B22	**C68SPB** Compact Male Elbow  Page B22	**C68PK** Male Elbow Composite Body  Page B23
F8GC Male Connector  Page B47	**F28PB** Male Connector  Page B18	**F8PB** Male Connector  Page B18	**R68GC** Male Run Tee Composite Body  Page B50	**R68PB** Male Run Tee  Page B26	**R68PK** Male Run Tee Composite Body  Page B26	**S68GC** Male Branch Tee Composite Body  Page B51
S68PB Male Branch Tee  Page B28	**S68PK** Male Branch Tee Composite Body  Page B28	**YJ68GC** Union Y Connector Composite Body  Page B52	**Metric Banjo Fittings**	**CORPB** Single Body  Page B31	**CORPBD** Double Body  Page B31	**COR8PB / COR4PB** Single Banjo  Page B31
COR8PBD / COR4PBD Double Banjo  Page B31	**SC4U / SC8U** Single Banjo Bolt  Page B31	**SC4UD / SC8UD** Stacking Banjo Bolt  Page B32	**Metric Plug-Ins**	**T2ESPK** Compact Elbow  Page B24	**T2JPK** Branch Tee  Page B28	**YJ2PK** Y Connector  Page B29
YJ52PK Double Y Connector  Page B30						

B

Metric Manifolds	**HS3PK** 2 Tubes  Page B33	**J3PK** 3 Tubes  Page B34	**J5PK** Multiple Tee  Page B32	**J6PK** Multiple Tee  Page B32	**J663PK** Multiple Tee  Page B32	
Metric Auxiliary Components	**TRPB** Metric Tube End Reducer  Page B16	**TR2PK** Tube End Reducer Composite Body  Page B16	**FNPB** Metric Plug  Page B33, 40	**FNPK** Composite Metric Plug  Page B33	**TEPB** Tube End Expander  Page B16	**TS2PK** Pressure Indicator  Page B34

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan



Prestolok Fittings

Advantages
Ready-to-use compact one-piece fitting for use with most thermoplastic 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 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 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.

Materials
Prestolok Nickel Plated Bodies: CA377, CA360, CA345
Prestolok Composite Bodies: Glass Filled Nylon
O-Ring: Nitrile (other compounds available on request)
Release Button: Polyacetal
Grab Ring: Stainless Steel
Note: For brass body Prestolok replace PLP with PLN.

Recommended Tubing
Prestolok nickel plated and composite fittings are designed to be used with the following Parker Hannifin Parflex Division tubing.

Tubing Series	Tubing Material
E	Linear Low Density Polyethylene
PP	Polypropylene
N	Plasticized Polyamide (Nylon)
NR	Unplasticized Polyamide (Rigid Nylon)
U	Polyurethane 90 Durometer Shore A
HU	Polyurethane 95 Durometer Shore A

Other materials for Prestolok inch sized nickel plated fittings:
Polyurethane 85 Durometer Shore A

CAUTION: All current manufacturers of 85A PU tubing do not approve the use of push-to-connect fittings with their product.

Testing has shown acceptable use with certain O.D – I.D. combinations. Applications and service conditions vary and therefore the use of a tube support may be required for any 85A PU tubing.

The following commercially available O.D. – I.D. 85A tubing sizes require the use of a tube support regardless of application.

5/32" – 3/32"	3/16" – 1/8"	1/4" - .170"	1/4" – 3/16"
5/16" – 1/4"	3/8" – 5/16"	1/2" – 3/8"	

Working pressure and temperature ranges

Prestolok	Zero to 200°F at up to 300 PSI depending on tubing being used.
Prestolok Composite	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. 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.
4. It is recommended to trim the tubing after every disassembly to insure a proper seal.

Order
By part number and name.

Example: W 68 PL –4 –2
- W — White Arcylic Thread Sealant
- 68 — Male Connector
- PL — Prestolok
- –4 — 1/4" (4/16) Tube O.D.
- –2 — 1/8" (2/16) Pipe Thread

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.

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

Metric Fittings
Metric fittings are available in Catalog 3550.
Thread types: BSPT and BSPP Sizes: 1/8-1/2.
Tube sizes: 4MM-14MM.

Specials
Fitting configurations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry.

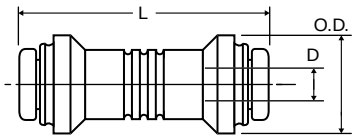
Pricing
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

B

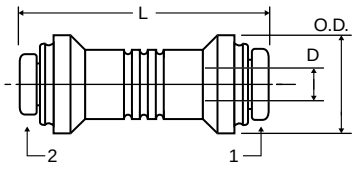
32PL Equal Union (Composite Body)

PART NO.	TUBE SIZE (IN)	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	.82	1.76	.31



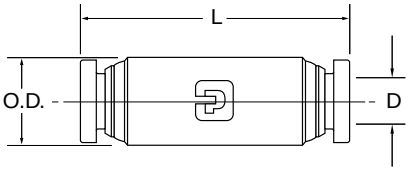
32PL Unequal Union (Composite Body)

PART NO.	1 TUBE SIZE (IN)	2 TUBE SIZE (IN)	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



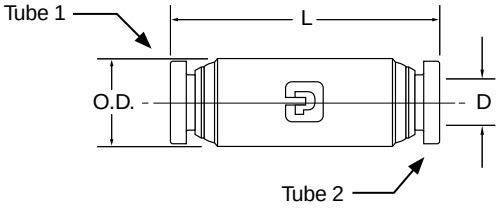
62PLP Union (Nickel Plated)

PART NO.	TUBE SIZE	O.D.	L	FLOW DIA. D
62PLP-2	1/8	.375	1.40	.094
62PLP-3	3/16	.437	1.41	.156
62PLP-5/32	5/32	.375	1.41	.125
62PLP-4	1/4	.500	1.43	.188
62PLP-5	5/16	.562	1.65	.250
62PLP-6	3/8	.625	1.66	.312
62PLP-8	1/2	.750	1.82	.375



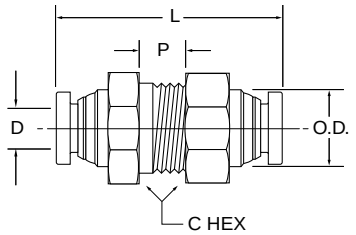
62PLP Unequal Union (Nickel Plated)

PART NO.	TUBE 1 SIZE (IN)	TUBE 2 SIZE (IN)	O.D.	L	FLOW DIA. D
62PLP-5/32-2	5/32	1/8	.375	1.41	.094
62PLP-4-2	1/4	1/8	.500	1.43	.094
62PLP-4-5/32	1/4	5/32	.500	1.43	.125
62PLP-4-6	1/4	3/8	.625	1.66	.188
62PLP-6-8	3/8	1/2	.750	1.82	.312



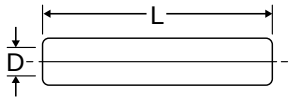
62PLPBH Bulkhead Union (Nickel Plated)

PART NO.	TUBE SIZE (IN)	BULKHEAD HOLE DIA. B	C HEX	P MAX.	L	D
62PLPBH-2	1/8	7/16	9/16	.39	1.40	.094
62PLPBH-5/32	5/32	7/16	9/16	.39	1.41	.125
62PLPBH-4	1/4	9/16	11/16	.29	1.43	.188
62PLPBH-5	5/16	5/8	3/4	.60	1.65	.250
62PLPBH-6	3/8	3/4	7/8	.54	1.66	.312
62PLPBH-8	1/2	7/8	1	.66	2.04	.375



63PL Double Male Union (Composite Body)

PART NO.	TUBE SIZE (IN)	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	2.22	.374



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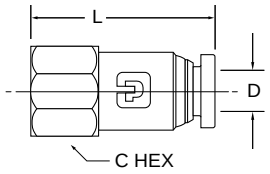
Otsego, Michigan

B

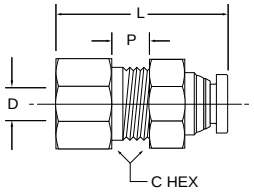
66PLP Female Connector (Nickel Plated)

PART NO.	TUBE SIZE	PIPE THREAD (NPTF)	C HEX	L	FLOW DIA. D
66PLP-2-2	1/8	1/8	9/16	1.17	.094
66PLP-2-2	1/8	1/4	11/16	1.34	.094
66PLP-3-2	3/16	1/8	9/16	1.13	.156
66PLP-5/32-2	5/32	1/8	9/16	1.17	.125
66PLP-5/32-4	5/32	1/4	11/16	1.38	.125
66PLP-4-2	1/4	1/8	9/16	1.17	.188
66PLP-4-4	1/4	1/4	11/16	1.38	.188
66PLP-5-2	5/16	1/8	9/16	1.25	.250
66PLP-5-4	5/16	1/4	11/16	1.45	.250
66PLP-6-4	3/8	1/4	11/16	1.46	.312
66PLP-6-6	3/8	3/8	13/16	1.51	.312



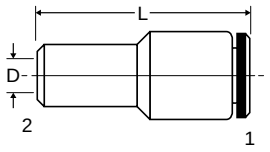
66PLPBH Female Bulkhead (Nickel Plated)

PART NO.	TUBE SIZE (IN)	PIPE THREAD (NPTF)	C HEX	P MAX.	L	FLOW DIA. D	BULKHEAD HOLE DIA.
66PLPBH-5/32-4	5/32	1/4	11/16	.19	1.39	.125	1/2
66PLPBH-4-4	1/4	1/4	11/16	.24	1.35	.188	9/16
66PLPBH-6-6	3/8	3/8	1	.22	1.47	.312	7/8
66PLPBH-8-6	1/2	3/8	1 1/4	.35	1.56	.344	1



67PPL Tube End Reducer (Composite Body)

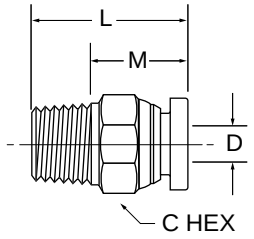
PART NO.	TUBE 1 SIZE (IN)	TUBE 2 SIZE (IN)	L	FLOW DIA. D
67PPL-2-5/32	1/8	5/32	1.76	.120
67PPL-2-4	1/8	1/4	1.48	.078
67PPL-5/32-4	5/32	1/4	1.32	.125
67PPL-5/32-5	5/32	5/16	1.31	.125
67PPL-5/32-6	5/32	3/8	1.64	.125
67PPL-4-5	1/4	5/16	1.65	.220
67PPL-4-6	1/4	3/8	1.76	.220
67PPL-4-8	1/4	1/2	1.77	.220
67PPL-5-6	5/16	3/8	1.81	.220
67PPL-6-8	3/8	1/2	2.02	.315



W68PLP Male Connector (Nickel Plated)

PART NO.	TUBE SIZE (IN)	PIPE THREAD (NPTF)	C HEX	L	FLOW DIA. D
W68PLP-2-1	1/8	1/16	3/8	.79	.094
W68PLP-2-2	1/8	1/8	7/16	.79	.094
W68PLP-2-4	1/8	1/4	9/16	1.02	.094
W68PLP-3-2	3/16	1/8	7/16	.85	.156
W68PLP-3-4	3/16	1/4	9/16	1.01	.156
W68PLP-5/32-1	5/32	1/16		.88	.940
W68PLP-5/32-2	5/32	1/8	7/16	.80	.125
W68PLP-5/32-4	5/32	1/4	9/16	1.03	.125
W68PLP-4-1	1/4	1/16	1/2	1.07	.141
W68PLP-4-2	1/4	1/8	1/2	.89	.188
W68PLP-4-4	1/4	1/4	9/16	1.00	.188
W68PLP-4-6	1/4	3/8	3/4	1.04	.188
W68PLP-5-2	5/16	1/8	9/16	1.18	.250
W68PLP-5-4	5/16	1/4	9/16	1.04	.250
W68PLP-5-6	5/16	3/8	11/16	1.04	.250
W68PLP-6-2	3/8	1/8	5/8	1.21	.250
W68PLP-6-4	3/8	1/4	5/8	1.08	.312
W68PLP-6-6	3/8	3/8	11/16	1.02	.312
W68PLP-6-8	3/8	1/2	7/8	1.28	.312
W68PLP-8-4	1/2	1/4	13/16	1.44	.344
W68PLP-8-6	1/2	3/8	13/16	1.24	.344
W68PLP-8-8	1/2	1/2	7/8	1.35	.375
68PLP-5/32-4LT*	5/32	1/4-28	7/16	.88	.093

*SAE-LTThreads



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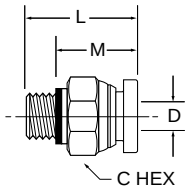
B

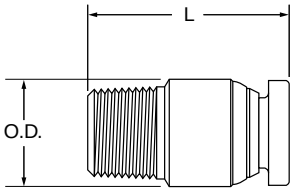
68PLP-X-10X32 Male Connector (Nickel Plated)

PART NO.	TUBE SIZE (IN)	PIPE THREAD (NPTF)	C HEX	L	FLOW DIA. D
68PLP-2-0	1/8	10x32	3/8	.92	.094
68PLP-5/32-0	5/32	10x32			
68PLP-4-0	1/4	10x32	1/2	.96	.094



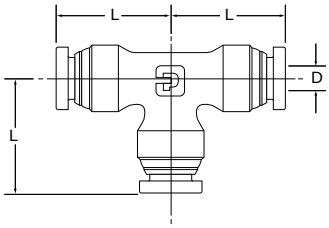
68PLPR Round Body Male Connector (Nickel Plated)

PART NO.	TUBE SIZE	THREAD SIZE NPTF	INTERNAL HEX BROACH	BODY DIA. O.D.	L	FLOW DIA.
68PLPR-2-0	1/8	10-32	3/32	3/8"	.89	.094
68PLPR-5/32-0	5/32	10-32	3/32	3/8"	.91	.094
68PLPR-4-0	1/4	10-32	3/32	1/2"	.95	.094
W68PLPR-5/32-1	5/32	1/16	1/8	7/16"	.87	.125
W68PLPR-5/32-2	5/32	1/8	1/8	7/16"	.79	.125
W68PLPR-4-1	1/4	1/16	5/32	1/2"	1.06	.156
W68PLPR-4-2	1/4	1/8	3/16	1/2"	.88	.188
W68PLPR-4-4	1/4	1/4	3/16	5/8"	.99	.188



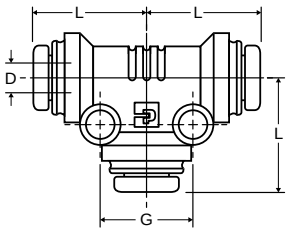
164PLP Union Tee (Nickel Plated)

PART NO.	TUBE SIZE (IN)	L	FLOW DIA. D
164PLP-2	1/8	.74	.094
164PLP-3	3/16	.82	.156
164PLP-5/32	5/32	.77	.125
164PLP-4	1/4	.85	.188
164PLP-5	5/16	.97	.250
164PLP-6	3/8	1.01	.250
164PLP-8	1/2	1.15	.375



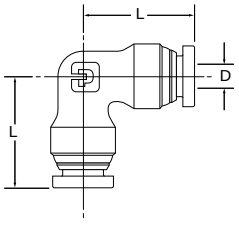
364PL Union Tee (Composite Body)

PART NO.	TUBE SIZE (IN)	MOUNTING HOLE DIA.	L	G	FLOW DIA. 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



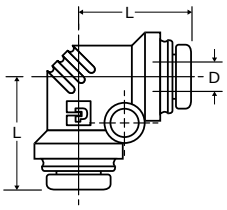
165PLP Union Elbow (Nickel Plated)

PART NO.	TUBE SIZE (IN)	L	FLOW DIA. D
165PLP-2	1/8	.74	.094
165PLP-5/32	5/32	.77	.125
165PLP-3	3/16	.82	.156
165PLP-4	1/4	.85	.188
165PLP-5	5/16	.97	.250
165PLP-6	3/8	1.01	.312
165PLP-8	1/2	1.15	.375



365PL Union Elbow (Composite Body)

PART NO.	TUBE SIZE (IN)	MOUNTING HOLE DIA.	L	FLOW DIA. 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



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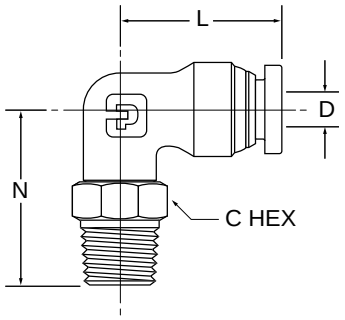
Parker Brass Products Division
Otsego, Michigan

B

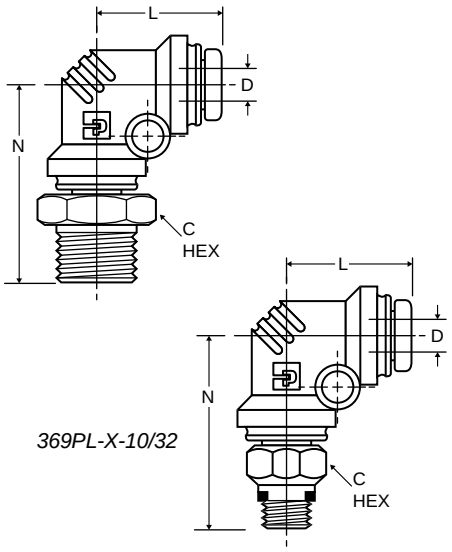
W169PLP Male Elbow Swivel 90° (Nickel Plated)

PART NO.	TUBE SIZE (IN)	PIPE THREAD (NPTF)	C HEX	L	N	FLOW DIA. D
W169PLP-2-1	1/8	1/16	3/8	.74	.93	.160
W169PLP-2-2	1/8	1/8	7/16	.74	.92	.094
169PLP-2-0	1/8	10-32	3/8	.74	.74	.080
W169PLP-2-4	1/8	1/4	9/16	.74	1.10	.094
W169PLP-3-2	3/16	1/8	7/16	.82	.92	.156
W169PLP-5/32-1	5/32	1/16	3/8	.84	.93	.160
W169PLP-5/32-2	5/32	1/8	7/16	.77	.92	.125
W169PLP-5/32-4	5/32	1/4	9/16	.77	1.10	.125
169PLP-5/32-0	5/32	10-32	3/8	.85	.74	.080
W169PLP-4-1	1/4	1/16	3/8	.84	.93	.160
W169PLP-4-2	1/4	1/8	7/16	.85	.92	.156
W169PLP-4-4	1/4	1/4	9/16	.85	1.10	.156
W169PLP-4-6	1/4	3/8	11/16	.85	1.19	.156
169PLP-4-0	1/4	10-32	3/8	.85	.74	.080
W169PLP-5-2	5/16	1/8	9/16	.97	1.02	.250
W169PLP-5-4	5/16	1/4	9/16	.97	1.24	.250
W169PLP-6-2	3/8	1/8	9/16	1.01	1.02	.250
W169PLP-6-4	3/8	1/4	9/16	1.01	1.24	.250
W169PLP-6-6	3/8	3/8	11/16	1.01	1.24	.250
W169PLP-6-8	3/8	1/2	7/8	1.01	1.48	.250
W169PLP-8-4	1/2	1/4	9/16	1.15	1.28	.312
W169PLP-8-6	1/2	3/8	11/16	1.15	1.31	.312
W169PLP-8-8	1/2	1/2	7/8	1.15	1.52	.312



W369PL Male Elbow Swivel 90° (Composite Body)

PART NO.	TUBE SIZE (IN)	PIPE THREAD (NPTF)	C HEX	MOUNTING HOLE DIA.	L	N	FL FLOW DIA. 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
369PL5/32-10X32	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	.76	1.38	.172
W369PL-4-6	1/4	3/8	11/16	.17	.76	1.42	.172
369PL-4-10X32	1/4	10-32	7/16	.17	.76	1.05	.094
W369PL-5-2	5/16	1/8	9/16	.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	1.04	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

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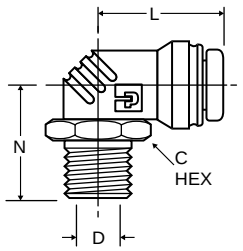
Otsego, Michigan

B

W369PLC Compact Elbow (Composite Body)

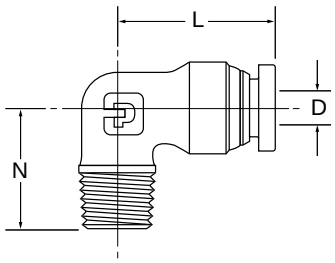
PART NO.	TUBE SIZE (IN)	PIPE THREAD (NPTF)	C HEX	L	N	FLOW DIA. D
W369PLC-2-2	1/8	1/8	7/16	.81	.71	.08
W369PLC-5/32-2	5/32	1/8	7/16	.83	.71	.08
W369PLC-5/32-4	5/32	1/4	9/16	.83	.89	.08
W369PLC-3-2	3/16	1/8	7/16	.86	.81	.08
W369PLC-4-2	1/4	1/8	7/16	.86	.81	.08
W369PLC-6-4	3/8	1/4	5/8	1.13	1.07	.20
W369PLC-6-6	3/8	3/8	3/4	1.13	1.15	.20



W169PLPNS Male Elbow 90° (Nickel Plated)

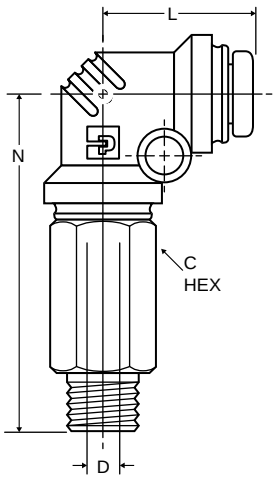
PART NO.	TUBE SIZE (IN)	PIPE THREAD (NPTF)	L	N	FLOW DIA. D
W169PLPNS-2-2	1/8	1/8	.74	.67	.094
W169PLPNS5/32-2	5/32	1/8	.77	.67	.125
W169PLPNS5/32-4	5/32	1/4	.77	.87	.125
W169PLPNS-4-2	1/4	1/8	.85	.67	.188
W169PLPNS-4-4	1/4	1/4	.85	.87	.188
W169PLPNS-5-2	5/16	1/8	.97	.75	.234
W169PLPNS-5-4	5/16	1/4	.97	.94	.250
W169PLPNS-6-4	3/8	1/4	1.01	.94	.312
W169PLPNS-6-6	3/8	3/8	1.01	1.01	.312
W169PLPNS-6-8	3/8	1/2	1.01	1.27	.312
W169PLPNS-8-6	1/2	3/8	1.15	1.00	.375
W169PLPNS-8-8	1/2	1/2	1.15	1.27	.375
169PLPNS532-4LT*	5/32	1/4-28	.60	.48	.090

* SAE-LT Threads



W369PLX Male Elbow Swivel 90° (Composite Body)

PART NO.	TUBE SIZE (IN)	PIPE THREAD (NPTF)	C HEX	MOUNTING HOLE DIA.	L	N	FLOW DIA. D
W369PLX-2-2	1/8	1/8	7/16	.13	.70	1.74	.078
W369PLX-2-4	1/8	1/4	9/16	.13	.70	1.74	.078
W369PLX-3-2	3/16	1/8	7/16	.17	.76	1.88	.147
W369PLX-3-4	3/16	1/4	9/16	.17	.76	1.88	.147
W369PLX-3-6	3/16	3/8	11/16	.17	.76	1.88	.147
W369PLX-4-2	1/4	1/8	7/16	.17	.76	1.88	.172
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	.172
369PLX-5/32-0	5/32	10-32	3/8	.13	.73	1.54	.094
W369PLX-5/32-2	5/32	1/8	7/16	.13	.73	1.54	.094
W369PLX-5/32-4	5/32	1/4	9/16	.13	.73	1.54	.094
W369PLX-5-2	5/16	1/8	9/16	.17	.84	1.99	.234
W369PLX-5-4	5/16	1/4	9/16	.17	.84	1.99	.234
W369PLX-5-6	5/16	3/8	11/16	.17	.84	1.99	.234
W369PLX-6-4	3/8	1/4	5/8	.17	1.04	2.56	.234
W369PLX-6-6	3/8	3/8	11/16	.17	1.04	2.56	.297
W369PLX-6-8	3/8	1/2	7/8	.17	1.04	2.56	.297
W369PLX-8-4	1/2	1/4	3/4	.17	1.03	2.80	.314
W369PLX-8-6	1/2	3/8	3/4	.17	1.03	2.80	.344
W369PLX-8-8	1/2	1/2	7/8	.17	1.03	2.80	.344



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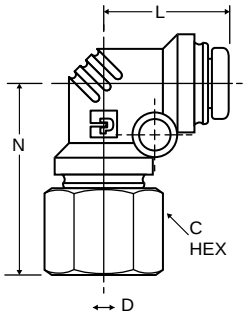
Parker Brass Products Division
Otsego, Michigan

B

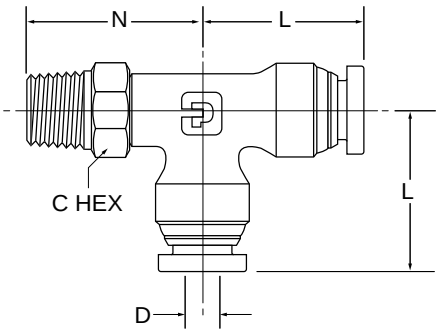
370PL Female Elbow Swivel (Composite Body)

PART NO.	TUBE SIZE (IN)	PIPE THREAD (NPTF)	C HEX	MOUNTING HOLE DIA.	L	N	FLOW DIA. D
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	.094
370PL-5/32-4	5/32	1/4	3/4	.13	.73	1.23	.094
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	.174
370PL-4-4	1/4	1/4	3/4	.17	.76	1.29	.174
370PL-5-4	5/16	1/4	3/4	.17	.84	1.37	.234
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	.344



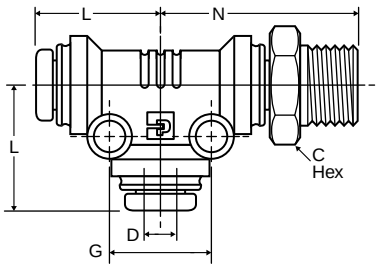
W171PLP Male Run Tee Swivel (Nickel Plated)

PART NO.	TUBE SIZE (IN)	PIPE THREAD (NPTF)	C HEX	L	N	FLOW DIA. D
W171PLP-2-2	1/8	1/8	7/16	.74	.92	.094
W171PLP-5/32-2	5/32	1/8	7/16	.77	.92	.125
W171PLP-4-2	1/4	1/8	7/16	.85	.92	.156
W171PLP-4-4	1/4	1/4	9/16	.85	1.10	.156
W171PLP-4-6	1/4	3/8	11/16	.85	1.24	.156
W171PLP-5-2	5/16	1/8	9/16	.97	1.02	.250
W171PLP-5-4	5/16	1/4	9/16	.97	1.24	.250
W171PLP-6-4	3/8	1/4	9/16	1.01	1.24	.250
W171PLP-6-6	3/8	3/8	11/16	1.01	1.24	.250
W171PLP-8-6	1/2	3/8	11/16	1.15	1.31	.312
W171PLP-8-8	1/2	1/2	7/8	1.15	1.52	.312



W371PL Male Run Tee Swivel (Composite Body)

PART NO.	TUBE SIZE (IN)	PIPE THREAD (NPTF)	C HEX	MOUNTING HOLE DIA.	L	N	G	FL FLOW DIA. D
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	.078
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	.147
W371PL-3-4	3/16	1/4	9/16	.17	.76	1.43	.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	1.32	.52	.094
371PL5/32-10x32	5/32	10-32	3/8	.13	.71	.94	.52	.094
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	.172
W371PL-4-4	1/4	1/4	9/16	.17	.76	1.38	.64	.172
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	.172
W371PL-5-2	5/16	1/8	9/16	.17	.84	1.28	.71	.234
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	.234
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	1.66	.83	.297
W371PL-6-8	3/8	1/2	7/8	.13	1.04	1.85	.83	.297
W371PL-8-4	1/2	1/4	3/4	.17	1.30	2.07	.99	.314
W371PL-8-6	1/2	3/8	3/4	.17	1.30	2.07	.99	.344
W371PL-8-8	1/2	1/2	7/8	.17	1.30	2.26	.99	.344



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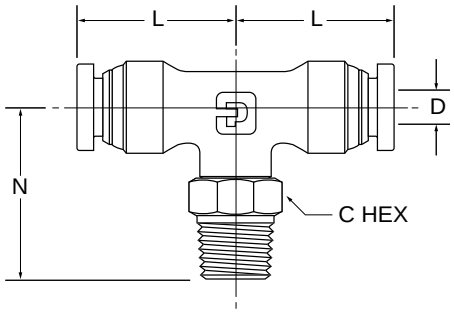
Parker Brass Products Division
Otsego, Michigan

B

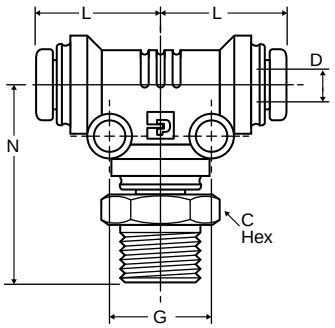
W172PLP Male Branch Tee Swivel (Nickel Plated)

PART NO.	TUBE SIZE (IN)	PIPE THREAD (NPTF)	C HEX	L	N	FLOW DIA. D
W172PLP-2-2	1/8	1/8	7/16	.74	.92	.094
W172PLP-3-2	3/16	1/8	7/16	.82	.92	.156
W172PLP-5/32-2	5/32	1/8	7/16	.77	.92	.125
W172PLP-4-2	1/4	1/8	7/16	.85	.92	.156
W172PLP-4-4	1/4	1/4	9/16	.85	1.10	.156
W172PLP-4-6	1/4	3/8	11/16	.85	1.10	.156
W172PLP-5-2	5/16	1/8	9/16	.97	1.02	.250
W172PLP-5-4	5/16	1/4	9/16	.97	1.24	.250
W172PLP-6-4	3/8	1/4	9/16	1.01	1.24	.250
W172PLP-6-6	3/8	3/8	11/16	1.01	1.24	.250
W172PLP-8-4	1/2	1/4	9/16	1.15	1.30	.312
W172PLP-8-6	1/2	3/8	11/16	1.15	1.31	.312
W172PLP-8-8	1/2	1/2	7/8	1.15	1.52	.312



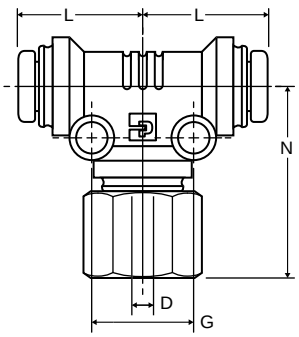
W372PL Male Branch Tee Swivel (Composite Body)

PART NO.	TUBE SIZE (IN)	PIPE THREAD (NPTF)	C HEX	MOUNTING HOLE DIA.	L	N	FLOW G	FLOW DIA. D
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	.71	1.32	.52	.078
372PL-2-10X32	1/8	10-32	3/8	.13	.71	.94	.52	.078
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	.094
372PL5/32-10x32	5/32	10-32	3/8	.13	.70	.94	.52	.094
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	.172
W372PL-4-4	1/4	1/4	9/16	.17	.76	1.38	.64	.172
372PL-4-10x32	1/4	10-32	7/16	.17	.76	1.05	.64	.094
W372PL-4-6	1/4	3/8	11/16	.17	.76	1.42	.64	.172
W372PL-5-2	5/16	1/8	9/16	.17	.84	1.23	.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	1.04	1.48	.83	.234
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	1.04	1.85	.83	.297
W372PL-8-4	1/2	1/4	3/4	.17	1.30	2.07	.99	.314
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



377PL Female Branch Tee Swivel (Composite Body)

PART NO.	TUBE SIZE (IN)	PIPE THREAD (NPTF)	C HEX	MOUNTING HOLE DIA.	L	N	F G	FLOW DIA. D
377PL-2-2	1/8	1/8	9/16	.17	.71	1.01	.52	.078
377PL-5/32-2	5/32	1/8	9/16	.13	.71	1.01	.52	.094
377PL-5/32-4	5/32	1/4	3/4	.13	.71	1.23	.52	.094
377PL-4-2	1/4	1/8	9/16	.17	.76	1.07	.64	.176
377PL-4-4	1/4	1/4	3/4	.17	.76	1.29	.64	.176
377PL-5-4	5/16	1/4	3/4	.17	.84	1.37	.71	.234
377PL-6-4	3/8	1/4	3/4	.17	1.04	1.57	.83	.298
377PL-8-6	1/2	3/8	7/8	.17	1.30	1.84	.99	.344



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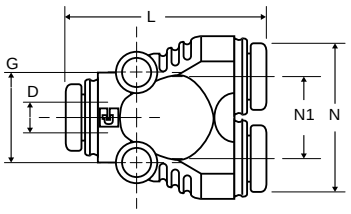
Otsego, Michigan

B

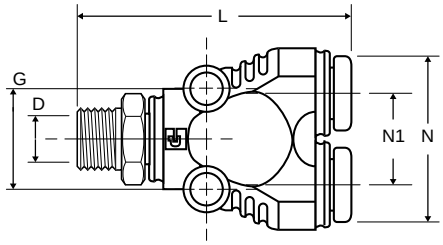
362PL Union Y Connector (Composite Body)

PART NO.	TUBE SIZE (IN)	MOUNTING HOLE DIA.	L	N	N1	G	FLOW DIA. D
362PL-2	1/8	.13	1.37	.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	.53	.67	.200
362PL-4	1/4	.17	1.49	1.13	.53	.67	.260
362PL-5	5/16	.17	1.46	1.21	.54	.72	.320
362PL-6	3/8	.17	1.88	1.53	.71	.76	.380



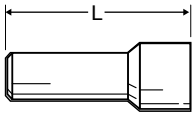
W368PL Union Y Male Connector (Composite Body)

PART NO.	TUBE SIZE (IN)	PIPE SIZE	G	MOUNTING HOLE DIA.	L	N	N1	FLOW DIA. D
W368PL-2-2	1/8	1/8	.57	.13	1.81	.92	.41	.080
W368PL-2-4	1/8	1/4	.57	.13	1.98	.92	.41	.080
368PL5/32-10x32	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
W368PL-3-2	3/16	1/8	.67	.17	1.92	1.13	.53	.150
W368PL-3-4	3/16	1/4	.67	.17	2.16	1.13	.53	.150
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	2.10	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



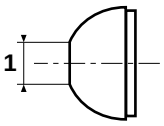
Plug 639PL (Composite Body)

PART NO.	TUBE SIZE (IN)	L
639PL-2	1/8	1.30
639PL-5/32	5/32	1.30
639PL-4	1/4	1.34
639PL-5	5/16	1.28
639PL-6	3/8	1.50
639PL-8	1/2	1.59



Protective Cap

PART NO.	1
C4*	4
C6*	6
C8*	8
C10*	10
C12*	12
C14*	14



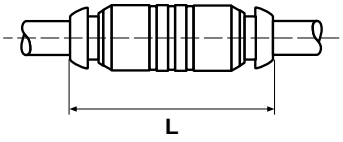
*Add the following code, corresponding to the chosen color W: white; BU: blue; G: green; R: red; Y: yellow; BL: black. Example: cap red suitable for tube 4mm: C4R. In case of no color specification, we will deliver yellow cap (standard color).

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

B

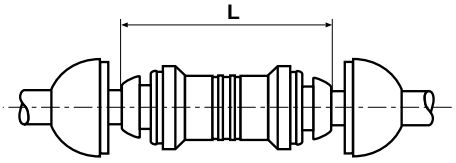
HPB Equal Union (Nickel Plated)

PART NO.	TUBE SIZE (MM)	L
HPB4	4	33.0
HPB5	5	34.5
HPB6	6	36.0
HPB8	8	38.0
HPB10	10	48.0
HPB12	12	48.0
HPB14	14	54.0



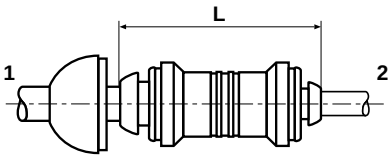
HPK Equal Union (Composite Body)

PART NO.	TUBE SIZE (MM)	L
HPK4	4	33.5
HPK6	6	37.0
HPK8	8	39.0
HPK10	10	48.0
HPK12	12	49.0
HPK14	14	54.0



HPK Unequal Union (Composite Body)

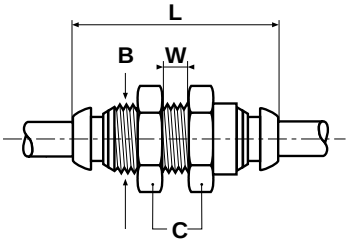
PART NO.	TUBE 1 SIZE (MM)	TUBE 2 SIZE (MM)	L
HPK6-4	6	4	36.0
HPK8-4	8	4	38.0
HPK8-6	8	6	39.0
HPK10-6	10	6	47.0
HPK10-8	10	8	47.0
HPK12-10	12	10	49.5



WPB Bulkhead Union (Nickel Plated)

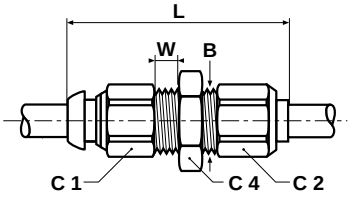
PART NO.	TUBE SIZE (MM)	B-MM THREAD	C HEX	L	W	BULKHEAD HOLE DIA.
WPB4	4	M11x0.75	16	33	6	11mm
WPB6	6	M13x1	19	35	6	13mm
WPB8	8	M15x1.25	22	36	6	16mm
WPB10	10	M18x1	22	43	8	18mm
WPB12	12	M23x1.5	27	46	10	23mm
WPB14	14	M24x1.5	30	52	10	24mm

Jam nut is supplied loose in box



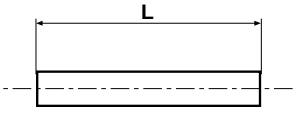
WBMPB Mixed Bulkhead Union (Nickel Plated)

PART NO.	TUBE 1 SIZE (MM)	TUBE 2 SIZE (MM)	B-MM THREAD	C1	C2	C4	L	W	BULKHEAD HOLE DIA.
WBMPB4	4	4	M8x1	10	10	12	34	5	8mm
WBMPB6	6	6	M10x1	12	10	12	37	5	10mm
WBMPB8	8	8	M12x1	14	14	16	39	5	12mm
WBMPB10	10	10	M14x1	17	17	19	45	5	14mm
WBMPB12	12	12	M16x1	22	19	22	49	5	16mm
WBMPB14	14	14	M18x1	24	22	22	52	7	18mm



BPK Double Male Union (Composite Body)

PART NO.	TUBE SIZE (MM)	L
BPK4	4	38
BPK6	6	41
BPK8	8	41
BPK10	10	51
BPK12	12	54
BPK14	14	55



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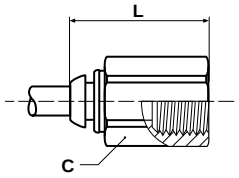
B

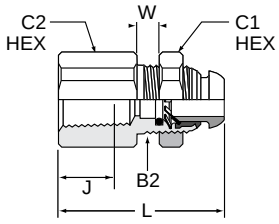
G4PB Female Connector BSPP (Nickel Plated)

PART NO.	TUBE SIZE (MM)	BSPP	C HEX	L
G4PB4-1/8	4	1/8	14	26.0
G4PB6-1/8	6	1/8	14	27.5
G4PB6-1/4	6	1/4	17	33.0
G4PB8-1/8	8	1/8	17	29.0
G4PB8-1/4	8	1/4	17	33.0



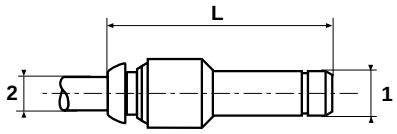
WG4PB Bulkhead Union Female BSPP (Nickel Plated)

PART NUMBER	TUBE SIZE (MM)	BSPP	B2	C1 HEX	C2 HEX	J	L	W
WG4PB4-1/8	4	G1/8	M11x0.75	14	14	8	25.0	6
WG4PB6-1/8	6	G1/8	M13x1	17	17	8	25.0	6
WG4PB6-1/4	6	G1/4	M13x1	17	19	12	29.5	6
WG4PB8-1/8	8	G1/8	M15x1.25	19	17	8	25.0	6
WG4PB8-1/4	8	G1/4	M15x1.25	19	19	12	30.0	6
WG4PB10-3/8	10	G3/8	M18x1	22	22	12	34.0	8
WG4PB12-3/8	12	G3/8	M23x1.5	27	24	12	35.0	10
WG4PB12-1/2	12	G1/2	M23x1.5	27	27	14	40.0	10



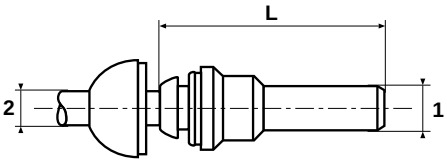
TRPB Tube End Reducer (Nickel Plated)

PART NO.	TUBE 1 SIZE (MM)	TUBE 2 SIZE (MM)	L
TRPB6-4	6	4	40.0
TRPB8-4	8	4	39.5
TRPB8-6	8	6	41.5
TRPB10-4	10	4	37.0
TRPB10-6	10	6	43.0
TRPB10-8	10	8	47.5
TRPB12-6	12	6	38.0
TRPB12-8	12	8	44.0
TRPB12-10	12	10	52.0
TRPB14-8	14	8	41.0
TRPB14-10	14	10	51.0
TRPB14-12	14	12	55.0



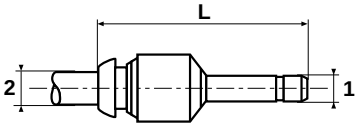
TR2PK Tube End Reducer (Composite Body)

PART NO.	TUBE 1 SIZE (MM)	TUBE 2 SIZE (MM)	L
TR2PK6-4	6	4	38
TR2PK8-4	8	4	36
TR2PK8-6	8	6	39
TR2PK10-4	10	4	41
TR2PK10-6	10	6	43
TR2PK10-8	10	8	47
TR2PK12-6	12	6	36
TR2PK12-8	12	8	38
TR2PK12-10	12	10	48
TR2PK14-8	14	8	39
TR2PK14-10	14	10	42
TR2PK14-12	14	12	51



TEPB Tube End Expander (Nickel Plated)

PART NO.	TUBE 1 SIZE (MM)	TUBE 2 SIZE (MM)	L
TEPB4-6	4	6	39



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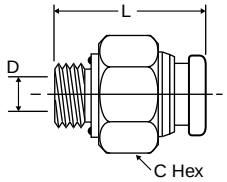
B

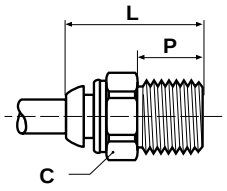
PLHBF4-B Male Connector BSPP (Nickel Plated)

PART NO.	TUBE SIZE (IN)	PIPE THREAD BSPP	C HEX	L	FLOW DIA. 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



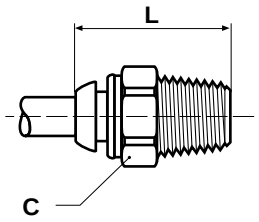
FPB Male Connector NPT (Nickel Plated)

PART NO.	TUBE SIZE (MM)	NPT	C HEX	L	P	INT. HEX
W68PLP-5/32-2	4	1/8-27	7/16"	21.7	9.7	-
W68PLP-5/32-4	4	1/4-18	9/16"	28.1	14.2	-
FPB6-1/8	6	1/8-27	14	26.0	10.1	4
FPB6-1/4	6	1/4-18	14	28.5	14.6	4
FPB10-1/4	10	1/4-18	19	40.0	14.6	8
FPB10-3/8	10	3/8-18	19	34.0	14.6	8
FPB12-3/8	12	3/8-18	22	36.5	14.6	10



F3PB Male Connector BSPT (Nickel Plated)

PART NO.	TUBE SIZE (MM)	BSPT	C HEX	L
F3PB4-1/8	4	1/8	12	20.5
F3PB4-1/4	4	1/4	14	23.0
F3PB5-1/8	5	1/8	11	22.5
F3PB5-1/4	5	1/4	14	24.0
F3PB6-1/8	6	1/8	14	24.0
F3PB6-1/4	6	1/4	14	24.0
F3PB8-1/8	8	1/8	17	28.0
F3PB8-1/4	8	1/4	17	28.5
F3PB8-3/8	8	3/8	17	26.5
F3PB10-1/4	10	1/4	19	35.5
F3PB10-3/8	10	3/8	19	33.0
F3PB10-1/2	10	1/2	22	31.0
F3PB12-1/4	12	1/4	22	36.5
F3PB12-3/8	12	3/8	22	36.0
F3PB12-1/2	12	1/2	22	36.0
F3PB14-3/8	14	3/8	24	39.0
F3PB14-1/2	14	1/2	24	37.0



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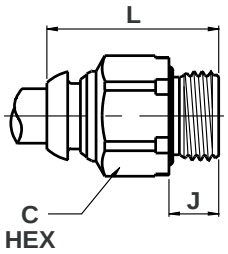
B

F4PB Compact Male Connector BSPP (Nickel Plated)

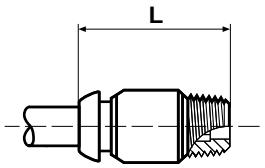
PART NO.	TUBE SIZE (MM)	BSPP	C HEX	J	L
F4PB4-1/8	4	1/8	13	4.7	20.0
F4PB4-1/4	4	1/4	16	6.0	20.4
F4PB6-1/8	6	1/8	13	4.7	23.7
F4PB6-1/4	6	1/4	16	6.0	22.6
F4PB8-1/4	8	1/4	16	4.7	25.3
F4PB8-1/8	8	1/8	14	6.0	26.7
F4PB8-3/8	8	3/8	20	6.5	23.5
F4PB10-1/4	10	1/4	17	6.0	32.1
F4PB10-3/8	10	3/8	20	6.5	27.5
F4PB10-1/2	10	1/2	24	7.5	26.8
F4PB12-1/4	12	1/4	20	6.0	32.3
F4PB12-3/8	12	3/8	20	6.5	32.3
F4PB12-1/2	12	1/2	24	7.5	28.3
F4PB14-3/8	14	3/8	22	6.5	35.4
F4PB14-1/2	14	1/2	24	7.5	30.5



F23PB Male Connector BSPT (Nickel Plated)

PART NO.	TUBE SIZE (MM)	BSPT	L
F23PB4-1/8	4	1/8	21
F23PB6-1/8	6	1/8	24
F23PB6-1/4	6	1/4	28
F23PB8-1/8	8	1/8	28
F23PB8-1/4	8	1/4	28

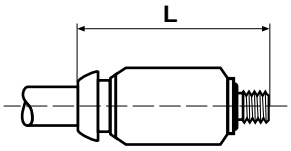
This fitting has been designed for use where space is at a premium. It is assembled using the internal hexagon and an allen key.



F28PB Male Connector Metric Straight Thread (Nickel Plated)

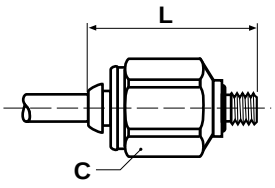
PART NO.	TUBE SIZE (MM)	MM THREAD	L
F28PB4M3	4	M3x0.5	24
F28PB4M5	4	M5x0.8	26
F28PB6M5	6	M5x0.8	26

This fitting has been designed for use where space is at a premium. It is assembled using the internal hexagon and an allen key.



F8PB Male Connector Metric Straight Thread (Nickel Plated)

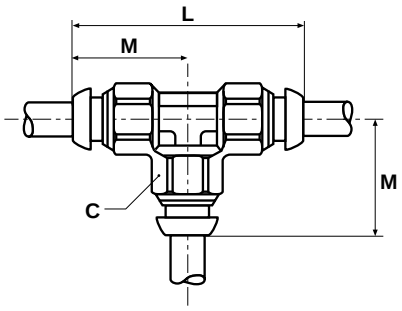
PART NO.	TUBE SIZE (MM)	MM THREAD	C HEX	L
F8PB4M5	4	M5x0.8	12	25.5
F8PB4M10	4	M10x1	14	24.0
F8PB6M5	6	M5x0.8	14	26.0
F8PB6M10	6	M10x1	14	28.0
F8PB6M12	6	M12x1.5	17	30.0
F8PB8M12	8	M12x1.5	17	30.0
F8PB8M16	8	M16x1.5	22	28.0
F8PB8M22	8	M22x1.5	27	30.0



B

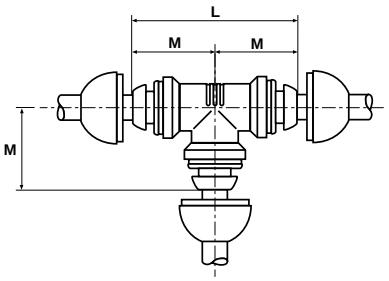
JPB Union Tee (Nickel Plated)

PART NO.	TUBE SIZE (MM)	C	L	M
JPB4	4	10	36	18
JPB5	5	12	41	21
JPB6	6	12	40	20
JPB8	8	14	44	22
JPB10	10	17	56	28
JPB12	12	22	60	30
JPB14	14	25	68	34



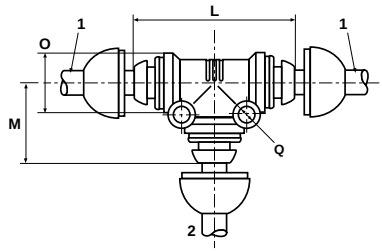
JPK Equal Tee (Composite Body)

PART NO.	TUBE SIZE (MM)	L	M
JPK4	4	36	18.0
JPK6	6	41	20.5
JPK8	8	45	22.5
JPK10	10	57	28.5
JPK12	12	60	30.0
JPK14	14	67	33.5



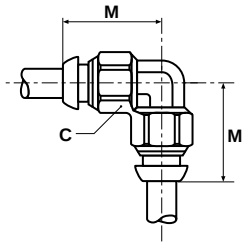
JPK Unequal Tee (Composite Body)

PART NO.	TUBE 1 SIZE (MM)	TUBE 2 SIZE (MM)	L	M	0	Q
JPK6-6-4	6	4	41	21.5	15	17.0
JPK8-8-6	8	6	45	22.5	17	19.0
JPK10-10-8	10	8	57	28.5	21	23.5
JPK12-12-10	12	10	60	30.0	23	25.5
JPK4-4-6	4	6	43	20.5	15	17.0
JPK6-6-8	6	8	45	22.5	17	19.0
JPK8-8-10	8	10	57	28.5	21	23.5
JPK10-10-12	10	12	61	30.5	23	25.5



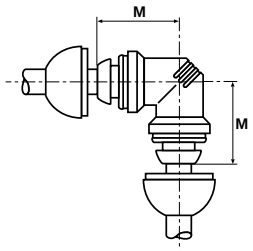
EPB 90° Union Elbow (Nickel Plated)

PART NO.	TUBE SIZE (MM)	C HEX	M
EPB4	4	10	18.0
EPB5	5	12	20.5
EPB6	6	12	20.0
EPB8	8	14	22.0
EPB10	10	17	28.0
EPB12	12	22	30.0
EPB14	14	25	34.0



EPK Equal Elbow (Composite Body)

PART NO.	TUBE SIZE (MM)	M
EPK4	4	18.0
EPK6	6	20.5
EPK8	8	22.5
EPK10	10	28.5
EPK12	12	30.0
EPK14	14	33.5



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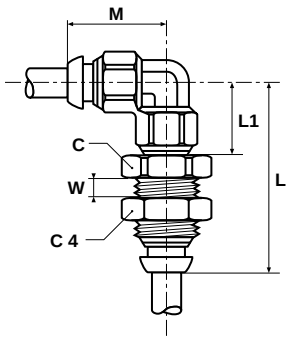
B

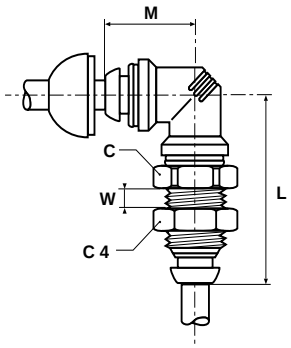
WE6PB Adjustable Bulkhead Union Elbow (Nickel Plated)

PART NO.	TUBE SIZE (MM)	THREAD B (MM)	C HEX	C4 HEX	L	L1	M	W	BULKHEAD HOLE DIA.
WE6PB4	4	M11x0.75	14	16	37	18.0	18.0	6	11mm
WE6PB6	6	M13x1	17	17	39	19.5	20.5	6	13mm
WE6PB8	8	M15x1.25	19	19	43	21.5	22.5	6	15mm
WE6PB10	10	M18x1	22	22	54	22.8	28.5	8	18mm
WE6PB12	12	M23x1.5	27	27	59	30.0	30.0	10	23mm



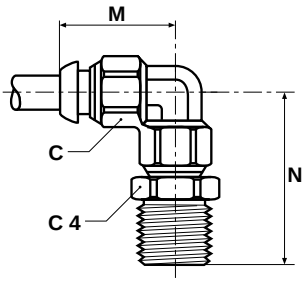
WE6PK 90° Adjustable Bulkhead Union Elbow (Composite Body)

PART NO.	TUBE SIZE (MM)	THREAD (MM)	C	C4	M	L	W	BULKHEAD HOLE DIA.
WE6PK4	4	M11x0.75	14	16	18.0	37	6	11mm
WE6PK6	6	M13x1	17	17	20.5	39	6	13mm
WE6PK8	8	M15x1.25	19	19	22.5	43	6	15mm
WE6PK10	10	M18x1	22	22	28.5	54	8	18mm
WE6PK12	12	M23x1.5	27	27	30.0	59	10	23mm



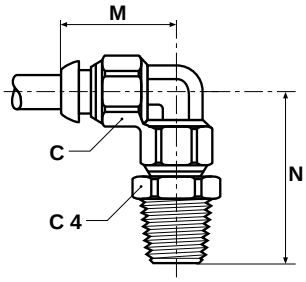
C6PB Adjustable Male Elbow NPT (Nickel Plated)

PART NO.	TUBE SIZE (MM)	NPT	C HEX	C4 HEX	M	N
C6PB6-1/4	6	1/4-18	12	14	20	36.0
C6PB6-3/8	6	3/8-18	12	19	20	36.5
C6PB10-1/4	10	1/4-18	17	16	28	41.5
C6PB10-3/8	10	3/8-18	17	19	28	41.5
C6PB12-3/8	12	3/8-18	17	19	30	44.0
C6PB12-1/2	12	1/2-14	22	22	30	47.5



C63PB Adjustable Male Elbow BSPT (Nickel Plated)

PART NO.	TUBE SIZE (MM)	BSPT	C HEX	C4 HEX	M	N
C63PB4-1/8	4	1/8	10	10	18	26.5
C63PB4-1/4	4	1/4	10	14	18	30.0
C63PB6-1/8	6	1/8	12	11	20	28.0
C63PB6-1/4	6	1/4	12	14	20	31.0
C63PB8-1/8	8	1/8	14	14	22	30.0
C63PB8-1/4	8	1/4	14	14	22	33.0
C63PB8-3/8	8	3/8	14	17	22	34.5
C63PB10-1/4	10	1/4	17	17	28	40.0
C63PB10-3/8	10	3/8	17	17	28	39.0
C63PB12-1/4	12	1/4	22	19	30	42.0
C63PB12-3/8	12	3/8	22	19	30	41.0
C63PB12-1/2	12	1/2	22	22	30	44.5
C63PB14-3/8	14	3/8	25	22	34	46.0
C63PB14-1/2	14	1/2	25	22	34	48.5



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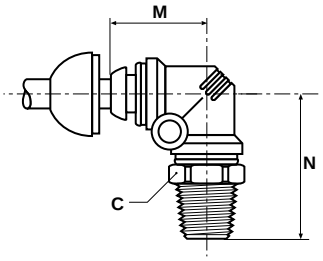
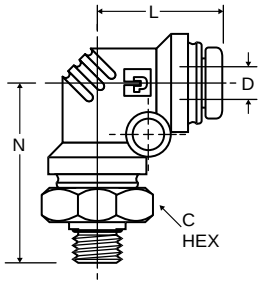
C63PK Adjustable Male Elbow BSPT (Composite Body)

PART NO.	TUBE SIZE (MM)	BSPT	C HEX	M	N
C63PK4-1/8	4	1/8	10	18.0	25.5
C63PK4-1/4	4	1/4	14	18.0	29.0
C63PK6-1/8	6	1/8	11	20.5	27.0
C63PK6-1/4	6	1/4	14	20.5	30.5
C63PK8-1/8	8	1/8	14	22.5	29.5
C63PK8-1/4	8	1/4	14	22.5	32.5
C63PK8-3/8	8	3/8	17	28.5	40.0
C63PK10-1/4	10	1/4	17	28.5	40.0
C63PK10-3/8	10	3/8	17	28.5	39.0
C63PK12-1/4	12	1/4	19	30.0	41.5
C63PK12-3/8	12	3/8	19	30.0	41.0
C63PK12-1/2	12	1/2	22	30.0	44.5
C63PK14-3/8	14	3/8	22	33.5	45.5
C63PK14-1/2	14	1/2	22	33.5	48.0



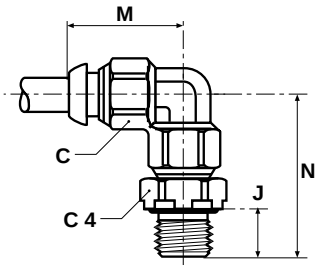
PLE2BF4-K Male Elbow Swivel BSPP (Composite Body)

PART NO.	TUBE SIZE (IN)	PIPE THREAD BSPP	C HEX	MOUNTING HOLE DIA.	L	N	FL FLOW DIA. D
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	.177
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	.344
8-1/2PLE2BF4-K	1/2	1/2-14	1-1/16	.17	1.03	1.78	.344



C64PB Adjustable Male Elbow BSPP (Nickel Plated)

PART NO.	TUBE SIZE (MM)	BSPP	C HEX	C4 HEX	J	M	N
C64PB4-1/8	4	1/8	10	13	4.7	18	23.8
C64PB4-1/4	4	1/4	10	16	6.0	18	25.6
C64PB6-1/8	6	1/8	12	13	4.7	20	28.8
C64PB6-1/4	6	1/4	12	16	6.0	20	27.1
C64PB8-1/8	8	1/8	14	13	4.7	22	28.8
C64PB8-1/4	8	1/4	14	16	6.0	22	29.1
C64PB8-3/8	8	3/8	14	20	6.5	22	31.3
C64PB10-1/4	10	1/4	17	16	6.0	28	35.1
C64PB10-3/8	10	3/8	17	20	6.5	28	35.3
C64PB12-1/4	12	1/4	22	19	6.0	30	37.1
C64PB12-3/8	12	3/8	22	22	6.5	30	38.2
C64PB12-1/2	12	1/2	22	24	7.5	30	39.3
C64PB14-3/8	14	3/8	25	22	6.5	34	43.6
C64PB14-1/2	14	1/2	25	24	7.5	34	43.2



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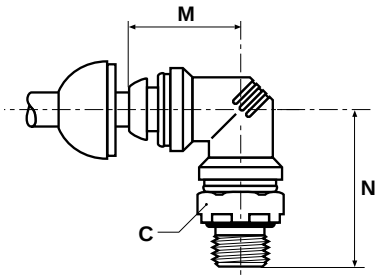
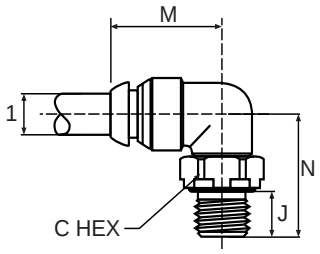
C64PK Adjustable Male Elbow BSPP (Composite Body)

PART NO.	TUBE SIZE (MM)	BSPP THREAD	C HEX	M	N
C64PK4-1/8	4	1/8	14	18.0	25.5
C64PK4-1/4	4	1/4	19	18.0	30.5
C64PK6-1/8	6	1/8	14	20.5	27.0
C64PK6-1/4	6	1/4	19	20.5	32.0
C64PK8-1/8	8	1/8	14	22.5	29.0
C64PK8-1/4	8	1/4	19	22.5	34.0
C64PK8-3/8	8	3/8	22	22.5	35.0
C64PK10-1/4	10	1/4	19	28.5	39.0
C64PK10-3/8	10	3/8	22	28.5	40.0
C64PK12-1/4	12	1/4	19	30.0	40.5
C64PK12-3/8	12	3/8	22	30.0	41.5
C64PK14-3/8	14	3/8	22	33.5	45.0
C64PK14-1/2	14	1/2	27	33.5	49.5



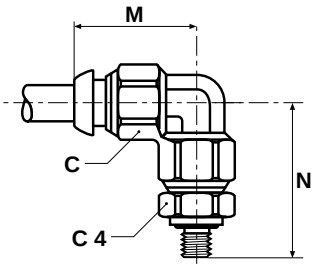
C64SPB Compact Adjustable Male Elbow BSPP (Nickel Plated)

PART NUMBER	TUBE SIZE (MM)	BSPP	C HEX	J	M	N
C64SPB4-1/8	4	1/8	13	4.7	17	16.5
C64SPB6-1/8	6	1/8	13	4.7	22	16.5
C64SPB6-1/4	6	1/4	16	6.0	22	19.0
C64SPB8-1/8	8	1/8	13	4.7	25	16.2
C64SPB8-1/4	8	1/4	16	6.0	25	18.5
C64SPB8-3/8	8	3/8	20	6.5	25	20.5
C64SPB10-1/4	10	1/4	16	6.0	30	20.5
C64SPB10-3/8	10	3/8	20	6.5	30	22.5
C64SPB12-1/4	12	1/8	16	6.0	32	21.5
C64SPB12-3/8	12	3/8	20	6.5	32	23.5
C64SPB12-1/2	12	1/2	24	7.5	32	25.5



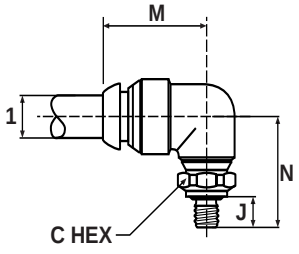
C68PB Adjustable Male Elbow Metric Straight Thread (Nickel Plated)

PART NO.	TUBE SIZE (MM)	THREAD (MM)	C HEX	C4 HEX	M	N
C68PB4M3	4	M3x0.5	10	10	18	23.0
C68PB4M5	4	M5x0.8	10	10	18	24.5
C68PB6M5	6	M5x0.8	12	11	20	25.5



C68SPB Compact Adjustable Male Elbow Metric Straight Thread (Nickel Plated)

PART NUMBER	TUBE SIZE (MM)	THREAD (MM)	C HEX	J	M	N
C68SPB4M5	4	M5x0.8	12.5	5	17	18
C68SPB6M5	6	M5x0.8	12.5	5	17	18



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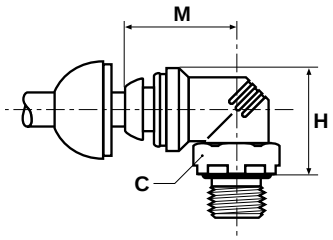
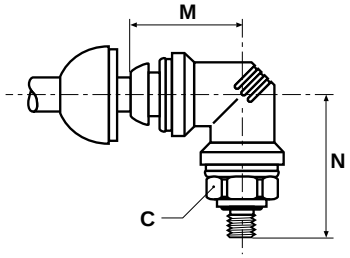
C64SPK Compact Adjustable Male Elbow BSPP (Composite Body)

PART NO.	TUBE SIZE (MM)	BSPP THREAD	C HEX	H	M
C64SPK4-1/8	4	1/8	14	16.7	20.5
C64SPK4-1/4	4	1/4	19	17.4	20.5
C64SPK6-1/8	6	1/8	14	17.9	23.0
C64SPK6-1/4	6	1/4	19	19.4	23.0
C64SPK8-1/8	8	1/8	14	18.9	25.0
C64SPK8-1/4	8	1/4	19	20.4	25.0
C64SPK8-3/8	8	3/8	22	21.9	25.0



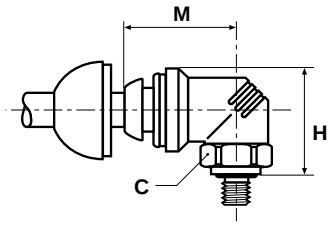
C68PK Adjustable Male Elbow Metric Straight Thread (Composite Body)

PART NO.	TUBE SIZE (MM)	THREAD (MM)	C HEX	M	N
C68PK4M3	4	M3x0.5	10	18.0	22.0
C68PK4M5	4	M5x0.8	10	18.0	23.5
C68PK6M5	6	M5x0.8	11	20.5	25.0
C68PK8M12	8	M12x1.5	17	22.5	35.0
C68PK8M16	8	M16x1.5	22	22.5	35.0
C68PK8M22	8	M22x1.5	27	22.5	39.0
C68PK10M12	10	M12x1.5	17	30.0	40.0



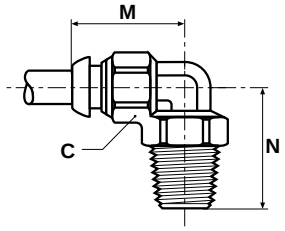
C68SPK Compact Adjustable Male Elbow Metric Straight Thread (Composite Body)

PART NO.	TUBE SIZE (MM)	THREAD (MM)	C HEX	H	M
C68SPK4M5	4	M5x0.8	10	15.5	20.5



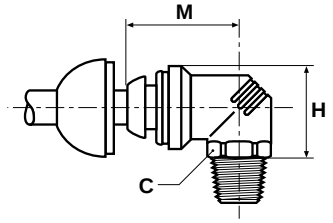
C3PB Compact Elbow BSPT (Nickel Plated)

PART NO.	TUBE SIZE (MM)	BSPT	C HEX	M	N
C3PB4-1/8	4	1/8	14	18	21
C3PB6-1/8	6	1/8	14	20	21
C3PB6-1/4	6	1/4	14	20	21
C3PB8-1/8	8	1/8	14	22	23
C3PB8-1/4	8	1/4	14	22	23
C3PB10-1/4	10	1/4	17	28	26
C3PB10-3/8	10	3/8	17	28	26
C3PB12-3/8	12	3/8	17	30	27
C3PB12-1/2	12	1/2	17	30	31
C3PB14-3/8	14	3/8	20	34	30
C3PB14-1/2	14	1/2	20	34	33



C63SPK Adjustable Male Elbow BSPT (Composite Body)

PART NO.	TUBE SIZE (MM)	BSPT	C HEX	H	M
C63SPK4-1/8	4	1/8	10	14.5	20.5
C63SPK4-1/4	4	1/4	14	14.5	20.5
C63SPK6-1/8	6	1/8	11	16.5	23.0
C63SPK6-1/4	6	1/4	14	16.0	23.0
C63SPK8-1/8	8	1/8	14	19.5	25.0
C63SPK8-1/4	8	1/4	14	18.5	25.0
C63SPK8-3/8	8	3/8	17	18.5	25.0
C63SPK10-1/4	10	1/4	17	23.0	31.0
C63SPK10-3/8	10	3/8	17	22.5	31.0
C63SPK10-1/2	10	1/2	22	24.0	31.0



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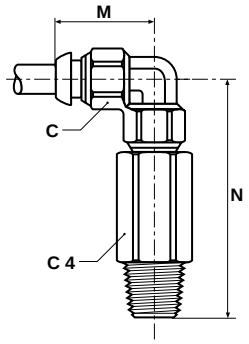
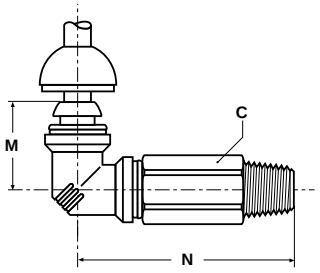
C63LPB Adjustable Extended Male Elbow BSPT (Nickel Plated)

PART NO.	TUBE SIZE (MM)	BSPT	C HEX	C4 HEX	M	N
C63LPB4-1/8	4	1/8	10	10	18	42.0
C63LPB4-1/4	4	1/4	10	14	18	46.0
C63LPB6-1/8	6	1/8	12	11	20	45.5
C63LPB6-1/4	6	1/4	12	14	20	49.5
C63LPB8-1/8	8	1/8	14	14	22	50.0
C63LPB8-1/4	8	1/4	14	14	22	52.5



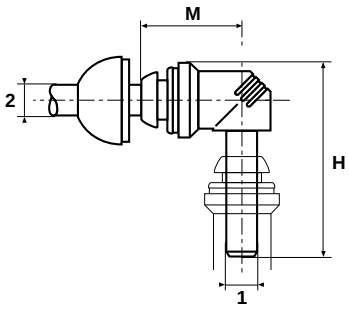
C63LPK Adjustable Male Elbow BSPT (Composite Body)

PART NO.	TUBE SIZE (MM)	BSPT	C HEX	M	N
C63LPK4-1/8	4	1/8	10	18.0	41.0
C63LPK4-1/4	4	1/4	14	18.0	45.0
C63LPK6-1/8	6	1/8	11	20.5	45.0
C63LPK6-1/4	6	1/4	14	20.5	49.0
C63LPK8-1/8	8	1/8	14	22.5	49.5
C63LPK8-1/4	8	1/4	14	22.5	52.0



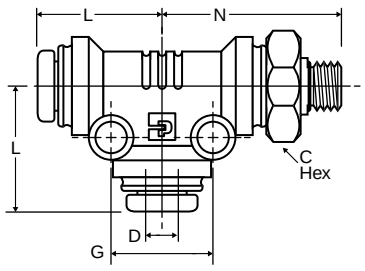
T2ESPK Compact Plug-in Elbow (Composite Body)

PART NO.	TUBE 1 SIZE (MM)	TUBE 2 SIZE (MM)	M	H
T2ESPK4	4	4	20.5	31.0
T2ESPK6	6	6	23.0	36.0
T2ESPK4-6	4	6	23.0	33.0
T2ESPK8	8	8	25.0	38.0



PLR2BF4-K Male Run Tee Swivel BSPP (Composite Body)

PART NO.	TUBE SIZE (IN)	PIPE THREAD BSPP	C HEX	MOUNTING HOLE DIA.	L	N	G	FL FLOW DIA. D
3-1/4PLR2BF4-K	3/16	1/4-19	3/4	.17	.76	1.31	.64	.147
4-1/8PLR2BF4-K	1/4	1/8-28	11/16	.17	.76	1.06	.64	.177
4-1/4PLR2BF4-K	1/4	1/4-19	3/4	.17	.76	1.31	.64	.172
6-1/4PLR2BF4-K	3/8	1/4-19	3/4	.17	1.04	1.56	.83	.296
6-3/8PLR2BF4-K	3/8	3/8-19	7/8	.17	1.04	1.68	.83	.296
8-3/8PLR2BF4-K	1/2	3/8-19	7/8	.17	1.30	1.90	.99	.344
8-1/2PLR2BF4-K	1/2	1/2-19	1-1/16	.17	1.30	2.05	.99	.344



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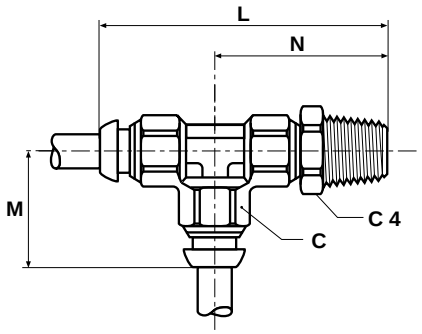
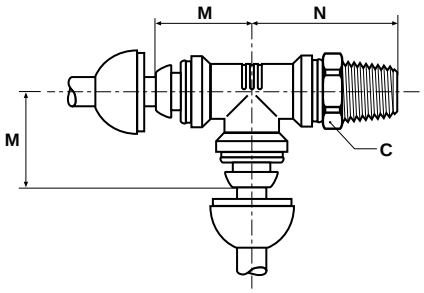
R63PB Swivel Male Run Tee BSPT (Nickel Plated)

PART NO.	TUBE SIZE (MM)	BSPT	C HEX	C4 HEX	L	M	N
R63PB4-1/8	4	1/8	10	10	44.5	18	26.5
R63PB4-1/4	4	1/4	10	14	48.0	18	30.0
R63PB6-1/8	6	1/8	12	11	48.0	20	28.0
R63PB6-1/4	6	1/4	12	14	51.0	20	31.0
R63PB8-1/8	8	1/8	14	14	52.0	22	30.0
R63PB8-1/4	8	1/4	14	14	55.0	22	33.0
R63PB8-3/8	8	3/8	14	17	56.5	22	34.5
R63PB10-1/4	10	1/4	17	17	68.0	28	40.0
R63PB10-3/8	10	3/8	17	17	67.0	28	39.0
R63PB12-1/4	12	1/4	22	19	72.0	30	42.0
R63PB12-3/8	12	3/8	22	19	71.0	30	41.0
R63PB12-1/2	12	1/2	22	22	74.5	30	44.5
R63PB14-3/8	14	3/8	25	22	80.0	34	46.0
R63PB14-1/2	14	1/2	25	22	82.5	34	48.5



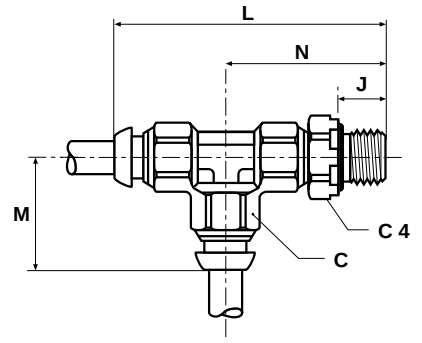
R63PK Adjustable Male Run Tee BSPT (Composite Body)

PART NO.	TUBE SIZE (MM)	BSPT	C HEX	M	N
R63PK4-1/8	4	1/8	10	18.0	25.5
R63PK4-1/4	4	1/4	14	18.0	29.0
R63PK6-1/8	6	1/8	11	20.5	27.0
R63PK6-1/4	6	1/4	14	20.5	30.5
R63PK8-1/8	8	1/8	14	22.5	29.5
R63PK8-1/4	8	1/4	14	22.5	32.5
R63PK8-3/8	8	3/8	17	22.5	34.0
R63PK10-1/4	10	1/4	17	28.5	40.0
R63PK10-3/8	10	3/8	17	28.5	39.0
R63PK12-1/4	12	1/4	19	30.0	41.5
R63PK12-3/8	12	3/8	19	30.0	41.0
R63PK12-1/2	12	1/2	22	30.0	44.5
R63PK14-3/8	14	3/8	22	33.5	45.5
R63PK14-1/2	14	1/2	22	33.5	48.0



R64PB Swivel Male Branch Run Tee BSPP (Nickel Plated)

PART NO.	TUBE SIZE (MM)	BSPP	C HEX	C4 HEX	J	L	M	N
R64PB4-1/8	4	1/8	10	13	4.7	44.5	18	23.8
R64PB4-1/4	4	1/4	10	16	6.0	49.5	18	25.6
R64PB6-1/8	6	1/8	12	13	4.7	50.0	20	28.8
R64PB6-1/4	6	1/4	12	16	6.0	53.0	20	27.1
R64PB8-1/8	8	1/8	14	13	4.7	52.0	22	28.8
R64PB8-1/4	8	1/4	14	16	6.0	57.0	22	29.1
R64PB8-3/8	8	3/8	14	20	6.5	58.0	22	31.3
R64PB10-1/4	10	1/4	17	16	6.0	67.0	28	35.1
R64PB10-3/8	10	3/8	17	20	6.5	68.0	28	35.3
R64PB12-1/4	12	1/4	22	19	6.0	71.0	30	37.1
R64PB12-3/8	12	3/8	22	22	6.5	72.0	30	38.2
R64PB14-3/8	14	3/8	25	22	6.5	80.0	34	43.6
R64PB14-1/2	14	1/2	25	24	7.5	84.5	34	43.2



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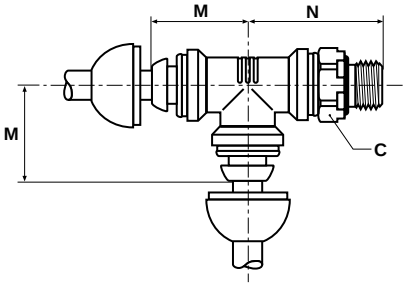
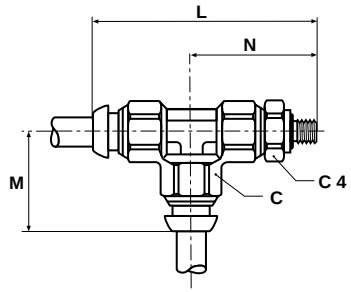
R64PK Adjustable Male Run Tee BSPP (Composite Body)

PART NO.	TUBE SIZE (MM)	BSPP	C HEX	M	N
R64PK4-1/8	4	1/8	14	18.0	25.5
R64PK4-1/4	4	1/4	19	18.0	30.5
R64PK6-1/8	6	1/8	14	20.5	27.0
R64PK6-1/4	6	1/4	19	20.5	32.0
R64PK8-1/8	8	1/8	14	22.5	29.0
R64PK8-1/4	8	1/4	19	22.5	34.0
R64PK8-3/8	8	3/8	22	22.5	35.0
R64PK10-1/4	10	1/4	19	28.5	39.0
R64PK10-3/8	10	3/8	22	28.5	40.0
R64PK12-1/4	12	1/4	19	30.0	40.5
R64PK12-3/8	12	3/8	22	30.0	41.5
R64PK14-3/8	14	3/8	22	33.5	45.0
R64PK14-1/2	14	1/2	27	33.5	49.5



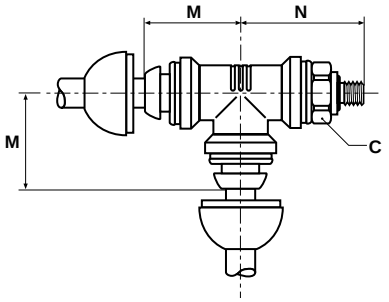
R68PB Adjustable Male Run Tee Metric Straight Thread (Nickel Plated)

PART NO.	TUBE SIZE (MM)	THREAD (MM)	C HEX	C4 HEX	L	M	N
R68PB4M3	4	M3x0.5	10	10	41.0	18	23.0
R68PB4M5	4	M5x0.8	10	10	42.5	18	24.5
R68PB6M5	6	M5x0.8	12	11	45.5	20	25.5



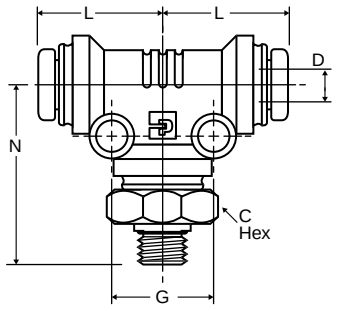
R68PK Adjustable Male Run Tee Metric Straight Thread (Composite Body)

PART NO.	TUBE SIZE (MM)	THREAD (MM)	C HEX	M	N
R68PK4M3	4	M3x0.5	10	18.0	22.0
R68PK4M5	4	M5x0.8	10	18.0	23.5
R68PK6M5	6	M5x0.8	11	20.5	25.0
R68PK8M12	8	M12x1.5	17	22.5	35.0
R68PK8M16	8	M16x1.5	22	22.5	35.0
R68PK8M22	8	M22x1.5	27	22.5	39.0



PLS2BF4-K Male Branch Tee Swivel BSPP (Composite Body)

PART NO.	TUBE SIZE (IN)	PIPE THREAD BSPP	C HEX	MOUNTING HOLE DIA.	L	N	FLOW G	FLOW DIA. D
3-1/8PLS2BF4-K	3/16	1/8-28	11/16	.17	.76	1.05	.64	.147
3-1/4PLS2BF4-K	3/16	1/4-19	3/4	.17	.76	1.31	.64	.147
4-1/8PLS2BF4-K	1/4	1/8-28	11/16	.17	.76	1.06	.64	.177
4-1/4PLS2BF4-K	1/4	1/4-19	3/4	.17	.76	1.31	.64	.172
6-1/4PLS2BF4-K	3/8	1/4-19	3/4	.17	1.04	1.56	.83	.296
6-3/8PLS2BF4-K	3/8	3/8-19	7/8	.17	1.04	1.68	.83	.296
6-1/2PLS2BF4-K	3/8	1/2-14	1-1/16	.17	1.04	1.83	.83	.297
8-3/8PLS2BF4-K	1/2	3/8-19	7/8	.17	1.30	1.90	.99	.344



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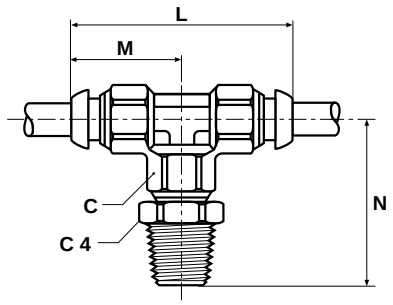
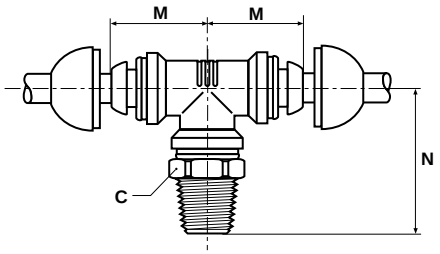
S63PB Swivel Male Branch Tee BSPT (Nickel Plated)

PART NO.	TUBE SIZE (MM)	BSPT	C HEX	C4 HEX	L	M	N
S63PB4-1/8	4	1/8	10	10	36	18	26.5
S63PB4-1/4	4	1/4	10	14	36	18	30.0
S63PB6-1/8	6	1/8	12	11	40	20	28.0
S63PB6-1/4	6	1/4	12	14	40	20	31.0
S63PB8-1/8	8	1/8	14	14	44	22	30.0
S63PB8-1/4	8	1/4	14	14	44	22	33.0
S63PB8-3/8	8	3/8	14	17	44	22	34.5
S63PB10-1/4	10	1/4	17	17	56	28	40.0
S63PB10-3/8	10	3/8	17	17	56	28	39.0
S63PB12-1/4	12	1/4	22	19	60	30	42.0
S63PB12-3/8	12	3/8	22	19	60	30	41.0
S63PB12-1/2	12	1/2	22	22	60	30	44.5
S63PB14-3/8	14	3/8	25	22	68	34	46.0
S63PB14-1/2	14	1/2	25	22	68	34	48.5



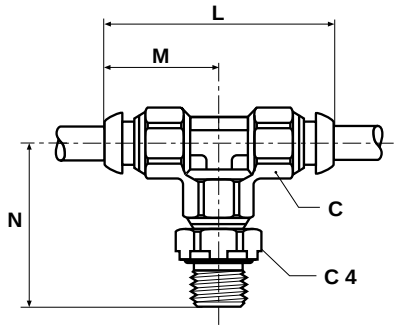
S63PK Adjustable Male Branch Tee BSPT (Composite Body)

PART NO.	TUBE SIZE (MM)	BSPT	C HEX	M	N
S63PK4-1/8	4	1/8	10	18.0	25.5
S63PK4-1/4	4	1/4	14	18.0	29.0
S63PK6-1/8	6	1/8	11	18.0	29.0
S63PK6-1/4	6	1/4	14	20.5	30.5
S63PK8-1/8	8	1/8	14	22.5	29.5
S63PK8-1/4	8	1/4	14	22.5	32.5
S63PK8-3/8	8	3/8	17	22.5	34.0
S63PK10-1/4	10	1/4	17	28.5	40.0
S63PK10-3/8	10	3/8	17	28.5	39.0
S63PK12-1/4	12	1/4	19	30.0	41.5
S63PK12-3/8	12	3/8	19	30.0	41.0
S63PK12-1/2	12	1/2	22	30.0	44.5
S63PK14-3/8	14	3/8	22	33.5	45.5
S63PK14-1/2	14	1/2	22	33.5	48.0



S64PB Swivel Male Branch Tee BSPP (Nickel Plated)

PART NO.	TUBE SIZE (MM)	BSPP	C HEX	C4 HEX	L	M	N
S64PB4-1/8	4	1/8	10	13	36	18	23.8
S64PB4-1/4	4	1/4	10	16	36	18	25.6
S64PB6-1/8	6	1/8	12	13	40	20	28.8
S64PB6-1/4	6	1/4	12	16	40	20	27.1
S64PB8-1/8	8	1/8	14	13	44	22	28.8
S64PB8-1/4	8	1/4	14	16	44	22	29.1
S64PB8-3/8	8	3/8	14	20	44	22	31.3
S64PB10-1/4	10	1/4	17	16	56	28	35.1
S64PB10-3/8	10	3/8	17	20	56	28	35.3
S64PB12-1/4	12	1/4	22	19	60	30	37.1
S64PB12-3/8	12	3/8	22	22	60	30	38.2
S64PB14-3/8	14	3/8	25	22	68	34	43.6
S64PB14-1/2	14	1/2	25	24	68	34	43.2



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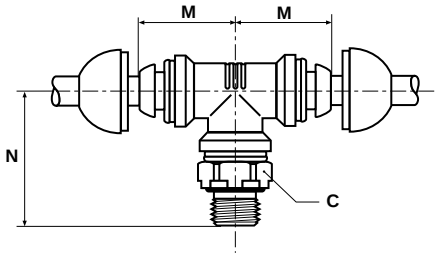
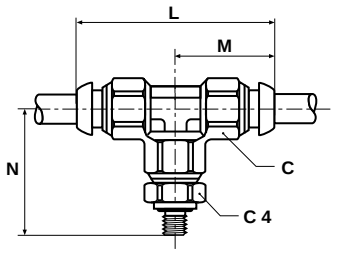
S64PK Adjustable Male Branch Tee BSPP (Composite Body)

PART NO.	TUBE SIZE (MM)	BSPP	C HEX	M	N
S64PK4-1/8	4	1/8	14	18.0	25.5
S64PK4-1/4	4	1/4	19	18.0	30.5
S64PK6-1/8	6	1/8	14	20.5	27.0
S64PK6-1/4	6	1/4	19	20.5	32.0
S64PK8-1/8	8	1/8	14	22.5	29.0
S64PK8-1/4	8	1/4	19	22.5	34.0
S64PK8-3/8	8	3/8	22	22.5	35.0
S64PK10-1/4	10	1/4	19	28.5	39.0
S64PK10-3/8	10	3/8	22	28.5	40.0
S64PK12-1/4	12	1/4	19	30.0	40.5
S64PK12-3/8	12	3/8	22	30.0	41.5
S64PK14-3/8	14	3/8	22	33.5	45.0
S64PK14-1/2	14	1/2	27	33.5	49.5



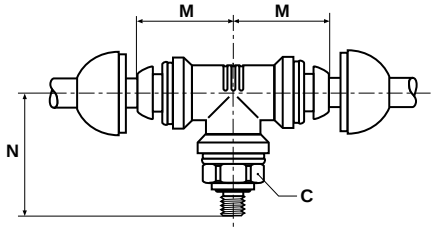
S68PB Adjustable Male Branch Tee Metric Straight Thread (Nickel Plated)

PART NO.	TUBE SIZE (MM)	THREAD (MM)	C HEX	C4 HEX	L	M	N
S68PB4M3	4	M3x0.5	10	10	36	18	23.0
S68PB4M5	4	M5x0.8	10	10	36	18	24.5
S68PB6M5	6	M5x0.8	12	11	40	20	25.5



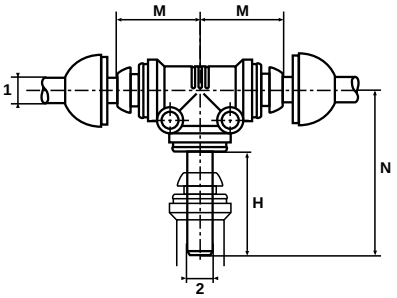
S68PK Adjustable Male Branch Tee Metric Straight Thread (Composite Body)

PART NO.	TUBE SIZE (MM)	THREAD (MM)	C HEX	M	N
S68PK4M3	4	M3x0.5	10	18.0	22.0
S68PK4M5	4	M5x0.8	10	18.0	23.5
S68PK6M5	6	M5x0.8	11	20.5	25.0
S68PK8M12	8	M12x1.5	17	22.5	35.0
S68PK8M16	8	M16x1.5	22	22.5	35.0
S68PK8M22	8	M22x1.5	27	22.5	39.0



T2JPK Plug-in Branch Tee (Composite Body)

PART NUMBER	TUBE 1 SIZE (MM)	TUBE 2 SIZE (MM)	MOUNTING HOLE DIA.	H	M	N
T2JPK4	4	4	3.2	19.5	18.0	33.5
T2JPK6	6	6	4.2	21.0	20.5	36.5
T2JPK8	8	8	4.2	22.0	22.5	39.5



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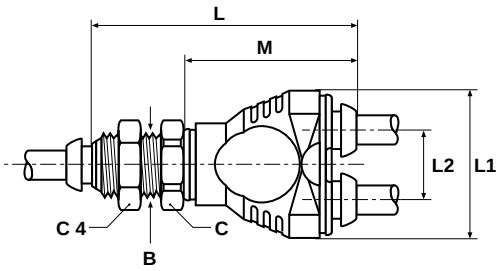
WYJ6PK Adjustable Male Bulkhead Y Connector (Composite Body)

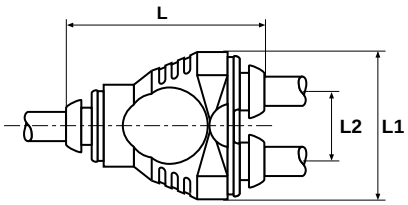
PART NO.	TUBE SIZE	MM THREAD	C	C4	L	L1	L2	M
WYJ6PK4	4	M11x0.75	14	16	46	22	11.0	27
WYJ6PK6	6	M13x1	17	17	54	30	13.5	35
WYJ6PK8	8	M15x1.25	19	19	64	30	13.5	35



YJPK Union Y Connector (Composite Body)

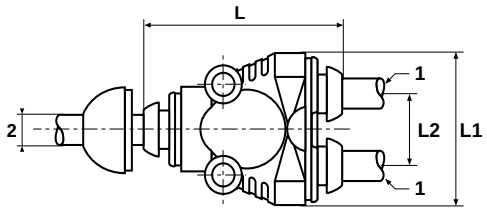
PART NO.	TUBE SIZE (MM)	L	L1	L2
YJPK4*	4	31.0	22	11.0
YJPK6*	6	40.0	30	13.5
YJPK8*	8	40.0	30	13.5

* Fittings not suitable for use with protective cap.



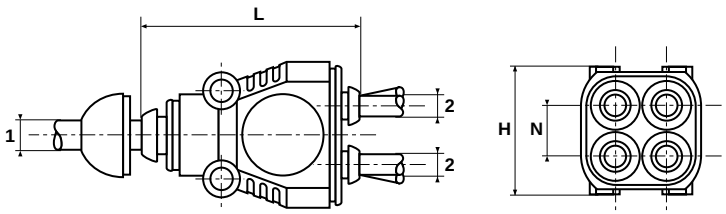
YJPK Unequal Union Y Connector (Composite Body)

PART NO.	TUBE 1 SIZE (MM)	TUBE 2 SIZE (MM)	MOUNTING HOLE DIA.	L	L1	L2
YJPK4-4-6	4	6	4.2	40	30	13.5
YJPK6-6-8	6	8	4.2	40	30	13.5
YJPK8-8-10	8	10	4.2	40	31	13.6



YJ5PK Union Double Y Connector (Composite Body)

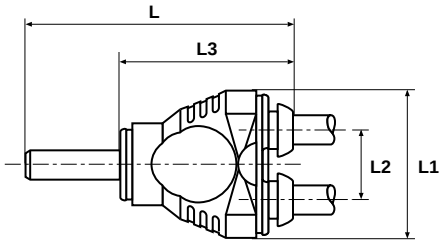
PART NO.	TUBE 1 SIZE (MM)	TUBE 2 SIZE (MM)	H	L	N	MOUNTING HOLE DIA.
YJ5PK6-4	6	4	22.5	38	9.5	4.2
YJ5PK4	4	4	22.5	35	9.5	3.2



YJ2PK Plug-In Y Connector (Composite Body)

PART NO.	TUBE SIZE (MM)	L	L1	L2	L3
YJ2PK4*	4	46.5	22	11.0	27
YJ2PK6*	6	56.0	30	13.5	35
YJ2PK8*	8	57.0	30	13.5	35

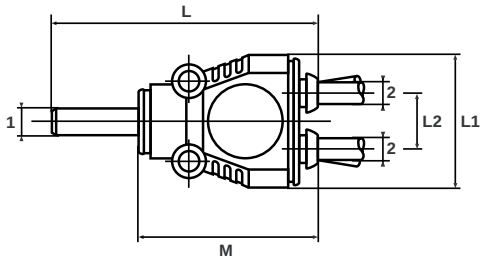
* Fittings not suitable for use with protective cap.



B

YJ52PK Plug-in Double Y Connector (Composite Body)

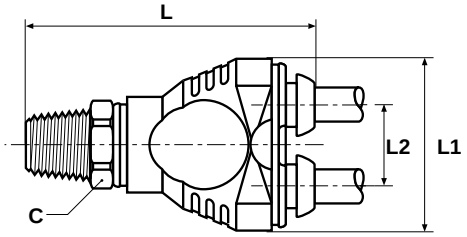
PART NUMBER	TUBE 1 SIZE (MM)	TUBE 2 SIZE (MM)	MOUNTING HOLE DIA	L	L1	L2	M
YJ52PK6-4	6	4	3.2	52	22.5	9.5	31



YJ63PK Adjustable Male Y Connector BSPT (Composite Body)

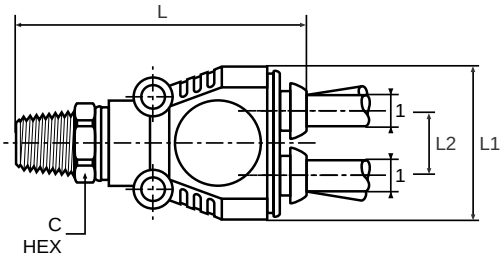
PART NO.	TUBE SIZE (MM)	BSPT	C HEX	L	L1	L2
YJ63PK4-1/8*	4	1/8	10	38.5	22	11.0
YJ63PK4-1/4*	4	1/4	14	42.0	22	11.0
YJ63PK6-1/8*	6	1/8	11	51.5	30	13.5
YJ63PK6-1/4*	6	1/4	14	50.0	30	13.5
YJ63PK8-1/8*	8	1/8	14	47.0	30	13.5
YJ63PK8-1/4*	8	1/4	14	50.0	30	13.5

*Fittings not suitable for use with protective cap.



YJ563PK Union Double Y Connector Adjustable Male BSPT (Composite Body)

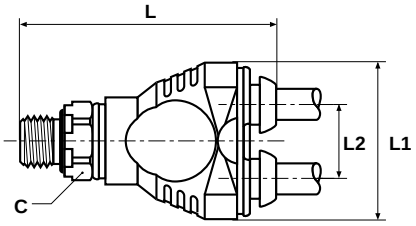
PART NUMBER	TUBE SIZE (MM)	BSPT	MOUNTING HOLE DIA	C HEX	L	L1	L2
YJ563PK4-1/8	4	1/8	3.2	10	42.5	22.5	9.5
YJ563PK4-1/4	4	1/4	3.2	14	46.0	22.5	9.5



YJ64PK Adjustable Male Y Connector BSPP (Composite Body)

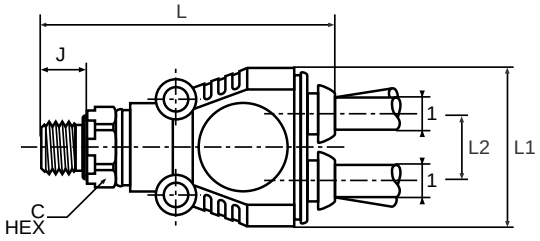
PART NO.	TUBE SIZE (MM)	BSPP	C HEX	L	L1	L2
YJ64PK4-1/8*	4	1/8	14	38.5	22	11.0
YJ64PK4-1/4*	4	1/4	19	43.5	22	11.0
YJ64PK6-1/8*	6	1/8	14	46.5	30	13.5
YJ64PK6-1/4*	6	1/4	19	51.5	30	13.5
YJ64PK8-1/8*	8	1/8	14	46.5	30	13.5
YJ64PK8-1/4*	8	1/4	19	51.5	30	13.5

* Fittings not suitable for use with protective cap.



YJ564PK Union Double Y Connector Adjustable Male BSPP (Composite Body)

PART NUMBER	TUBE SIZE (MM)	BSPP	MOUNTING HOLE DIA	C HEX	J	L	L1	L2
YJ564PK4-1/8	4	1/8	3.2	14	6	42.5	22.5	9.5
YJ564PK4-1/4	4	1/4	3.2	19	9	47.5	22.5	9.5



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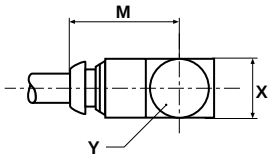
B

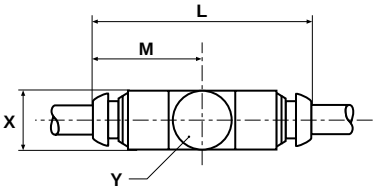
CORPB Single Banjo Body Only (Nickel Plated)

PART NO.	TUBE SIZE (MM)	PART NO. SINGLE BOLT	PART NO. STACKING BOLT	M	X	Y
CORPB4-5	4	SC8UM5-4	SC8UDM5-4	19.0	10	10
CORPB4-10	4	SC4U1/8-4	SC4UD1/8-4	22.5	14	14
CORPB6-10	6	SC4U1/8-4	SC4UD1/8-4	23.0	14	14
CORPB6-13	6	SC4U1/4-6	SC4UD1/4-6	24.5	14	17
CORPB8-10	8	SC4U1/8-4	SC4UD1/8-4	24.0	14	14
CORPB8-13	8	SC4U1/4-6	SC4UD1/4-6	25.5	14	17
CORPB10-17	10	SC4U3/8-10	SC4UD3/8-10	32.0	17	22



CORPBD Double Banjo Body Only (Nickel Plated)

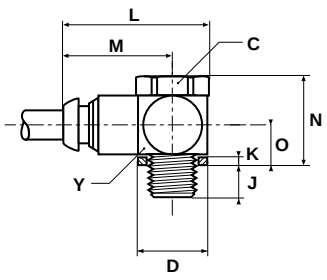
PART NO.	TUBE SIZE (MM)	PART NO. SINGLE BOLT	PART NO. STACKING BOLT	L	M	X	Y
CORPB4D5	4	SC8UM5-4	SC8UDM5-4	38	19.0	10	10
CORPB4D10	4	SC4U1/8-4	SC4UD1/8-4	45	22.5	14	14
CORPB6D10	6	SC4U1/8-4	SC4UD1/8-4	46	23.0	14	14
CORPB6D13	6	SC4U1/4-6	SC4UD1/4-6	49	24.5	14	17
CORPB8D10	8	SC4U1/8-4	SC4UD1/8-4	48	24.0	14	14



COR8PB/COR4PB Single Banjo Assembled (Nickel Plated)

PART NO.	TUBE SIZE (MM)	BSPP	C HEX	D	J	K	L	M	N	0	Y
COR8PB4M5	4	M5x0.8	8	8.2	4.5	1.0	24.0	19.0	13.5	6.0	10
COR4PB4-1/8	4	1/8	14	14.4	6.0	1.5	29.5	22.5	19.5	8.5	14
COR4PB6-1/8	6	1/8	14	14.4	6.0	1.5	30.0	23.0	19.5	8.5	14
COR4PB6-1/4	6	1/4	17	18.4	9.0	2.0	33.0	24.5	21.0	9.0	17
COR4PB8-1/8	8	1/8	14	14.4	6.0	1.5	31.0	34.0	19.5	8.5	14
COR4PB8-1/4	8	1/4	17	18.4	9.0	2.0	34.0	25.5	21.0	9.0	17
COR4PB10-3/8	10	3/8	22	21.6	9.0	2.5	43.0	32.0	25.5	11.0	22

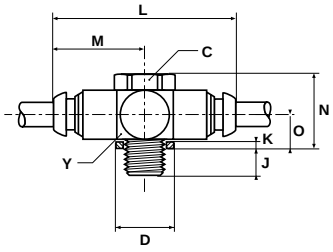
These parts are delivered complete with sealing washer.



COR8PBD/COR4PBD Double Banjo Assembled (Nickel Plated)

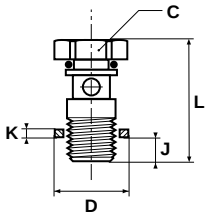
PART NO.	TUBE SIZE (MM)	BSPP	C HEX	D	J	K	L	M	N	0	Y
COR8PB4DM5	4	M5x0.8	8	8.2	4.5	1.0	38	19.0	13.5	6.0	10
COR4PB4D1/8	4	1/8	14	14.4	6.0	1.5	45	22.5	19.5	8.5	14
COR4PB6D1/8	6	1/8	14	14.4	6.0	1.5	46	23.0	19.5	8.5	14
COR4PB6D1/4	6	1/4	17	18.4	9.0	2.0	49	24.5	21.0	9.0	17
COR4PB8D1/8	8	1/8	14	14.4	6.0	1.5	48	24.0	19.5	8.5	14

These parts are delivered complete with sealing washer.



SC8U/SC4U Single Banjo Bolt with Seals BSPP (Nickel Plated)

PART NO.	BSPP	C HEX	D	J	K	L
SC8UM5-4	M5x0.8	8	8.2	4.5	1.0	18.5
SC4U1/8-4	1/8	14	14.4	6.0	1.5	25.5
SC4U1/4-6	1/4	17	18.4	9.0	2.0	30.0
SC4U3/8-10	3/8	22	21.6	9.0	2.5	34.5



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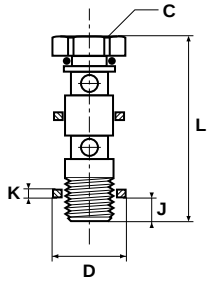
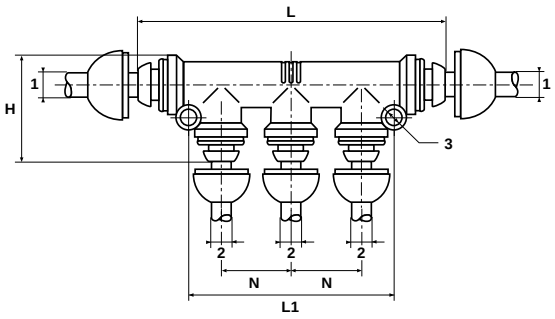
SC8UD/SC4UD Stacking Banjo Bolt with Seals BSPP (Nickel Plated)

PART NO.	BSPP	C HEX	D	J	K	L
SC8UDM5-4	M5x0.8	8	8.2	4.5	1.0	29.5
SC4UD1/8-4	1/8	14	14.4	6.0	1.5	41.0
SC4UD1/4-6	1/4	17	18.4	9.0	2.0	46.0



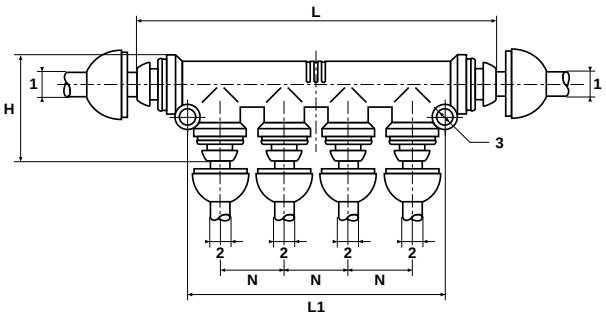
J5PK Multiple Tee (Composite Body)

PART NO.	TUBE 1 SIZE (MM)	TUBE 2 SIZE (MM)	MOUNTING HOLE DIA	H	L	L1	N
J5PK6-4	6	4	4.2	27	78	52	18
J5PK8-4	8	4	4.2	28	80	52	18
J5PK8-6	8	6	4.2	30	80	52	18
J5PK10-6	10	6	4.2	33	90	52	18



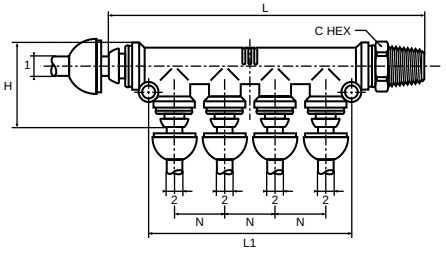
J6PK Multiple Tee (Composite Body)

PART NO.	TUBE 1 SIZE (MM)	TUBE 2 SIZE (MM)	MOUNTING HOLE DIA	H	L	L1	N
J6PK6-4	6	4	4.4	27	96	70	18
J6PK8-4	8	4	4.4	28	98	70	18
J6PK8-6	8	6	4.4	30	98	70	18
J6PK10-6	10	6	4.4	33	108	70	18



J663PK Adjustable Male Multiple Tee BSPT (Composite Body)

PART NUMBER	TUBE 1 SIZE (MM)	TUBE 2 SIZE (MM)	MOUNTING HOLE DIA	BSPT	C HEX	H	L	L1	N
J663PK6-4-1/4	6	4	4.4	1/4	14	27	106.5	70	18



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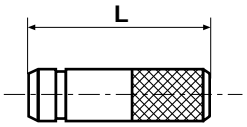
B

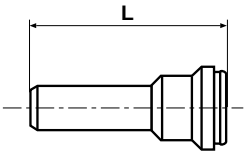
FNPB Plug (Nickel Plated)

PART NO.	TUBE SIZE (MM)	L
FNPB4	4	27
FNPB6	6	27
FNPB8	8	30
FNPB10	10	30
FNPB12	12	35
FNPB14	14	36



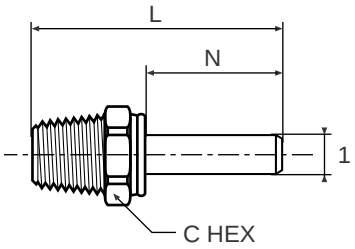
FNPK Plug (Composite Body)

PART NO.	TUBE SIZE (MM)	L
FNPK4	4	34.5
FNPK6	6	35.0
FNPK8	8	35.0
FNPK10	10	42.0
FNPK12	12	41.0
FNPK14	14	40.0



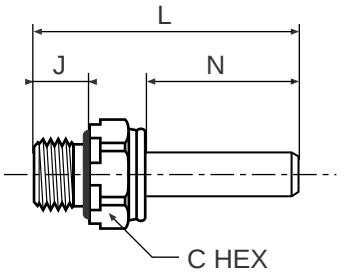
T23FPK Tube End Male Adaptor BSPT (Composite Body)

PART NUMBER	TUBE SIZE (MM)	BSPT	C HEX	L	N
T23FPK4-1/8	4	1/8	12	36	19.5
T23FPK4-1/4	4	1/4	14	40	19.5
T23FPK6-1/8	6	1/8	14	40	21.0
T23FPK6-1/4	6	1/4	14	40	21.0
T23FPK8-1/8	8	1/8	17	45	22.0
T23FPK8-1/4	8	1/4	17	46	22.0
T23FPK8-3/8	8	3/8	17	44	22.0



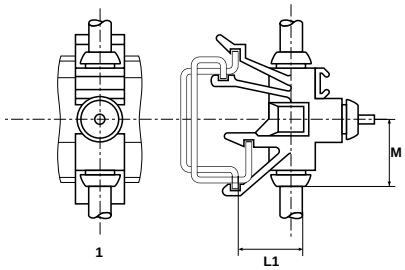
T24FPK Tube End Male Adaptor BSPP (Composite Body)

PART NUMBER	TUBE SIZE (MM)	BSPP	C HEX	J	L	N
T24FPK4-1/8	4	1/8	14	6	38	19.0
T24FPK4-1/4	4	1/4	16	9	38	19.5
T24FPK6-1/8	6	1/8	14	6	41	21.0
T24FPK6-1/4	6	1/4	16	9	41	20.5
T24FPK8-1/8	8	1/8	14	6	45	22.0
T24FPK8-1/4	8	1/4	16	9	45	22.0
T24FPK8-3/8	8	3/8	19	9	45	22.0
T24FPK10-1/4	10	1/4	19	9	57	27.0



HS3PK Manifold for 2 Tubes And Pressure Indicator (Composite Body)

PART NO.	TUBE SIZE (MM)	L 1	M
HS3PK4	4	14	16
HS3PK6	6	15	18
HS3PK8	8	15	29



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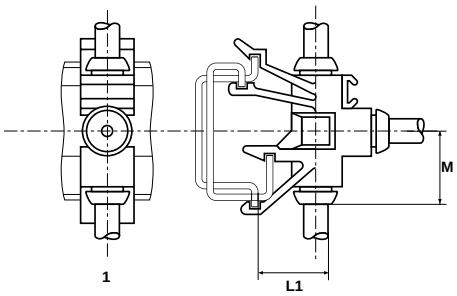
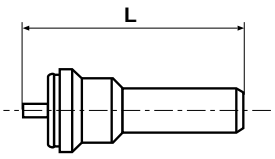
J3PK Manifold for 3 Tubes (Composite Body)

PART NO.	TUBE SIZE (MM)	L 1	M
J3PK4	4	14	16
J3PK6	6	15	18
J3PK8	8	15	29



TS2PK Pressure Indicator (Composite Body)

PART NO.	TUBE SIZE (MM)	L
TS2PK4	4	36
TS2PK6	6	37
TS2PK8	8	36



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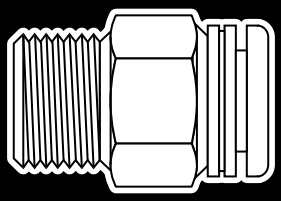


PrestoWeld Fittings

Advantages
Parker Prestoweld Push-to-Connect fittings are weld splatter resistant and silicone free to meet the stringent requirements of the robotic welding industry for pneumatic controls. All fittings feature nickel-plated brass bodies and threads. Release buttons are made from a UL94-V0 engineered thermoplastic and color coded black to designate inch size. The fittings are designed for use with special Parker Microweld tubing. Microweld tubing is an ether-based polyurethane for maximum hydrolytic stability and has a UL-94 V2 flame rating. Microweld tubing does not contain silicone or other contaminants that affect paint surfaces. The Prestoweld fitting is based on the design of the Parker Prestolok push-in fitting, with a silicone free lubricated nitrile o-ring and stainless steel grab ring to ensure positive tube retention. The release button collet aids in preventing weld spatter into the fittings.

Materials
- Body: Nickel Plated Brass
- O-ring: Nitrile silicone free
- Release Ring: PBT UL94-VO
- Black release ring: Inch
- Yellow release ring: Metric
- Grab Ring: Stainless Steel

Applications
Use with Parker Microweld tubing to meet the stringent requirements of the robotic welding industry for pneumatic controls. 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 Range
0° to +200°F at up to 300 PSI depending on tubing being used

Assembly Instructions
1. Cut tubing squarely, be certain the port of 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 the tubing to verify it is properly retained in the fitting.
3. To disassemble, simply push in the release button against the body and remove the tubing.
4. It is recommended to trim the tubing after every disassembly to insure a proper seal.

Order
By part number and name.

Nomenclature
Part numbers are constructed from symbols the 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 169 PW -4 -2**

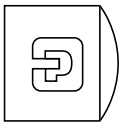
- W — White PCTFE, Thread Sealant
- 169 — Male Elbow
- PW — PrestoWeld
- -4 — ¼" (4/16) Tube O.D.
- -2 — 1/8" (2/16) Pipe Thread

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

Pricing
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for special quantity.

DB Dust/Weld Spatter Boot

PART NO.	FITTING SIZE
DB-4	1/4", 5/16", 6MM, 8MM
DB-6	3/8", 10MM
DB-8	1/2",12MM



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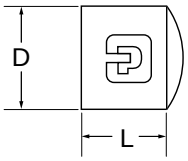
B

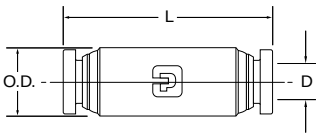
DB Dust/Weld Spatter Boot

PART NO.	TUBE SIZE (IN)	L	D
DB-4	1/4	.50	.53
DB-6	3/8	.50	.76
DB-8	1/2	.50	.88



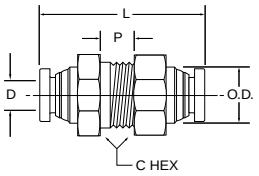
62PW Union (Nickel Plated)

PART NO.	TUBE SIZE	O.D.	L	FLOW DIA. D
62PW-4	1/4	.500	1.43	.188
62PW-5	5/16	.562	1.65	.250
62PW-6	3/8	.625	1.66	.312
62PW-8	1/2	.750	1.82	.375



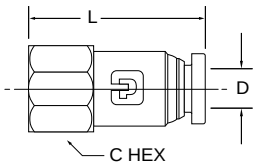
62PWBH Bulkhead Union (Nickel Plated)

PART NO.	TUBE SIZE (IN)	BULKHEAD HOLE DIA. B	C HEX	P MAX.	L	D
62PWBH-4	1/4	9/16	11/16	.29	1.43	.188
62PWBH-5	5/16	5/8	3/4	.60	1.65	.250
62PWBH-6	3/8	3/4	7/8	.54	1.66	.312
62PWBH-8	1/2	7/8	1	.66	2.04	.375



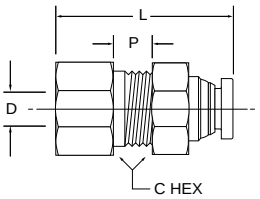
66PW Female Connector (Nickel Plated)

PART NO.	TUBE SIZE	PIPE THREAD (NPTF)	C HEX	L	FLOW DIA. D
66PW-4-2	1/4	1/8	9/16	1.17	.188
66PW-4-4	1/4	1/4	11/16	1.38	.188
66PW-5-2	5/16	1/8	9/16	1.25	.250
66PW-5-4	5/16	1/4	11/16	1.45	.250
66PW-6-4	3/8	1/4	11/16	1.46	.312
66PW-6-6	3/8	3/8	13/16	1.51	.312



66PWBH Female Bulkhead (Nickel Plated)

PART NO.	TUBE SIZE (IN)	THREAD (NPTF)	C HEX	P MAX.	L	FLOW DIA. D	BULKHEAD HOLE DIA.
66PWBH-4-4	1/4	1/4	11/16	.24	1.35	.188	9/16
66PWBH-6-6	3/8	3/8	1	.22	1.47	.312	7/8
66PWBH-8-6	1/2	3/8	1 1/4	.35	1.56	.344	1



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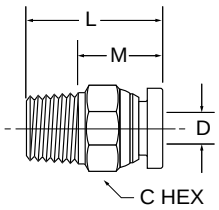
Parker Brass Products Division
Otsego, Michigan

B

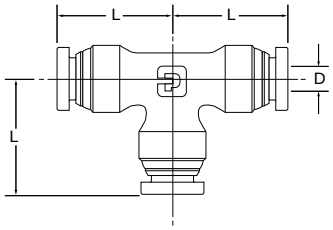
W68PW Male Connector (Nickel Plated)

PART NO.	TUBE SIZE (IN)	PIPE THREAD (NPTF)	C HEX	L	FLOW DIA. D
W68PW-4-2	1/4	1/8	1/2	.89	.188
W68PW-4-4	1/4	1/4	9/16	1.00	.188
W68PW-4-6	1/4	3/8	3/4	1.04	.188
W68PW-5-2	5/16	1/8	9/16	1.18	.250
W68PW-5-4	5/16	1/4	9/16	1.04	.250
W68PW-5-6	5/16	3/8	11/16	1.04	.250
W68PW-6-2	3/8	1/8	5/8	1.21	.250
W68PW-6-4	3/8	1/4	5/8	1.08	.312
W68PW-6-6	3/8	3/8	11/16	1.02	.312
W68PW-6-8	3/8	1/2	7/8	1.28	.312
W68PW-8-4	1/2	1/4	13/16	1.44	.344
W68PW-8-6	1/2	3/8	13/16	1.24	.344
W68PW-8-8	1/2	1/2	7/8	1.35	.375



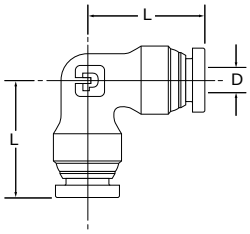
164PW Union Tee (Nickel Plated)

PART NO.	TUBE SIZE (IN)	L	FLOW DIA. D
164PW-4	1/4	.85	.188
164PW-5	5/16	.97	.250
164PW-6	3/8	1.01	.250
164PW-8	1/2	1.15	.375



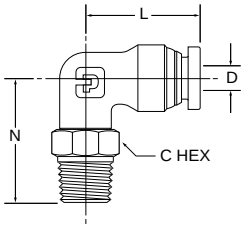
165PW Union Elbow (Nickel Plated)

PART NO.	TUBE SIZE (IN)	L	FLOW DIA. D
165PW-4	1/4	.85	.188
165PW-5	5/16	.97	.250
165PW-6	3/8	1.01	.312
165PW-8	1/2	1.15	.375



W169PW Male Elbow Swivel 90° (Nickel Plated)

PART NO.	TUBE SIZE (IN)	PIPE THREAD (NPTF)	C HEX	L	N	FLOW DIA. D
W169PW-4-2	1/4	1/8	7/16	.85	.92	.156
W169PW-4-4	1/4	1/4	9/16	.85	1.10	.156
W169PW-4-6	1/4	3/8	11/16	.85	1.19	.156
W169PW-5-2	5/16	1/8	9/16	.97	1.02	.250
W169PW-5-4	5/16	1/4	9/16	.97	1.24	.250
W169PW-6-2	3/8	1/8	9/16	1.01	1.02	.250
W169PW-6-4	3/8	1/4	9/16	1.01	1.24	.250
W169PW-6-6	3/8	3/8	11/16	1.01	1.24	.250
W169PW-6-8	3/8	1/2	7/8	1.01	1.48	.250
W169PW-8-4	1/2	1/4	9/16	1.15	1.28	.312
W169PW-8-6	1/2	3/8	11/16	1.15	1.31	.312
W169PW-8-8	1/2	1/2	7/8	1.15	1.52	.312



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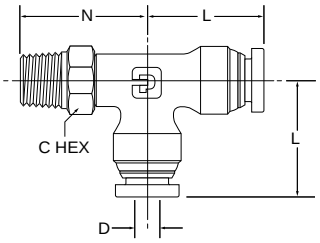
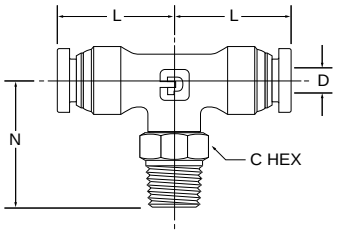
W171PW Male Run Tee Swivel (Nickel Plated)

PART NO.	TUBE SIZE (IN)	PIPE THREAD (NPTF)	C HEX	L	N	FLOW DIA. D
W171PW-4-2	1/4	1/8	7/16	.85	.92	.156
W171PW-4-4	1/4	1/4	9/16	.85	1.10	.156
W171PW-4-6	1/4	3/8	11/16	.85	1.24	.156
W171PW-5-2	5/16	1/8	9/16	.97	1.02	.250
W171PW-5-4	5/16	1/4	9/16	.97	1.24	.250
W171PW-6-4	3/8	1/4	9/16	1.01	1.24	.250
W171PW-6-6	3/8	3/8	11/16	1.01	1.24	.250
W171PW-8-6	1/2	3/8	11/16	1.15	1.31	.312
W171PW-8-8	1/2	1/2	7/8	1.15	1.52	.312



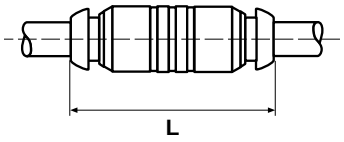
W172PW Male Branch Tee Swivel (Nickel Plated)

PART NO.	TUBE SIZE (IN)	PIPE THREAD (NPTF)	C HEX	L	N	FLOW DIA. D
W172PW-4-2	1/4	1/8	7/16	.85	.92	.156
W172PW-4-4	1/4	1/4	9/16	.85	1.10	.156
W172PW-4-6	1/4	3/8	11/16	.85	1.10	.156
W172PW-5-2	5/16	1/8	9/16	.97	1.02	.250
W172PW-5-4	5/16	1/4	9/16	.97	1.24	.250
W172PW-6-4	3/8	1/4	9/16	1.01	1.24	.250
W172PW-6-6	3/8	3/8	11/16	1.01	1.24	.250
W172PW-8-4	1/2	1/4	9/16	1.15	1.30	.312
W172PW-8-6	1/2	3/8	11/16	1.15	1.31	.312
W172PW-8-8	1/2	1/2	7/8	1.15	1.52	.312



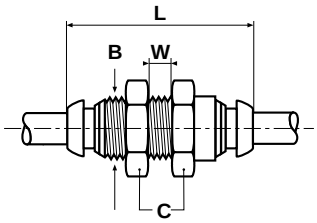
HPB Equal Union

PART NO.	TUBE SIZE (MM)	L
HPB6	6	36.0
HPB8	8	38.0
HPB10	10	48.0
HPB12	12	48.0



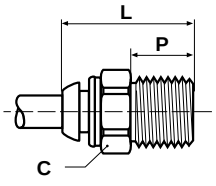
WPB Bulkhead Union

PART NO.	TUBE SIZE (MM)	B-MM THREAD	C HEX	L	W	BULKHEAD HOLE DIA.
WPB6	6	M13x1	19	35	6	13mm
WPB8	8	M15x1.25	22	36	6	16mm
WPB10	10	M18x1	22	43	8	18mm
WPB12	12	M23x1.5	27	46	10	23mm



F3PB Male Connector BSPT

PART NO.	TUBE SIZE (MM)	BSPT	C HEX	L
F3PB6-1/8	6	1/8	14	24.0
F3PB6-1/4	6	1/4	14	24.0
F3PB8-1/8	8	1/8	17	28.0
F3PB8-1/4	8	1/4	17	28.5
F3PB8-3/8	8	3/8	17	26.5
F3PB10-1/4	10	1/4	19	35.5
F3PB10-3/8	10	3/8	19	33.0
F3PB10-1/2	10	1/2	22	31.0
F3PB12-1/4	12	1/4	22	36.5
F3PB12-3/8	12	3/8	22	36.0
F3PB12-1/2	12	1/2	22	36.0



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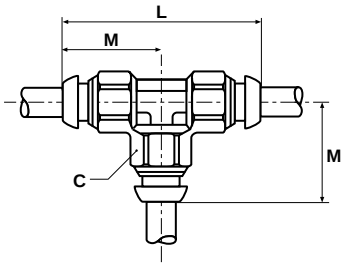
Otsego, Michigan

B

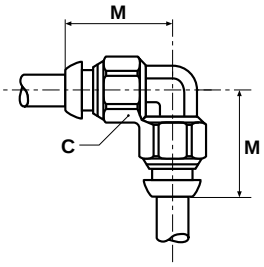
JPB Equal Tee

PART NO.	TUBE SIZE (MM)	C	L	M
JPB6	6	12	40	20
JPB8	8	14	44	22
JPB10	10	17	56	28
JPB12	12	22	60	30



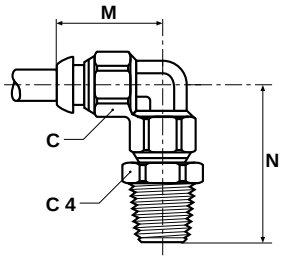
EPB Equal Elbow

PART NO.	TUBE SIZE (MM)	C HEX	M
EPB6	6	12	20.0
EPB8	8	14	22.0
EPB10	10	17	28.0
EPB12	12	22	30.0



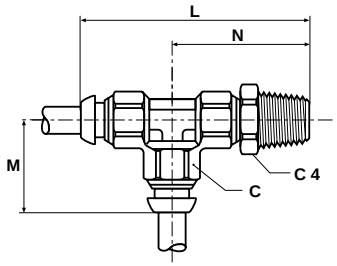
C63PB Adjustable Male Elbow BSPT

PART NO.	TUBE SIZE (MM)	BSPT	C HEX	C4 HEX	M	N
C63PB6-1/8	6	1/8	12	11	20	28.0
C63PB6-1/4	6	1/4	12	14	20	31.0
C63PB8-1/8	8	1/8	14	14	22	30.0
C63PB8-1/4	8	1/4	14	14	22	33.0
C63PB8-3/8	8	3/8	14	17	22	34.5
C63PB10-1/4	10	1/4	17	17	28	40.0
C63PB10-3/8	10	3/8	17	17	28	39.0
C63PB12-1/4	12	1/4	22	19	30	42.0
C63PB12-3/8	12	3/8	22	19	30	41.0
C63PB12-1/2	12	1/2	22	22	30	44.5



R63PB Swivel Male Run Tee BSPT

PART NO.	TUBE SIZE (MM)	BSPT	C HEX	C4 HEX	L	M	N
R63PB6-1/8	6	1/8	12	11	48.0	20	28.0
R63PB6-1/4	6	1/4	12	14	51.0	20	31.0
R63PB8-1/8	8	1/8	14	14	52.0	22	30.0
R63PB8-1/4	8	1/4	14	14	55.0	22	33.0
R63PB8-3/8	8	3/8	14	17	56.5	22	34.5
R63PB10-1/4	10	1/4	17	17	68.0	28	40.0
R63PB10-3/8	10	3/8	17	17	67.0	28	39.0
R63PB12-1/4	12	1/4	22	19	72.0	30	42.0
R63PB12-3/8	12	3/8	22	19	71.0	30	41.0
R63PB12-1/2	12	1/2	22	22	74.5	30	44.5



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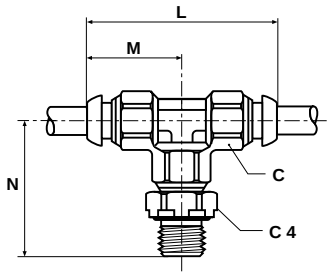
Otsego, Michigan

B

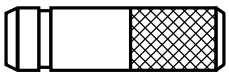
S63PB Swivel Male Branch Tee BSPT

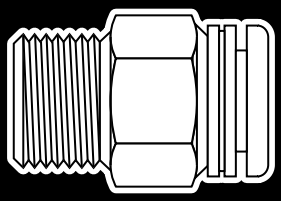
PART NO.	TUBE SIZE (MM)	BSPT	C HEX	C4 HEX	L	M	N
S63PB6-1/8	6	1/8	12	11	40	20	28.0
S63PB6-1/4	6	1/4	12	14	40	20	31.0
S63PB8-1/8	8	1/8	14	14	44	22	30.0
S63PB8-1/4	8	1/4	14	14	44	22	33.0
S63PB8-3/8	8	3/8	14	17	44	22	34.5
S63PB10-1/4	10	1/4	17	17	56	28	40.0
S63PB10-3/8	10	3/8	17	17	56	28	39.0
S63PB12-1/4	12	1/4	22	19	60	30	42.0
S63PB12-3/8	12	3/8	22	19	60	30	41.0
S63PB12-1/2	12	1/2	22	22	60	30	44.5



FNPB Plug

PART NO.	TUBE SIZE (MM)
FNPB6	6
FNPB8	8
FNPB10	10
FNPB12	12





Global Connect Fittings

Advantages
Ready-to-use compact one piece fitting for use with most thermoplastic 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 tube assembly, just insert the tubing until it bottoms. Global Connect is designed to be used without a tube support to provide full flow through the tubing. The grab ring design of Global Connect grips the tubing securely to provide retention. Global Connect straight fittings have a nickel plated brass body and shaped fittings have a composite body with nickel plated brass componentry. Global Connect external pipe threads come with a pre-applied white PCTFE sealant. Positional external pipe threaded ends are featured on shapes for installation in compact areas and for precise positioning.

Global Connect fittings should not be used for live swivel applications.

Materials
- Global Connect Straights: Brass, nickel plated
- Global Connect Shape Bodies: Polyamide
- Ellipse Button: Acetal Copolymer
- Grab Ring: Ring Stainless Steel
- O-Ring: Nitrile
- Sealant: PCTFE

Applications
Use with Parker Parflex series “U” and “HU” polyurethane tubing and series”N” nylon tubing. Global Connect was designed as an economical alternative for pneumatic applications that do not require the higher pressure capacity of the 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.

Working Pressure and Temperature Range
32˚to + 140˚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. 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 elliptical 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.

Note: 0 indicates 10-32 UNF Thread

Example: W 369 GC -4 -2

- W — White PCTFE
- 369 — Thread Sealant
- GC — Male Elbow
- -4 — Global Connect
- -2 — ¼” (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.

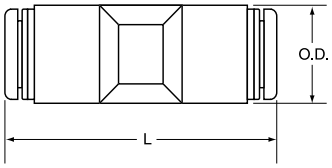
Pricing
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

B

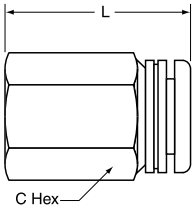
Union 32GC

PART NO.	TUBE SIZE	O.D.	L
32GC-2	1/8	.433	1.299
32GC-5/32	5/32	.433	1.300
32GC-3	3/16	.512	1.535
32GC-4	1/4	.560	1.570
32GC-5	5/16	.610	1.614
32GC-6	3/8	.728	1.890
32GC-8	1/2	.866	2.362



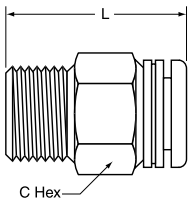
66GC Female Connector

PART NO.	TUBE SIZE	PIPE THREAD	C HEX	L
66GC-3-2	3/16	1/8	1/2	1.12
66GC-4-2	1/4	1/8	1/2	1.11
66GC-4-4	1/4	1/4	5/8	1.31
66GC-5/32-2	5/32	1/8	1/2	1.07
66GC-5/32-4	5/32	1/4	5/8	1.26
66GC-5-2	5/16	1/8	9/16	1.17
66GC-5-4	5/16	1/4	5/8	1.33
66GC-6-4	3/8	1/4	13/16	1.40
66GC-6-6	3/8	3/8	13/16	1.45



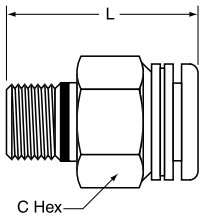
Male Connector W68GC

PART NO.	TUBE SIZE	PIPE THREAD	C HEX	L
W68GC-2-1	1/8	1/16	1/2	.950
W68GC-2-2	1/8	1/8	1/2	.900
W68GC-2-4	1/8	1/4	9/16	1.050
W68GC-5/32-1	5/32	1/16	1/2	.940
W68GC-5/32-2	5/32	1/8	1/2	.890
W68GC-5/32-4	5/32	1/4	9/16	1.050
W68GC-3-2	3/16	1/8	1/2	.940
W68GC-3-4	3/16	1/4	9/16	1.090
W68GC-4-1	1/4	1/16	1/2	1.130
W68GC-4-2	1/4	1/8	1/2	.940
W68GC-4-4	1/4	1/4	9/16	1.090
W68GC-4-6	1/4	3/8	11/16	1.090
W68GC-5-2	5/16	1/8	9/16	1.300
W68GC-5-4	5/16	1/4	9/16	1.260
W68GC-5-6	5/16	3/8	11/16	1.250
W68GC-6-2	3/8	1/8	3/4	1.220
W68GC-6-4	3/8	1/4	3/4	1.340
W68GC-6-6	3/8	3/8	3/4	1.340
W68GC-6-8	3/8	1/2	15/16	1.540
W68GC-8-4	1/2	1/4	13/16	1.460
W68GC-8-6	1/2	3/8	13/16	1.450
W68GC-8-8	1/2	1/2	15/16	1.650



Male Connector 68GC

PART NO.	TUBE SIZE	THREAD UNF	C HEX	L
68GC-2-0	1/8	10-32	1/2	.930
68GC-5/32-0	5/32	10-32	1/2	.910
68GC-3-0	3/16	10-32	1/2	.900
68GC-4-0	1/4	10-32	1/2	.900



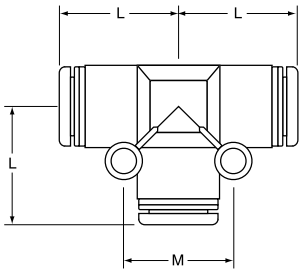
All dimensions are preliminary and could change during final production.

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

B

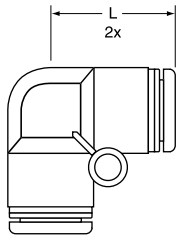
Union Tee 364GC

PART NO.	TUBE SIZE	MOUNTING HOLE DIA.	L	M
364GC-2	1/8	•	.689	
364GC-5/32	5/32	•	.689	
364GC-3	3/16	.138	.740	.63
364GC-4	1/4	.150	.740	.72
364GC-5	5/16	.173	.906	.81
364GC-6	3/8	.165	1.122	.92
364GC-8	1/2	.165	1.142	1.04



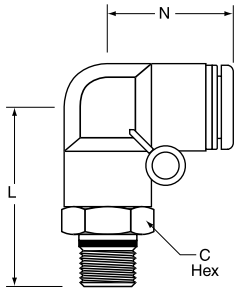
Union Elbow 365GC

PART NO.	TUBE SIZE	MOUNTING HOLE DIA.	L
365GC-2	1/8	•	.65
365GC-5/32	5/32	•	.65
365GC-3	3/16	.130	.76
365GC-4	1/4	.130	.76
365GC-5	5/16	.170	.87
365GC-6	3/8	.157	1.13
365GC-8	1/2	.170	1.24



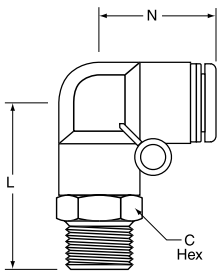
Male Elbow Swivel 369GC

PART NO.	TUBE SIZE	THREAD UNF	MOUNTING HOLE DIA.	C HEX	L	N
369GC-2-0	1/8	10-32	*	1/2	.96	.650
369GC-5/32-0	5/32	10-32	*	1/2	.96	.650
369GC-3-0	3/16	10-32	.138	9/16	1.09	.760
369GC-4-0	1/4	10-32	.138	9/16	1.09	.760



Male Elbow Swivel W369GC

PART NO.	TUBE SIZE	PIPE THREAD	MOUNTING HOLE DIA.	C HEX	L	N
W369GC-2-1	1/8	1/16	•	1/2	1.09	.650
W369GC-2-2	1/8	1/8	•	1/2	1.10	.650
W369GC-2-4	1/8	1/4	•	9/16	1.30	.650
W369GC-5/32-1	5/32	1/16	•	1/2	1.09	.650
W369GC-5/32-2	5/32	1/8	•	1/2	1.10	.650
W369GC-5/32-4	5/32	1/4	•	9/16	1.30	.650
W369GC-3-2	3/16	1/8	.138	9/16	1.47	.760
W369GC-3-4	3/16	1/4	.138	9/16	1.43	.760
W369GC-4-2	1/4	1/8	.138	9/16	1.47	.760
W369GC-4-4	1/4	1/4	.138	9/16	1.43	.760
W369GC-4-6	1/4	3/8	.138	13/16	1.44	.760
W369GC-5-2	5/16	1/8	.169	5/8	1.26	.866
W369GC-5-4	5/16	1/4	.169	5/8	1.46	.866
W369GC-5-6	5/16	3/8	.169	13/16	1.50	.866
W369GC-6-2	3/8	1/8	.158	13/16	1.52	1.130
W369GC-6-4	3/8	1/4	.158	13/16	1.72	1.130
W369GC-6-6	3/8	3/8	.158	13/16	1.72	1.130
W369GC-6-8	3/8	1/2	.158	15/16	1.94	1.130
W369GC-8-4	1/2	1/4	.173	15/16	1.88	1.240
W369GC-8-6	1/2	3/8	.173	15/16	1.89	1.240
W369GC-8-8	1/2	1/2	.173	15/16	2.07	1.240



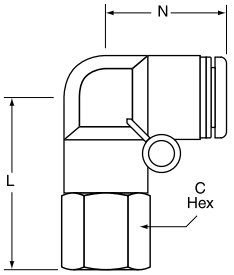
All dimensions are preliminary and could change during final production.

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

B

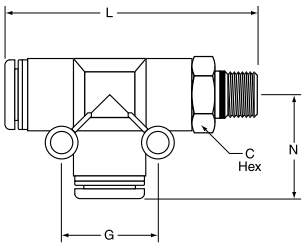
Female Elbow Swivel 370GC

PART NO.	TUBE SIZE	PIPE THREAD	MOUNTING HOLE DIA.	C HEX	L	N
370GC-2-2	1/8	1/8	•	1/2	.98	.650
370GC-2-4	1/8	1/4	•	5/8	1.14	.650
370GC-5/32-2	5/32	1/8	•	1/2	.98	.650
370GC-5/32-4	5/32	1/4	•	5/8	1.14	.650
370GC-3-4	3/16	1/4	.138	9/16	1.23	.760
370GC-4-2	1/4	1/8	.138	9/16	1.08	.760
370GC-4-4	1/4	1/4	.138	5/8	1.23	.760
370GC-4-6	1/4	3/8	.138	13/16	1.27	.760
370GC-5-2	5/16	1/8	.173	5/8	1.14	.866
370GC-5-4	5/16	1/4	.173	5/8	1.30	.866
370GC-6-2	3/8	1/8	.157	13/16	1.36	1.130
370GC-6-4	3/8	1/4	.157	13/16	1.52	1.130
370GC-6-6	3/8	3/8	.157	13/16	1.56	1.130
370GC-6-8	3/8	1/2	.157	15/16	1.70	1.130
370GC-8-6	1/2	3/8	.173	15/16	1.68	1.240
370GC-8-8	1/2	1/2	1.730	15/16	2.27	1.240



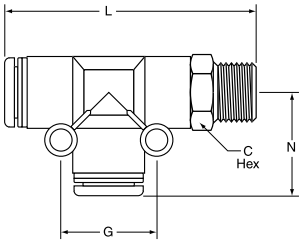
Male Run Tee Swivel 371GC

PART NO.	TUBE SIZE	THREAD UNF	MOUNTING HOLE DIA.	C HEX	L	N	G
371GC-5/32-0	5/32	10-32	*	1/2	1.71	.689	
371GC-4-0	1/4	10-32	.138	9/16	1.81	.740	.630



Male Run Tee Swivel W371GC

PART NO.	TUBE SIZE	PIPE THREAD	MOUNTING HOLE DIA.	C HEX	L	N	G
W371GC-2-1	1/8	1/16	•	1/2	1.86	.689	
W371GC-2-2	1/8	1/8	•	1/2	1.86	.689	
W371GC-2-4	1/8	1/4	•	9/16	2.06	.689	
W371GC-5/32-1	5/32	1/16	•	1/2	1.85	.689	
W371GC-5/32-2	5/32	1/8	•	1/2	1.85	.689	
W371GC-5/32-4	5/32	1/4	•	9/16	2.05	.689	
W371GC-3-2	3/16	1/8	.138	9/16	1.94	.740	.630
W371GC-3-4	3/16	1/4	.138	9/16	2.15	.740	.630
W371GC-4-2	1/4	1/8	.138	9/16	1.94	.740	.630
W371GC-4-4	1/4	1/4	.138	9/16	2.15	.740	.630
W371GC-4-6	1/4	3/8	.138	13/16	2.19	.740	.630
W371GC-5-2	5/16	1/8	.173	5/8	2.21	.906	.811
W371GC-5-4	5/16	1/4	.173	5/8	2.41	.906	.811
W371GC-5-6	5/16	3/8	.173	13/16	2.46	.906	.811
W371GC-6-2	3/8	1/8	.165	13/16	2.61	1.122	.921
W371GC-6-4	3/8	1/4	.165	13/16	2.80	1.122	.921
W371GC-6-6	3/8	3/8	.165	13/16	2.81	1.122	.921
W371GC-6-8	3/8	1/2	.165	15/16	3.03	1.122	.921
W371GC-8-4	1/2	1/4	.165	15/16	2.89	1.142	1.035
W371GC-8-6	1/2	3/8	.165	15/16	2.90	1.142	1.035
W371GC-8-8	1/2	1/2	.165	15/16	3.12	1.142	1.035

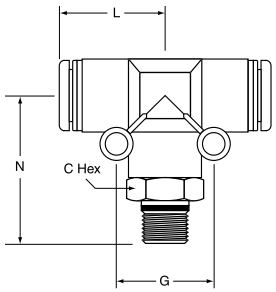


All dimensions are preliminary and could change during final production. *Note 1/8", 5/32" and 4mm sizes do not have mounting holes.

B

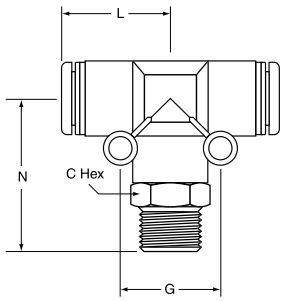
Male Branch Tee Swivel 372GC

PART NO.	TUBE SIZE	PIPE THREAD	MOUNTING HOLE DIA.	C HEX	L	N	G
372GC-2-0	1/8	10-32	•	1/2	.689	1.00	
372GC-5/32-0	5/32	10-32	•	1/2	.689	1.00	
372GC-4-0	1/4	10-32	.138	9/16	.740	1.04	.630



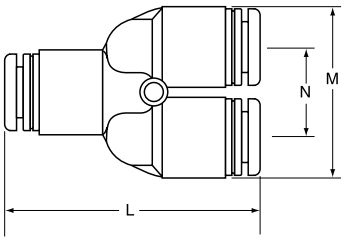
Male Branch Tee Swivel W372GC

PART NO.	TUBE SIZE	PIPE THREAD	MOUNTING HOLE DIA.	C HEX	L	N	G
W372GC-2-2	1/8	1/8	•	1/2	.689	1.14	
W372GC-2-4	1/8	1/4	•	9/16	.689	1.34	
W372GC-5/32-2	5/32	1/8	•	1/2	.689	1.14	
W372GC-3-2	3/16	1/8	.138	9/16	.740	1.17	.630
W372GC-3-4	3/16	1/4	.138	9/16	.740	1.38	.630
W372GC-4-2	1/4	1/8	.138	9/16	.740	1.17	.630
W372GC-4-4	1/4	1/4	.138	9/16	.740	1.38	.630
W372GC-4-6	1/4	3/8	.138	13/16	.740	1.42	.630
W372GC-5-2	5/16	1/8	.173	5/8	.906	1.31	.811
W372GC-5-4	5/16	1/4	.173	5/8	.906	1.51	.811
W372GC-5-6	5/16	3/8	.173	13/16	.906	1.56	.811
W372GC-6-2	3/8	1/8	.165	13/16	1.122	1.50	.921
W372GC-6-4	3/8	1/4	.165	13/16	1.122	1.70	.921
W372GC-6-6	3/8	3/8	.165	13/16	1.122	1.71	.921
W372GC-6-8	3/8	1/2	.165	15/16	1.122	1.93	.921
W372GC-8-4	1/2	1/4	.165	15/16	1.142	1.74	1.035
W372GC-8-6	1/2	3/8	.165	15/16	1.142	1.74	1.035
W372GC-8-8	1/2	1/2	.165	15/16	1.142	1.96	1.035



Union Y Connector 362GC

PART NO.	TUBE SIZE	MOUNTING HOLE DIA.	L	M	N
362GC-2	1/8	.118	1.358	.421	.846
362GC-5/32	5/32	.118	1.358	.421	.846
362GC-3	3/16	.129	1.417	.531	1.063
362GC-4	1/4	.150	1.450	.561	1.100
362GC-5	5/16	.150	1.693	.591	1.201
362GC-6	3/8	.165	1.969	.728	1.457
362GC-8	1/2	.173	2.256	.807	1.646



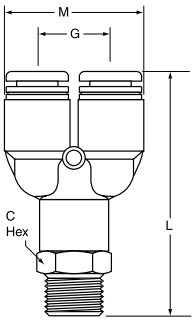
All dimensions are preliminary and could change during final production. *Note 1/8" and 4mm sizes do not have mounting holes.

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

B

Union Y Male Swivel Connector W368GC

PART NO.	TUBE SIZE	PIPE THREAD	MOUNTING HOLE DIA.	C HEX	L	G	M
W368GC-2-2	1/8	1/8	.118	1/2	1.84	.433	.854
W368GC-2-4	1/8	1/4	.118	9/16	2.04	.433	.854
W368GC-3-2	3/16	1/8	.134	9/16	1.89	.531	1.063
W368GC-3-4	3/16	1/4	.134	9/16	2.09	.531	1.063
W368GC-5/32-2	5/32	1/8	.118	1/2	1.83	.433	.854
W368GC-5/32-4	5/32	1/4	.118	9/16	2.03	.433	.854
W368GC-4-2	1/4	1/8	.134	9/16	1.89	.531	1.063
W368GC-4-4	1/4	1/4	.134	9/16	2.09	.531	1.063
W368GC-4-6	1/4	3/8	.134	13/16	2.10	.531	1.063
W368GC-5-2	5/16	1/8	.150	5/8	2.07	.590	1.201
W368GC-5-4	5/16	1/4	.150	5/8	2.28	.590	1.201
W368GC-6-2	3/8	1/8	.165	13/16	2.36	.728	1.457
W368GC-6-4	3/8	1/4	.165	13/16	2.57	.728	1.457
W368GC-6-6	3/8	3/8	.165	13/16	2.57	.728	1.457
W368GC-6-8	3/8	1/2	.173	15/16	2.79	.728	1.457
W368GC-8-4	1/2	1/4	.173	15/16	2.91	.807	1.654
W368GC-8-6	1/2	3/8		15/16	2.92	.807	1.654
W368GC-8-8	1/2	1/2	.173	15/16	3.11	.807	1.654

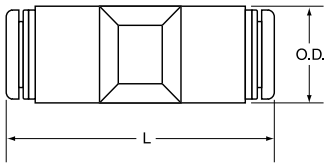


All dimensions are preliminary and could change during final production. *Note 1/8", 5/32" and 4mm sizes do not have mounting holes.

B

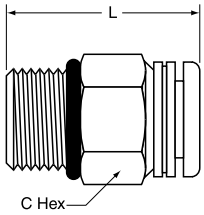
Union HGC (Metric)

PART NO.	TUBE SIZE MM	O.D.	L
HGC4	4	11.00	33.00
HGC6	6	13.00	39.00
HGC8	8	15.50	41.00
HGC10	10	18.50	48.00
HGC12	12	22.00	60.00



Male Connector BSPT F3GC (Metric)

PPART NO.	TUBE SIZE MM	BSPT THREAD	C HEX	L
F3GC4-1/8	4	1/8	12	21.00
F3GC4-1/4	4	1/4	14	18.50
F3GC6-1/8	6	1/8	14	22.00
F3GC6-1/4	6	1/4	14	23.00
F3GC8-1/8	8	1/8	17	26.40
F3GC8-1/4	8	1/4	17	24.00
F3GC8-3/8	8	3/8	17	23.00
F3GC10-1/4	10	1/4	21	31.80
F3GC10-3/8	10	3/8	21	29.20
F3GC10-1/2	10	1/2	22	27.00
F3GC12-1/4	12	1/4	22	34.00
F3GC12-3/8	12	3/8	22	32.00
F3GC12-1/2	12	1/2	22	33.00

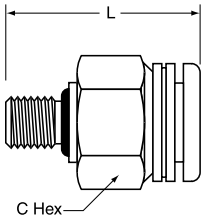


Male Connector BSPP F4GC (Metric)

PART NO.	TUBE SIZE MM	BSPP THREAD	C HEX	L
F4GC4-1/8	4	1/8	14	21.00
F4GC4-1/4	4	1/4	17	20.00
F4GC6-1/8	6	1/8	14	25.50
F4GC6-1/4	6	1/4	17	24.00
F4GC8-1/8	8	1/8	14	27.40
F4GC8-1/4	8	1/4	17	26.20
F4GC8-3/8	8	3/8	21	26.20
F4GC10-1/4	10	1/4	17	34.30
F4GC10-3/8	10	3/8	21	31.30
F4GC10-1/2	10	1/2	24	34.30
F4GC12-1/4	12	1/4	19	35.60
F3GC12-3/8	12	3/8	21	31.60
F4GC12-1/2	12	1/2	24	34.60

Male Connector Metric Thread F8GC

PART NO.	TUBE SIZE MM	MM THREAD	C HEX	L
F8GC4M5	4	M5	12	23.00
F8GC6M5	6	M5	14	22.50
F8GC6M10	6	M10	14	23.50
F8GC6M12	6	M12	17	25.50
F8GC8M12	8	M12	17	29.70
F8GC8M16	8	M16	21	25.20

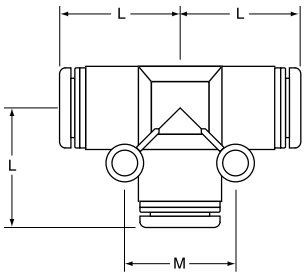


All dimensions are preliminary and could change during final production. *Note 1/8", 5/32" and 4mm sizes do not have mounting holes.

B

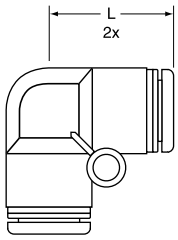
Union Tee JGC (Metric)

PART NO.	TUBE SIZE MM	MOUNTING HOLE DIA.	L	M
JGC4	4	•	17.50	
JGC6	6	18.80	18.80	3.50
JGC8	8	23.00	23.00	4.40
JGC10	10	28.50	28.50	4.20
JGC12	12	29.00	29.00	4.20



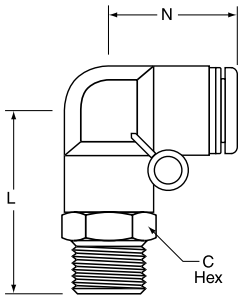
Union Elbow EGC (Metric)

PART NO.	TUBE SIZE MM	MOUNTING HOLE DIA.	L
EGC4	4	*	16.50
EGC6	6	3.50	19.30
EGC8	8	4.30	22.00
EGC10	10	4.00	28.70
EGC12	12	4.40	31.50



Male Elbow Swivel BSPT C63GC (Metric)

PART NO.	TUBE SIZE MM	BSPT THREAD	MOUNTING HOLE DIA.	C HEX	L	N
C63GC4-1/8	4	1/8	•	12	24.90	16.50
C63GC4-1/4	4	1/4	•	14	24.90	16.50
C63GC4-3/8	4	3/8	•	17	27.90	16.50
C63GC6-1/8	6	1/8	3.5	14	27.70	13.00
C63GC6-1/4	6	1/4	3.5	14	29.70	13.00
C63GC6-3/8	6	3/8	3.5	17	31.70	13.00
C63GC8-1/8	8	1/8	4.3	17	29.00	22.00
C63GC8-1/4	8	1/4	4.3	17	31.00	22.00
C63GC8-3/8	8	3/8	4.3	17	33.00	22.00
C63GC8-1/2	8	1/2	4.3	22	35.00	22.00
C63GC10-1/4	10	1/4	4.0	21	36.50	28.70
C63GC10-3/8	10	3/8	4.0	21	37.50	28.70
C63GC10-1/2	10	1/2	4.0	22	40.50	28.70
C63GC12-1/4	12	1/4	4.4	22	40.70	31.50
C63GC12-3/8	12	3/8	4.4	22	41.70	31.50
C63GC12-1/2	12	1/2	4.4	22	43.70	31.50

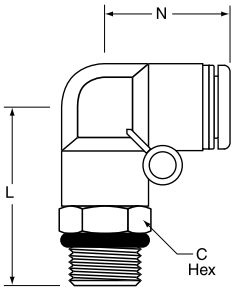


All dimensions are preliminary and could change during final production. *Note 1/8", 5/32" and 4mm sizes do not have mounting holes.

B

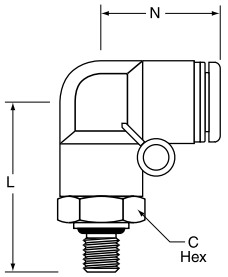
Male Elbow Swivel BSPP C64GC (Metric)

PART NO.	TUBE SIZE MM	BSPP THREAD	MOUNTING HOLE DIA.	C HEX	L	N
C64GC4-1/8	4	1/8	•	12	26.90	16.50
C64GC4-1/4	4	1/4	•	17	30.90	16.50
C64GC4-3/8	4	3/8	•	21	32.90	16.50
C64GC6-1/8	6	1/8	3.5	14	29.30	13.00
C64GC6-1/4	6	1/4	3.5	17	33.30	13.00
C64GC6-3/8	6	3/8	3.5	21	33.30	13.00
C64GC8-1/8	8	1/8	4.3	17	30.00	22.00
C64GC8-1/4	8	1/4	4.3	17	34.00	22.00
C64GC8-3/8	8	3/8	4.3	21	34.00	22.00
C64GC8-1/2	8	1/2	4.3	24	36.00	22.00
C64GC10-1/4	10	1/4	4.0	21	40.50	28.70
C64GC10-3/8	10	3/8	4.0	21	40.50	28.70
C64GC10-1/2	10	1/2	4.0	24	42.50	28.70
C64GC12-1/4	12	1/4	4.4	22	41.70	31.50
C64GC12-3/8	12	3/8	4.4	22	41.70	31.50
C64GC12-1/2	12	1/2	4.4	24	45.70	31.50



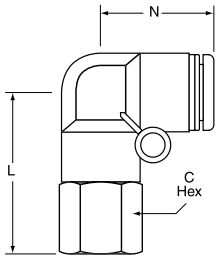
Male Elbow Swivel Metric Thread C68GC

PART NO.	TUBE SIZE MM	METRIC THREAD	MOUNTING HOLE DIA.	C HEX	L	N
C68GC4M5	4	M5X0.8	•	12	26.90	16.50
C68GC4M6	4	M6X1.0	•	12	26.90	16.50
C68GC6M5	6	M5X0.8	3.5	14	29.30	19.30
C68GC6M6	6	M6X1.0	3.5	14	29.30	19.30



Female Elbow Swivel BSPT CF63GC (Metric)

PART NO.	TUBE SIZE MM	BSPT THREAD	MOUNTING HOLE DIA.	C HEX	L	N
CF63GC4-1/8	4	1/8	•	12	24.50	16.50
CF63GC4-1/4	4	1/4	•	17	25.90	16.50
CF63GC4-3/8	4	3/8	•	21	26.40	16.50
CF63GC6-1/8	6	1/8	3.5	14	28.80	19.30
CF63GC6-1/4	6	1/4	3.5	17	28.80	19.30
CF63GC6-3/8	6	3/8	3.5	21	28.80	19.30
CF63GC8-1/8	8	1/8	4.3	17	31.00	22.00
CF63GC8-1/4	8	1/4	4.3	17	31.00	22.00
CF63GC8-3/8	8	3/8	4.3	21	32.00	22.00
CF63GC8-1/2	8	1/2	4.3	22	32.00	22.00
CF63GC10-1/4	10	1/4	4.0	21	36.50	28.70
CF63GC10-3/8	10	3/8	4.0	21	37.50	28.70
CF63GC10-1/2	10	1/2	4.0	24	37.50	28.70
CF63GC12-1/4	12	1/4	4.4	22	40.70	31.50
CF63GC12-3/8	12	3/8	4.4	22	40.70	31.50
CF63GC12-1/2	12	1/2	4.4	24	51.20	31.50



Female Elbow Swivel Metric Thread CF68GC

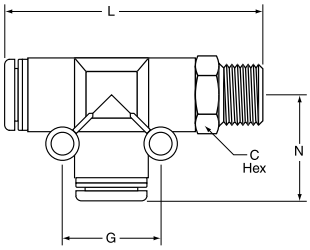
PART NO.	TUBE SIZE MM	METRIC THREAD	MOUNTING HOLE DIA.	C HEX	L	N
CF68GC4M5	4	M5X0.8	•	12	23.00	16.50
CF68GC4M6	4	M6X1.0	•	12	23.00	16.50
CF68GC6M5	6	M5X0.8	3.5	14	25.30	19.30
CF68GC6M6	6	M6X1.0	3.5	14	25.30	19.30

All dimensions are preliminary and could change during final production. *Note 1/8", 5/32" and 4mm sizes do not have mounting holes.

B

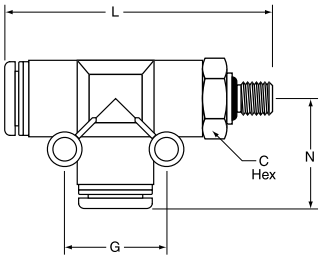
Male Run Tee Swivel BSPT R63GC (Metric)

PART NO.	TUBE SIZE MM	BSPT THREAD	MOUNTING HOLE DIA.	C HEX	L	N	G
R63GC4-1/8	4	1/8	•	12	43.90	17.50	
R63GC4-1/4	4	1/4	•	14	45.90	17.50	
R63GC4-3/8	4	3/8	•	17	47.90	17.50	
R63GC6-1/8	6	1/8	3.5	14	46.30	18.80	16.00
R63GC6-1/4	6	1/4	3.5	14	48.30	18.80	16.00
R63GC6-3/8	6	3/8	3.5	17	50.30	18.80	16.00
R63GC8-1/8	8	1/8	4.4	17	53.20	23.00	20.60
R63GC8-1/4	8	1/4	4.4	17	55.20	23.00	20.60
R63GC8-3/8	8	3/8	4.4	17	57.20	23.00	20.60
R63GC8-1/2	8	1/2	4.4	22	59.20	23.00	20.60
R63GC10-1/4	10	1/4	4.2	21	64.20	28.50	23.40
R63GC10-3/8	10	3/8	4.2	21	65.20	28.50	23.40
R63GC10-1/2	10	1/2	4.2	22	68.20	28.50	23.40
R63GC12-1/4	12	1/4	4.2	22	67.00	29.00	26.30
R63GC12-3/8	12	3/8	4.2	22	68.00	29.00	26.30
R63GC12-1/2	12	1/2	4.2	22	70.00	29.00	26.30



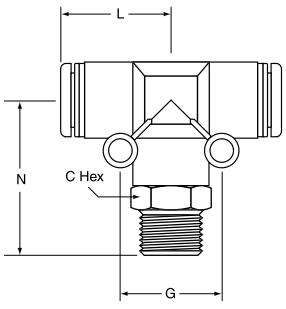
Male Run Tee Swivel Metric Thread R68GC

PART NO.	TUBE SIZE MM	METRIC THREAD	MOUNTING HOLE DIA.	C HEX	L	N	G
R68GC4M5	4	M5X0.8	•	12	46.00	17.50	
R68GC4M6	4	M6X1.0	•	12	46.00	17.50	
R68GC6M5	6	M5X0.8	3.5	14	48.30	18.80	16.00
R68GC6M6	6	M6X1.0	3.5	14	48.30	18.80	16.00



Male Branch Tee Swivel BSPT S63GC (Metric)

PART NO.	TUBE SIZE MM	BSPT THREAD	MOUNTING HOLE DIA.	C HEX	L	N	G
S63GC4-1/8	4	1/8	•	12	17.50	26.00	
S63GC4-1/4	4	1/4	•	14	17.50	28.00	
S63GC4-3/8	4	3/8	•	17	17.50	30.00	
S63GC6-1/8	6	1/8	3.5	14	18.80	26.80	16.00
S63GC6-1/4	6	1/4	3.5	14	18.80	28.80	16.00
S63GC6-3/8	6	3/8	3.5	17	18.80	30.80	16.00
S63GC8-1/8	8	1/8	4.4	17	23.00	30.20	20.60
S63GC8-1/4	8	1/4	4.4	17	23.00	32.20	20.60
S63GC8-3/8	8	3/8	4.4	17	23.00	34.20	20.60
S63GC8-1/2	8	1/2	4.4	22	23.00	36.20	20.60
S63GC10-1/4	10	1/4	4.2	21	28.50	36.20	23.40
S63GC10-3/8	10	3/8	4.2	21	28.50	37.20	23.40
S63GC10-1/2	10	1/2	4.2	22	28.50	40.20	23.40
S63GC12-1/4	12	1/4	4.2	22	29.00	38.00	26.30
S63GC12-3/8	12	3/8	4.2	22	29.00	39.00	26.30
S63GC12-1/2	12	1/2	4.2	22	29.00	41.00	26.30



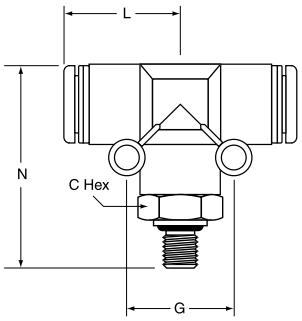
All dimensions are preliminary and could change during final production.

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

B

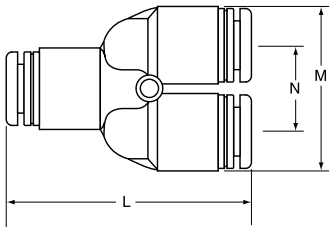
Male Branch Tee Swivel Metric Thread S68GC

PART NO.	TUBE SIZE MM	METRIC THREAD	MOUNTING HOLE DIA.	C HEX	L	N	G
S68GC4M5	4	M5X0.8	•	12	17.50	28.00	
S68GC4M6	4	M6X1.0	•	12	17.50	28.00	
S68GC6M5	6	M5X0.8	3.5	14	18.80	28.80	16.00
S68GC6M6	6	M6X1.0	3.5	14	18.80	28.80	16.00



Union Y Connector YJGC (Metric)

PART NO.	TUBE SIZE MM	MOUNTING HOLE DIA.	L	M	N
YJGC4	4	3.00	34.50	21.50	10.70
YJGC6	6	3.40	36.00	27.00	13.50
YJGC8	8	3.80	43.00	30.50	15.00
YJGC10	10	4.20	50.80	37.00	18.50
YJGC12	12	4.40	57.80	41.50	20.50



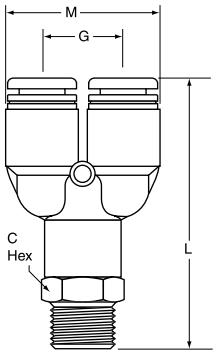
All dimensions are preliminary and could change during final production.

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

B

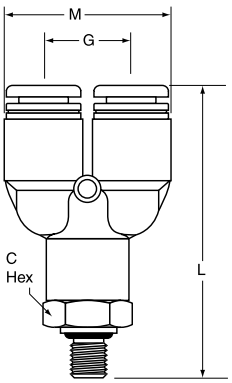
Union Y Male Swivel Connector BSPT YJ63GC (Metric)

PART NO.	TUBE SIZE MM	BSPT THREAD	MOUNTING HOLE DIA.	C HEX	L	G	M
YJ63GC4-1/8	4	1/8	3.0	12	43.40	11.0	21.50
YJ63GC4-1/4	4	1/4	3.0	14	45.40	11.0	21.50
YJ63GC4-3/8	4	3/8	3.0	17	47.40	11.0	21.50
YJ63GC6-1/8	6	1/8	3.4	14	44.20	13.5	27.00
YJ63GC6-1/4	6	1/4	3.4	14	46.20	13.5	27.00
YJ63GC6-3/8	6	3/8	3.4	17	48.20	13.5	27.00
YJ63GC8-1/8	8	1/8	3.8	17	50.00	15.0	30.50
YJ63GC8-1/4	8	1/4	3.8	17	52.00	15.0	30.50
YJ63GC8-3/8	8	3/8	3.8	17	54.00	15.0	30.50
YJ63GC8-1/2	8	1/2	3.8	22	56.00	15.0	30.50
YJ63GC10-1/4	10	1/4	4.2	21	58.30	18.5	37.00
YJ63GC10-3/8	10	3/8	4.2	21	59.30	18.5	37.00
YJ63GC10-1/2	10	1/2	4.2	22	62.30	18.5	37.00
YJ63GC12-1/4	12	1/4	4.4	22	66.80	20.5	41.50
YJ63GC12-3/8	12	3/8	4.4	22	67.80	20.5	41.50
YJ63GC12-1/2	12	1/2	4.4	22	69.80	20.5	41.50



Union Y Male Swivel Connector Metric Thread YJ68GC

PART NO.	TUBE SIZE MM	METRIC THREAD	MOUNTING HOLE DIA.	C HEX	L	G	M
YJ68GC4M5	4	M5X0.8	3.0	12	43.40	11.0	21.50
YJ68GC4M6	4	M6X1.0	3.0	12	43.40	11.0	21.50
YJ68GC6M5	6	M5X0.8	3.4	14	44.20	13.5	27.00
YJ68GC6M6	6	M6X1.0	3.4	14	44.20	13.5	27.00



All dimensions are preliminary and could change during final production.

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Integrated Fittings

Flow Controls

- Direct Mounting
- Right Angle & In-line
- Compact & Miniature Styles
- Brass & Composite Bodies
- Inch & Metric Sizes

Slow Start Fittings

- Mount to FRL or Power Unit
- Permits Gradual Increase in Pressure
- Prevents Shocks to System

Blocking Valves

- Direct Mounting
- Safe & Immediate Stopping of Piston Rod
- Push-in or Threaded Terminations

Combination Valves

- Multi Function
- Blocking & Flow Control
- Blocking & Exhaust

Pressure Sensor Valves

- Direct Mounting
- Pneumatic, Electric or Electronic Sensing
- Detect End of Stroke Travel

Pressure Reducing Valves

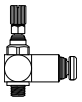
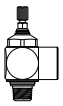
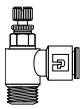
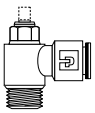
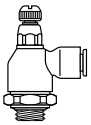
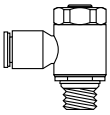
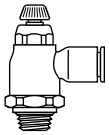
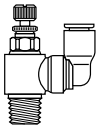
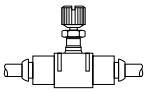
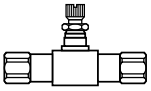
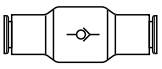
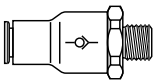
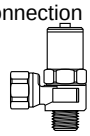
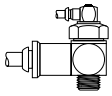
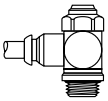
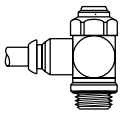
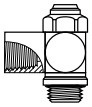
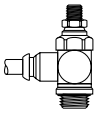
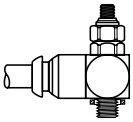
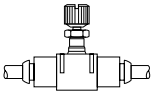
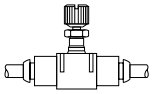
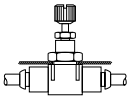
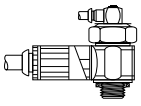
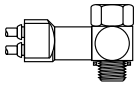
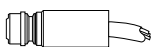
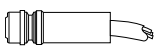
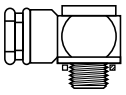
- Energy Savings
- Optimum air Pressure
- Reduce Air Consumption

Non-Return Valves

- Compact
- Light Weight
- In-line or Threaded Versions

The World Standard

C

Right Angle Flow Controls	**FC701** Push-In Connection  Page C5	**FC702** Threaded Connection  Page C5	**FCM701** Miniature  Page C6	**FCM703** Miniature  Page C6	**FCS701** Swivel Outlet  Page C5	**FC705** Metal  Page C7
FCC701 Knobless Compact  Page C7	**FCC703** Compact  Page C7	**FCS703** Swivel Outlet  Page C6	**In-Line Flow Controls**	**FC800** Push-In Connection  Page C22	**FC806** Threaded Connection  Page C22	
Non-Return Valves	**NRV800** In-Line  Page C32	**NRV808** Male  Page C32	**Slow Start Valves**	**FC902** Threaded Connection  Page C14		
Blocking Valves	**FC601** Push-In Connection  Page C18	**FC602** Threaded Connection  Page C18	**Metric Right Angle Flow Controls**	**PT4/8PB** Exhaust Flow  Page C10	**PTFA4/8PB** Inlet Flow  Page C10	**PTF4** Exhaust Flow  Page C10
PTFL4/8PB Exhaust Flow  Page C12	**PTFAL8PB** Inlet Flow  Page C12	**PTFL4/8** Exhaust Flow  Page C12	**PTFAL8** Inlet Flow  Page C12	**PTF4/8E6PB** Swivel Outlet  Page C13		
Metric In-Line Flow Controls	**PTFIPK** Metric Push-In  Page C23	**PTFMIPK** Ultrafine Adjustment  Page C24	**PTFIWPK** Panel Mountable  Page C24			
Metric Slow Start Valves	**PCV4** Power Valve Version  Page C16	**Metric Blocking Valves**	**PWB** Metric  Page C20	**Metric Combination Valves**	**PWR-HB / PWR-HE** Metric  Page C25	
Metric Sensor Valves	**PTP4/8PB** Pneumatic Output  Page C26	**PWS-M** Sensor-Electrical  Page C27	**PWS-E** SensorElectrical  Page C27	**PWS-B** Banjo Socket  Page C27		

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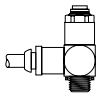
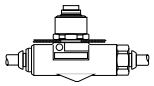
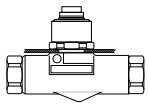
Metric Reducing Valves	**PRB4PB** Push-In Connection  Page C29	**PRB4** Theaded Connection  Page C29	**PR1PB** In-Line  Page C29	**PR14** In-Line  Page C29	**Metric Silencer & Flow Control**	**PRS** Silencer  Page C30

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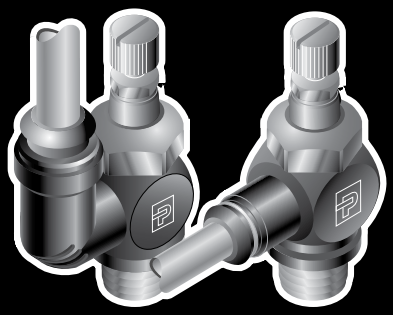


Right Angle Flow Control Valves

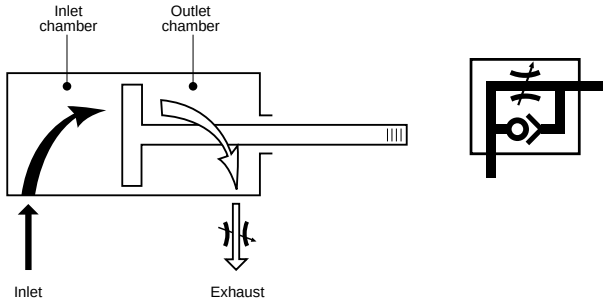
General Information
Parker offers a wide range of flow controls to meet a large variety of applications. Parker flow controls are designed for mounting directly onto the cylinder ports to provide precise control of piston rod speed. Due to their compactness they are particularly suitable for applications where space is at a premium.

General Principle
The piston rod moves as a result of the pressure differential on either side of the piston. The speed of the rod is normally determined by the exhaust air flow from the cylinder, although certain applications require control from the inlet. The control of the air flow is via an adjustable flow control valve installed on the exhaust port.

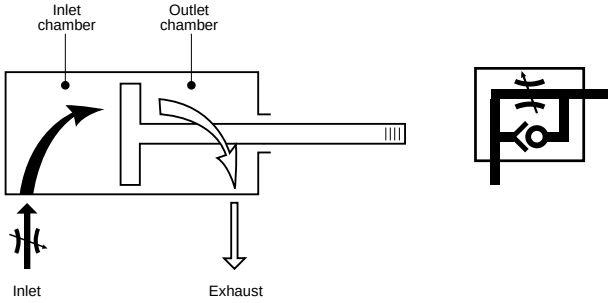
Operation
The mounting of two flow controls on a cylinder permits speed control of the cylinder rod in both directions. Air passes freely through the flow control valve A, with the check valve in the open position. The exhaust is controlled by the flow control valve B, where the check valve in the closed position forces the air to go through the adjustable needle valve. The function of A and B are reversed when inlet air is applied to port B.

Advantages
- Direct mounting
- Compact
- Positional
- Optimum flow control
- Swivel outlet for use where access is restricted

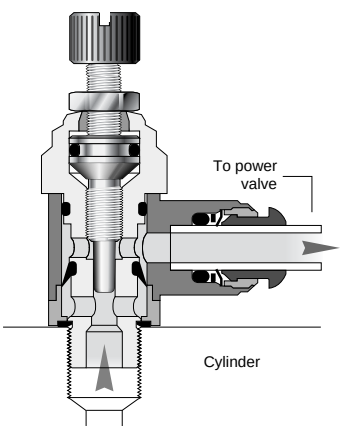
Valve Specifications
Maximum working pressure: 145 PSI
Operating Temperature: - 10° to 200° F
Body Material: Brass black epoxy coated
Bolt Material: Brass

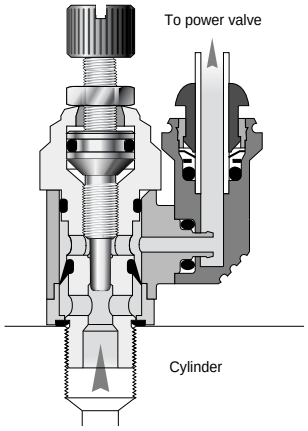


Flow regulation on the exhaust port

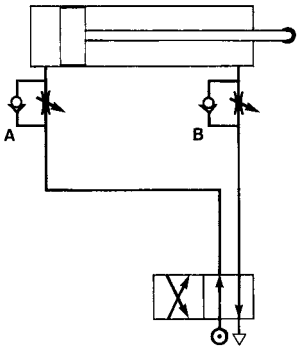


Flow regulation on the inlet port





Flow control on a double acting cylinder



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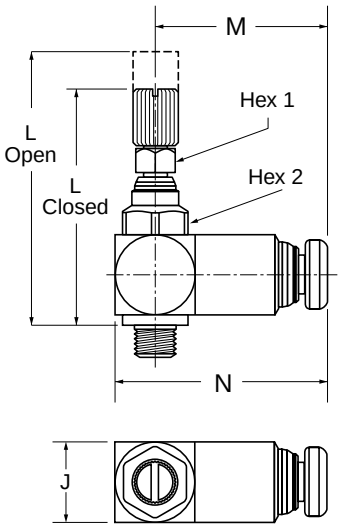
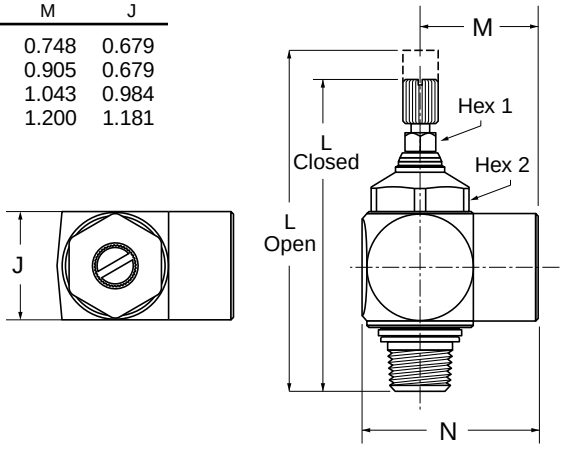
Push-in Connection Exhaust Flow Control FC701

PART NO.	TUBE SIZE	THREAD SIZE	HEX 1	HEX 2	L OPEN	L CLOSED	N	M	J
FC701-2-0	1/8	10-32	1/16	5/16	1.363	1.167	1.040	0.870	0.393
FC701-5/32-4	5/32	1/4	5/16	5/8	2.566	2.318	1.377	1.008	0.679
FC701-4-2	1/4	1/8	5/16	5/8	2.181	2.000	1.361	0.992	0.679
FC701-4-4	1/4	1/4	5/16	5/8	2.566	2.318	1.381	1.011	0.679
FC701-4-6	1/4	3/8	5/16	13/16	3.157	2.696	1.582	1.090	0.984
FC701-6-4	3/8	1/4	5/16	5/8	2.566	2.318	1.507	1.138	0.679
FC701-6-6	3/8	3/8	5/16	13/16	3.157	2.696	1.677	1.177	0.984
FC701-6-8	3/8	1/2	9/16	1	3.858	3.287	1.866	1.276	1.181



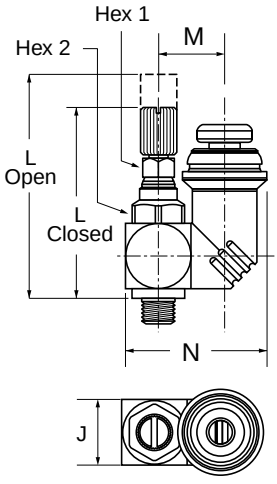
Threaded Connection Exhaust Flow Control FC702

PART NO.	MALE PIPE	FEMALE PIPE	HEX 1	HEX 2	L OPEN	L CLOSED	N	M	J
FC702-2	1/8	1/8	5/16	5/8	2.181	2.000	1.117	0.748	0.679
FC702-4	1/4	1/4	5/16	5/8	2.566	2.318	1.274	0.905	0.679
FC702-6	3/8	3/8	5/16	13/16	3.157	2.696	1.535	1.043	0.984
FC702-8	1/2	1/2	9/16	1	3.858	3.287	1.791	1.200	1.181



Swivel Exhaust Flow Control FCS701

PART NO.	TUBE SIZE	THREAD SIZE	HEX 1	HEX 2	L OPEN	L CLOSED	N	M	J
FCS701-2-2	1/8	1/8	5/16	5/8	2.181	2.000	1.240	0.620	0.679
FCS701-5/32-2	5/32	1/8	5/16	5/8	2.181	2.000	1.239	0.618	0.679
FCS701-5/32-4	5/32	1/4	5/16	5/8	2.566	2.318	1.240	0.620	0.679
FCS701-4-2	1/4	1/8	5/16	5/8	2.181	2.000	1.318	0.657	0.679
FCS701-6-6	3/8	3/8	5/16	13/16	3.157	2.696	1.740	0.834	0.984
FCS701-6-8	3/8	1/2	9/16	1	3.858	3.287	1.619	0.992	1.181



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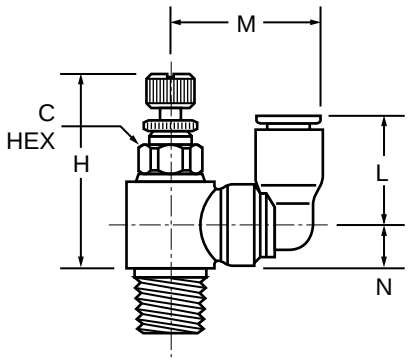
C

Miniature Swivel Exhaust Flow Control FCS703

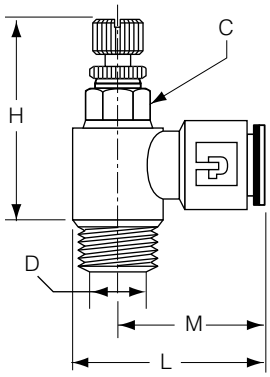
PART NO.	TUBE SIZE	THREAD SIZE	C HEX (MM)	H CLOSED	H OPEN	L	M	N
FCS703-5/32-0	5/32	10-32	6	.96	1.08	.55	.73	.26
FCS703-5/32-2	5/32	1/8	8	1.08	1.20	.55	.73	.33



Miniature Exhaust Flow Control FCM701

Composite Body

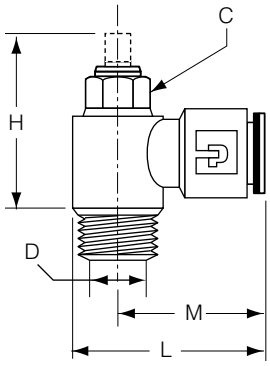
PART NO.	TUBE SIZE	THREAD SIZE	C HEX (MM)	H CLOSED	H OPEN	L	M	FLOW DIA. D
FCM701-5/32-0	5/32	10-32	6	.925	1.023	.846	.669	.080
FCM701-5/32-2	5/32	1/8	7	1.000	1.083	.935	.708	.100
FCM701-4-0	1/4	10-32	6	.925	1.023	.885	.708	.080
FCM701-4-2	1/4	1/8	7	1.000	1.083	.957	.730	.100
FCM701-4-4	1/4	1/4	8	1.083	1.180	1.013	.748	.160



Knobless Miniature Exhaust Flow Control FCM703

Composite Body

PART NO.	TUBE SIZE	THREAD SIZE	C HEX (MM)	H CLOSED	H OPEN	L	M	FLOW DIA. D
FCM703-5/32-0	5/32	10-32	6	.650	.787	.846	.669	.080
FCM703-5/32-2	5/32	1/8	6	.708	.860	.935	.708	.100
FCM703-4-0	1/4	10-32	6	.650	.790	.825	.650	.080
FCM703-4-2	1/4	1/8	7	.708	.860	.956	.730	.100
FCM703-4-4	1/4	1/4	8	.826	.964	.1.013	.748	.160



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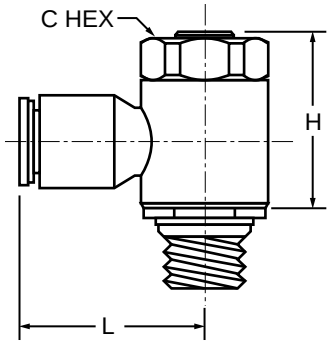
Knobless Compact Exhaust Flow Control FCC701

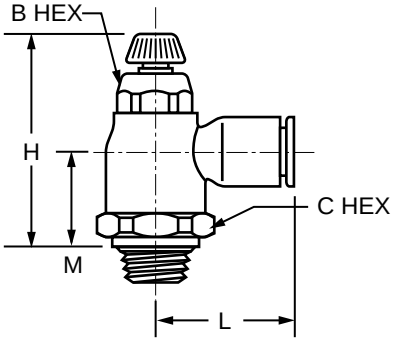
PART NO.	TUBE SIZE	THREAD SIZE	C HEX (MM)	H	L
FCC701-2-2	1/8	1/8	13	.79	.75
FCC701-5/32-2	5/32	1/8	13	.79	.75
FCC701-4-2	1/4	1/8	13	.79	.85
FCC701-4-4	1/4	1/4	17	1.04	.89
FCC701-5-2	5/16	1/8	13	.79	1.02
FCC701-5-4	5/16	1/4	17	1.04	1.06
FCC701-6-4	3/8	1/4	17	1.04	1.14
FCC701-6-6	3/8	3/8	20	1.14	1.36



C

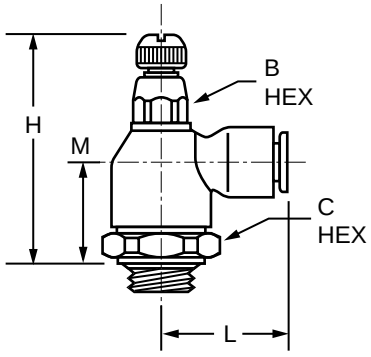
Compact Exhaust Flow Control FCC703

PART NO.	TUBE SIZE	THREAD SIZE	B HEX	C HEX	H CLOSED	H OPEN	L	M
FCC703-5/32-2	5/32	1/8	.39	.63	1.44	1.67	.85	.59
FCC703-4-2	1/4	1/8	.39	.63	1.44	1.67	.85	.59
FCC703-6-4	3/8	1/4	.67	.91	1.71	2.03	1.22	.71



Push-to-Connect Exhaust Metal Flow Control FC705

PART NO.	TUBE SIZE	THREAD SIZE	B HEX	C HEX	H CLOSED	H OPEN	L	M
FC705-5/32-2	5/32	1/8	.39	.75	1.79	2.01	.85	.87
FC705-4-2	1/4	1/8	.39	.75	1.79	2.01	.85	.87
FC705-4-4	1/4	1/4	.39	.75	1.79	2.01	.97	.87
FC705-6-4	3/8	1/4	.55	.75	1.91	2.11	1.14	.91
FC705-6-6	3/8	3/8	.67	.99	2.15	2.40	1.40	.91



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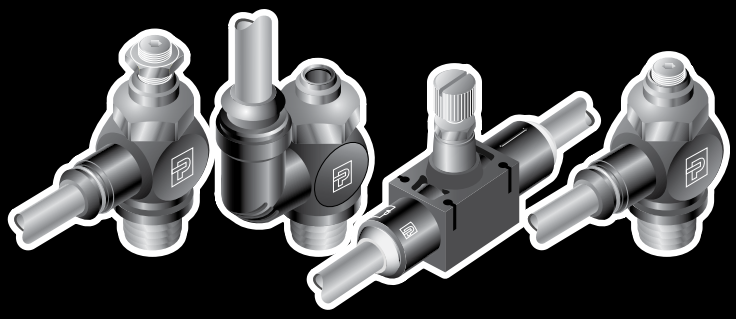
Otsego, Michigan



Metric Right Angle Flow Control Valves

Prestoflow - Flow regulators

Parker offers a wide range of flow regulators to meet a large variety of applications. Prestoflow can be fitted directly to a cylinder port or mounted in the line. Prestoflow regulators with push-in terminations are suitable for use with a wide range of plastic tubing. Prestoflow regulators with threaded terminations can be adapted for use with copper and steel tubing or hoses.

General principle

The piston rod moves as a result of the pressure differential on either side of the piston. The speed of the rod is normally determined by the exhaust air flow from the cylinder. The control of this air flow is via an adjustable needle valve installed on the exhaust port.

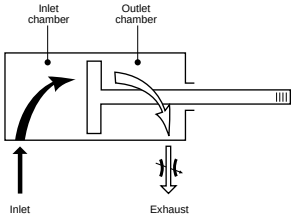
On single acting cylinders and some miniature (M5) double acting cylinders, the air flow can be controlled from the inlet port.

To permit regular and smooth movement of the piston rod, flow control should be made as near to the cylinder as possible.

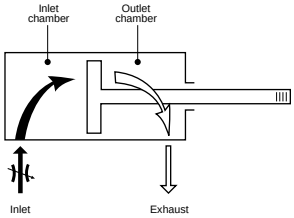
Operation

The mounting of two flow control devices on a cylinder permits speed control of the cylinder rod in both directions.

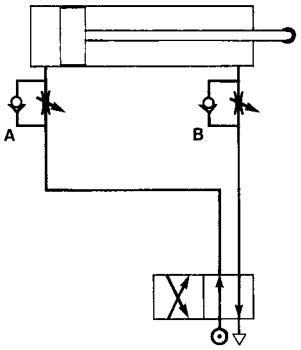
The sketch opposite shows a cylinder with inlet air at port A. Air passes freely through the flow control valve A, with the check valve in the open position. The exhaust is controlled by the flow control fitting B, where the check valve in the closed position forces the air to go through the adjustable needle valve. The function of A and B are reversed when inlet air is applied to port B.



Flow regulation on the exhaust port



Flow regulation on the inlet port



Flow control on a double acting cylinder

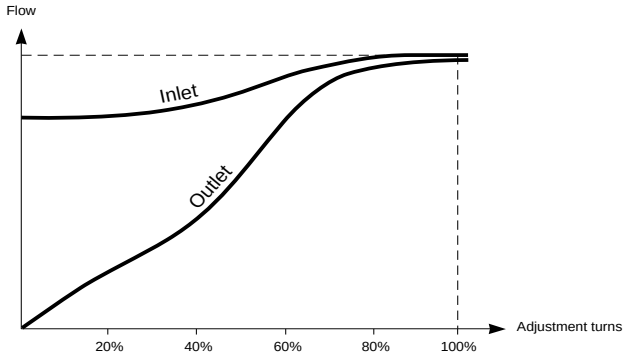
Flow characteristics

Prestoflow pneumatic integrated fittings are designed to permit maximum flow in both directions. This full flow in both directions, together with the very precise setting of the screw, permits a wide range of adjustment between the minimum and maximum speeds. The sketch opposite shows the flow progression according to the adjustment of the screw.

Flow regulators - assembly torques

To ensure a leak free connection for port mounted regulators the regulator bolt should be tightened in accordance with the table opposite.

ASSEMBLY TORQUE		
THREAD	**MIN. NM**	**MAX. NM**
M5	0.2	0.5
1/8	6	9
1/4	10	15
3/8	14	22
1/2	30	42



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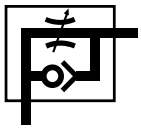
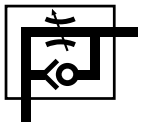
Otsego, Michigan

Prestoflow - Flow regulator - Compact series



Exhaust flow control



Inlet flow control

C

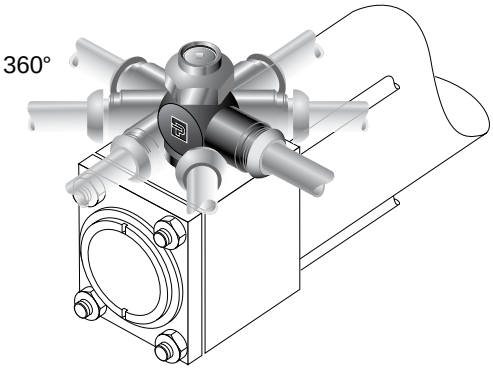
Principle

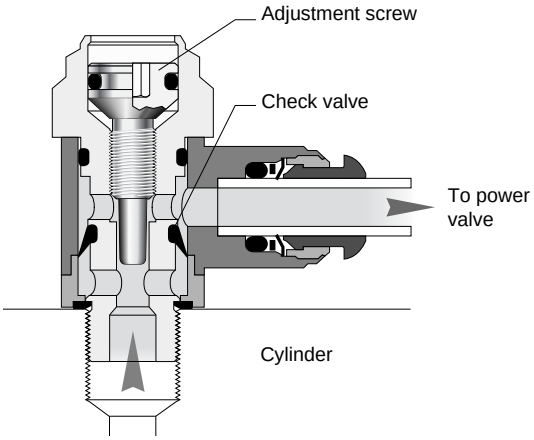
Prestoflow compact flow regulators are designed for mounting directly onto cylinder ports to provide precise control of piston rod speed. Thanks to their compactness they are particularly suitable for applications where space is at a minimum. These unidirectional flow regulators are available for exhaust or inlet flow control.

- A check valve blocks the full flow ports in the exhaust or inlet direction.
- The flow is controlled by a needle valve fitted in the regulator bolt.

Flow adjustment

Flow control is adjusted with an Allen key. The large number of turns from fully closed to fully open allows for precise flow control.





Technical

BODY MATERIAL	BOLT MATERIAL	BOLT THREAD	SEALING DEVICE		TERMINATIONS		WORKING TEMPERATURE	WORKING PRESSURE
Brass Black Epoxy Coated	Brass	M5 1/8 BSPP 1/4 BSPP 3/8 BSPP 1/2 BSPP	M5 Thread Nylon Washer	1/8 - 1/2 BSPP Nitrile E.D. Seal	4 mm - 12 mm Push-In Connection	1/8 - 1/2 BSPP +M5 Female Thread DIN 3852 Long	From 0° to +200° F	140 PSI

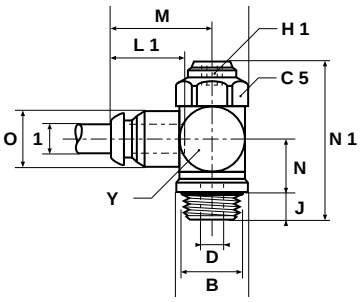
Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

C

PTF4/8PB Flow Regulator with Push-In Connection

PART NO.	1	B	C5	D	G1	H1	J	M	M1	N	N1	O	Y
PTF8PB4M5*	4	M5x0.8	8	1.65	10.0	1.5	4	19.5	24.5	6.3	22.0	10	10
PTF4PB4-1/8	4	1/8	14	3.00	14.4	2.0	6	22.0	30.1	10.7	34.5	10	14
PTF8PB6M5*	6	M5x0.8	8	1.65	10.0	1.5	4	20.5	26.5	7.3	24.5	12	12
PTF4PB6-1/8	6	1/8	14	3.20	14.4	2.0	6	23.5	31.6	10.7	34.5	12	14
PTF4PB6-1/4	6	1/4	17	5.20	18.4	4.0	7	25.0	34.9	13.8	41.0	12	17
PTF4PB6-3/8	6	3/8	22	5.50	21.6	4.0	7	28.0	40.7	17.3	51.0	12	22
PTF4PB8-1/8	8	1/8	14	3.20	14.4	2.0	6	25.0	33.1	10.7	34.5	14	14
PTF4PB8-1/4	8	1/4	17	5.20	18.4	4.0	7	28.5	38.3	13.8	41.0	14	17
PTF4PB8-3/8	8	3/8	22	6.00	21.6	4.0	7	29.5	42.2	17.3	51.0	14	22
PTF4PB10-1/4	10	1/4	17	5.20	18.4	4.0	7	31.5	41.3	13.8	41.0	17	17
PTF4PB10-3/8	10	3/8	22	6.00	21.6	4.0	7	34.0	46.7	17.3	51.0	17	22
PTF4PB10-1/2	10	1/2	27	8.00	26.5	4.0	9	36.5	52.1	20.1	61.0	17	27
PTF4PB12-3/8	12	3/8	22	6.00	21.6	4.0	7	34.0	46.7	17.3	51.0	20	22
PTF4PB12-1/2	12	1/2	27	8.50	26.5	4.0	9	36.5	52.1	20.1	61.0	20	27

* These fittings are supplied with Nylon seal.

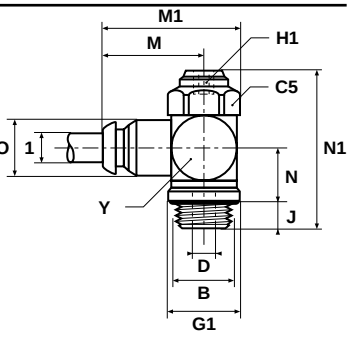


Exhaust Flow Control

PTFA4/8PB Flow Regulator with Push-In Connection

PART NO.	1	B	C5	D	G1	H1	J	M	M1	N	N1	O	Y
PTFA8PB4M5*	4	M5x0.8	8	1.7	10.0	1.5	4	19.5	24.5	6.3	22.0	10	10
PTFA4PB4-1/8	4	1/8	14	3.0	14.4	2.0	6	22.0	30.1	10.7	34.5	10	14
PTFA8PB6M5*	6	M5x0.8	8	1.7	10.0	1.5	4	20.5	26.5	7.3	24.5	12	12
PTFA4PB6-1/8	6	1/8	14	3.2	14.4	2.0	6	23.5	31.6	10.7	34.5	12	14
PTFA4PB6-1/4	6	1/4	17	5.2	18.4	4.0	7	25.0	34.9	13.8	41.0	12	17
PTFA4PB8-1/8	8	1/8	14	3.2	14.4	2.0	6	25.0	33.1	10.7	34.5	14	14
PTFA4PB8-1/4	8	1/4	17	5.2	18.4	4.0	7	28.5	38.3	13.8	41.0	14	17

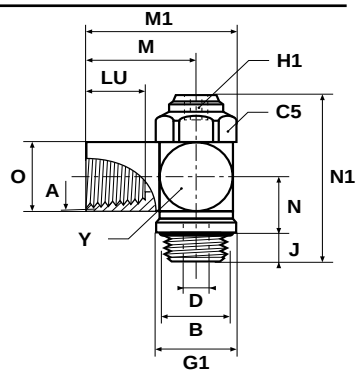
* These fittings are supplied with Nylon seal.



Inlet Flow Control

PTF4 Flow Regulator with Threaded Connection

PART NO.	A	B	C5	D	G1	H1	J	LU	M	M1	N	N1	O	Y
PTF4-1/8	1/8	1/8	14	3.2	14.4	2	6	8.5	17.5	25.6	10.7	34.5	13.9	14
PTF4-1/4	1/4	1/4	17	5.2	18.4	4	7	12.5	24.5	34.3	10.7	34.5	16.9	17
PTF4-3/8	3/8	3/8	22	6.0	21.6	4	7	12.5	27.5	40.2	13.8	41.0	21.6	22
PTF4-1/2	1/2	1/2	27	8.5	26.5	4	9	14.5	33.5	49.1	17.3	51.0	26.5	27



Exhaust Flow Control

Only items priced in current price list are carried in stock. Dimensions shown may be changed at any time without prior notice.

Parker Hannifin Corporation
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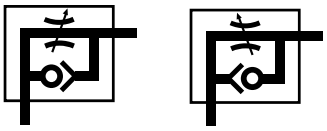
Otsego, Michigan

Prestoflow - Flow regulator - Locknut series



Exhaust flow control

Inlet flow control

C

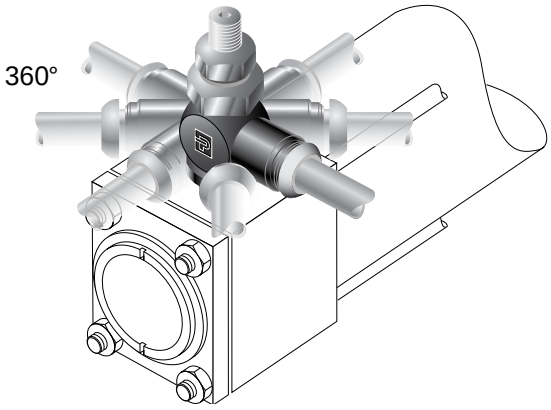
Principle

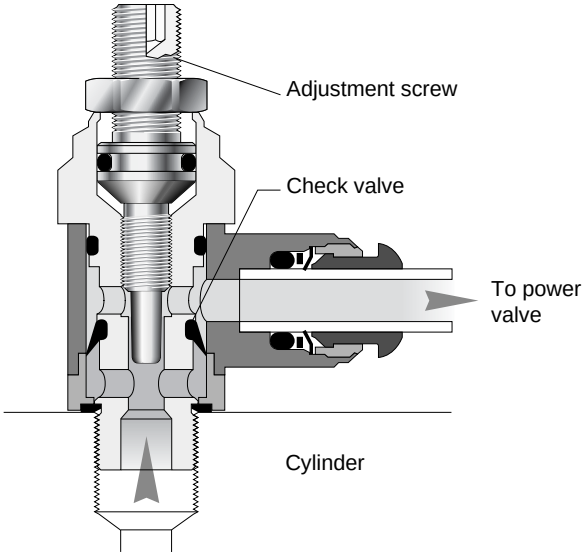
Prestoflow compact flow regulators are designed for mounting directly onto cylinder ports to provide precise control of piston rod speed. Thanks to their compactness they are particularly suitable for applications where space is at a premium. These unidirectional flow regulators are available for exhaust or inlet flow control.

- A check valve blocks the full flow ports in the exhaust or inlet direction.
- The flow is controlled by a needle valve fitted in the regulator bolt.
- The adjustment screw can be locked in position to prevent tampering

Flow adjustment

Flow control is adjusted with an Allen key. When the desired flow is set the adjusting screw can be locked using the locking nut. The large number of turns from fully closed to fully open allows for precise flow control.





Technical features

BODY MATERIAL	BOLT MATERIAL	LOCK NUT	BOLT THREAD	SEALING DEVICE		TERMINATIONS		WORKING TEMPERATURE	WORKING PRESSURE
Brass Black Epoxy Coated	Brass	Brass	M5 1/8 BSPP 1/4 BSPP 3/8 BSPP 1/2 BSPP	M5 Thread Nylon Washer	1/8 - 1/2 BSPP Nitrile E.D. Seal	4 mm - 12 mm Push-In Connection	1/8 - 1/2 BSPP +M5 Female Thread DIN 3852 Long	From 0° to +200° F	140 PSI

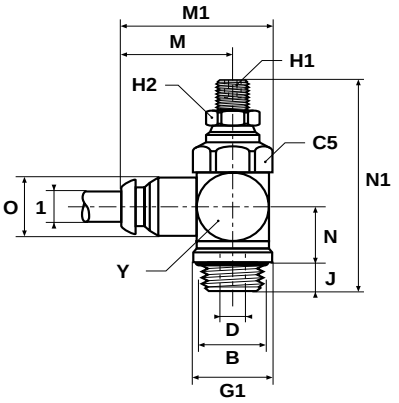
Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

C

PTFL4/8PB Flow Regulator with Push-In Connection

PART NO.	1	B	C5	D	G1	H1	H2	J	M	M1	N	N1	O	Y
PTFL8PB4M5*	4	M5x0.8	8	1.65	10.0	1.5	8	4	19.5	24.5	6.3	28.5	10	10
PTFL4PB4-1/8	4	1/8	14	3.00	14.4	2.0	7	6	22.0	30.1	10.7	43.7	10	14
PTFL8PB6M5*	6	M5x0.8	8	1.65	10.0	1.5	8	4	20.5	26.5	7.3	31.0	12	12
PTFL4PB6-1/8	6	1/8	14	3.20	14.4	2.0	7	6	23.5	31.6	10.7	43.7	12	14
PTFL4PB6-1/4	6	1/4	17	5.20	18.4	4.0	11	7	25.0	34.9	13.8	51.8	12	17
PTFL4PB6-3/8	6	3/8	22	5.50	21.6	4.0	11	7	28.0	40.7	17.3	63.7	12	22
PTFL4PB8-1/8	8	1/8	14	3.20	14.4	2.0	7	6	25.0	33.1	10.7	43.7	14	14
PTFL4PB8-1/4	8	1/4	17	5.20	18.4	4.0	11	7	28.5	38.3	13.8	51.8	14	17
PTFL4PB8-3/8	8	3/8	22	6.00	21.6	4.0	11	7	29.5	42.2	17.3	63.7	14	22
PTFL4PB10-1/4	10	1/4	17	5.20	18.4	4.0	11	7	31.5	41.3	13.8	51.8	17	17
PTFL4PB10-3/8	10	3/8	22	6.00	21.6	4.0	11	7	34.0	46.7	17.3	63.7	17	22
PTFL4PB10-1/2	10	1/2	27	8.00	26.5	4.0	14	9	36.5	52.1	20.1	76.1	17	27
PTFL4PB12-3/8	12	3/8	22	6.00	21.6	4.0	11	7	34.0	46.7	17.3	63.7	20	22
PTFL4PB12-1/2	12	1/2	27	8.50	26.5	4.0	14	9	36.5	52.1	20.1	76.1	20	27

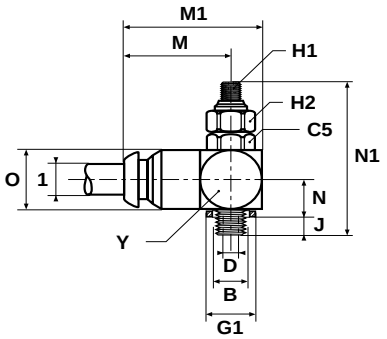
* These fittings are supplied with Nylon seal.



Exhaust Flow Control

PTFAL8PB Flow Regulator with Push-In Connection

PART NO.	1	B	C5	D	G1	H1	H2	J	M	M1	N	N1	O	Y
PTFAL8PB4M5	4	M5x0.8	8	1.65	10.0	1.5	8	4	19.5	24.5	6.3	28.5	10	10

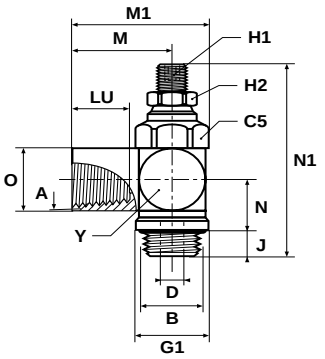


Inlet Flow Control

PTFL4/8 Flow Regulator with Threaded Connection

PART NO.	A	B	C5	D	G1	H1	H2	J	LU	M	M1	N	N1	O	Y
PTFL8M5*	M5x0.8	M5x0.8	8	1.65	10.0	1.5	8	4	5.0	11.0	16.0	6.3	28.5	8.0	10
PTFL4-1/8	1/8	1/8	14	3.20	14.4	2.0	7	6	8.5	17.5	25.6	10.7	43.7	13.9	14
PTFL4-1/4	1/4	1/4	17	5.20	18.4	4.0	11	7	12.5	24.5	34.3	10.7	51.8	16.9	17
PTFL4-3/8	3/8	3/8	22	6.00	21.6	4.0	11	7	12.5	27.5	40.2	13.8	63.7	21.6	22
PTFL4-1/2	1/2	1/2	27	8.50	26.5	4.0	14	9	14.5	33.5	49.1	17.3	76.1	26.5	27

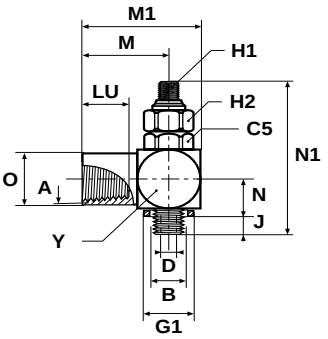
* These fittings are supplied with Nylon seal.



Exhaust Flow Control

PTFAL8 Flow Regulator with Threaded Connection

PART NO.	A	B	C5	D	G1	H1	H2	J	LU	M	M1	N	N1	O	Y
PTFAL8M5	M5x0.8	M5x0.8	8	1.65	10.0	1.5	8	4	5	11	16	6.3	28.5	8	10



Inlet Flow Control

Only items priced in current price list are carried in stock. Dimensions shown may be changed at any time without prior notice.

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Prestoflow - Flow regulator - Swivel outlet

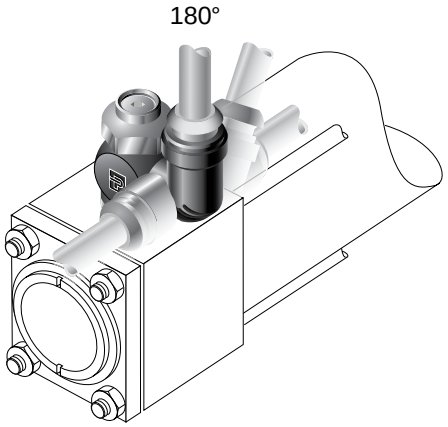
Principle

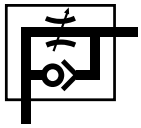
Prestoflow unidirection swivel flow regulators are designed for mounting directly onto the cylinder exhaust port and provide precise control of the piston rod speed. The swivel outlet is designed to allow vertical or oblique tube exit where access is restricted.

- A check valve blocks the full flow ports in the exhaust direction.
- The flow is controlled by a needle valve fitted in the regulator bolt.
- The swivel outlet can be positioned in the most suitable direction.

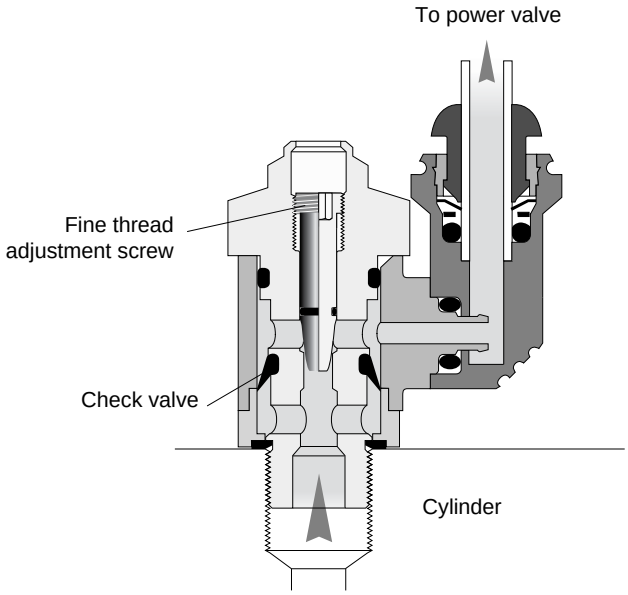
Flow adjustment

Flow control is adjusted with an Allen key. The large number of turns from fully closed to fully open allows for precise flow control.





Exhaust flow control



C

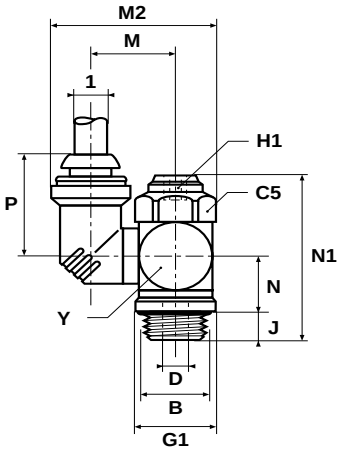
Technical features

BODY MATERIAL	SWIVEL ELBOW MATERIAL	BOLT MATERIAL	BOLT THREAD	SEALING DEVICE		TERMINATIONS	ADJUSTMENT SCREW	WORKING TEMP.	WORKING PRESSURE
Brass Black Epoxy Coated	High Resistance Polyamide	Brass	M5 1/8 BSPP 1/4 BSPP 3/8 BSPP 1/2 BSPP	M5 Nylon Washer	1/8 - 3/8 BSPP Nitrile E.D. Seal	4 mm - 8 mm Push-In	Brass	From 0° to +150° F	140 PSI

PTF4/8E6PB Flow Regulator with Push-In Connection

PART NO.	1	B	C5	D	G1	H1	J	M	M2	N	N1	P	Y
PTF8E6PB4M5*	4	M5x0.8	8	1.65	10.0	1.5	4	11.7	18.4	6.2	22.5	20.5	10
PTF4E6PB4-1/8	4	1/8	14	3.00	14.4	2.0	6	14.3	30.0	10.7	34.5	20.5	14
PTF8E6PB6M5*	6	M5x0.8	8	1.65	10.0	1.5	4	12.7	20.4	7.2	24.5	23.0	12
PTF4E6PB6-1/8	6	1/8	14	3.20	14.4	2.0	6	15.3	31.0	10.7	34.5	23.0	14
PTF4E6PB6-1/4	6	1/4	17	5.20	18.4	4.0	7	17.3	35.0	13.8	41.0	23.0	17
PTF4E6PB6-3/8	6	3/8	22	5.50	21.6	4.0	7	19.8	40.0	17.3	51.0	23.0	22
PTF4E6PB8-1/8	8	1/8	14	3.20	14.4	2.0	6	16.8	33.5	10.7	34.5	25.0	14
PTF4E6PB8-1/4	8	1/4	17	5.20	18.4	4.0	7	18.3	37.0	13.8	41.0	25.0	17
PTF4E6PB8-3/8	8	3/8	22	6.00	21.6	4.0	7	20.8	42.0	17.3	51.0	25.0	22

* These fittings are supplied with Nylon seal.



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Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Slow Start Flow Control Valves

Principle
Designed for mounting on either the FRL or power valve, Parker Prestostart slow start function fittings permit the gradual increase in pressure to a section of the pneumatic system. This prevents shocks to the system that may occur when full system pressure is introduced thus reducing wear and potential damage to components.

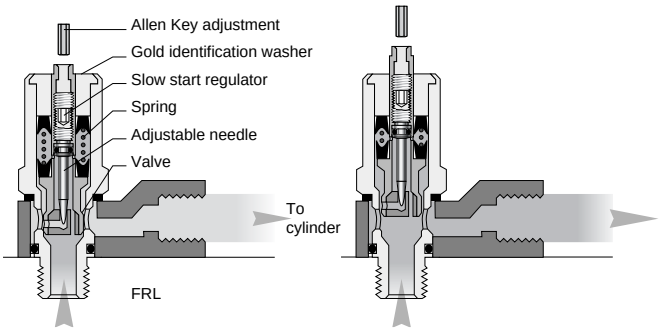
Operation
- Mounted on outlet port of FRL to control downstream installation.
- Initial flow through the bolt is controlled by a restrictor and adjustable needle valve.
- When 2/3rd system pressure is achieved the spring is compressed allowing immediate increase to full system pressure.
- When the system is pressurized after an emergency stop all cylinders will return to the position they were in before the system air was vented.

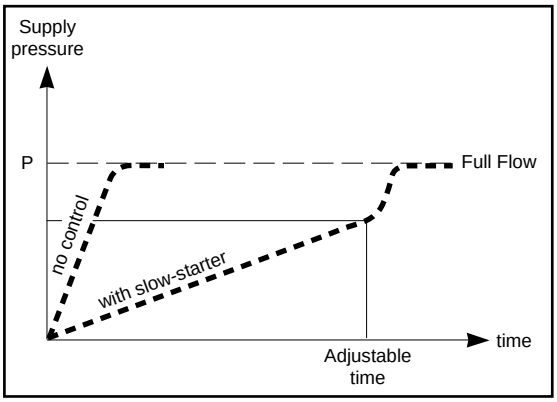
Pressurization speed
Adjustment of the needle valve to regulate the air flow controls the time taken to pressurize the system.

Advantages
- Simplified cabling
- Compact installation
- Reduces wear and damage

Valve Specifications
Maximum Working Pressure: 145 PSI
Operating Temperature: +5° - +150° F
Body Material: Brass nickel plated
Bolt Material:Brass nickel plated

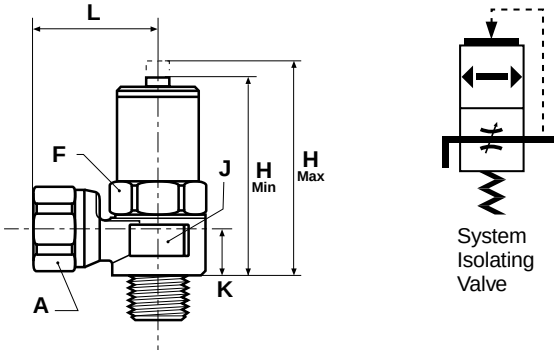
Soft start operation/Full flow





FC902 Slow Start with Threaded Connection

PART NO.	NPT THREADS	H MAX.	H MIN.	F	A	J	L	K
FC902-4	1/4	2.44	2.17	7/8	3/4	.95	1.22	.55
FC902-6	3/8	2.44	2.17	7/8	3/4	.95	1.22	.55



Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Prestostart
Pneumatic slow start fittings

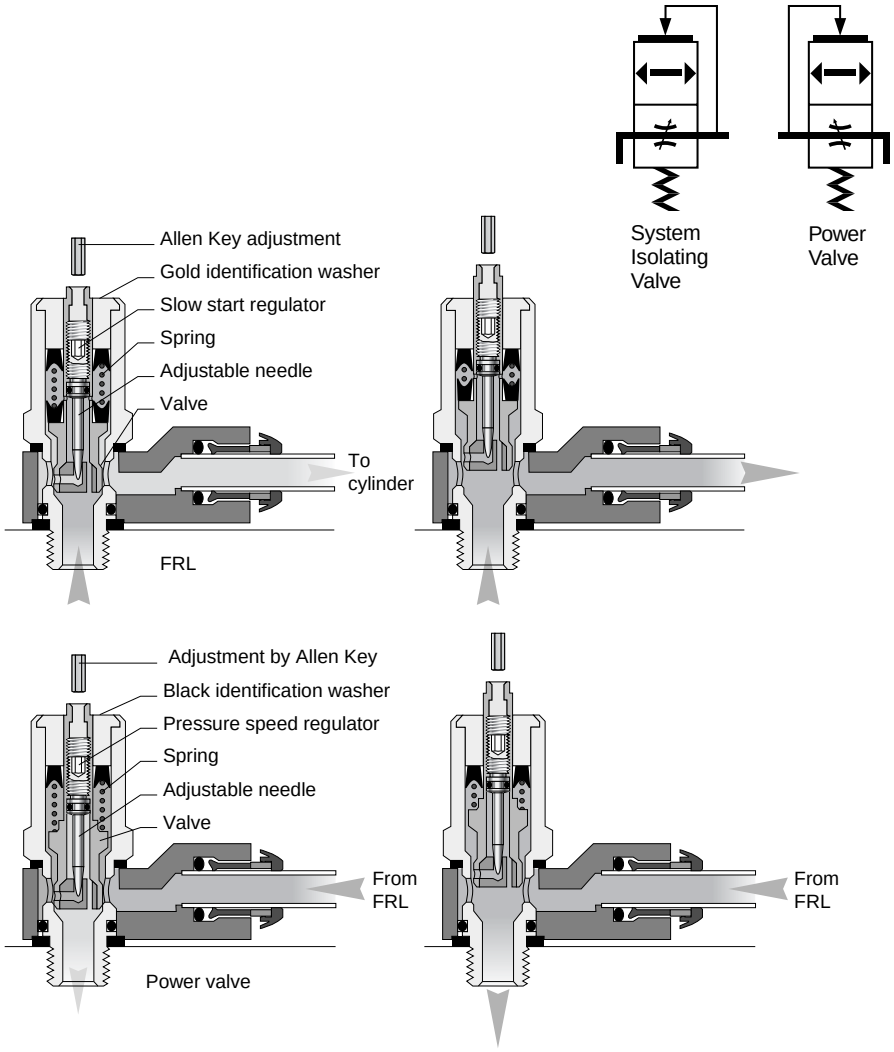
Principle
Designed for mounting on either the FRL or power valve, Parker Prestostart slow start function fittings permit the gradual increase in pressure to a section of the pneumatic system. This prevents shocks to the system that may occur when full system pressure is introduced thus reducing wear and potential damage to components.

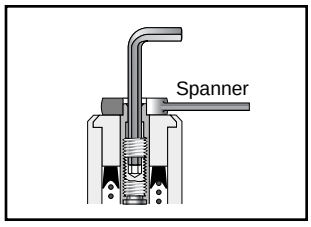
PIV Series
- Mounted on outlet port of FRL to control downstream installation.
- Initial flow through the bolt is controlled by a restrictor and adjustable needle valve.
- When 2/3 of the system pressure is achieved the spring is compressed allowing immediate increase to full system pressure.
- When the system is pressurized after an emergency stop all cylinders will return to the rest position.

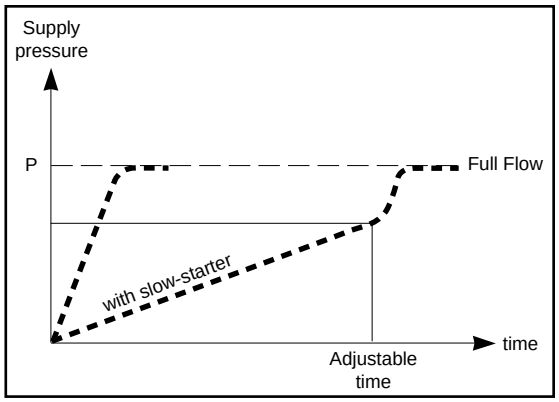
PCV Series
- Mounted on the supply port of the power valve or on the common supply of associated power valves.
- Initial flow into the power valve is controlled by the needle valve assembly.
- When 2/3 of the system pressure is achieved the spring is compressed allowing immediate increase to full system pressure.
- When the system is pressurized after an emergency stop all cylinders will return to the rest position.

Pressurization speed
Adjustment of the needle valve to regulate the air flow controls the time taken to pressurize the system.

Adjustment
- Use a spanner to prevent the bolt assembly turning.
- Use an Allen key to adjust the needle valve. Maximum torque 1N/m.







Technical features

BODY MATERIAL		BOLT ASSEMBLY MATERIAL	BOLT THREAD	SEALING DEVICE	TERMINATORS		WORKING TEMP.	WORKING PRESSURE
PUSH-IN VERSION	THREAD VERSION							
High Resistance Polyamide	Brass Nickel Plated	Brass Nickel Plated	1/4 BSPP 3/8 BSPP 1/2 BSPP	Nylon Washer	8 to 12 mm Push-In	1/4 to 1/2 BSPP Female Thread	From 0° to +140° F	100 PSI

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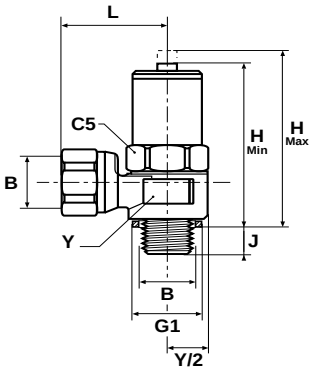
Parker Brass Products Division
Otsego, Michigan

PCV4 Slow Start Fitting Power Valve Version with Threaded Connection

PART NO.	B	C5	G1	H MIN.	H MAX.	J	L	Y	TORQUE MDAN	AIR FLOW NL/MN AT 87 PSI	KV
PCV4-1/4†	1/4	22	19.5	55	62	9	31	24	1.3	2000	1.15
PCV4-3/8	3/8	22	21.0	55	62	10	31	24	1.5	2000	1.15



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†Indicates non-standard part.
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Otsego, Michigan

Blocking Valves

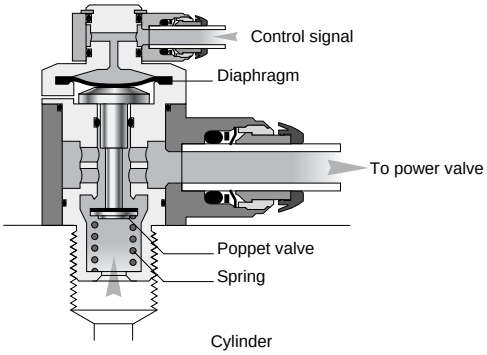
Principle
Prestobloc pilot-operated blocking fittings are designed for mounting directly to the cylinder ports. Available with push-in or threaded terminations, these function fittings permit safe and immediate stopping of the piston rod by blocking the cylinder supply and exhaust.

Operation
- Pilot operated diaphragm maintains full flow when pilot signal is present.
- Spring closes the poppet valve locking air in the cylinder when the pilot signal is removed.
- Prestobloc fittings used in conjunction with Prestoflow flow regulators are mounted on inlet and outlet ports.
- Pilot signal should be independent from the control valve.

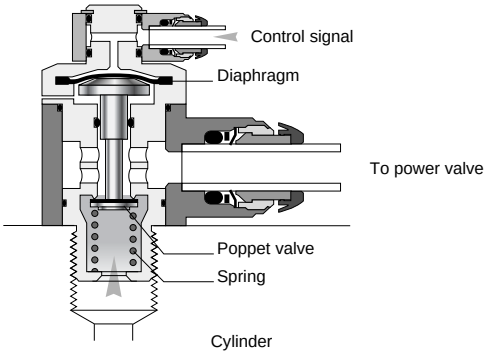
Advantages
- Compact
- Direct mounting
- Safety
- Independent control

Valve Specifications
Maximum Working Pressure: 145 PSI
Operating Temperature: +5°- +150° F
Body Material: Zinc alloy epoxy coated
Bolt Material: Brass

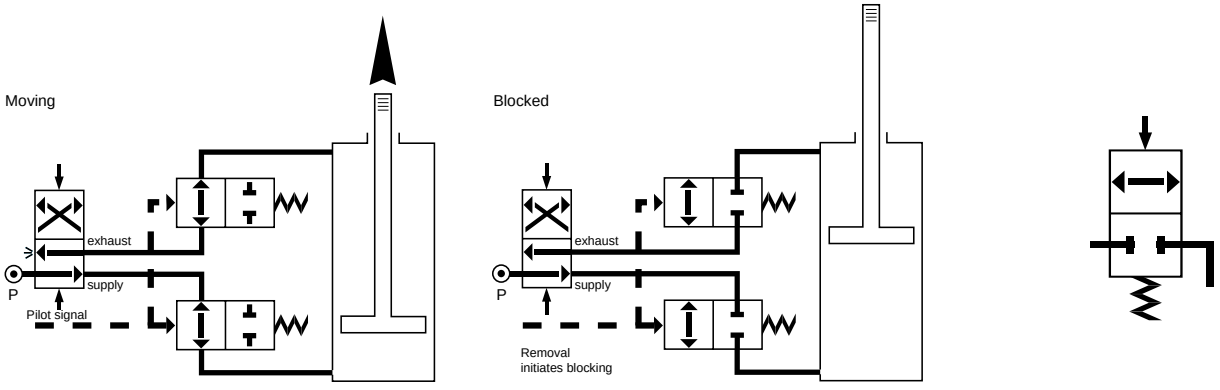
With control signal



Without control signal



Blocking principle



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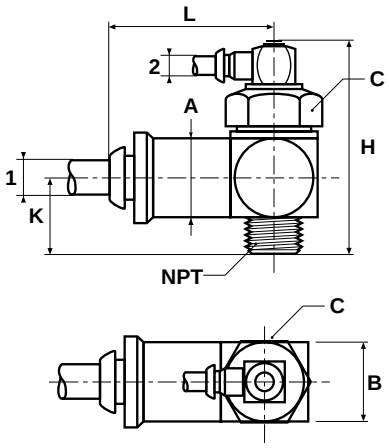
Otsego, Michigan

C

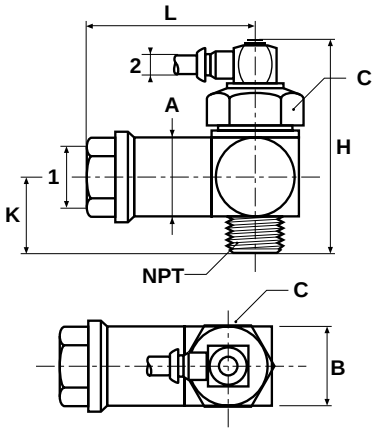
FC601 Blocker with Push-In Connection

PART NO.	TUBE 1	TUBE 2	NPT	FLOW	A	B	C	K	H	L
FC601-4-2	1/4	5/32	1/8	14.80	.86	.82	.94	.53	2.32	1.54
FC601-4-4	1/4	5/32	1/4	19.40	.86	.82	.94	.53	2.09	1.54
FC601-6-6	3/8	5/32	3/8	49.90	1.06	1.10	.94	.55	2.09	1.98
FC601-8-8	1/2	5/32	1/2	81.20	1.22	1.22	1.30	.94	2.59	2.59



FC602 Blocker with Threaded Connection

PART NO.	FEMALE THREAD 1	TUBE 2	FLOW	A	B	C	K	H	L	NPT
FC602-2	1/8	5/32	14.80	.86	.82	.94	.53	2.32	1.71	1/8
FC602-4	1/4	10-32	19.40	.86	.82	.94	.53	2.09	1.71	1/4
FC602-6	3/8	10-32	49.90	1.06	1.10	.94	.55	2.09	2.18	3/8
FC602-8	1/2	10-32	81.20	1.22	1.30	1.30	.94	2.59	2.47	1/2



Operating Characteristics

BOLT SIZE	PILOT OPERATING PRESSURE (100% FLOW)				PILOT RELEASE PRESSURE				MAX. INPUT FLOW AT 87 PSI
	29 psi	58 psi	87 psi	116 psi	29 psi	58 psi	87 psi	116 psi	
1/8"	45.0	51.0	58.0	65.5	11.5	14.5	17.5	20.5	17.6 cfm
1/4"	45.0	51.0	58.0	65.5	11.5	14.5	17.5	20.5	22.9 cfm
3/8"	35.5	40.0	44.0	49.5	20.5	24.5	58.0	34.0	45.9 cfm
1/2"	44.0	49.5	53.5	58.5	25.5	30.5	35.0	40.5	81.2 cfm

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

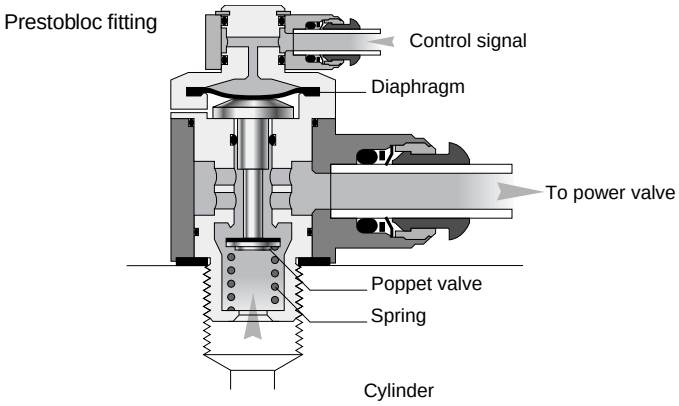
Prestobloc - Pilot-operated blocking fittings

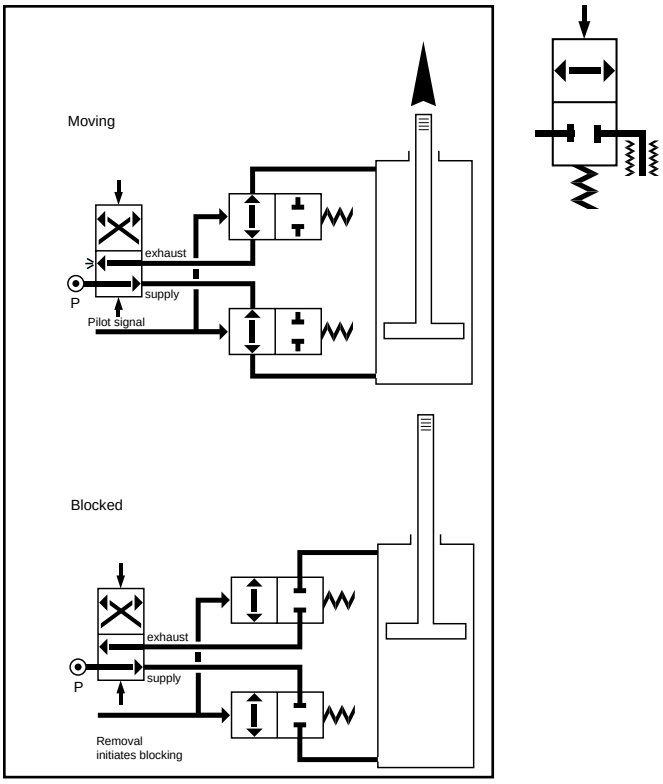
Principle

Prestobloc pilot-operated blocking fittings are designed for mounting directly to the cylinder ports. Available with push-in or threaded terminations, these function fittings permit safe and immediate stopping of the piston rod by blocking the cylinder supply and exhaust.

Operation

- Pilot operated diaphragm maintains full flow when pilot signal is present.
- Spring closes the poppet valve locking air in the cylinder when the pilot signal is removed.
- Prestobloc fittings used in conjunction with Prestoflow flow regulators are mounted on inlet and outlet ports.
- Pilot signal should be independent from the control valve.





Blocking principle

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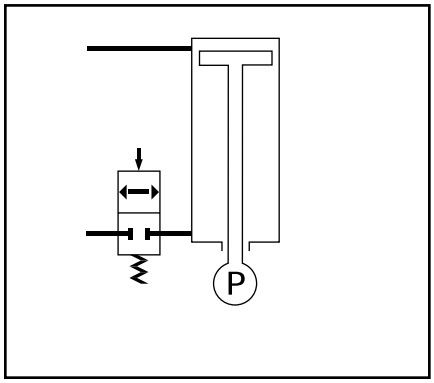
Technical features

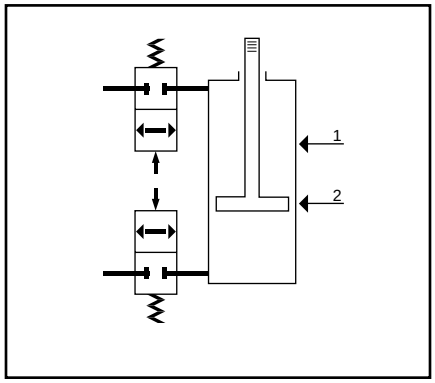
BODY MATERIAL	BOLT MATERIAL	BOLT THREAD	SEALING DEVICE	TERMINATIONS		PILOT TERMINATION	WORKING TEMPERATURE	WORKING PRESSURE
Zinc Alloy Epoxy Coated	Brass	1/8 BSPP 1/4 BSPP 3/8 BSPP 1/2 BSPP	Nylon Washer	6 mm - 12 mm Push-In	1/4 - 1/2 BSPP Female Thread	4 mm - 8 mm Push-In	From 0° to +150° F	140 PSI

Applications



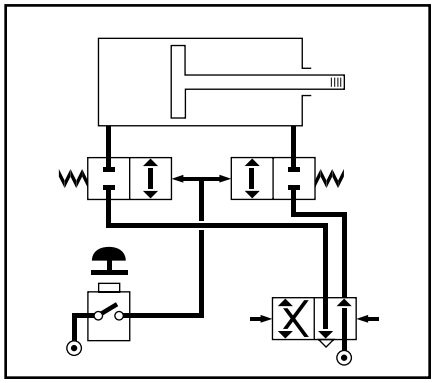
Safety stop
Prevents descent under load in the event of power failure

Stroke control



Stops the piston in various positions for conveying and handling applications.

Safety locks



Safety guards for assembly and punch presses. Combination with an emergency switch: restarting the cylinder after resetting the emergency switch.

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Otsego, Michigan

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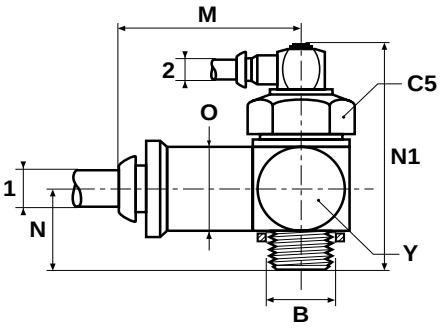
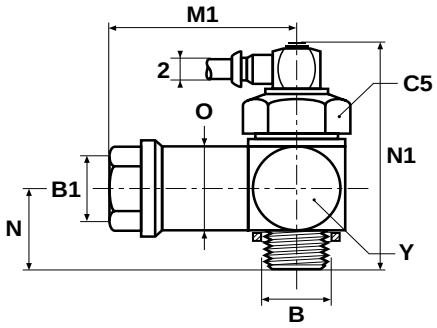
PWB-A- Blocker with Push-In Connection

OLD PART NO.	NEW PART NO.	1	B	2	C5	M	N	N1	O	Y
PBV4PB6-1/8	PWB-A1468	6	1/8	4	24	39	20	59	20	22
PBV4PB6-1/4	PWB-A1469	6	1/4	4	24	39	22	61	22	24
PBV4PB8-1/4	PWB-A1489	8	1/4	4	24	39	22	61	22	24
PBV4PB8-3/8	PWB-A1483	8	3/8	4	27	50	25	64	27	24
PBV4PB10-3/8	PWB-A1493	10	3/8	4	27	50	25	64	27	24
PBV4PB12-1/2	PWB-A1412	12	1/2	4	27	66	36	78	31	33



PWB-A- Blocker with Threaded Connection

OLD PART NO.	NEW PART NO.	B	B1	2	C5	M1	N	N1	O	Y
PBV4-1/8-1/4	PWB-A1898	1/8	1/4	4	24	44	20	59	20	24
PBV4-1/4	PWB-A1899	1/4	1/4	4	24	44	22	61	22	24
PBV4-3/8	PWB-A1833	3/8	3/8	4	27	56	25	64	27	24
PBV4-1/2	PWB-A1822	1/2	1/2	4	27	63	36	78	31	33



Operating Characteristics

Bolt Size	Pilot operating pressure			Pilot release pressure			Max. input flow at 6 Bar
	3 Bar	6 Bar	8 Bar	3 Bar	6 Bar	8 Bar	
1/8 BSPP	1.75	3.35	4.50	.95	2.05	2.75	1450 l/mn ANR
1/4 BSPP	2.35	4.30	5.90	.95	2.05	2.75	2800 l/mn ANR
3/8 BSPP	2.00	4.10	4.80	.90	2.00	3.00	3950 l/mn ANR
1/2BSPP	1.40	3.35	5.00	.90	2.20	3.50	4750 l/mn ANR

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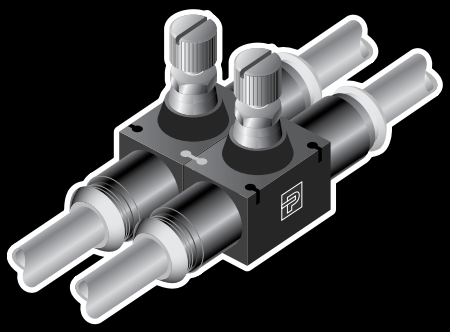


In-Line Flow Control Valves

General Information

It is sometimes impossible to mount a flow control directly on the port of the cylinder, either due to lack of space or because of the need for remote adjustment of the flow control. To resolve this problem in-line flow controls are designed to mount on the piping between the directional valve and the cylinder or can be mounted on the control panel next to other control units.

Designed to be versatile

Parker In-Line Flow Controls are unidirectional flow control valves. Intake air flows freely through the flow control; exhaust air is metered out through a specially designed adjustment screw. An arrow on the body of the valve indicates the direction of controlled flow. Since it is a tube to tube connection, our in-line flow controls may be installed as a meter in or a meter out device.

Parker in-line flow controls can be easily added to existing circuitry. Simply splice it into the cylinder port line. In-line flow controls may be used individually or, they may be stacked together using two joining clips, supplied standard with each valve. Panel mounting is accomplished by using the through holes in the molded body.

Adjustment characteristics

Control is achieved through a finely threaded special adjustment screw. The special shaped adjustment screw produces a more linear flow control than ordinary tapered screws. With the use of a locking nut, the in-line flow control may be secured in its final setting. Settings are maintained even under adverse conditions such as vibration. A captive adjustment screw prevents loss or dangerous blow out.

Full flow in both directions

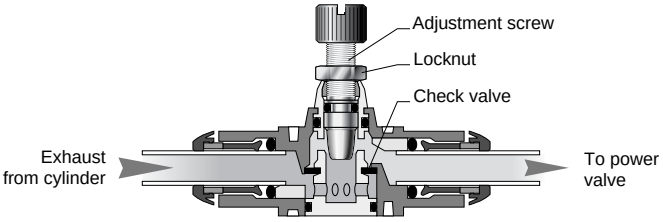
Intake capacity is always slightly greater than the full open exhaust capacity, enabling maximum variation of speeds between outward and return strokes.

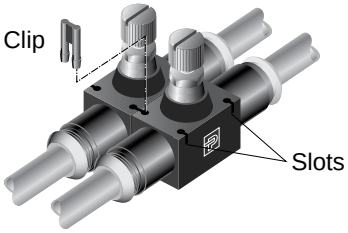
Advantages

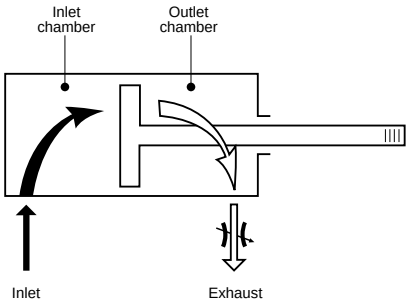
- Assembly in banks
- Panel mounting
- Allows other function fittings to be mounted on a cylinder
- Space saving
- Weight saving
- Flexibility

Valve Specifications

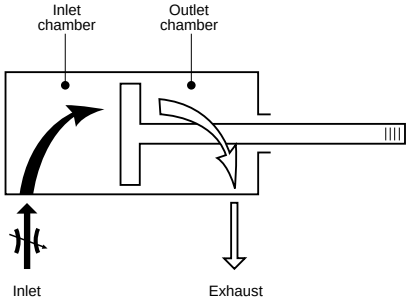
Maximum Working pressure: 145 PSI
Operating Temperature: +5° - +150° F
Body material: High resistance polyamide
Adjustment screw material: Brass







Flow regulation on the exhaust port



Flow regulation on the inlet port

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

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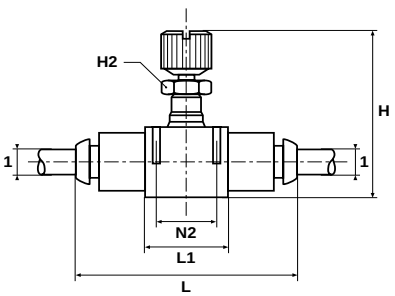
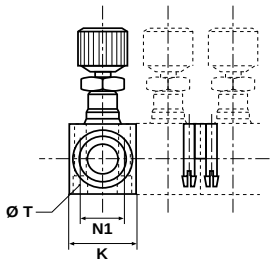
Push-in Connection In-line Exhaust Flow Control FC800

PART NO.	1 ØD	H MIN.	H MAX.	L	L1	K	N1	N2	T	ORIFICE	H2 (MM)
FC800-5/32	5/32	1.15	1.31	1.52	.59	.47	.31	.43	.09	.12	5
FC800-4	1/4	1.54	1.74	2.11	.90	.66	.43	.66	.12	.16	8
FC800-6	3/8	2.03	2.38	2.96	1.29	.94	.62	1.01	.16	.31	14
FC800-8	1/2	2.24	2.63	3.35	1.37	1.09	.78	1.07	.16	.39	14

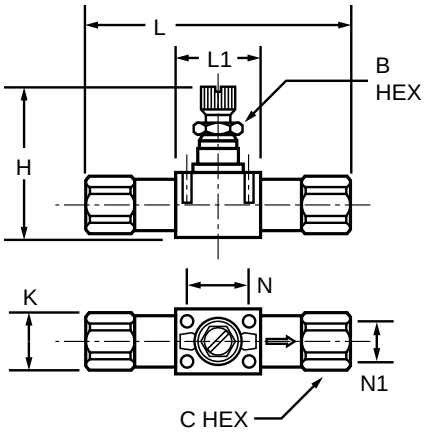




Supplied with 2 clips

Threaded In-line Exhaust Flow Control FC806

PART NO.	THREAD SIZE	B HEX (MM)	C HEX (MM)	H CLOSED	H OPEN	L	L1	K	N	N1
FC806-2	1/8	13	8	1.56	1.75	2.70	.91	.67	.67	.43
FC806-4	1/4	16	11	1.73	1.97	3.27	1.02	.73	.79	.49
FC806-6	3/8	22	14	2.05	2.40	3.82	1.30	.94	1.02	.63
FC806-8	1/2	24	14	2.26	2.66	4.76	1.38	1.10	1.08	.79



Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Prestoflow - Flow regulator - In-line series

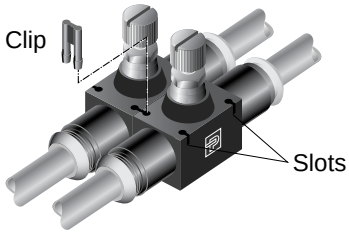
Principle

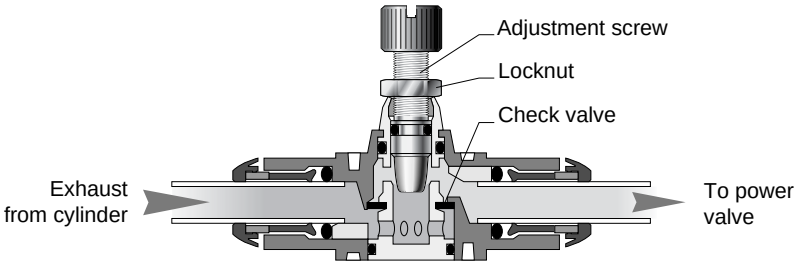
Prestoflow unidirection in-line flow regulators are designed to be used directly in the compressed air line when cylinder access is difficult or where another function fitting is already connected to the cylinder port. The fine thread knurled adjuster provides precise control of piston rod speed. When the desired flow has been set the adjusting bolt can be locked in position.

- A check valve blocks the full flow ports in the exhaust direction.
- The flow is controlled by a needle valve fitted in the regulator body.
- These regulators can be :
  - mounted using the 4 fixing holes
  - assembled into banks using the joining clips included.

Flow adjustment

Flow control is adjusted with a screwdriver or manually with the knurled nut. When the desired flow is set the adjusting screw can be locked using the locking nut. The large number of turns from fully closed to fully open allows for precise flow control.



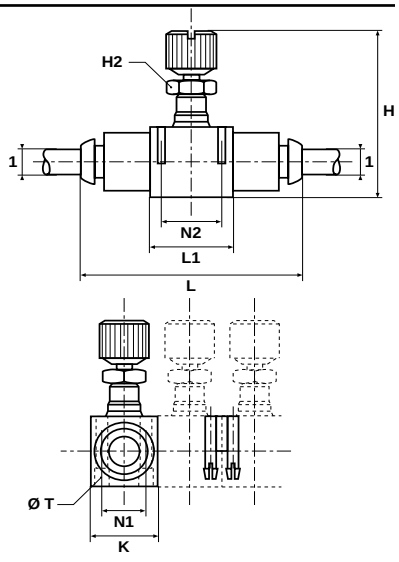


Technical features

BODY MATERIAL	CARTRIDE MATERIAL	ADJUSTMENT AND LOCKING NUT		TERMINATIONS	WORKING TEMPERATURE	WORKING PRESSURE
High Resistance Polyamide	Brass	Standard Adjustment Brass	Ultrafine Adjustment Duralumin	4 mm - 12 mm Push-In	From 0° to +150° F	140 PSI

PTFIPK Flow Regulator with Push-In Connection

PART NO.	1	H MIN.	H MAX.	H2	K	L	L1	N1	N2	T
PTFIPK4	4	29.5	33.5	5	12.0	39.0	15	8.0	11.0	2.2
PTFIPK6	6	39.5	44.5	8	17.0	55.0	23	11.0	17.0	3.2
PTFIPK8	8	44.0	50.0	11	18.5	61.5	26	12.5	20.0	3.2
PTFIPK10	10	52.0	61.0	14	24.0	77.0	33	16.0	26.0	4.2
PTFIPK12	12	57.5	67.5	14	28.0	87.0	35	20.0	27.5	4.2



Supplied with 2 clips

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Parker Hannifin Corporation
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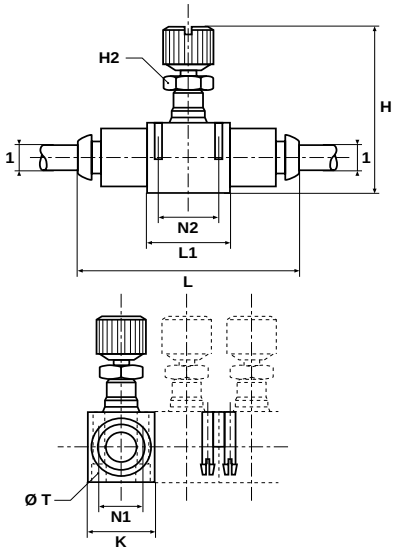
Otsego, Michigan

C

PTFMIPK Flow regulator with Push-In Connection Ultrafine Adjustment

PART NO.	1	H MIN.	H MAX.	K	L	L1	N1	N2	T
PTFMIPK4	4	34	37.0	12	39	15	8	11	2.2
PTFMIPK6	6	42	45.5	17	54	23	11	17	3.2

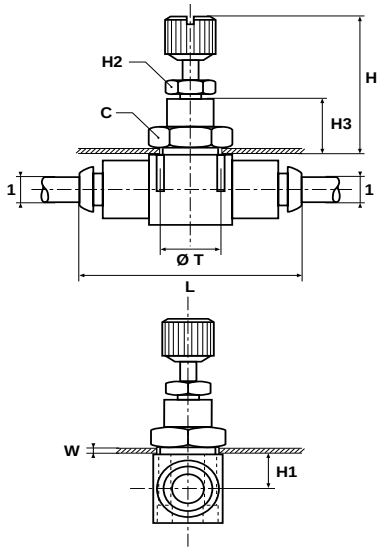


Supplied with 2 clips

PTFIWPK Flow Regulator with Push-In Connection Panel Mountable

PART NO.	1	C	H MIN.	H MAX.	H1	H2	H3	L	T	W MAX.
PTFIWPK4*	4	14	21.5	25.5	6.5	-	11.0	39.0	10.5	6
PTFIWPK6*	6	19	27.5	32.5	7.5	-	13.5	54.0	16.5	7
PTFIWPK8	8	24	28.5	34.5	9.0	11	13.5	60.5	18.5	7
PTFIWPK10†	10	30	29.5	38.5	11.5	14	13.5	76.0	24.5	7
PTFIWPK12†	12	32	32.0	42.0	12.5	14	15.5	86.0	27.5	8

* Ultrafine adjustment



†Indicates non-standard part.
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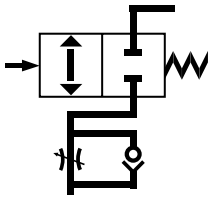
Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Prestotwin - Combined flow - blocking - valves

Principle

Prestotwin are multi-function fittings combining flow control and blocking. This avoids the requirement for two function fittings offering a compact solution with significant space saving. They meet the requirements for a safety fitting and incorporate the facility to accurately control the piston rod speed.

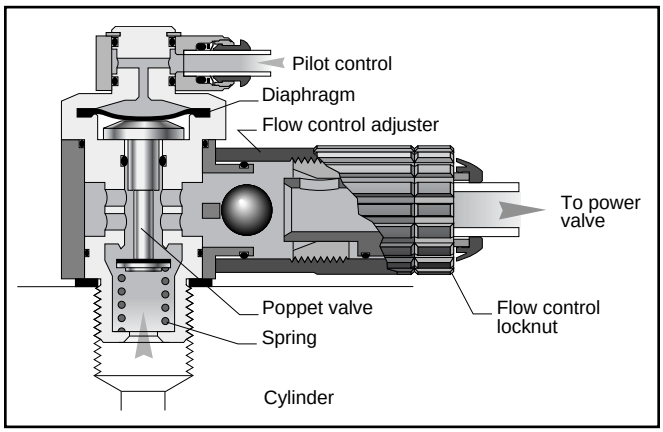


Speed control and blocker

Operation

PBVF4PK Flow regulator + blocker

- The pilot signal acting on the diaphragm keeps the poppet valve open. When the pilot signal is removed the spring closes the poppet valve.
- Flow control is obtained by the adjustment of the rotating barrel against a ball bearing.
- The flow control locknut ensures the optimum setting is maintained.



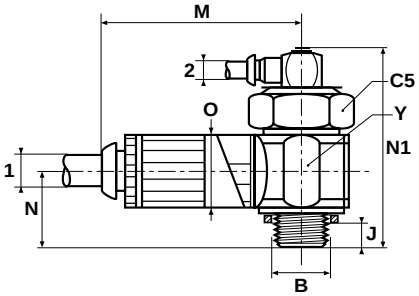
Combined flow control and blocker

Technical features

BODY MATERIAL	BOLT MATERIAL	BOLT THREAD	SEALING DEVICE	PILOT TERMINATION	FLOW CONTROL ADJUSTMENT	FLOW CONTROL LOCKING	WORKING TEMP.	WORKING PRESSURE
Zinc Alloy Epoxy Coated	Brass	1/8 BSPP 1/4 BSPP	Nylon Washer	4 mm - 8 mm Push-In	Rotating Barrel	Knurled Locknut	From 0° to +140° F	140 PSI

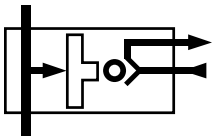
PWR-HB- Flow Regulator + Blocker with Push-In Connection

PART NO.	1	B	2	C5	J	M	N	N1	O	Y
PWR-HB1448	4	1/8	4	24	8	47	21.5	67	22.5	21
PWR-HB1468	6	1/8	4	24	8	47	21.5	67	22.5	21
PWR-HB1469	6	1/4	4	24	10	47	23.5	69	22.5	21
PWR-HB1489	8	1/4	4	24	10	47	23.5	69	22.5	21
PWR-HB1483	8	3/8	4	27	11	60	29.0	73	29.0	28
PWR-HB1493	10	3/8	4	27	11	60	29.0	73	29.0	28



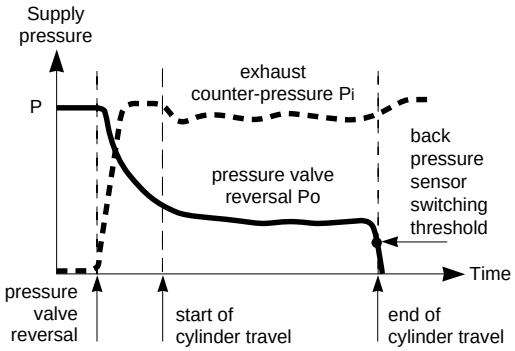
Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Prestosensor
Pressure sensor fittings



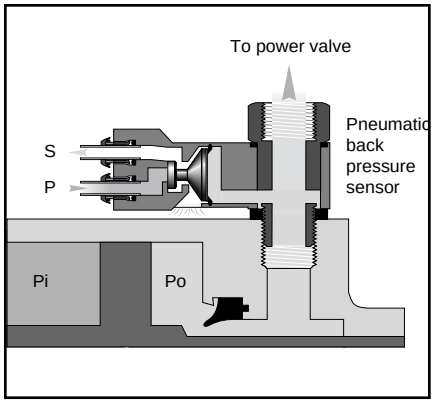
Principle

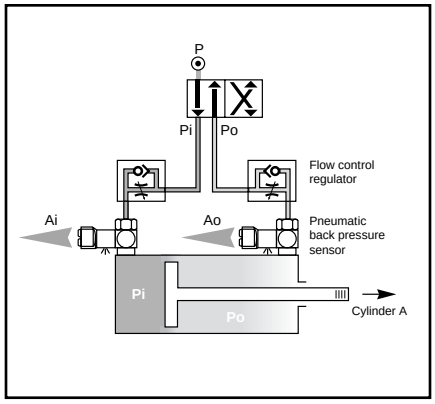
Prestosensor fittings are designed for direct mounting onto the cylinder. These sensors detect end of stroke travel by the variation in internal operating pressure. The sensing can be pneumatic, electric or electronic to suit the application. These fittings remove the need for mechanical position switches.



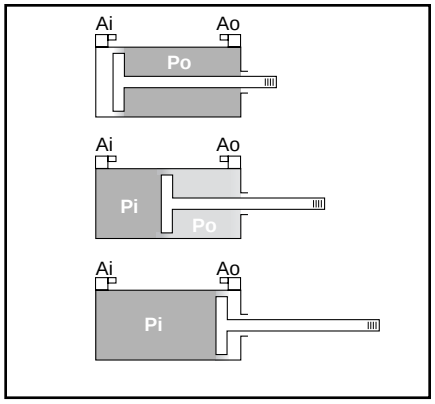
Operation

- Mounting to cylinder port
- Pressure sensors should be mounted in conjunction with flow regulators
- Pressure sensing on diaphragm valve.





Mounting of pressure sensors



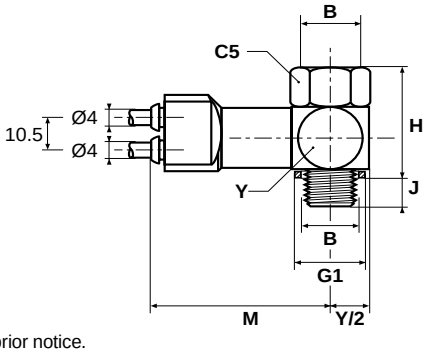
Signals from pressure sensors

Technical features

BODY MATERIAL		BOLT MATERIAL	BOLT THREAD	SEALING DEVICE	TERMINATORS			WORKING TEMP.	WORKING PRESSURE
PNEUMATIC OUTPUT VERSION	ELECTRIC AND ELECTRONIC VERSION				PNEUMATIC OUTPUT VERSION	ELECTRIC OUTPUT VERSION	ELECTRONIC OUTPUT VERSION		
Zinc Alloy and Thermoplastic	Thermoplastic	M5 Bichromate steel 1/8 to 1/2 BSPP: Brass	M5 1/8 BSPP 1/4 BSPP 3/8 BSPP 1/2 BSPP	Nylon Washer	4 mm Push-In or M5 Female Thread	3 Core Cable 0.5 mm² 2 Meters Long	3 Core Cable 0.1 mm² 2 Meters Long	From 0° to +140° F	100 PSI

PTP4/8PB Pressure Sensor Pneumatic Output with Push-In Connection

PART NO.	B	C5	G1	H	J	M	Y
PTP4PB4-1/8	1/8	14	6.0	23	14.0	45.0	16.0
PTP4PB4-1/4	1/4	17	7.0	28	17.5	47.0	19.5
PTP4PB4-3/8	3/8	22	8.0	29	21.0	49.5	23.5
PTP4PB4-1/2	1/2	27	10.0	30	25.5	53.5	31.5



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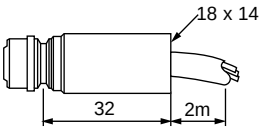
Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

PWS-M -Plug-in Sensor-Electrical Output

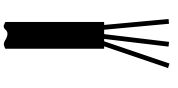
PART NO.	WEIGHT GRAMS	OUTPUT FUNCTION	OUTPUT CONNECTION	OUTPUT CHARACTERISTICS
PWS-M1012	0.08	Electrical ~ Ve = 3 A	3 wires 0.5 mm² long. 2 m	Contact OF 12 to 230 V ~ /10 VA 12 to 48 VCC/ 5W

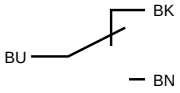


Level of Protection: IP40

Technical specification of model PWS-M : breaking pressure = 0.5 bar

connection :

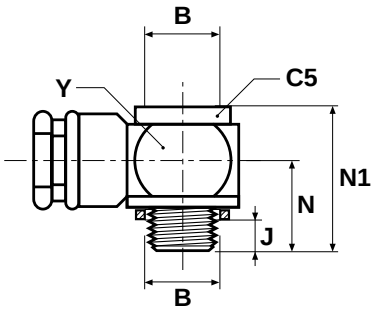




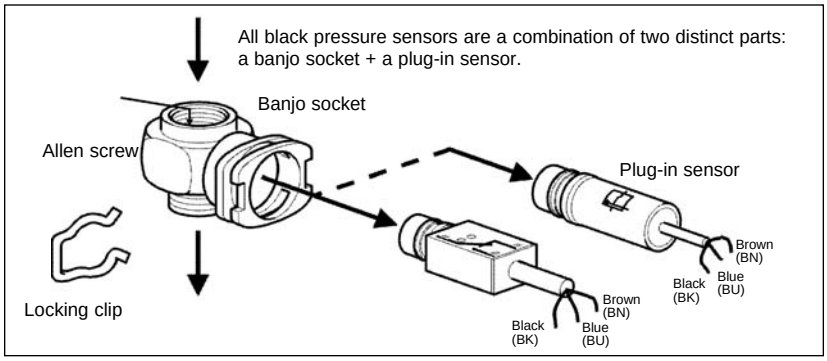
C

PWS-B-Banjo Socket (with sensor locking clip)

B	PART NO.	C5	J	N	N1	Y	WEIGNT GRAMS	TOOL REQUIRED
1/8	PWS-B188	6	8	18	28	16	0.04	Allen key 5 mm
1/4	PWS-B199	8	10	18	28	21	0.05	Allen key 8 mm
3/8	PWS-B133	10	11	22	32	28	0.07	Allen key 10 mm
1/2	PWS-B122	12	12	26	38	33	0.11	Allen key 12 mm



NEW PART NO.	OLD PART NO.
PWS-M1012 + PWS-B155	PTZ8M5
PWS-M1012 + PWS-B188	PTZ4-1/8
PWS-M1012 + PWS-B199	PTZ4-1/4
PWS-M1012 + PWS-B133	PTZ4-3/8
PWS-M1012 + PWS-B122	PTZ4-1/2
PWS-E101 + PWS-B155	PTE8M5
PWS-E101 + PWS-B188	PTE4-1/8
PWS-E101 + PWS-B199	PTE4-1/4
PWS-E101 + PWS-B133	PTE4-3/8
PWS-E101 + PWS-B122	PTE4-1/2
PWS-E111 + PWS-B155	PTE8M5C
PWS-E111 + PWS-B188	PTE4-1/8C
PWS-E111 + PWS-B199	PTE4-1/4C
PWS-E111 + PWS-B133	PTE4-3/8C
PWS-E111 + PWS-B122	PTE4-1/2C



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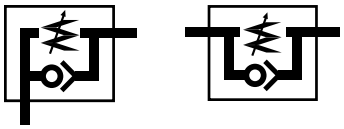
Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

C

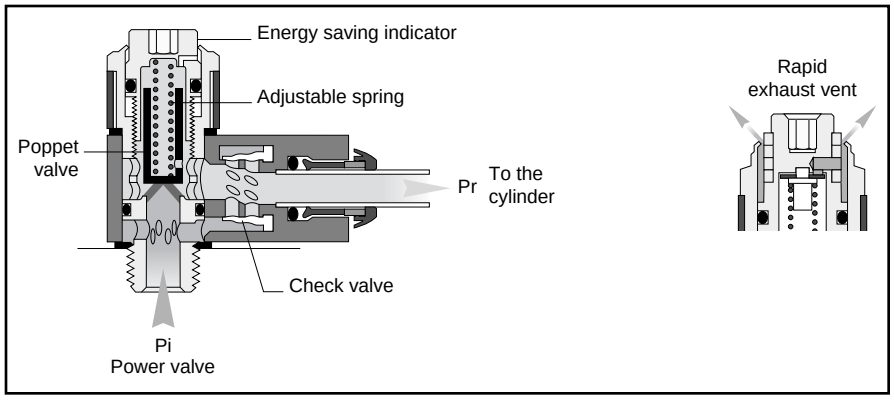
Prestoreduce
Pressure reduction fittings



Principle

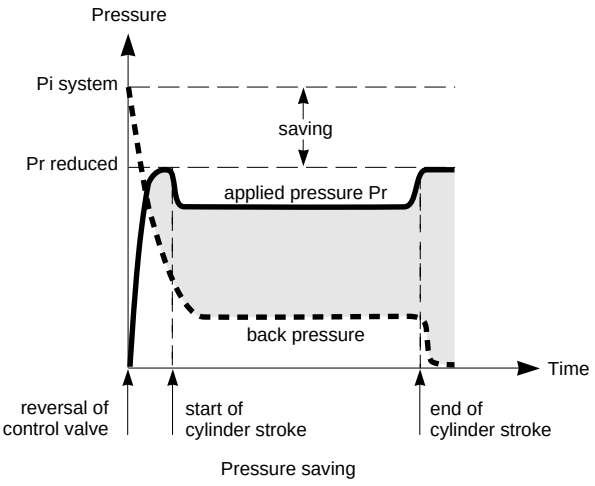
This function fitting is manually preset to provide the cylinder with optimum air pressure. This reduces the air consumption of the cylinder generating energy savings. This fitting is particularly suitable for cylinders used in cutting, pressing or gripping operations.

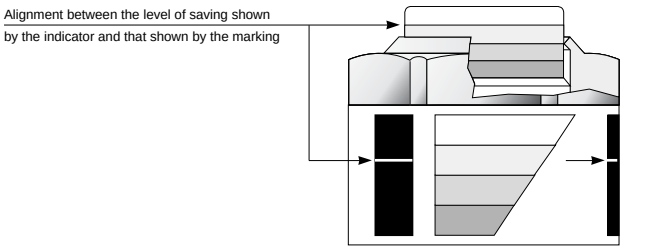
- System pressure (Pi) is reduced by a spring-loaded valve which can be calibrated by the set screw.
- The greater the reduction between inlet and outlet pressure the larger the energy savings.
- The coloured indicator shows the energy savings achieved.
- The purge vent allows rapid exhaust of air in emergencies.
- Adjustment can be made with an Allen key or manual ratchet control.
- An anti-tamper plug can be fitted after the pressure has been set.

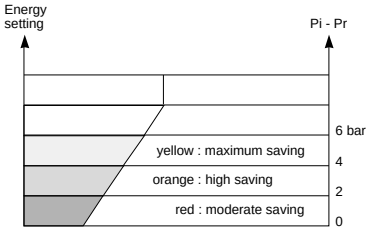


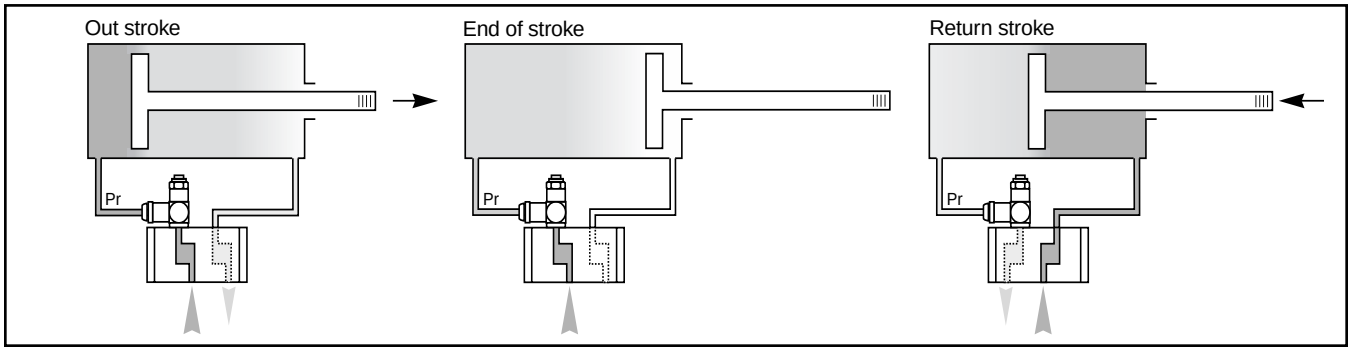
Technical features

BODY MATERIAL		BOLT ASSEMBLY MATERIAL	BOLT THREAD	SEALING DEVICE	TERMINATORS		WORKING TEMP.	WORKING PRESSURE
PUSH-IN VERSION	THREAD VERSION							
Zinc Alloy	Brass Nickel Plated	Brass	1/8 BSPP 1/4 BSPP 3/8 BSPP 1/2 BSPP	Nylon Washer	6 to 10 mm Push-In	1/8 to 1/2 BSPP Female Thread	From 0° to +150° F	100 PSI









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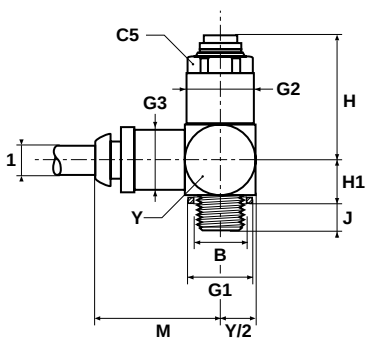
Parker Brass Products Division
Otsego, Michigan

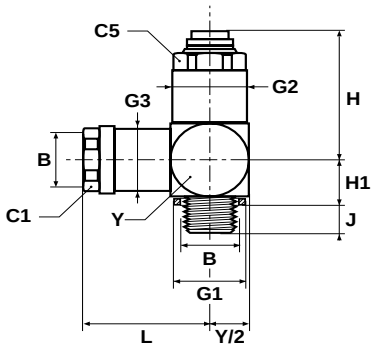
PRB4PB Pressure Reducer Banjo Version with Push-In Connection

PART NO.	1	B	C5	G1	G2	G3	H MIN.	H MAX.	H1	J	M	Y
PRB4PB6-1/8	6	1/8	19	19.5	22	20	49	57	12	6	43	21
PRB4PB6-1/4	6	1/4	19	19.5	22	20	49	57	12	6	43	21
PRB4PB8-1/4	8	1/4	19	19.5	22	20	49	57	12	6	40	21
PRB4PB10-1/4†	10	1/4	27	26.0	28	26	55	64	15	6	50	28
PRB4PB10-3/8†	10	3/8	27	26.0	28	26	55	64	15	8	50	28



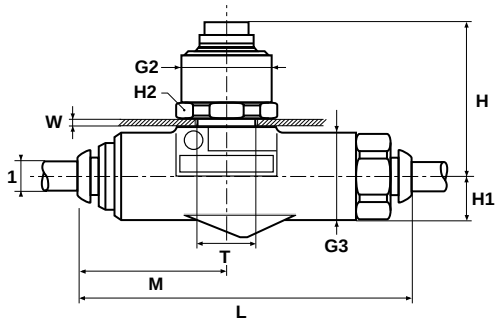
PRB4 Pressure Reducer Banjo Version with Threaded Connection

PART NO.	B	C1	C5	G1	G2	G3	H MIN.	H MAX.	H1	J	L	Y
PRB4-1/8†	1/8	19	19	19.5	22	20	49	57	12	6	45	21
PRB4-1/4	1/4	19	19	19.5	22	20	49	57	12	6	45	21
PRB4-3/8	3/8	24	27	26.0	28	26	55	64	15	6	56	28
PRB4-1/2†	1/2	30	30	30.0	32	31	75	86	23	8	63	33



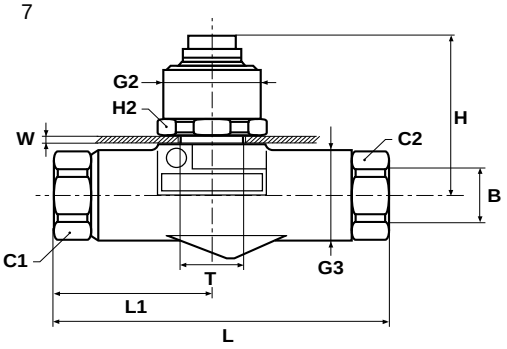
PRIPB Pressure Reducer In-Line Version with Push-In Connection

PART NO.	1	G2	G3	H MIN.	H MAX.	H1	H2	L	M	T MIN.	W MAX.
PRIPB6	6	11	21	49	57	14	22	75	32.5	18.5	4
PRIPB8	8	13	21	49	57	14	22	72	32.5	18.5	4
PRIPB10†	10	17	28	61	70	19	27	90	41.5	22.5	5



PRI4 Pressure Reducer In-Line Version with Threaded Connection

PART NO.	B	C1	C2	G2	G3	H MIN.	H MAX.	H1	H2	L	L1	T MIN.	W MAX.
PRI4-1/8	1/8	17	19	11	21	49	57	14	22	74	35	18.5	4
PRI4-1/4	1/4	17	19	13	21	49	57	14	22	83	44	18.5	4
PRI4-3/8	3/8	22	27	17	28	61	70	19	27	90	44	22.5	5
PRI4-1/2†	1/2	27	30	19	31	75	86	23	32	119	61	27.5	7



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Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

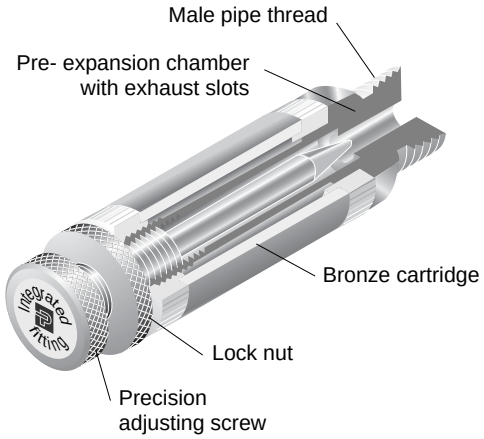
Prestosil - Silencer and flow control valve

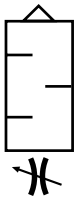
Principle
Prestosil silencers are designed for mounting into the exhaust valve of single acting cylinders or on the directional control valve.

Operation

Noise reduction
The escaping air is pre-expanded in the chamber of the silencer. It then flows through a sintered bronze cartridge whose design provides a complete expansion of the exhaust air.

Flow control
The adjusting screw of the uni- direction flow control valve allows fine adjustment of the restriction and thus precise control of the piston-rod speed. The setting is secured by a lock nut.





C

Technical features

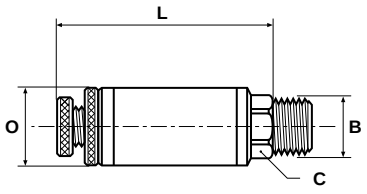
BODY MATERIAL	BOLT MATERIAL	NEEDLE VALVE MATERIAL	LOCKNUT MATERIAL	SILENCER THREAD	WORKING TEMPERATURE	WORKING PRESSURE
Aluminum	Bronze	Aluminum	Aluminum	1/8 BSPP 1/4 BSPP 3/8 BSPP 1/2 BSPP	From 0° to +200° F	140 PSI

Noise reduction characteristics
At an average working pressure of 75 PSI the noise reduction achieved with the appropriate Prestosil model ranges from 22 to 37 dB.

PART NO.	WORKING PRESSURE						
	15 PSI	30 PSI	45 PSI	60 PSI	75 PSI	90 PSI	105 PSI
PRS 4-1/8	6	15	20	21	22	24	24
PRS 4-1/4	11	22	27	29	32	32	32
PRS 4-3/8	19	27	33	35	37	39	40
PRS 4-1/2	19	27	33	35	37	39	40

PRS Silencer and Flow Control Valve

PART NO.	B	C	L MIN.	L MAX.	O
PRS4-1/8	1/8	11	43	48	14
PRS4-1/4	1/4	14	60	68	17
PRS4-3/8	3/8	19	80	88	26
PRS4-1/2	1/2	22	83	91	26



Only items priced in current price list are carried in stock. Dimensions shown may be changed at any time without prior notice.

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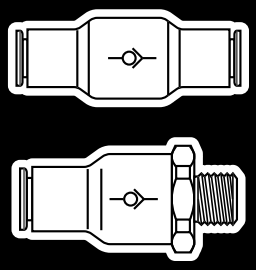

Non-Return Valves

General Information

Parker offers two styles of Non-Return valves, In-Line, tube to tube, and a threaded version with NPT male threads. Their extreme compactness and light weight make them suitable as a safety item in compressed air circuits.

The body of the fitting is marked with an arrow to indicate the direction of flow.

General Principle

Parker Non-Return Valves allow air to pass in one direction while blocking flow in the other direction. A pressure of more than 7 psi will overcome the spring pressure, which is keeping the valve closed, thus allowing the passage of air.

Valve Specifications

Maximum Working Pressure: 145 PSI
Operating Temperature: +30° to +160° F
Body Material: Nylon / Nickel-Plated Brass Body

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Otsego, Michigan

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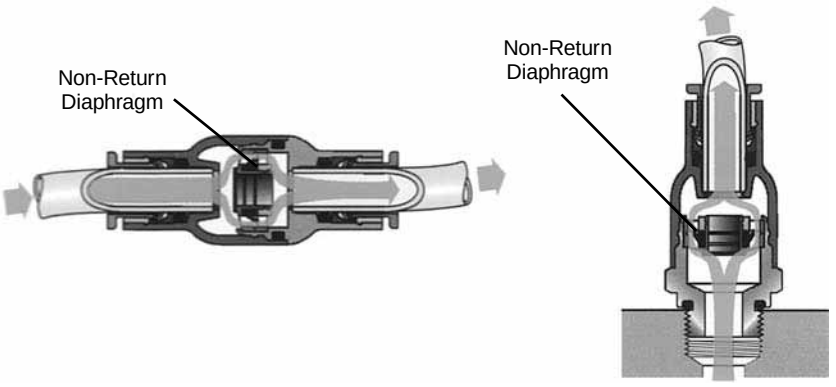
Non-Return Valves

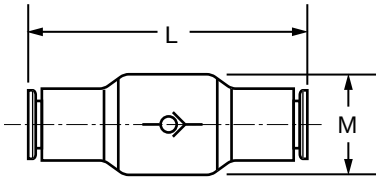
Parker Non-Return Valves allow air to pass in one direction while blocking flow in the other direction. A pressure of more than 7 psi will overcome the spring pressure, which is keeping the valve closed, thus allowing the passage of air.



Meter Out Version

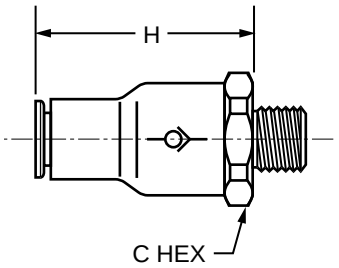
In-Line Non-Return Valve NRV800

PART NO.	TUBE SIZE	L	M
NRV800-5/32	5/32	1.52	.63
NRV800-4	1/4	1.61	.63
NRV800-5	5/16	2.03	.75
NRV800-6	3/8	2.50	.91



Male Thread Non-Return Valve NRV808

PART NO.	TUBE SIZE	THREAD SIZE	C HEX	L
NRV808-5/32-0	5/32	10-32	.35	1.26
NRV808-5/32-2	5/32	1/8	.63	1.12
NRV808-4-2	1/4	1/8	.75	1.42
NRV808-4-4	1/4	1/4	.75	1.42
NRV808-6-4	3/8	1/4	.91	1.65
NRV808-6-6	3/8	3/8	.91	1.65



Thermoplastic Fittings and Valves

TrueSeal™

- FDA Compliant
- NSF-51 Listed
- Acetal Fittings meet NSF-61
- All Plastic Body Designs

Polypropylene Ball Valves

- FDA Compliant
- NSF-51 Listed
- Bi-directional
- Corrosion Resistant

Fast & Tite®

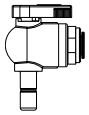
- FDA Compliant
- NSF-51 Listed
- Stainless Steel Grab Ring
- O-ring Seal

Par-Barb®

- FDA Compliant
- NSF-51 Listed
- High Strength, Chemically Inert

The World Standard

D

TrueSeal™	**MC** Male Connector Tube to Pipe  Page D5	**EU** Elbow Union Tube to Tube  Page D5	**TU** Tee Union Tube to Tube  Page D6	**WY** "Y" Union Tube to Tube  Page D6	**MES** Male Elbow Swivel Tube to Pipe  Page D7	**MRS** Male Run Swivel Tube to Pipe  Page D7
MTS Male Tee Swivel Tube to Pipe  Page D8	**UC** Union Connector Tube to Tube  Page D8	**CU** Cross Union Tube to Tube  Page D9	**FA** Faucet Adapter Tube to Faucet  Page D9	**FC** Female Connector Tube to Pipe  Page D9	**FF** Female Flare Tube to Flare  Page D10	**TMC** Tube Stem Adapter Tube Stem to Pipe  Page D10
BU Bulkhead Union Tube to Tube  Page D11	**TEU** Tube Elbow Union Tube to Tube Stem  Page D11	**RD** Tube Reducer Tube to Tube Stem  Page D12	**CAP** Tube Cap  Page D12	**FE** Female Elbow Tube to Tube  Page D12	**ME** Male Elbow Tube to Pipe  Page D13	**ST** Straight Thread Tube to Male O-Ring Boss  Page D13
TCB Tube to Barb Connector  Page D13	**TEB** Tube Elbow Barb Connector  Page D14	**TPL** Plug  Page D14	**TSC** Cartridge Insert  Page D15	**VC** Check Valve  Page D16	**VME** Valve Male Elbow  Page D17	**VFE** Valve Female Elbow  Page D17
VUC Valve Union Connector  Page D18	**VEU** Valve Elbow Union  Page D18	**VMC** Va;ve Male Con- nector  Page D18	**VFC** Valve Female Connector  Page D19	**VTEU** Valve Tube Elbow Union  Page D19	**VTU** Water Supply Valve  Page D20	**TFA** Tube Faucet Adapter (Female Thread)  Page D21
TAF Tube Faucet Adapter (Male Thread)  Page D21	**SC** Safety Clip  Page D21	**TS** Tube Support  Page D21	**PTS** Pipe Thread Seal- ant  Page D21	**AQRT** Quick Release Tool  Page D21		

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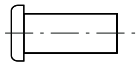
Otsego, Michigan

Fast & Tite®	**MC** Male Connector Tube to Male Pipe  Page D23	**UC** Union Connector Tube to Tube  Page D23	**ME** Male Elbow Tube to Male Pipe  Page D24	**EU** Elbow Union Tube to Tube  Page D24	**BU** Bulkhead Union Tube to Tube  Page D25	**FE** Female Elbow Tube to Female Pipe  Page D25
FC Female Connector Tube to Female Pipe  Page D25	**MR** Male Run Tee Tube to Tube to Male Pipe  Page D26	**TU** Tee Union Tube to Tube  Page D26	**MT** Male branch Tee Tube to Male Pipe  Page D26	**GR** Grab Ring Stainless or Plastic  Page D27	**OR** O-Ring  Page D27	**TS** Tube Support  Page D27
NS Nut & Spacer Sets  Page D27						
Par-Barb®	**TUB** Tee Union  Page D29	**EUB** Elbow Union  Page D29	**MTB** Tee Male Branch  Page D30	**HPL** Hex Head Pipe Plug  Page D30	**MEB** Male Elbow Connector  Page D31	**UCB** Union Connector  Page D31
HPN Hex Pipe Nipple  Page D32	**MCB** Male Connector Adapter  Page D33					

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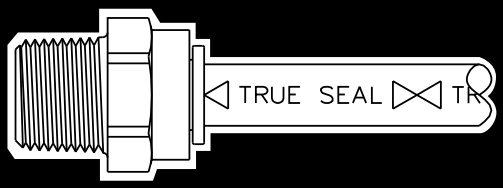
Parker Brass Products Division
Otsego, Michigan



TrueSeal™ Thermoplastic Push-In Fittings

D

The patented* TrueSeal™ push-to-connect thermoplastic fittings are light weight, Field Attachable, and connect to plastic tubing without the use of tools.

Features

- All components in TrueSeal™ fittings are manufactured from FDA compliant materials and are NSF-51 listed for contact with food.
- Gray acetal TrueSeal™ fittings meet NSF-61 requirements for drinking water (potable water) system components.
- All-plastic body designs offer reduced weight, eliminate rust, corrosion, and system contamination in applications where metal components cannot be tolerated.
- Collets are offered in either a patented all-plastic design for use with flexible tubing or with a metal grip edge made from 300 series stainless steel for use on all tubing including copper.
- Extra deep tube seat in fitting body provides support to reduce side-load leakage.
- Elastomer o-ring seal provides positive compression on tubing O.D. in vacuum or pressure applications.
- Removable collet design permits o-ring replacement in the field. Collets are available in colors for easy color coding of systems.
- Tube stem adapters provide a wide range of tube-to-port jump size potential and allow elbows and tees to swivel for positive tube routing alignment. Connections made with metal gripper collets, may require tube stems to be replaced upon reconnection.

Applications

TrueSeal™ fittings find wide acceptance in water conditioning, filtration, and reverse osmosis industries and on water, soft drink, beer, wine, and condiment dispensing equipment. Industrial applications range from vacuum to low-pressure hydraulic and pneumatic systems on robotics, air logic, packaging/filling equipment, and conveyors. Ink and dye transfer, lubrication and cooling lines on presses, machine tools, ion implanting devices—all rely on TrueSeal™.

Standard Materials

Material	Fitting Color	O-Ring
Acetal	Gray	EPDM
Polypropylene	White	EPDM
Kynar®	Natural	Viton

Black nitrile o-rings and colored collets in black, white, red, blue, green, yellow and orange are also available. Consult Division.
KYNAR® is a registered trademark of Atochem North America, Inc.
*U.S. Patent 5,584,513

Note: Provide adequate fail-safe mechanisms such as leakage detection sensors, automatic shut-off controls or other industry and code appropriate fail-safe devices in the design of your water-handling appliance to protect against personal injury and property damage. Plastic fittings containing an o-ring have a finite life depending on the environment, media and severity of the application. Frequent inspections and replacement of the fitting when anomalies are found is recommended.

How to Order

A 4 MC 4 - MG - V

- V — O-Ring Materials (BLANK = Reference Standard Materials, EPDM = Ethylene Propylene, N = Nitrile, V = Fluorocarbon)
- MG — "MG" = Metal Gripper Collet
- 4 — End termination size
- MC — Body Style
- 4 — Tube O.D. in sixteenths of an inch
- A — Fitting body material (A = Acetal, PP = Polypropylene, F = Kynar (PVDF))

Working Pressure

TrueSeal™ fittings are rated for the pressures listed below or at 1/4 (one-fourth) of the rated burst pressure of the tubing being used (whichever is less).

Fitting Size	Acetal	Polypropylene	Kynar®
1/4"	300	150	300
5/16"	300		
3/8"	300	150	300
1/2"	250	150	
Temp. Range	-20°F (-29°C) to +180°F (85°C)	0°F (-18°C) to +225°F (110°C)	0°F (-18°C) to +275°F (135°C)

- These pressure ratings are based on tests conducted with Series NR tubing at 73°F.
- Actual working pressures will be lower at elevated temperatures. Consult division.
- Meets pressure integrity tests of NSF-53 and NSF-58

Tubing

Parker TrueSeal™ fittings with all plastic collets can be used with the following tubing materials: polyethylene, polypropylene, nylon, vinyl, fluoropolymer, and polyurethane (3/8" and 1/2" polyurethane and all sizes of vinyl should use tube supports). TrueSeal™ fittings with metal gripper collets can be used with tubing listed above and soft copper tubing. For stainless steel or glass tubing or all other metal tubing, consult factory.

Tube Sizes	O.D. Tolerance	Insertion Depth
5/32"	±005"	9/16"
1/4"	±005"	11/16"
5/16"	±005"	13/16"
3/8"	±005"	3/4"
1/2"	±005"	7/8"

Assembly Instructions

1. Cut tubing square and clean. (Use a Parker plastic tube cutter, Part No. PTC.)
2. Mark from end of tube the length of insertion (see table above).
3. Push tube into the fitting until it bottoms out.
4. To remove, depress collet and pull tubing out.
5. Use TrueSealant™ (Part No. PTS) on threads.

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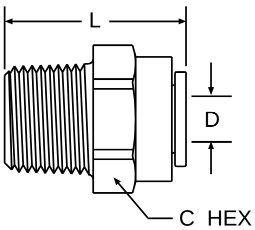
Parker Brass Products Division
Otsego, Michigan

MC - Male Connector
Tube-to-Pipe

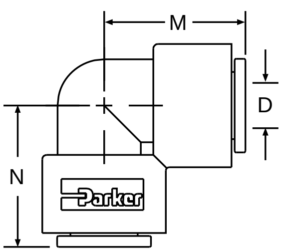


Gray Acetal EPDM Seal	White Polypropylene EPDM Seal	Natural Kynar Fluorocarbon Seal	Nom. Tube O.D.	NPTF Thread Size	C Hex	L Overall Length	D Thru Hole Min.
#	#	#					
A4MC2-MG	PP4MC2	F4MC2	1/4	1/8	11/16	1.28	.175
A4MC4-MG	PP4MC4	F4MC4	1/4	1/4	11/16	1.14	.175
A4MC6-MG	PP4MC6	F4MC6	1/4	3/8	11/16	1.18	.175
A5MC2-MG			5/16	1/8	13/16	1.46	.175
A5MC4-MG			5/16	1/4	13/16	1.41	.188
A5MC6-MG			5/16	3/8	13/16	1.27	.188
A6MC2-MG		F6MC2	3/8	1/8	13/16	1.46	.175
A6MC4-MG	PP6MC4	F6MC4	3/8	1/4	13/16	1.41	.250
A6MC6-MG	PP6MC6	F6MC6	3/8	3/8	13/16	1.27	.250
A6MC8-MG		F6MC8	3/8	1/2	15/16	1.45	.250
A8MC6-MG	PP8MC6		1/2	3/8	15/16	1.65	.360
A8MC8-MG	PP8MC8		1/2	1/2	15/16	1.46	.375

For nonstandard plastic collet, remove -MG suffix.

D

EU - Elbow Union
Tube-to-Tube



Gray Acetal EPDM Seal	White Polypropylene EPDM Seal	Natural Kynar Fluorocarbon Seal	Nom. Tube O.D.	M	N	D Thru Hole Min.
#	#	#				
A4EU4-MG	PP4EU4	F4EU4	1/4	0.87	0.87	.175
A5EU4-MG			5/16-1/4	1.052	0.90	.175
A5EU5-MG			5/16	1.02	1.02	.188
A6EU4-MG	PP6EU4	F6EU4	3/8-1/4	1.02	0.90	.212
A6EU5-MG			3/8-5/16	1.02	1.02	.175
A6EU6-MG	PP6EU6	F6EU6	3/8	1.02	1.02	.250
A8EU6-MG			1/2-3/8	1.20	1.20	.250
A8EU8-MG	PP8EU8		1/2	1.20	1.20	.375

For nonstandard plastic collet, remove -MG suffix.

All sizes in inches.

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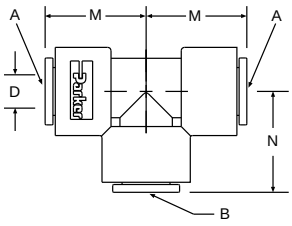
Otsego, Michigan

TU - Tee Union

Tube-to-Tube



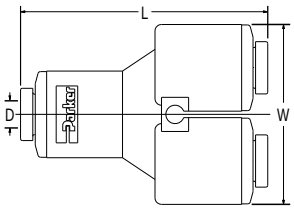
Gray Acetal EPDM Seal	White Polypropylene EPDM Seal	Natural Kynar Fluorocarbon Seal	Nom. Tube O.D.		M	N	D Thru Hole Min.
			Tube A Run	Tube B Stem			
#	#	#					
A4TU4-MG	PP4TU4	F4TU4	1/4	1/4	0.81	0.85	.175
A5TU5-MG			5/16	5/16	1.02	1.02	.188
A6TU4-MG	PP6TU4	F6TU4	3/8	1/4	1.02	1.03	.175
A6TU6-MG	PP6TU6	F6TU6	3/8	3/8	1.02	1.02	.290
A8TU8-MG	PP8TU8		1/2	1/2	1.20	1.20	.375

For nonstandard plastic collet, remove -MG suffix.

D

WY - “Y” Union

Tube-to-Tube



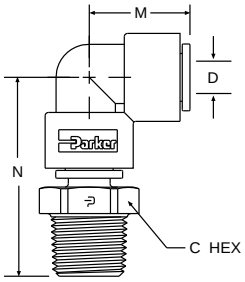
Gray Acetal EPDM Seal	White Polypropylene EPDM Seal	Natural Kynar Fluorocarbon Seal	Nom. Tube O.D.		L	W	D Thru Hole Min.
			Inlet Tube A Run	Outlet Tube B Stem			
#	#	#					
A5WY5-MG			5/16	5/16	2.250	1.75	0.190
A6WY4-MG			3/8	1/4	2.100	1.43	0.190
A6WY5-MG			3/8	5/16	2.200	1.75	0.190
A6WY6-MG			3/8	3/8	2.175	1.75	0.250

All sizes in inches

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

MES - Male Elbow Swivel

Tube-to-Pipe



Gray Acetal EPDM Seal	White Polypropylene EPDM Seal	Natural Kynar Fluorocarbon Seal	Nom. Tube O.D.	NPTF Thread Size	C Hex	M	N	D Thru Hole Min.
#	#	#						
A4MES2-MG	PP4MES2	F4MES2	1/4	1/8	9/16	0.87	1.60	.175
A4MES4-MG	PP4MES4	F4MES4	1/4	1/4	11/16	0.87	1.71	.175
A4MES6-MG	PP4MES6	F4MES6	1/4	3/8	13/16	0.90	1.91	.212
A5MES2-MG			5/16	1/8	9/16	1.02	1.78	.188
A5MES4-MG			5/16	1/4	11/16	1.02	1.90	.188
A5MES6-MG			5/16	3/8	13/16	1.02	1.90	.188
A6MES2-MG		F6MES2	3/8	1/8	9/16	1.02	1.65	.175
A6MES4-MG	PP6MES4	F6MES4	3/8	1/4	13/16	1.02	1.90	.250
A6MES6-MG	PP6MES6	F6MES6	3/8	3/8	13/16	1.02	1.90	.250
A8MES4-MG			1/2	1/4	13/16	1.20	2.10	.240
A8MES6-MG	PP8MES6		1/2	3/8	13/16	1.20	2.10	.375
A8MES8-MG	PP8MES8		1/2	1/2	1	1.20	2.32	.375

*Part consists of elbow union and tube stem adaptor.
Note: Assemblies with metal gripper collets are permanent.
Assemblies with plastic collets can be taken apart.

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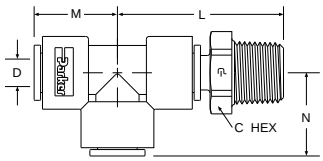
MRS - Male Run Swivel

Tube-to-Pipe



Gray Acetal EPDM Seal	White Polypropylene EPDM Seal	Natural Kynar Fluorocarbon Seal	Nom. Tube O.D.	NPTF Thread Size	C Hex	L	M	N	D Thru Hole Min.
#	#	#							
A4MRS2-MG	PP4MRS2	F4MRS2	1/4	1/8	9/16	1.55	0.81	0.85	.175
A4MRS4-MG	PP4MRS4	F4MRS4	1/4	1/4	11/16	1.67	0.81	0.85	.175
A5MRS2-MG			5/16	1/8	9/16	1.78	1.02	1.02	.188
A5MRS4-MG			5/16	1/4	11/16	1.90	1.02	1.02	.188
A5MRS6-MG			5/16	3/8	13/16	1.90	1.02	1.02	.188
A6MRS4-MG	PP6MRS4	F6MRS4	3/8	1/4	13/16	1.90	1.02	1.02	.250
A6MRS6-MG	PP6MRS6	F6MRS6	3/8	3/8	13/16	1.90	1.02	1.02	.250
A8MRS4-MG			1/2	1/4	13/16	2.10	1.20	1.20	.240
A8MRS6-MG	PP8MRS6		1/2	3/8	13/16	2.10	1.20	1.20	.375
A8MRS8-MG	PP8MRS8		1/2	1/2	1	2.32	1.20	1.20	.375

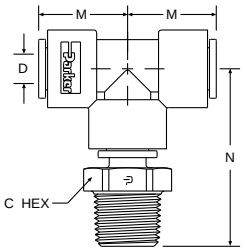
*Part consists of tee union and tube stem adaptor.
Note: Assemblies with metal gripper collets are permanent.
Assemblies with plastic collets can be taken apart.

All sizes in inches

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

MTS - Male Tee Swivel

Tube-to-Pipe

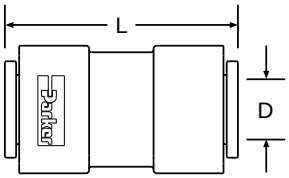


Gray Acetal EPDM Seal	White Polypropyl-ene EPDM Seal	Natural Kynar Fluorocarbon Seal	Nom. Tube O.D.	NPTF Thread Size	C Hex	M	N	D Thru Hole Min.
#	#	#						
A4MTS2-MG	PP4MTS2	F4MTS2	1/4	1/8	9/16	0.81	1.60	.175
A4MTS4-MG	PP4MTS4	F4MTS4	1/4	1/4	11/16	0.81	1.71	.175
A5MTS2-MG			5/16	1/8	9/16	1.02	1.78	.188
A5MTS4-MG			5/16	1/4	11/16	1.02	1.90	.188
A5MTS6-MG			5/16	3/8	13/16	1.02	1.90	.188
A6MTS2-MG		F6MTS2	3/8	1/8	9/16	1.02	1.75	.175
A6MTS4-MG	PP6MTS4	F6MTS4	3/8	1/4	13/16	1.02	1.90	.250
A6MTS6-MG	PP6MTS6	F6MTS6	3/8	3/8	13/16	1.02	1.90	.250
A8MTS4-MG			1/2	1/4	13/16	1.20	2.10	.240
A8MTS6-MG	PP8MTS6		1/2	3/8	13/16	1.20	2.10	.375
A8MTS8-MG	PP8MTS8		1/2	1/2	1	1.20	2.32	.375

*Part consists of tee union and tube stem adaptor.
Note: Assemblies with metal gripper collets are permanent.
Assemblies with plastic collets can be taken apart.

UC - Union Connector

Tube-to-Tube



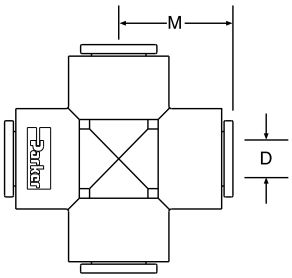
Gray Acetal EPDM Seal	White Polypropylene EPDM Seal	Natural Kynar Fluorocarbon Seal	Nom. Tube O.D.	L Overall Length	D Thru Hole Min.
#	#	#			
A4UC4-MG	PP4UC4	F4UC4	1/4	1.49	.175
A5UC4-MG			5/16-1/4	1.70	.175
A5UC5-MG			5/16	1.70	.188
A6UC4-MG	PP6UC4	F6UC4	3/8-1/4	1.70	.175
A6UC5-MG			3/8-5/16	1.70	.188
A6UC6-MG	PP6UC6	F6UC6	3/8	1.70	.250
A8UC5-MG			1/2-5/16	1.90	.188
A8UC6-MG	PP8UC6		1/2-3/8	1.90	.250
A8UC8-MG	PP8UC8		1/2	1.91	.375

For nonstandard plastic collet, remove -MG suffix.

All sizes in inches

CU - Cross Union

Tube-to-Tube



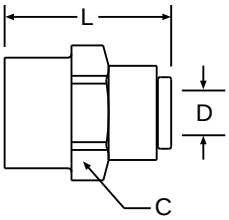
Gray Acetal EPDM Seal	White Polypropylene EPDM Seal	Natural Kynar Fluorocarbon Seal	Nom. Tube O.D.	M	D Thru Hole Min.
#	#	#			
A4CU4-MG			1/4	.91	.175
A6CU6-MG			3/8	1.08	.250

For nonstandard plastic collet, remove -MG suffix.

D

FA - Faucet Adapter

Tube-to-Faucet

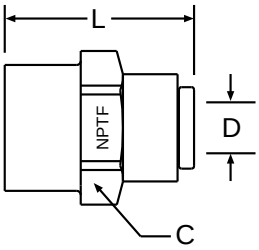


Gray Acetal EPDM Seal	White Polypropylene EPDM Seal	Natural Kynar Fluorocarbon Seal	Nom. Tube O.D.	UNS-2B Thread Size	C Hex	L Overall Length	D Thru Hole Min.
#	#	#					
A4FA7-MG	PP4FA7	F4FA7	1/4	7/16-24	23/32	1.32	.190
A5FA7-MG			5/16	7/16-24	13/16	1.41	.190
A6FA7-MG	PP6FA7	F6FA7	3/8	7/16-24	13/16	1.41	.190

For nonstandard plastic collet, remove -MG suffix.

FC - Female Connector

Tube-to-Pipe



Gray Acetal EPDM Seal	White Polypropylene EPDM Seal	Natural Kynar Fluorocarbon Seal	Nom. Tube O.D.	NPTF Thread Size	C Hex	L Overall Length	D Thru Hole Min.
#	#	#					
A4FC2-MG	PP4FC2	F4FC2	1/4	1/8	11/16	1.20	.175
A4FC4-MG	PP4FC4	F4FC4	1/4	1/4	23/32	1.32	.175
A5FC4-MG			5/16	1/4	13/16	1.41	.188
A5FC6-MG			5/16	3/8	1	1.50	.188
A6FC4-MG	PP6FC4	F6FC4	3/8	1/4	13/16	1.41	.250
A6FC6-MG	PP6FC6	F6FC6	3/8	3/8	1	1.50	.250
A6FC8-MG			3/8	1/2	1-1/8	1.52	.250
A8FC6-MG	PP8FC6		1/2	3/8	1-1/8	1.60	.375
A8FC8-MG	PP8FC8		1/2	1/2	1-1/8	1.75	.375

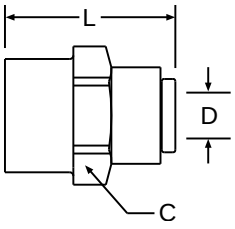
For nonstandard plastic collet, remove -MG suffix.

All sizes in inches

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

FF - 45° Female Flare

Tube-to-Flare

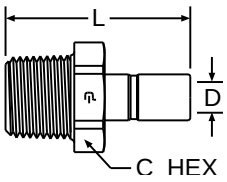


Gray Acetal EPDM Seal	White Polypropylene EPDM Seal	Natural Kynar Fluorocarbon Seal	Nom. Tube O.D.	UNF-2B Thread Size	C Hex	L Overall Length	D Thru Hole Min.
#	#	#					
A4FF4-MG	PP4FF4	F4FF4	1/4	7/16-20	23/32	1.32	.190
A6FF4-MG		F6FF4	3/8	7/16-20	13/16	1.41	.190
A6FF6-MG	PP6FF6	F6FF6	3/8	5/8-18	1	1.50	.250

For nonstandard plastic collet, remove -MG suffix.

TMC - Tube Stem Adapter

Tube Stem-to-Pipe



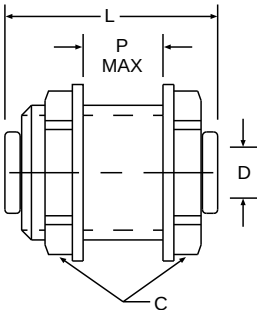
Gray Acetal EPDM Seal	White Polypropylene EPDM Seal	Natural Kynar Fluorocarbon Seal	Nom. Tube O.D.	NPTF Thread Size	C Hex	L Overall Length	D Thru Hole Min.
#	#	#					
A4TMC2	PP4TMC2	F4TMC2	1/4	1/8	9/16	1.44	.175
A4TMC4	PP4TMC4	F4TMC4	1/4	1/4	11/16	1.56	.175
A5TMC2			5/16	1/8	9/16	1.5	.188
A5TMC4			5/16	1/4	11/16	1.67	.188
A5TMC6			5/16	3/8	13/16	1.67	.188
A6TMC4	PP6TMC4	F6TMC4	3/8	1/4	13/16	1.70	.250
A6TMC6	PP6TMC6	F6TMC6	3/8	3/8	13/16	1.70	.250
A8TMC4			1/2	1/4	13/16	1.82	.240
A8TMC6	PP8TMC6		1/2	3/8	13/16	1.82	.375
A8TMC8	PP8TMC8		1/2	1/2	1	2.04	.375

All sizes in inches

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

BU - Bulkhead Union

Tube-to-Tube



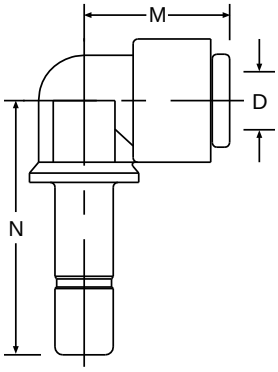
Gray Acetal EPDM Seal	White Polypropylene EPDM Seal	Natural Kynar Fluorocarbon Seal	Nom. Tube O.D.	C1 Hex	C2 Hex	L Overall Length	P Max. Wall Thk.	D Thru Hole Min.	Bulkhead Hole Drill Size
#	#	#							
A4BU4-MG	PP4BU4	F4BU4	1/4	15/16	15/16	1.50	.50	.175	7/8
A5BU5-MG			5/16	1-1/16	1-1/16	1.75	.62	.188	1
A6BU4-MG	PP6BU4		3/8-1/4	1-1/16	1-1/16	1.75	.62	.175	1
A6BU6-MG	PP6BU6	F6BU6	3/8	1-1/16	1-1/16	1.75	.62	.250	1
A8BU8-MG			1/2	1-1/4	1-1/4	2.04	.70	.375	1-1/8

For nonstandard plastic collet, remove -MG suffix.

D

TEU - Tube Elbow Union

Tube-to-Tube Stem



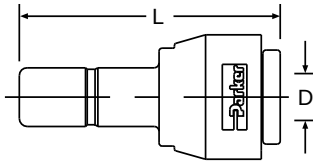
Gray Acetal EPDM Seal	White Polypropylene EPDM Seal	Natural Kynar Fluorocarbon Seal	Nom. Tube O.D.	Tube Stem O.D.	M	N	D Thru Hole Min.
#	#	#					
A4TEU4-MG	PP4TEU4	F4TEU4	1/4	1/4	.84	1.21	.125
A4TEU6-MG		F4TEU6	1/4	3/8	.84	1.35	.125
A5TEU5-MG			5/16	5/16	1.03	1.40	.188
A6TEU4-MG		F6TEU4	3/8	1/4	1.03	1.29	.125
A6TEU6-MG	PP6TEU6	F6TEU6	3/8	3/8	1.03	1.64	.250
A8TEU8-MG	PP8TEU8		1/2	1/2	1.21	1.64	.380

For nonstandard plastic collet, remove -MG suffix.

All sizes in inches

RD - Tube Reducer

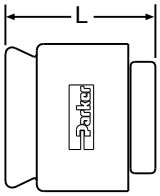
Tube-to-Tube Stem



Gray Acetal EPDM Seal	White Polypropylene EPDM Seal	Natural Kynar Fluorocarbon Seal	Nom. Tube O.D.	Tube Stem O.D.	L	D Thru Hole Min.
#	#	#	◯	◯		
A4RD5-MG	PP4RD5		1/4	5/16	1.62	.18
A4RD6-MG	PP4RD6		1/4	3/8	1.62	.18
A5RD6-MG			5/16	3/8	1.78	.25
A5RD8-MG			5/16	1/2	1.90	.25
A6RD8-MG			3/8	1/2	1.90	.25

For nonstandard plastic collet, remove -MG suffix.

CAP - Tube Cap

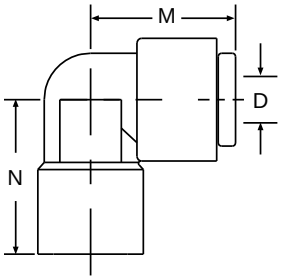


Gray Acetal EPDM Seal	White Polypropylene EPDM Seal	Natural Kynar Fluorocarbon Seal	Nom. Tube O.D.	L Overall Length
#	#	#	◯	
A4CAP-MG	PP4CAP	F4CAP	1/4	0.77
A6CAP-MG	PP6CAP		3/8	0.88

For nonstandard plastic collet, remove -MG suffix.

FE - Female Elbow

Tube-to-Tube



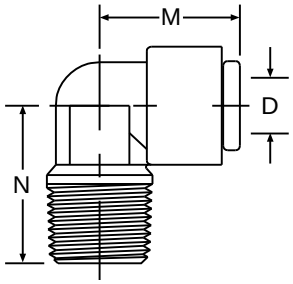
Gray Acetal EPDM Seal	White Polypropylene EPDM Seal	Natural Kynar Fluorocarbon Seal	Nom. Tube O.D.	NPTF Thread Size	M	N	D Thru Hole Min.
#	#	#	◯	∿∿∿			
A4FE4-MG			1/4	1/4	0.84	1.00	.18
A6FE4-MG			3/8	1/4	1.03	1.00	.25
A6FE6-MG			3/8	3/8	1.03	1.00	.25

For nonstandard plastic collet, remove -MG suffix.

All sizes in inches

ME - Male Elbow

Tube-to-Pipe



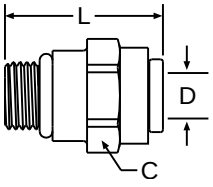
Gray Acetal EPDM Seal	White Polypropylene EPDM Seal	Natural Kynar Fluorocarbon Seal	Nom. Tube O.D.	NPTF Thread Size	M	N	D Thru Hole Min.
#	#	#					
A4ME2-MG	PP4ME2	F4ME2	1/4	1/8	0.84	0.94	.175
A4ME4-MG	PP4ME4	F4ME4	1/4	1/4	0.84	0.94	.175
A4ME6-MG	PP4ME6	F4ME6	1/4	3/8	0.84	1.04	.175
A5ME4-MG			5/16	1/4	1.03	1.08	.175
A5ME6-MG			5/16	3/8	1.03	1.06	.188
A6ME4-MG	PP6ME4	F6ME4	3/8	1/4	1.03	1.08	.250
A6ME6-MG	PP6ME6	F6ME6	3/8	3/8	1.03	1.06	.250

For nonstandard plastic collet, remove -MG suffix.

D

ST - Straight Thread

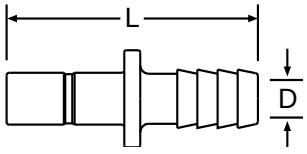
Tube-to-Male O-Ring Boss



Gray Acetal EPDM Seal	White Polypropylene EPDM Seal	Natural Kynar Fluorocarbon Seal	Nom. Tube O.D.	UNF-2B Thread Size	C Hex	L Overall Length	D Thru Hole Min.
#	#	#					
A6ST9-MG		F6ST9 (+)	3/8	9/16-18	13/16	1.39	.250

For nonstandard plastic collet, remove -MG suffix.

TCB - Tube-to-Barb Connector

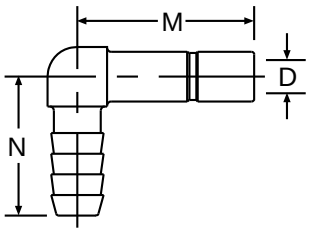


Gray Acetal	White Polypropylene	Natural Kynar	Tube Stem O.D.	Tube I.D.	L Overall Length	D Thru Hole Min.
#	#	#				
A4TCB4	PP4TCB4	F4TCB4	1/4	1/4	1.67	.140
A6TCB4		F6TCB4	3/8	1/4	1.82	.140
A6TCB6	PP6TCB6	F6TCB6	3/8	3/8	1.98	.250
A8TCB6			1/2	3/8	2.10	.250
A8TCB8			1/2	1/2	2.10	.375

All sizes in inches

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

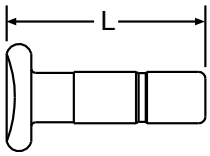
TEB - Tube Elbow Barb Connector



Gray Acetal	White Polypropylene	Natural Kynar	Tube Stem O.D.	Tube I.D.	M	N	D Thru Hole Min.
#	#	#					
A4TEB4	PP4TEB4	F4TEB4	1/4	1/4	0.89	1.00	.140
A6TEB6	PP6TEB6	F6TEB6	3/8	3/8	1.34	1.21	.250
A8TEB8			1/2	1/2	1.30	1.30	.390

D

TPL - Plug



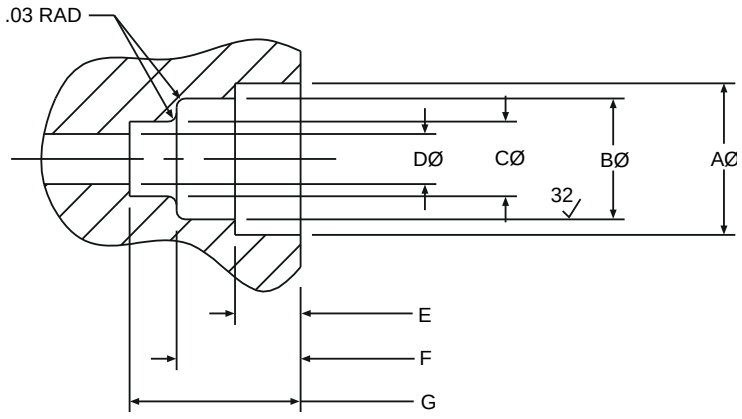
Gray Acetal	White Polypropylene	Natural Kynar	Fitting Size	L Overall Length
#	#	#		
A4TPL	PP4TPL	F4TPL	1/4	0.88
A6TPL	PP6TPL	F6TPL	3/8	1.45
A8TPL	PP8TPL		1/2	1.50

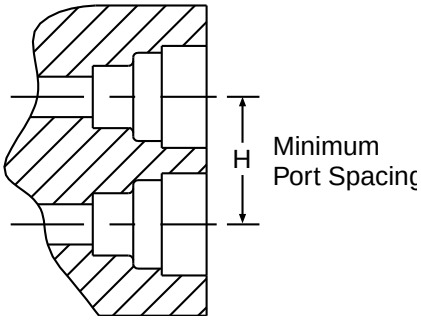
All sizes in inches

TSC - Cartridge Insert

Part Number with EPDM Seal	Nom. Tube O.D.	A* Diameter ±002	B Diameter ±003	C Diameter ±003	D Diameter Minimum	E Depth ±002	F Depth ±002	G Depth ±002	H* Centerline of Ports Minimum
#	◎	∅	∅	∅	∅				
ATSC4-MG	1/4	.528	.421	.260	.19	.230	.435	.600	.670
ATSC6-MG	3/8	.632	.545	.385	.31	.280	.455	.705	.790
ATSC8-MG	1/2	.774	.668	.510	.41	.315	.510	.810	1.250

D





Parker TrueSeal™ Cartridge Inserts:
Allow you to machine or mold a tube connection into your equipment or components. By using cartridge inserts, you will reduce your material and assembly costs, reduce potential leak paths, and give your equipment a new, clean profile by eliminating the need for threaded connections. TSC Cartridge Inserts consist of 1 o-ring, 1 cartridge, and 1 collet.

*Cartridge inserts are rated at 300 psi in ports dimensioned as above and having Noryl as the receiving material. Other materials may have different ratings and require different port dimensions. Consult the Brass Products Division when using polypropylene, unfilled polypropylene, ABS or Nylon.

Assembly Instructions:
Step 1—Machine or mold the receiving orifice as per the above dimensions.

Step 2—Place the cartridge insert squarely onto the prepared port opening making sure that the barbs of the cartridge are going into the hole and the lettering on the face of the cartridge is visible.

Step 3—Using a rubber mallet or press, insert the cartridge into the first gland orifice until its face is flush with the top surface of the port.

Step 4—Insert the o-ring into the cartridge and seat it evenly into the second gland orifice.

Step 5—Insert the collet into the cartridge opening.

Step 6—Insert tubing.

NORYL® is a registered trademark of the General Electric Co.

All sizes in inches

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

TrueSeal Check Valves

Push-to-Connect check valves that ensures protection against reversal of flow. The valves have an arrow molded into the body to indicate the direction of flow. Valves are designed for connection with either thermoplastic or soft metal tubing and are intended for use with liquids only.

Materials of Construction
Body: Acetal
O-ring: EPDM
Metal Grip Edge: 300 Stainless

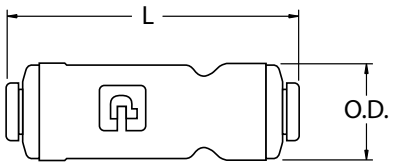
Working Pressure
Up to 150 PSI depending on tubing being used

Temperature Range
+34°F (1° C) to +150°F (65°C)

Cracking Pressure
1/3 PSI

VC – Check Valve

PART NO.	TUBE SIZE	L	O.D.
A4VC4-MG	1/4	2.00	.66
A5VC5-MG	5/16	2.10	.70
A6VC6-MG	3/8	2.15	.80



Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Polypropylene Ball Valves

For proven leak-free performance, specify **Polypropylene Ball Valves**. Their corrosion-resistant, all-plastic design makes them ideal for water filtration units, coffee and beverage machines and a wide variety of other fluid applications. Polypropylene material meets all FDA and NSF-51 requirements for food contact.

Features/Benefits:

- Precision molded, all-plastic design is leak free and corrosion resistant.
- Polypropylene material offers a wider chemical acceptance range, as well as a wide temperature range.
- Bi-directional flow maximizes productivity.
- Full flow design reduces pressure drop across the valve.
- Special o-ring seal ensures a reliable leak-tight connection.
- TrueSeal™ connection reduces potential leaks.

Specifications:

- Temperature range: 0°F to 225°F (-18°C to 107°C).
- O-ring seal material: Nitrile.
- NSF-51 listed.
- Pressure rated to 150 PSI with a 600 PSI burst pressure. Actual working pressures with be lower at elevated temperatures

Advantages:

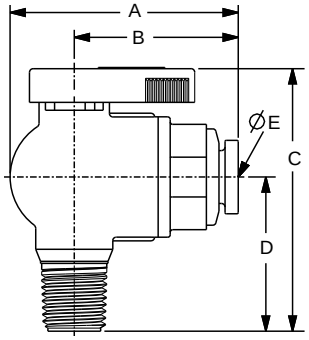
- Reduce costs—Built-in TrueSeal™ connection eliminates the need for a secondary fitting.
- Save space—Low-profile design allows for easy assembly and access where space is at a premium.

D

Assembly Instructions:

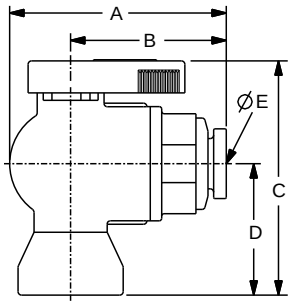
1. Inspect the mating threads for debris or damage. Remove any old fluoropolymer tape or sealant on previously used threads. If threads are damaged, replace with new adapter before proceeding.
2. Apply 2 to 3 wraps of fluoropolymer tape, Parker TrueSealant™ or an NSF/FDA approved silicon sealant. Do not user Plumbers Putty or Pipe Dope. These chemically react with plastic materials and could cause a failure.
3. Align ball valve to mating thread to ensure cross threading does not occur.
4. Screw ball valve onto mating thread 3 to 5 turns. This should be sufficient to properly seal the threads.
5. Pressurize system and check for leaks.

VME - Valve Male Elbow



Part Number	Nom. Tube O.D.	NPTF Thread Size	A	B	C	D	ØE Thru Hole Min.
#							
PP4VME2-MG (+)	1/4	1/8	1.74	1.21	2.00	1.10	.19
PP4VME4-MG	1/4	1/4	1.74	1.21	2.18	1.28	.19
PP4VME6-MG	1/4	3/8	1.74	1.21	2.18	1.28	.19
PP4VME8-MG (+)	1/4	1/2	1.74	1.21	2.37	1.47	.19
PP6VME2-MG (+)	3/8	1/8	1.85	1.32	2.00	1.10	.25
PP6VME4-MG	3/8	1/4	1.85	1.32	2.18	1.28	.25
PP6VME6-MG	3/8	3/8	1.85	1.32	2.18	1.28	.25
PP6VME8-MG	3/8	1/2	1.85	1.32	2.37	1.47	.25

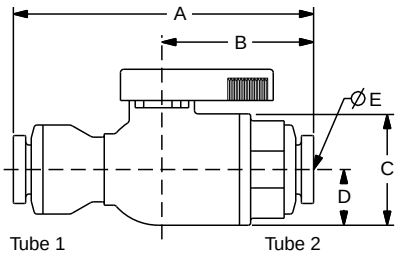
VFE - Valve Female Elbow



Part Number	Nom. Tube O.D.	NPTF Thread Size	A	B	C	D	ØE Thru Hole Min.
#							
PP4VFE2-MG (+)	1/4	1/8	1.74	1.21	1.82	0.92	.19
PP4VFE4-MG	1/4	1/4	1.74	1.21	2.05	1.15	.19
PP4VFE6-MG	1/4	3/8	1.74	1.21	2.18	1.28	.19
PP6VFE2-MG (+)	3/8	1/8	1.85	1.32	1.82	0.92	.25
PP6VFE4-MG	3/8	1/4	1.85	1.32	2.05	1.15	.25
PP6VFE6-MG	3/8	3/8	1.85	1.32	2.18	1.28	.25

(+) Non Standard.

VUC - Valve Union Connector



Part Number	1 Tube Size	2 Tube Size	A	B	C	D	ØE Thru Hole Min.
#							
PP4VUC4-MG	1/4	1/4	2.55	1.22	1.0	0.5	.19
PP4VUC6-MG	1/4	3/8	2.55	1.22	1.0	0.5	.19
PP6VUC4-MG	3/8	1/4	2.57	1.30	1.0	0.5	.19
PP6VUC6-MG	3/8	3/8	2.67	1.32	1.4	0.5	.25

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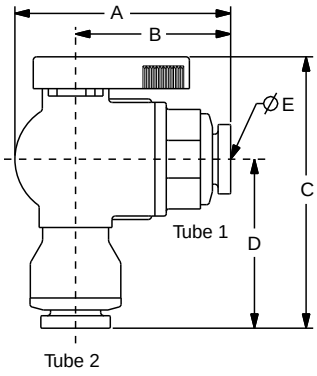
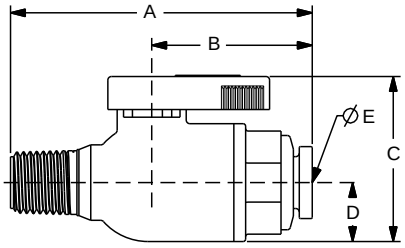
VEU - Valve Elbow Union



Part Number	1 Tube Size	2 Tube Size	A	B	C	D	ØE Thru Hole Min.
#							
PP4VEU4-MG	1/4	1/4	1.75	1.22	2.33	1.42	.19
PP4VEU6-MG	1/4	3/8	1.75	1.22	2.33	1.42	.11
PP6VEU4-MG	3/8	1/4	1.83	1.30	2.32	1.40	.19
PP6VEU6-MG	3/8	3/8	1.85	1.32	2.34	1.44	.25

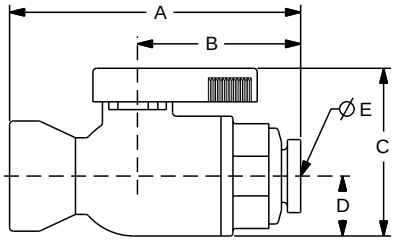
VMC - Valve Male Connector



Part Number	Nom. Tube O.D.	NPTF Thread Size	A	B	C	D	ØE Thru Hole Min.
#							
PP4VMC2-MG (+)	1/4	1/8	2.22	1.21	1.4	0.5	.19
PP4VMC4-MG	1/4	1/4	2.40	1.21	1.4	0.5	.19
PP4VMC6-MG	1/4	3/8	2.40	1.21	1.4	0.5	.19
PP4VMC8-MG (+)	1/4	1/2	2.59	1.21	1.4	0.5	.19
PP6VMC2-MG (+)	3/8	1/8	2.33	1.32	1.4	0.5	.25
PP6VMC4-MG	3/8	1/4	2.51	1.32	1.4	0.5	.25
PP6VMC6-MG	3/8	3/8	2.51	1.32	1.4	0.5	.25
PP6VMC8-MG (+)	3/8	1/2	2.70	1.32	1.4	0.5	.25

(+) Non Standard.

VFC - Valve Female Connector



Part Number	Nom. Tube O.D.	NPTF Thread Size	A	B	C	D	ØE Thru Hole Min.
#							
PP4VFC2-MG	1/4	1/8	2.04	1.21	1.4	0.5	.19
PP4VFC4-MG	1/4	1/4	2.27	1.21	1.4	0.5	.19
PP4VFC6-MG	1/4	3/8	2.40	1.21	1.4	0.5	.19
PP6VFC2-MG	3/8	1/8	2.15	1.32	1.4	0.5	.25
PP6VFC4-MG	3/8	1/4	2.38	1.32	1.4	0.5	.25
PP6VFC6-MG	3/8	3/8	2.51	1.32	1.4	0.5	.25

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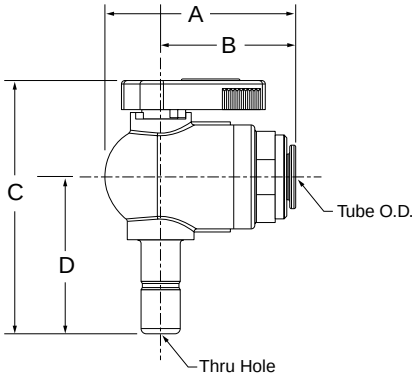
VTEU - Valve Tube Elbow Union



Part Number	Nom. Tube O.D.	Stem	A	B	C	D	ØE Thru Hole Min.
#							
PP4VTEU6-MG	1/4	3/8	1.75	1.22	2.43	1.50	.17
PP6VTEU6-MG	3/8	3/8	1.83	1.30	2.43	1.50	.25

Cold Water Supply Valve

(Patent No. 6,213,149)

Parker's water supply valve is intended for use with Point Of Use water appliances requiring a cold water supply such as POU faucets, instant hot water faucets, reverse osmosis systems and water filtration systems. The Parker TrueSeal™ Cold Water Supply Valve is designed for temporary cold water shut-off to a POU appliance to change filters, tanks or when servicing the appliance — all while maintaining full water flow to the sink or water basin above. When the POU system is removed from service, the Parker TrueSeal™ Cold Water Supply Valve is to be removed also.

TrueSeal™ Cold Water Supply Valves are for cold water service at temperatures above freezing to 125°F ambient. Not for use in hot water service applications.

Features/Benefits:

- Fast, easy installation.
- No pierced lines or saddle hookups.
- Optimum flow to the faucet - full flow porting.
- No need to pierce the supply line.
- Connects 3/8" OD tubing directly to valve.
- 1/2" NPT connections available.
- Excellent resistance to chlorine and other chemicals.
- Integrated handle for easy on/off operation.
- Visual indicator shows open/closed position.

Specifications:

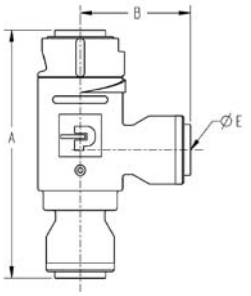
- NSF Standard 51 listed.
- Pressure rating: 150 PSI with a 600 PSI burst pressure.
- Design factor: 4:1
- O-ring seal material: EPDM.
- Meets the pressure integrity test of NSF-53 and NSF-58.

Applications:

- Reverse osmosis systems.
- Under sink filtration systems.
- POU faucets.
- Water supply valves are intended for cold water service at temperatures from above freezing to 125°F ambient.
- NOT for use in hot water service applications.

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

VTU - Water Supply Valve



White Polypropylene	Nom. Tube O.D.	A	B	D Thru Hole Min.
#	◯			
PP6VTU6-MG	3/8	2.92	1.3	.30

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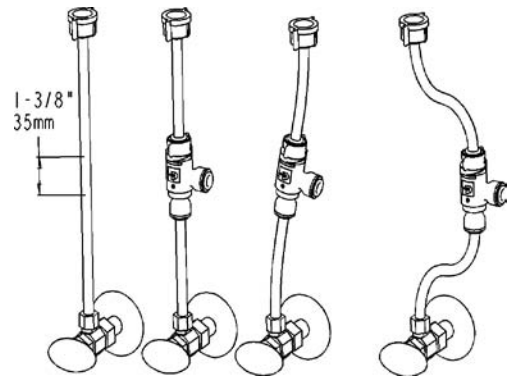
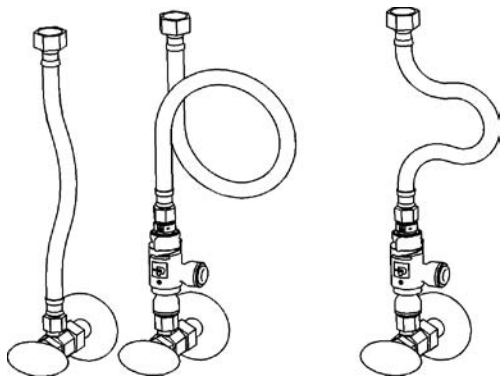
TrueSeal™ Cold Water Supply Valve Assembly Instructions

Installation on Existing Tubing Assembly



Installation on Existing Hose Assembly



For Installation with 3/8" Plastic Tubing:

1. Shut off water at the chrome or brass valve.
2. Disconnect existing tube assembly.
3. Cut out a 1-3/8" (35 mm) section near the center of the existing tubing. Cut the tube squarely and remove any burrs.
4. Place an insertion depth mark 3/4" (19 mm) from the end of each cut on the tubing to be reused. Refer to "TrueSeal Assembly Instructions," Steps 2 and 3, for tubing assembly (reverse side).
5. Reconnect tube assembly with new valve.
6. Make sure new valve is closed before opening water valve. Open valve in Step 1 and check for leaks.
7. Insert 3/8" tubing from water appliance into side port.
8. Open new valve by turning pointer to large end of flow indicator.

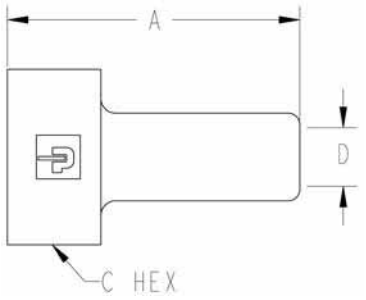
For Installation with Flexible Hose:

1. Shut off water at the chrome or brass valve.
2. Disconnect one end of existing hose assembly.
3. Place the appropriate adapters on the chrome or brass valve and the hose end.
4. Tighten adapter on chrome or brass valve finger tight plus 1/2 turn. Do not over tighten.
5. Push tube portion of adapters into top and bottom of valve until bottomed out. Hose should not be kinked. A longer hose assembly might be required if a gently loop cannot be made.
6. Make sure new valve is closed before opening water valve. Pointer will be at the small end of triangle flow indicator. Open valve in Step 1 and check for leaks.
7. Insert 3/8" tubing form water appliance into side port.
8. Open new valve by turning pointer to large end of flow indicator.

Water Supply Valve Kits

Part No.	Connects to:	Kit Contains
WSV4-Kit	1/4” Compression Valve	AW6TAF7-MG, AW6TFA7-MG, PP6VTU6-MG
WSV6-Kit	3/8” Compression Valve	AW6TAF9-MG, AW6TFA9-MG, PP6VTU6-MG
WSV8-Kit	1/2” NPSM Faucet Stem	AW6TAF8-MG, AW6TFA8-MG, PP6VTU6-MG

TFA - Tube Faucet Adapter (Female Thread)



White Acetal #	Tube Stem O.D.	Thread Size	A	C Hex	D Min.
AW6TFA7-MG	3/8	7/16-24	1.25	.69	.17
AW6TFA8-MG	3/8	1/2-14 NPSM	1.45	1.06	.22
AW6TFA9-MG	3/8	9/16-24	1.25	.75	.22

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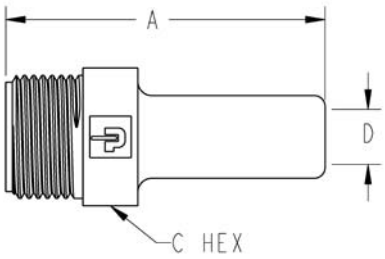
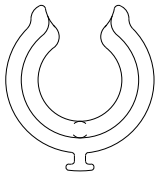
TAF - Tube Faucet Adapter (Male Thread)



White Acetal #	Tube Stem O.D.	Thread Size	A	C Hex	D Min.
AW6TAF7-MG	3/8	7/16-24	1.41	.50	.22
AW6TAF8-MG	3/8	1/2-14 NPSM	1.65	.88	.22
AW6TAF9-MG	3/8	9/16-24	1.45	.63	.22

SC - Safety Clip

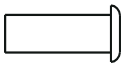
(Patent No. 6,065,779)



Standard color is black or blue. Other colors available upon request.

Part Number #	Part Number #	For Nominal Tube O.D.
SC-4	SC-4-B	1/4
SC-5	SC-5-B	5/16
SC-6	SC-6-B	3/8
SC-8	SC-8-B	1/2

TS - Tube Supports



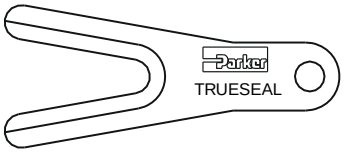
To be used with soft durometer tubing.

Nylon Part Number #	Polypropylene Part Number #
N4TS3	P4TS3
N5TS3	P5TS3
N6TS4	P6TS4
N8TS6	P8TS6

PTS - Pipe Thread Sealant

NSF-51listed silicone.

AQRT - Quick Release Tool



Makes disconnection of tube adapters and tubing a breeze.

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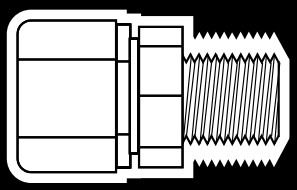
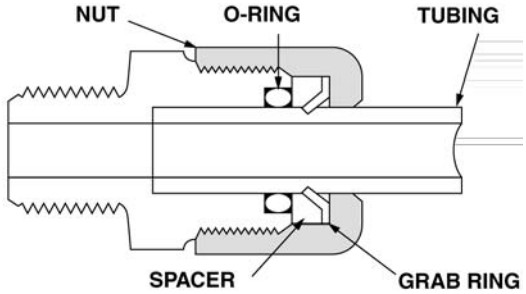
Parker Brass Products Division
Otsego, Michigan



Fast & Tite® Thermoplastic Fittings

D

Fast & Tite® fittings are the most complete line of plastic fittings for thermoplastic tubing in the industry.



Fast & Tite® thermoplastic tube fittings from Parker will prove to be the answer to your tubing connector needs. Patented Fast & Tite® fittings install in seconds without tools and provide a tight, sure, leak proof seal without clamps or adjustments. A unique 302 stainless steel grab ring for tube retention, coupled with a Nitrile O-Ring for positive seal, assures good tube connection with only hand tight assembly. A plastic grab ring is also available upon special request. Vibration or tube movement will not break the seal and cause leakage. Preassembled in either highly inert polypropylene, or strong, durable nylon, Fast & Tite® fittings are the answer to full flow thermoplastic tubing system requirements.

When necessary, Fast & Tite® fittings can be disassembled by hand for fast system drainage. Fittings are completely Field Attachable. Parts are easily replaced. O-Rings are standard size and universally available. (For applications requiring other than Nitrile O-Rings, consult your Fast & Tite® distributor.)

Use Fast & Tite® fittings with Parker Parflex tubing or other plastic, glass or metal tubing for low pressure or vacuum lines up to the pressure limits shown below. When using clear vinyl tubing or urethane tubing, it is necessary to use a TS tube support. A tube support can be used with any tubing for maximum holding power where tensiling, vibration or pressure spikes may occur.

Fast & Tite® fittings meet FDA and NSF-51 requirements for food contact.

Working Pressures for Fast & Tite® Fittings

Air-Oil-Water Pressure in PSI			
Tube O. D., in.	Up to 75°F	76° to 125°F	126° to 175°F
1/4	300	300	300
5/16	300	300	300
3/8	250	250	150
1/2	200	200	150
5/8	150	100	50

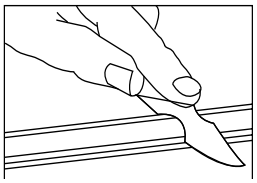
Ratings are based on use with copper tubing, and in all cases represent the maximum recommended working pressure of the fitting only. Working pressures (vs. temperatures) of other types of tubing may limit the tube and fitting assembly to pressures lower than shown above. Consult factory for recommendations on applications other than shown above.

Temperature Range:

Black/White Polypropylene: 0°F (-18°C) to +212°F (+100°C)White Nylon: -40°F (-40°C) to +200°F (+93°C)

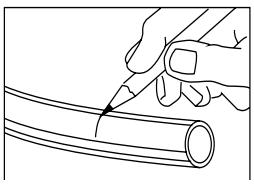
Fast Assembly

Step 1.
Cut the tube squarely and remove any burrs.



Tube O.D. (in.)	Insertion Length with Tube Support (in.)	Insertion Length without Tube Support (in.)
1/4	5/8	9/16
5/16	5/8	9/16
3/8	13/16	3/4
1/2	7/8	13/16
5/8	1	15/16

Step 2.
Mark from end of tube the length of insertion. If using a tube support, insert fully into tube and then mark from end of tube support length of insertion. (See table below)



Step 3.
Loosen nut on fitting until three threads are visible. Fittings for glass tubes must be disassembled and the grab ring removed. If the fitting has been disassembled the components are to be placed in the following order: fitting body, o-ring, spacer, grab ring and nut. Assemble the nut until three threads are showing on the body before inserting tube.

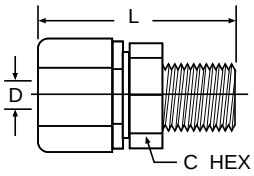
Step 4.
Moisten end of the tube with water. Push the tube Straight into fitting until it bottoms on the fitting's shoulder. Tighten nut by hand. Additional tightening should not be necessary, but 1/4 additional turn may be added if desired. Do not overtighten nut as the threads will strip and the fitting will not function properly. A proper assembly will not show the insertion mark extending beyond the nut. If the insertion mark is visible, then steps 1 thru 4 must be repeated.

Note: Provide adequate fail-safe mechanisms such as leakage detection sensors, automatic shut-off controls or other industry and code appropriate fail-safe devices in the design of your water-handling appliance to protect against personal injury and property damage. Plastic fittings containing an o-ring have a finite life depending on the environment, media and severity of the application. Frequent inspections and replacement of the fitting when anomalies are found is recommended.

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

MC - Male Connector

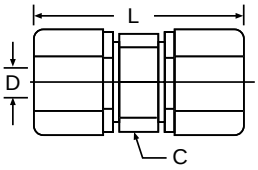
Tube to male pipe



White Polypropylene Part Number	Black Polypropylene Part Number	White Nylon Part Number	Nom. Tube O.D.	NPTF Thread Size	C Hex	L Overall Length	D Thru Hole Min.
#	#	#					
W4MC2	P4MC2	N4MC2	1/4	1/8	11/16	1.38	.170
W4MC4	P4MC4	N4MC4	1/4	1/4	11/16	1.51	.170
W4MC6 (+)	P4MC6 (+)	N4MC6 (+)	1/4	3/8	11/16	.148	.170
W5MC2 (+)	P5MC2	N5MC2	5/16	1/8	11/16	1.38	.170
W5MC4 (+)	P5MC4	N5MC4	5/16	1/4	11/16	1.50	.250
W6MC2 (+)	P6MC2	N6MC2	3/8	1/8	13/16	1.50	.170
W6MC4	P6MC4	N6MC4	3/8	1/4	13/16	1.67	.250
W6MC6	P6MC6	N6MC6	3/8	3/8	13/16	1.67	.250
W6MC8 (+)	P6MC8	N6MC8	3/8	1/2	1	1.78	.250
W6MC12	P6MC12	N6MC12	3/8	3/4	1	1.84	.250
W8MC2 (+)	P8MC2	N8MC2	1/2	1/8	1	1.61	.170
W8MC4 (+)	P8MC4	N8MC4	1/2	1/4	1	1.74	.250
W8MC6	P8MC6	N8MC6	1/2	3/8	1	1.74	.375
W8MC8	P8MC8	N8MC8	1/2	1/2	1	1.87	.375
W8MC12 (+)	P8MC12	N8MC12	1/2	3/4	1	1.89	.375
W10MC2 (+)	P10MC2	N10MC2	5/8	1/8	1-18	1.75	.170
W10MC4 (+)	P10MC4	N10MC4	5/8	1/4	1-18	1.90	.250
W10MC6 (+)	P10MC6	N10MC6	5/8	3/8	1-18	1.90	.375
W10MC8 (+)	P10MC8	N10MC8	5/8	1/2	1-18	2.01	.500
W10MC12 (+)	P10MC12	N10MC12	5/8	3/4	1-18	2.04	.500

UC - Union Connector

Tube to tube



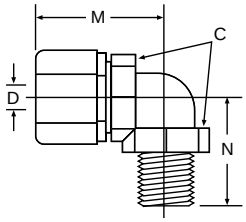
White Polypropylene Part Number	Black Polypropylene Part Number	White Ny-lon Part Number	Nom. Tube O.D.	C Hex	L Overall Length	D Thru Hole Min.
#	#	#				
W4UC4	P4UC4	N4UC4	1/4	11/16	1.62	.170
W5UC4 (+)	P5UC4	N5UC4	5/16-1/4	11/16	1.62	.170
W5UC5 (+)	P5UC5	N5UC5	5/16	11/16	1.62	.190
W6UC4	P6UC4	N6UC4	3/8-1/4	13/16	1.80	.170
W6UC5 (+)	P6UC5	N6UC5	3/8-5/16	13/16	1.80	.190
W6UC6	P6UC6	N6UC6	3/8	13/16	1.92	.250
W8UC6	P8UC6	N8UC6	1/2-3/8	1	1.95	.250
W8UC8	P8UC8	N8UC8	1/2	1	2.03	.375
W10UC6 (+)	P10UC6	N10UC6	5/8-3/8	1-18	2.19	.250
W10UC8 (+)	P10UC8	N10UC8	5/8-1/2	1-1/8	2.24	.375
W10UC10 (+)	P10UC10	N10UC10	5/8	1-1/8	2.40	.500

(+) Non Standard. see page XX for information on non-standard products.

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

ME - Male Elbow

Tube to male pipe

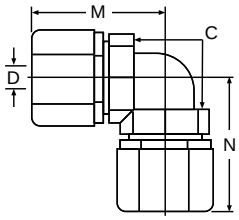


D

White Polypropylene Part Number	Black Polypropylene Part Number	White Nylon Part Number	Nom. Tube O.D.	NPTF Thread Size	C Hex	M	N	D Thru Hole Min.
#	#	#						
W4ME2	P4ME2	N4ME2	1/4	1/8	3/4	1.06	0.81	.170
W4ME4	P4ME4	N4ME4	1/4	1/4	3/4	1.06	1.02	.170
W4ME6	P4ME6	N4ME6	1/4	3/8	3/4	1.06	1.02	.170
W5ME2 (+)	P5ME2	N5ME2	5/16	1/8	3/4	1.06	0.81	.193
W5ME4 (+)	P5ME4	N5ME4	5/16	1/4	3/4	1.06	1.02	.193
W5ME6 (+)	P5ME6	N5ME6	5/16	3/8	3/4	1.06	1.02	.193
W6ME4	P6ME4	N6ME4	3/8	1/4	7/8	1.28	1.12	.250
W6ME6	P6ME6	N6ME6	3/8	3/8	7/8	1.28	1.12	.250
W6ME8	P6ME8	N6ME8	3/8	1/2	1	1.28	1.34	.250
W6ME12 (+)	P6ME12	N6ME12	3/8	3/4	1-3/16	1.59	1.40	.250
W8ME4 (+)	P8ME4	N8ME4 (+)	1/2	1/4	1-1/16	1.48	1.22	.250
W8ME6	P8ME6	N8ME6	1/2	3/8	1-1/16	1.56	1.21	.375
W8ME8	P8ME8	N8ME8	1/2	1/2	1-1/16	1.56	1.34	.375
W8ME12 (+)	P8ME12 (+)	N8ME12 (+)	1/2	3/4	1-1/8	1.50	1.40	.375
W10ME8 (+)	P10ME8	N10ME8	5/8	1/2	1-3/16	1.72	1.40	.500

EU - Elbow Union

Tube to tube



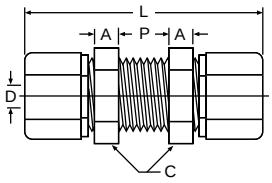
White Polypropylene Part Number	Black Polypropylene Part Number	White Ny-lon Part Number	Nom. Tube O.D.	C Hex	M	N	D Thru Hole Min.
#	#	#					
W4EU4	P4EU4	N4EU4	1/4	3/4	1.06	1.06	.170
W5EU4 (+)	P5EU4	N5EU4	5/16-1/4	3/4	1.06	1.06	.170
W5EU5 (+)	P5EU5	N5EU5	5/16	3/4	1.06	1.06	.193
W6EU4	P6EU4	N6EU4	3/8-1/4	7/8	1.06	1.28	.170
W6EU5 (+)	P6EU5	N6EU5	3/8-5/16	7/8	1.06	1.28	.170
W6EU6	P6EU6	N6EU6	3/8	7/8	1.28	1.28	.250
W8EU6	P8EU6	N8EU6	1/2-3/8	1-1/16	1.37	1.56	.250
W8EU8	P8EU8	N8EU8	1/2	1-1/16	1.56	1.56	.375
W10EU10 (+)	P10EU10	N10EU10	5/8	1-3/16	1.72	1.72	.500

(+) Non Standard. see page XX for information on non-standard products.

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

BU - Bulkhead Union

Tube to tube

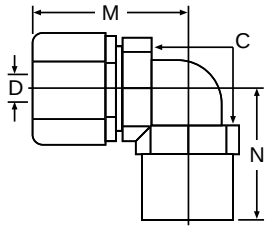


White Polypropylene Part Number	Black Polypropylene Part Number	White Nylon Part Number	Nom. Tube O.D.	A Ref.	C Hex	L Overall Length	P Max.	D Thru Hole Min.	Bulkhead Hole Drill Size
#	#	#	◯		⬡				
W4BU4	P4BU4	N4BU4	1/4	1/4	13/16	2-11/64	3/8	.170	21/32
W5BU5 (+)	P5BU5	N5BU5	5/16	1/4	13/16	2-11/64	3/8	.187	21/32
W6BU6	P6BU6	N6BU6	3/8	9/32	15/16	2-39/64	1/2	.250	25/32
W8BU8	P8BU8	N8BU8	1/2	5/16	1-5/32	2-3/4	1/2	.375	31/32

D

FE - Female Elbow

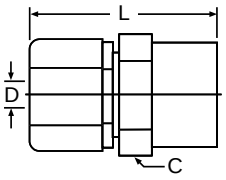
Tube to female pipe



White Polypropylene Part Number	Black Polypropylene Part Number	White Nylon Part Number	Nom. Tube O.D.	NPTF Thread Size	C Hex	M	N	D Thru Hole Min.
#	#	#	◯	⌇⌇⌇	⬡			
W4FE2	P4FE2	N4FE2	1/4	1/8	11/16	1.10	0.84	.170
W4FE4	P4FE4	N4FE4	1/4	1/4	11/16	1.10	0.94	.170
W5FE2 (+)	P5FE2	N5FE2	5/16	1/8	11/16	1.10	0.84	.193
W6FE4	P6FE4	N6FE4	3/8	1/4	13/16	1.30	1.06	.250
W6FE6	P6FE6	N6FE6	3/8	3/8	13/16	1.30	1.03	.250
W8FE6 (+)	P8FE6	N8FE6	1/2	3/8	1	1.50	1.16	.375
W8FE8	P8FE8	N8FE8	1/2	1/2	1	1.50	1.27	.375
W10FE8 (+)	P10FE8	N10FE8	5/8	1/2	1-1/8	1.70	1.34	.500

FC - Female Connector

Tube to female pipe



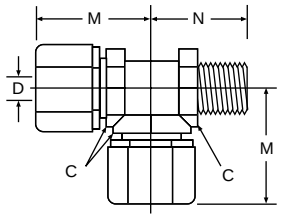
White Polypropylene Part Number	Black Polypropylene Part Number	White Nylon Part Number	Nom. Tube O.D.	NPTF Thread Size	C Hex	L Overall Length	D Thru Hole Min.
#	#	#	◯	⌇⌇⌇	⬡		
W4FC2	P4FC2	N4FC2	1/4	1/8	11/16	1.30	.170
W4FC4	P4FC4	N4FC4	1/4	1/4	11/16	1.40	.170
W6FC4	P6FC4	N6FC4	3/8	1/4	1	1.57	.250
W6FC6	P6FC6	N6FC6	3/8	3/8	1-1/8	1.57	.250
W6FC8 (+)	P6FC8	N6FC8	3/8	1/2	1-1/8	1.67	.250
W8FC6	P8FC6	N8FC6	1/2	3/8	1	1.66	.375
W8FC8	P8FC8	N8FC8	1/2	1/2	1-1/8	1.78	.375
W10FC8 (+)	P10FC8	N10FC8	5/8	1/2	1-1/8	1.95	.500

(+) Non Standard. see page XX for information on non-standard products.

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

MR - Male Run Tee

Tube to male pipe

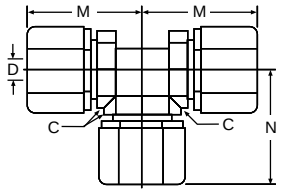


White Polypropylene Part Number	Black Polypropylene Part Number	White Nylon Part Number	Nom. Tube O.D.	NPTF Thread Size	C Hex	M	N	D Thru Hole Min.
#	#	#						
W4MR2	P4MR2	N4MR2	1/4	1/8	11/16	1.09	0.89	.170
W6MR4	P6MR4	N6MR4	3/8	1/4	13/16	1.30	1.17	.250
W8MR6	P8MR6	N8MR6	1/2	3/8	1	1.46	1.28	.375
W10MR8 (+)	P10MR8	N10MR8	5/8	1/2	1-1/8	1.68	1.50	.500

D

TU - Tee Union

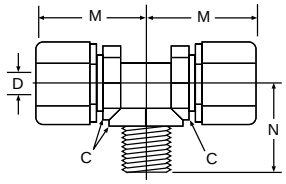
Tube to tube



White Polypropylene Part Number	Black Polypropylene Part Number	White Nylon Part Number	Nom. Tube O.D.	C Hex	M	N	D Thru Hole Min.
#	#	#					
W4TU4	P4TU4	N4TU4	1/4	11/16	1.09	1.09	.170
W5TU5 (+)	P5TU5	N5TU5	5/16	11/16	1.09	1.09	.187
W6TU6	P6TU6	N6TU6	3/8	13/16	1.30	1.30	.250
W8TU6 (+)	P8TU6	N8TU6	1/2-3/8	1	1.46	1.39	.250
W8TU8	P8TU8	N8TU8	1/2	1	1.46	1.46	.375
W10TU6 (+)	P10TU6	N10TU6	5/8-3/8	1-1/8	1.68	1.46	.250
W10TU10 (+)	P10TU10	N10TU10	5/8	1-3/16	1.68	1.68	.500

MT - Male Branch Tee

Tube to male pipe



White Polypropylene Part Number	Black Polypropylene Part Number	White Nylon Part Number	Nom. Tube O.D.	NPTF Thread Size	C Hex	M	N	D Thru Hole Min.
#	#	#						
W4MT2	P4MT2	N4MT2	1/4	1/8	11/16	1.09	0.89	.170
W4MT4	P4MT4	N4MT4	1/4	1/4	11/16	1.09	1.06	.170
W5MT2 (+)	P5MT2	N5MT2	5/16	1/8	11/16	1.09	0.89	.170
W5MT4 (+)	P5MT4	N5MT4	5/16	1/4	11/16	1.09	1.06	.187
W6MT4	P6MT4	N6MT4	3/8	1/4	13/16	1.30	1.12	.250
W6MT6	P6MT6	N6MT6	3/8	3/8	13/16	1.30	1.10	.250
W8MT6	P8MT6	N8MT6	1/2	3/8	1	1.46	1.22	.375
W8MT8	P8MT8	N8MT8	1/2	1/2	1	1.46	1.43	.375
W10MT8 (+)	P10MT8	N10MT8	5/8	1/2	1-1/8	1.68	1.41	.500

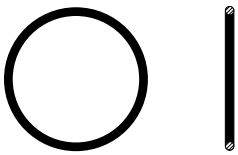
(+) Non Standard. see page XX for information on non-standard products.

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

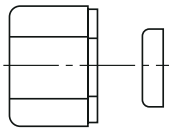
GR - Grab Ring (Stainless or Plastic)

Stainless Grab Ring Part Number	Plastic Grab Ring Part Number	O-Ring Part Number	For Nom. Tube O.D.
#	#	#	◯
4GR	4GRP	4OR	1/4
5GR	5GRP	5OR	5/16
6GR	6GRP	6OR	3/8
8GR	8GRP	8OR	1/2
10GR	10GRP	10OR	5/8

OR - O-Ring

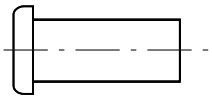


NS - Nut and Spacer Sets

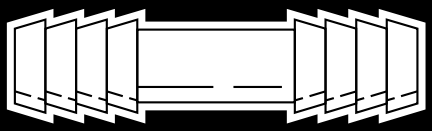


White Polypropylene Part Number	Black Polypropylene Part Number	White Nylon Part Number	For Nom. Tube O.D.
#	#	#	
W4NS	P4NS	N4NS	1/4
W5NS	P5NS	N5NS	5/16
W6NS	P6NS	N6NS	3/8
W8NS	P8NS	N8NS	1/2
W10NS	P10NS	N10NS	5/8

TS - Tube Support



Polypropylene Part Number	Nylon Part Number	For Tube Part Number
#	#	
P4TS3	N4TS3	PV43
P5TS3	N5TS3	PV53
P6TS4	N6TS3	PV64
P8TS6	N8TS6	PV86
P10TS8	N10TS8	PV108



D Par-Barb® Thermoplastic Fittings

Par-Barb® fittings are precision injection molded from high-strength, chemically inert, thermoplastic materials.

The specially engineered four-barb design generates the maximum gripping and sealing power when combined with a hose clamp. The unique barb design requires the tube or hose to expand slightly to accept the fitting, providing a positive seal on the barbs.

Par-Barb® fittings are widely used with Parflex clear vinyl tubing, urethane tubing and a variety of rubber tubing and hose. Par-Barb® fittings meet FDA and NSF-51 specifications for food contact.

Par-Barb® is recommended in medical, pollution control, food and beverage applications. Other uses include irrigation, instrumentation, reverse osmosis and deionized water systems.

Temperature range:
Black Polyethylene: -65°F (-54°C) to +190°F (+88°C.)
White Nylon: -40°F (-40°C) to +200°F (+93°C.)

Working pressures:
Par-Barb® fittings are generally used in systems where pressures do not exceed 125 PSI. When used in excess of 125 PSI, Par-Barb® fittings, in all sizes, should be tested by the customer in his particular application. Operating pressures of Par-Barb® fittings are governed by ambient and fluid temperatures, type of fluid conveyed, hose or tubing used, clamping mechanism employed and conditions of mechanical abuse.

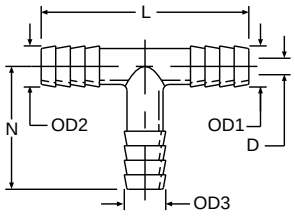
How to order Par-Barb® fittings:

P 4 TU B 2

- 2 — I. D. of Tubing on stem in sixteenths of an in.
- B — Barb
- TU — Style Tee Union (TU)
- 4 — I. D. of tubing on Tee in sixteenths of an in.
- P — Polyethylene

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

TUB - Tee Union

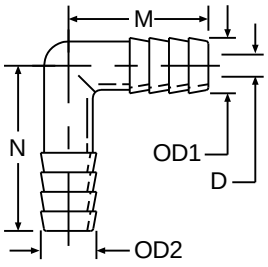


Black High Density Linear Polyethylene Part Number	White Nylon Part Number	Tube or Hose I.D. 1&2	Tube or Hose I.D. 3	O.D. 1&2	O.D. 3	L	N	D Flow Diameter
#	#	○	○	○	○			∅
P2TUB2	N2TUB2	1/8	1/8	.141	.141	1.203	0.594	.078
P3TUB3	N3TUB3	3/16	3/16	.245	.245	1.941	1.256	.106
P4TUB3 (+)	N4TUB3	1/4	3/16	.308	.245	2.004	1.256	.106
P4TUB4	N4TUB4	1/4	1/4	.308	.308	2.004	1.256	.153
P5TUB5	N5TUB5	5/16	5/16	.361	.361	2.058	1.256	.215
P6TUB3 (+)	N6TUB3 (+)	3/8	3/16	.425	.245	1.941	1.256	.106
P6TUB4	N6TUB4	3/8	1/4	.425	.308	2.121	1.256	.153
P6TUB6	N6TUB6	3/8	3/8	.425	.425	2.134	1.256	.247
P6TUB8	N6TUB8	3/8	1/2	.425	.550	2.121	1.256	.247
P8TUB4 (+)	N8TUB4 (+)	1/2	1/4	.550	.308	2.246	1.256	.153
P8TUB6	N8TUB6	1/2	3/8	.550	.425	2.248	1.256	.247
P8TUB8	N8TUB8	1/2	1/2	.550	.550	2.248	1.256	.372
P10TUB8	N10TUB8	5/8	1/2	.644	.550	2.340	1.256	.372
P10TUB10	N10TUB10	5/8	5/8	.644	.644	2.340	1.256	.465

*P2UCB2, P2TUB2, P12HPN6 are not FDA compliant.

D

EUB - Elbow Union

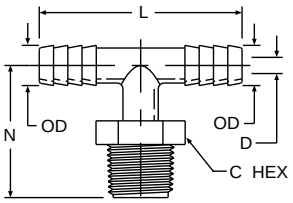


Black High Density Linear Polyethylene Part Number	White Nylon Part Number	Tube or Hose I.D.		O.D. 1	O.D. 2	M	N	D Flow Diameter
		1	2					
#	#	○	○	○	○			∅
P4EUB4	N4EUB4	1/4	1/4	.308	.308	1.002	1.256	.153
P6EUB6	N6EUB6	3/8	3/8	.425	.425	1.060	1.256	.247
P8EUB4	N8EUB4	1/2	1/4	.550	.308	1.002	1.256	.153
P8EUB6	N8EUB6	1/2	3/8	.550	.425	1.060	1.256	.247
P8EUB8	N8EUB8	1/2	1/2	.550	.550	1.123	1.256	.372
P10EUB10	N10EUB10	5/8	5/8	.644	.644	1.170	1.256	.465
P12EUB12	N12EUB12	3/4	3/4	.788	.788	1.242	1.256	.606

(+) Non Standard. see page XX for information on non-standard products.

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

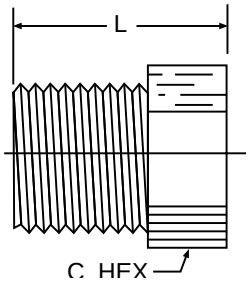
MTB - Tee Male Branch



Black High Density Linear Polyethylene Part Number	White Nylon Part Number	Tube or Hose I.D.	NPTF Pipe Thread Size	O.D.	C Hex	L	N	D Flow Diameter
#	#							
P3MTB2	N3MTB2	3/16	1/8	.245	7/16	1.941	1.187	.106
P3MTB4	N3MTB4	3/16	1/4	.245	9/16	1.941	1.406	.106
P4MTB2	N4MTB2	1/4	1/8	.308	7/16	2.004	1.187	.153
P4MTB4	N4MTB4	1/4	1/4	.308	9/16	2.004	1.406	.153
P4MTB6	N4MTB6	1/4	3/8	.308	11/16	2.004	1.436	.153
P6MTB4	N6MTB4	3/8	1/4	.425	9/16	2.121	1.406	.247
P6MTB6	N6MTB6	3/8	3/8	.425	11/16	2.121	1.436	.247
P6MTB8	N6MTB8	3/8	1/2	.425	7/8	2.121	1.626	.247
P8MTB4	N8MTB4	1/2	1/4	.550	9/16	2.246	1.406	.281
P8MTB6	N8MTB6	1/2	3/8	.550	11/16	2.246	1.436	.372
P8MTB8	N8MTB8	1/2	1/2	.550	7/8	2.246	1.626	.372
P12MTB12	N12MTB12 (+)	3/4	3/4	.788	1-1/8	2.484	1.636	.606

D

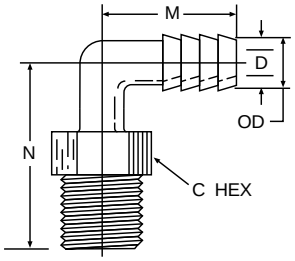
HPL - Hex Head Pipe Plug



Black High Density Linear Polyethylene Part Number	White Nylon Part Number	NPTF Pipe Thread Size	C Hex	L Overall Length
#	#			
P2HPL	N2HPL	1/8	7/16	0.660
P4HPL	N4HPL	1/4	9/16	0.880
P6HPL	N6HPL	3/8	11/16	0.905
P8HPL	N8HPL	1/2	7/8	1.092
P12HPL	N12HPL	3/4	1-1/8	1.115

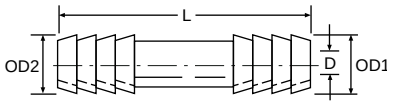
(+) Non Standard. see page XX for information on non-standard products.

MEB - Male Elbow Connector



Black High Density Linear Polyethylene Part Number	White Nylon Part Number	Tube or Hose I.D.	NPTF Pipe Thread Size	O.D.	C Hex	M	N	D Flow Diameter
#	#	○	⌇⌇⌇	○	⬡			∅
P3MEB2	N3MEB2	3/16	1/8	.245	7/16	1.971	1.186	.106
P3MEB4	N3MEB4	3/16	1/4	.245	9/16	1.971	1.406	.106
P4MEB2	N4MEB2	1/4	1/8	.308	7/16	1.002	1.186	.153
P4MEB4	N4MEB4	1/4	1/4	.308	9/16	1.002	1.406	.153
P4MEB6	N4MEB6	1/4	3/8	.308	11/16	1.002	1.436	.153
P4MEB8	N4MEB8	1/4	1/2	.308	7/8	1.002	1.626	.153
P4MEB12	N4MEB12	1/4	3/4	.308	1-1/8	1.002	1.636	.153
P6MEB2	N6MEB2	3/8	1/8	.425	7/16	1.060	1.186	.247
P6MEB4	N6MEB4	3/8	1/4	.425	9/16	1.060	1.406	.247
P6MEB6	N6MEB6	3/8	3/8	.425	11/16	1.060	1.436	.247
P6MEB8	N6MEB8	3/8	1/2	.425	7/8	1.060	1.626	.247
P6MEB12	N6MEB12	3/8	3/4	.425	1-1/8	1.060	1.636	.247
P8MEB4	N8MEB4	1/2	1/4	.550	9/16	1.123	1.406	.372
P8MEB6	N8MEB6	1/2	3/8	.550	11/16	1.123	1.436	.372
P8MEB8	N8MEB8	1/2	1/2	.550	7/8	1.123	1.626	.372
P8MEB12	N8MEB12	1/2	3/4	.550	1-1/8	1.123	1.636	.372
P10MEB6	N10MEB6	5/8	3/8	.644	11/16	1.170	1.436	.465
P10MEB8	N10MEB8	5/8	1/2	.644	7/8	1.170	1.626	.465
P10MEB12	N10MEB12	5/8	3/4	.644	1-1/8	1.170	1.636	.465
P12MEB8	N12MEB8	3/4	1/2	.788	7/8	1.242	1.626	.606

UCB - Union Connector



Black High Density Linear Polyethylene Part Number	White Nylon Part Number	Tube or Hose I.D. 1&2	Tube or Hose I.D. 3	O.D. 1&2	O.D. 3	L	D Flow Diameter
#	#	○	○	○	○		∅
P2UCB2	N2UCB2	1/8	1/8	.152	.152	.625	.090
P3UCB3	N3UCB3	3/16	3/16	.245	.245	1.750	.106
P4UCB3	N4UCB3	1/4	3/16	.308	.245	1.750	.106
P4UCB4	N4UCB4	1/4	1/4	.308	.308	1.750	.153
P5UCB5	N5UCB5	5/16	5/16	.361	.361	1.750	.215
P6UCB4	N6UCB4	3/8	1/4	.425	.308	1.750	.153
P6UCB6	N6UCB6	3/8	3/8	.425	.425	1.733	.247
P8UCB4	N8UCB4	1/2	1/4	.550	.308	1.750	.153
P8UCB6	N8UCB6	1/2	3/8	.550	.425	1.750	.247
P8UCB8	N8UCB8	1/2	1/2	.550	.550	1.750	.372
P10UCB6	N10UCB6	5/8	3/8	.644	.425	1.750	.247
P10UCB8	N10UCB8	5/8	1/2	.644	.550	1.750	.372
P10UCB10	N10UCB10	5/8	5/8	.644	.644	1.750	.465

*P2UCB2, P2TUB2, P12HPN6 are not FDA compliant.

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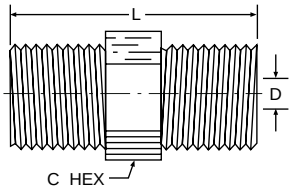
Otsego, Michigan

HPN - Hex Pipe Nipple

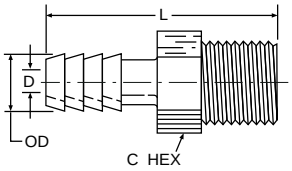


Black High Density Linear Polyethylene Part Number	White Nylon Part Number	Side 1	Side 2	C Hex	L	D1 Diameter	D2 Diameter
#	#			⬡		∅	∅
P2HPN2	N2HPN2	1/8	1/8	7/16	1.062	.187	.187
P4HPN2	N4HPN2	1/4	1/8	9/16	1.281	.286	.187
P4HPN4	N4HPN4	1/4	1/4	9/16	1.469	.285	.285
P6HPN2	N6HPN2	3/8	1/8	11/16	1.332	.406	.187
P6HPN4	N6HPN4	3/8	1/4	11/16	1.488	.406	.285
P6HPN6	N6HPN6	3/8	3/8	11/16	1.500	.406	.406
P8HPN2	N8HPN2	1/2	1/8	7/8	1.485	.618	.187
P8HPN4	N8HPN4	1/2	1/4	7/8	1.687	.618	.285
P8HPN6	N8HPN6	1/2	3/8	7/8	1.687	.618	.406
P8HPN8	N8HPN8	1/2	1/2	7/8	1.875	.618	.618
P12HPN6	N12HPN6	3/4	3/8	1-1/8	1.703	.750	.408
P12HPN8	N12HPN8	3/4	1/2	1-1/8	1.891	.750	.618
P10HPN12	N10HPN12	3/4	3/4	1-1/8	1.932	.750	.750

*P2UCB2, P2TUB2, P12HPN6 are not FDA compliant.

MCB - Male Connector

Adapter



Black High Density Linear Polyethylene Part Number	White Nylon Part Number	Tube or Hose I.D.	NPTF Pipe Thread Size	O.D.	C Hex	L	D Flow Diameter
#	#						∅
P3MCB2	N3MCB2	3/16	1/8	.245	7/16	1.530	.106
P3MCB4	N3MCB4	3/16	1/4	.245	9/16	1.750	.106
P3MCB8	N3MCB8	3/16	1/2	.245	7/8	1.970	.106
P4MCB2	N4MCB2	1/4	1/8	.308	7/16	1.530	.153
P4MCB4	N4MCB4	1/4	1/4	.308	9/16	1.750	.153
P4MCB6	N4MCB6	1/4	3/8	.308	11/16	1.780	.153
P4MCB8	N4MCB8	1/4	1/2	.308	7/8	1.970	.153
P4MCB12	N4MCB12	1/4	3/4	.308	1-1/8	1.980	.153
P5MCB2	N5MCB2	5/16	1/8	.361	7/16	1.530	.215
P5MCB4	N5MCB4	5/16	1/4	.361	9/16	1.750	.215
P5MCB6	N5MCB6	5/16	3/8	.361	11/16	1.780	.215
P6MCB2	N6MCB2	3/8	1/8	.425	7/16	1.530	.187
P6MCB4	N6MCB4	3/8	1/4	.425	9/16	1.750	.247
P6MCB6	N6MCB6	3/8	3/8	.425	11/16	1.780	.247
P6MCB8	N6MCB8	3/8	1/2	.425	7/8	1.970	.247
P6MCB12	N6MCB12	3/8	3/4	.425	1-1/8	1.980	.247
P8MCB4	N8MCB4	1/2	1/4	.550	9/16	1.750	.372
P8MCB6	N8MCB6	1/2	3/8	.550	11/16	1.780	.372
P8MCB8	N8MCB8	1/2	1/2	.550	7/8	1.970	.372
P8MCB12	N8MCB12	1/2	3/4	.550	1-1/8	1.980	.372
P10MCB6	N10MCB6	5/8	3/8	.644	11/16	1.780	.465
P10MCB8	N10MCB8	5/8	1/2	.644	7/8	1.970	.465
P10MCB12	N10MCB12	5/8	3/4	.644	1-1/8	1.980	.465
P12MCB8	N12MCB8	3/4	1/2	.788	7/8	1.970	.606
P12MCB12	N12MCB12	3/4	3/4	.788	1-1/8	1.980	.606

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Notes

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Otsego, Michigan

Flare Fittings

SAE 45° Flare

- Meets SAE Functional Requirements
- Resists Vibration
- Resists Mechanical Pull-out
- UL Listed

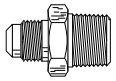
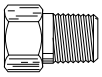
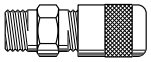
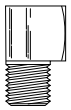
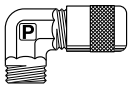
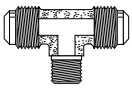
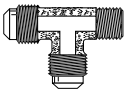
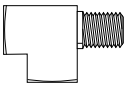
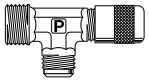
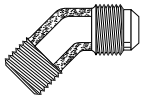
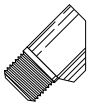
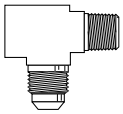
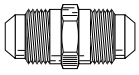
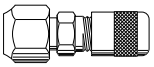
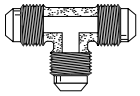
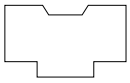
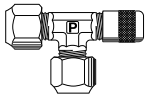
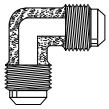
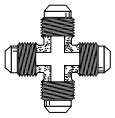
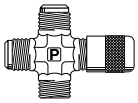
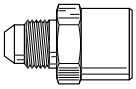
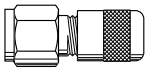
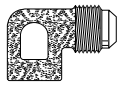
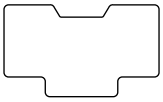
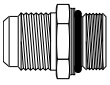
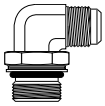
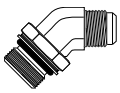
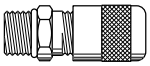
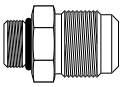
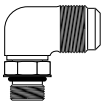
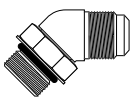
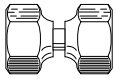
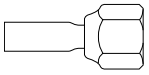
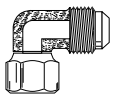
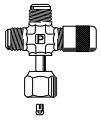
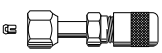
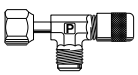
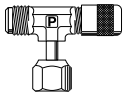
Inverted Flare

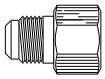
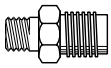
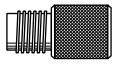
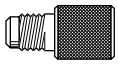
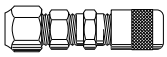
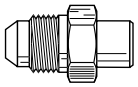
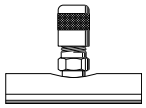
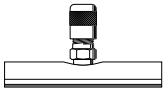
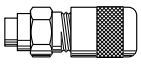
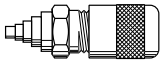
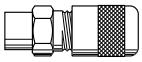
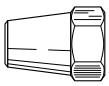
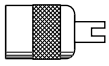
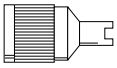
- UL Listed
- Economical
- Steel Nut option

Access Valves

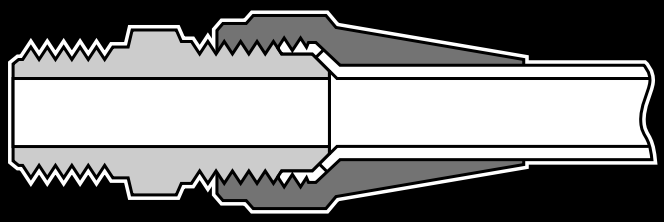
- Teflon Seal on Valve core
- Machined to ARI Standards
- Finger Tight Quick Seal Cap

The World Standard

Flare to Male NPT	**48F** Male Connector  Page E8	**48IFHD** Male Connector  Page E16	**AVU1** Male Connector  Page E20	**149F/249F** Male Elbow  Page E10	**249IFHD/249IF** Male Elbow  Page E16	**AVE1** Male Elbow  Page E20
145F Branch Tee  Page E9	**245IFHD** Branch Tee  Page E16	**151F** Run Tee  Page E11	**251IFHD** Run Tee  Page E17	**AVT3** Run Tee  Page E20	**159H/259F** 45° Male Elbow  Page E12	**259IFHD** 45° Male Elbow  Page E17
256F Adapter Tee  Page E12	**Flare to Flare**	**42F** Union  Page E7	**42IFHD** Union  Page E15	**AVU2** Union  Page E19	**144F** Union Tee  Page E9	**244IFHD** Union Tee  Page E16
AVT2 Union Tee  Page E20	**155F** Union Elbow  Page E11	**255IFHD** Union Elbow  Page E17	**660FHD** Flare Union  Page E13	**147F** Cross  Page E9	**AVC1** Cross  Page E20	
Flare to Female NPT	**46F** Female Connector  Page E8	**46IFHD** Female Connector  Page E15	**AVUR3** Female Connector  Page E21	**150F** Female Elbow  Page E11	**250IFHD** Female Elbow  Page E17	**252IFHD** Branch Tee  Page E17
Flare to Metric Straight Thread	**48F-MI** Male Connector  Page E8	**149F-MI** Male Elbow  Page E10	**159F-MI** 45° Male Elbow  Page E12	**Flare to Straight Thread**	**AVU1F1** Male Connector  Page E20	**485F** Male Connector  Page E9
1495F Male Elbow  Page E10	**1595F** 45° Male Elbow  Page E12	**Swivels**	**14FSV** Swivel Nut Connector  Page E6	**US5** Flare Adapter  Page E6	**166FSV** Swivel Elbow  Page E12	**AVCS4D** Cross  Page E21
AVUS4D Swivel Connector  Page E21	**AVTS4** Swivel Run Tee  Page E21	**AVTS6** Swivel Branch Tee  Page E22				

Adapters	**1F** Refrigerant Drum  Page E5	**66IFHD** Reducer  Page E13	**664FHD** Female Flare to Pipe  Page E13	**88AC** Refrigerant Adapter  Page E23	**880AC** Refrigerant Adapter  Page E23	**881AC** Refrigerant Adapter  Page E23
Bulkheads	**AVU2BH** Bulkhead Union  Page E19	**AVUS3BH** Solder Union  Page E19	**Flare to Solder**	**43F** Connector  Page E7	**AVUSE** Extended Copper Tube  Page E19	**AVTS** Solder tee  Page E19
AVTSL Extended Solder Tee  Page E19	**AVUS3-40** 3 Way Solder  Page E21	**AVUS3-49** 9 Way Solder  Page E21	**AVUS** Solder Connector  Page E21			
Auxiliary	**14FL** Long Forged Nut  Page E5	**14FSX** Short Forged Nut  Page E5	**14FS** Forged Reducing Nut  Page E6	**41FL** Long Nut  Page E6	**41FS/41FX** Shorter Nut  Page E6, E7	**41IF** Inverted Flare Nut  Page E15
41IFS Inverted Flare Nut Steel  Page E15	**41IFF** Inverted Flare Piloted Nut  Page E15	**639F** Seal Plug  Page E13	**640F** CAP NUT  Page E13	**640QSFC** Seal Cap with Chain  Page E22	**640QSFCR** Seal Cap with Core Remover  Page E22	**2GF** Face Gasket  Page E5
3GF Seal Bonnet  Page E5	**CR** Core Remover  Page E22	**VC** Valve Core  Page E22				

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan



SAE 45° Flared Fittings

E

Advantages
This economical fitting resists mechanical pullout. Can be assembled and disassembled repeatedly. Manufactured from CA 360, CA 345 or CA 377 brass.

Specifications
Listed with Underwriter's Laboratories for flammable liquid, marine, refrigeration and gas applications. Meets functional requirements of SAE J512 and J513. Refer to list of UL listed fittings on page M10 for specific configurations.

Applications
Use with copper, brass, aluminum and welded steel hydraulic tubing that can be flared. Manufactured especially for hard-to-hold liquids and gases.

Working Pressure Ranges
Temperature and type of tubing used are important factors. However, the following table is a good guide for proper selection. Temperature 73°F with copper tubing:

PSI	TUBE O.D. (IN.)	TUBE WALL (IN.)
2800	1/8	.030
1900	3/16	.030
1400	1/4	.030
1200	5/16	.032
1000	3/8	.032
750	1/2	.032
650	5/8	.035
550	3/4	.035
450	7/8	.035

Temperature Ranges
From -65° to +250°F.

Vibration
Short nut may be used when vibration is minimal. The long nut offers additional vibration capacity.

Assembly Instructions
1. Cut tubing squarely and clean tube end thoroughly to remove burrs.
2. Place nut onto tube. Place threaded end of nut toward end of tube.
3. Flare tube end with flaring tool to provide 45° flare.
4. Clamp tube flare between nut and nose of fitting body by screwing nut on finger-tight. Tighten with a wrench an additional 1/4 to 1/2 turn past finger tight for a metal-to-metal seal.

Flare fittings are easy to disassemble and may be reassembled repeatedly, for a leak-proof connection.

Order
By part number and name. SAE 45° flared bodies and nuts are separate items. Both numbers must be indicated when ordered.

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:

1 **49** **F** **–6** **–4**

Forging (1)
Extrusion (2)
Flare to external pipe, 90° elbow
Flare fitting
3/8" (6/16) tube O.D. size
1/4" (4/16) pipe size

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

Special Fittings
Fitting configurations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry. Special UL stamped fittings are available. Please consult price list.

Pricing
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

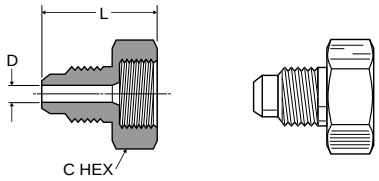
Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Refrigerant Drum a Aapter 1F

Ref. SAE 010165

PART NO.	TUBE O.D.	PIPE THREAD	C HEX	L	FLOW DIA. D
1F-4-8	1/4	1/2	1-1/8	1.12	.189
1F-4-12*	1/4	3/4	1-1/4	1.12	.189
1F-6-12*	3/8	3/4	1-1/4	1.24	.282
1F-8-12*	1/2	3/4	1-1/4	1.37	.407

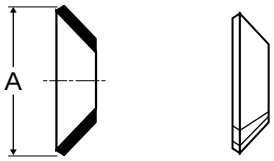
Gasket Furnished with each 1F adapter



Copper Flare Gasket 2GF

Ref. SAE 010113

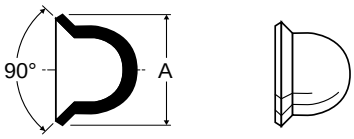
PART NO.	TUBE SIZE	A
2GF-3	3/16	.32
2GF-4	1/4	.36
2GF-5	5/16	.43
2GF-6	3/8	.56
2GF-8	1/2	.67
2GF-10	5/8	.78
2GF-12*	3/4	.97



Seal Bonnet 3GF

Ref. SAE 010114

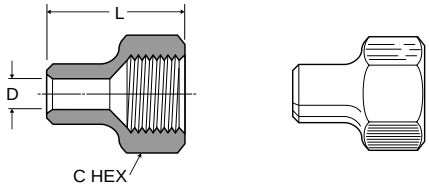
PART NO.	TUBE SIZE	A
3GF-3	3/16	.32
3GF-4	1/4	.37
3GF-5	5/16	.43
3GF-6	3/8	.56
3GF-8	1/2	.67
3GF-10	5/8	.78
3GF-12*	3/4	.97



Long Forged Nut 14FL

Ref. SAE 010167

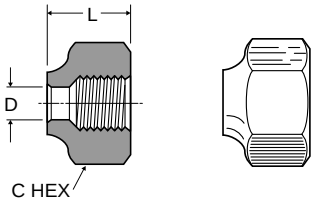
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
14FL-4	1/4	7/16-20	5/8	.257	.94
14FL-6	3/8	5/8-18	13/16	.382	1.06
14FL-8	1/2	3/4-16	15/16	.507	1.19
14FL-10	5/8	7/8-14	1-1/16	.632	1.44



Short Forged Nut 14FSX

Ref. SAE 010166

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
14FSX-4	1/4	7/16-20	5/8	.257	.63
14FSX-5	5/16	1/2-20	11/16	.320	.67
14FSX-6	3/8	5/8-18	13/16	.382	.74
14FSX-8	1/2	3/4-16	15/16	.507	.86
14FSX-10	5/8	7/8-14	1-1/16	.632	.97
14FSX-12*	3/4	1-1/16-14	1-5/16	.757	1.17

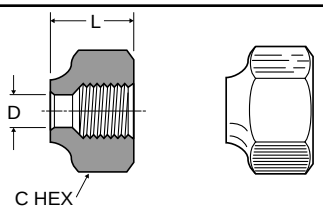


*Comes standard with thread protectors

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Short Forged Reducing Nuts 14FS

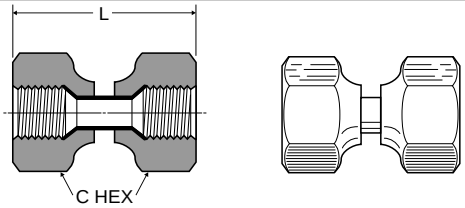
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
14FS-6-4	3/8 to 1/4	5/8-18	13/16	.257	.74
14FS-8-6	1/2 to 3/8	3/4-16	15/16	.382	.86
14FS-10-8	5/8 to 1/2	7/8-14	1-1/16	.507	.99



Swivel Nut Valve Connector 14FSV

Ref. SAE 010108

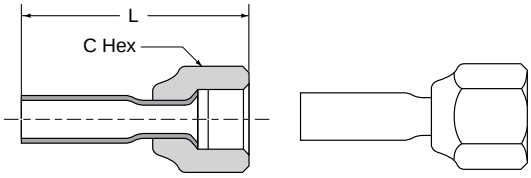
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L
14FSV-4	1/4	7/16-20	5/8	1.31
14FSV-6	3/8	5/8-18	13/16	1.50
14FSV-8	1/2	3/4-16	15/16	1.75
14FSV-10	5/8	7/8-14	1-1/16	2.00



E

Flare Adapter US5

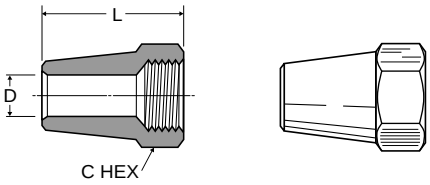
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L
US5-4	1/4	7/16-20	5/8	1.50
US5-6	3/8	5/8-18	13/16	1.58
US5-8	1/2	3/4-16	15/16	1.80
US5-10	5/8	7/8-14	1-1/16	2.18



Long Nut 41FL

Ref. SAE 010111

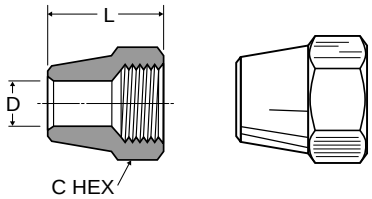
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
41FL-2	1/8	5/16-24	3/8	.133	.75
41FL-3	3/16	3/8-24	7/16	.195	.81
41FL-4	1/4	7/16-20	9/16	.257	.94
41FL-5	5/16	1/2-20	5/8	.320	1.12
41FL-6	3/8	5/8-18	3/4	.382	1.31
41FL-8	1/2	3/4-16	7/8	.507	1.62
41FL-10	5/8	7/8-14	1-1/16	.632	1.88
41FL-12*	3/4	1-1/16-14	1-1/4	.757	2.19



Short Nut 41FS / Shorter Nut 41FX

Ref. SAE 010110

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
41FS-2	1/8	5/16-24	3/8	.132	.50
41FS-3	3/16	3/8-24	7/16	.195	.62
41FS-4	1/4	7/16-20	9/16	.257	.75
41FS-5	5/16	1/2-20	5/8	.320	.88
41FS-6	3/8	5/8-18	3/4	.382	1.00
41FX-6	3/8	5/8-18	3/4	.382	.91
41FS-8	1/2	3/4-16	7/8	.507	1.12
41FX-8	1/2	3/4-16	7/8	.507	1.00
41FS-10	5/8	7/8-14	1-1/16	.632	1.31
41FX-10	5/8	7/8-14	1-1/16	.632	1.06
41FX-12	3/4	1-1/16-14	1-1/4	.757	1.17
41FS-12*	3/4	1-1/16-14	1-1/4	.757	1.50
41FS-14*	7/8	1-1/4-12	1-1/2	.882	1.62

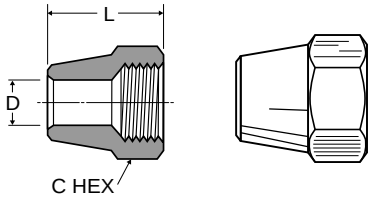


*Comes standard with thread protectors

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Reducing Nuts 41FS

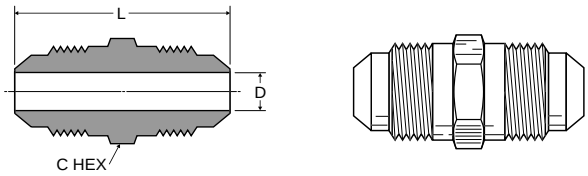
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
41FS-6-4	3/8 to 1/4	5/8-18	3/4	.257	1.00
41FS-8-6	1/2 to 3/8	3/4-16	7/8	.382	1.09
41FS-10-8	5/8 to 1/2	7/8-14	1-1/16	.507	1.25



Union 42F

Ref. SAE 010101 *Thread Protectors

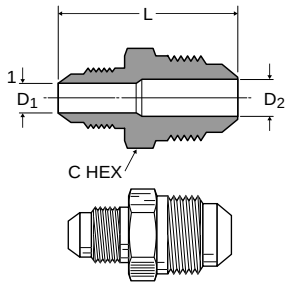
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	D
42F-2	1/8	5/16-24	5/16	.90	.079
42F-3	3/16	3/8-24	3/8	1.04	.125
42F-4	1/4	7/16-20	7/16	1.17	.189
42F-5	5/16	1/2-20	1/2	1.32	.220
42F-6	3/8	5/8-18	5/8	1.48	.282
42F-8	1/2	3/4-16	3/4	1.79	.407
42F-10	5/8	7/8-14	7/8	2.10	.501
42F-12*	3/4	1-1/16-14	1-1/16	2.42	.626
42F-14*	7/8	1-1/4-12	1-1/4	2.72	.751



Union Reducers 42F

Ref. SAE 010101

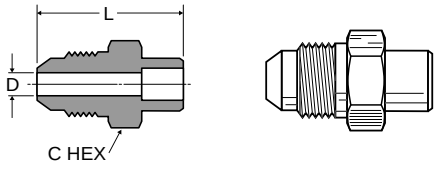
PART NO.	1 TUBE SIZE	2 TUBE SIZE	1 STRAIGHT THREAD	2 STRAIGHT THREAD	C HEX	L	FLOW DIA. D1	FLOW DIA. D2
42F-6-4	1/4	3/8	7/16-20	5/8-18	5/8	1.36	.189	.282
42F-6-5	5/16	3/8	1/2-20	5/8-18	5/8	1.42	.220	.282
42F-8-4	1/4	1/2	7/16-20	3/4-16	3/4	1.54	.189	.407
42F-8-6	3/8	1/2	5/8-18	3/4-16	3/4	1.67	.282	.407
42F-10-6	3/8	5/8	5/8-18	7/8-14	7/8	1.86	.282	.501
42F-10-8	1/2	5/8	3/4-16	7/8-14	7/8	1.98	.407	.501



Flare to Solder 43F

Ref. SAE 010104

PART NO.	TUBE SIZE	SOLDER OD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
43F-4-4	1/4	1/4	7/16-20	7/16	.98	.189
43F-4-5	1/4	5/16	7/16-20	7/16	.98	.189
43F-4-6	1/4	3/8	7/16-20	1/2	.98	.189
43F-6-4	3/8	1/4	5/8-18	5/8	1.17	.189
43F-6-5	3/8	5/16	5/8-18	5/8	1.17	.252
43F-6-6	3/8	3/8	5/8-18	5/8	1.17	.282
43F-6-8	3/8	1/2	5/8-18	5/8	1.23	.282
43F-6-10	3/8	5/8	5/8-18	3/4	1.36	.282
43F-8-6	1/2	3/8	3/4-16	3/4	1.36	.314
43F-8-8	1/2	1/2	3/4-16	3/4	1.42	.407
43F-8-10	1/2	5/8	3/4-16	3/4	1.54	.407
43F-10-8	5/8	1/2	7/8-14	7/8	1.60	.440
43F-10-10	5/8	5/8	7/8-14	7/8	1.73	.501
43F-10-12*	5/8	3/4	7/8-14	7/8	1.86	.501
43F-10-14*	5/8	7/8	7/8-14	1	1.98	.501
43F-12-12*	3/4	3/4	1-1/16-14	1-1/16	2.04	.626
43F-12-14*	3/4	7/8	1-1/16-14	1-1/16	2.17	.626



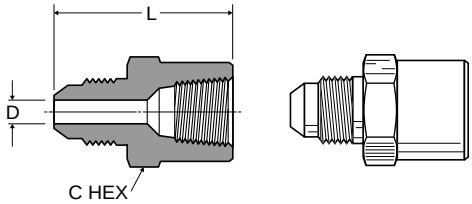
*Comes standard with thread protectors

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Female Connector 46F

Ref. SAE 010103

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
46F-2-2	1/8	1/8	5/16-24	9/16	.91	.078
46F-3-2	3/16	1/8	3/8-24	9/16	.95	.125
46F-4-2	1/4	1/8	7/16-20	9/16	1.01	.189
46F-4-4	1/4	1/4	7/16-20	11/16	1.23	.189
46F-4-6	1/4	3/8	7/16-20	13/16	1.26	.189
46F-5-2	5/16	1/8	1/2-20	9/16	1.05	.220
46F-5-4	5/16	1/4	1/2-20	11/16	1.26	.220
46F-6-2	3/8	1/8	5/8-18	5/8	1.10	.282
46F-6-4	3/8	1/4	5/8-18	11/16	1.29	.282
46F-6-6	3/8	3/8	5/8-18	13/16	1.36	.282
46F-6-8	3/8	1/2	5/8-18	1	1.60	.282
46F-8-4	1/2	1/4	3/4-16	3/4	1.39	.407
46F-8-6	1/2	3/8	3/4-16	13/16	1.48	.407
46F-8-8	1/2	1/2	3/4-16	1	1.73	.407
46F-8-12*	1/2	3/4	3/4-16	1-1/4	1.79	.407
46F-10-6	5/8	3/8	7/8-14	7/8	1.57	.501
46F-10-8	5/8	1/2	7/8-14	1	1.80	.501
46F-10-12*	5/8	3/4	7/8-14	1-1/4	1.89	.501

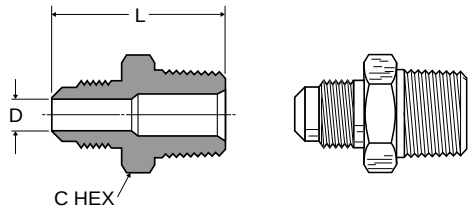


E

Male Connector 48F

Ref. SAE 010102

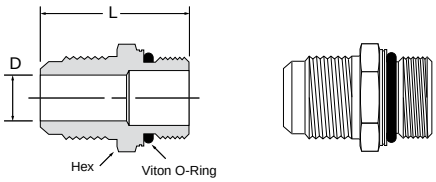
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
48F-2-2	1/8	1/8	5/16-24	7/16	.91	.078
48F-3-2	3/16	1/8	3/8-24	7/16	.98	.125
48F-3-4	3/16	1/4	3/8-24	9/16	1.17	.125
48F-4-2	1/4	1/8	7/16-20	7/16	1.04	.189
48F-4-4	1/4	1/4	7/16-20	9/16	1.23	.189
48F-4-6	1/4	3/8	7/16-20	11/16	1.29	.189
48F-4-8	1/4	1/2	7/16-20	7/8	1.54	.189
48F-5-2	5/16	1/8	1/2-20	1/2	1.14	.220
48F-5-4	5/16	1/4	1/2-20	9/16	1.32	.220
48F-5-6	5/16	3/8	1/2-20	11/16	1.36	.220
48F-6-2	3/8	1/8	5/8-18	5/8	1.23	.220
48F-6-4	3/8	1/4	5/8-18	5/8	1.42	.282
48F-6-6	3/8	3/8	5/8-18	11/16	1.42	.282
48F-6-8	3/8	1/2	5/8-18	7/8	1.67	.282
48F-6-12*	3/8	3/4	5/8-18	1-1/16	1.79	.282
48F-8-4	1/2	1/4	3/4-16	3/4	1.60	.407
48F-8-6	1/2	3/8	3/4-16	3/4	1.60	.407
48F-8-8	1/2	1/2	3/4-16	7/8	1.79	.407
48F-8-12	1/2	3/4	3/4-16	1-1/16	1.92	.407
48F-10-4	5/8	1/4	7/8-14	7/8	1.79	.313
48F-10-6	5/8	3/8	7/8-14	7/8	1.79	.408
48F-10-8	5/8	1/2	7/8-14	7/8	1.98	.501
48F-10-12*	5/8	3/4	7/8-14	1-1/16	2.04	.501
48F-12-8*	3/4	1/2	1-1/16-14	1-1/16	2.17	.626
48F-12-12*	3/4	3/4	1-1/16-14	1-1/16	2.17	.626
48F-14-12*	7/8	3/4	1-1/4-12	1-1/4	2.35	.751



Flare to Metric Adaptor 48F-X-MIX

PART NUMBER	TUBE SIZE	METRIC THREAD	HEX	L	D
48F-8-MII6	1/2	M16 X 1.5	7/8	1.60	.35
48F-10-MI27	5/8	M27 x 2.0	1 1/4	1.87	.50
48F-12-MI27*	3/4	M27 x 2.0	1 1/4	1.99	.63

Note: Fluorocarbon o-ring is standard

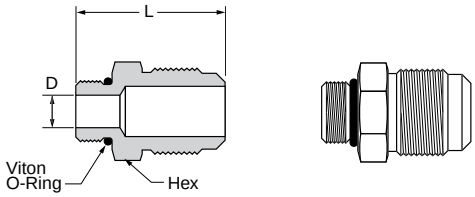


*Comes standard with thread protectors

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Flare to SAE Straight Thread 485F

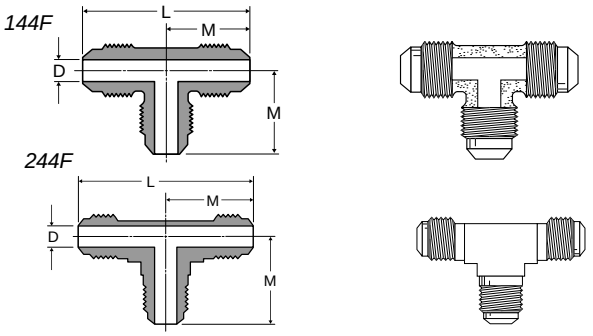
PART NO.	TUBE SIZE	STRAIGHT THREAD	HEX	L	FLOW DIA. D
485F-12-8*	3/4	3/4-16	1 1/16	1.80	.397
485F-12-12*	3/4	1 1/16-12	1 1/4	2.03	.615



Union Tee 144F-244F

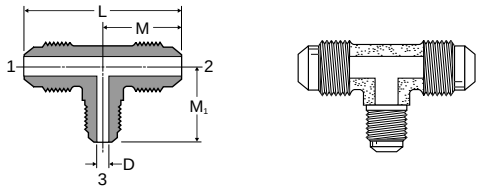
Ref. SAE 010401

PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
144F-3	3/16	3/8-24	1.46	.73	.125
144F-4	1/4	7/16-20	1.72	.86	.189
244F-4	1/4	7/16-20	1.72	.86	.189
144F-5	5/16	1/2-20	1.82	.91	.220
144F-6	3/8	5/8-18	2.08	1.04	.282
144F-8	1/2	3/4-16	2.46	1.23	.407
144F-10	5/8	7/8-14	2.78	1.39	.501



Union Tee 144F-244F combination sizes

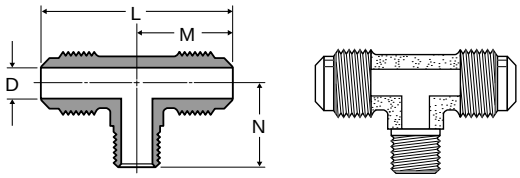
PART NO.	1 TUBE SIZE	2 TUBE SIZE	3 TUBE SIZE	L	M	M1	FLOW DIA. D
144F-6-6-4	3/8	3/8	1/4	2.08	1.04	.89	.189
144F-8-8-6	1/2	1/2	3/8	2.40	1.20	1.10	.282



Male Branch Tee 145F

Ref. SAE 010425

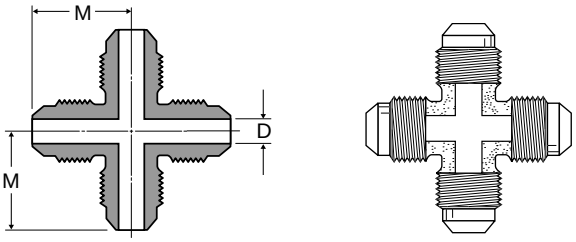
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
145F-2-2	1/8	1/8	5/16-24	1.26	.63	.69	.079
145F-4-2	1/4	1/8	7/16-20	1.58	.79	.76	.189
145F-4-4	1/4	1/4	7/16-20	1.78	.89	.92	.189
145F-5-4	5/16	1/4	1/2-20	1.90	.95	.96	.220
145F-6-4	3/8	1/4	5/8-18	1.96	.98	1.05	.282
145F-6-6	3/8	3/8	5/8-18	2.00	1.00	.98	.282
145F-6-8	3/8	1/2	5/8-18	2.28	1.14	1.26	.282
145F-8-6	1/2	3/8	3/4-16	2.40	1.20	1.10	.407
145F-8-8	1/2	1/2	3/4-16	2.46	1.23	1.36	.407
145F-10-8	5/8	1/2	7/8-14	2.78	1.39	1.36	.501



Cross 147F

Ref. SAE 010501

PART NO.	TUBE SIZE	STRAIGHT THREAD	M	FLOW DIA. D
147F-6	3/8	5/8-18	1.04	.282



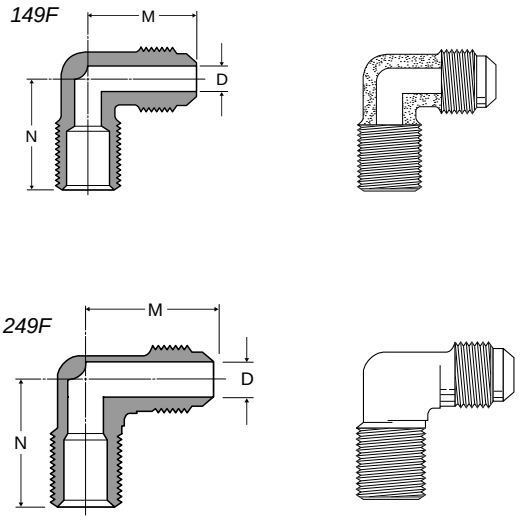
*Comes standard with thread protectors

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Male Elbow 149F-249F

Ref. SAE 010202

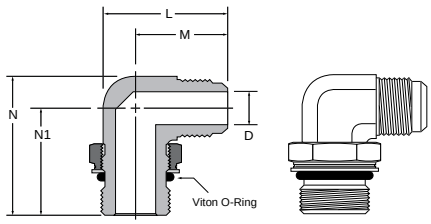
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D
149F-2-2	1/8	1/8	5/16-24	.63	.69	.079
149F-3-2	3/16	1/8	3/8-24	.75	.75	.125
249F-3-2	3/16	1/8	3/8-24	.73	.73	.125
149F-4-2	1/4	1/8	7/16-20	.79	.76	.189
249F-4-2	1/4	1/8	7/16-20	.79	.76	.189
149F-4-4	1/4	1/4	7/16-20	.89	.92	.189
249F-4-4	1/4	1/4	7/16-20	.89	.92	.189
149F-4-6	1/4	3/8	7/16-20	.92	1.01	.189
249F-4-6	1/4	3/8	7/16-20	.92	1.01	.189
149F-4-8	1/4	1/2	7/16-20	1.02	1.26	.189
149F-5-2	5/16	1/8	1/2-20	.90	.79	.220
249F-5-2	5/16	1/8	1/2-20	.89	.77	.220
149F-5-4	5/16	1/4	1/2-20	.95	.95	.220
249F-5-4	5/16	1/4	1/2-20	.95	.92	.220
149F-5-6	5/16	3/8	1/2-20	.98	1.01	.220
149F-6-2	3/8	1/8	5/8-18	1.01	.90	.282
249F-6-2	3/8	1/8	5/8-18	1.01	.89	.220
149F-6-4	3/8	1/4	5/8-18	1.01	1.05	.282
249F-6-4	3/8	1/4	5/8-18	.98	1.04	.282
149F-6-6	3/8	3/8	5/8-18	1.04	1.07	.282
249F-6-6	3/8	3/8	5/8-18	1.04	1.07	.282
149F-6-8	3/8	1/2	5/8-18	1.15	1.26	.282
249F-6-8	3/8	1/2	5/8-18	1.14	1.26	.282
149F-6-12*	3/8	3/4	5/8-18	1.25	1.38	.282
149F-8-4	1/2	1/4	3/4-16	1.20	1.17	.407
149F-8-6	1/2	3/8	3/4-16	1.20	1.10	.407
249F-8-6	1/2	3/8	3/4-16	1.20	1.10	.407
149F-8-8	1/2	1/2	3/4-16	1.28	1.38	.407
249F-8-8	1/2	1/2	3/4-16	1.26	1.36	.407
149F-8-12*	1/2	3/4	3/4-16	1.38	1.38	.407
149F-10-4	5/8	1/4	7/8-14	1.41	1.25	.501
149F-10-6	5/8	3/8	7/8-14	1.41	1.25	.501
149F-10-8	5/8	1/2	7/8-14	1.40	1.39	.501
249F-10-8	5/8	1/2	7/8-14	1.39	1.36	.501
149F-10-12*	5/8	3/4	7/8-14	1.42	1.48	.501
149F-12-8*	3/4	1/2	1-1/16-14	1.60	1.48	.626
149F-12-12*	3/4	3/4	1-1/16-14	1.60	1.62	.626
149F-14-12*	7/8	3/4	1-1/4-12	1.73	1.67	.751



Flare Elbow to SAE Metric Straight Thread 149F-X-MIX

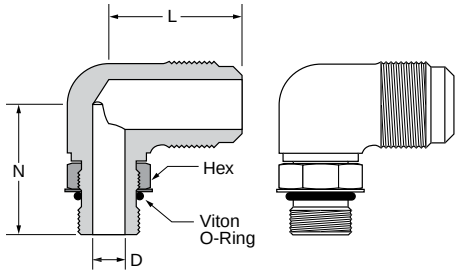
PART NUMBER	TUBE SIZE	METRIC THREAD	L	M	N	N1	D
149F-10-MI27	5/8	M27 x 2.0	1.95	1.46	2.12	1.63	.501

Note: Fluorocarbon o-ring is standard



Flare Elbow to SAE Straight Thread 1495F

PART NO.	TUBE SIZE	STRAIGHT THREAD	HEX	L	N	FLOW DIA. D
1495F-12-8*	3/4	3/4-16	7/8	1.60	1.60	.398
1495F-12-12*	3/4	1-1/16-12	1 1/4	1.59	2.12	.616



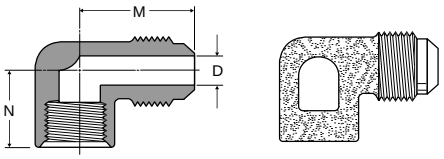
*Comes standard with thread protectors

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Female Elbow 150F

Ref. SAE 010203

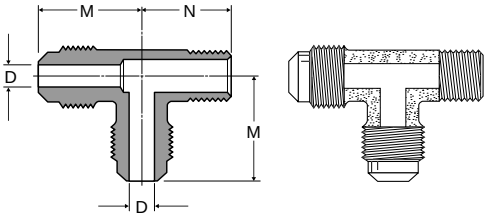
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D
150F-4-2	1/4	1/8	7/16-20	.86	.50	.189
150F-4-4	1/4	1/4	7/16-20	.95	.64	.189
150F-5-4	5/16	1/4	1/2-20	1.01	.64	.220
150F-6-2	3/8	1/8	5/8-18	1.08	.48	.282
150F-6-4	3/8	1/4	5/8-18	1.07	.67	.282
150F-6-6	3//8	3/8	5/8-18	1.14	.67	.282
150F-6-8	3/8	1/2	5/8-18	1.23	.86	.282
150F-8-6	1/2	3/8	3/4-16	1.25	.69	.407
150F-8-8	1/2	1/2	3/4-16	1.36	.92	.407
150F-8-12	1/2	3/4	3/4-16	1.51	.92	.407
150F-10-8*	5/8	1/2	7/8-14	1.48	.98	.501
150F-10-12*	5/8	3/4	7/8-14	1.64	.98	.501



Male Run Tee 151F

Ref. SAE 010424

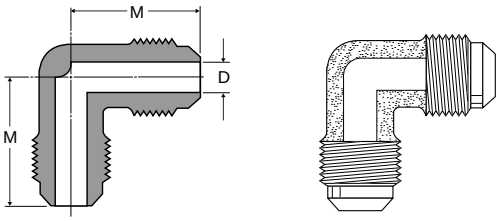
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D
151F-4-2	1/4	1/8	7/16-20	.86	.76	.189
151F-4-4	1/4	1/4	7/16-20	.92	.89	.189
151F-5-4	5/16	1/4	1/2-20	.92	.95	.220
151F-6-4	3/8	1/4	5/8-18	1.04	1.04	.282
151F-6-6	3/8	3/8	5/8-18	.98	1.00	.282
151F-6-8	3/8	1/2	5/8-18	1.26	1.16	.282
151F-8-6	1/2	3/8	3/4-16	1.20	1.10	.407
151F-8-8	1/2	1/2	3/4-16	1.36	1.23	.407
151F-10-8	5/8	1/2	7/8-14	1.36	1.39	.501



Union Elbow 155F

Ref. SAE 010201

PART NO.	TUBE SIZE	STRAIGHT THREAD	M	FLOW DIA. D
155F-2	1/8	5/16-24	.64	.079
155F-3	3/16	3/8-24	.73	.125
155F-4	1/4	7/16-20	.86	.189
155F-5	5/16	1/2-20	.92	.220
155F-6	3/8	5/8-18	1.04	.282
155F-8	1/2	3/4-16	1.20	.407
155F-10	5/8	7/8-14	1.39	.501
155F-12*	3/4	1-1/16-14	1.64	.626



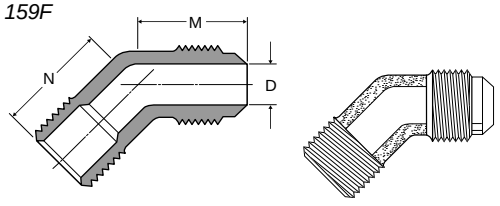
*Comes standard with thread protectors

45° Elbow 159F-259F

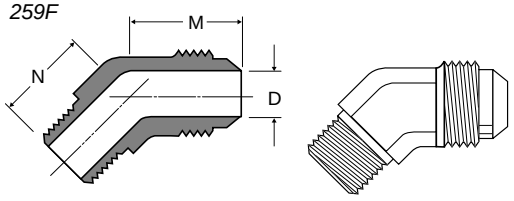
Ref. SAE 010302

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D
159F-4-2	1/4	1/8	7/16-20	.78	.56	.189
259F-4-2	1/4	1/8	7/16-20	.65	.62	.189
159F-4-4	1/4	1/4	7/16-20	.75	.84	.189
259F-4-4	1/4	1/4	7/16-20	.73	.84	.189
159F-5-2	5/16	1/8	1/2-20	.76	.65	.220
159F-5-4	5/16	1/4	1/2-20	.75	.81	.220
159F-6-2	3/8	1/8	5/8-18	.89	.67	.282
159F-6-4	3/8	1/4	5/8-18	.89	.86	.282
259F-6-4	3/8	1/4	5/8-18	.91	.86	.282
159F-6-6	3/8	3/8	5/8-18	.91	.93	.282
259F-6-6	3/8	3/8	5/8-18	.91	.93	.282
159F-8-4	1/2	1/4	3/4-16	1.06	.95	.407
159F-8-6	1/2	3/8	3/4-16	1.06	.95	.407
259F-8-6	1/2	3/8	3/4-16	1.04	.93	.407
159F-8-8	1/2	1/2	3/4-16	1.12	1.16	.407
159F-10-6	5/8	3/8	7/8-14	1.13	.95	.501
259F-10-6	5/8	3/8	7/8-14	1.20	1.15	.501
159F-10-8	5/8	1/2	7/8-14	1.21	1.16	.501
259F-10-8	5/8	1/2	7/8-14	1.21	.98	.501
159F-12-8*	3/4	1/2	1-1/16-14	1.28	1.16	.626

159F



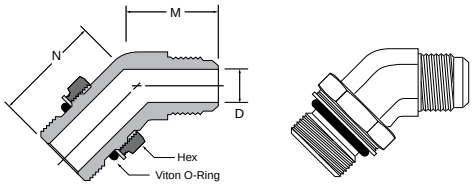
259F



45° Flare Elbow to SAE Metric Straight Thread 159F-X-MIX

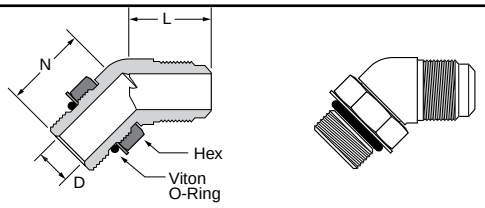
PART NUMBER	TUBE SIZE	METRIC THREAD	HEX	M	N	D
159F-8-MII6	1/2	M16 X 1.5	22mm	1.10	1.16	.36
159F-10-MI27	5/8	M27 x 2.0	1 1/4	1.21	1.50	.50

Note: Fluorocarbon o-ring is standard



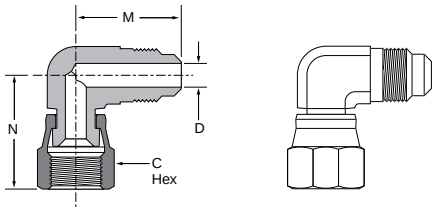
45° Flare to SAE Straight Thread 1595F

PART NO.	TUBE SIZE	STRAIGHT THREAD	HEX	L	N	FLOW DIA. D
1595F-8-8	1/2	3/4-16	7/8	1.00	1.16	.398
1595F-12-8*	3/4	3/4-16	7/8	1.41	1.30	.398
1595F-12-12*	3/4	1 1/16-12	1 1/4	1.41	1.45	.615



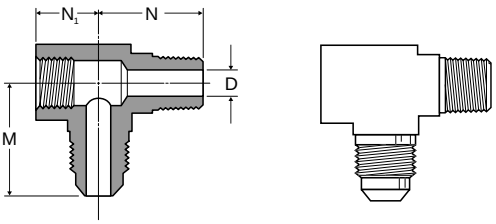
90° Swivel Elbow 166FSV

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	M	N	FLOW DIA. D
166FSV-4-4	1/4	7/16-20	9/16	.86	.93	.189
166FSV-6-6	3/8	5/8-18	3/4	1.04	1.12	.282
166FSV-8-8	1/2	3/4-16	7/8	1.20	1.29	.407
166FSV-10-10	5/8	7/8-14	1	1.39	1.50	.501
166FSV-12-12*	3/4	1-1/16-14	1-1/4	1.60	1.83	.626



Adapter Tee 256F

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	N1	FLOW DIA. D
256F-4-2	1/4	1/8	7/16-20	.86	.77	.47	.220



*Comes standard with thread protectors

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Parker Brass Products Division
Otsego, Michigan

Flared Seal Plug 639F

Ref. SAE 010109

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L
639F-4	1/4	7/16-20	7/16	.69
639F-5	5/16	1/2-20	1/2	.78
639F-6	3/8	5/8-18	5/8	.88
639F-8	1/2	3/4-16	3/4	1.06
639F-10	5/8	7/8-14	7/8	1.19

Cap Nut 640F

Ref. SAE 010112

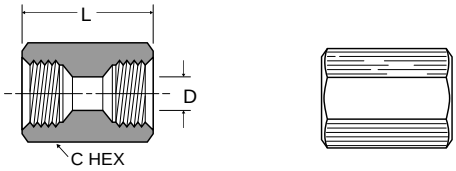
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L
640F-3†	3/16	3/8-24	1/2	.47
640F-4†	1/4	7/16-20	9/16	.53
640F-5†	5/16	1/2-20	5/8	.62
640F-6†	3/8	5/8-18	3/4	.69
640F-8†	1/2	3/4-16	7/8	.84
640F-10†	5/8	7/8-14	1-1/16	.97

E

Flared Union–Female Flare to Female Flare 660FHD

Ref. SAE 010107

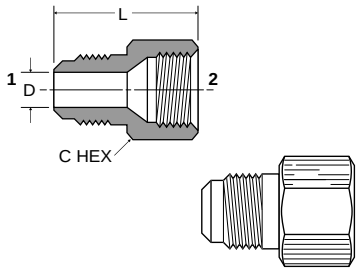
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
660FHD-4†	1/4	7/16-20	5/8	.98	.251
660FHD-6†	3/8	5/8-18	13/16	1.24	.376
660FHD-8†	1/2	3/4-16	15/16	1.43	.501
660FHD-10†	5/8	7/8-14	1-1/16	1.67	.626



Reducer–Male Flare to Female Flare 661FHD

Ref. SAE 010105

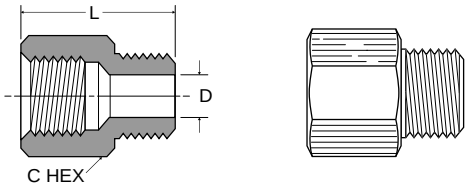
PART NO.	1 TUBE SIZE	2 TUBE SIZE	1 STRAIGHT THREAD	2 STRAIGHT THREAD	C HEX	L	FLOW DIA. D
661FHD-4-6†	1/4	3/8	7/16-20	5/8-18	13/16	1.20	.189
661FHD-4-8†	1/4	1/2	7/16-20	3/4-16	15/16	1.36	.189
661FHD-6-4†	3/8	1/4	5/8-18	7/16-20	5/8	1.10	.282
661FHD-6-8†	3/8	1/2	5/8-18	3/4-16	15/16	1.42	.282
661FHD-8-6†	1/2	3/8	3/4-16	5/8-18	13/16	1.39	.407
661FHD-8-10†	1/2	5/8	3/4-16	7/8-14	1-1/16	1.67	.407
661FHD-10-8†	5/8	1/2	7/8-14	3/4-16	15/16	1.60	.501
661FHD-10-12*†	5/8	3/4	7/8-14	1-1/16-14	1-5/16	1.95	.501
661FHD-12-10*†	3/4	5/8	1-1/16-14	7/8-14	1-1/16	1.86	.626



Female Flare to Male Pipe Thread 664FHD

Ref. SAE 010106

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
664FHD-4-2†	1/4	1/8	7/16-20	5/8	.91	.220
664FHD-4-4†	1/4	1/4	7/16-20	5/8	1.01	.252
664FHD-6-4†	3/8	1/4	5/8-18	13/16	1.28	.345
664FHD-8-6†	1/2	3/8	3/4-16	15/16	1.31	.407



†Should be used with 2GF copper flare gasket.
*Comes standard with thread protectors

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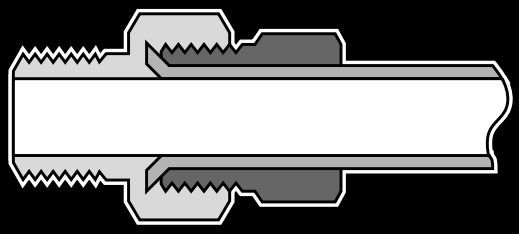
Parker Brass Products Division
Otsego, Michigan



Inverted Flared Fittings

E

Advantages
Built to resist mechanical pullout. This economical fitting can be assembled and disassembled repeatedly. Readily available in a broad selection of styles to fill your specific needs. Manufactured from CA 360 or CA 345 brass.

Specifications
Listed with Underwriter's Laboratories for flammable liquid and gas . Meets functional requirements of SAE, J512. Refer to list of UL listed fittings on page N10 for specific configurations.

Applications
Use with copper, brass, aluminum and welded steel hydraulic tubing that can be flared. Manufactured especially for hard-to-hold liquids and gases.

Working Pressure Ranges
Temperature and type of tubing used are important factors. However, the following table is a good guide for proper selection. Temperature 73°F with copper tubing:

PSI	TUBE O.D. (IN.)	TUBE WALL (IN.)
2800	1/8	.030
1900	3/16	.030
1400	1/4	.030
1200	5/16	.032
1000	3/8	.032
750	1/2	.032
650	5/8	.035
550	3/4	.035

Temperature Ranges
From -65° to +250°F.

Vibration
Will withstand minimal vibration movements.

Assembly Instructions
1. Cut tubing squarely and clean tube end thoroughly to remove burrs.
2. Place nut onto tube. Place threaded end of nut toward end of tube.
3. On thin wall copper, welded or brazed tubing, use double flare to prevent pinch-off or cracked flares.
4. Clamp tube flare between nut and flare seat of body by screwing nut on finger-tight. Tighten with a wrench an additional 1/4 turn for a metal-to-metal seal.

Note: The seat dimensions are predicated on practical threading limitations and use of these fittings with double flared tubing.

Order
By part number and name. Bodies and nuts are separate items and individual part numbers must be indicated when ordered.

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:

48	1F	1FHD	–4	–2
Half Union				
	Inverted Flared (Light Duty)			
		Inverted Flared (Heavy Duty)		
			1/4" (4/16) tube O.D.	
				1/8" (2/16) pipe thread

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

Special Fittings
Fitting configurations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry. Special UL stamped fittings are available. Please consult price list.

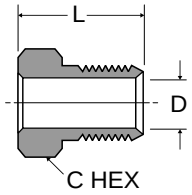
Pricing
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

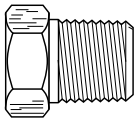
Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Nut 41IF

Ref. SAE 040110

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	D
41IF-2	1/8	5/16-28	5/16	.52	.133
41IF-3	3/16	3/8-24	3/8	.56	.196
41IF-4	1/4	7/16-24	7/16	.56	.259
41IF-5	5/16	1/2-20	1/2	.62	.321
41IF-6	3/8	5/8-18	5/8	.66	.384
41IF-8	1/2	3/4-18	3/4	.74	.508

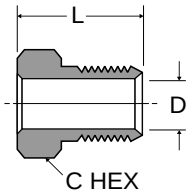


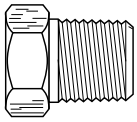


Steel Nut–Zinc Chromate 41IFS

Ref. SAE 040110

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	D
41IFS-3	3/16	3/8-24	3/8	.56	.196
41IFS-4	1/4	7/16-24	7/16	.56	.259
41IFS-5	5/16	1/2-20	1/2	.62	.321
41IFS-6	3/8	5/8-18	5/8	.66	.384
41IFS-8	1/2	3/4-18	3/4	.74	.508
41IFS-10	5/8	7/8-18	7/8	.80	.633
41IFS-12	3/4	1-1/16-16	1-1/16	.88	.759

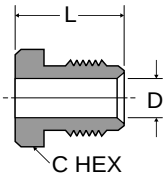


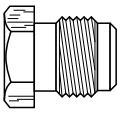


Piloted Nut 41IFF for Single Flared Tubing

Ref. SAE 040110

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	D
41IFF-2	1/8	5/16-28	5/16	.52	.133
41IFF-3	3/16	3/8-24	3/8	.56	.196
41IFF-4	1/4	7/16-24	7/16	.56	.259
41IFF-5	5/16	1/2-20	1/2	.62	.321
41IFF-6	3/8	5/8-18	5/8	.66	.384
41IFF-8	1/2	3/4-18	3/4	.74	.508

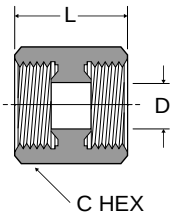




Union 42IFHD

Ref. SAE 040101

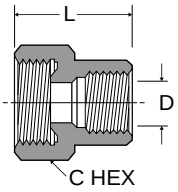
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	D
42IFHD-2	1/8	5/16-28	13/32	.60	.078
42IFHD-3	3/16	3/8-24	15/32	.63	.125
42IFHD-4	1/4	7/16-24	17/32	.63	.189
42IFHD-5	5/16	1/2-20	19/32	.71	.220
42IFHD-6	3/8	5/8-18	3/4	.81	.282
42IFHD-8	1/2	3/4-18	29/32	.92	.407

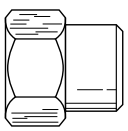


Female Connector 46IFHD

Ref. SAE 040103

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
46IFHD-3-2	3/16	1/8	3/8-24	1/2	.76	.125
46IFHD-4-2	1/4	1/8	7/16-24	17/32	.78	.189
46IFHD-5-2	5/16	1/8	1/2-20	19/32	.79	.220
46IFHD-6-4	3/8	1/4	5/8-18	3/4	1.04	.282
46IFHD-8-6	1/2	3/8	3/4-18	29/32	1.10	.407



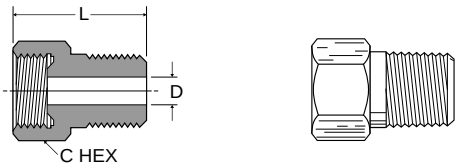


Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Male Connector 48IFHD

Ref. SAE 040102

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
48IFHD-2-2	1/8	1/8	5/16-28	13/32	.63	.078
48IFHD-3-2	3/16	1/8	3/8-24	15/32	.70	.125
48IFHD-4-2	1/4	1/8	7/16-24	17/32	.74	.189
48IFHD-4-4	1/4	1/4	7/16-24	9/16	.89	.189
48IFHD-5-2	5/16	1/8	1/2-20	19/32	.79	.220
48IFHD-5-4	5/16	1/4	1/2-20	19/32	.98	.220
48IFHD-6-2	3/8	1/8	5/8-18	3/4	.89	.220
48IFHD-6-4	3/8	1/4	5/8-18	3/4	1.03	.282
48IFHD-6-6	3/8	3/8	5/8-18	3/4	1.03	.282
48IFHD-8-4	1/2	1/4	3/4-18	29/32	1.07	.346
48IFHD-8-6	1/2	3/8	3/4-18	29/32	1.07	.407
48IFHD-8-8	1/2	1/2	3/4-18	29/32	1.26	.407
48IFHD-10-8	5/8	1/2	7/8-18	1-1/16	1.32	.533
48IFHD-12-12	3/4	3/4	1-1/16-16	1 1/4	1.38	.626

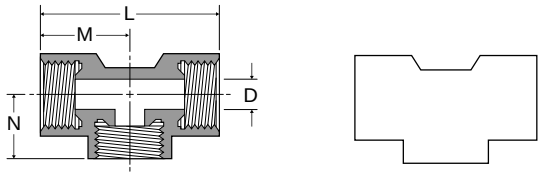


E

Union Tee 244IFHD

Ref. SAE 040401

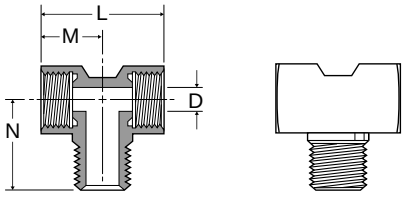
PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	N	FLOW DIA. D
244IFHD-3	3/16	3/8-24	1.10	.55	.39	.125
244IFHD-4	1/4	7/16-24	1.13	.56	.42	.189
244IFHD-5	5/16	1/2-20	1.26	.63	.45	.220
244IFHD-6	3/8	5/8-18	1.48	.74	.56	.282
244IFHD-8	1/2	3/4-18	1.76	.88	.67	.407



Male Branch Tee 245IFHD

Ref. SAE 040425

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
245IFHD-4-2	1/4	1/8	7/16-24	.85	.43	.64	.189
245IFHD-6-4	3/8	1/4	5/8-18	1.17	.58	.94	.282

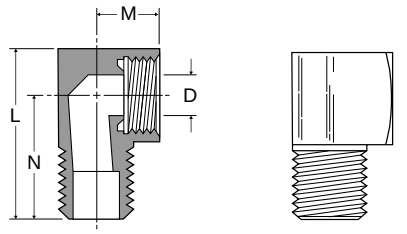


Male Elbow 249IFHD–249IF

Ref. SAE 040202

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
249IFHD-2-2	1/8	1/8	5/16-28	.79	.25	.58	.078
249IFHD-3-2	3/16	1/8	3/8-24	.85	.27	.61	.125
249IFHD-4-2	1/4	1/8	7/16-24	.92	.33	.65	.189
249IFHD-4-4	1/4	1/4	7/16-24	1.10	.28	.82	.189
249IFHD-5-2	5/16	1/8	1/2-20	.98	.47	.68	.220
249IFHD-5-4	5/16	1/4	1/2-20	1.16	.45	.86	.220
249IFHD-6-2	3/8	1/8	5/8-18	1.13	.53	.76	.220
249IF-6-4†	3/8	1/4	5/8-18	1.26	.45	.92	.282
249IFHD-6-4	3/8	1/4	5/8-18	1.32	.53	.95	.282
249IFHD-6-6	3/8	3/8	5/8-18	1.32	.50	.94	.282
249IFHD-8-4	1/2	1/4	3/4-18	1.48	.59	1.02	.407
249IF-8-6+	1/2	3/8	3/4-18	1.42	.53	.99	.407
249IFHD-8-6	1/2	3/8	3/4-18	1.48	.59	1.02	.407
249IFHD-8-8	1/2	1/2	3/4-18	1.67	.66	1.22	.407
249IFHD-10-6	5/8	3/8	7/8-18	1.62	.67	1.09	.533
249IFHD-10-8	5/8	1/2	7/8-18	1.82	.67	1.29	.533

†Light Duty Series

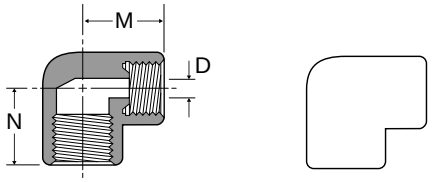


Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Female Elbow 250IFHD

Ref. SAE 040203

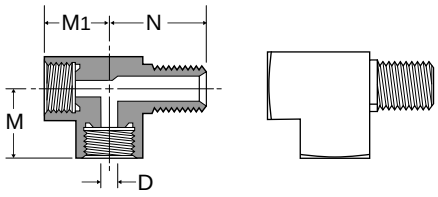
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D
250IFHD-3-2	3/16	1/8	3/8-24	.50	.49	.125
250IFHD-4-2	1/4	1/8	7/16-24	.53	.53	.189
250IFHD-5-2	5/16	1/8	1/2-20	.59	.59	.220
250IFHD-6-4	3/8	1/4	5/8-18	.67	.68	.282



Male Run Tee 251IFHD

Ref. SAE 040424

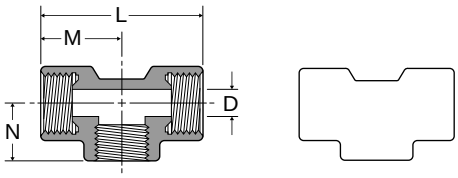
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	M1	N	FLOW DIA. D
251IFHD-3-2	3/16	1/8	3/8-24	.39	.53	.72	.125
251IFHD-5-2	5/16	1/8	1/2-20	.45	.62	.85	.220
251IFHD-6-4	3/8	1/4	5/8-18	.56	.75	1.08	.282



Female Branch Tee 252IFHD

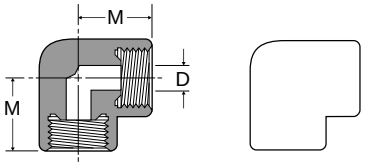
Ref. SAE 040427

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
252IFHD-5-2	5/16	1/8	1/2-20	1.26	.63	.45	.220
252IFHD-6-4	3/8	1/4	5/8-18	1.48	.74	.56	.282



Union Elbow 255IFHD

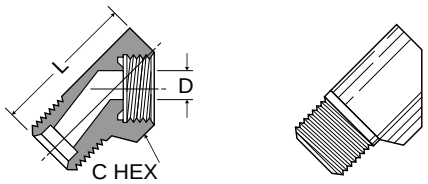
PART NO.	TUBE SIZE	STRAIGHT THREAD	M	FLOW DIA. D
255IFHD-4	1/4	7/16-24	.55	.189



45° Elbow 259IFHD

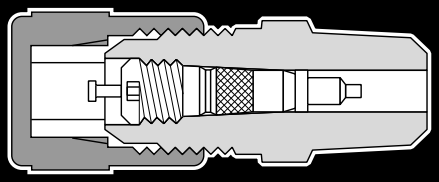
Ref. SAE 040302

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
259IFHD-3-2	3/16	1/8	3/8-24	17/32	.88	.125
259IFHD-4-2	1/4	1/8	7/16-24	9/16	.94	.189
259IFHD-5-2	5/16	1/8	1/2-20	5/8	1.00	.220
259IFHD-5-4	5/16	1/4	1/2-20	5/8	1.16	.220
259IFHD-6-4	3/8	1/4	5/8-18	13/16	1.34	.282
259IFHD-8-6	1/2	3/8	3/4-18	7/8	1.44	.407
259IFHD-10-8	5/8	1/2	7/8-18	1-1/16	1.75	.533



E

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan



Access Valves

E

Advantages
Access Valves are designed to offer convenient low cost access ports for Refrigeration service. All Access Valves feature 1/4" SAE male flare access ports and are furnished with a finger tight quick seal cap. For greater flexibility, all Tees and Crosses are machined to receive an access core in all 1/4" SAE flare ends. This allows for 2 or more access connections in one fitting plus greater flexibility in the positioning of the valves. All Access Valves with pipe connections have internal ODS solder cups so that these valves may be installed in either of 2 ways.

Applications
Access Valves may be installed in any position on either high or low side for quick testing, pressure checking, purging or charging.

Valve Bodies
Straight Access Valve bodies are manufactured from brass rod CA360 or CA345. Shaped Access Valve bodies are manufactured from brass forge rod CA377. All Access Valve bodies are machined in accordance with ARI standard 720.

Valve Core
Parker valve cores meet ARI standard 720 and are designed for use with all florocarbon refrigerants such as R-12,R-22 and R-502, R-134a and are resistant to oils, alkalies and dilute mineral acids.

Working Pressure and Temperature Ranges
Up to 500 PSI
-20°F to +220°F

Order
By part number and name.

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

Example:

X	AV	T1	–2
Packaged	Access Valve	Male Branch Tee	1/8" (2/16) Pipe Thread

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

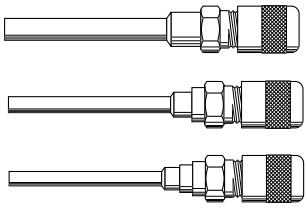
Special Fittings
Fitting configurations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry.

Pricing
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Extended Copper Tube AVUSE

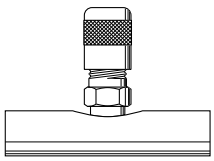
PART NO.	CONNECTION SIZE
AVUSE-2	1/8” O.D. Tube
AVUSE-3	3/16” O.D. Tube
AVUSE-4	1/4” O.D. Tube
AVUSE-5	5/16” O.D. Tube
AVUSE-6	3/8” O.D. Tube
AVUSE-8	1/2” O.D. Tube
AVUSE-9	1/8” O.D. Tube; Additional steps on body for 3/16”, 1/4”, 5/16”, 3/8”O.D. Tube. 3/16”, 1/4”, or 5/16” Solder Fitting/Swaged Tube.
AVUSE-11	3/16” O.D. Tube; Additional steps on body for 1/4” or 3/8” Solder Fittings/Swaged Tubes 5/16” O.D. Tube.



Product comes with valve core loose and should be torqued after brazing to ARI 720 standard.

Solder Tee AVTS

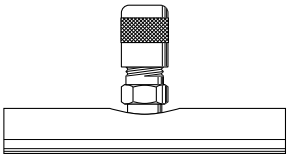
PART NO.	CONNECTION SIZE
AVTS-4	1/4” O.D. Tube or 3/8” Solder Fitting/Swaged Tube
AVTS-5	5/16” O.D. Tube or 3/8” Solder Fitting/Swaged Tube
AVTS-6	3/8” O.D. Tube or 1/2” Solder Fitting/Swaged Tube
AVTS-8	1/2” O.D. Tube or 5/8” Solder Fitting/Swaged Tube



Product comes with valve core loose and should be torqued after brazing to ARI 720 standard.

Extended Solder Tee AVTSL

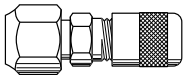
PART NO.	CONNECTION SIZE
AVTSL-6	3/8” O.D. Tube/Solder 5/16”, 3/8” & 7/16” Tube



Product comes with valve core loose and should be torqued after brazing to ARI 720 standard.

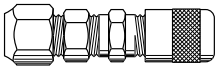
Full Union AVU2

PART NO.	CONNECTION SIZE
AVU2-4	1/4” O.D. Flare Tube With Forged Flare Nut



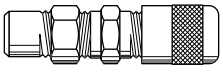
Bulkhead Union AVU2BH

PART NO.	CONNECTION SIZE
AVU2BH-4	1/4" Bulkhead Access X 1/4" SAE With Forged Nut



Bulkhead Solder Union AVUS3BH

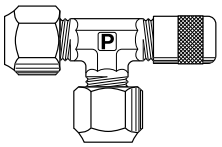
PART NO.	CONNECTION SIZE
AVUS3BH-4	1/4" Bulkhead Access X 3 Way ODS



Product comes with valve core loose and should be torqued after brazing to ARI 720 standard.

Forged Union Tee AVT2

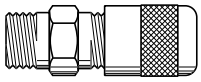
PART NO.	CONNECTION SIZE
AVT2-4	1/4" Access All Ends With 2 Forged Flare Nuts and One Core and Cap



Male Connector AVU1

PART NO.	CONNECTION SIZE
AVU1-2	1/8" Male Pipe or 1/4" O.D. Solder
AVU1-4	1/4" Male Pipe or 5/16" O.D. Solder

Product comes with valve core loose and should be torqued after brazing to ARI 720 standard.

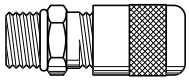


E

Access Valve Assembly AVUIFI

PART NO.	CONNECTION SIZE
AVUIFI-4	7/16-20 SAE Straight thread O-Ring Port Note: Standard o-ring is neoprene. Consult Brass Products Division for optional o-rings

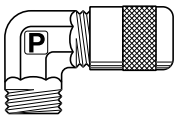
Product comes with valve core loose and should be torqued after brazing to ARI 720 standard.



Forged Male Elbow AVE1

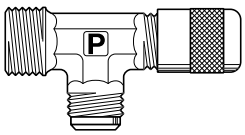
PART NO.	CONNECTION SIZE
AVE1-2	1/8" Male Pipe or 1/4" O.D. Solder

Product comes with valve core loose and should be torqued after brazing to ARI 720 standard.



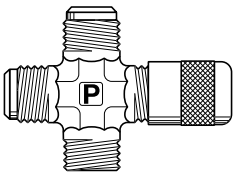
Forged Male Run Tee AVT3

PART NO.	CONNECTION SIZE
AVT3-2	1/8" Male Pipe or 1/4" O.D. Solder on Run x 1/4" Access on Run and Branch With One Core and Cap
AVT3-4	1/4" Male Pipe or 5/16" O.D. Solder on Run x 1/4" Access on Run and Branch With One Core and Cap



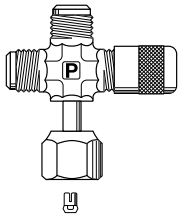
Forged Male Cross AVC1

PART NO.	CONNECTION SIZE
AVC1-4	1/4" Male Pipe or 5/16" O.D. Solder x 1/4" Access on all Flare Ends With One Core and Cap



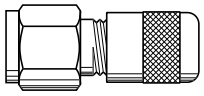
Swivel Cross AVCS4D-4

PART NO.	CONNECTION SIZE
AVCS4D-4	1/4" Forged Female Flare Swivel With Depressor x 1/4" Access on all Flare Ends with One Core and Cap



Female Connector AVUR3

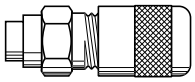
PART NO.	CONNECTION SIZE
AVUR3-4	1/4" Female Flare with Copper Gasket



3 Way Solder Connector AVUS3

PART NO.	CONNECTION SIZE
AVUS3-40	For 3/16" O.D. Tube or 1/4" and 3/8" Solder Fitting/Swaged Tube

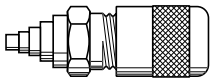
Product comes with valve core loose and should be torqued after brazing to ARI 720 standard.



9 Way Solder Connector AVUS3

PART NO.	CONNECTION SIZE
AVUS3-49	For 3/16", 1/4", 5/16", 3/8" or 1/2" O.D. Tube. Also Fits 3/16",1/4" and 5/16" Solder Fitting/Swaged Tube or 1/8" Hole May Be Punched in Larger Size Tube

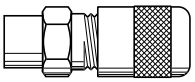
Product comes with valve core loose and should be torqued after brazing to ARI 720 standard.



Straight Solder Connector AVUS

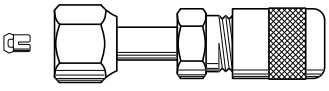
PART NO.	CONNECTION SIZE
AVUS-42	1/8" O.D. Tube or 1/4" Solder Fitting/Swaged Tube
AVUS-43	3/16" O.D. Tube or 1/4" Solder Fitting/Swaged Tube
AVUS-44	1/4" O.D. Tube or 3/8" Solder Fitting/Swaged Tube
AVUS-45	5/16" O.D.Tube or 1/2" Solder Fitting/Swaged Tube
AVUS-46	3/8" O.D. Tube or 1/2" Solder Fitting/Swaged Tube

Product comes with valve core loose and should be torqued after brazing to ARI 720 standard.



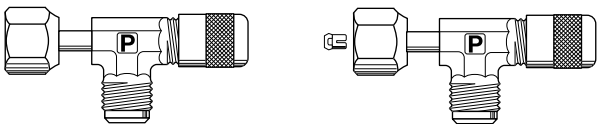
Swivel Connector AVUS4D

PART NO.	CONNECTION SIZE
AVUS4D-4	1/4" Forged Female Flare Swivel Nut with Depressor



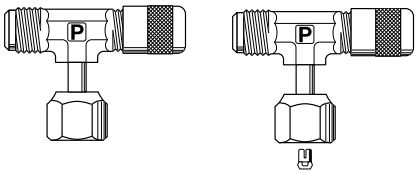
Forged Female Run Swivel Tee AVTS4

PART NO.	CONNECTION SIZE
AVTS4-4	1/4" Female Flare Swivel x 1/4" Access on Both Run and Branch
AVTS4D-4	1/4" Female Flare Swivel on Run with Depressor x 1/4" Access on Both Run and Branch



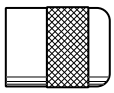
Forged Female Branch Tee AVTS6

PART NO.	CONNECTION SIZE
AVTS6-4	1/4" Female Flare Swivel x 1/4" Access on Both Ends
AVTS6D-4	1/4" Female Flare Swivel on Branch with Depressor x 1/4" Access on Both Ends



Quick Seal Caps 640QSF

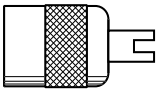
PART NO.	CONNECTION SIZE
640QSF-4	1/4" SAE Seal Cap with Seal Gasket
640QSF-6	3/8" SAE Seal Cap with Seal Gasket



E

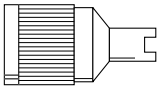
Quick Seal Cap with Core Remover 640QSFCR

PART NO.	CONNECTION SIZE
640QSFCR-4	1/4" SAE Seal Cap Core Remover with internal Seal Gasket



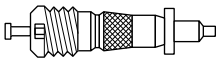
Core Remover CR

PART NO.	CONNECTION SIZE
CR-001	Standard Core Remover



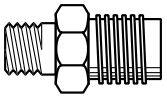
Valve Cores VC

PART NO.	CONNECTION SIZE
VC-001	Replacement Valve Cores For all 1/4" Access Valves



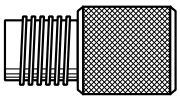
Refrigerant adapter 88AC

PART NO.	CONNECTION SIZE
88AC-8-2	1/8" male pipe to SAE J2197 Acme threaded male connector



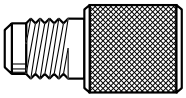
Refrigerant adapter 880AC

PART NO.	CONNECTION SIZE
880AC-8-4	1/4" female SAE flare to SAE J2197 Acme threaded male connector



Refrigerant adapter 881AC

PART NO.	CONNECTION SIZE
881AC-8-4	1/4" SAE male flare to SAE J2197 Acme threaded female connector



Notes

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Adapters

Pipe Fittings

- SAE Standards
- Dryseal Threads
- Forgings & Extrusions

Metric Adapters

- Economical
- Reusable
- Forgings & Extrusions

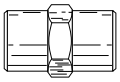
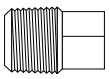
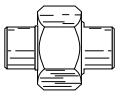
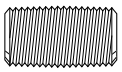
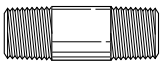
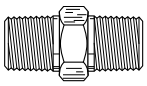
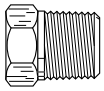
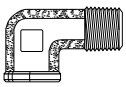
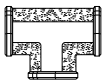
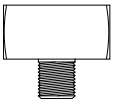
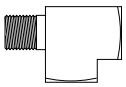
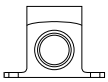
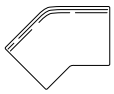
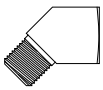
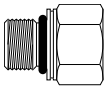
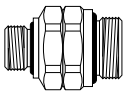
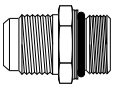
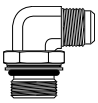
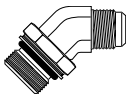
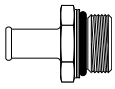
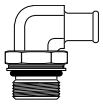
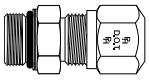
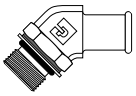
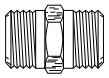
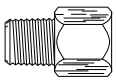
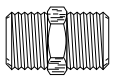
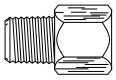
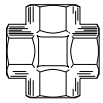
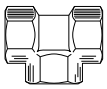
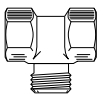
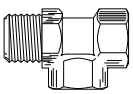
ISO Port Adapters

- Meets ISO 6149-3 Requirements
- Meets SAE 2244-3 Requirements
- Viton O-rings Standard

Garden Hose Fittings

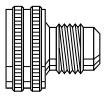
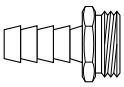
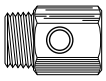
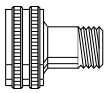
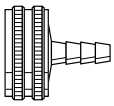
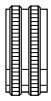
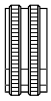
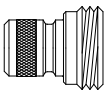
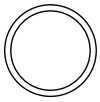
- Heavy Duty Construction
- Coupler option
- Use with Hose Clamp

The World Standard

Industrial Pipe Fittings	**207ACBH** Anchor Coupling  Page F6	**207P** Pipe Coupling  Page F6	**208P** Reducer Coupling  Page F6	**209P** Pipe Bushing  Page F6	**210P** Lock Nut  Page F6	**211P** Square-head Plug  Page F7
212P Union  Page F7	**213P** Cap  Page F7	**215PN** Close Nipple  Page F7	**215PNL** Long Nipple  Page F7	**216P** Hex Nipple  Page F8	**218P** Hex-Head Plug  Page F8	**219P** Countersunk Plug  Page F8
220P Slotted-Head Plug  Page F8	**222P** Adapter  Page F9	**1200P-2200P** Union Elbow  Page F9	**1202P-2202P** Street Elbow  Page F9	**1203P-2203P** Union Tee  Page F10	**1204P** Male Elbow  Page F10	**2224P** Male Branch Tee  Page F10
2225P Street Tee  Page F10	**2200PDE** Drop-Ear Elbow  Page F11	**2201P** 45° Female Elbow  Page F11	**2205P** Cross  Page F11	**2214P** 45° Street Elbow  Page F11	**Metric Straight Thread Adapters**	**222P-MI** Adapter  Page F14 & E18
M16M22F8UHA8UB Union  Page F14 & E18	**48F-MI** Flare Adapter  Page F18	**149F-MI** Flare Adapter  Page F18	**159F-MI** Flare Adapter  Page F18	**68HB-MI** Hose Barb Adapter  Page F19	**169HB-MI** Hose Barb Adapter  Page F19	**68NTA-MI** NTA Adapter  Page F19
179HB-MI Hose Barb Adapter  Page F19	**BSP Adapters**	**CD43** Street Elbow  Page F13	**DD44** Elbow  Page F13	**F3HF** Hex Nipple NPTF-BSPT  Page F13	**F3HG** Adapter-Male BSPT  Page F13	**FF33** BSPT Hex Nipple  Page F13
FF44 BSPP Hex Nipple  Page F14	**FG43** Adapter-Male BSPT  Page F14	**FHG4** Female-BSPP  Page F14	**GG44** Coupling BSPP  Page F15	**HHP3** BSPT Plug  Page F15	**HP3** BSPT Plug  Page F15	**KMMOO4** BSPP Cross  Page F15
MMO444 BSPP Tee  Page F15	**MMS443** Branch Tee  Page F16	**MRO434** Run Tee  Page F16	**PTR34** Pipe Reducer  Page F16	**WGG44** Bulkhead Union  Page 16		

F

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Garden Hose Fittings	**50GHSV** Swivel Connector  Page F21	**53GH, 54GH, 55GH** Hose Barb  Page F21	**69GH, 70GH, 71GH** Male Pipe  Page F21	**75GH** Connector  Page F21	**78GH, 79GH, 80GH, 81GH** Female Pipe  Page F21	**82GH, 83GH** Female Hose  Page F21
84GH Filter Adapter  Page F21	**88GH** Swivel Connector  Page F22	**90GH** Swivel Connector  Page F22	**94GH** Hose Nut  Page F22	**95GH** Hose Nut Reducer  Page F22	**96GH** Hose Cap  Page F22	**98GH, 99GH** Hose to Pipe  Page F22
98GHSV, 99GHSV Swivel Connector  Page F23	**101GHSV** Swivel Nut Connector  Page F23	**1163-60-BPD** Coupler  Page F23	**1163-61-BPD** Nipple  Page F23	**Auxiliary**	**112** Copper Ring  Page F16	**901GH** Rubber Washer  Page F23

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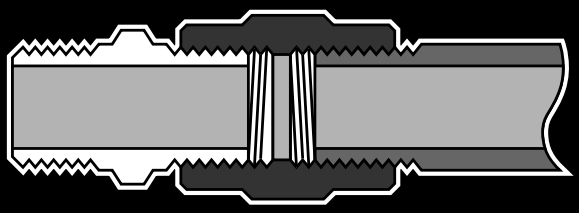

Pipe Fittings

F

Advantages
All pipe fitting threads are made to Dryseal standards.* Connectors, unions, nuts and extruded elbows and tees are machined from CA 360 and CA 345 brass; forged elbows and tees are machined from CA 377 brass.

Specifications
Meets functional requirements of the SAE J530 and SAE J531.

Applications
Use with brass, copper or iron pipe. Manufactured for low and medium pressure line connection work.

Working Pressure and Temperature Ranges
From -65° to +250°F. at 1000 psi.

Vibration
Fair resistance to vibration and pipe movement depending upon conditions.

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 identifies the style and type fitting. The second series of numbers describes the size.

Example:

2	214	P	–2	–2
Forging (1) / Extrusion (2)	45° Street Elbow	Pipe	1/8" (2/16) Pipe Thread	1/8" (2/16) Pipe Thread

Sizes
Pipe sizes are determined by the number of sixteenths of an inch in the pipe size.

Special Fittings
Fitting configureations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry.

Pricing
Only items prices in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

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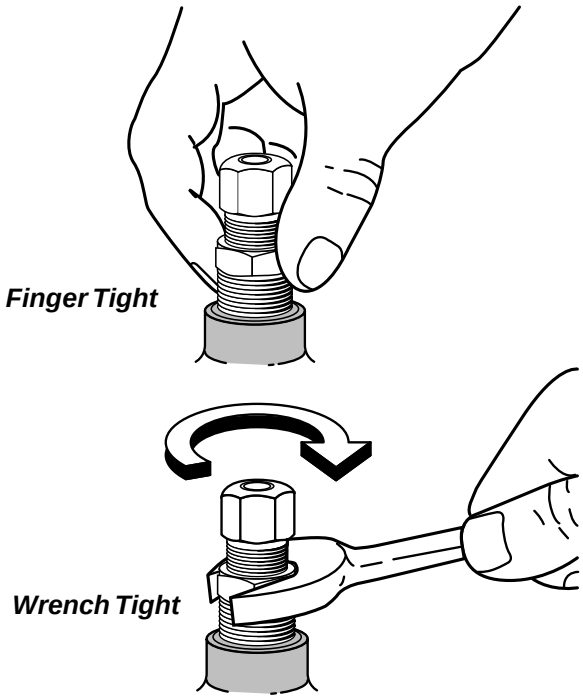
Pipe thread assembly guide (turns method) for Dryseal threads with pre-applied Vibra Seal

Straight Fittings

1. Tighten external thread into the internal thread.

2. Tighten an additional 2 revolutions with a wrench up to 1⁄2 in. male pipe thread. Above 1⁄2 in., 11⁄2 to 21⁄2 revolutions.



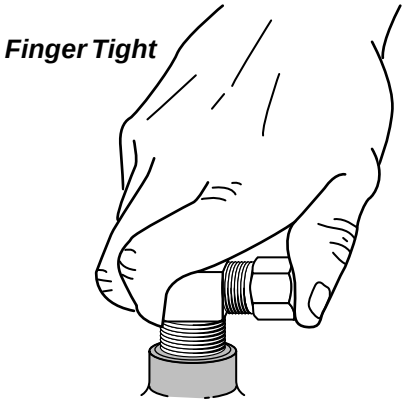
Elbow or Tee Fittings

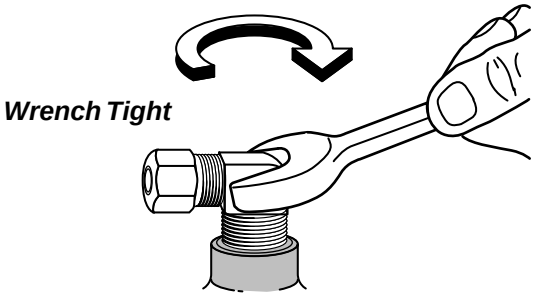
1. Tighten external thread into the internal thread.

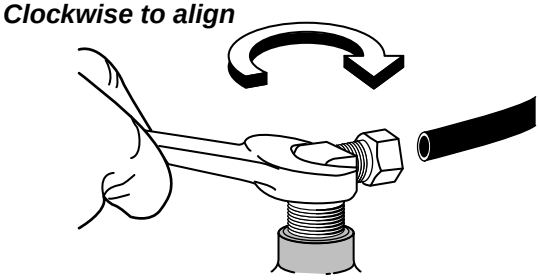
2. Tighten an additional 1 to 11⁄2 revolutions with a wrench.

3. Tighten fitting, Clockwise, to Align with Tubing (never counter clockwise).

Note: To minimize the possibility of a leaking threaded joint after assembling male to female pipe threads, neither end should be backed out (loosened) once the assembly has been made.







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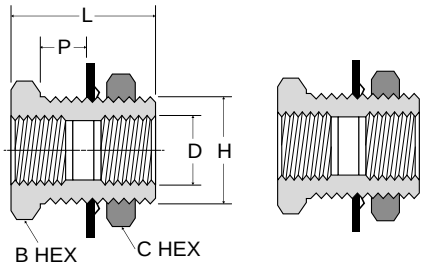
Anchor Coupling 207ACBH

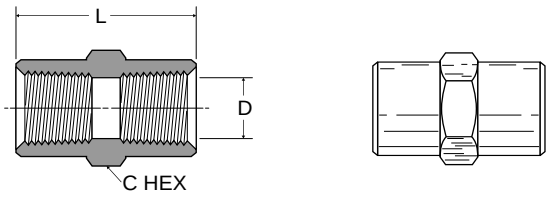
PART NO.	FEAMLE PIPE THREAD	STRAIGHT THREAD	MAX . BULK HEAD P	B HEX	C HEX	L	BULKHEAD HOLE DIA. H	FLOW DIA. D
207ACBH-2	1/8	5/8-18	.89	7/8	15/16	1.50	5/8	.339
207ACBHS-2	1/8	5/8-18	.35	7/8	15/16	.96	5/8	.339
207ACBH-4	1/4	3/4-16	.81	1	1-1/8	1.50	3/4	.441
207ACBHS-4	1/4	3/4-16	.26	1	1	.94	3/4	.441
207ACBH-6	3/8	1-14	.62	1-1/8	1-1/4	1.31	1	.571
207ACBH-8	1/2	1-1/8-14	.75	1-1/4	1-3/8	1.50	1-1/8	.703
207ACBH-12	3/4	1-5/16-12	.65	1-1/2	1-1/2	1.50	1-5/16	.906
207ACBH-16*	1	1-5/8-14	1.00	2	2	1.68	1-5/8	1.140

*Lock Washer not Available



Coupling 207P

PART NO.	PIPE THREAD	C HEX	L	FLOW DIA. D
207P-2	1/8	9/16	.75	.339
207P-4	1/4	3/4	1.12	.441
207P-6	3/8	7/8	1.12	.571
207P-8	1/2	1-1/16	1.50	.703
207P-12	3/4	1-3/8	1.53	.906



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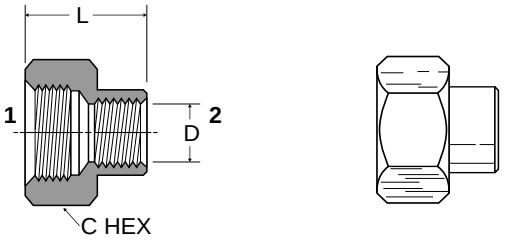
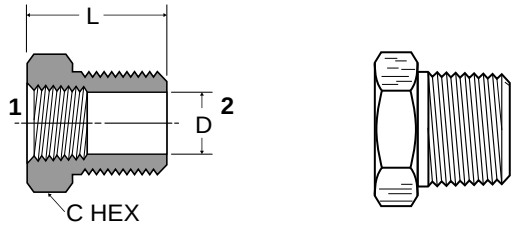
Reducer Coupling 208P

PART NO.	1 PIPE THREAD	2 PIPE THREAD	C HEX	L	FLOW DIA. D
208P-4-2	1/4	1/8	3/4	.97	.339
208P-6-4	3/8	1/4	7/8	1.16	.441
208P-8-4	1/2	1/4	1-1/16	1.28	.441
208P-8-6	1/2	3/8	1-1/16	1.38	.571
208P-12-6	3/4	3/8	1-3/8	1.32	.571
208P-12-8	3/4	1/2	1-3/8	1.50	.703



Bushing 209P

PART NO.	1 PIPE THREAD	2 PIPE THREAD	C HEX	L	FLOW DIA. D
209P-4-2	1/8	1/4	9/16	.75	.339
209P-6-2	1/8	3/8	11/16	.75	.339
209P-6-4	1/4	3/8	3/4	.75	.441
209P-8-2	1/8	1/2	7/8	1.00	.339
209P-8-4	1/4	1/2	7/8	1.00	.441
209P-8-6	3/8	1/2	7/8	1.00	.571
209P-12-2	1/8	3/4	1-1/8	1.00	.339
209P-12-4	1/4	3/4	1-1/8	1.00	.441
209P-12-6	3/8	3/4	1-1/8	1.00	.571
209P-12-8	1/2	3/4	1-1/8	1.00	.703
209P-16-8	1/2	1	1-3/8	1.31	.703
209P-16-12	3/4	1	1-3/8	1.31	.906

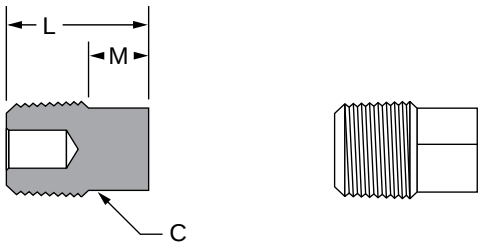


Lock Nut 210P

PART NO.	PIPE THREAD	C HEX	L
210P-2	1/8 NPSL	11/16	.19
210P-4	1/4 NPSL	7/8	.25
210P-6	3/8 NPSL	1	.25
210P-8	1/2 NPSL	1-1/8	.25

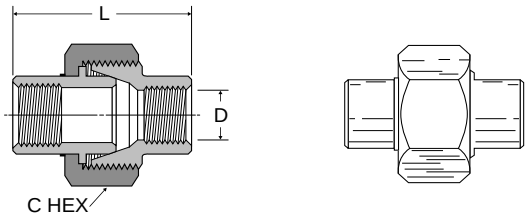
Square-Head Plug 211P

PART NO.	PIPE THREAD	C	L	M
211P-2	1/8	9/32	.59	.25
211P-4	1/4	3/8	.80	.29
211P-6	3/8	7/16	.83	.32
211P-8	1/2	9/16	1.07	.39
211P-12	3/4	5/8	1.14	.45



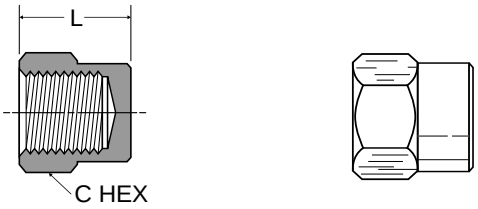
Union 212P

PART NO.	PIPE THREAD	C HEX	L	D
212P-4	1/4	1-3/16	1.54	.441
212P-6	3/8	1-1/4	1.76	.571



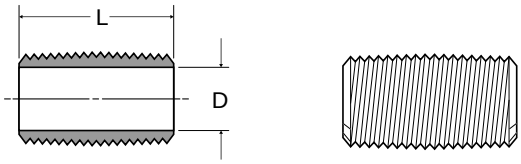
Cap 213P

PART NO.	PIPE THREAD	C HEX	L
213P-2	1/8	9/16	.50
213P-4	1/4	11/16	.63
213P-6	3/8	13/16	.63
213P-8	1/2	1-1/16	.87
213P-12	3/4	1-1/4	.89



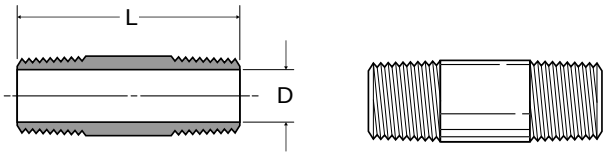
Close Nipple 215PN

PART NO.	PIPE THREAD	L	FLOW DIA.D
215PN-2	1/8	.75	.281
215PN-4	1/4	.88	.375
215PN-6	3/8	1.00	.500
215PN-8	1/2	1.13	.625
215PN-12	3/4	1.31	.750



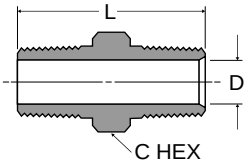
Long Nipple 215PNL

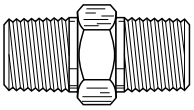
PART NO.	PIPE THREAD	L	FLOW DIA.D
215PNL-2-15	1/8	1-1/2	.250
215PNL-4-15	1/4	1-1/2	.375
215PNL-6-15	3/8	1-1/2	.500
215PNL-8-15	1/2	1-1/2	.625
215PNL-2-20	1/8	2	.250
215PNL-4-20	1/4	2	.375
215PNL-6-20	3/8	2	.500
215PNL-8-20	1/2	2	.625
215PNL-2-25	1/8	2-1/2	.250
215PNL-4-25	1/4	2-1/2	.375
215PNL-6-25	3/8	2-1/2	.500
215PNL-8-25	1/2	2-1/2	.625
215PNL-2-30	1/8	3	.250
215PNL-4-30	1/4	3	.375
215PNL-6-30	3/8	3	.500
215PNL-8-30	1/2	3	.625
215PNL-2-35	1/8	3-1/2	.250
215PNL-4-35	1/4	3-1/2	.375
215PNL-6-35	3/8	3-1/2	.500
215PNL-8-35	1/2	3-1/2	.625



Hex Nipple 216P

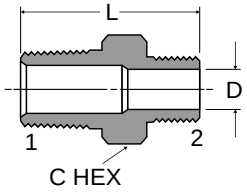
PART NO.	PIPE THREAD	C HEX	L	FLOW DIA.D
216P-2	1/8	7/16	.97	.220
216P-4	1/4	9/16	1.38	.314
216P-6	3/8	11/16	1.41	.440
216P-8	1/2	7/8	1.81	.564
216P-12	3/4	1-1/16	1.81	.752

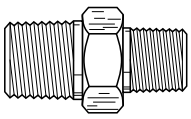




Hex Nipple Reducers 216P

PART NO.	1 PIPE THREAD	2 PIPE THREAD	C HEX	L	FLOW DIA. D
216P-4-2	1/4	1/8	9/16	1.19	.220
216P-6-2	3/8	1/8	11/16	1.22	.220
216P-6-4	3/8	1/4	11/16	1.41	.314
216P-8-4	1/2	1/4	7/8	1.62	.314
216P-8-6	1/2	3/8	7/8	1.62	.440
216P-12-8	3/4	1/2	1-1/16	1.80	.564





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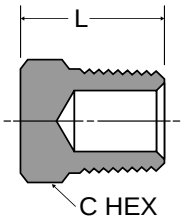
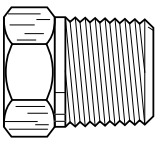
Hex-Head Plug 218P

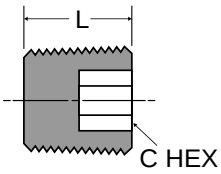
PART NO.	PIPE THREAD	C HEX	L
218P-2	1/8	7/16	.560
218P-4	1/4	9/16	.747
218P-6	3/8	11/16	.780
218P-8	1/2	7/8	.970
218P-12	3/4	1-1/16	1.054





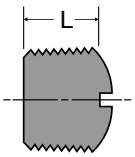
Countersunk Hex-Head Plug 219P

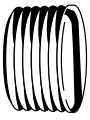
PART NO.	PIPE THREAD	C HEX	L
219P-2	1/8	3/16	.30
219P-4	1/4	1/4	.46
219P-6	3/8	5/16	.46
219P-8	1/2	3/8	.61
219P-12	3/4	9/16	.62



Slotted-Head Plug 220P

PART NO.	PIPE THREAD	L
220P-2	1/8	.31
220P-4	1/4	.42
220P-6	3/8	.43





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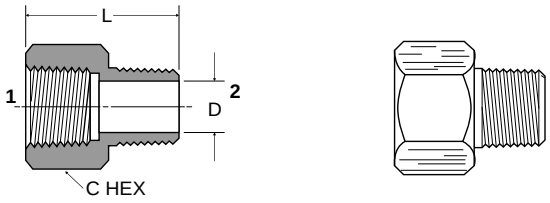
Otsego, Michigan

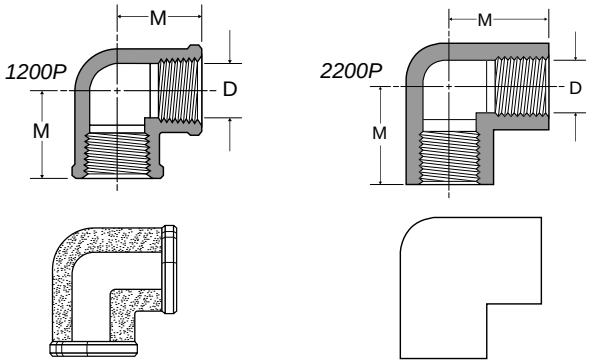
Adapter 222P

PART NO.	1 PIPE THREAD	2 PIPE THREAD	C HEX	L	FLOW DIA. D
222P-2-2	1/8	1/8	9/16	.88	.220
222P-4-2	1/4	1/8	3/4	1.06	.220
222P-4-4	1/4	1/4	3/4	1.25	.314
222P-6-2	3/8	1/8	7/8	1.10	.220
222P-6-4	3/8	1/4	7/8	1.25	.314
222P-6-6	3/8	3/8	7/8	1.25	.440
222P-8-4	1/2	1/4	1	1.47	.314
222P-8-6	1/2	3/8	1-1/16	1.47	.440
222P-8-8	1/2	1/2	1-1/16	1.66	.564
222P-12-6	3/4	3/8	1-3/8	1.50	.440
222P-12-8	3/4	1/2	1-3/8	1.69	.564
222P-12-12	3/4	3/4	1-3/8	1.69	.752



90° Union Elbow 1200P-2200P

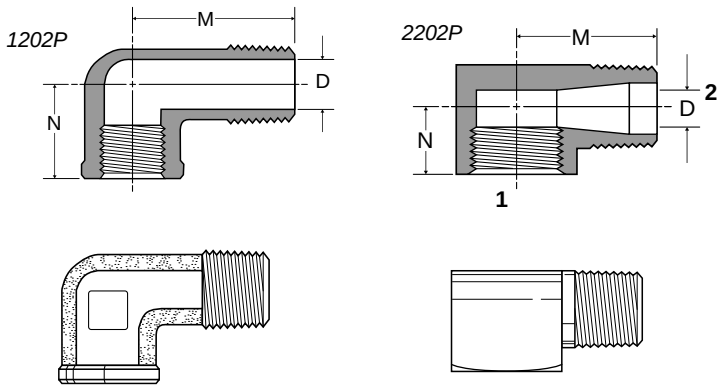
PART NO.	PIPE THREAD	M	FLOW DIA. D
1200P-2-2	1/8	.56	.329
2200P-2-2	1/8	.55	.339
1200P-4-4	1/4	.81	.441
2200P-4-4	1/4	.78	.441
1200P-6-6	3/8	.84	.571
2200P-6-6	3/8	.84	.571
2200P-8-8	1/2	1.07	.703



90° Street Elbow 1202P-2202P

PART NO.	1 PIPE THREAD	2 PIPE THREAD	M	N	FLOW DIA. D
1202P-2-2	1/8	1/8	.81	.56	.22
2202P-2-2	1/8	1/8	.62	.48	.22
2202PA-2-2*	1/8	1/8	.66	.48	.22
2202P-4-2	1/4	1/8	.72	.45	.23
1202P-4-4	1/4	1/4	1.08	.69	.31
2202P-4-4	1/4	1/4	.91	.45	.34
2202PA-4-4*	1/4	1/4	.91	.72	.31
2202P-4-6	1/4	3/8	.97	.78	.43
1202P-6-4	3/8	1/4	1.25	.78	.31
1202P-6-6	3/8	3/8	1.25	.78	.42
2202P-6-6	3/8	3/8	.98	.54	.41
2202PA-6-6*	3/8	3/8	.97	.78	.43
1202P-6-8	3/8	1/2	1.53	1.01	.56
1202P-8-6	1/2	3/8	1.25	.97	.42
2202P-8-8	1/2	1/2	1.25	1.03	.56
2202P-12-8	3/4	1/2	1.39	1.10	.56
2202P-12-12	3/4	3/4	1.39	1.10	.75

*Meets SAE Dimensions



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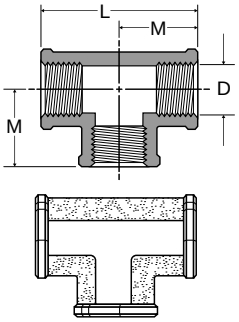
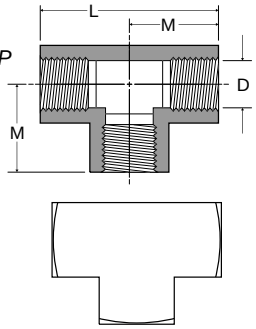
Union Tee 1203P-2203P

PART NO.	PIPE THREAD	L	M	FLOW DIA.D
1203P-2	1/8	1.12	.56	.339
2203P-2	1/8	1.06	.53	.339
1203P-4	1/4	1.38	.69	.441
2203P-4	1/4	1.52	.76	.441
2203P-6	3/8	1.68	.84	.571
1203P-8	1/2	2.14	1.07	.703
2203P-8	1/2	2.14	1.07	.703
2203P-12	3/4	2.28	1.14	.906

1203P

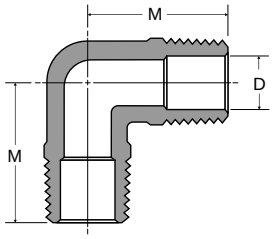


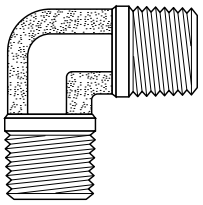
2203P



Male Elbow 1204P

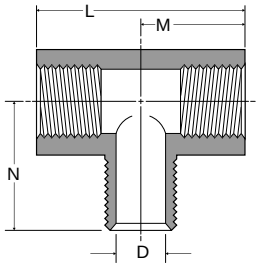
PART NO.	PIPE THREAD	M	FLOW DIA.D
1204P-2	1/8	.71	.220
1204P-4	1/4	1.09	.312
1204P-6	3/8	1.09	.408
1204P-8	1/2	1.41	.502

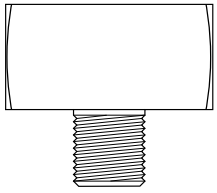




Male Branch Tee 2224P

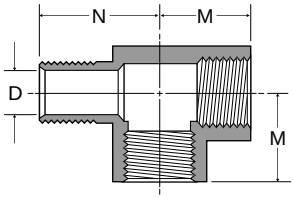
PART NO.	PIPE THREAD	L	M	N	FLOW DIA.D
2224P-2	1/8	1.06	.53	.66	.220
2224P-4	1/4	1.52	.76	.91	.314
2224P-6	3/8	1.68	.84	.97	.440
2224P-8	1/2	2.18	1.09	1.25	.564
2224P-12	3/4	2.32	1.16	1.38	.752

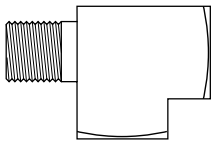




Street Tee 2225P

PART NO.	PIPE THREAD	M	N	FLOW DIA.D
2225P-2	1/8	.53	.66	.220
2225P-4	1/4	.76	.91	.314
2225P-6	3/8	.84	.98	.440
2225P-8	1/2	1.07	1.26	.564
2225P-12	3/4	1.14	1.38	.752





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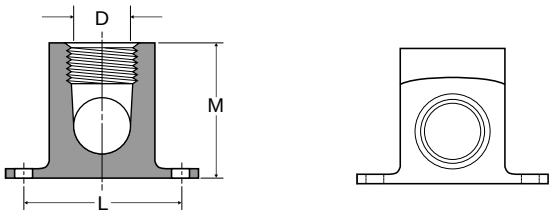
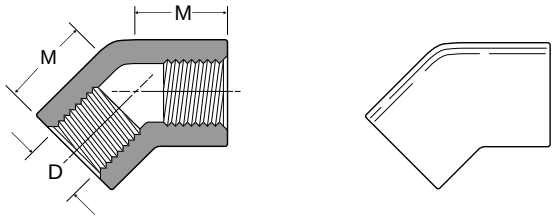
Drop-ear 90° Elbow 2200PDE

PART NO.	PIPE THREAD	L	M	FLOW DIA.D
2200PDE-2	1/8	1.38	1.00	.339



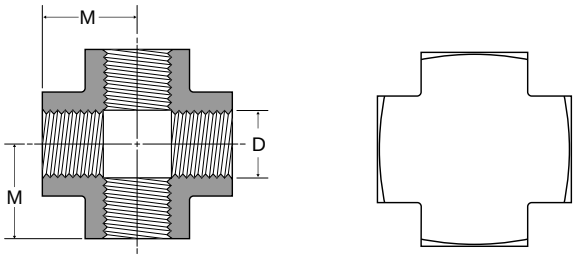
45° Female Elbow 1201P-2201P

PART NO.	PIPE THREAD	M	FLOW DIA. D
2201P-2-2	1/8	.43	.339
1201P-8-8	1/2	.89	.703



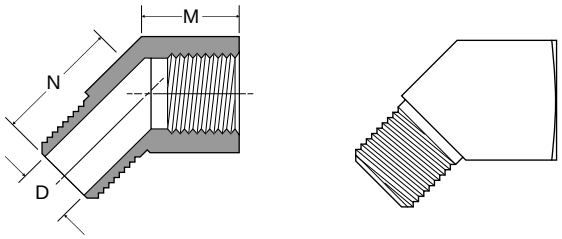
Cross 2205P

PART NO.	PIPE THREAD	M	FLOW DIA. D
2205P-2	1/8	.53	.339
2205P-4	1/4	.75	.441
2205P-6	3/8	.81	.571
2205P-8	1/2	1.07	.703
2205P-12	3/4	1.14	.906



45° Street Elbow 2214P

PART NO.	PIPE THREAD	M	N	FLOW DIA.D
2214P-2-2	1/8	.38	.50	.220
2214P-4-4	1/4	.54	.70	.314
2214P-6-6	3/8	.56	.78	.440
2214P-8-8	1/2	.73	1.00	.564



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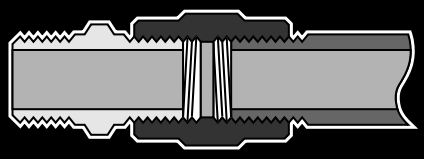


Parker Brass Metric Adapters

F

Advantages
To simplify the installation of pneumatic systems, Parker supplies a comprehensive range of adapters for NPT, BSPP, and BSPT pipe threads. Pipe nipples, pipe connectors, reducing connectors, pipe thread reducers, bulkhead female unions, elbows, tees, crosses and hex head plugs.

Parker brass adapters are produced from forgings and extrusions to meet exacting requirements. The hot forging process increases the density of the material, refines the grain structure and improves material strength.

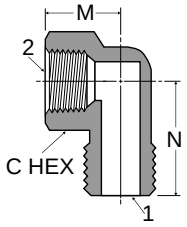
Applications
Use with brass, copper, or iron pipe. Manufactured for low- and medium-pressure line connection work.

Working Pressure and Temperature Ranges
From -65° to +250° at 1000 psi.

Vibration
Fair resistance to vibration and pipe movement depending upon conditions.

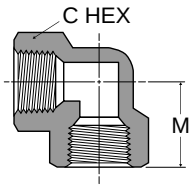
CD43 90° Elbow Male-Female BSPT-BSPP

PART NO.	BSPT 1	BSPP 2	C HEX	M	N
1/8CD43B	1/8	1/8	14	14	20
1/4CD43B	1/4	1/4	17	18	25
3/8CD43B	3/8	3/8	22	19	29
1/2CD43B	1/2	1/2	27	24	37



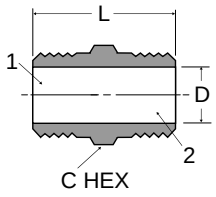
DD44 Pipe 90° Elbow BSPP

PART NO.	BSPP	C HEX	M
1/8DD44B	1/8	14	15
1/4DD44B	1/4	17	18
3/8DD44B	3/8	22	22
1/2DD44B	1/2	27	29



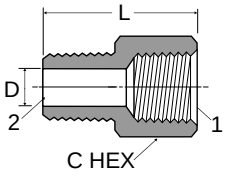
F3HF Hex Nipple NPTF BSPT

PART NO.	NPTF 1	BSPT 2	C HEX	L	FLOW D
1/8F3HF-B	1/8	1/8	7/16	1.07	.22
1/4F3HF-B	1/4	1/4	9/16	1.58	.31
3/8F3HF-B	3/8	3/8	11/16	1.61	.44
1/2F3HF-B	1/2	1/2	7/8	2.01	.56



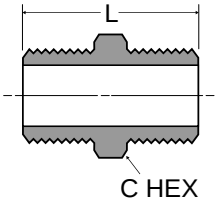
F3HG Adapter NPTF Male BSPT

PART NO.	NPTF 1	BSPT 2	C HEX	L	FLOW D
1/8F3HG-B	1/8	1/8	9/16	0.93	.22
1/4F3HG-B	1/4	1/4	3/4	1.35	.31
3/8F3HG-B	3/8	3/8	7/8	1.35	.44
1/2F3HG-B	1/2	1/2	1-1/16	1.76	.56



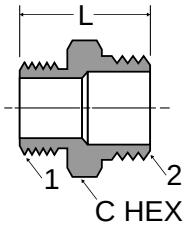
FF33 Pipe Nipples BSPT

PART NO.	BSPT	C HEX	L
1/8FF33B	1/8	10	19
1/4FF33B	1/4	14	27
3/8FF33B	3/8	17	28
1/2FF33B	1/2	22	36
3/4FF33B	3/4	27	40
1FF33B	1	36	46



FF33 Unequal Pipe Nipples BSPT

PART NO.	BSPT 1	BSPT 2	C HEX	L
1/8x1/4FF33B	1/8	1/4	14	23
1/8x3/8FF33B	1/8	3/8	17	24
1/8x1/2FF33B	1/8	1/2	22	28
1/4x3/8FF33B	1/4	3/8	17	28
1/4x1/2FF33B	1/4	1/2	22	31
3/8x1/2FF33B	3/8	1/2	22	32
3/8x3/4FF33B	3/8	3/4	27	35
1/2x3/4FF33B	1/2	3/4	27	38
3/4x1FF33B	3/4	1	36	43



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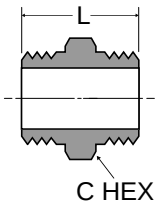
FF44 Pipe Nipples BSPP

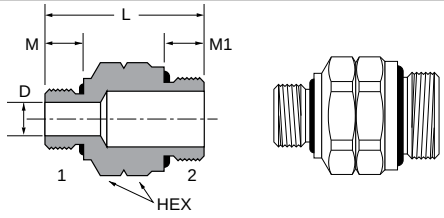
PART NO.	BSPP	C HEX	L
1/8FF44B	1/8	14	19
1/4FF44B	1/4	17	22
3/8FF44B	3/8	22	24
1/2FF44B	1/2	27	31



Metric Straight Thread Union M16M22F8UHA8UB

PART NUMBER	METRIC THD 1	METRIC THD 2	L (mm)	HEX (mm)	M (mm)	M1 (mm)	D (mm)
M16M22F8UHA8UB	M16X1.5	M22X1.5	43	27	10	12.5	9.0

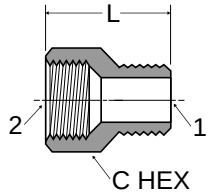
Note: Fluorocarbon o-ring is standard



F

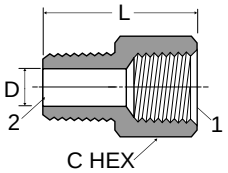
FG43 Reducing Connector Female-Male BSPP-BSPT

PART NO.	BSPT 1	BSPP 2	C HEX	L
1/4x1/8FG43B	1/8	1/4	17	23
3/8x1/8FG43B	1/8	3/8	22	25
3/8x1/4FG43B	1/4	3/8	22	28
1/2x1/8FG43B	1/8	1/2	27	29
1/2x1/4FG43B	1/4	1/2	27	32
1/2x3/8FG43B	3/8	1/2	27	31
3/4x1/2FG43B	1/2	3/4	32	39
1x3/4FG43B	3/4	1	41	38



FHG4 Adapter Male NPTF BSPP

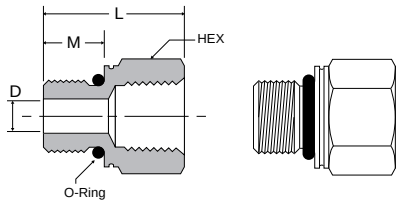
PART NO.	BSPP 1	NPTF 2	C HEX	L	FLOW D
1/8FHG4-B	1/8	1/8	0.562	0.870	.22
1/4FHG4-B	1/4	1/4	0.750	1.125	.31
3/8FHG4-B	3/8	3/8	0.875	1.125	.44
1/2FHG4-B	1/2	1/2	1.062	1.660	.60



Pipe to Metric Adaptor 222P-X-MIX

PART NUMBER	NPTF	METRIC THREAD	HEX	L	M	D
222P-2-MI10	1/8-27	M10 x 1.0	9/16	.75	.34	.18
222P-2-MI14	1/8-27	M14 x 1.5	3/4	.91	.43	.30
222P-4-MI12	1/4-18	M12 x 1.5	11/16	1.09	.43	.24
222P-6-MI16	3/8-18	M16 x 1.5	7/8	1.10	.45	.35
222P-6-MI22	3/8-18	M22 x 1.5	1 1/16	1.05	.37	.47
222P-8-MI27	1/2-14	M27 x 2.0	1 1/4	1.32	.63	.60

Note: Fluorocarbon o-ring is standard



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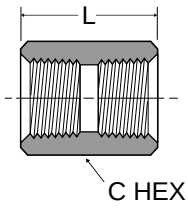
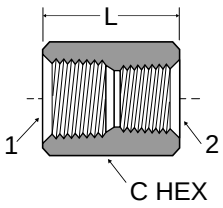
GG44 Pipe Connector BSPP

PART NO.	BSPP	C HEX	L
1/8GG44B	1/8	14	16
1/4GG44B	1/4	17	20
3/8GG44B	3/8	22	24
1/2GG44B	1/2	27	28
3/4GG44B	3/4	32	32
1GG44B	1	41	36



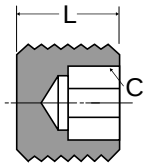
GG44 Unequal Pipe Connector BSPP

PART NO.	BSPP 1	BSPP 2	C HEX	L
1/8x1/4GG44B	1/8	1/4	17	18
1/8x3/8GG44B	1/8	3/8	22	20
1/8x1/2GG44B	1/8	1/2	27	22
1/4x3/8GG44B	1/4	3/8	22	22
1/4x1/2GG44B	1/4	1/2	27	24
3/8x1/2GG44B	3/8	1/2	17	26



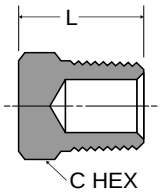
HHP3 Hollow Hex Head Plug BSPT

PART NO.	BSPT	C HEX	L
1/8HHP3B	1/8	5	8
1/4HHP3B	1/4	6	10
3/8HHP3B	3/8	8	11
1/2HHP3B	1/2	10	13



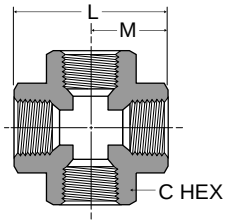
HP3 Hex Plug BSPT

PART NO.	BSPT	C HEX	L
1/8HP3B	1/8	10	12
1/4HP3B	1/4	14	16
3/8HP3B	3/8	17	17
1/2HP3B	1/2	22	21
3/4HP3B	3/4	27	24
1HP3B	1	36	27



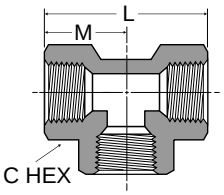
KMMOO4 Pipe Cross BSPP

PART NO.	BSPP	C HEX	L	M
1/8KMMOO4B	1/8	14	29	14.5
1/4KMMOO4B	1/4	17	36	18.0
3/8KMMOO4B	3/8	22	44	22.0
1/2KMMOO4B	1/2	27	58	29.0



MMO444 Pipe Tee BSPP

PART NO.	BSPP	C HEX	L	M
1/8MMO444B	1/8	14	29	14.5
1/4MMO444B	1/4	17	36	18.0
3/8MMO444B	3/8	22	44	22.0
1/2MMO444B	1/2	27	58	29.0
3/4MMO444B	3/4	32	62	31.0
1MMO444B	1	40	85	42.5



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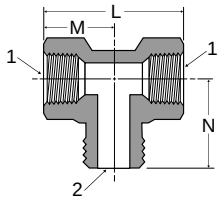
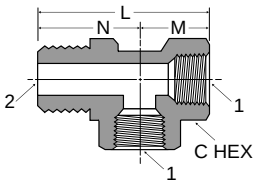
MMS443 Branch Tee Female-Male-Female BSPP-BSPT-BSPP

PART NO.	BSPP 1	BSPT 2	L	M	N
1/8MMS443B	1/8	1/8	29	14.5	17
1/4MMS443B	1/4	1/4	36	18.0	22
3/8MMS443B	3/8	3/8	48	24.0	25
1/2MMS443B	1/2	1/2	62	31.0	32



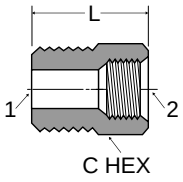
MRO434 Run Tee Female-Female-Male BSPP-BSPP-BSPT

PART NO.	BSPP 1	BSPT 2	C HEX	L	M	N
1/8MRO434B	1/8	1/8	14	32	15	17
1/4MRO434B	1/4	1/4	17	40	18	22
3/8MRO434B	3/8	3/8	24	49	24	25
1/2MRO434B	1/2	1/2	30	63	31	32



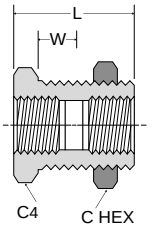
PTR34 Pipe Thread Reducer male-female BSPT-BSPP

PART NO.	BSPT 1	BSPP 2	C HEX	L
1/4x1/8PTR34B	1/4	1/8	14	16
3/8x1/8PTR34B	3/8	1/8	17	17
3/8x1/4PTR34B	3/8	1/4	17	17
1/2x1/8PTR34B	1/2	1/8	22	22
1/2x1/4PTR34B	1/2	1/4	22	22
1/2x3/8PTR34B	1/2	3/8	22	22
3/4x3/8PTR34B	3/4	3/8	27	23
3/4x1/2PTR34B	3/4	1/2	27	23
1x1/2PTR34B	1	1/2	36	27
1x3/4PTR34B	1	3/4	36	27



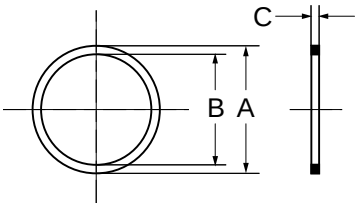
WGG44 Bulkhead Female Union BSPP

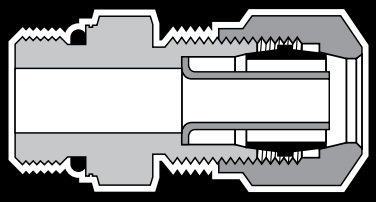
PART NO.	BSPP	STRAIGHT THREAD	C HEX	C4	L	W
1/8WGG44B	1/8	M16x1.5	19	22	22	12
1/4WGG44B	1/4	M20x1.5	24	24	22	12
3/8WGG44B	3/8	M23x1.5	27	27	24	12
1/2WGG44B	1/2	M27x1.5	32	32	28	14
3/4WGG44B	3/4	M34x1.5	41	41	31	13
1WGG44B	1	M45x2	55	55	36	12



Copper Rings for BSPP

PART NO.	BSPP	A	B	C
112-5-10	1/8	16.0	9.9	1.5
112-8-13	1/4	19.0	13.5	1.5
112-12-17	3/8	24.0	16.9	1.5
112-15-21	1/2	27.0	21.2	2.0





ISO Port Adapters

Advantages
To simplify the installation of hydraulic and pneumatic systems, Parker supplies a range of ISO Port Adapters for various sizes of metric threads and end configurations. Theses adapters include NPTF, flare, hose barb and NTA end configurations. Fluorocarbon o-rings are standard on all ISO adapters.

Specifications
Meets dimensional requirements of ISO 6149-3 and SAE 2244-3.

Applications
Use with brass, copper or J844 type A & B nylon tubing. Manufactured for low and medium pressure line connection work.

Working Pressure and Temperature Ranges
Dependent on tubing or hose end connection

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:

1 59 F – 10 MI – 27

- Forging (1)
- 45° Male Elbow
- 45° Flare
- 5/8" (10/16) Tube Size
- MI-Metric ISO Port
- 27mm Port Thread

Special Fittings
Fitting configurations and / or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry.

Pricing
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

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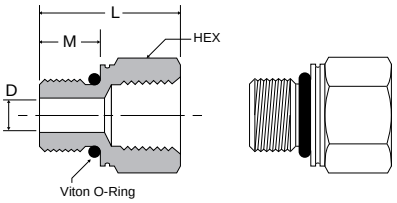
Otsego, Michigan

Pipe to Metric Adaptor 222P-X-MIX

PART NUMBER	NPTF	METRIC THREAD	HEX	L	M	D
222P-2-MI10	1/8-27	M10 x 1.0	9/16	.75	.34	.18
222P-2-MI14	1/8-27	M14 x 1.5	3/4	.91	.43	.30
222P-4-MI12	1/4-18	M12 x 1.5	11/16	1.09	.43	.24
222P-4-MI14	1/4-18	M14 x 1.5	3/4	1.09	.43	.30
222P-6-MI16	3/8-18	M16 x 1.5	7/8	1.16	.45	.35
222P-6-MI22	3/8-18	M22 x 1.5	1 1/16	1.05	.51	.47
222P-8-MI27	1/2-14	M27 x 2.0	1 1/4	1.32	.63	.60

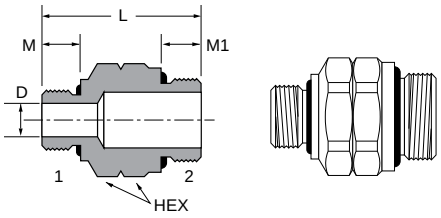
Note: Fluorocarbon o-ring is standard
For working pressure and Temperature see Metric Adapters Section



Metric Straight Thread Union M16M22F8UHA8UB

PART NUMBER	METRIC THD 1	METRIC THD 2	L (mm)	HEX (mm)	M (mm)	M1 (mm)	D (mm)
M16M22F8UHA8UB	M16X1.5	M22X1.5	43	27	10	12.5	9.0

Note: Fluorocarbon o-ring is standard
For working pressure and Temperature see Metric Adapters Section



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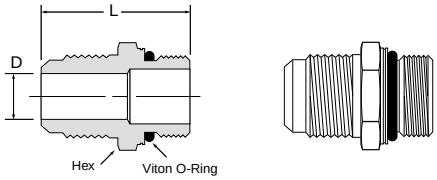
Flare to Metric Adaptor 48F-X-MIX

PART NUMBER	TUBE SIZE	METRIC THREAD	HEX	L	D
48F-8-MII6	1/2	M16 X 1.5	7/8	1.60	.35
48F-10-MI27	5/8	M27 x 2.0	1 1/4	1.87	.50
48F-12-MI27	3/4	M27 x 2.0	1 1/4	1.99	.63

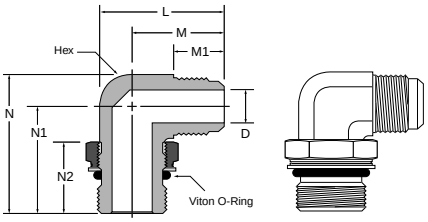
Note: Fluorocarbon o-ring is standard
For working pressure and Temperature see SAE Flare Section



Flare Elbow to Metric Adaptor 149F-X-MIX

PART NUMBER	TUBE SIZE	METRIC THREAD	HEX	L	M	M1	N	N1	N2	D
149F-10-MI27	5/8	M27 x 2.0	7/8	1.95	1.46	.88	2.12	1.63	1.09	.50

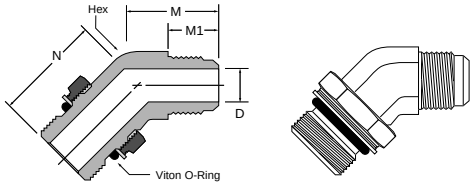
Note: Fluorocarbon o-ring is standard
For working pressure and Temperature see SAE Flare Section



45° Flare Elbow to Metric Adaptor 159F-X-MIX

PART NUMBER	TUBE SIZE	METRIC THREAD	HEX	M	M1	N	D
159F-8-MII6	1/2	M16 X 1.5	13/16	1.10	.75	1.16	.36
159F-10-MI27	5/8	M27 x 2.0	1 1/8	1.21	.88	1.50	.50

Note: Fluorocarbon o-ring is standard
For working pressure and Temperature see SAE Flare Section



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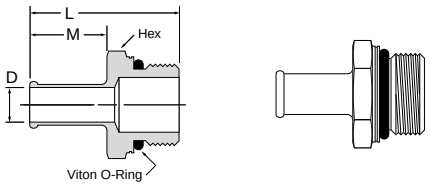
Hose Barb to Metric Adaptor 68HB-X-MIX

PART NUMBER	TUBE SIZE	METRIC THREAD	HEX	L	M	D
68HB-6-M12	3/8	M12 x 1.5	11/16	1.50	.78	.24
68HB-6-MI14	3/8	M14 1.5	3/4	1.51	.78	.30
68HB-8-MI12	1/2	M12 x 1.5	11/16	1.50	.78	.24
68HB-10-MI27	5/8	M27 x 2.0	1 1/4	1.77	.78	.50

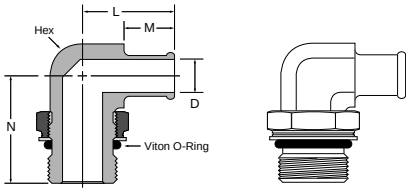
Note: Fluorocarbon o-ring is standard
For working pressure and Temperature see Hose Barb Section



Beaded Elbow to Metric Adaptor 169HB-X-MIX

PART NUMBER	HOSE SIZE	METRIC THREAD	HEX	L	M	N	D
169HB-10-MI27	5/8	M27 x 2.0	7/8	1.41	.78	1.63	.50
169HB-16-MI27	1	M27 x 2.0	1	1.67	.97	1.68	.71

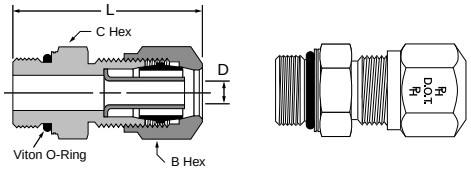
Note: Fluorocarbon o-ring is standard
For working pressure and Temperature see Hose Barb Section



NTA to Metric Adaptor 68NTA-X-MIX

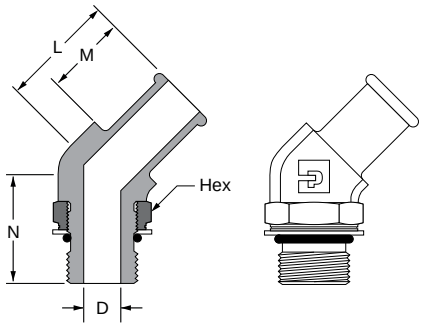
PART NUMBER	TUBE SIZE	METRIC THREAD	B HEX	C HEX	L	D
68NTA-4-MI10	1/4	M10 x 1.0	9/16	9/16	1.33	.140

Note: Fluorocarbon o-ring is standard
For working pressure and Temperature see Air Brake-NTA Section



Beaded Hose Barb 45° Elbow to Metric Thread 179HB-X-MIX

PART NUMBER	HOSE SIZE	METRIC THREAD	HEX	L	M	N	D
179HB-12-MI18	3/4	M18 x 1.5	13/16	1.15	.78	1.16	.44
179HB-16-MI27	1	M27 x 2.0	1 1/16	1.51	.97	1.71	.71



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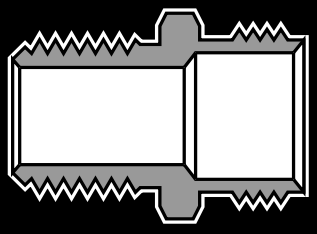


Garden Hose Fittings

F

Advantages
All fitting pipe threads are made to Dryseal standards. Connectors, unions, nuts and extruded elbows and tees are machined from CA 360 and CA 345 brass.

Temperature and Working Pressure Ranges
From +35°F. to +100°F. at 75 PSI maximum or the recommended working pressure of garden hose. (not to exceed 150 PSI.)

Note: 90GH is intended for use with 97HC hose clamp or crimped ferrule.

Note: All female connector ends should have a rubber washer (901GH-12) inserted prior to usage.

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 identifies the style and type fitting. The second series of numbers describes the size.

Example:

50GH	SV	–6	–12
Garden Hose			
	Swivel Connector		
		3/8" Tube O.D.	
			3/4" Hose Thread

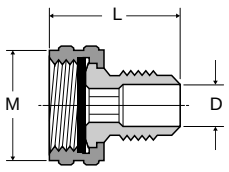
Sizes
Pipe sizes are determined by the number of sixteenths of an inch in the pipe size.

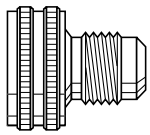
Pricing
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Swivel Connector SAE Flare to Female Hose Thread 50GHSV

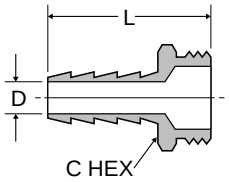
PART NO.	TUBE SIZE	HOSE THREAD	L	M	FLOW DIA.D
50GHSV-6-12	3/8	3/4	1.25	1.15	.297
50GHSV-8-12	1/2	3/4	1.34	1.15	.406

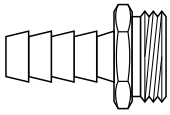




Hose Barb to Male Hose Thread 53GH, 54GH & 55GH

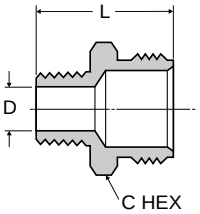
PART NO.	I.D. HOSE SIZE	HOSE THREAD	C HEX	L	FLOW DIA.D
53GH-8-12	1/2	3/4	1-1/16	1.88	.375
54GH-10-12	5/8	3/4	1-1/16	1.88	.500
55GH-12-12	3/4	3/4	1-1/16	1.88	.625

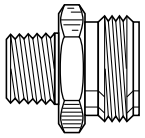




Male Hose to Male Pipe 69GH, 70GH, 71GH

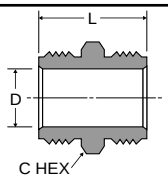
PART NO.	HOSE THREAD	PIPE THREAD	C HEX	L	FLOW DIA.D
69GH-12-4	3/4	1/4	1-1/16	1.25	.410
69GH-12-6	3/4	3/8	1-1/16	1.25	.406
70GH-12-8	3/4	1/2	1-1/16	1.39	.531
71GH-12-12	3/4	3/4	1-1/16	1.41	.750

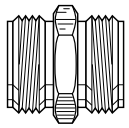




Male Hose to Male Hose 75GH

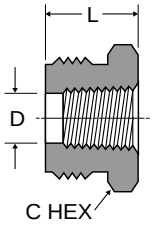
PART NO.	HOSE THREAD	C HEX	L	FLOW DIA.D
75GH-12	3/4	1-1/16	1.25	.750

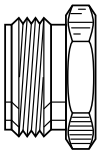




Male Hose to Female Pipe 78GH, 79GH, 80GH & 81GH

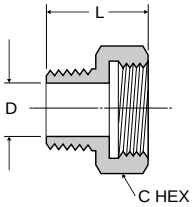
PART NO.	HOSE THREAD	PIPE THREAD	C HEX	L	FLOW DIA.D
78GH-12-4	3/4	1/4	1-1/16	.75	.422
79GH-12-6	3/4	3/8	1-1/16	.75	.562
80GH-12-8	3/4	1/2	1-1/16	.75	.687
81GH-12-12	3/4	3/4	1-3/16	1.28	.719

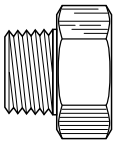




Female Hose to Male Pipe 82GH & 83GH

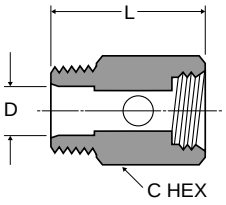
PART NO.	HOSE THREAD	PIPE THREAD	C HEX	L	FLOW DIA.D
82GH-12-8	3/4	1/2	1-3/16	1.20	.562
83GH-12-12	3/4	3/4	1-3/16	1.22	.750

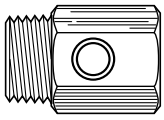




Special Filter Adapter 84GH

PART NO.	HOSE THREAD	PIPE THREAD	C HEX	L	FLOW DIA.D
84GH-8-8	1/2	1/2	15/16	1.53	.530





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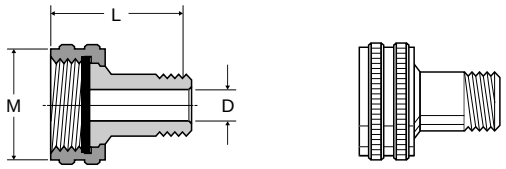
Otsego, Michigan

Swivel Connector Female Garden Hose to Male Pipe 88GH

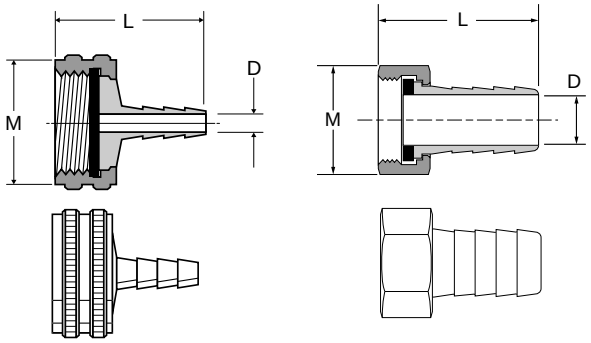
PART NO.	HOSE THREAD	PIPE THREAD	L	M	FLOW DIA.D
88GH-12-4	3/4	1/4	1.69	1.15	.312
88GH-12-6	3/4	3/8	1.69	1.15	.406



Swivel Connector Female Garden Hose to Hose Barb 90GH

PART NO.	HOSE THREAD	I.D. HOSE SIZE	L	M	FLOW DIA.D
90GH-12-3	3/4	3/16	1.29	1.15	.125
90GH-12-4	3/4	1/4	1.21	1.15	.187
90GH-12-6	3/4	3/8	1.21	1.15	.281
90GH-12-8	3/4	1/2	1.21	1.15	.375
90GH-12-10*	3/4	5/8	1.93	1.19	.500
90GH-12-12*	3/4	3/4	1.93	1.19	.625

*Denotes hex body



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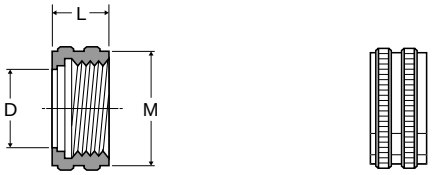
Knurled Hose Nut 94GH

PART NO.	HOSE THREAD	L	M	FLOW DIA.D
94GH-12	3/4	.57	1.15	.808

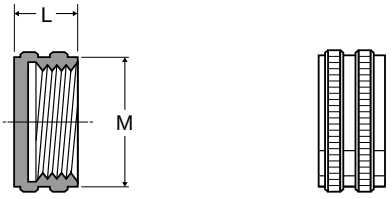


Hose Nut Reducer 95GH

PART NO.	HOSE THREAD	PIPE THREAD	C HEX	L
95GH-12-2	3/4	1/8	1-1/8	.63

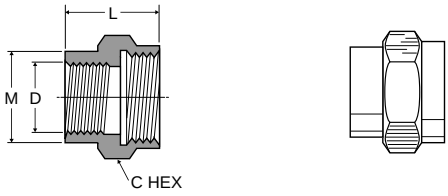
Hose Cap Nut 96GH

PART NO.	HOSE THREAD	L	M
96GH-12	3/4	.50	1.15



Female Hose to Female Pipe 98GH & 99GH

PART NO.	HOSE THREAD	PIPE THREAD	C HEX	L	M	FLOW DIA.D
98GH-12-8	3/4	1/2	1-3/16	1.14	1.01	.687
99GH-12-12	3/4	3/4	1-3/16	1.25	1.17	.750



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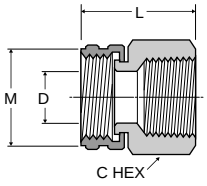
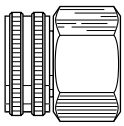
Parker Brass Products Division
Otsego, Michigan

Swivel Connector Female Hose to Female Pipe 98GHSV & 99GHSV

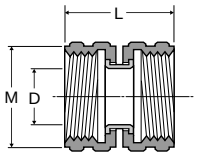
PART NO.	HOSE THREAD	PIPE THREAD	C HEX	L	M	FLOW DIA.D
98GHSV-12-8	3/4	1/2	1	1.27	1.21	.687
99GHSV-12-12	3/4	3/4	1-3/16	1.34	1.21	.687

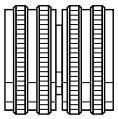




Swivel Nut Connector 101GHSV

PART NO.	HOSE THREAD	L	M	FLOW DIA.D
101GHSV-12	3/4	1.25	1.15	.625





Rubber Garden Hose Coupling Washer 901GH

PART NO.	HOSE THREAD
901GH-12	3/4

NOTE: All female connector ends should have this rubber washer installed prior to usage.

F

Hydraulic Quick Couplings/High Flow Couplings

Applications

Parker Water Service Couplings are used anywhere water hoses are connected and disconnected frequently. They are used on a wide variety of applications including garden hoses, wash down systems, and mobile water tank lines. The unvalved design permits maximum flow with minimum pressure drop.

Features

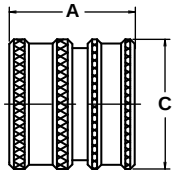
- Brass and stainless steel construction for heavy duty service.
- Durable 4-ball locking mechanism for secure connections.
- Quality, temperature-resistant nitrile seals for a leak-free service life.

Specifications

Body Size	3/4"
Rated Pressure (PSI)	200
Rated Flow (GPM)	28
Temperature Range (std seals)	-40°F to +250°F

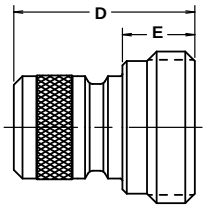
High Flow Coupler 1163-60-BPD

PART NO.	BODY SIZE	THREAD SIZE NH	A	C
1163-60-BPD	3/4	3/4-11 1/2	1.12	1.21



High Flow Nipple 1163-61-BPD

PART NO.	BODY SIZE	THREAD SIZE NH	D	E
1163-61-BPD	3/4	3/4-11 1/2	1.25	.50



Notes

F

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Barbed Fittings

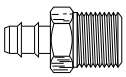
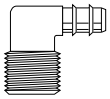
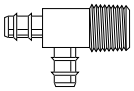
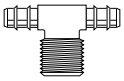
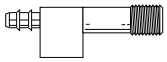
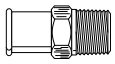
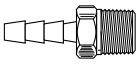
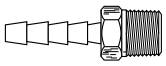
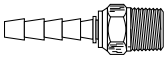
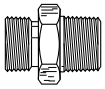
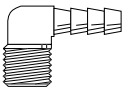
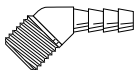
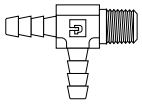
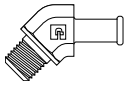
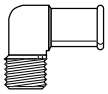
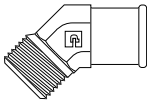
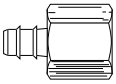
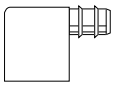
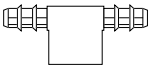
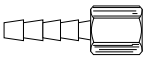
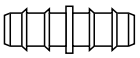
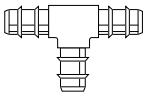
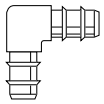
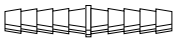
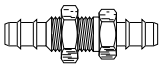
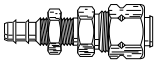
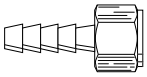
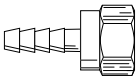
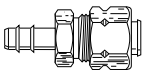
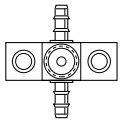
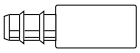
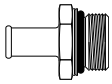
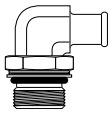
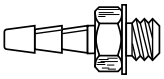
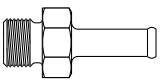
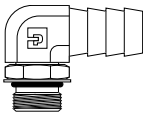
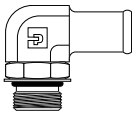
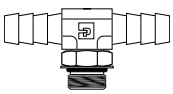
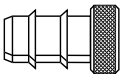
Dubl-Barb Fittings

- Compact
- One-piece
- Economical
- Reusable
- Use with Polyethylene Tubing

Hose Barb Fittings

- All Brass Construction
- Straight and Metric Threads
- Beaded & Standard Hose Barbs
- Use with Hose Clamp
- Reusable

The World Standard

Barb to Male NPT	**28** Male Connector  Page G5	**229** Male Elbow  Page G7	**231** Run Tee  Page G7	**232** Branch Tee  Page G8	**228** Gauge Tee  Page G7	**68HB** Male Connector  Page G10
125HB Male Connector  Page G11	**125HBL** Male Connector  Page G11	**125HBLSV** Swivel Connector  Page G11	**127HB** Ball-End Adapter  Page G12	**129HB** Male Elbow  Page G12	**139HB** 45° Male Elbow  Page G12	**171HB** Run Tee  Page G13
179HB 45° Male Elbow  Page G14	**269HB** Male Elbow  Page G14	**279HB** 45° Male Elbow  Page G14	**Barb to Female NPT**	**26** Female Connector  Page G5	**230** Female Elbow  Page G7	**237** Female Tee  Page G8
126HBL Female Connector  Page G11	**Barb to Barb**	**22** Union  Page G4	**224** Union Tee  Page G6	**225** Union Elbow  Page G6	**122HBL** Hose Mender  Page G10	
Bulkheads	**22BH** Bulkhead Union  Page G4	**22CABH** Bulkhead Union  Page G5	**Swivels**	**128HBLSV** Female Ball-End  Page G12	**146HBLFSV** 45° Female Flare  Page G13	
Adapters	**22CA** Mixed Union  Page G4	**220** Adapter Tee  Page G6	**233** Mixed Tee  Page G8	**238** Solder Connector  Page G8	**Barb to Metric Straight Thread**	**68HB-MI** Male Connector  Page G10
169HB-MI Male Elbow  Page G13	**179HB-MI** 45° Male Elbow  Page G14	**Barb to Straight Thread**	**27** Male Connector  Page G5	**685HB** Male Connector  Page G10	**1295HB** Male Elbow  Page G12	**1695HB** Male Elbow  Page G13
1725HB Tee  Page G13	**1795HB** 45° Elbow  Page G14	**Auxiliary**	**20** Plug  Page G4	**97HC** Clamp  Page G10		

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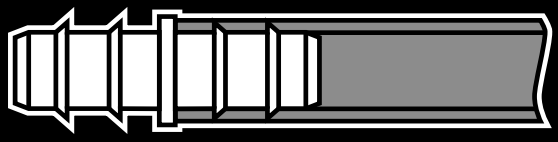
Otsego, Michigan



Dubl-Barb® Fittings

Advantages
Compact one-piece, push-on barbed fitting for a quick, economical way to connect polyethylene tubing. In addition to the styles shown, custom DUBL-BARB fittings to meet your exact requirements are available. Machined from CA 360 or CA 345 brass.

Applications
Because of the many available variations in qualities of polyethylene tubing, DUBL-BARB® fittings are recommended for use with Parker Parflex® polyethylene tubing (or an equal grade). Parker Parflex® 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 tube size 1/2 working pressures up 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 squarely.

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 identifies the style and type fitting. The second series of numbers describes the size.

Example:

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

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

Special Fittings
Fitting configurations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry.

Pricing
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

G

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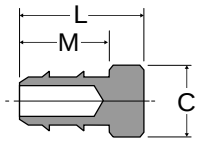
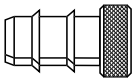
Parker Brass Products Division
Otsego, Michigan

Plug 20

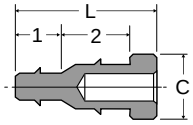
PART NO.	TUBE O.D.	TUBE I.D.	C DIA.	L	M
20-4	1/4	.170	.290	.56	.41
20-6	3/8	.250	.390	.68	.44
20-8	1/2	.377	.577	.81	.56

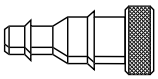




Plug Adapter 20

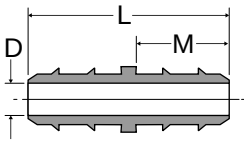
PART NO.	TUBE O.D. 1	TUBE I.D. 1	TUBE O.D. 2	TUBE I.D. 2	C DIA.	L
20-4-5/32	5/32	.096	1/4	.170	.290	.65

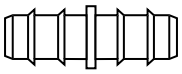




Union 22

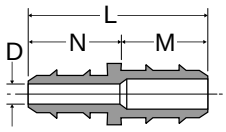
PART NO.	TUBE O.D.	TUBE I.D.	L	M	FLOW DIA. D
22-5/32	5/32x5/32	.096x.096	.59	.28	.062
22-4	1/4x1/4	.170x.170	.84	.41	.120
22-6	3/8x3/8	.250x.250	.94	.44	.187
22-8	1/2x1/2	.375x.375	1.19	.56	.312

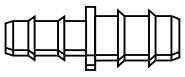




Union Reducer 22

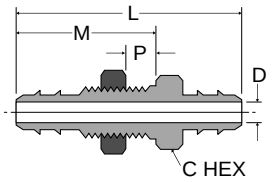
PART NO.	TUBE O.D.	TUBE I.D.	L	M	N	FLOW DIA. D
22-4-5/32	1/4x5/32	.170x.096	.72	.41	.28	.062
22-4-6	1/4x3/8	.170x.250	.88	.44	.41	.120
22-4-8	1/4x1/2	.170x.375	1.06	.56	.41	.120
22-6-8	3/8x1/2	.250x.375	1.06	.56	.44	.187

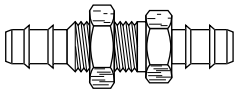




Bulkhead Union 22BH

PART NO.	TUBE O.D.	TUBE I.D.	ST. THD.	C HEX	P MAX.	L	M	FLOW DIA. D	BLKHD HOLE DIA.
22BH-4-4	1/4	.170	5/16-24	7/16	.219	1.38	.78	.120	5/16
22BH-6-6	3/8	.250	3/8-24	7/16	.375	1.63	1.00	.187	3/8

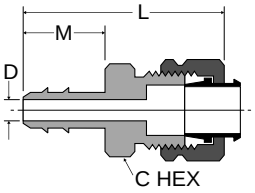


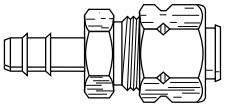


Union 22CA

Tube to Compress-Align

PART NO.	TUBE O.D.	TUBE I.D.	CA TUBE	C HEX	L	M	FLOW DIA. D
22CA-4-4	1/4	.170	1/4	7/16	1.15	.41	.120



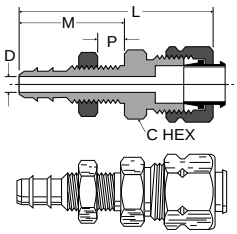


Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Bulkhead Union 22CABH

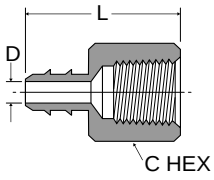
Tube to Compress-Align

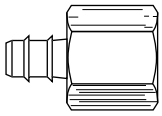
PART NO.	TUBE O.D.	TUBE I.D.	CA TUBE	ST. THD.	C HEX	P MAX.	L	M	FLOW DIA. D	BULKHEAD HOLE DIA.
22CABH-4-4	1/4	.170	1/4	5/16-24	7/16	.219	1.53	.78	.120	5/16
22CABH-6-6	3/8	.250	3/8	3/8-24	9/16	.375	1.87	1.00	.187	3/8



Female Connector 26

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

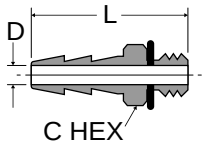


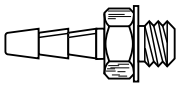


Male Connector 27

PART NO.	TUBE O.D.	TUBE I.D.	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
27-1*	1/8	.062	10-32	1/4	.61	.052
27-2*	1/4	.125	10-32	1/4	.74	.093

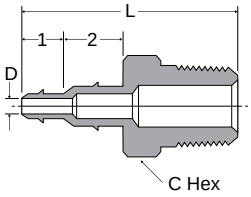
*For vinyl tubing only.

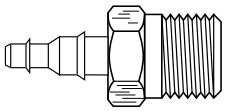




Barb-to-Pipe Adapter 28

PART NO.	TUBE O.D. 1	TUBE I.D. 1	TUBE O.D. 2	TUBE I.D. 2	PIPE THD.	C HEX	L	FLOW DIA. D
28-4-5/32-2	5/32	.096	1/4	.170	1/8	7/16	1.07	.062

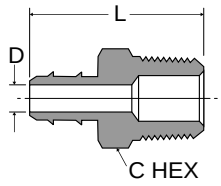


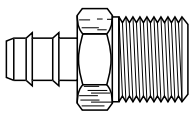


Male Connector 28

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	3/8	.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
28-4-10x32*	1/4	.170	10-32	1/4	.71	.093
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

*Straight thread

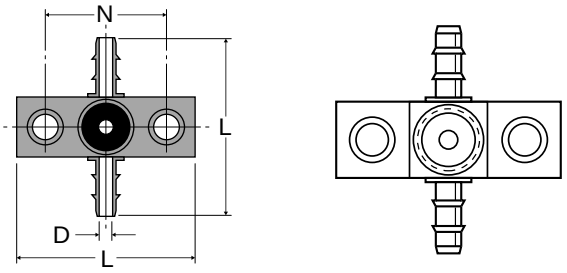




Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

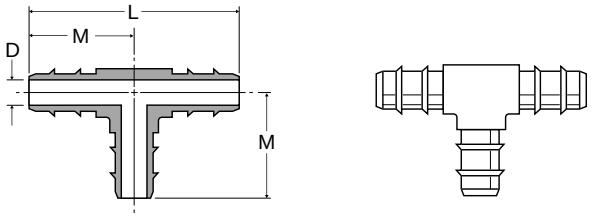
Adapter Tee 220

PART NO.	TUBE O.D.	TUBE I.D.	PIPE THREAD	L	N	FLOW DIA. D
220-4-2	1/4	.170	1/8	1.50	1.00	.120



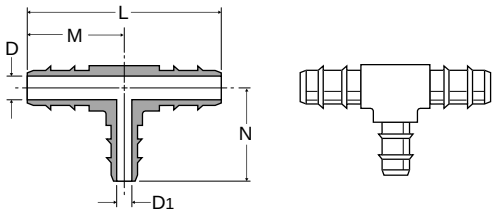
Union Tee 224

PART NO.	TUBE O.D.	TUBE I.D.	L	M	FLOW DIA. D
224-5/32	5/32	.096	1.00	.50	.062
224-4	1/4	.170	1.25	.63	.120
224-6	3/8	.250	1.38	.69	.187
224-8	1/2	.375	1.63	.81	.312



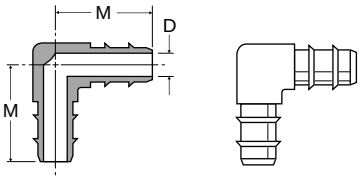
Union Tee 224 Combination Sizes

PART NO.	TUBE O.D.	TUBE I.D.	L	M	N	FLOW DIA. D	FLOW DIA. D1
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



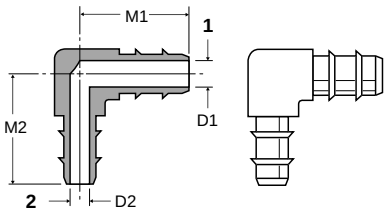
Union Elbow 225

PART NO.	TUBE O.D.	TUBE I.D.	M	FLOW DIA. D
225-5/32	5/32	.096	.50	.062
225-4-4	1/4	.170	.63	.120
225-6-6	3/8	.250	.69	.187
225-8-8	1/2	.375	.81	.312



Union Elbow 225 Combination Size

PART NO.	TUBE O.D. 1	TUBE O.D. 2	TUBE I.D. 1	TUBE I.D. 2	M1	M2	FLOW DIA. D1	FLOW DIA. D2
225-4-5/32	1/4	5/32	.170	.096	.63	.50	.120	.062



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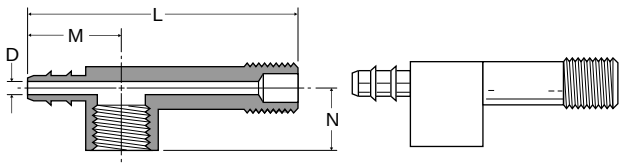
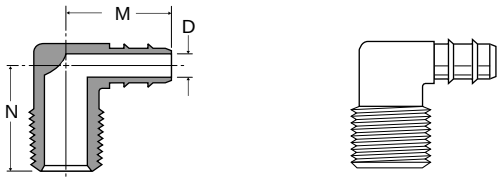
Gauge Tee 228

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



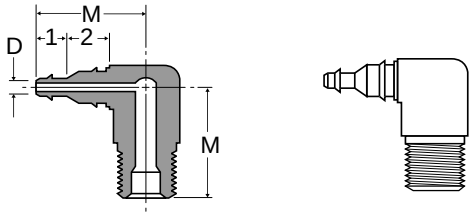
Male Elbow 229

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
229-8-4	1/2	.375	1/4	.94	.74	.312
229-8-6	1/2	.375	3/8	.94	.81	.312



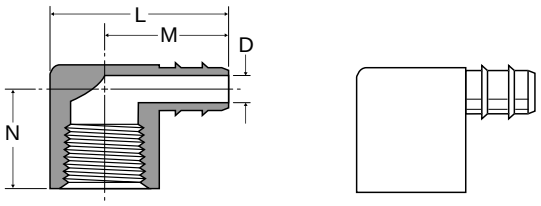
90° Elbow Barb Adapter 229

PART NO.	TUBE O.D. 1	TUBE I.D. 1	TUBE O.D. 2	TUBE I.D. 2	PIPE THREAD	M	FLOW DIA. D
229-4-5/32-2	5/32	.096	1/4	.170	1/8	.78	.062



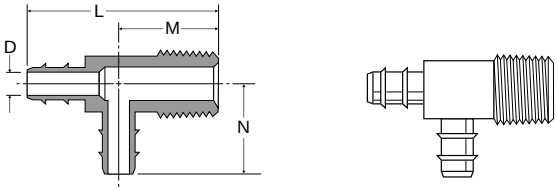
Female Elbow 230

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



Male Run Tee 231

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



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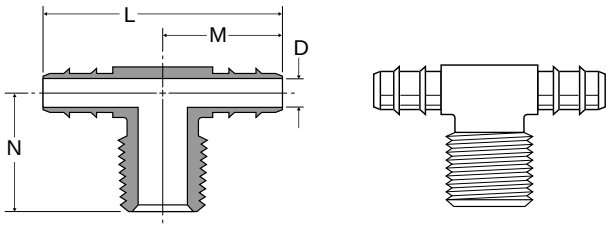
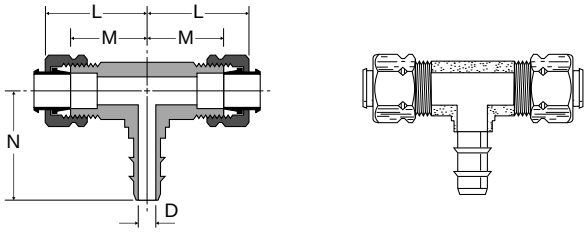
Male Branch Tee 232

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



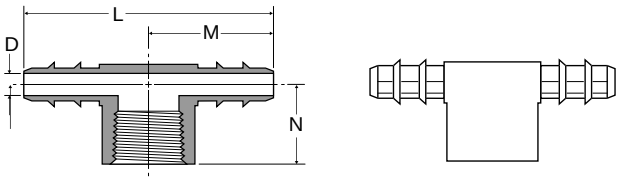
Tee 233

PART NO.	TUBE O.D.	TUBE I.D.	COMB. 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



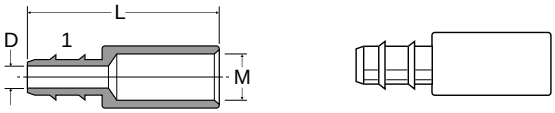
Female Branch Tee 237

PART NO.	TUBE O.D.	TUBE I.D.	PIPE THREAD	L	M	N	FLOW DIA. D
237-5/32-2	5/32	.096	1/8	1.06	.53	.44	.062
237-4-2	1/4	.170	1/8	1.34	.67	.49	.120



Solder Connector 238

PART NO.	TUBE O.D. 1	TUBE I.D. 1	L	M	FLOW DIA. D
238-4-4	1/4	.170	.91	.25	.120



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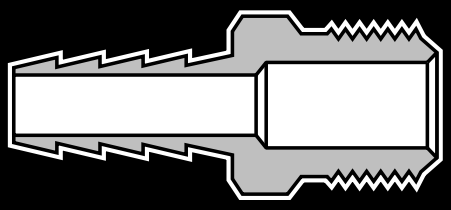


Hose Barb Fittings

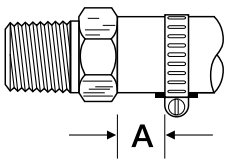
Advantages
All Parker hose barb fitting pipe threads are made to Dryseal standards. Connectors, unions, nuts and extended elbows and tees are machined from CA 360 and CA 345 brass.

Temperature and Working Pressure Ranges
From -40° to +160°F. at 150 PSI maximum.

Note: These fittings are intended for use with 97HC hose clamp, similar type clamp or a crimped ferrule.

Assembly Instructions
1. Cut hose cleanly and squarely to length.
2. Slide clamp on hose.
3. Lubricate hose. Push hose on fitting until hose bottoms against stop ring or hex.
4. Position hose clamp as shown below and secure with a screwdriver or wrench. Maintain "A" dimension noted below for proper clamp positioning.

HOSE SIZE	HOSE CLAMP	A
3/16"	97 HC-3	1/4"
1/4"	97 HC-3	1/4"
5/16"	97 HC-6	1/4"
3/8"	97 HC-6	1/8"
1/2"	97 HC-8	1/8"
5/8"	97 HC-12	1/8"
3/4"	97 HC-12	1/8"



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 identifies the style and type fitting. The second series of numbers describes the size.

Example:

125 HBL –6 –4

- 125 — Hose Barb to Male Pipe
- HBL — Hose Barb
- –6 — 3/8" (6/16) Hose I.D.
- –4 — 1/4" (4/16) NPTF/PTF

Sizes
Pipe sizes are determined by the number of sixteenths of an inch in the pipe size.

Special Fittings
Fitting configurations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry.

Pricing
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

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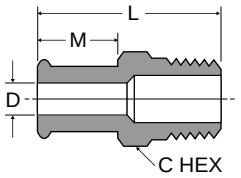
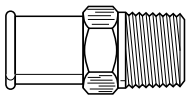
Beaded Hose Barb to Male Pipe 68HB

PART NO.	I.D. HOSE SIZE	PIPE THREAD	C HEX	L	M	FLOW DIA.D
68HB-6-6	3/8	3/8	11/16	1.53	.78	.281
68HB-8-4	1/2	1/4	5/8	1.56	.78	.375
68HB-8-6	1/2	3/8	11/16	1.53	.78	.406
68HB-8-8	1/2	1/2	7/8	1.73	.78	.406
68HB-10-6	5/8	3/8	3/4	1.62	.88	.501
68HB-10-8	5/8	1/2	7/8	1.92	.88	.501
68HB-12-8	3/4	1/2	7/8	1.98	.88	.564
68HB-12-12	3/4	3/4	1 1/16	2.04	.97	.625
68HB-16-12	1	3/4	1 1/8	2.12	1.00	.750
68HB-16-16	1	1	1.38	2.31	1.00	.812

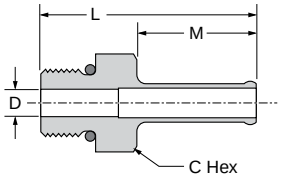


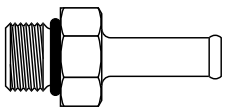


Beaded Hose Barb to SAE Straight Thread 685HB

PART NO.	I.D. HOSE SIZE	STRAIGHT THREAD	C HEX	L	M	FLOW DIA.D
685HB-4-4	1/4	7/16-20	9/16	1.40	.78	.18
685HB-6-4	3/8	7/16-20	9/16	1.39	.78	.18
685HB-8-8	1/2	3/4-16	7/8	1.48	.78	.40
685HB-10-8	5/8	3/4-16	7/8	1.56	.78	.40
685HB-12-8	3/4	3/4-16	7/8	1.75	.97	.40
685HB-12-12	3/4	1 1/16-12	1 1/4	1.82	.97	.62
685HB-16-8	1	3/4-16	1 1/8	1.79	.97	.40
685HB-16-12	1	1 1/16-12	1 1/4	1.99	.97	.62

Note: Fluorocarbon o-ring is standard





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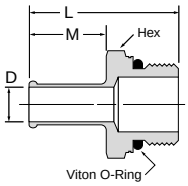
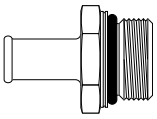
Hose Barb to Metric Adaptor 68HB-X-MIX

PART NUMBER	TUBE SIZE	METRIC THREAD	HEX	L	M	D
68HB-6-MI12	3/8	M12 x 1.5	11/16	1.50	.78	.24
68HB-6-MI14	3/8	M14 1.5	3/4	1.51	.78	.30
68HB-8-MI12	1/2	M12 x 1.5	11/16	1.50	.78	.24

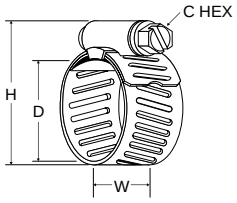
Note: Fluorocarbon o-ring is standard





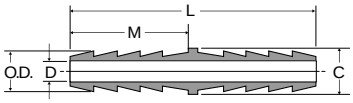
Stainless Steel Worm Drive Clamp 97HC

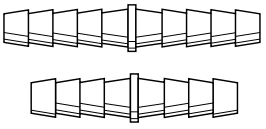
PART NO.	D MAX.	D MIN.	C HEX	H MAX.	W
97HC-3	.62	.25	.25	1.00	.31
97HC-6	.87	.38	.31	1.40	.50
97HC-8	1.00	.44	.31	1.53	.50
97HC-12	1.25	.50	.31	1.80	.50



Hose Mender 122HBL

PART NO.	I.D. HOSE SIZE	C DIA.	L	M	O.D.	FLOW DIA. D
122HB-3*	3/16	5/16	1.44	.69	.227	.125
122HBL-4	1/4	3/8	2.00	.97	.290	.187
122HBL-5	5/16	7/16	2.00	.97	.353	.250
122HBL-6	3/8	1/2	2.00	.97	.415	.281
122HBL-8	1/2	5/8	2.00	.97	.530	.375
122HBL-12	3/4	7/8	2.00	.97	.790	.562



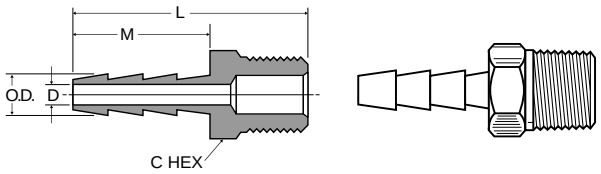


** 3 Barb design.*

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

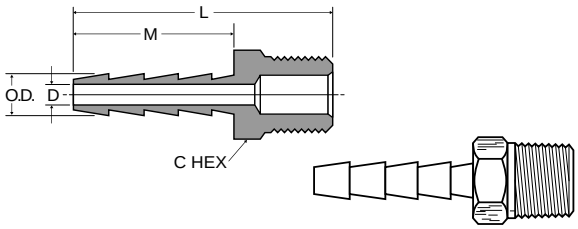
Hose Barb to Male Pipe 125HB

PART NO.	I.D. HOSE SIZE	PIPE THREAD	C HEX	L	M	O.D.	FLOW DIA. D
125HB-2-2	1/8	1/8	7/16	1.07	.50	.185	.093
125HB-3-2	3/16	1/8	7/16	1.25	.69	.227	.125
125HB-3-4	3/16	1/4	9/16	1.44	.69	.227	.125



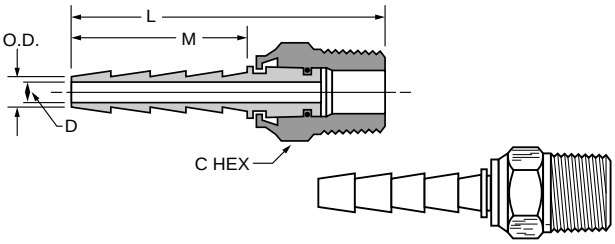
Hose Barb to Male Pipe 125HBL

PART NO.	I.D. HOSE SIZE	PIPE THREAD	C HEX	L	M	O.D.	FLOW DIA. D
125HBL-4-2	1/4	1/8	7/16	1.54	.97	.290	.187
125HBL-4-4	1/4	1/4	9/16	1.72	.97	.290	.187
125HBL-4-6	1/4	3/8	11/16	1.77	.97	.290	.187
125HBL-5-2	5/16	1/8	7/16	1.54	.97	.353	.250
125HBL-5-4	5/16	1/4	9/16	1.72	.97	.353	.250
125HBL-5-6	5/16	3/8	11/16	1.77	.97	.353	.250
125HBL-6-2	3/8	1/8	7/16	1.54	.97	.415	.281
125HBL-6-4	3/8	1/4	9/16	1.72	.97	.415	.281
125HBL-6-6	3/8	3/8	11/16	1.77	.97	.415	.281
125HBL-6-8	3/8	1/2	7/8	1.97	.97	.415	.281
125HBL-8-4	1/2	1/4	9/16	1.72	.97	.530	.375
125HBL-8-6	1/2	3/8	11/16	1.77	.97	.530	.375
125HBL-8-8	1/2	1/2	7/8	1.97	.97	.530	.375
125HBL-8-12	1/2	3/4	1-1/16	1.98	.97	.530	.375
125HBL-10-6	5/8	3/8	11/16	1.77	.97	.645	.468
125HBL-10-8	5/8	1/2	7/8	1.97	.97	.645	.468
125HBL-10-12	5/8	3/4	1-1/16	1.98	.97	.645	.468
125HBL-12-8	3/4	1/2	7/8	1.97	.97	.790	.562
125HBL-12-12	3/4	3/4	1-1/16	1.98	.97	.790	.562
125HBL-16-12	1	3/4	1-1/16	2.18	1.17	1.02	.750
125HBL-16-16	1	1	1-3/8	2.36	1.17	1.02	.875



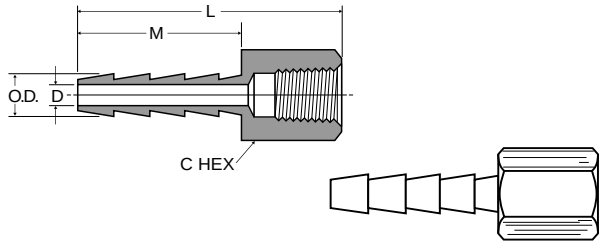
Male Swivel Hose Barb 125HBLSV

PART NO.	I.D. HOSE SIZE	PIPE THREAD	C HEX	L	M	O.D.	FLOW DIA. D
125HBLSV-4-4	1/4	1/4	11/16	2.14	.97	.290	.187
125HBLSV-6-4	3/8	1/4	11/16	2.14	.97	.415	.250
125HBLSV-6-6	3/8	3/8	11/16	2.14	.97	.415	.250
125HBLSV-8-8	1/2	1/2	7/8	2.48	.97	.530	.375



Hose Barb to Female Pipe 126HBL

PART NO.	I.D. HOSE SIZE	PIPE THREAD	C HEX	L	M	O.D.	FLOW DIA. D
126HBL-4-2	1/4	1/8	1/2	1.47	.97	.290	.187
126HBL-4-4	1/4	1/4	11/16	1.58	.97	.290	.187
126HBL-5-4	5/16	1/4	11/16	1.58	.97	.353	.250
126HBL-6-2	3/8	1/8	1/2	1.47	.97	.415	.281
126HBL-6-4	3/8	1/4	11/16	1.58	.97	.415	.281
126HBL-6-6	3/8	3/8	13/16	1.63	.97	.415	.281
126HBL-8-6	1/2	3/8	13/16	1.59	.97	.530	.375
126HBL-8-8	1/2	1/2	1	1.73	.97	.530	.375
126HBL-12-12	3/4	3/4	1-1/4	1.92	.97	.790	.562



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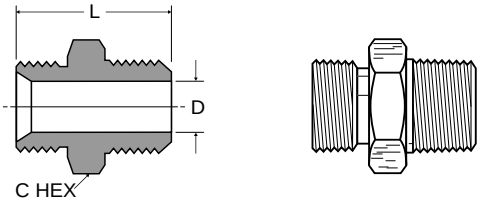
Otsego, Michigan

Ball-End Joint Adapter to Male Pipe 127HB

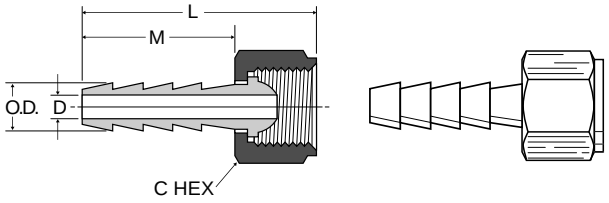
For use with 128HBLSV

PART NO.	MALE N.P.S.M. THREAD	MALE N.P.T. THREAD	C HEX	L	FLOW DIA. D
127HB-4-2	1/4	1/8	9/16	.91	.219
127HB-4-4	1/4	1/4	9/16	1.10	.281
127HB-6-4	3/8	1/4	11/16	1.10	.312
127HB-6-6	3/8	3/8	11/16	1.15	.406
127HB-8-6	1/2	3/8	7/8	1.25	.406
127HB-8-8	1/2	1/2	7/8	1.50	.531



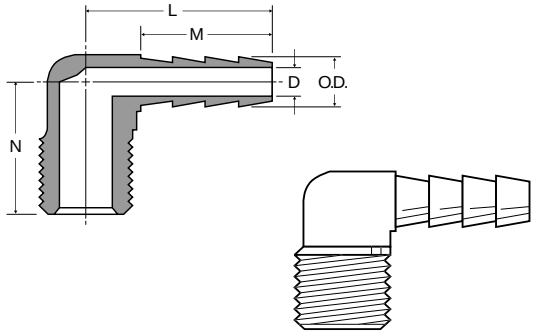
Hose Barb to Swivel Female Ball-End 128HBLSV

PART NO.	I.D. HOSE SIZE	FEMALE N.P.S.M. THREAD	C HEX	L	M	O.D.	FLOW DIA. D
128HBLSV-4-4	1/4	1/4	5/8	1.50	.97	.290	.187
128HBLSV-5-4	5/16	1/4	5/8	1.50	.97	.353	.250
128HBLSV-6-4	3/8	1/4	5/8	1.63	.97	.415	.250
128HBLSV-6-6	3/8	3/8	3/4	1.50	.97	.415	.281
128HBLSV-8-8	1/2	1/2	29/32	1.52	.97	.530	.375



Hose Barb 90° Elbow to Male Pipe 129HB

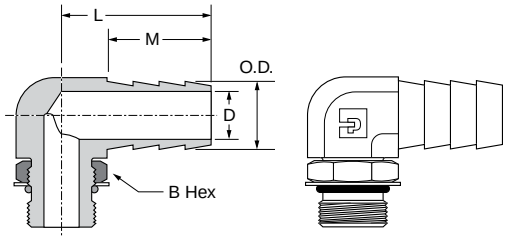
PART NO.	I.D. HOSE SIZE	PIPE THREAD	L	M	N	O.D.	FLOW DIA. D
129HB-3-2	3/16	1/8	.97	.69	.66	.227	.173
129HB-4-2	1/4	1/8	1.04	.76	.66	.290	.187
129HB-4-4	1/4	1/4	1.06	.76	.86	.290	.187
129HB-4-6	1/4	3/8	1.30	.76	.84	.290	.187
129HB-5-2	5/16	1/8	1.06	.76	.66	.353	.234
129HB-5-4	5/16	1/4	1.12	.76	.84	.353	.234
129HB-5-6	5/16	3/8	1.19	.76	.84	.353	.234
129HB-6-2	3/8	1/8	1.32	.97	.94	.415	.281
129HB-6-4	3/8	1/4	1.32	.97	.94	.415	.281
129HB-6-6	3/8	3/8	1.50	.97	1.06	.415	.281
129HB-6-8	3/8	1/2	1.52	.97	1.25	.415	.281
129HB-8-4	1/2	1/4	1.53	.97	1.06	.530	.375
129HB-8-6	1/2	3/8	1.53	.97	1.06	.530	.375
129HB-8-8	1/2	1/2	1.53	.97	1.25	.530	.375
129HB-12-12	3/4	3/4	1.33	.79	1.27	.790	.562



Hose Barb Elbow to SAE Straight Thread 1295HB

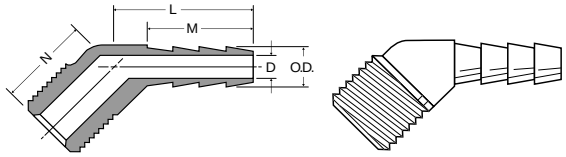
PART NO.	I.D. HOSE SIZE	STRAIGHT THREAD	B HEX	L	M	O.D.	FLOW DIA. D
1295HB-6-6	3/8	9/16-18	11/16	1.10	1.11	.410	.270

Note: Fluorocarbon o-ring is standard



Hose Barb 45° Elbow to Male Pipe 139HB

PART NO.	I.D. HOSE SIZE	PIPE THREAD	L	M	N	O.D.	FLOW DIA. D
139HB-4-2	1/4	1/8	.91	.76	.68	.290	.187
139HB-4-4	1/4	1/4	1.00	.76	.68	.290	.187
139HB-6-4	3/8	1/4	1.00	.76	.68	.415	.281



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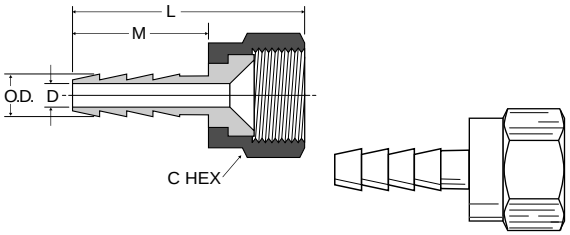
Parker Brass Products Division
Otsego, Michigan

Hose Barb to Swivel 45° Female Flare 146HBLFSV

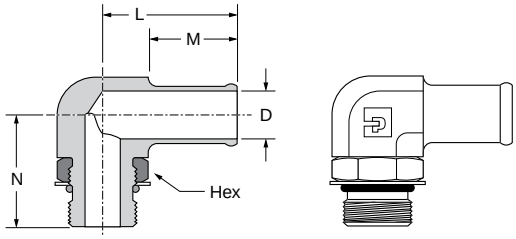
PART NO.	I.D. HOSE SIZE	STRAIGHT THREAD	C HEX	L	M	O.D.	FLOW DIA. D
146HBLFSV-4-4	1/4	7/16-20	9/16	1.55	.97	.290	.187
146HBLFSV-4-6	1/4	5/8-18	3/4	1.72	.97	.290	.187
146HBLFSV-6-6	3/8	5/8-18	3/4	1.72	.97	.415	.281



Beaded Hose Barb Elbow to SAE Straight Thread 1695HB

PART NUMBER	HOSE SIZE	STRAIGHT THREAD	HEX	L	M	N	D
1695HB-6-4	3/8	7/16-20	9/16	1.09	.78	1.10	.18
1695HB-8-6	1/2	9/16-18	9/16	1.10	.78	1.11	.30
1695HB-8-8	1/2	3/4-16	7/8	1.28	.78	1.47	.40
1695HB-10-8	5/8	3/4-16	7/8	1.47	.88	1.47	.40
1695HB-10-10	5/8	7/8-14	1	1.41	.88	1.60	.50
1695HB-12-8	3/4	3/4-16	7/8	1.47	.97	1.47	.40
1695HB-12-10	3/4	7/8-14	1	1.60	.97	1.62	.50
1695HB-12-12	3/4	1 1/16-12	1	1.60	.97	1.64	.62
1695HB-16-12	1	1 1/16-12	1 1/4	1.60	.97	1.75	.60

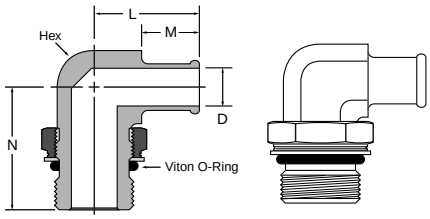
Note: Fluorocarbon o-ring is standard



Beaded Elbow to Metric Adaptor 169HB-X-MIX

PART NUMBER	HOSE SIZE	METRIC THREAD	HEX	L	M	N	D
169HB-10-MI27	5/8	M27 x 2.0	7/8	1.41	.78	1.63	.50
169HB-16-MI27	1	M27 x 2.0	1	1.67	.97	1.68	.71
169HB-16-MI33	1	M33 x 2.0	1 5/16	1.75	.97	1.90	.84

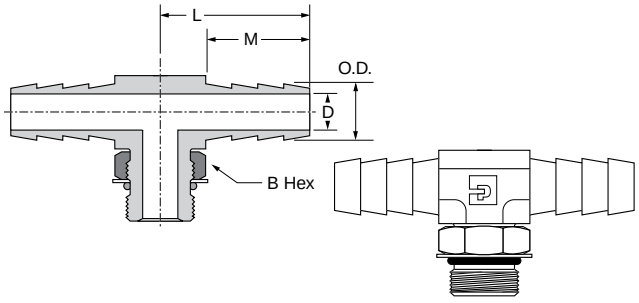
Note: Fluorocarbon o-ring is standard



Hose Barb Tee to SAE Straight Thread 1725HB

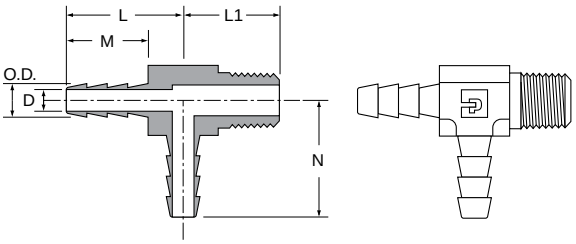
PART NO.	I.D. HOSE SIZE	STRAIGHT THREAD	B HEX	L	M	O.D.	FLOW DIA. D
1725HB-6-6	3/8	9/16-18	11/16	2.20	1.10	.420	.280

Note: Fluorocarbon o-ring is standard



Hose Barb Tee to Male Pipe 171HB

PART NO.	I.D. HOSE SIZE	PIPE THREAD	L	L1	M	N	O.D.	FLOW DIA. D
171HB-4-4	1/4	1/4	1.10	.85	.76	1.10	.290	.187



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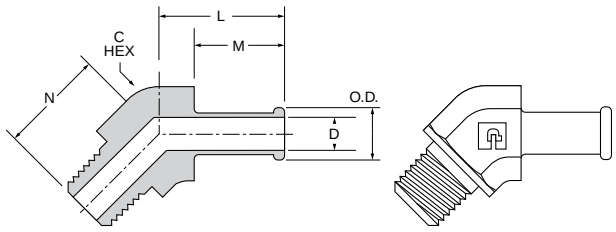
Otsego, Michigan

Beaded Hose Barb 45° Elbow Tube to Male Pipe 179HB

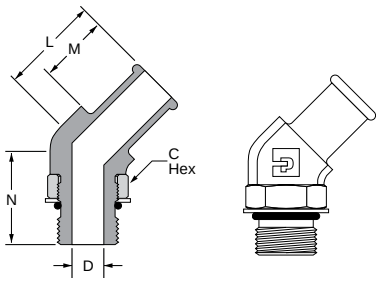
PART NO.	I.D. HOSE SIZE	NPTF THREAD	C HEX	L	M	N	O.D.	FLOW DIA. D
179HB-6-4	3/8	1/4-18	.75	1.09	.78	.93	.45	.28
179HB-6-6	3/8	3/8-18	.75	1.09	.78	.93	.45	.28
179HB-10-8	5/8	1/2-14	.81	1.19	.78	1.13	.70	.50
179HB-12-8	3/4	1/2-14	.81	1.19	.78	1.13	.83	.56



Beaded Hose Barb 45° Elbow Tube to Straight Thread 1795HB

PART NO.	I.D. HOSE SIZE	STRAIGHT THREAD	C HEX	L	M	N	FLOW DIA. D
1795HB-8-8	1/2	3/4-16	7/8	1.12	.78	1.16	.400
1795HB-10-8	5/8	3/4-16	7/8	1.22	.88	1.16	.398
1795HB-12-8	3/4	3/4-16	7/8	1.22	.88	1.16	.398
1795HB-12-12	3/4	1 1/16-12	1 1/4	1.35	.97	1.65	.620
1795HB-16-12	1	1 1/16-12	1 1/4	1.38	.97	1.47	.620
1795HB-16-14	1	1 3/16-12	1 3/8	1.25	.97	1.80	.720

Note: Fluorocarbon o-ring is standard

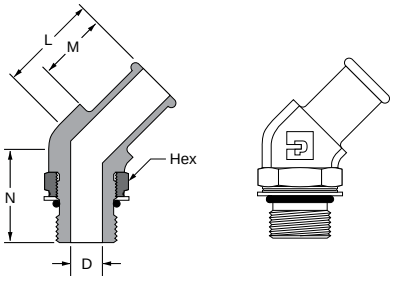


G

Beaded Hose Barb 45 Elbow to Metric Thread 179HB-X-MIX

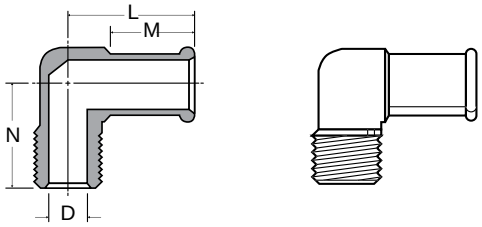
PART NUMBER	HOSE SIZE	METRIC THREAD	HEX	L	M	N	D
179HB-12-MI18	3/4	M18 x 1.5	13/16	1.15	.78	1.16	.44
179HB-16-MI27	1	M27 x 2.0	1 1/16	1.51	.97	1.71	.71

Note: Fluorocarbon o-ring is standard



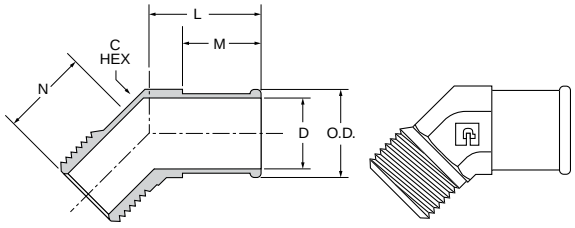
Beaded Hose Barb 90° Elbow Tube to Male Pipe 269HB

PART NO.	I.D. HOSE SIZE	PIPE THREAD	L	M	N	FLOW DIA. D
269HB-6-6	3/8	3/8	1.19	.78	.88	.281
269HB-8-4	1/2	1/4	1.16	.78	.99	.310
269HB-8-6	1/2	3/8	1.16	.78	1.08	.406
269HB-8-8	1/2	1/2	1.28	.78	1.25	.406
269HB-10-4	5/8	1/4	1.13	.78	.99	.312
269HB-10-6	5/8	3/8	1.16	.78	.99	.406
269HB-10-8	5/8	1/2	1.28	.78	1.25	.501
269HB-12-8	3/4	1/2	1.28	.78	1.25	.563
269HB-12-12	3/4	3/4	1.33	.78	1.27	.625



Beaded Hose Barb 45° Elbow Tube to Male Pipe 279HB

PART NO.	I.D. HOSE SIZE	NPTF THREAD	C HEX	L	M	N	O.D.	FLOW DIA. D
279HB-16-12	1	3/4-14	1.12	1.38	.97	1.13	1.06	.720



Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Compression Style Transportation

Air Brake Fittings

- Meets D.O.T. FMVSS 571.106
- Meets SAE J246 & J1131
- Reusable
- Use with Copper Tubing

NTA Fittings

- Meets D.O.T. FMVSS 571.106
- Meets SAE J246 & J1131
- Staked in Tube Support
- Pre-applied Sealant

Transmission Fittings

- Slotted Sleeve Prevents Over Torque
- Use with SAE J844 Tubing
- For Use in Pressure Protected Applications

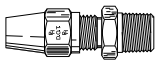
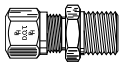
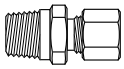
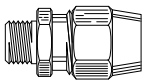
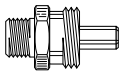
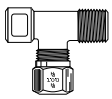
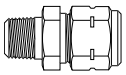
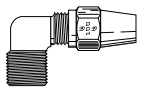
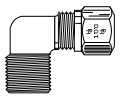
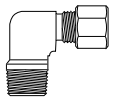
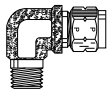
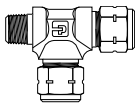
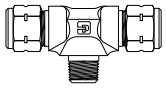
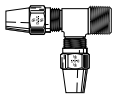
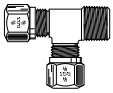
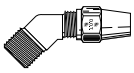
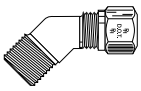
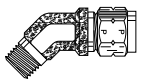
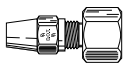
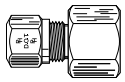
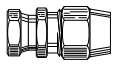
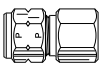
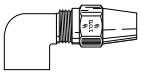
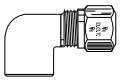
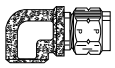
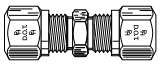
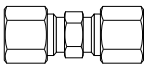
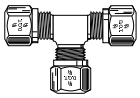
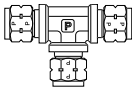
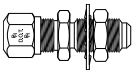
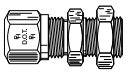
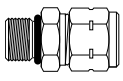
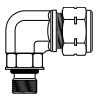
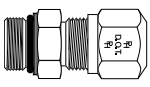
Air Brake Hose Ends

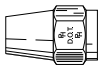
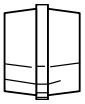
- Meets D.O.T. FMVSS 571.106
- Use with SAE J1402 Air Brake Hose

Vibra-Lok

- Elastomeric Seal
- Excellent Vibration Resistance
- Viton Sleeve for High Temp
- Wide Range of Tubing

The World Standard

Tube to Male NPTF	**VS68AB** Male Connector  Page H15	**VS68NTA** Male Connector  Page H8	**68TF** Male Connector  Page H12	**68RB** Male Connector  Page H21	**68RB** Male Connector Body Only  Page H21	**68RBSG** Male Connector w/ Spring Guard  Page H21
76RB Adapter  Page H21	**VS176NTA** Adapter Tee  Page H8	**68VL** Male Connector  Page H25	**682VL** Tank Fitting  Page H25	**VS269AB** Male Elbow  Page H15	**VS269NTA** Male Elbow  Page H9	**269TF** Male Elbow  Page H12
169VL Male Elbow  Page H25	**171VL** Male Run Tee  Page H26	**172VL** Male BranchTee  Page H26	**VS271AB** Male Run Tee  Page H16	**VS271NTA** Male Run Tee  Page H9	**VS272AB** Male Branch Tee  Page H16	**VS272NTA** Male Branch Tee  Page H10
VS279AB 45° Male Elbow  Page H16	**VS279NTA** 45° Male Elbow  Page H10	**179VL** 45° Male Elbow  Page H26	**Tube to Female NPTF**	**66AB** Female Connector  Page H14	**66NTA** Female Connector  Page H7	**66RBSV** Female Connector  Page H20
66VL Female Connector  Page H24	**270AB** Female Elbow  Page H16	**270NTA** Female Elbow  Page H9	**170VL** Female Elbow  Page H26	**207ACBH** Anchor Coupling  Page H17	**Tube to Tube**	**62AB** Union  Page H14
62NTA Union  Page H6	**62TF** Union  Page H12	**62RB** Union  Page H20	**62VL** Union  Page H24	**264AB** Union Tee  Page H15	**264NTA** Union Tee  Page H8	**164VL** Union Tee  Page H25
265AB Union Elbow  Page H15	**265NTA** Union Elbow  Page H9	**Bulkhead Unions**	**62ABH** Bulkhead Union  Page H14	**62ANBH** Bulkhead Union  Page H6	**62NBH** Bulkhead Union  Page H7	**62NFBH** Bulkhead Union  Page H7
66NBH Bulkhead Union  Page H7	**Tube to Straight Thread**	**685VLV** Male Connector  Page H25	**1695VLV** Male Elbow  Page H26	**Tube to Metric Straight Thread**	**68NTA-MI** Adapter  Page H8	

Auxiliary	**61AB** Nut  Page H14	**61NTA** Nut  Page H6	**61TF** Nut  Page H12	**61RB** Nut  Page H20	**61RBSG** Spring Guard Nut  Page H20	**67RBSG** Nut & Spring  Page H20
61VL Nut  Page H24	**60AB** Sleeve  Page H14	**60NTA** Sleeve  Page H6	**60TF** Sleeve  Page H12	**60RB** Sleeve  Page H20	**60VL** Sleeve  Page H24	**60VLV** Viton Sleeve  Page H24
56RBSG Spring  Page H20	**63NTA** Tube Support  Page H6					

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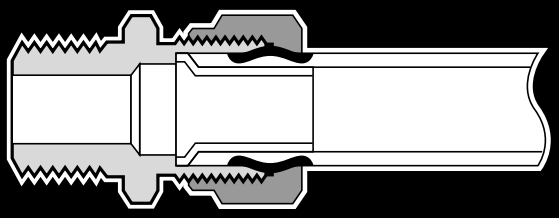
Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan



Air Brake-NTA® Fittings

NTA® Advantages
Meets D.O.T. FMVSS 571.106 air brake specifications. Utilizes ribbed sleeve for compression and positive grip. NTA® bodies (less tube supports) are interchangeable with AB (SAE J246) fitting bodies. NTA® fittings are pre-applied with Locite Vibra-Seal 516 on all male pipe threads.

No Special Tools Needed
You can assemble tubing to Parker NTA® fittings, no need to flare. Machined from CA 360, CA 345 or CA 377 brass. Broad selection of styles available.

Specifications
Meets functional requirements of the SAE automotive tube fitting standards: SAE J246 and SAE J1131.

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Applications
Use with SAE J844 Type A and B nylon tubing in air brake systems or in cab air controls. Acceptable for use with diesel oil fuels when used with Parker Parflex Division diesel fuel tubing. Electroless nickel plated bodies can be used with bio-diesel.

Working Pressure Ranges
Up to 150 psi.

Temperature Ranges
Fittings will withstand variations from -40° to +200°F.

Order
By part number. Nuts and sleeves may be ordered as separate items by their catalog number.

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:

VS	68	NTA	–10	–8
Locite Vibra Seal 516				
	Male Connector			
		Nylon Tube Air Brake Fitting		
			5/8” (10/16) Tube Size	
				1/2” (8/16) Pipe Thread

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

Special Fittings
Fitting configurations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry.

Pricing
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

Assembly Instructions

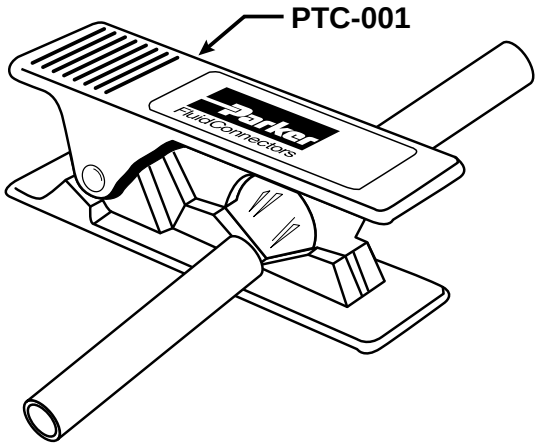
1. Cut tubing squarely–maximum of 15° angle allowable.

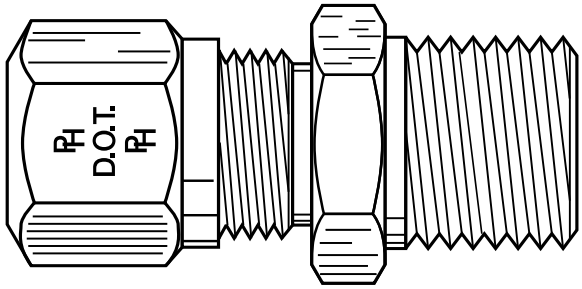
- Use of Parker tube cutter PTC-001 is recommended.

2. Check that port or mating part is clean and free of debris.

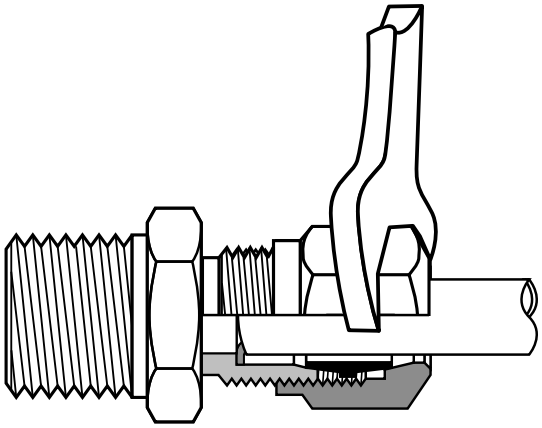
3. Insert tubing into fitting until it bottoms on seat.

4. Tighten nut with wrench until one thread remains visible on the fitting body; (this will allow for a number of remakes) or, the nut should be screwed down finger tight, then the wrench-tightened as indicated in the following table.





Tube Size	Additional Number of Turns From Hand-Tight
3/16	2-1/2
1/4	3
3/8 &1/2	4
5/8 &3/4	3-1/2



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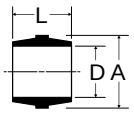
Sleeve 60NTA

Ref. SAE 100115

PART NO.	TUBE SIZE	A	D	L
60NTA-3*	3/16	.255	.194	.23
60NTA-4	1/4	.359	.256	.30
60NTA-6	3/8	.479	.384	.39
60NTA-8	1/2	.624	.509	.43
60NTA-10	5/8	.746	.634	.49
60NTA-12	3/4	.922	.760	.54

*Meets D.O.T. FMVSS 571.106 specification. No applicable SAE specification for this tube size.

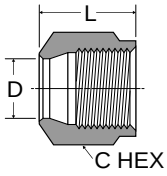


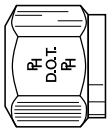
Nut 61NTA

Ref. SAE 100110

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
61NTA-3*	3/16	5/16-24	7/16	.194	.40
61NTA-4	1/4	7/16-24	9/16	.256	.45
61NTA-6	3/8	17/32-24	5/8	.384	.63
61NTA-8	1/2	11/16-20	13/16	.509	.72
61NTA-10	5/8	13/16-18	15/16	.634	.77
61NTA-12	3/4	1-18	1-1/8	.760	.81

*Meets D.O.T. FMVSS 571.106 specification. No applicable SAE specification for this tube size.

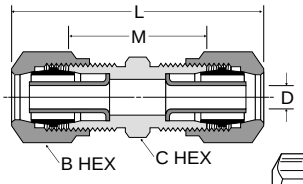


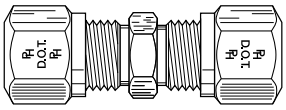


Union 62NTA

Ref. SAE 100101 BA

PART NO.	TUBE SIZE	STRAIGHT THREAD	B HEX	C HEX	L	M	FLOW DIA. D
62NTA-4	1/4	7/16-24	9/16	7/16	1.49	.83	.137
62NTA-6	3/8	17/32-24	5/8	9/16	2.00	1.08	.217
62NTA-8	1/2	11/16-20	13/16	11/16	2.32	1.29	.338
62NTA-10	5/8	13/16-18	15/16	13/16	2.39	1.41	.398
62NTA-12	3/4	1-18	1-1/8	1	2.60	1.58	.523

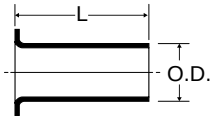


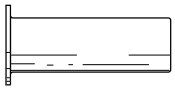


Stainless Steel Insert 63NTA

(For SAE J844 Tubing)

PART NO.	TUBE SIZE	L	O.D.
63NTA-4	1/4	.53	.163
63NTA-6	3/8	.64	.245
63NTA-8	1/2	.81	.370
63NTA-10	5/8	.86	.434
63NTA-12	3/4	1.04	.559

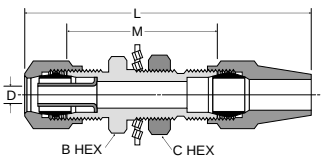


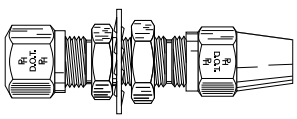


Bulkhead Union 62ANBH

(NTA® & Air Brake)

PART NO.	TUBE SIZE	STRAIGHT THREAD	B HEX	C HEX	L	M	FLOW DIA. D	BULKHEAD HOLE DIA.
62ANBH-4	1/4	7/16-24	9/16	9/16	2.28	1.38	.137	7/16
62ANBH-6	3/8	17/32-24	11/16	3/4	2.97	1.62	.217	17/32
62ANBH-8	1/2	11/16-20	13/16	1	3.36	1.88	.338	11/16

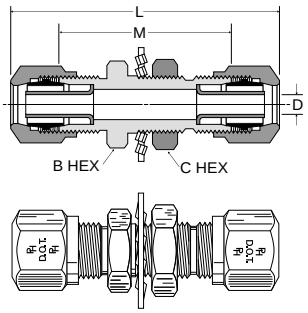




Bulkhead Union 62NBH

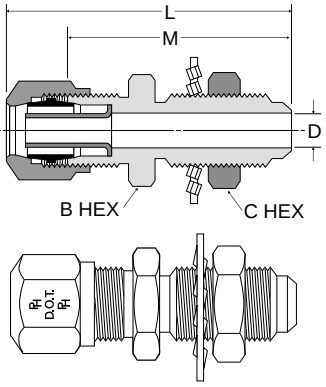
PART NO.	TUBE SIZE	STRAIGHT THREAD	B HEX	C HEX	L	M	FLOW DIA. D	BULKHEAD HOLE DIA.
62NBH-3*	3/16	5/16-24	7/16	7/16	1.80	1.21	.087	5/16
62NBH-4	1/4	7/16-24	9/16	9/16	2.04	1.38	.137	7/16
62NBH-6	3/8	17/32-24	11/16	3/4	2.54	1.62	.217	17/32
62NBH-8	1/2	11/16-20	13/16	1	2.92	1.88	.338	11/16
62NBH-10	5/8	13/16-18	15/16	1	2.99	2.01	.398	13/16

*Meets D.O.T. FMVSS 571.106 specifications.
No applicable SAE specification for this tube size.



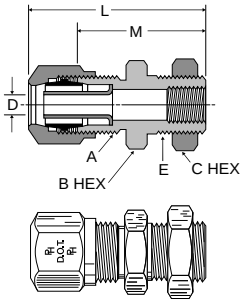
Bulkhead Union 62NFBH

PART NO.	TUBE SIZE	FLARE SIZE	STRAIGHT THREAD	B HEX	C HEX	L	M	FLOW DIA. D	BULKHEAD HOLE DIA.
62NFBH-4	1/4	1/4	7/16-24	9/16	9/16	2.04	1.38	.137	7/16
62NFBH-6	3/8	3/8	17/32-24	11/16	3/4	2.54	1.62	.217	5/8
62NFBH-8	1/2	1/2	11/16-20	13/16	1	2.92	1.88	.338	3/4
62NFBH-10	5/8	5/8	13/16-18	15/16	1	3.04	2.02	.398	7/8
62NFBH-10-6	5/8	3/8	11/16-20	7/8	3/4	2.43	1.90	.280	5/8
62NFBH-10-8	5/8	1/2	13/16-18	7/8	7/8	2.90	2.40	.400	3/4



Bulkhead Union 66NBH

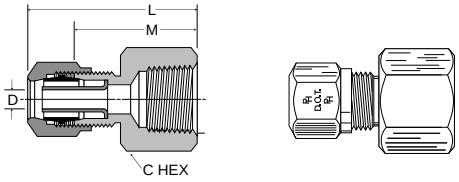
PART NO.	TUBE SIZE	PIPE THREAD	A STRAIGHT THREAD	E STRAIGHT THREAD	B HEX	C HEX	L	M	FLOW DIA. D	BULKHEAD HOLE DIA.
66NBH-8-6	1/2	3/8	11/16-20	7/8-14	1-1/16	1-1/16	1.94	1.42	.338	7/8



Female Connector 66NTA

Ref. SAE 100103 BA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
66NTA-4-2	1/4	1/8	7/16-24	9/16	1.17	.84	.137
66NTA-4-4	1/4	1/4	7/16-24	11/16	1.40	1.07	.137
66NTA-6-2	3/8	1/8	17/32-24	9/16	1.46	1.00	.217
66NTA-6-4	3/8	1/4	17/32-24	11/16	1.64	1.18	.217
66NTA-6-6	3/8	3/8	17/32-24	7/8	1.64	1.18	.217
66NTA-8-6	1/2	3/8	11/16-20	7/8	1.79	1.27	.338
66NTA-8-8	1/2	1/2	11/16-20	1-1/16	1.96	1.44	.338
66NTA-10-6	5/8	3/8	13/16-18	7/8	1.80	1.31	.398
66NTA-10-8	5/8	1/2	13/16-18	1-1/16	1.99	1.50	.398



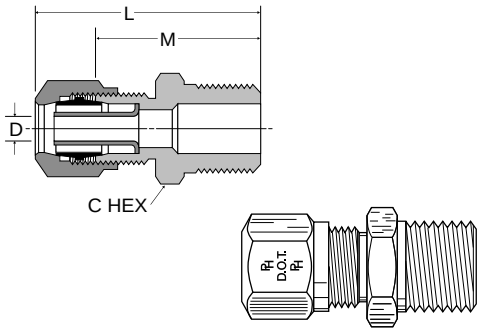
Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Male Connector VS68NTA

Ref. SAE 100102 BA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
VS68NTA-3-1*	3/16	1/16	5/16-24	3/8	1.16	.87	.087
VS68NTA-3-2*	3/16	1/8	5/16-24	7/16	1.15	.86	.087
VS68NTA-3-4*	3/16	1/4	5/16-24	9/16	1.35	1.05	.087
VS68NTA-4-2	1/4	1/8	7/16-24	7/16	1.22	.89	.137
VS68NTA-4-4	1/4	1/4	7/16-24	9/16	1.43	1.10	.137
VS68NTA-4-6	1/4	3/8	7/16-24	11/16	1.47	1.14	.137
VS68NTA-6-2	3/8	1/8	17/32-24	9/16	1.49	1.03	.217
VS68NTA-6-4	3/8	1/4	17/32-24	9/16	1.67	1.21	.217
VS68NTA-6-6	3/8	3/8	17/32-24	11/16	1.70	1.24	.217
VS68NTA-6-8	3/8	1/2	17/32-24	7/8	1.89	1.43	.217
VS68NTA-8-4	1/2	1/4	11/16-20	11/16	1.85	1.33	.338
VS68NTA-8-6	1/2	3/8	11/16-20	11/16	1.85	1.33	.338
VS68NTA-8-8	1/2	1/2	11/16-20	7/8	2.04	1.52	.338
VS68NTA-10-6	5/8	3/8	13/16-18	13/16	1.88	1.39	.398
VS68NTA-10-8	5/8	1/2	13/16-18	7/8	2.10	1.58	.398
VS68NTA-12-6	3/4	3/8	1-18	1	2.00	1.49	.440
VS68NTA-12-8	3/4	1/2	1-18	1	2.19	1.68	.523
VS68NTA-12-12	3/4	3/4	1-18	1-1/8	2.22	1.71	.523

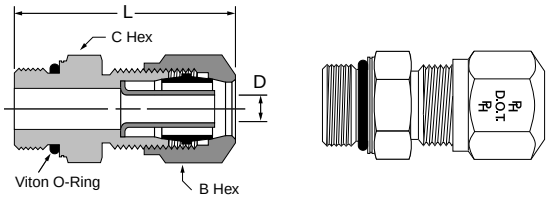
*Meets D.O.T. FMVSS 571.106 specifications. No applicable SAE specification for this tube size.



NTA® to Metric Adaptor 68NTA-X-MIX

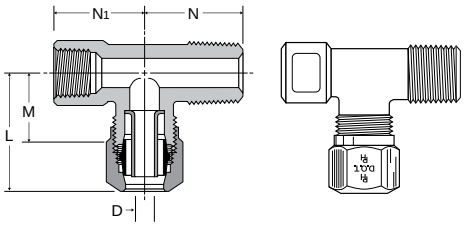
PART NUMBER	TUBE SIZE	METRIC THREAD	B HEX	C HEX	L	D
68NTA-4-MI10	1/4	M10 x 1.0	9/16	9/16	1.33	.140

Note: Fluorocarbon o-ring is standard



Adapter Tee VS176NTA

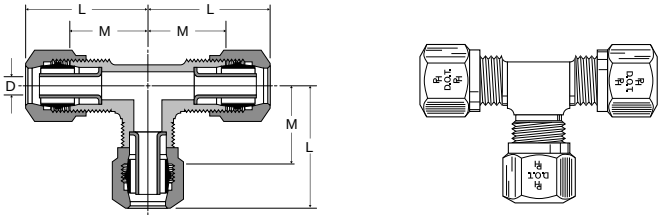
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	N1	FLOW DIA. D
VS176NTA-4-2	1/4	1/8	7/16-24	1.02	.69	.75	.66	.137



Union Tee 264NTA

Ref. SAE 100401 BA

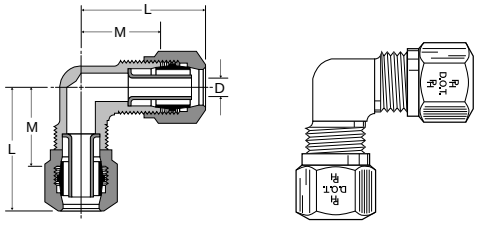
PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
264NTA-4	1/4	7/16-24	.95	.62	.137
264NTA-6	3/8	17/32-24	1.24	.78	.217
264NTA-8	1/2	11/16-20	1.45	.93	.338
264NTA-10	5/8	13/16-18	1.58	1.09	.398



Union Elbow 265NTA

Ref. SAE 100201 BA

PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
265NTA-4	1/4	7/16-24	.95	.62	.137
265NTA-6	3/8	17/32-24	1.25	.79	.217
265NTA-8	1/2	11/16-20	1.45	.93	.338
265NTA-10	5/8	13/16-18	1.58	1.09	.398

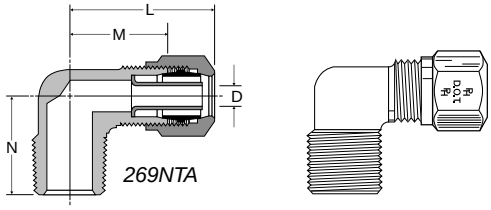


Male Elbow VS269NTA

Ref. SAE 100202 BA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
VS269NTA-3-2*	3/16	1/8	5/16-24	.90	.60	.67	.087
VS269NTA-3-4*	3/16	1/4	5/16-24	.91	.62	.87	.087
VS269NTA-4-2	1/4	1/8	7/16-24	.95	.62	.66	.137
VS269NTA-4-4	1/4	1/4	7/16-24	1.00	.68	.87	.137
VS269NTA-4-6	1/4	3/8	7/16-24	1.16	.73	.86	.137
VS269NTA-6-2	3/8	1/8	17/32-24	1.19	.73	.75	.217
VS269NTA-6-4	3/8	1/4	17/32-24	1.25	.79	.92	.217
VS269NTA-6-6	3/8	3/8	17/32-24	1.30	.84	.91	.217
VS269NTA-6-8	3/8	1/2	17/32-24	1.40	.94	1.10	.217
VS269NTA-8-4	1/2	1/4	11/16-20	1.38	.86	.99	.338
VS269NTA-8-6	1/2	3/8	11/16-20	1.44	.92	.99	.338
VS269NTA-8-8	1/2	1/2	11/16-20	1.55	1.03	1.18	.338
VS269NTA-10-6	5/8	3/8	13/16-18	1.49	1.00	1.05	.398
VS269NTA-10-8	5/8	1/2	13/16-18	1.58	1.09	1.24	.398
VS269NTA-10-12	5/8	3/4	13/16-18	1.76	1.25	1.32	.400
VS269NTA-12-8	3/4	1/2	1-18	1.70	1.19	1.33	.523
VS269NTA-12-12	3/4	3/4	1-18	1.77	1.26	1.32	.523

*Meets D.O.T. FMVSS 571.106 specifications. No applicable SAE specification for this tube size.



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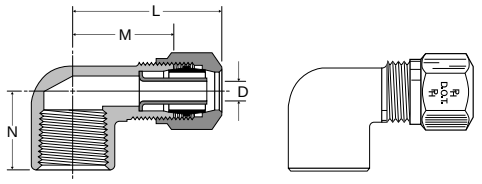
Female Elbow 270NTA

Ref. SAE 100203 BA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
270NTA-3-2*	3/16	1/8	5/16-24	.96	.67	.52	.087
270NTA-4-2	1/4	1/8	7/16-24	1.02	.69	.52	.137
270NTA-4-4	1/4	1/4	7/16-24	1.11	.78	.71	.137
270NTA-6-2	3/8	1/8	17/32-24	1.29	.83	.59	.217
270NTA-6-4	3/8	1/4	17/32-24	1.35	.89	.77	.217
270NTA-6-6	3/8	3/8	17/32-24	1.39	.93	.77	.217
270NTA-8-6	1/2	3/8	11/16-20	1.55	1.03	.82	.338
270NTA-8-8	1/2	1/2	11/16-20	1.65	1.13	1.01	.338
270NTA-10-8	5/8	1/2	13/16-18	1.70	1.19	1.07	.398

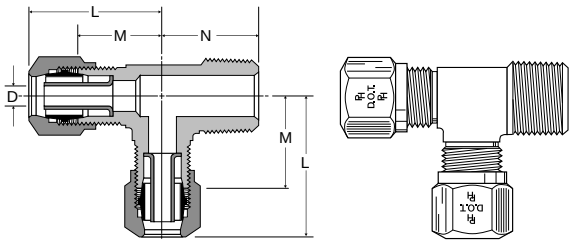
*Meets D.O.T. FMVSS 571.106 specification. No applicable SAE specification for this tube size.



Male Run Tee VS271NTA

Ref. SAE 100424 BA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
VS271NTA-4-2	1/4	1/8	7/16-24	.95	.62	.66	.137
VS271NTA-4-4	1/4	1/4	7/16-24	1.00	.68	.87	.137
VS271NTA-6-4	3/8	1/4	17/32-24	1.25	.79	.92	.217
VS271NTA-6-6	3/8	3/8	17/32-24	1.30	.84	.91	.217
VS271NTA-8-6	1/2	3/8	11/16-20	1.45	.93	.99	.338
VS271NTA-8-8	1/2	1/2	11/16-20	1.55	1.03	1.18	.338
VS271NTA-10-8	5/8	1/2	13/16-18	1.60	1.09	1.24	.398

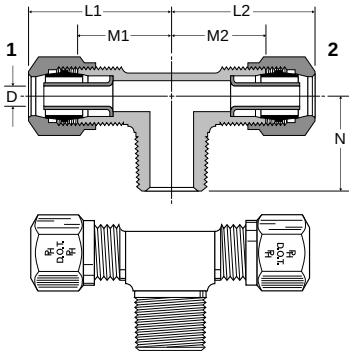


Male Branch Tee VS272NTA

Ref. SAE 100425 BA

PART NO.	TUBE 1	TUBE 2	PIPE THREAD	STRAIGHT THREAD	L1	L2	M1	M2	N	FLOW DIA. D
VS272NTA-3-2*	3/16	3/16	1/8	7/16-24	.90	.90	.61	.61	.66	.087
VS272NTA-4-2	1/4	1/4	1/8	7/16-24	.95	.95	.62	.62	.66	.137
VS272NTA-4-4	1/4	1/4	1/4	7/16-24	1.00	1.00	.68	.68	.87	.137
VS272NTA-6-2	3/8	3/8	1/8	17/32-24	1.18	1.18	.72	.72	.75	.217
VS272NTA-6-4	3/8	3/8	1/4	17/32-24	1.25	1.25	.91	.91	.92	.217
VS272NTA-6-4-4	3/8	1/4	1/4	7/16-24 17/32-24	.99	1.25	.67	.79	.91	.137
VS272NTA-6-6	3/8	3/8	3/8	17/32-24	1.30	1.30	.84	.84	.91	.217
VS272NTA-8-4	1/2	1/2	1/4	11/16-20	1.41	1.41	.89	.89	.99	.338
VS272NTA-8-6	1/2	1/2	3/8	11/16-20	1.45	1.45	.93	.93	.99	.338
VS272NTA-8-8	1/2	1/2	1/2	11/16-20	1.55	1.55	1.03	1.03	1.18	.338
VS272NTA-10-8	5/8	5/8	1/2	13/16-18	1.60	1.60	1.09	1.09	1.24	.398

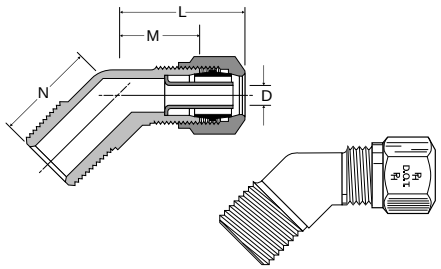
*Meets D.O.T. FMVSS 571.106 specifications. No applicable SAE specification for this tube size.



45° Elbow VS279NTA

Ref. SAE 100302 BA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
VS279NTA-4-2	1/4	1/8	7/16-24	.81	.49	.63	.137
VS279NTA-4-4	1/4	1/4	7/16-24	.93	.60	.85	.137
VS279NTA-6-2	3/8	1/8	17/32-24	1.17	.71	.68	.217
VS279NTA-6-4	3/8	1/4	17/32-24	1.17	.71	.85	.217
VS279NTA-6-6	3/8	3/8	17/32-24	1.21	.75	.94	.217
VS279NTA-6-8	3/8	1/2	17/32-24	1.24	.78	1.16	.217
VS279NTA-8-4	1/2	1/4	11/16-20	1.36	.84	.94	.338
VS279NTA-8-6	1/2	3/8	11/16-20	1.36	.84	.94	.338
VS279NTA-8-8	1/2	1/2	11/16-20	1.39	.87	1.16	.338
VS279NTA-10-6	5/8	3/8	13/16-18	1.43	.94	.98	.398
VS279NTA-10-8	5/8	1/2	13/16-18	1.42	.93	1.16	.398
VS279NTA-12-8	3/4	1/2	1-18	1.61	1.10	1.18	.523



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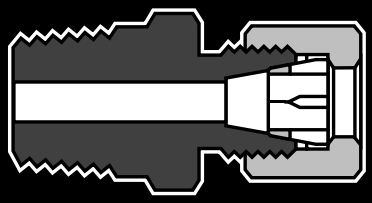
Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan



Transmission Fittings

Advantages
Parker Air Transmission Fittings utilize a specially designed slotted sleeve to help eliminate notch stress related to over-torque. The fitting design is ideally suited for use in pressure protected air transmission applications.

Application
Use with SAE J844 type A nylon tubing in pressure protected air transmission applications. Electroless nickel plated bodies can be used with bio-diesel.

Technical Data
- Working pressure from 0 to 150 psi
- Working temperature from -40° F to +220°F

Assembly Instructions
1. Cut tubing squarely.
2. Insert tubing into fitting until bottomed.
3. Tighten nut 1 1/2 turns from finger tight.

Order
By part number and name. Nuts and sleeves may be ordered as separate items by their catalog number.

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 of fitting. The second series describe the size.

Example:

68	TF	-2	-2
Male Connector			
	Transmission Fitting		
		1/8" (2/16) Tube Size	
			1/8" (2/16) Pipe Thread

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

Special Fittings
Fitting configurations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry.

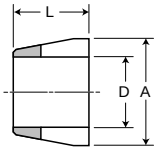
Pricing
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantities.

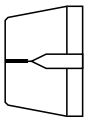
H

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Sleeve 60TF

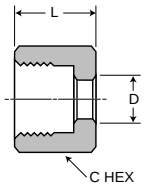
PART NO.	TUBE SIZE	A	D	L
60TF-2	1/8	.235	.130	0.17
60TF-5/32	5/32	.251	.165	0.18

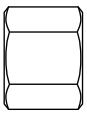




Nut 61TF

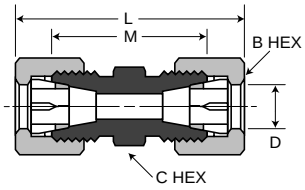
PART NO.	TUBE SIZE	D	L	STRT THD	C HEX
61TF-2	1/8	.133	.32	5/16-24	3/8
61TF-5/32	5/32	.163	.32	5/16-24	3/8

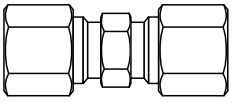




Union 62TF

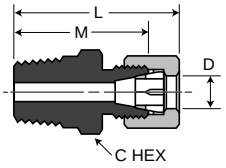
PART NO.	TUBE SIZE	D	L	STRT THD	M	C HEX	B HEX
62TF-2	1/8	0.109	1.04	5/16-24	.68	5/16	3/8
62TF-5/32	5/32	0.068	1.04	5/16-24	.68	5/16	3/8

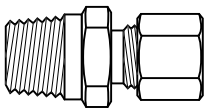




Male Connector 68TF

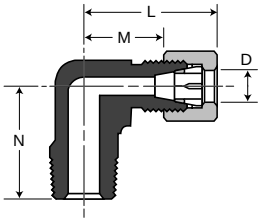
PART NO.	TUBE SIZE	PIPE THREAD	D	L	STRT THD	M	C HEX
68TF-2-1	1/8	1/16	.109	.96	5/16-24	.78	11/32
68TF-2-2	1/8	1/8	.109	.96	5/16-24	.78	7/16
68TF-5/32-1	5/32	1/16	.068	.84	5/16-24	.66	11/32
68TF-5/32-2	5/32	1/8	.068	.96	5/16-24	.78	7/16

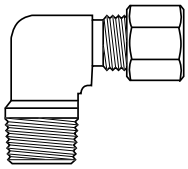




Male Elbow 269TF

PART NO.	TUBE SIZE	PIPE THREAD	D	L	STRT THD	M	N
269TF-2-2	1/8	1/8	.109	.79	5/16-24	.61	.66
269TF-5/32-2	5/32	1/8	.068	.79	5/16-24	.61	.66





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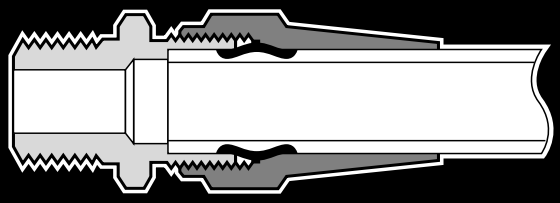


Air Brake-AB Fittings

AB Advantages
Easy to assemble, no flaring required. Extruded from CA 360 or CA 345 brass. Readily available in broad selection of configurations and sizes. AB fittings are pre-applied with Locite Vibra-Seal® 516 on all male pipe threads.

Specifications
AB fittings meet DOT FMVSS571.106 performance specifications when assembled with 63NTA tube support (page 83) andSAE J844 nylon tubing. Meets functional requirements of SAE J246.

Applications
Use with copper tubing in air brake systems. Air Brake bodies (with addition of NTA tube support) are interchangeable with NTA bodies for use with SAE J844 nylon tubing. Electroless nickel plated bodies can be used with bio-diesel.

Working Pressure Ranges
Up to 400 psi.

Temperature Ranges
Fittings will withstand variations from -65° to +250°F.

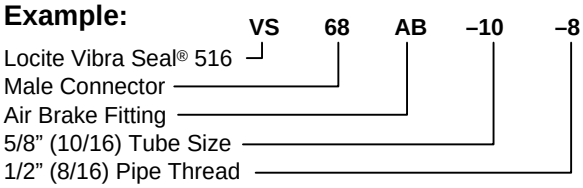
Assembly Instructions
1. Cut tubing squarely and remove burrs.
2. Slide nut and sleeve onto tubing.
3. Insert tubing into fitting until bottomed on seat. The nut should be screwed down finger-tight, then wrench-tightened as indicated below (This will allow a number of remakes):

Tube Size	Additional Number of Turns from Hand-Tight
1/4, 3/8, 1/2	2
5/8, 3/4	3

Order
By part number. Nuts and sleeves may be ordered as separate items by their catalog number.

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 numbers of sixteenths of an inch in the tube O.D.

Special Fittings
Fitting configurations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry.

Pricing
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

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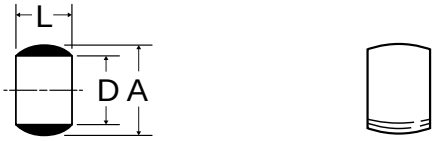
Sleeve 60AB

Ref. SAE 120115

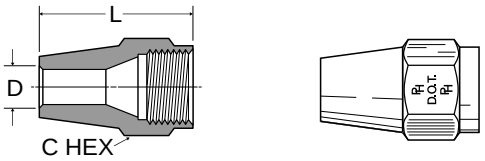
PART NO.	TUBE SIZE	A	D	L
60AB-4	1/4	.322	.255	.250
60AB-6	3/8	.461	.382	.310
60AB-8	1/2	.594	.507	.380
60AB-10	5/8	.734	.632	.440
60AB-12	3/4	.874	.758	.500



Nut 61AB

Ref. SAE 120111

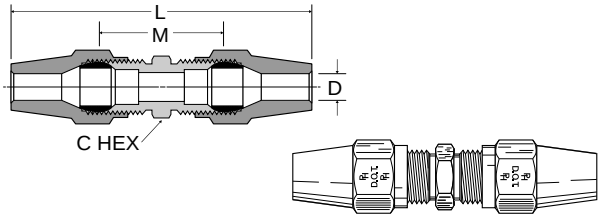
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
61AB-4	1/4	7/16-24	9/16	.256	.75
61AB-6	3/8	17/32-24	5/8	.384	1.13
61AB-8	1/2	11/16-20	13/16	.509	1.25
61AB-10	5/8	13/16-18	15/16	.634	1.38
61AB-12	3/4	1-18	1-1/8	.760	1.56



Union 62AB

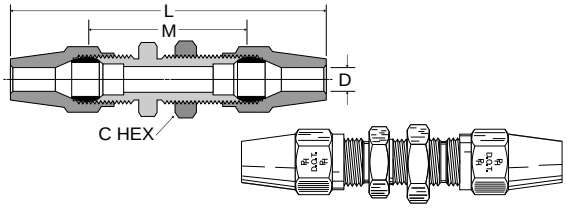
Ref. SAE 120101 BA

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
62AB-4	1/4	7/16-24	7/16	1.98	.83	.189
62AB-6	3/8	17/32-24	9/16	2.87	1.08	.314
62AB-8	1/2	11/16-20	11/16	3.21	1.29	.405
62AB-10	5/8	13/16-18	13/16	3.59	1.41	.531
62AB-12	3/4	1-18	1	4.08	1.59	.656



Bulkhead Union 62ABH

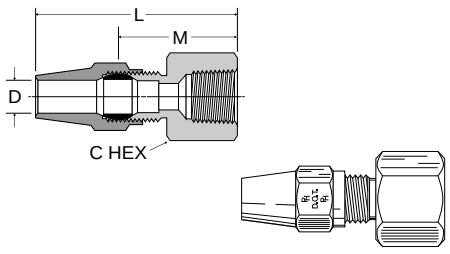
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D	BULKHEAD HOLE DIA.
62ABH-4	1/4	7/16-24	9/16	2.53	1.38	.188	7/16
62ABH-6	3/8	17/32-24	3/4	3.41	1.62	.314	17/32
62ABH-8	1/2	11/16-20	1	3.80	1.88	.408	11/16



Female Connector 66AB

Ref. SAE 120103 BA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
66AB-4-2	1/4	1/8	7/16-24	9/16	1.42	.84	.188
66AB-4-4	1/4	1/4	7/16-24	11/16	1.65	1.07	.188
66AB-6-2	3/8	1/8	17/32-24	9/16	1.89	1.00	.314
66AB-6-4	3/8	1/4	17/32-24	11/16	2.07	1.18	.314
66AB-6-6	3/8	3/8	17/32-24	7/8	2.07	1.18	.314
66AB-8-6	1/2	3/8	11/16-20	7/8	2.23	1.27	.408
66AB-8-8	1/2	1/2	11/16-20	1-1/16	2.40	1.44	.408
66AB-10-6	5/8	3/8	13/16-18	7/8	2.40	1.31	.533
66AB-10-8	5/8	1/2	13/16-18	1-1/16	2.59	1.50	.533



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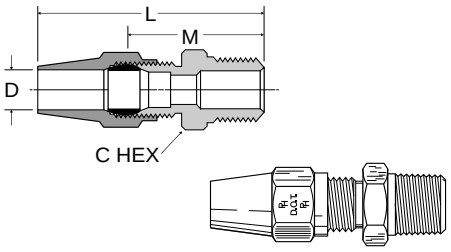
Male Connector VS68AB

Ref. SAE 120102 BA

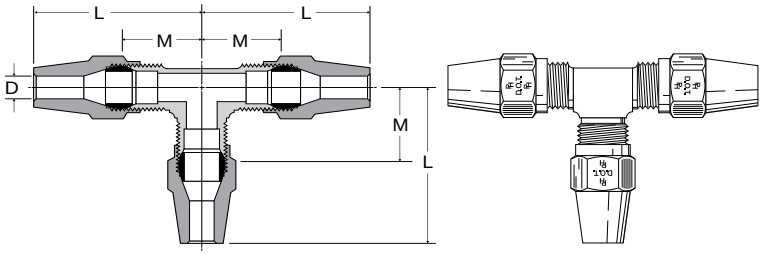
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
VS68AB-4-2	1/4	1/8	7/16-24	7/16	1.47	.89	.189
VS68AB-4-4	1/4	1/4	7/16-24	9/16	1.68	1.10	.189
VS68AB-4-6	1/4	3/8	7/16-24	11/16	1.72	1.14	.189
VS68AB-6-2	3/8	1/8	17/32-24	9/16	1.92	1.03	.189
VS68AB-6-4	3/8	1/4	17/32-24	9/16	2.10	1.21	.314
VS68AB-6-6	3/8	3/8	17/32-24	11/16	2.13	1.24	.314
VS68AB-6-8	3/8	1/2	17/32-24	7/8	2.32	1.43	.314
VS68AB-8-4	1/2	1/4	11/16-20	11/16	2.29	1.33	.314
VS68AB-8-6	1/2	3/8	11/16-20	11/16	2.29	1.33	.408
VS68AB-8-8	1/2	1/2	11/16-20	7/8	2.48	1.52	.408
VS68AB-10-6	5/8	3/8	13/16-18	13/16	2.48	1.39	.408
VS68AB-10-8	5/8	1/2	13/16-18	7/8	2.67	1.58	.533
VS68AB-12-8	3/4	1/2	1-18	1	2.92	1.68	.533
VS68AB-12-12	3/4	3/4	1-18	1-1/8	2.95	1.71	.658



Union Tee 264AB

Ref. SAE 120401 BA

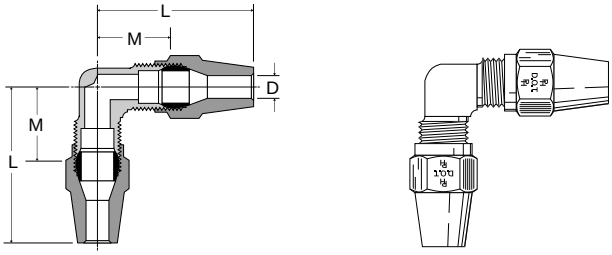
PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
264AB-4	1/4	7/16-24	1.20	.62	.189
264AB-6	3/8	17/32-24	1.67	.78	.314
264AB-8	1/2	11/16-20	1.89	.93	.408
264AB-10	5/8	13/16-18	2.18	1.09	.533



Union Elbow 265AB

Ref. SAE 120201 BA

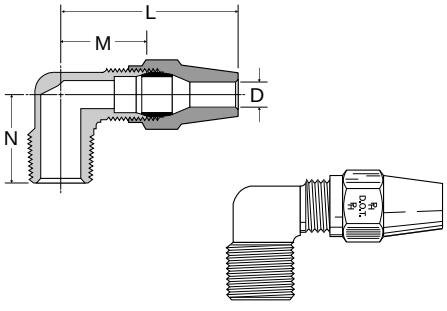
PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
265AB-4	1/4	7/16-24	1.20	.62	.189
265AB-6	3/8	17/32-24	1.68	.79	.314
265AB-8	1/2	11/16-20	1.89	.93	.408
265AB-10	5/8	13/16-18	2.18	1.09	.533



Male Elbow VS269AB

Ref. SAE 120202 BA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
VS269AB-4-2	1/4	1/8	7/16-24	1.20	.62	.66	.189
VS269AB-4-4	1/4	1/4	7/16-24	1.26	.68	.87	.189
VS269AB-4-6	1/4	3/8	7/16-24	1.31	.73	.86	.189
VS269AB-6-2	3/8	1/8	17/32-24	1.62	.73	.75	.189
VS269AB-6-4	3/8	1/4	17/32-24	1.68	.79	.92	.314
VS269AB-6-6	3/8	3/8	17/32-24	1.73	.84	.91	.314
VS269AB-6-8	3/8	1/2	17/32-24	1.83	.94	1.10	.314
VS269AB-8-4	1/2	1/4	11/16-20	1.82	.86	.99	.314
VS269AB-8-6	1/2	3/8	11/16-20	1.88	.93	.99	.408
VS269AB-8-8	1/2	1/2	11/16-20	1.99	1.03	1.18	.408
VS269AB-10-6	5/8	3/8	13/16-18	2.09	1.00	1.05	.408
VS269AB-10-8	5/8	1/2	13/16-18	2.18	1.09	1.24	.533
VS269AB-12-8	3/4	1/2	1-18	2.33	1.19	1.32	.533
VS269AB-12-12	3/4	3/4	1-18	2.50	1.26	1.32	.533



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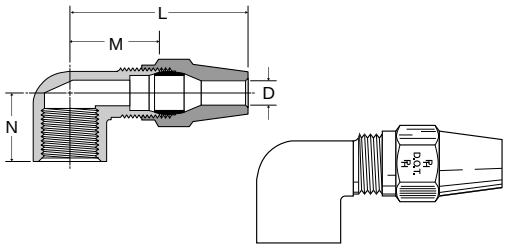
Female Elbow 270AB

Ref. SAE 120203 BA

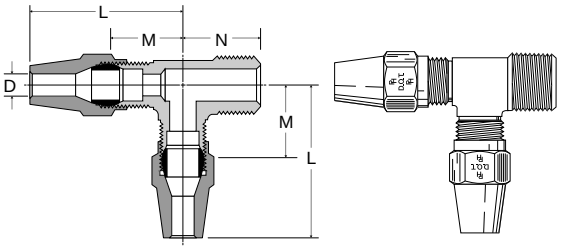
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
270AB-4-2	1/4	1/8	7/16-24	1.27	.69	.52	.189
270AB-4-4	1/4	1/4	7/16-24	1.36	.78	.71	.189
270AB-6-2	3/8	1/8	17/32-24	1.72	.83	.59	.314
270AB-6-4	3/8	1/4	17/32-24	1.78	.89	.77	.314
270AB-6-6	3/8	3/8	17/32-24	1.82	.93	.77	.314
270AB-8-6	1/2	3/8	11/16-20	1.99	1.03	.82	.408
270AB-8-8	1/2	1/2	11/16-20	2.09	1.13	1.01	.408
270AB-10-8	5/8	1/2	13/16-18	2.28	1.19	1.07	.533



Male Run Tee VS271AB

Ref. SAE 120424 BA

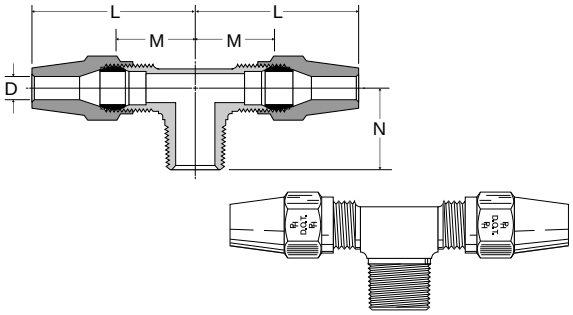
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
VS271AB-4-2	1/4	1/8	7/16-24	1.20	.62	.66	.189
VS271AB-4-4	1/4	1/4	7/16-24	1.26	.68	.87	.189
VS271AB-6-4	3/8	1/4	17/32-24	1.68	.79	.92	.314
VS271AB-6-6	3/8	3/8	17/32-24	1.73	.84	.91	.314
VS271AB-8-6	1/2	3/8	11/16-20	1.89	.93	.99	.408
VS271AB-8-8	1/2	1/2	11/16-20	1.99	1.03	1.18	.408
VS271AB-10-8	5/8	1/2	13/16-18	2.18	1.09	1.24	.533



Male Branch Tee VS272AB

Ref. SAE 120425 BA

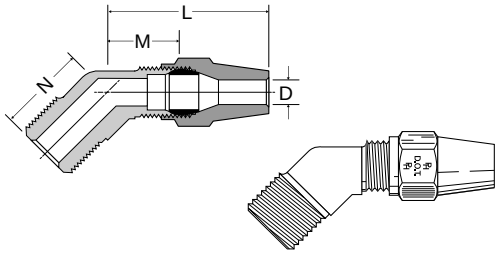
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
VS272AB-4-2	1/4	1/8	7/16-24	1.20	.62	.66	.189
VS272AB-4-4	1/4	1/4	7/16-24	1.26	.68	.87	.189
VS272AB-6-2	3/8	1/8	17/32-24	1.61	.72	.75	.189
VS272AB-6-4	3/8	1/4	17/32-24	1.68	.79	.92	.314
VS272AB-6-6	3/8	3/8	17/32-24	1.73	.84	.91	.314
VS272AB-8-6	1/2	3/8	11/16-20	1.89	.93	.99	.408
VS272AB-8-8	1/2	1/2	11/16-20	1.99	1.03	1.18	.408
VS272AB-10-8	5/8	1/2	13/16-18	2.18	1.09	1.24	.533



45° Elbow VS279AB

Ref. SAE 120302 BA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
VS279AB-4-2	1/4	1/8	7/16-24	1.07	.49	.63	.189
VS279AB-4-4	1/4	1/4	7/16-24	1.18	.60	.85	.189
VS279AB-6-2	3/8	1/8	17/32-24	1.60	.71	.68	.189
VS279AB-6-4	3/8	1/4	17/32-24	1.64	.71	.85	.314
VS279AB-6-6	3/8	3/8	17/32-24	1.64	.75	.94	.314
VS279AB-6-8	3/8	1/2	17/32-24	1.67	.78	1.16	.314
VS279AB-8-6	1/2	3/8	11/16-20	1.80	.84	.94	.408
VS279AB-8-8	1/2	1/2	11/16-20	1.83	.87	1.16	.408
VS279AB-10-6	5/8	3/8	13/16-18	2.03	.94	.98	.408
VS279AB-10-8	5/8	1/2	13/16-18	2.13	1.05	1.16	.533
VS279AB-12-8	3/4	1/2	1-18	2.34	1.10	1.18	.533



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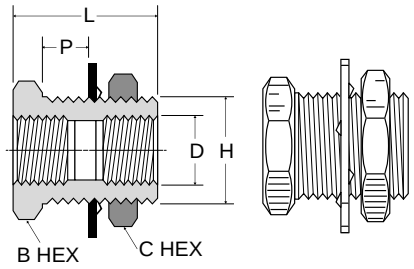
Anchor Coupling 207ACBH

PART NO.	FEAMLE PIPE THREAD	STRAIGHT THREAD	MAX . BULK HEAD P	B HEX	C HEX	L	BULKHEAD HOLE DIA. H	FLOW DIA. D
207ACBH-2	1/8	5/8-18	.89	7/8	15/16	1.50	5/8	.339
207ACBHS-2	1/8	5/8-18	.35	7/8	15/16	.96	5/8	.339
207ACBH-4	1/4	3/4-16	.81	1	1-1/8	1.50	3/4	.441
207ACBHS-4	1/4	3/4-16	.26	1	1	.94	3/4	.441
207ACBH-6	3/8	1-14	.62	1-1/8	1-1/4	1.31	1	.571
207ACBH-8	1/2	1-1/8-14	.75	1-1/4	1-3/8	1.50	1-1/8	.703
207ACBH-12	3/4	1-5/16-12	.65	1-1/2	1-1/2	1.50	1-5/16	.906
207ACBH-16*	1	1-5/8-14	1.00	2	2	1.68	1-5/8	1.140

*Lock Washer not Available



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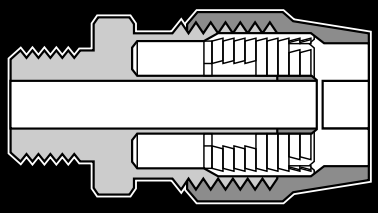

Air Brake Hose Ends

Advantages
Easy to assemble and disassemble. Extruded from CA360 or CA345 brass. Readily available in broad selection of configurations and sizes.

Specifications
Air brake hose ends will meet D.O.T. FMVSS571.106 standards when used with SAE J1402 Air brake hose.

Applications
Air brake hose connections. Electroless nickel plated bodies can be used with bio-diesel.

Working pressure ranges
Up to 225 PSI

Temperature ranges
-50°F to +212°F

Order
By part number. Nuts, sleeves, bodies and springs may be ordered as separate items by their catalog number.

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:

68	RB	SG	–6	–8
Male connector				
	Air brake hose end			
		Spring guard		
			3/8" (6/16) Hose I.D.	
				1/2" (8/16) Pipe thread

Sizes
Hose sizes are determined by the number of sixteenths of an inch in the hose I.D.

Special fittings
Fitting configuration and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry.

Pricing
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

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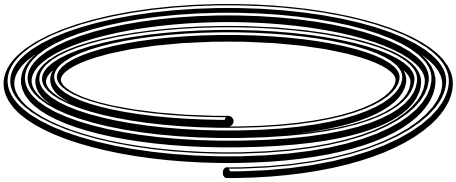
Otsego, Michigan

Parker 271

Meets or exceeds the requirements of SAE J1402 Table A, and Dept. of Transportation FMVSS 106-74, Type A2.

PART NO.	HOSE SIZE	HOSE I.D.	HOSE O.D.	MIN. BURST PRESS.	MAX. WORKING PRESS.	MIN. BEND RADUS	APPROX. WT. LBS./FT.
271-6	-6	3/8	.750	900	225	1.75	.200
271-8	-8	1/2	.875	900	225	2.00	.260



Construction
Tube - Synthetic rubber. Reinforcement - One or more fabric braids or spirals. Cover - Abrasion, oil and age resistant synthetic rubber.

Identification
Parker, part number, and appropriate SAE and DOT markings.

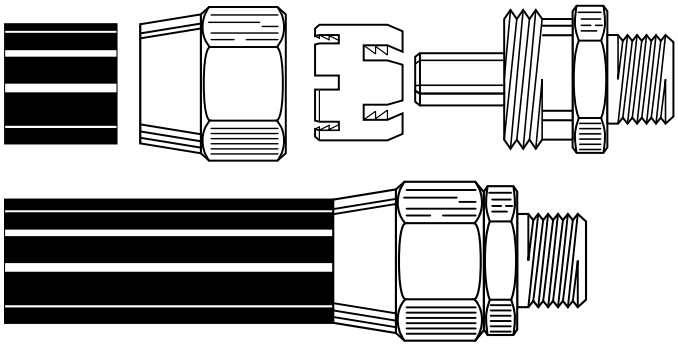
Application
Air brake systems.

Temperature range
-50°F thru +212°F (-46°C thru +100°C)

Assembly instructions

1. Slide nut onto hose.
2. Slide sleeve onto hose with tapered edge toward fitting body (see example).
3. Bottom hose into fitting.
4. Tighten nut until it contacts body hex.

Note: When reassembling fitting, body and nut should be inspected. Only reuse if parts are in proper condition. Sleeves should never be reused.



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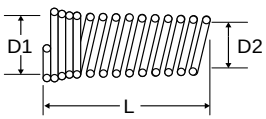
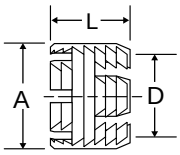
Spring 56RBSG

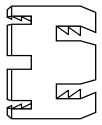
PART NO.	HOSE SIZE	L	D1	D2
56RBSG-6	3/8	2.75	.84	.78
56RBSG-8	1/2	3.00	1.03	.91



Sleeve 60RB

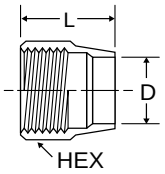
PART NO.	HOSE SIZE	L	A	D
60RB-6	3/8	.69	.90	.78
60RB-8	1/2	.69	1.03	.92





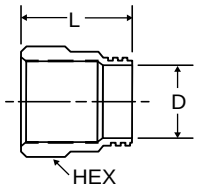
Nut 61RB

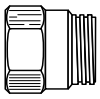
PART NO.	HOSE SIZE	STRAIGHT THREAD	HEX	L	D
61RB-6	3/8	31/32-20	1-1/16	1.12	.80
61RB-8	1/2	1-3/32-20	1-1/4	1.12	.93



Spring Guard Nut 61RBSG

PART NO.	HOSE SIZE	STRAIGHT THREAD	HEX	L	D
61RBSG-6	3/8	31/32-20	1-1/16	1.22	.80
61RBSG-8	1/2	1-3/32-20	1-1/4	1.19	.92





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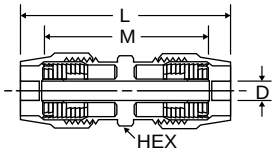
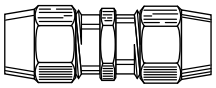
Union 62RB

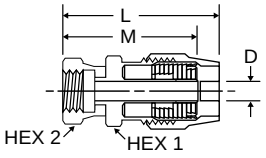
PART NO.	HOSE SIZE	STRAIGHT THREAD	HEX	L	M	D
62RB-6	3/8	31/32-20	31/32	2.98	2.56	.281
62RB-8	1/2	1-3/32-20	1-1/8	2.99	2.55	.390

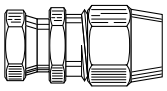




Female Swivel Connector 66RBSV

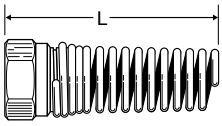
PART NO.	HOSE SIZE	STRAIGHT THREAD	HEX1	HEX2	L	M	D
66RBSV-6-3/4	3/8	3/4-20	31/32	7/8	2.30	2.09	.281
66RBSV-8-7/8	1/2	7/8-20	1-1/8	1"	2.36	2.14	.390





Air Brake Hose Nut & Attached Spring 67RBSG

PART NO.	L
67RBSG-6	3.50
67RBSG-8	3.75



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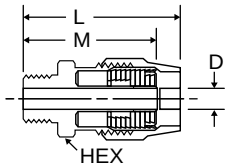
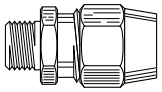
Male Connector 68RB

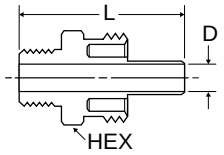
PART NO.	HOSE SIZE	STRAIGHT THREAD	PIPE THREAD	HEX	L	M	D
68RB-6-4	3/8	31/32-20	1/4	31/32	2.24	1.91	.281
68RB-6-6	3/8	31/32-20	3/8	31/32	2.24	1.91	.281
68RB-6-8	3/8	31/32-20	1/2	31/32	2.38	2.06	.281
68RB-8-6	1/2	1-3/32-20	3/8	1-1/8	2.24	1.91	.390
68RB-8-8	1/2	1-3/32-20	1/2	1-1/8	2.29	2.07	.390

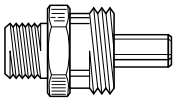




Male Connector Body Only 68RB

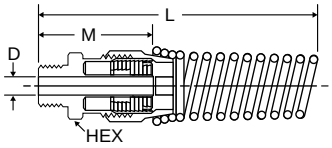
PART NO.	HOSE SIZE	STRAIGHT THREAD	PIPE THREAD	HEX	L	D
68RB-6-4B	3/8	31/32-20	1/4	31/32	1.91	.281
68RB-6-6B	3/8	31/32-20	3/8	31/32	1.91	.281
68RB-6-8B	3/8	31/32-20	1/2	31/32	2.06	.281
68RB-8-6B	1/2	1-3/32-20	3/8	1-1/8	1.91	.390
68RB-8-8B	1/2	1-3/32-20	1/2	1-1/8	2.07	.390

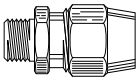




Male Connector with Spring Guard 68RBSG

PART NO.	HOSE SIZE	PIPE THREAD	HEX	L	M	D
68RBSG-6-4	3/8	1/4	31/32	4.8	1.91	.281
68RBSG-6-6	3/8	3/8	31/32	4.8	1.91	.281
68RBSG-6-8	3/8	1/2	31/32	4.9	2.06	.281
68RBSG-8-6	1/2	3/8	1-1/8	5.0	1.91	.390
68RBSG-8-8	1/2	1/2	1-1/8	5.2	2.07	.390





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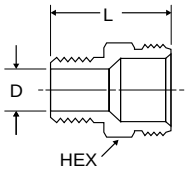
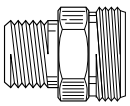
Adapter 76RB

PART NO.	PIPE THREAD	STRAIGHT THREAD	HEX	L	D
76RB-3/4-4	1/4	3/4-20	3/4	1.06	.31
76RB-3/4-6	3/8	3/4-20	3/4	1.12	.31
76RB-7/8-6	3/8	7/8-20	7/8	1.25	.44
76RB-7/8-8	1/2	7/8-20	7/8	1.47	.50





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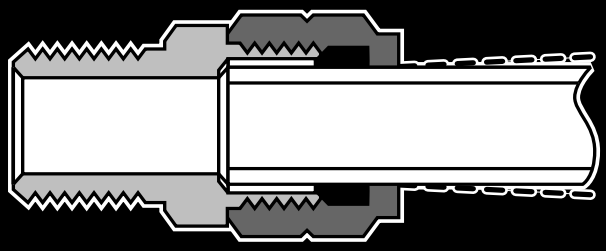

Vibra-Lok Fittings

Advantages
Vibra-Lok provides a positive reliable seal under vibration conditions, mechanical shock or tube movement. The sleeve cushions the tubing permitting the tube to flex back and forth in the fitting. Seal design compensates for tube mis-alignment and tube surface defects during assembly. Special Vibra-Lok sleeves resist deterioration and retain flexibility over a wide temperature range. Positive nut stop bottoms nut on body requiring only visual inspection — no torque measurement is needed. Manufactured from CA 360, CA 345 or CA 377 brass. With SAE straight threads on Vibra-Lok fittings this allows the fitting to adhere to the system design requirements outlined in the Genuine Parker Parts Program making it an approved product under GPP.

Applications
Use with all seamed or seamless metal tubing: Copper, Aluminum, Steel (Bundy), Stainless Steel and Glass. Sleeves are compatible for gasoline, oil, diesel fuel, lubricants, vacuum, air and water service. Electroless nickel plated bodies can be used with bio-diesel.

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Threads
SAE J1926 straight threads and NPTF pipe threads are standard. Optional threads include ISO 6149 straight threads and British pipe threads.

Working Pressures
See table on next page for maximum working pressures.

Temperature Ranges
Fitting will withstand various temperatures depending on the sleeve used in the assembly.

Fluorocarbon sleeves are marked with a red stripe and will provide service from -15°F to +450°F.

Buna N sleeves are marked with a green stripe and will provide service from -30°F to +275°F.

Vibration
Excellent resistance to vibration, mechanical, shock and tube movement.

Order Information
By part number and name. For Fluorocarbon seal add “V” to basic part number. Example 68VLV-4-2.

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:

68	VL	V	–4	–2
Male Connector				
	Vibra-Lok			
		Viton® Sleeve		
			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 tube O.D.

Special Fittings
Fitting configurations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry.

Pricing
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for nonstock items furnished on request for specified quantity.

Remake Instructions
All Vibra-Lok fittings can be reassembled repeatedly. New sleeves can easily be added to retain original fitting performance.

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Otsego, Michigan

Assembly Instructions

1. Cut the tube cleanly and squarely removing all burrs.
2. Slip tube nut and sleeve over tube.
3. Insert tubing in fitting body as far as it will go and tighten nut until stop is reached. The elastic sleeve ordinarily will extrude slightly around the tube at the end of the nut. This extrusion further aids in isolating the tube from the nut.

Assembly Instructions for Higher Pressure Applications

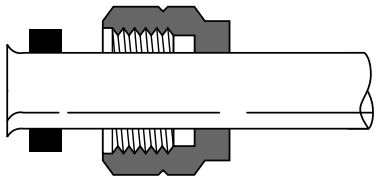
1. Consult pressure chart to determine if tubing should be belled for your particular application.
2. Slip the nut and sleeve over tubing. The sleeve should be positioned near end of tubing just behind the surface to be belled.
3. Bell tubing with standard 45° flaring tool or 90° punch. The size of bell should be approximately that shown.

Pressure Chart

In high pressure applications and sizes larger than 1/2" O.D., the tube end should be belled or flared.

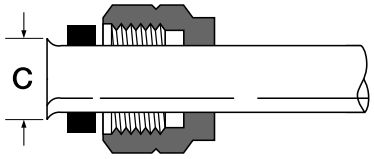
CONDITION	TUBE O.D.	TUBE NOT BELLED	TUBE BELLED OR FLARED
STATIC PRESSURE	3/16"	500	1000
	1/4"	500	1000
	5/16"	450	900
	3/8"	350	700
	1/2"	200	500
	5/8"		400
MINOR SURGES AND/OR VIBRATIONS	3/16"	400	800
	1/4"	400	800
	5/16"	325	700
	3/8"	225	500
	1/2"	150	375
	5/8"		300
SEVERE VIBRATIONS OR SHOCK	3/16"	300	600
	1/4"	300	600
	5/16"	225	500
	3/8"	175	400
	1/2"	100	250
	5/8"		100

Sleeve Position



Recommended Size of Bell

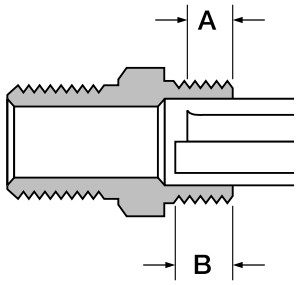
TUBE O.D.	BELL DIA. C
1/8"	.190-.160
3/16"	.255-.225
1/4"	.318-.288
5/16"	.381-.351
3/8"	.444-.414
1/2"	.569-.539
5/8"	.694-.664
3/4"	.819-.789
7/8"	.944-.914



Tube Length Calculator

This table shows distance tube extends beyond face of Vibra-Lok fitting body on installation with bell on tubing and without bell on tubing.

O.D. of TUBE	A With BELL	B Without BELL
1/8"	3/16"	3/16"
3/16"	3/16"	7/32"
1/4"	3/16"	1/4"
5/16"	3/16"	1/4"
3/8"	3/16"	1/4"
1/2"	3/16"	11/32"
5/8"	3/16"	Tubing
3/4"	3/16"	should
7/8"	1/4"	be belled



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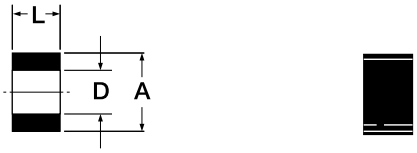
Parker Brass Products Division
Otsego, Michigan

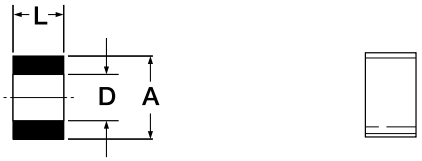
Sleeve 60VL

PART NO.	TUBE SIZE	A	D	L
60VL-2	1/8	.306	.100	.20
60VL-3	3/16	.359	.156	.20
60VL-4	1/4	.422	.219	.21
60VL-5	5/16	.484	.281	.24
60VL-6	3/8	.547	.344	.25
60VL-8	1/2	.688	.469	.36
60VL-10	5/8	.875	.594	.48
60VL-12	3/4	1.000	.720	.59



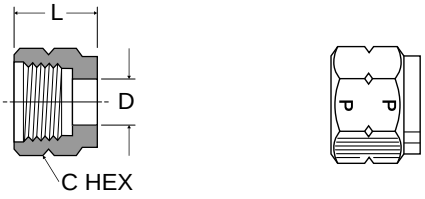
Sleeve (Fluorocarbon) 60VLV

PART NO.	TUBE SIZE	A	D	L
60VLV-3	3/16	.359	.156	.20
60VLV-4	1/4	.422	.219	.21
60VLV-5	5/16	.484	.281	.24
60VLV-6	3/8	.547	.344	.25
60VLV-8	1/2	.688	.469	.36
60VLV-10	5/8	.875	.594	.48
60VLV-12	3/4	1.000	.720	.59



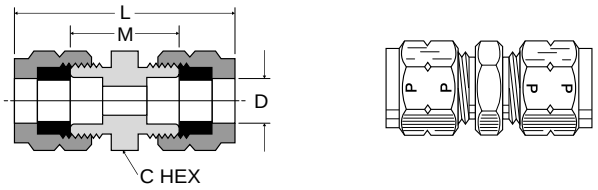
Nut 61VL

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
61VL-2	1/8	3/8-24	7/16	.156	.44
61VL-3	3/16	7/16-24	1/2	.218	.47
61VL-4	1/4	1/2-24	9/16	.281	.50
61VL-5	5/16	9/16-24	5/8	.344	.53
61VL-6	3/8	5/8-24	3/4	.406	.53
61VL-8	1/2	13/16-18	15/16	.531	.67
61VL-10	5/8	1-18	1-1/8	.656	.88
61VL-12	3/4	1-1/8-18	1-1/4	.781	.98



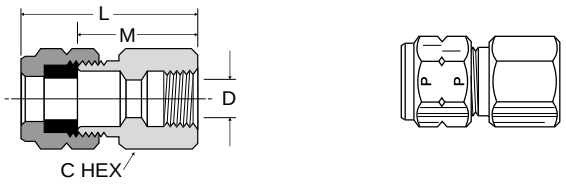
Union 62VL

PART NO.	TUBE SIZE	C HEX	L	M	FLOW DIA. D
62VL-4	1/4	9/16	1.39	.77	.188
62VL-5	5/16	5/8	1.49	.81	.250
62VL-6	3/8	11/16	1.49	.80	.312
62VL-8	1/2	7/8	1.90	.94	.437



Female Connector 66VL

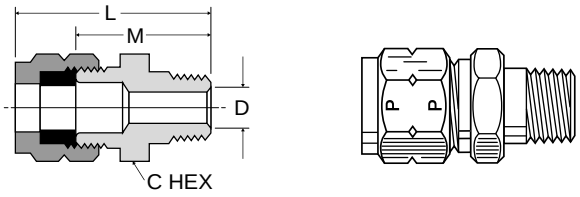
PART NO.	TUBE SIZE	PIPE THREAD	C HEX	L	M	FLOW DIA.D
66VL-4-2	1/4	1/8	9/16	1.09	.78	.188
66VL-5-4	5/16	1/4	11/16	1.32	.97	.250



Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

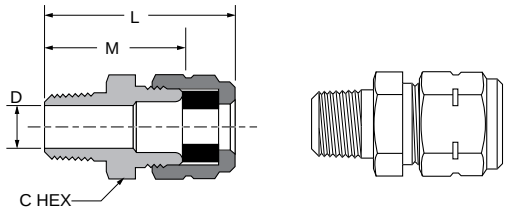
Male Connector 68VL

PART NO.	TUBE SIZE	PIPE THREAD	C HEX	L	M	FLOW DIA.D
68VL-2-2	1/8	1/8	7/16	1.12	.81	.093
68VL-3-2	3/16	1/8	1/2	1.10	.81	.125
68VL-4-2	1/4	1/8	9/16	1.15	.84	.188
68VL-4-4	1/4	1/4	9/16	1.34	1.03	.188
68VL-5-4	5/16	1/4	5/8	1.41	1.06	.250
68VL-6-2	3/8	1/8	11/16	1.22	.87	.235
68VL-6-4	3/8	1/4	11/16	1.41	1.06	.312
68VL-6-6	3/8	3/8	11/16	1.41	1.06	.312
68VL-8-6	1/2	3/8	7/8	1.64	1.16	.406
68VL-8-8	1/2	1/2	7/8	1.64	1.35	.406
68VL-10-8	5/8	1/2	1-1/16	2.10	1.44	.560
68VL-12-8	3/4	1/2	1-3/16	2.26	1.50	.530
68VL-12-12	3/4	3/4	1-3/16	2.26	1.50	.688



Straight Through Tank Fitting 682VL

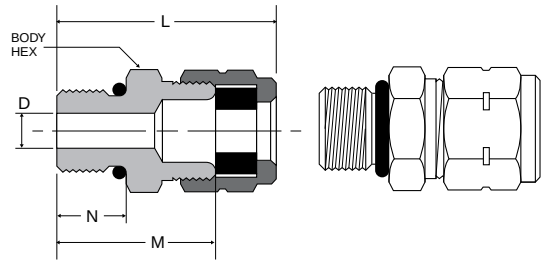
PART NO.	TUBE SIZE	PIPE THREAD	C HEX	L	M	FLOW DIA.D
682VL-4-2	1/4	1/8	9/16	1.15	.84	.265
682VL-4-4	1/4	1/4	9/16	1.34	1.03	.265
682VL-5-4	5/16	1/4	5/8	1.41	1.06	.328
682VL-6-6	3/8	3/8	11/16	1.41	1.06	.406



Male Connector 685VLV

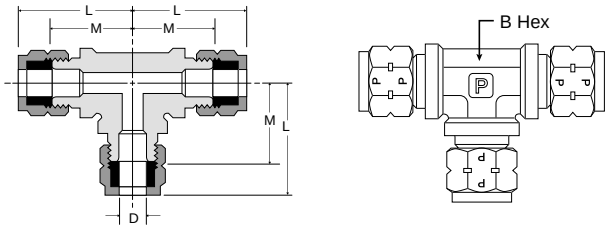
PART NO.	TUBE SIZE	STRAIGHT THREAD	BODY HEX	L	M	N	D
685VLV-4-4	1/4	7/16-20	9/16	1.14	.83	.36	.18
685VLV-5-4	5/16	7/16-20	5/8	1.18	.83	.36	.18
685VLV-6-4	3/8	7/16-20	11/16	1.18	.83	.36	.18
685VLV-6-6	3/8	9/16-18	11/16	1.25	.90	.39	.30
685VLV-8-8	1/2	3/4-16	7/8	1.52	1.04	.44	.39
685VLV-10-10	5/8	7/8-14	1 1/16	1.84	1.20	.50	.50
685VLV-12-12	3/4	1 1/16-12	1 1/4	2.10	1.34	.59	.62

Note: Fluorocarbon seal & o-ring standard



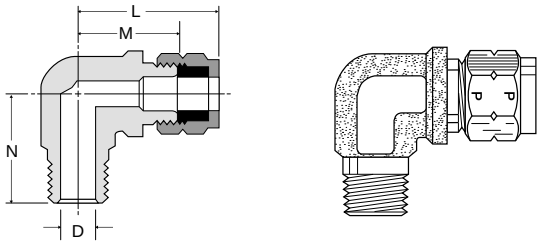
Union Tee 164VL

PART NO.	TUBE SIZE	B HEX	L	M	FLOW DIA. D
164VL-3	3/16	3/8	.98	.69	.160
164VL-4	1/4	1/2	1.06	.75	.190
164VL-5	5/16	15/32	1.22	.88	.250
164VL-8	1/2	13/16	1.64	1.16	.406



Male Elbow 169VL

PART NO.	TUBE SIZE	PIPE THREAD	L	M	N	FLOW DIA.D
169VL-3-2	3/16	1/8	.98	.69	.75	.156
169VL-4-2	1/4	1/8	1.00	.69	.78	.188
169VL-4-4	1/4	1/4	1.16	.84	1.00	.188
169VL-5-4	5/16	1/4	1.16	.81	1.00	.252
169VL-6-2	3/8	1/8	1.19	.84	.91	.235
169VL-6-4	3/8	1/4	1.19	.84	1.06	.312
169VL-6-6	3/8	3/8	1.29	.94	1.13	.312
169VL-8-6	1/2	3/8	1.48	1.00	1.06	.406
169VL-8-8	1/2	1/2	1.54	1.06	1.44	.406
169VL-10-8	5/8	1/2	1.92	1.28	1.47	.565



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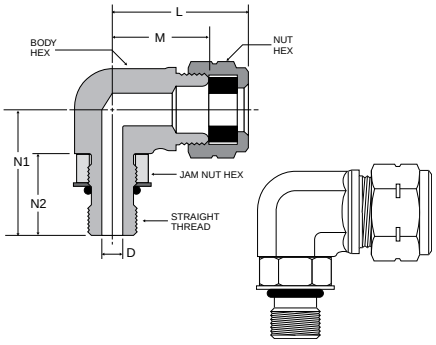
Otsego, Michigan

Male Elbow 1695VLV

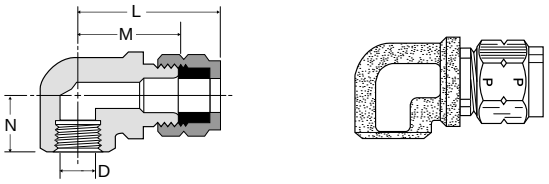
PART NO.	TUBE SIZE	STRAIGHT THREAD	NUT HEX	BODY HEX	JAM NUT HEX	L	M	N1	N2	D
1695VLV-4-4	1/4	7/16-20	9/16	9/16	9/16	1.15	.84	1.07	.71	.18
1695VLV-5-4	5/16	7/16-20	5/8	9/16	9/16	1.16	.81	1.07	.71	.18
1695VLV-6-4	3/8	7/16-20	3/4	5/8	9/16	1.19	.84	1.10	.71	.18
1695VLV-6-6	3/8	9/16-18	3/4	5/8	11/16	1.29	.94	1.17	.78	.30
1695VLV-8-8	1/2	3/4-16	15/16	3/4	7/8	1.54	1.06	1.44	.89	.39
1695VLV-10-10	5/8	7/8-14	1 1/8	1.00	1.00	1.92	1.28	1.68	1.03	.50
1695VLV-12-12	3/4	1 1/16-12	1 1/4	1.00	1 1/4	2.04	1.28	1.82	1.17	.62

Note: Fluorocarbon seal & o-ring standard



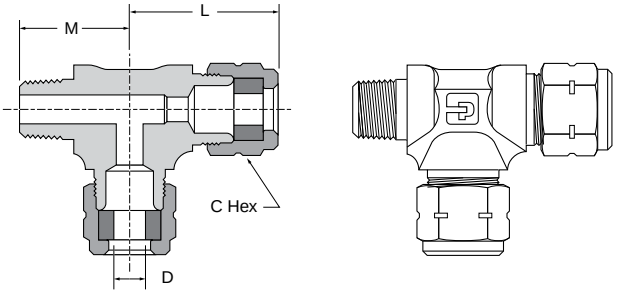
Female Elbow 170VL

PART NO.	TUBE SIZE	PIPE THREAD	L	M	N	FLOW DIA.D
170VL-4-2	1/4	1/8	.96	.65	.50	.188
170VL-5-4	5/16	1/4	1.16	.81	.70	.250



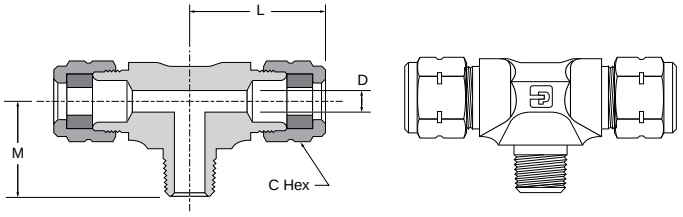
Male Run Tee 171VL

PART NO.	TUBE SIZE	PIPE THREAD	C HEX	L	M	FLOW DIA.D
171VL-4-2	1/4	1/8	9/16	1.03	.76	.188
171VL-4-4	1/4	1/4	9/16	1.12	1.03	.188



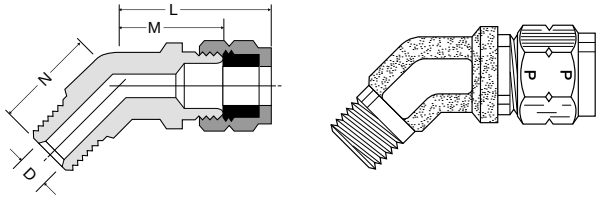
Male Run Tee 172VL

PART NO.	TUBE SIZE	PIPE THREAD	C HEX	L	M	FLOW DIA.D
172VL-4-2	1/4	1/8	9/16	1.06	.75	.188



45° Elbow 179VL

PART NO.	TUBE SIZE	PIPE THREAD	L	M	N	FLOW DIA.D
179VL-4-2	1/4	1/8	1.06	.75	.69	.188
179VL-6-4	3/8	1/4	1.07	.72	.84	.315



Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Push to Connect Transportation

Prestomatic

- Meets D.O.T. FMVSS 571.106
- Meets SAE J2494
- Stainless Steel Tube support

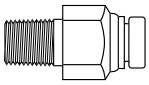
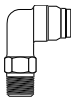
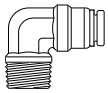
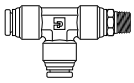
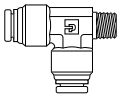
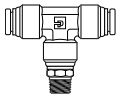
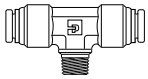
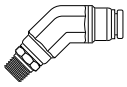
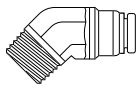
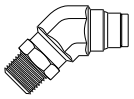
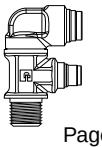
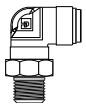
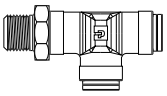
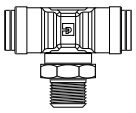
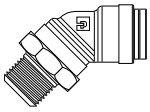
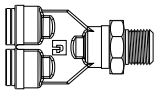
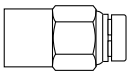
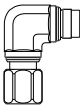
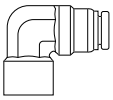
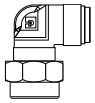
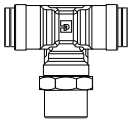
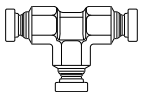
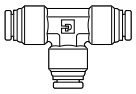
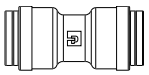
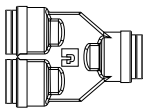
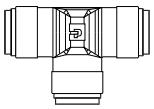
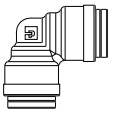
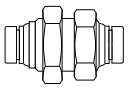
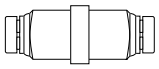
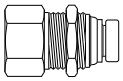
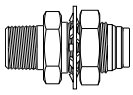
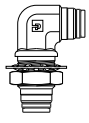
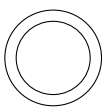
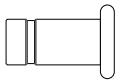
PTC

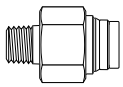
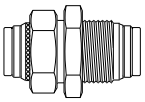
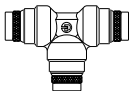
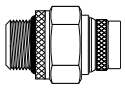
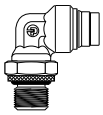
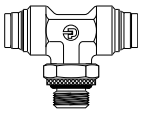
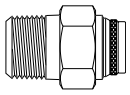
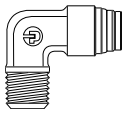
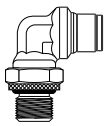
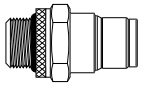
- Meets D.O.T. FMVSS 571.106
- Meets SAE J2494 – 3
- Composite Light Weight Bodies
- Brass componentry

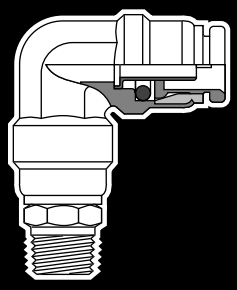
Metric Prestomatic

- Sizes 6mm and above Meets DIN 74324. Product only meets FMVSS 571.106 when used with SAE J844 metric tubing. If product is used with DIN tubing, it will not meet the FMVSS 571.106 performance requirements.
- Meets DOT FMVSS 571.106 when used with SAE J844 tubing
- Use with DIN 73378 virgin nylon or SAE J844 Tubing
- Universal Stud Design and Brass Body

The World Standard

Tube to Male NPT	**68PMT** Male Connector  Page I8	**169PMNS** Male Elbow  Page I9	**169PMT** Male Elbow Swivel  Page I9	**169PMTL** Male Elbow Long  Page I10	**169PMTR** Male Elbow Swivel 90°  Page I9	**169PMTNS** Male Elbow  Page I10
	171PMT Run Tee Swivel  Page I11	**171PMTNS** Male Run Tee  Page I11	**172PMT** Branch Tee Swivel  Page I12	**172PMTNS** Branch Tee  Page I12	**179PMT** 45° Elbow Swivel  Page I12	**179PMTNS** 45° Elbow  Page I13	**179PMTR** Male Elbow Swivel 45°  Page I12
	189PMTR Dual Port Elbow  Page I13	**369PTC** Male Elbow Swivel 90°  Page I15	**371PTC** Male Run Tee Swivel  Page I16	**372PTC** Male Branch Tee Swivel  Page I17	**379 PTC** Male Elbow Swivel 45°  Page I17	**368PTC** Union Y  Page I16	
Tube to Female NPT	**66PMT** Female Connector  Page I7	**170PMT** Female Elbow Swivel  Page I11	**170PMTNS** Female Elbow Swivel  Page I11	**370PTC** Female Elbow Swivel 90°  Page I15	**377PTC** Branch Tee  Page I17		
Tube to Tube		**62PMT** Union  Page I7	**164PM** Union Tee  Page I8	**164PMT** Union Tee  Page I8	**165PMT** Union Elbow  Page I9	**32PTC** Union  Page I15
	362PTC Union Y  Page I15	**364PTC** Union Tee  Page I16	**365PTC** Union Elbow  Page I16				
Bulkhead Unions	**62PMTBH** Bulkhead Union  Page I7	**62PMTBHR** Bulkhead Union  Page I6	**66PMTBH** Bulkhead Female  Page I7	**68PMTBH** Bulkhead Male  Page I8	**165PMTBH** Bulkhead Elbow  Page I9	**169PMTBH** Bulkhead Male Elbow  Page I10
Auxiliary	**ERHD** External Retainer  Page I6	**ES** External Seal  Page I6	**639PM/639PMT** Plug  Page I13				

Metric Tube to Male NPT	**F2PMTB** Male Connector  Page I19	**C2PMTB** Male Elbow  Page I20	**Metric Tube to Metric Tube**	**HPMTB** Metric Union  Page I19	**WPMTB** Bulkhead Union  Page I19	**JPMTB** Metric Union Tee  Page I20
Metric Tube to Metric Straight Thread	**F8UPMTB** Male Connector  Page I20	**C8UPMTB** Male Elbow  Page I21	**S8UPMTB** Branch Tee  Page I21	**V8UPMTB** 45° Male Elbow  Page I21		
Metric Tube to Male BSPT	**F3PMTB** Male Connector  Page I19	**C3PMTB** Male Elbow  Page I20				
Tube to Metric Thread	**169PMTNS-X-M** Male Elbow  Page I10	**68PMT-X-M** Male Connector  Page I8				

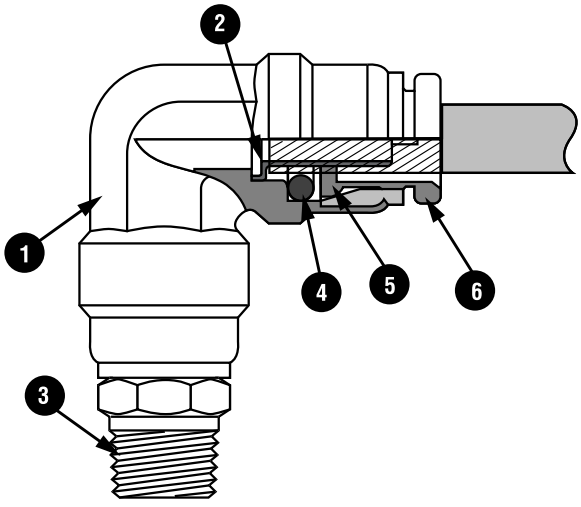


Prestomatic Air Brake Push-In Fittings

Advantages
Patented design of sizes 5/32" and above meet SAE J2494 and D.O.T. FMVSS 571.106 air brake performance specifications.. No special tools are needed to assemble. Just bottom the tubing in the fitting body for a positive seal. Stainless steel tube support in sizes 1/4" and above assures maximum flow and performance requirements of SAE J2494-3. Any Prestomatic fitting without a tube support (PM designation) is designed for use in pressure protected air accessory lines that are isolated from the air brake system

Application
Use with Parker Parflex SAE J844 type A & B nylon tubing. Designed for all D.O.T. truck and trailer applications. Consult the factory with any questions regarding special product applications. Prior to use, all applications should be carefully tested through the range of conditions which may be encountered.

Features
1. All brass body.
2. Stainless steel tube support assures maximum flow and performance characteristics.
3. Elbows and tees are available in positionable or rigid dryseal pipe threads. Positioning feature is designed for installation and alignment purposes only and should not be used as a swivel.
4. Lubricated O-Ring Seal (Buna N) insures a quick, easy and positive seal.
5. Innovative Collet design insures positive grip on tubing.
6. Release Button offers quick and easy disconnections.



Technical Data
- Working pressure from vacuum to 250 psi.
- Working temperature from -40° F to +200°F (Note: see tubing manufacturer's recommendations for pressure and temperature limitations).
- Buna N (Nitrile) O-Rings.

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 of fitting. The Prestomatic series has a tube support and is designated with a "PMT" suffix.

Example:

68	PMT	6	4
Male Connector			
	Air Brake Push-In Fitting		
		3/8" (6/16) Tube Size	
			1/4" (4/16) Pipe Thread

Special Fittings
Fitting configurations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry. Price and delivery for non-stock items furnished on request for specified quantities.

Pricing
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

† U.S. Patent No. 5,683,120

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Assembly Instructions

1. Cut tubing squarely–maximum of 15° angle allowable.

- Use of Parker tube cutter PTC-001 is recommended.

2. Check that port or mating part is clean and free of debris.

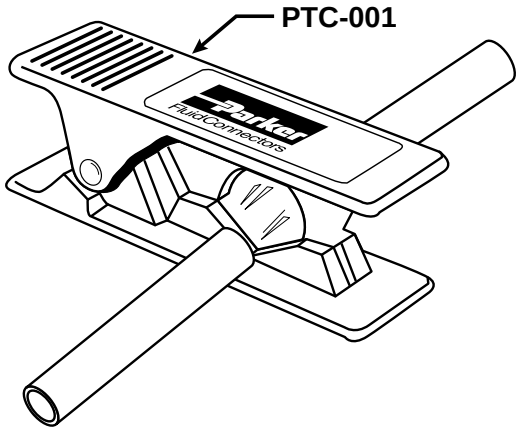
3. Insert tubing into fitting until it bottoms.

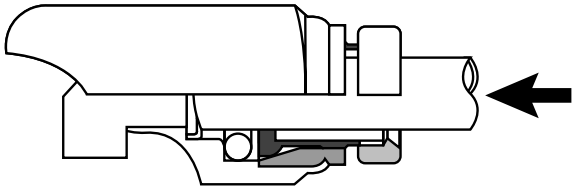
- Push twice to verify that tubing is inserted past collet and O-Ring.

4. Pull on tubing to verify it is fully inserted.

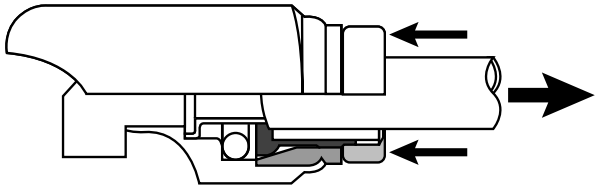
5. To disassemble, simply press release button, hold against body, and pull tubing out of fitting.

Note: in order to pass hot pull requirements of SAE FMVSS 571.106 and SAE J2494-3 a tube support must be present in the end of the fitting before final fitting assembly.





Insert tubing until it bottoms



Depress button to remove tubing

I

† U.S. Patent No. 5,683,120

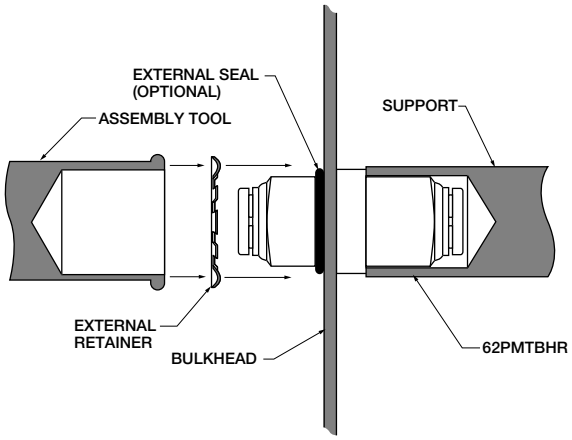
Prestomatic† Retaining Ring Bulkhead Unions

Prestomatic† retaining ring bulkhead unions feature a unique design that provides the user with an economical method to install and assemble a union connection through a bulkhead.

The retaining ring bulkhead unions feature a smaller envelope size than standard bulkhead union connectors and do not require a wrench to mount or assemble in cramped areas.

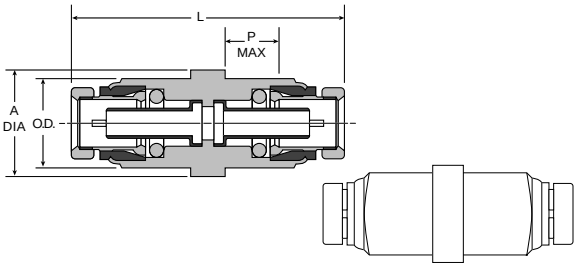
The external seal feature provides a moisture barrier and can also prevent external contamination from entering into an enclosed area.

To install, simply support the bulkhead union from behind and apply the external seal. Then push the external retainer against the external seal with an assembly tool and you have a reliable bulkhead connection in a confined area.



Retaining Ring Bulkhead 62PMTBHR

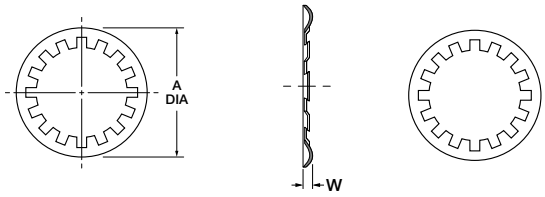
PART NO.	TUBE SIZE	O.D.	REC. HOLE SIZE	L	P MAX	A DIA
62PMTBHR-4	1/4	.500	.512	1.53	.26	.625
62PMTBHR-6	3/8	.750	.762	1.92	.36	.875
62PMTBHR-8	1/2	.875	.887	2.15	.43	1.000
62PMTBHR-10	5/8	1.000	1.012	2.54	.62	1.250



External Retainer ERHD*

PART NUMBER	TUBE SIZE	BULKHEAD UNION O.D.	A DIA	W
ERHD-50	1/4	.500	.83	.05
ERHD-75	3/8	.750	1.08	.05
ERHD-87	1/2	.875	1.20	.05
ERHD-100	5/8	1.000	1.33	.05

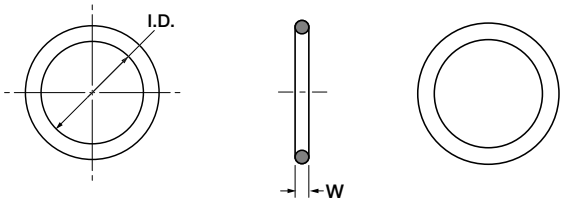
*Material Carbon Spring Steel



External Seal ES*

PART NUMBER	TUBE SIZE	BULKHEAD UNION O.D.	I.D.	W
ES-50	1/4	.500	.489	.07
ES-75	3/8	.750	.739	.07
ES-87	1/2	.875	.864	.07

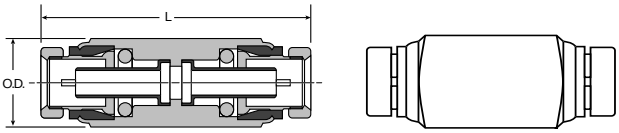
*Material is Nitrite (Buna N), 70 Durometer



† U.S. Patent No. 5,683,120

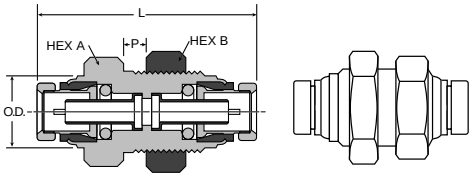
Union 62PMT

PART NO.	TUBE SIZE	L	O.D.
62PMT-5/32	5/32	1.45	.38
62PMT-4	1/4	1.48	.50
62PMT-4-2	1/4-1/8	1.48	.50
62PMT-6	3/8	1.87	.75
62PMT-6-4	3/8-1/4	1.68	.75
62PMT-8	1/2	2.03	.88
62PMT-10	5/8	2.42	1.00



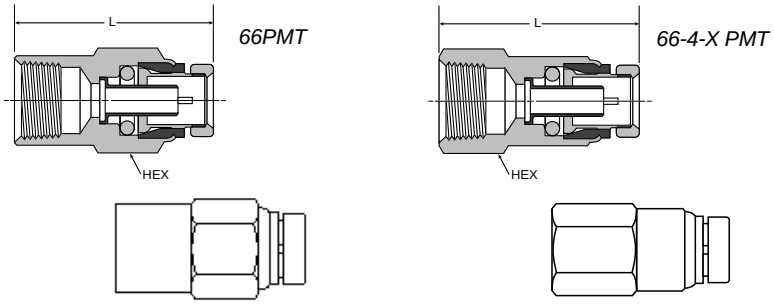
Bulkhead Union 62PMTBH

PART NO.	TUBE SIZE	O.D.	L	P MAX	HEX A	HEX B	BULKHEAD HOLE DIA.
62PMTBH-4	1/4	.56	1.69	.25	11/16	3/4	9/16
62PMTBH-6	3/8	.88	1.93	.44	1-1/16	1-1/16	7/8
62PMTBH-8	1/2	1.00	2.02	.58	1-1/4	1-1/4	1
62PMTBH-10	5/8	1.12	2.92	.81	1-1/4	1-3/8	1-1/8



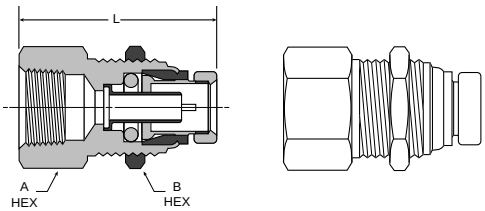
Female Connector 66PMT

PART NO.	TUBE SIZE	PIPE THREAD	L	HEX
66PMT-4-2	1/4	1/8	1.22	9/16
66PMT-4-4	1/4	1/4	1.43	11/16
66PMT-6-2	3/8	1/8	1.37	3/4
66PMT-6-4	3/8	1/4	1.58	3/4
66PMT-6-6	3/8	3/8	1.62	13/16
66PMT-8-4	1/2	1/4	1.69	7/8
66PMT-8-6	1/2	3/8	1.68	7/8
66PMT-8-8	1/2	1/2	1.91	1



Bulkhead Female Connector 66PMTBH

PART NO.	TUBE SIZE	PIPE THREAD	L	HEX A	HEX B	BULKHEAD HOLE DIA.
66PMTBH-4-4	1/4	1/4	1.62	11/16	3/4	9/16
66PMTBH-6-6	3/8	3/8	1.87	1.06	1.06	7/8
66PMTBH-8-8	1/2	1/2	2.02	1-1/4	1-1/4	1

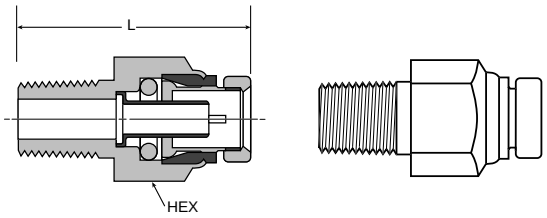


† U.S. Patent No. 5,683,120

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

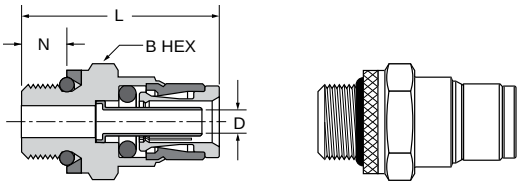
Male Connector 68PMT

PART NO.	TUBE SIZE	PIPE THREAD	L	HEX
68PMT -5/32-1	5/32	1/16	.85	3/8
68PMT-5/32-2	5/32	1/8	.89	7/16
68PMT-4-2	1/4	1/8	1.06	1/2
68PMT-4-4	1/4	1/4	1.19	9/16
68PMT-4-6	1/4	3/8	1.27	3/4
68PMT-6-2	3/8	1/8	1.37	3/4
68PMT-6-4	3/8	1/4	1.43	3/4
68PMT-6-6	3/8	3/8	1.33	3/4
68PMT-6-8	3/8	1/2	1.38	7/8
68PMT-8-4	1/2	1/4	1.72	7/8
68PMT-8-6	1/2	3/8	1.52	7/8
68PMT-8-8	1/2	1/2	1.44	7/8
68PMT-10-6	5/8	3/8	1.88	1
68PMT-10-8	5/8	1/2	1.88	1
68PMT-12-8	3/4	1/2	2.03	1 3/16
68PMT-12-12	3/4	3/4	2.03	1 1/8



Male Connector to Metric Adapter 68PMT-X-M

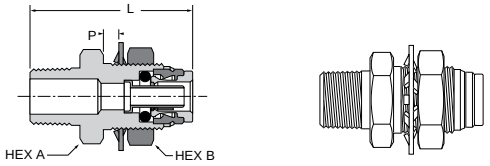
PART NO.	TUBE SIZE	METRIC THREAD	L	B HEX	N
68PMT-4-M12	1/4	M12X1.5	1.19	11/16	.29
68PMT-4-M16	1/4	M16X1.5	1.29	7/8	.39
68PMT-6-M12	3/8	M12X1.5	1.40	3/4	.29
68PMT-6-M16	3/8	M16X1.5	1.35	7/8	.39
68PMT-6-M22	3/8	M22X1.5	1.23	1 1/16	.40
68PMT-8-M12	1/2	M12X1.5	1.45	7/8	.29
68PMT-8-M16	1/2	M16X1.5	1.52	7/8	.39
68PMT-8-M22	1/2	M22X1.5	1.31	1 1/16	.37
68PMT-10-M16	5/8	M16X1.5	1.78	1	.39



I

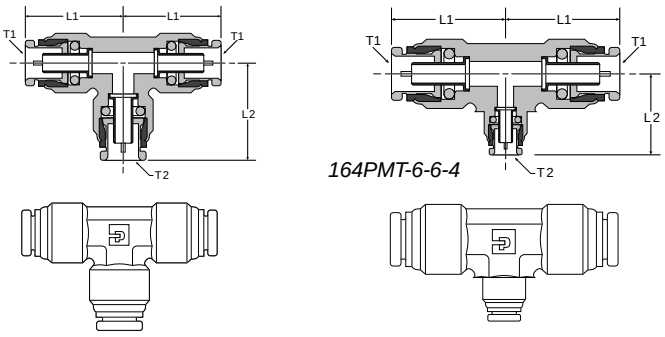
Bulkhead Male Connector 68PMTBH

PART NO.	TUBE SIZE	PIPE THREAD	L	P MAX	HEX A	HEX B	BULKHEAD HOLE DIA.
68PMTBH-6-8	3/8	1/2	2.37	.33	1-1/4	1-1/4	1
68PMTBH-8-8	1/2	1/2	2.38	.33	1-1/4	1-1/4	1



Union Tee 164PMT

PART NO.	TUBE 1 SIZE	TUBE 2 SIZE	L1	L2
164PMT-4	1/4	1/4	.85	.85
164PMT-6	3/8	3/8	1.21	1.21
164PMT-6-6-4	3/8	1/4	1.21	.93
164PMT-8	1/2	1/2	1.27	1.27
164PMT-10	5/8	5/8	1.63	1.62

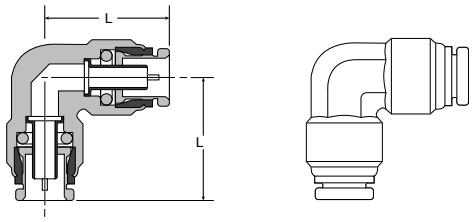


† U.S. Patent No. 5,683,120

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

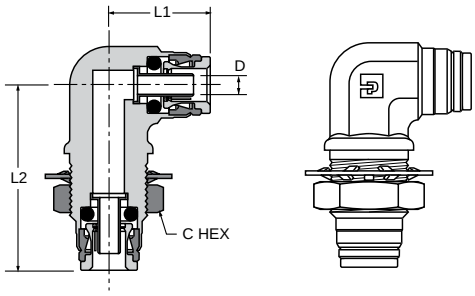
Union Elbow 165PMT

PART NO.	TUBE SIZE	L
165PMT-4	1/4	.85
165PMT-6	3/8	1.11
165PMT-8	1/2	1.24
165PMT-10	5/8	1.57



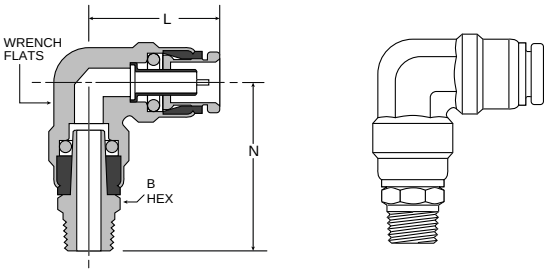
Union Bulkhead Elbow 165PMTBH

PART NO.	TUBE SIZE	L1	L2	C HEX	FLOW DIA. D	BULKHEAD HOLE DIA.
165PMTBH-8	1/2	1.29	2.45	1 1/4	.34	1



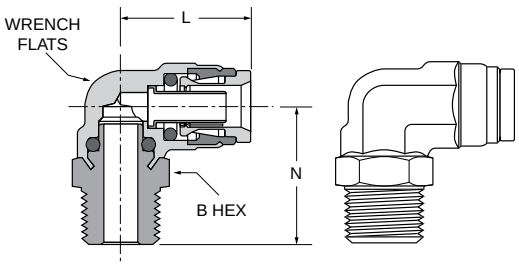
Male Elbow 90° 169PMT

PART NO.	TUBE SIZE	PIPE THREAD	L	N	WRENCH FLATS	B HEX
169PMT-4-2	1/4	1/8	.84	1.21	13/32	7/16
169PMT-4-4	1/4	1/4	.84	1.43	13/32	9/16
169PMT-4-6	1/4	3/8	.84	1.43	13/32	11/16
169PMT-6-2	3/8	1/8	1.11	1.41	9/16	9/16
169PMT-6-4	3/8	1/4	1.11	1.58	9/16	9/16
169PMT-6-6	3/8	3/8	1.11	1.58	9/16	11/16
169PMT-6-8	3/8	1/2	1.11	1.79	9/16	7/8
169PMT-8-4	1/2	1/4	1.27	1.73	11/16	5/8
169PMT-8-6	1/2	3/8	1.27	1.81	11/16	3/4
169PMT-8-8	1/2	1/2	1.27	1.96	11/16	7/8
169PMT-10-6	5/8	3/8	1.53	2.03	7/8	3/4
169PMT-10-8	5/8	1/2	1.53	2.18	7/8	7/8



Male Elbow Positional 90° 169PMTR

PART NO.	TUBE SIZE	PIPE THREAD	B HEX	L	N	WRENCH FLATS
169PMTR-4-4	1/4	1/4	9/16	0.84	1.13	1/2
169PMTR-6-6	3/8	3/8	3/4	1.12	1.19	9/16
169PMTR-10-8	5/8	1/2	7/8	1.54	1.50	7/8

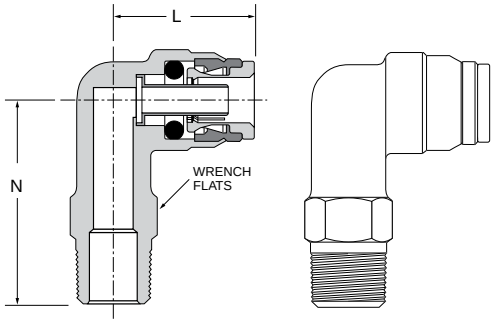


† U.S. Patent No. 5,683,120

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

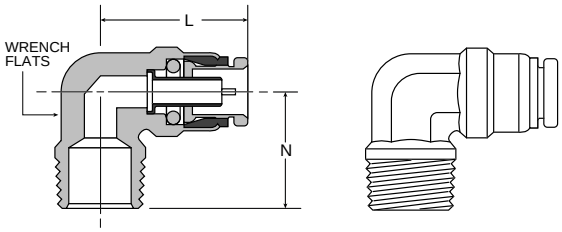
Male Elbow Long Rigid 90° 169PMTL

PART NO.	TUBE SIZE	PIPE THREAD	L	N	WRENCH FLATS
169PMTL-6-4	3/8	1/4	1.06	1.63	9/16
169PMTL-6-8	3/8	1/2	1.19	2.50	7/8
169PMTL-6-6	3/8	3/8	1.19	2.50	7/8
169PMTL-8-8	1/2	1/2	1.22	2.50	7/8
169PMTL-10-8	5/8	1/2	1.46	2.50	7/8



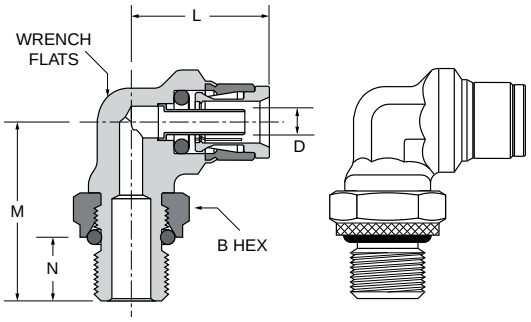
Male Elbow Rigid 90° 169PMTNS/269PMT

PART NO.	TUBE SIZE	PIPE THREAD	L	N	WRENCH FLATS
269PMT-5/32-1	5/32	1/16	.85	.66	7/16
269PMT-5/32-2	5/32	1/8	.85	.66	7/16
169PMTNS-4-2	1/4	1/8	.84	.72	1/2
169PMTNS-4-4	1/4	1/4	.84	.90	1/2
169PMTNS-4-6	1/4	3/8	.84	1.06	1/2
169PMTNS-6-2	3/8	1/8	1.05	.75	9/16
169PMTNS-6-4	3/8	1/4	1.05	.94	9/16
169PMTNS-6-6	3/8	3/8	1.05	.94	3/4
169PMTNS-6-8	3/8	1/2	1.12	1.26	11/16
169PMTNS-8-4	1/2	1/4	1.17	1.06	11/16
169PMTNS-8-6	1/2	3/8	1.22	1.06	11/16
169PMTNS-8-8	1/2	1/2	1.22	1.26	11/16
169PMTNS-10-6	5/8	3/8	1.46	1.11	7/8
169PMTNS-10-8	5/8	1/2	1.46	1.32	7/8
169PMTNS-12-8	3/4	1/2	1.81	1.44	1



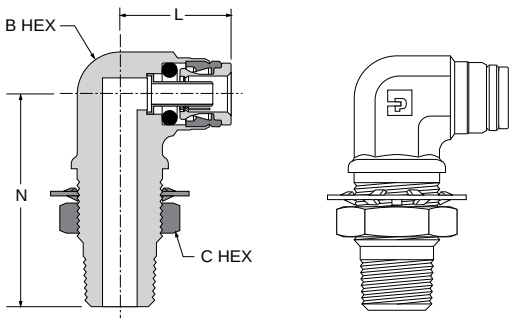
Male Elbow to Metric Adjustable 169PMTNS-X-M

PART NO.	TUBE SIZE	METRIC THREAD	WRENCH FLATS (MM)	B HEX (MM)	L	M	N
169PMTNS-4-MI2	1/4	M12X1.5	10	17	.84	1.11	.37
169PMTNS-4-M16	1/4	M16X1.5	11	24	.96	1.27	.41
169PMTNS-4-M22	1/4	M22X1.5	19	30	1.09	1.53	.41
169PMTNS-6-M12	3/8	M12X1.5	16	17	1.10	1.15	.66
169PMTNS-6-M16	3/8	M16X1.5	19	24	1.23	1.27	.41
169PMTNS-8-M12	1/2	M12X1.5	16	17	1.21	1.31	.37
169PMTNS-8-M16	1/2	M16X1.5	16	24	1.26	1.34	.41
169PMTNS-8-M22	1/2	M22X1.5	19	30	1.26	1.59	.41
169PMTNS-12-M22	3/4	M22X1.5	27	30	1.77	1.59	.41



Male Elbow Bulkhead 169PMTBH

PART NO.	TUBE SIZE	PIPE THREAD	L	N	B HEX	C HEX	BULKHEAD HOLE DIA.
169PMTBH6-8	3/8	1/2	1.19	2.50	1-1/4	7/8	1
169PMTBH8-8	1/2	1/2	1.29	2.50	1-1/4	7/8	1

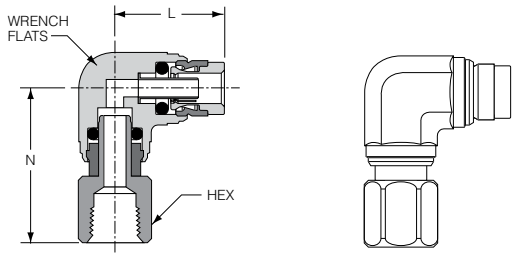


† U.S. Patent No. 5,683,120

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

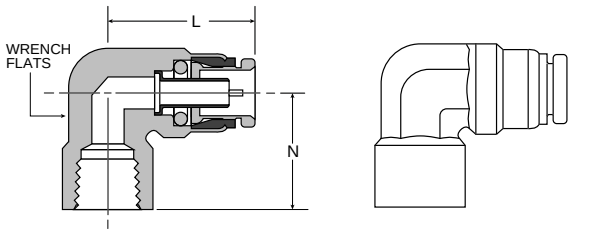
Female Elbow Swivel 90° 170PMT

PART NO.	TUBE SIZE	PIPE THREAD	L	N	HEX	WRENCH FLATS
170PMT-4-2	1/4	1/8-27	.84	1.18	1/2	1/2



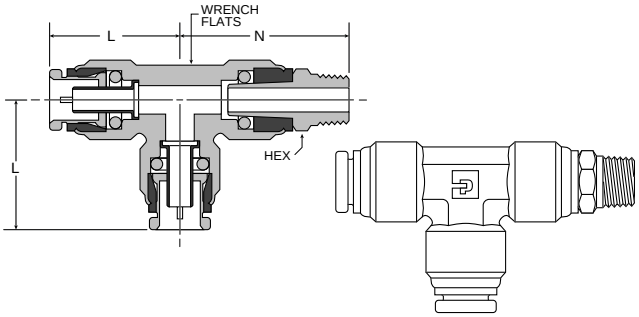
Female Elbow Rigid 90° 170PMTNS

PART NO.	TUBE SIZE	PIPE THREAD	L	N	WRENCH FLATS
170PMTNS-4-2	1/4	1/8	.84	.56	11/16
170PMTNS-4-4	1/4	1/4	1.00	.67	11/16
170PMTNS-6-2	3/8	1/8	1.12	.64	9/16
170PMTNS-6-4	3/8	1/4	1.25	1.00	11/16
170PMTNS-6-6	3/8	3/8	1.25	1.00	13/16
170PMTNS-8-4	1/2	1/4	1.25	.75	11/16
170PMTNS-8-6	1/2	3/8	1.32	.88	11/16
170PMTNS-8-8	1/2	1/2	1.70	.98	1



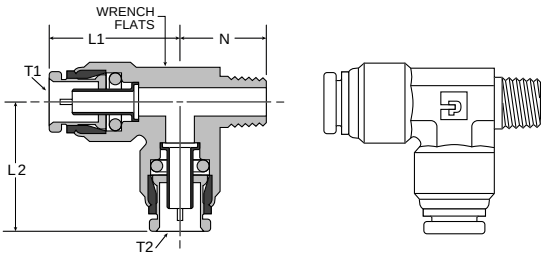
Male Run Tee Swivel 171PMT

PART NO.	TUBE SIZE	PIPE THREAD	L	N	HEX	WRENCH FLATS
171PMT-4-2	1/4	1/8	.85	1.25	7/16	1/2
171PMT-4-4	1/4	1/4	.85	1.48	9/16	1/2
171PMT-4-6	1/4	3/8	.85	1.43	11/16	1/2
171PMT-6-4	3/8	1/4	1.21	1.83	9/16	5/8
171PMT-6-6	3/8	3/8	1.21	1.83	11/16	5/8
171PMT-8-4	1/2	1/4	1.27	1.74	5/8	7/8
171PMT-8-6	1/2	3/8	1.27	1.83	3/4	7/8
171PMT-8-8	1/2	1/2	1.27	1.99	7/8	7/8



Male Run Tee Rigid 171PMTNS

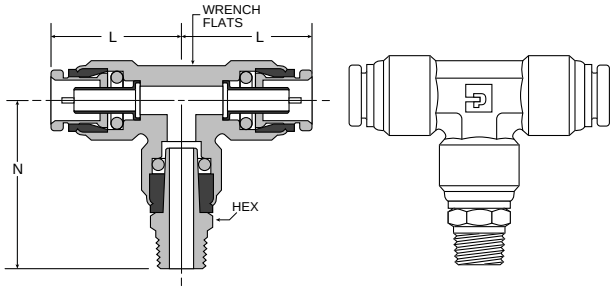
PART NO.	TUBE 1 SIZE	TUBE 2 SIZE	PIPE THREAD	L1	L2	N	WRENCH FLATS
171PMTNS-4-2	1/4	1/4	1/8	.91	.91	.77	15/32
171PMTNS-4-4	1/4	1/4	1/4	.91	.91	.94	15/32
171PMTNS-4-6-4	1/4	3/8	1/4	.93	1.21	.97	5/8
171PMTNS-6-4	3/8	3/8	1/4	1.21	1.21	.97	5/8
171PMTNS-6-4-4	3/8	1/4	1/4	1.21	.93	.97	5/8
171PMTNS-6-4-6	3/8	1/4	3/8	1.22	.97	.93	5/8
171PMTNS-6-6	3/8	3/8	3/8	1.21	1.21	.97	5/8
171PMTNS-6-8	3/8	3/8	1/2	1.17	1.17	1.26	5/8
171PMTNS-8-4	1/2	1/2	1/4	1.28	1.28	1.06	7/8



† U.S. Patent No. 5,683,120

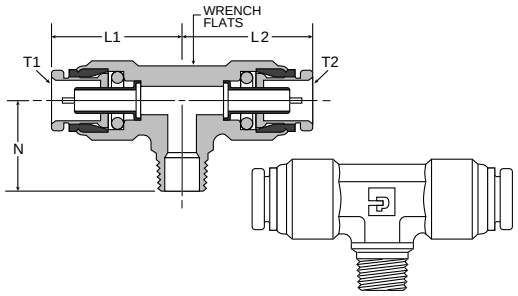
Male Branch Tee Swivel 172PMT

PART NO.	TUBE SIZE	PIPE THREAD	L	N	HEX	WRENCH FLATS
172PMT-4-2	1/4	1/8	.85	1.25	7/16	1/2
172PMT-4-4	1/4	1/4	.85	1.43	9/16	1/2
172PMT-6-2	3/8	1/8	1.22	1.66	9/16	5/8
172PMT-6-4	3/8	1/4	1.22	1.83	5/8	5/8
172PMT-6-6	3/8	3/8	1.22	1.83	3/4	5/8
172PMT-8-4	1/2	1/4	1.27	1.73	5/8	7/8
172PMT-8-6	1/2	3/8	1.27	1.79	3/4	7/8
172PMT-8-8	1/2	1/2	1.27	1.97	7/8	7/8



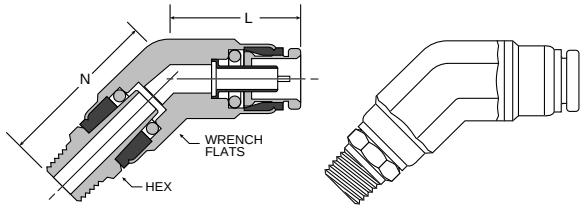
Male Branch Tee Rigid 172PMTNS

PART NO.	TUBE 1 SIZE	TUBE 2 SIZE	PIPE THREAD	L1	L2	N	WRENCH FLATS
172PMTNS-4-2	1/4	1/4	1/8	.91	.91	.78	1/2
172PMTNS-6-4	3/8	3/8	1/4	1.21	1.21	.97	5/8
172PMTNS-6-4-4	3/8	1/4	1/4	1.21	.93	.97	5/8
172PMTNS-6-6	3/8	3/8	3/8	1.21	1.21	.97	5/8
172PMTNS-6-8	3/8	3/8	1/2	1.17	1.17	1.26	7/8
172PMTNS-8-6	1/2	1/2	3/8	1.28	1.28	1.06	7/8
172PMTNS-8-6-8	1/2	3/8	1/2	1.25	1.25	1.25	7/8
172PMTNS-8-8	1/2	1/2	1/2	1.34	1.34	1.25	7/8



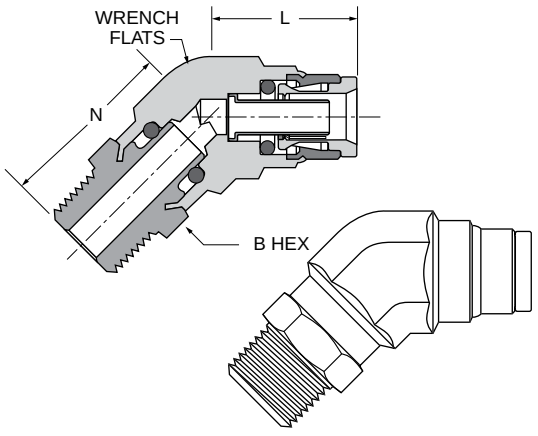
Male Elbow Swivel 45° 179PMT

PART NO.	TUBE SIZE	PIPE THREAD	L	N	HEX	WRENCH FLATS
179PMT-4-2	1/4	1/8	.79	1.16	7/16	9/16
179PMT-4-4	1/4	1/4	.89	1.46	9/16	9/16
179PMT-6-2	3/8	1/8	.99	1.44	5/8	3/4
179PMT-6-4	3/8	1/4	.99	1.61	5/8	3/4
179PMT-6-6	3/8	3/8	.99	1.61	5/8	3/4
179PMT-8-4	1/2	1/4	1.20	1.70	5/8	7/8
179PMT-8-6	1/2	3/8	1.20	1.78	3/4	7/8
179PMT-8-8	1/2	1/2	1.20	1.93	7/8	7/8



Male Elbow Positional Swivel 45° 179PMTR

PART NO.	TUBE SIZE	PIPE THREAD	B HEX	L	N	WRENCH FLATS
179PMTR-4-4	1/4	1/4	9/16	0.79	1.18	9/16
179PMTR-8-8	1/2	1/2	7/8	1.17	1.35	7/8

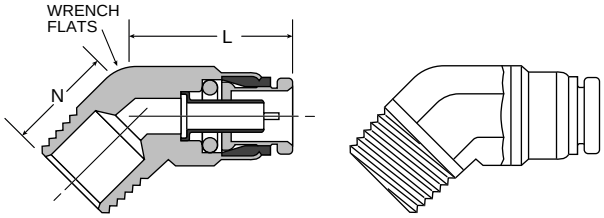


† U.S. Patent No. 5,683,120

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

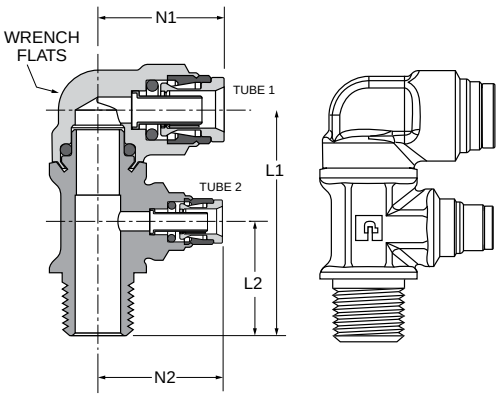
Male Elbow Rigid 45° 179PMTNS

PART NO.	TUBE SIZE	PIPE THREAD	L	N	WRENCH FLATS
179PMTNS-4-2	1/4	1/8	.80	.56	9/16
179PMTNS-4-4	1/4	1/4	.80	.75	9/16
179PMTNS-6-2	3/8	1/8	.99	.55	3/4
179PMTNS-6-4	3/8	1/4	.99	.73	3/4
179PMTNS-6-6	3/8	3/8	.99	.73	3/4
179PMTNS-8-4	1/2	1/4	1.28	.81	13/16
179PMTNS-8-6	1/2	3/8	1.28	.81	13/16
179PMTNS-8-8	1/2	1/2	1.28	1.06	13/16
179PMTNS-10-6	5/8	3/8	1.22	.88	7/8
179PMTNS-10-8	5/8	1/2	1.22	1.00	7/8
179PMTNS-12-8	3/4	1/2	1.41	1.25	1



Dual port 90 Male Elbow Positional 189PMTR

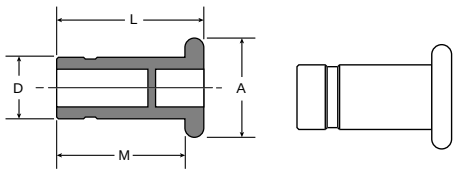
PART NO.	TUBE 1 SIZE	TUBE 2 SIZE	PIPE THREAD	L1	L2	N1	N2	WRENCH FLATS
189PMTR6-4-6	3/8	1/4	3/8	2.12	1.05	1.21	1.19	11/16
189PMTR6-6-4	3/8	3/8	1/4	2.06	.98	1.12	1.20	9/16
189PMTR6-6-6	3/8	3/8	3/8	2.06	.98	1.12	1.20	9/16
189PMTR10-4-6	5/8	1/4	3/8	2.18	1.05	1.54	1.19	7/8
189PMTR10-6-6	5/8	3/8	3/8	2.31	1.12	1.54	1.18	7/8



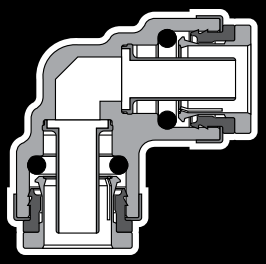
Push-To-Connect Fitting Plug 639PM/639PMT

PART NO.	TUBE SIZE	L	M	A	D
639PM-5/32BL	5/32	1.09	1.00	.39	.156
639PMT-4	1/4	1.14	.96	.48	.250
639PMT-6	3/8	1.33	1.15	.67	.375
639PMT-8	1/2	1.33	1.15	.81	.500

Specify color when ordering Black (BL) or Blue (BU), example 639PMT-4BU
Note: use appropriate PM/PMT style connection as determined by part number.



† U.S. Patent No. 5,683,120



PTC Composite Push-In Air Brake Fitting

Advantages
The design of the Parker PTC Composite Air Brake Fitting Complies with the performance requirements of D.O.T. FMVSS 571.106 and SAE J2494-3.

No special tools are needed to assemble. Just bottom the tubing in the fitting for a positive seal. Tube support design assures maximum flow. Brass componentry includes a shoulder on the collet for increased side load capabilities, contamination resistance features and tight internal tolerances for a close fit and smooth operation.

Application
Use with Parker Parflex SAE J844 type A & B nylon tubing. Designed for all D.O.T. truck and trailer applications. Consult the factory with any questions regarding special product applications. Prior to use, all applications should be carefully tested through the range of conditions which may be encountered.

Features
1. Composite body - Strong, lightweight, compact and impact resistant
2. Rigid tube support stays in place for ease of and proper assembly.
3. All threads are per SAE J476, with a substantial hex to facilitate wrenching operations.
4. Lubricated O-Ring seal (Buna N) insures a quick, easy and positive seal.
5. Innovative Collet design insures positive grip on tubing.
6. Release button offers quick and easy disconnections.
7. Composite body can be rotated after assembly to align shaped fittings for proper orientation.

Technical Data
- Working pressure from vacuum to 250 psi.
- Working temperature from -40° to +200°F (Note: see tubing manufacturer's recommendations for pressure and temperature limitations)
- Buna N (Nitrile) O-Rings

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 of fitting.

Example:

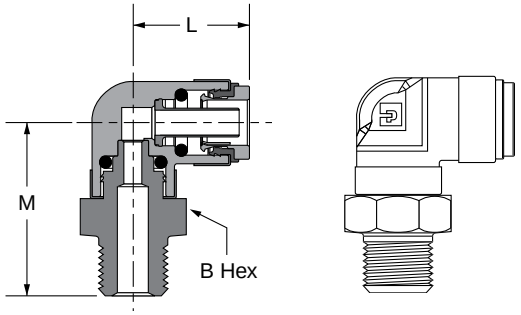
369	PTC	6	4
Male Elbow 90°			
	Composite Push-In Air Brake Fitting		
		3/8" (6/16) Tube Size	
			1/4" (4/16) Pipe Thread

* Thread sealant available upon request

Special Fittings
Fitting configurations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry. Price and delivery for non-stock items furnished on request for specified quantities.

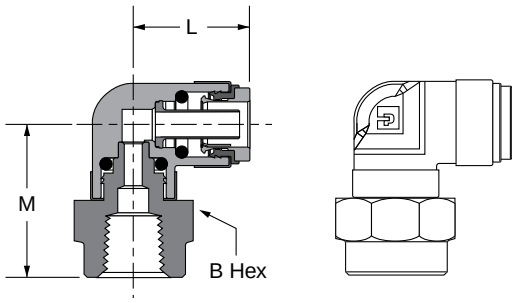
Male Elbow Swivel 90° 369PTC

PART NO.	TUBE SIZE	PIPE THREAD	B HEX	L	M
369PTC-4-2	1/4	1/8	9/16	.69	1.05
369PTC-4-4	1/4	1/4	9/16	.69	1.20
369PTC-4-6	1/4	3/8	3/4	.69	1.20
369PTC-6-2	3/8	1/8	3/4	.99	1.13
369PTC-6-4	3/8	1/4	3/4	.99	1.28
369PTC-6-6	3/8	3/8	3/4	.99	1.28
369PTC-6-8	3/8	1/2	7/8	.99	1.47
369PTC-8-4	1/2	1/4	15/16	1.11	1.39
369PTC-8-6	1/2	3/8	15/16	1.11	1.39
369PTC-8-8	1/2	1/2	15/16	1.11	1.58
369PTC-10-6	5/8	3/8	1-1/16	1.33	1.60
369PTC-10-8	5/8	1/2	1-1/16	1.33	1.79
369PTC-12-8	3/4	1/2	1-3/16	1.52	1.89
369PTC-12-12	3/4	3/4	1-3/16	1.52	1.99



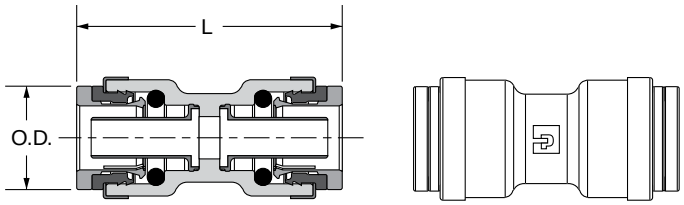
Female Elbow Swivel 90° 370PTC

PART NO.	TUBE SIZE	PIPE THREAD	B HEX	L	M
370PTC-4-2	1/4	1/8	5/8	.69	.89
370PTC-4-4	1/4	1/4	3/4	.69	1.05
370PTC-6-2	3/8	1/8	3/4	.99	.90
370PTC-6-4	3/8	1/4	3/4	.99	1.13
370PTC-6-6	3/8	3/8	13/16	.99	1.19
370PTC-8-6	1/2	3/8	15/16	1.11	1.30
370PTC-8-8	1/2	1/2	1-1/16	1.11	1.49
370PTC-10-8	5/8	1/2	1-1/16	1.33	1.67



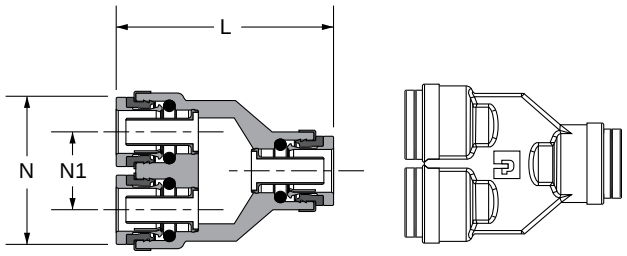
Union 32PTC

PART NO.	TUBE SIZE	L	O.D.
32PTC-6	3/8	1.61	.73
32PTC-8	1/2	1.75	.88
32PTC-10	5/8	2.15	1.02
32PTC-12	3/4	2.50	1.17



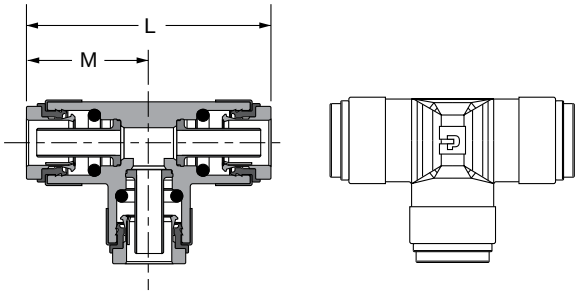
Union Y 362PTC

PART NO.	TUBE SIZE	L	N	N1
362PTC-4	1/4	1.49	1.03	.50
362PTC-6	3/8	1.99	1.41	.68
362PTC-8	1/2	2.18	1.72	.84



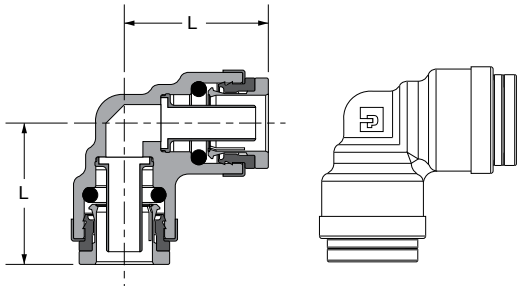
Union Tee 364PTC

PART NO.	TUBE SIZE	L	M
364PTC-4	1/4	1.42	.71
364PTC-6	3/8	1.99	.99
364PTC-8	1/2	2.25	1.13



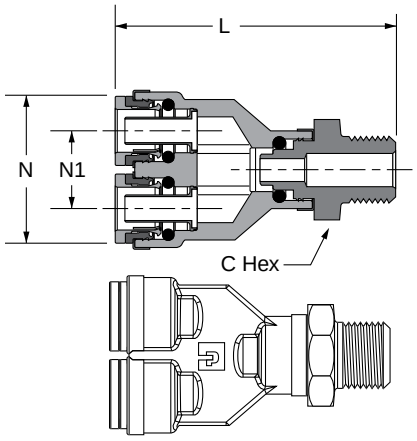
Union Elbow 365PTC

PART NO.	TUBE SIZE	L
365PTC-6	3/8	.99
365PTC-8	1/2	1.11



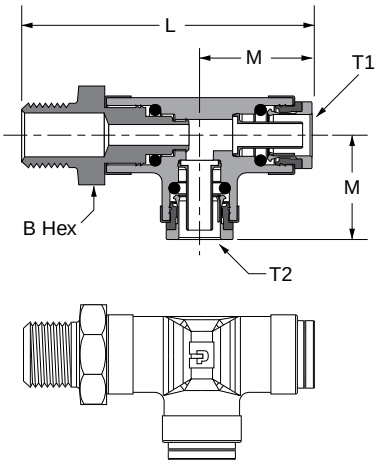
Union Y Male Connector 368PTC

PART NO.	TUBE SIZE	PIPE THREAD	L	C HEX	N	N1
368PTC-4-2	1/4	1/8	1.96	9/16	1.03	.50
368PTC-4-4	1/4	1/4	2.12	9/16	1.03	.50
368PTC-6-4	3/8	1/4	2.56	3/4	1.41	.68
368PTC-8-6	1/2	3/8	2.85	15/16	1.71	.84
368PTC-8-8	1/2	1/2	3.08	15/16	1.72	.84



Male Run Tee Swivel 371PTC

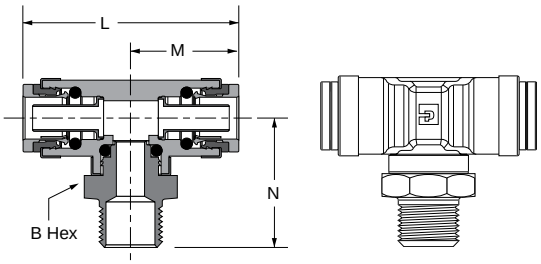
PART NO.	TUBE SIZE 1	TUBE SIZE 2	PIPE THREAD	B HEX	L	M
371PTC-4-2	1/4	1/4	1/8	9/16	1.93	.71
371PTC-4-4	1/4	1/4	1/4	9/16	2.08	.71
371PTC-4-6	1/4	1/4	3/8	3/4	2.08	.71
371PTC-6-4	3/8	3/8	1/4	3/4	2.27	.99
371PTC-6-4-4	3/8	1/4	1/4	3/4	2.27	1.08
371PTC-6-6	3/8	3/8	3/8	3/4	2.27	.99
371PTC-8-4	1/2	1/2	1/4	15/16	2.55	1.13
371PTC-8-6	1/2	1/2	3/8	15/16	2.55	1.13
371PTC-8-8	1/2	1/2	1/2	15/16	2.74	1.13
371PTC-10-8	5/8	5/8	1/2	1-1/16	3.22	1.41



Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

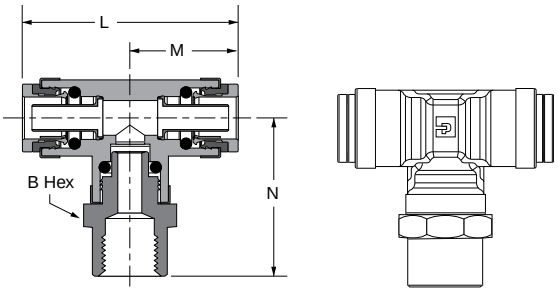
Male Branch Tee Swivel 372PTC

PART NO.	TUBE SIZE	PIPE THREAD	B HEX	L	M	N
372PTC-4-2	1/4	1/8	9/16	1.42	.73	1.22
372PTC-4-4	1/4	1/4	9/16	1.42	.71	1.37
372PTC-4-6	1/4	3/8	3/4	1.42	.71	1.37
372PTC-6-2	3/8	1/8	3/4	1.99	.99	1.17
372PTC-6-4	3/8	1/4	3/4	1.99	.99	1.32
37PTC-6-6	3/8	3/8	3/4	1.99	.99	1.32
372PTC-8-4-8	1/2x1/4	1/2	15/16	2.28	1.14	1.58
372PTC-8-6	1/2	3/8	15/16	2.25	1.13	1.39
372PTC-8-8	1/2	1/2	15/16	2.25	1.13	1.58
372PTC-10-8	5/8	1/2	1-1/16	2.82	1.41	1.81



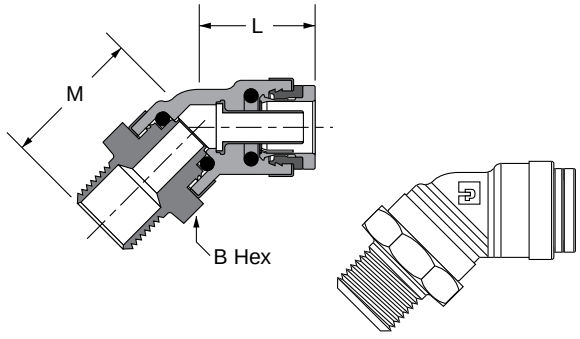
Female Branch Tee Swivel 377PTC

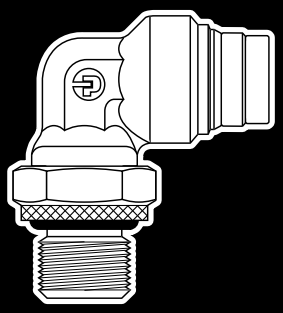
PART NO.	TUBE SIZE	PIPE THREAD	B HEX	L	M	N
377PTC-4-4	1/4	1/4	3/4	1.48	0.74	1.27



Male Elbow Swivel 45° 379PTC

PART NO.	TUBE SIZE	PIPE THREAD	B HEX	L	M
379PTC-4-2	1/4	1/8	9/16	.64	.97
379PTC-4-4	1/4	1/4	9/16	.64	1.12
379PTC-4-6	1/4	3/8	3/4	.64	1.12
379PTC-6-2	3/8	1/8	3/4	.87	1.01
379PTC-6-4	3/8	1/4	3/4	.87	1.16
379PTC-6-6	3/8	3/8	3/4	.87	1.16
379PTC-8-4	1/2	1/4	15/16	1.01	1.20
379PTC-8-6	1/2	3/8	15/16	1.01	1.20
379PTC-8-8	1/2	1/2	15/16	1.01	1.39
379PTC-10-6	5/8	3/8	1-1/16	1.18	1.42
379PTC-10-8	5/8	1/2	1-1/16	1.18	1.61
379PTC-12-8	3/4	1/2	1-3/16	1.35	1.69
379PTC-12-12	3/4	3/4	1-3/16	1.35	1.79





Metric Prestomatic Air Brake Push-In Fittings

Advantages

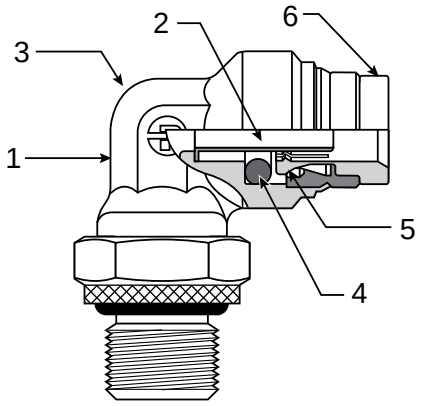
Patented design of sizes 6mm and above meet DIN 74324. Meets D.O.T. FMVSS571.106 performance specifications when used with SAE J844 metric tubing. No special tools are needed to assemble. Just bottom the tubing in the fitting body for a positive seal.

Application

Use with DIN 73378 virgin nylon or SAE J844 tubing. Designed for DIN and D.O.T. truck and trailer applications. Consult the factory with any questions regarding special product applications. Prior to use, all applications should be carefully tested through the range of conditions which may be encountered.

Features

1. All brass body.
2. Stainless steel tube support
3. Elbows and tees utilize the Universal Stud HOBS nut design.
4. Lubricated O-Ring Seal (Buna N) insures a quick, easy and positive seal.
5. Innovative Collet design insures positive grip on tubing.
6. Release Button offers quick and easy disconnections.



Technical Data

- Working pressure up 250 psi.
- Working temperature from -40° F to +200°F (Note: see tubing manufacturer's recommendations for pressure and temperature limitations).
- Buna N (Nitrile) O-Rings.
- **DIN 74324: Air brake systems thermoplastic tubes and pipe requirements and testing**
- **DIN 73378: Polymade tubing for motor vehicles.**

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 of fitting. The Prestomatic series 6mm and above has a brass tube support and is designated with a "PMT" suffix.

Example:

F 8 U PMTB 8 M22

- F — Straight Male Connector
- 8 — Metric Parallel
- U — Universal Stud
- PMTB — Air Brake Push-In Fitting–Brass Body
- 8 — 8mm Tube Size
- M22 — 22mm Port Thread

Special Fittings

Fitting configurations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry. Price and delivery for non-stock items furnished on request for specified quantities.

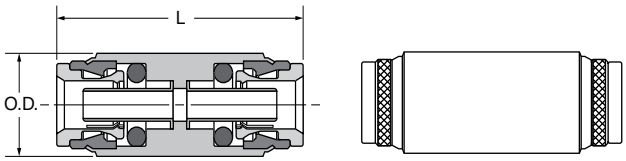
Pricing

Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

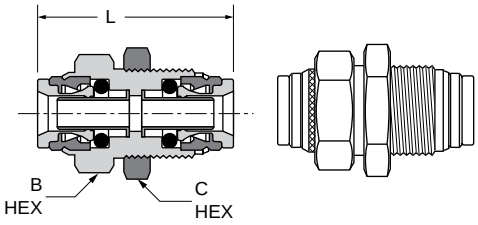
Union HPMTB

PART NO.	TUBE SIZE (mm)	L (mm)	O.D. (mm)
HPMTB6	6	45.2	15.9
HPMTB8	8	45.3	17.5
HPMTB10	10	51.7	22.2
HPMTB12	12	51.7	22.2



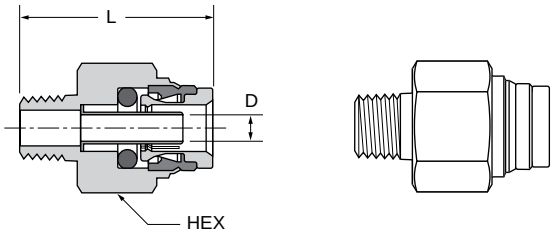
Male Bulkhead Union WPMTB

PART NO.	TUBE SIZE (MM)	METRIC THREAD	L (MM)	B HEX (MM)	C HEX (MM)	BULKHEAD HOLE DIA. (MM)
WPMTB6	6	M20X1.5	47.5	22	24	20
WPMTB8	8	M20X1.5	47.2	22	24	20
WPMTB10	10	M22X1.5	52.3	27	27	22
WPMTB12	12	M24X1.5	52.1	27	30	24



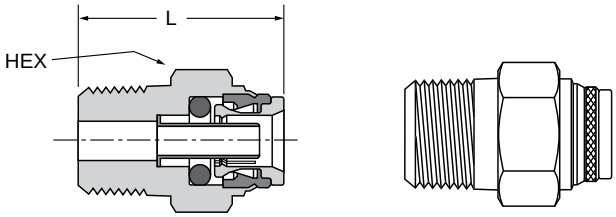
Male Connector F2PMTB

PART NO.	TUBE (mm)	PIPE THREAD	L (mm)	HEX (mm)	FLOW DIA. D(mm)
F2PMTB8-1/8	8	1/8	33.79	19	4.90
F2PMTB8-1/4	8	1/4	38.38	19	4.90
F2PMTB10-1/4	10	1/4	36.83	20	6.35



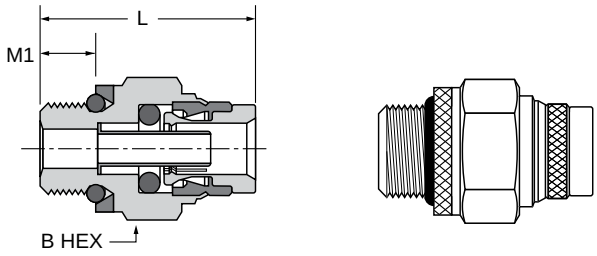
Male Connector BSPT F3PMTB

PART NO.	TUBE (mm)	BSPT THREAD	L (mm)	HEX (mm)
F3PMTB8-1/2	8	1/2	35.1	22
F3PMTB10-1/4	10	1/4	39.9	22
F3PMTB10-3/8	10	3/8	36.2	22
F3PMTB10-1/2	10	1/2	39.6	22
F3PMTB12-1/4	12	1/4	40.6	22
F3PMTB12-3/8	12	3/8	40.4	22
F3PMTB12-1/2	12	1/2	40.4	22



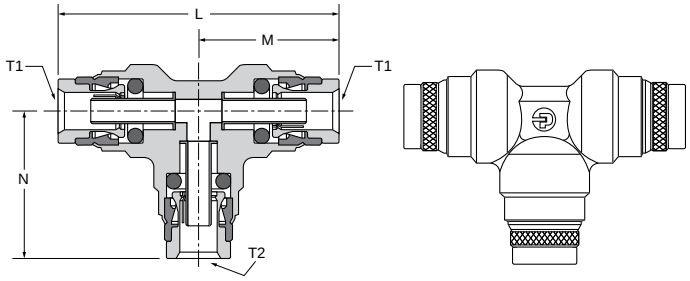
Male Connector Metric Straight Thread F8UPMTB

PART NO.	TUBE SIZE (mm)	METRIC THREAD	L (mm)	B HEX (mm)	M1 (mm)
F8UPMTB6-M10	6	M10x1	29.7	17	6.4
F8UPMTB6-M12	6	M12x1.5	29.1	17	7.5
F8UPMTB6-M14	6	M14x1.5	29.1	22	7.5
F8UPMTB6-M16	6	M16x1.5	31.6	22	10.0
F8UPMTB6-M22	6	M22x1.5	29.7	27	9.5
F8UPMTB8-M10	8	M10x1	31.4	22	6.4
F8UPMTB8-M12	8	M12x1.5	33.0	22	7.5
F8UPMTB8-M14	8	M14x1.5	33.0	22	7.5
F8UPMTB8-M16	8	M16x1.5	31.0	22	10.0
F8UPMTB8-M22	8	M22x1.5	28.8	27	9.5
F8UPMTB10-M10	10	M10x1	34.8	22	6.4
F8UPMTB10-M12	10	M12x1.5	36.9	22	7.5
F8UPMTB10-M14	10	M14x1.5	36.8	22	7.5
F8UPMTB10-M16	10	M16x1.5	37.5	22	10.0
F8UPMTB10-M22	10	M22x1.5	31.1	27	9.5
F8UPMTB12-M12	12	M12x1.5	37.3	22	7.5
F8UPMTB12-M14	12	M14x1.5	36.8	22	7.5
F8UPMTB12-M16	12	M16x1.5	39.7	22	10.0
F8UPMTB12-M22	12	M22x1.5	33.4	27	9.5
F8UPMTB16-M16	16	M16x1.5	39.7	27	10.0
F8UPMTB16-M22	16	M22x1.5	33.3	27	9.5



Union Tee JPMTB

PART NO.	TUBE 1 (mm)	TUBE 2 (mm)	L (mm)	M (mm)	N (mm)
JPMTB6	6	6	51.3	25.6	26.7
JPMTB8	8	8	53.2	26.6	26.7
JPMTB10	10	10	60.4	30.2	31.4
JPMTB12	12	12	63.3	31.7	35.0
JPMTB12-12-6	12	6	63.3	31.7	28.1
JPMTB12-12-8	12	8	63.3	31.7	32.9



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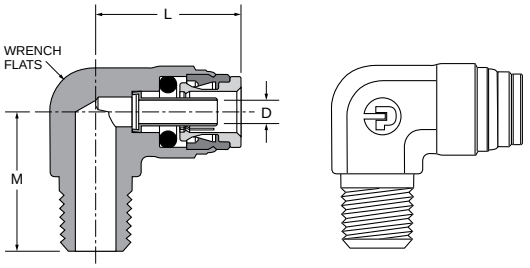
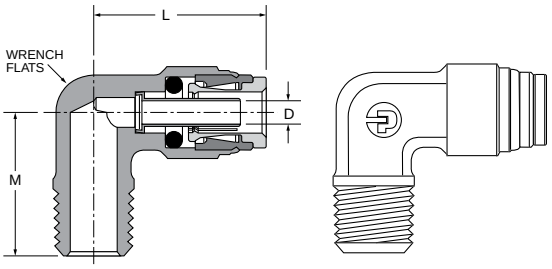
Male Elbow Non-Swivel C2PMTB

PART NO.	TUBE SIZE (MM)	PIPE THREAD	WRENCH FLATS (MM)	L (MM)	M (MM)	FLOW DIA. (MM)
C2PMTB8-1/4	8	1/4	16	28.5	26.9	4.83



Male Elbow Non-Swivel BSPT C3PMTB

PART NO.	TUBE SIZE (MM)	BSPT THREAD	WRENCH FLATS (MM)	L (MM)	M (MM)
C3PMTB6-1/4	6	1/4	11	27.9	23.1
C3PMTB10-1/4	10	1/4	17	31.8	25.4
C3PMTB12-1/4	12	1/4	22	34.3	28.5
C3PMTB12-1/2	12	1/2	22	34.3	33.5



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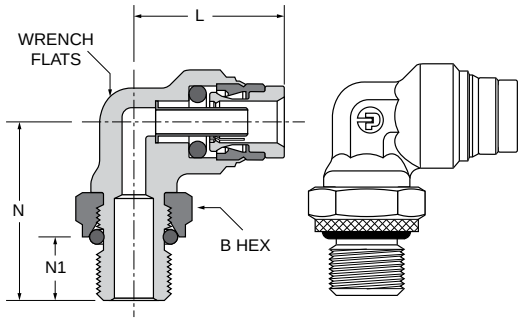
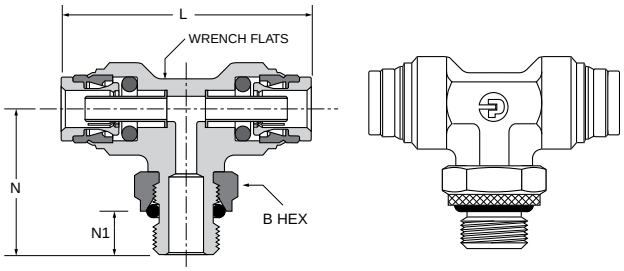
Male Elbow Metric Straight Thread C8UPMTB

PART NO.	TUBE SIZE (mm)	METRIC THREAD	WRENCH FLATS (mm)	B HEX (mm)	L (mm)	N (mm)	N1 (mm)
C8UPMTB6-M10	6	M10x1	10	14	24.8	26.0	7.5
C8UPMTB6-M12	6	M12x1.5	10	17	24.8	28.2	9.5
C8UPMTB6-M16	6	M16x1.5	11	24	25.0	34.0	10.5
C8UPMTB6-M22	6	M22x1.5	19	30	28.1	41.4	10.5
C8UPMTB8-M12	8	M12x1.5	16	17	27.5	33.0	9.5
C8UPMTB8-M14	8	M14x1.5	16	19	26.7	33.5	9.5
C8UPMTB8-M16	8	M16x1.5	16	24	27.5	34.0	10.5
C8UPMTB8-M22	8	M22x1.5	19	30	32.0	40.4	10.5
C8UPMTB10-M12	10	M12x1.5	16	17	29.4	30.2	9.5
C8UPMTB10-M16	10	M16x1.5	19	24	30.3	33.5	10.5
C8UPMTB10-M22	10	M22x1.5	19	30	32.0	38.4	10.5
C8UPMTB12-M16	12	M16x1.5	16	24	31.2	35.6	10.5
C8UPMTB12-M22	12	M22x1.5	16	30	32.9	38.4	10.5
C8UPMTB16-M16	16	M16x1.5	19	24	30.6	36.4	10.5
C8UPMTB16-M22	16	M22x1.5	25	30	31.7	40.4	10.5



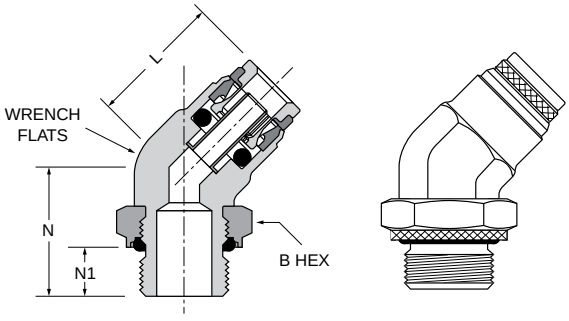
Male Branch Tee Swivel Metric Straight Thread S8UPMTB

PART NO.	TUBE SIZE (mm)	METRIC THREAD	WRENCH FLATS (mm)	HEX (mm)	L (mm)	N (mm)	N1 (mm)
S8UPMTB12-M16	12	M16x1.5	19	24	65.9	37.6	10.5
S8UPMTB12-M22	12	M22x1.5	23	30	65.9	35.6	10.5
S8UPMTB16-M22	16	M22x1.5	16	24	64.3	40.1	10.5



Male Elbow 45° Metric Straight Thread V8UPMTB

PART NO.	TUBE SIZE (mm)	METRIC THREAD	WRENCH FLATS (mm)	B HEX (mm)	L (mm)	N (mm)	N1 (mm)
V8UPMTB10-M22	10	M22x1.5	22	30	31.7	28.5	10.5
V8UPMTB12-M22	12	M22x1.5	27	30	31.7	28.5	10.5



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Notes

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Cartridges & Manifolds

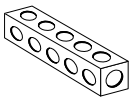
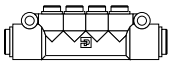
SAE Encapsulated Cartridge

- Meets Performance Requirements of D.O.T. FMVSS 571.106
- Meets Dimensional Standards of SAE J2494-4 in 6061-T6 Aluminum
- Eliminate the space and labor costs associated with pipe threads.
- Weight Reduction
- 3 barb design

Manifolds

- Light Weight Body
- Push to Connect Ports
- O-ring Seal

The World Standard

Cartridges	**PMTCE SAE** Encapsulated  Page J4					
Manifolds	**255MP** Brass Manifold  Page J5	**24M** Composite Manifold  Page J6				

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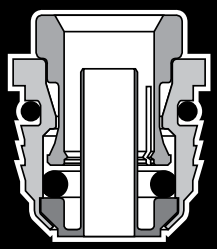


Prestomatic SAE Encapsulated Cartridges

Advantages
Parker Prestomatic† SAE Encapsulated Cartridges are a compact, economical design that allows the user to eliminate the space and labor required to install and assemble a conventional pipe thread fitting connection. Weight reduction and the elimination of pipe thread leakage related to improper assembly techniques are achieved. The SAE Cartridge design allows for faster and easier installation of components and assemblies. The external o-ring seals radially and does not require special chamfers at the top of the cavity to effect a seal. The SAE Cartridge includes a built in tube support. Once the SAE Cartridge is installed in a single step cavity, no special tools are needed for tube assembly. Just bottom the tubing into the cartridge body for a positive seal.

Materials
Parker's Prestomatic SAE Encapsulated Cartridges have been developed for both soft metal and plastic cavity applications. Consult factory for specific cavity or housing materials that would be suitable for a particular application.

Specifications
Cavity dimensions are per SAE Standard J2494-4. The Prestomatic SAE Encapsulated Cartridge is thoroughly tested to meet or exceed the performance requirements of DOT FMVSS 571.106. Cavity dimensions specified by SAE J2494-4 need to be adjusted slightly for optimum performance in material other than 6061-T6.

Technical Data
- Working pressure from vacuum to 250 psi
- Working temperature from -40ºF to +200ºF (Note: See tubing manufacturer's recommendations for pressure and temperatures limitations.)

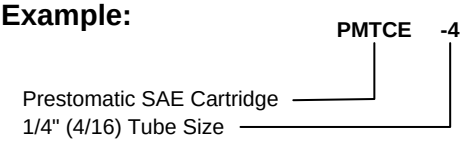
Features
- Easy assembly
- Patented Prestomatic* brass componentry which includes a shoulder for increased side load capabilities, contamination resistance features and tight internal tolerances for a close fit and smooth operation.
- Available in tube sizes 5/32", 1/4", 3/8", 1/2", 5/8" and 3/4"
- Available in elbows and straight configurations
- Built in Brass tube support assures maximum flow and performance characteristics

Tube Assembly Instructions
1. Cut Parker Parflex thermoplastic squarely using Parker tube cutter PTC-001. Metal tubing should be cut square and free of burrs.
2. Insert end of tubing into cartridge until it bottoms. Pull on tubing to verify it is properly retained
3. To disassemble, simply hold release button against the body and remove tubing
4. To reassemble, lubricate leading end of tubing with light oil or petroleum jelly

Order
By part number and name

Nomenclature
Part numbers are constructed from symbols that identify the style and size of the cartridge

Example:



Special Cartridges
Encapsulated cartridge configurations and /or sizes other than those shown in the catalog can be furnished. Non-standard o-ring materials are available. It is suggested that a print or sketch be submitted with the inquiry. Price and delivery for non-stock items furnished on request for specified quantities.

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† U.S. Patent No. 5,683,120

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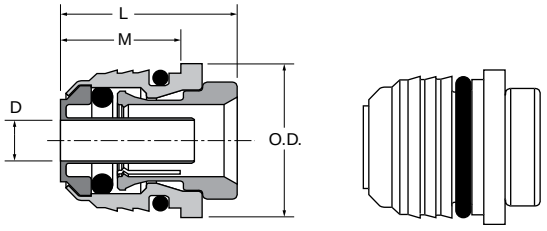
Otsego, Michigan

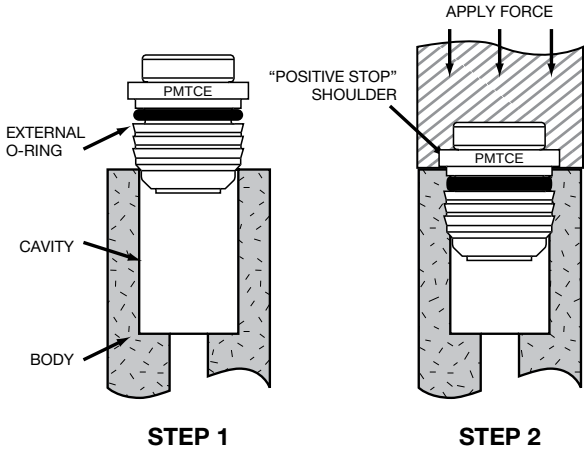
Prestomatic SAE Encapsulated Cartridge PMCE/PMTCE

PART NO.	TUBE SIZE	CAVITY SIZE ±.002	L	M	O.D.	FLOW DIA. D
PMCE-5/32	5/32	.346	.57	.43	.44	.125
PMTCE-4	1/4	.504	.64	.44	.56	.140
PMTCE-4-8	1/4	.775	.66	.42	.87	.140
PMTCE-6	3/8	.650	.84	.64	.75	.217
PMTCE-6-8	3/8	.775	.84	.64	.87	.217
PMTCE-8	1/2	.775	.98	.77	.87	.338
PMTCE-10	5/8	.925	1.07	.86	1.00	.398
PMTCE-12	3/4	1.067	1.12	.93	1.19	.503

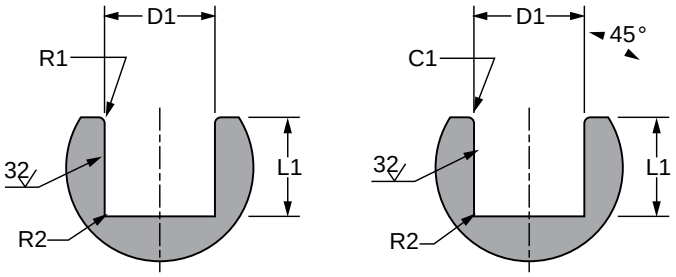


Installation

Apply force evenly over the top surface of the cartridge body until the cartridge shoulder bottoms out on the top of the cavity. The amount of force required will vary depending on the cartridge size and the material of the cavity.

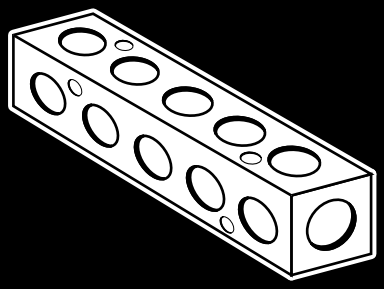


Optional Construction



Nominal Tube OD (in)	D1 (mm) ±.05	D1 (in) ±.002	L1 (mm) MIN	L1 (in) MIN	R1 (mm) ±.05	R1 (in) ±.002	R2 (mm) ±.05	R2 (in) ±.002	C1 (mm) ±.05	C1 (in) ±.002
5/32	8.80	.346	11.40	.45	.50	.02	.50	.02	.50	.02
1/4	12.80	.504	12.70	.50	.50	.02	.50	.02	.50	.02
3/8	16.50	.650	16.50	.65	.50	.02	.50	.02	.50	.02
1/2	19.70	.775	19.80	.78	.50	.02	.50	.02	.50	.02
5/8	23.50	.925	22.40	.88	.80	.03	.50	.02	.80	.03
3/4	27.10	1.067	23.90	.94	.80	.03	.50	.02	.80	.03
Cavity material is to be 6061 T6 aluminum										

† U.S. Patent No. 5,683,120



Brass Manifold

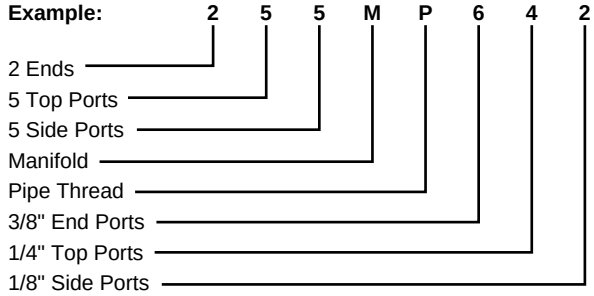
Advantages
Parker's Brass Manifold provides a convenient junction for the hook-up of multi-branch distribution lines. Porting is easy with five 1/8" and five 1/4" side ports. Two 3/8" inlet ports allow for maximum flow. Universal dual sided 7/32" mounting holes allow for easy manifold attachment.

Parker's all brass manifold can be readily identified, assuring high quality engineering and reliability. This economical manifold is machined from high quality CA360 brass.

Applications
May be used for air, water or hydraulic requirements. Specific applications include injection molders (coolant lines), packaging equipment, air logic systems (panel builders) and specialized industrial machinery requiring multiple line connections.

Temperature and Working Pressure Ranges
From -65° to +250°F at 1000 PSI maximum.

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



Special Manifolds
Manifold configurations and /or sizes other than our cataloged manifold can be furnished. It is suggested that a print or sketch be submitted with the inquiry.

Pricing
Price and delivery for non-stock items furnished on request for specified quanity.

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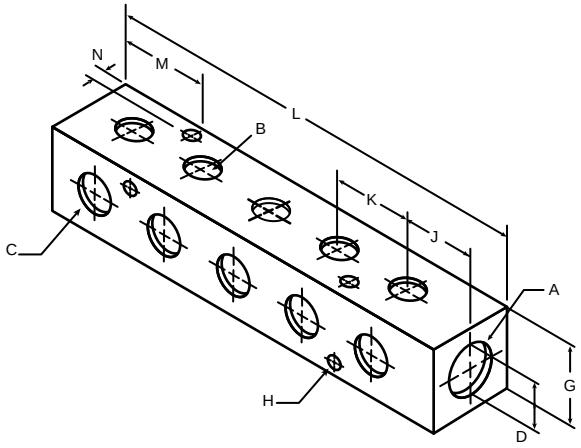
Brass Manifold 255M

PART NO.	PIPE THREAD A	PIPE THREAD B	PIPE THREAD C	G	MOUNTING HOLE DIA. H	J	K	L	M	N	D
255MP-6-4-2	3/8	1/8	1/4	1.25	.22	.88	1.13	6.25	1.45	.25	.25



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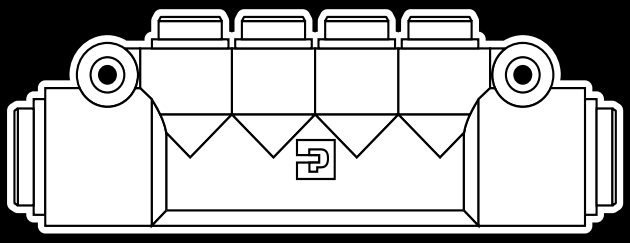
Otsego, Michigan



Presto Manifold

Advantages
Presto manifolds provide a convenient junction to connect multiple tubing lines for industrial and transportation applications. The glass reinforced body is lightweight yet durable. Presto manifolds contain 1/4, 3/8 and 1/2 O.D. tube inlet and outlet ports to allow for design and application flexibility. No special tools are needed to assemble. Just bottom the tubing in the port for a positive seal.

Applications
Suitable for industrial or transportation applications requiring multiple branch connections using Parker Parflex series N Nylon for industrial applications, and Parker Parflex S.A.E. J844 type A & B nylon tubing for all transportation applications. Consult the factory with any questions regarding special product applications prior to use. All applications should be carefully tested through the range of conditions that may be encountered.

Technical Data
- Body Material: Glass Filled Nylon
- O-Ring Material: Buna N (Nitrile)
- Working Pressure from: Vacuum to 150 PSI
- Working Temperature from: -40° to 200° F
  (Note: See tubing manufacturer's recommendation for pressure and temperature limitations).

Special Manifolds
Presto Manifold sizes other than those shown in the catalog can be formulated upon request. Die tooling charges may apply to non-standards. It is suggested that a print or sketch with specified buy quantities be submitted with the inquiry.

Assembly Instructions
1. Cut tubing squarely with Parker tube cutter PTC-001. Be certain that Manifold ports are clean and free of debris.
2. Insert tubing into port until it bottoms. Pull on tubing to verify that it is properly retained in the manifold.
3. To disassemble, simply hold release button against the manifold body and remove the tubing.
4. To reassemble, make certain that the Manifold ports are clean and free of debris and lubricate leading end of the tubing with light oil or petroleum jelly.

Order
By part number and name.

Nomenclature
Part numbers are constructed from symbols that identify the size and type of manifold. The first series of letters and numbers identify the style and type of manifold. The second series of numbers describe the tube O.D.

Example:

24M	6	4
Presto Manifold		
	Inlet Tube O.D. (6/16)	
		Outlet Tube O.D. (4/16)

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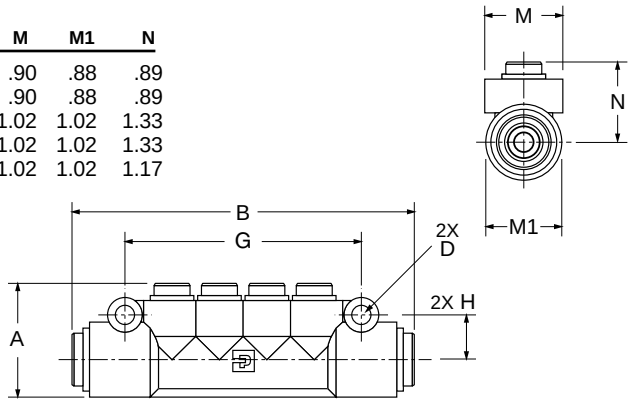
Presto Manifold 24M

PART NO.	TUBE O.D. INLET	TUBE O.D. OUTLET	A	B	D	G	H	M	M1	N
24M-4-4	1/4	1/4	1.33	3.98	.21	2.75	.53	.90	.88	.89
24M-6-4	3/8	1/4	1.33	4.00	.21	2.75	.53	.90	.88	.89
24M-6-6	3/8	3/8	1.65	6.49	.22	4.55	.60	1.02	1.02	1.33
24M-8-8	1/2	1/2	1.65	6.49	.22	4.55	.60	1.02	1.02	1.33
24M-8-6446	1/2	3/8 - 1/4	1.65	6.49	.22	4.55	.64	1.02	1.02	1.17



*U.S. Patent Number 5,683,120

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Valves

Ball Valves

- Brass, Carbon Steel & Stainless Steel
- UL Listed
- 90˚ Valves
- Padlocking & Vented Options
- Handle Options
- Actuators
- Inch & Metric

Needle Valves

- Metal to Metal Seats
- All Brass construction
- Fine Threaded for control and positive seal

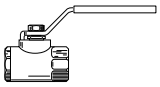
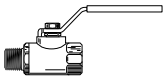
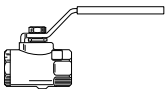
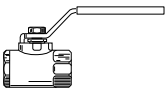
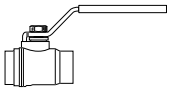
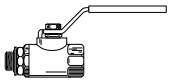
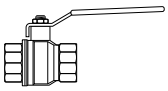
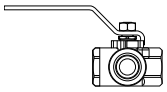
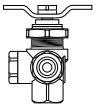
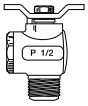
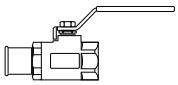
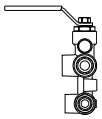
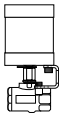
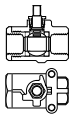
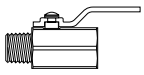
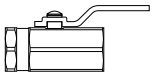
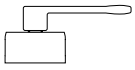
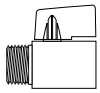
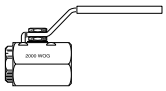
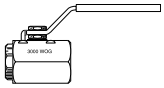
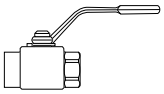
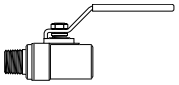
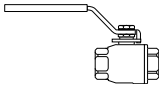
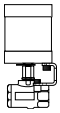
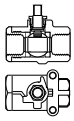
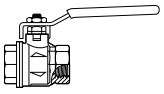
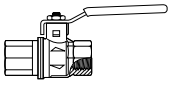
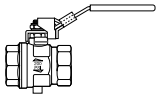
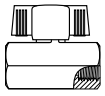
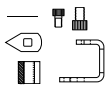
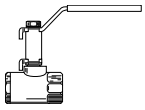
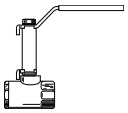
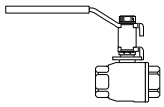
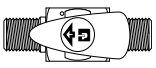
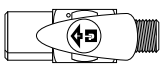
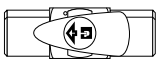
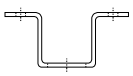
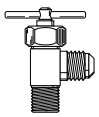
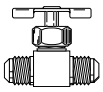
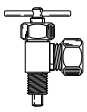
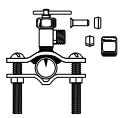
Truck Valves

- Metal to Metal Seats
- All Brass construction
- -30˚ to +250˚ F

Ground Plug Shutoff / Drain Cocks

- Metal to Metal Seats
- Economical
- External & Internal Seat

The World Standard

Brass Ball Valves	**XV500P** Female-Female  Page K5	**XV501P** Male-Female  Page K9	**XV502P** Panel Mount  Page K12	**XV506P** Straight Thread  Page K15	**XV509P** Solder End  Page K17	**XV510P** Straight Thread  Page K19
XV520P Economy Series  Page K22	**XV533P** 3-Female Pipe Ends  Page K24	**XV540P** 4-Female Pipe Ends  Page K24	**XV590/591P** 90° Ball Valve  Page K26	**XV500HB** Hose Barb  Page K27	**XV600P/XV633P** 6 Port Diversion  Page K29	**XV502P-ACT** Actuator  Page K47
XV502P-SUB Sub Assembly  Page K48	**MV708** Micro Valve  Page K60	**MV709** Micro Valve  Page K60	**MV200** Mini Valve  Page K65	**MV608** Mini Valve  Page K65	**MV609** Mini Valve  Page K65	
Carbon Steel Valves	**XV500/502CS** Female-Female  Page K31	**XV506CS** Straight Thread  Page K35	**XV500HP/506HP/ 507HP** High Pressure  Page K37	**Stainless Steel Valves**	**XV501SS** Male-Female  Page K41	**XV502SS** Female-Female  Page K43
XV502SS-ACT Actuator  Page K47	**XV502SS-SUB** Sub Assembly  Page K48	**Metric Ball Valves**	**BVGC** Female-Female  Page K51	**BVGL** Female Long  Page K53	**BVGPLOCK** Padlocking  Page K55	**MBVG** Compact  Page K58
Auxiliary	**ACT-P-KIT** Brass Actuator Kit  Page K49	**ACT-SS-Kit** Stainless Actuator Kit  Page K49	**STX-P-1-125** Stem Extension  Page K62	**STX-P-1-225** Stem Extension  Page K62	**STXSS-X-X** Stem Extension  Page K63	
Plug Valves	**PV607** Male-Male  Page K67	**PV608** Male-Female  Page K67	**PV609** Female-Female  Page K67	**PVMB** Mounting Bracket  Page K67		
Needle Valves	**NV101F** Flare-Male Pipe  Page K69	**NV102F** Flare-Flare  Page K69	**NV103F** Flare-Male Pipe  Page K69	**HV104C** Humidifier Valve  Page K69	**HV104C-Kit** Humidifier Kit  Page K69	**SPC104C-Kit** Self Piercing  Page K70

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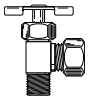
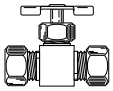
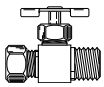
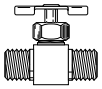
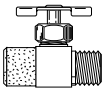
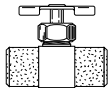
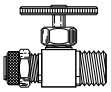
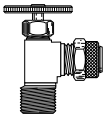
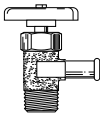
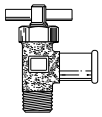
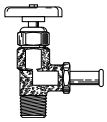
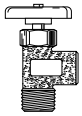
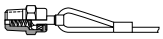
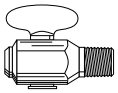
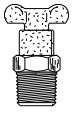
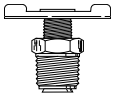
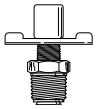
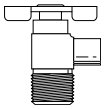
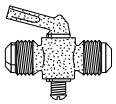
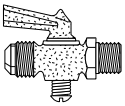
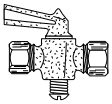
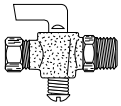
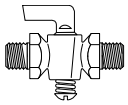
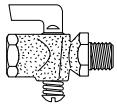
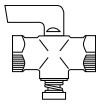
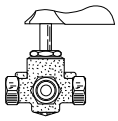
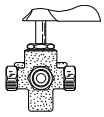
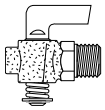
Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

NV104C/ NV104CA Comp-Pipe  Page K70	**NV105C/ NV105CA** Comp-Comp  Page K70	**NV106C/ NV106CA** Comp-Pipe  Page K71	**NV107P** Pipe-Pipe  Page K71	**NV108P** Female-Male  Page K71	**NV109P** Female-Female  Page K71	**NV311P** Poly-Tite/Pipe  Page K71
NV312P Poly-Tite/Pipe  Page K72	**Truck Valves**	**V404P** Hose-Pipe  Page K72	**V404PH** Hose-Pipe  Page K72	**SV404P** Hose-Pipe  Page K72	**V405P** Female-Male  Page K72	**V408NTA** Tube-Pipe  Page K73
V409F Flare - Pipe  Page K73	**V410NTA** Tube-Pipe  Page K73	**V412F** Tube-Pipe  Page K73	**LV91** Lanyard Valve  Page K73	**Drain Cocks**	**DCR601** Internal Seal  Page K77	**DC602** Internal Seal  Page K77
DC603 Internal Seal  Page K77	**DC604** External Seal  Page K77	**DC606** External Seal  Page K77	**DC607** Bib Drain  Page K77	**Shutoff Valves**	**V203F** Flare-Flare  Page K75	**V204F** Flare-Pipe  Page K75
V303C/V303CA Comp-Comp  Page K75	**V304C/V304CA** Comp-Pipe  Page K75	**V401P** Pipe-Pipe  Page K75	**V402P** Female-Male  Page K76	**V403P** Female-Female  Page K76	**V406P** 3-Way  Page K76	**V407P** 4-Way  Page K76
DC601 Pipe  Page K76						

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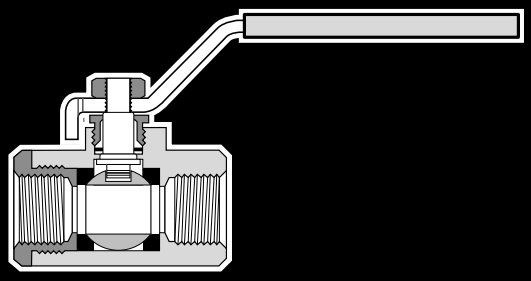


Brass Ball Valves Series 500

Advantages

Parker's forged body ball valve provides extended service life and resists failure caused by severe temperature applications. Optimum flow design assures maximum system efficiency. Highly inert PTFE seats and seals provide resistance to chemical corrosion. Parker also provides a blow-out proof stem, chrome plated brass ball and a specially designed handle enabling increased turning leverage for ease of opening and closing. Parker's ball valve can be readily identified assuring high quality engineering and reliability. This economical ball valve is available in female pipe sizes. Parker's ball valve bodies are machined from high quality CA 377 forgings.

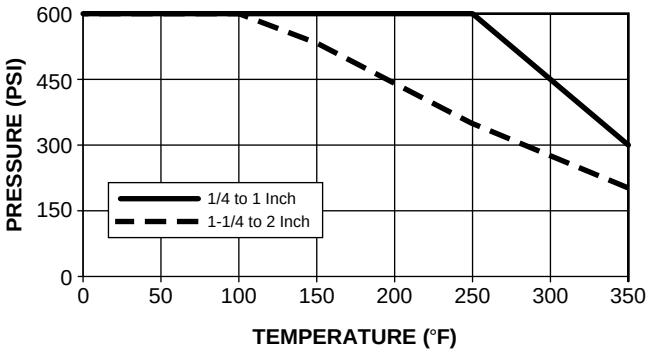
Applications

Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle.

For use as fuel line shutoffs for gasoline and diesel powered over the highway, off highway, and construction equipment vehicles. Water and air service lines on capital equipment and plant design plumbing that require total shutoff capability.

Working Pressure and Temperature

Saturated steam service up to 150 PSI and 400° F
Vacuum, 29 Inches of Mercury
Vented up to 250 PSI



Operating Instructions

Quarter turn is "ON" or "OFF".
(Provides positive stop action for full shutoff.)

NOTE: PERIODICALLY CHECK THE ADJUSTABLE PACKING NUT AND TIGHTEN AS REQUIRED.

Style	Type	Material	Size	Options
V	**500**	**P**	**-4**	**-00**
Style	V-Valve VP-Valve, Padlocking Handle VV-Valve, Vented VVP-Valve, Vented, Padlocking Handle			
Type	500-Female/Female PTF Ports			
Material	P- Brass PN-Nickel Plated			
Size	4-1/4" 6-3/8" 8-1/2" 12-3/4" 16-1"			
Options	01-Stainless Steel Ball & Stem 02-Stainless Steel Handle & Nut 03-Stainless Steel Ball, Stem, Handle & Nut 04-Tee Handle 08-Unmarked Yellow Vinyl Handle Cover 21-Oval Handle			

Style	Type	Material	Size
V	**500**	**P**	**-20**
Style	V-Valve VP-Valve, Padlocking Handle		
Type	500-Female/Female PTF Ports		
Material	P- Brass		
Size	20-1 1/4" 24-1 1/2" 32-2"		

Flow Data

VALVE SIZE	CV
1/4	4.0
3/8	5.8
1/2	12.0
3/4	25.0
1	35.0
1-1/4	57.0
1-1/2	92.0
2	224.0

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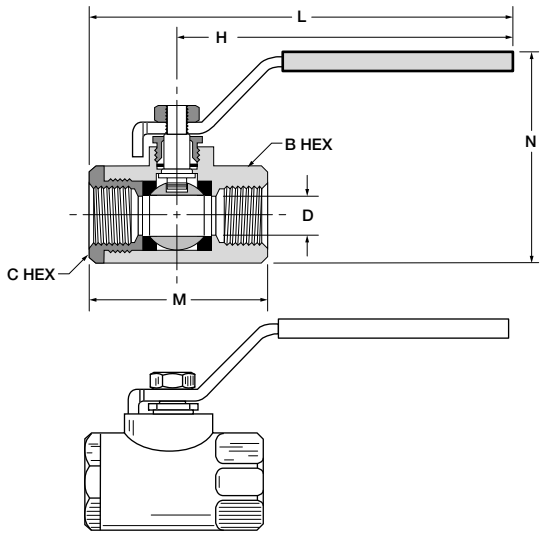
Female-Female Pipe Ends XV500P

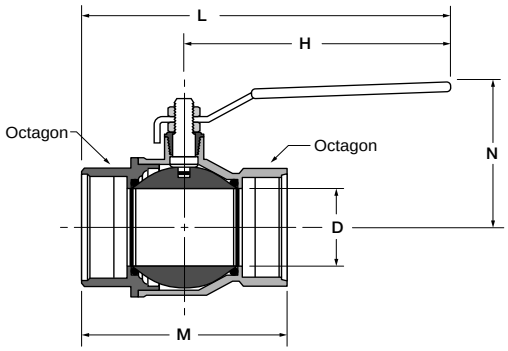
PART NO.	PIPE THREAD [PTF]	B HEX	C HEX	H	L	M	N	FLOW DIA.D
XV500P-4	1/4	15/16	15/16	3.96	4.90	2.03	2.47	.375
XV500P-6	3/8	15/16	15/16	3.96	4.90	2.03	2.47	.375
XV500P-8	1/2*	1-1/16	1-1/16	3.96	5.00	2.20	2.58	.500
XV500P-12†	3/4**	1-1/4	1-5/16	3.96	5.25	2.42	2.81	.685
XV500P-16†	1**	1-1/2	1-9/16	3.96	5.34	2.75	3.08	.875

† Available in Full Flow Panel Mount see XV508P Series



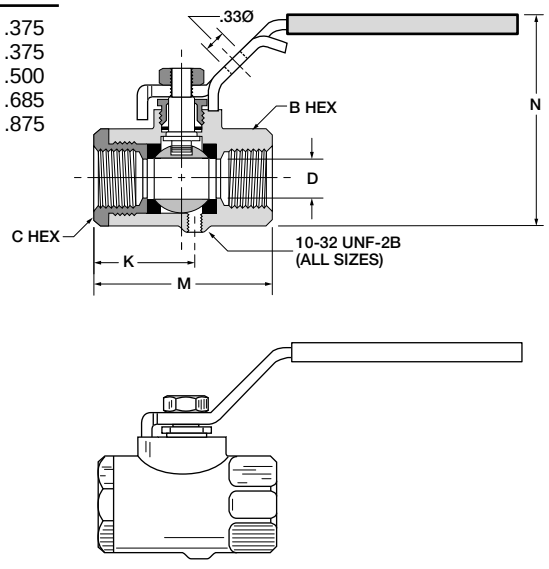
Female-Female Pipe Ends XV500P-20, XV500P-24, XV500P-32

PART NO.	PIPE THREAD [NPT]	OCTAGON	H	L	M	N	FLOW DIA.D
XV500P-20	1-1/4	1.93	6.22	8.05	3.66	3.01	1.18
XV500P-24	1-1/2	2.13	6.22	8.23	4.02	3.25	1.50
XV500P-32	2	2.69	6.22	8.58	4.76	3.52	1.89



Vented, Female Pipe Ends XVV500P

PART NO.	PIPE THREAD	B HEX	C HEX	K	H	L	M	N	D FLOW Ø
XVV500P-4	1/4	15/16	15/16	1.11	3.96	4.90	2.03	2.47	.375
XVV500P-6	3/8	15/16	15/16	1.11	3.96	4.90	2.03	2.47	.375
XVV500P-8	1/2*	1-1/16	1-1/16	1.23	3.96	5.00	2.20	2.58	.500
XVV500P-12	3/4**	1-1/4	1-5/16	1.45	3.96	5.25	2.42	2.81	.685
XVV500P-16	1**	1-1/2	1-9/16	1.58	3.96	5.34	2.75	3.08	.875



*PTF special short. **PTF special extra short

K

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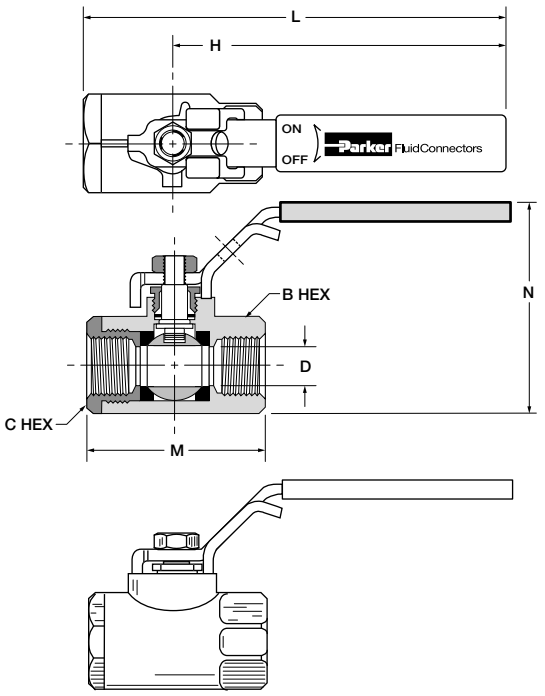
Otsego, Michigan

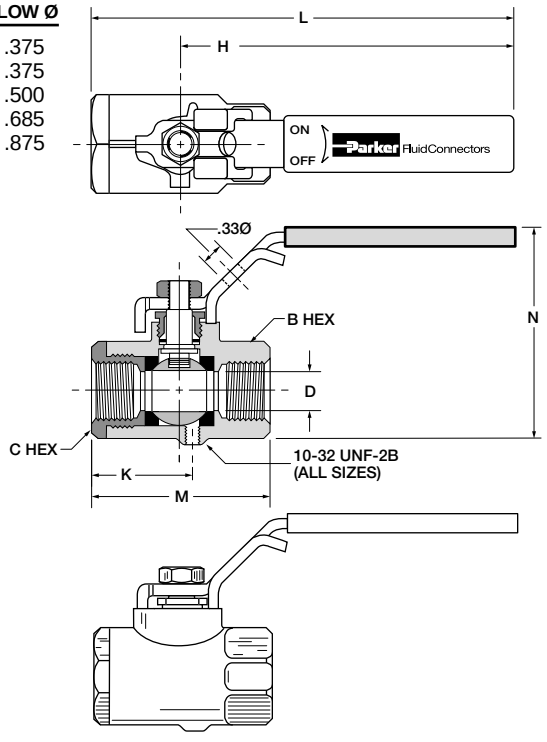
Locking Handle, Female Pipe Ends XVP500P

PART NO.	PIPE THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XVP500P-4	1/4	15/16	15/16	3.96	4.90	2.03	2.47	.375
XVP500P-6	3/8	15/16	15/16	3.96	4.90	2.03	2.47	.375
XVP500P-8	1/2*	1-1/16	1-1/16	3.96	5.00	2.20	2.58	.500
XVP500P-12	3/4**	1-1/4	1-5/16	3.96	5.25	2.42	2.81	.685
XVP500P-16	1**	1-1/2	1-9/16	3.96	5.34	2.75	3.08	.875
For use with 5/16" Ø shank lock; .33Ø								
XVP500P-20	1-1/4	1-15/16	1-15/16	6.22	8.05	3.66	4.04	1.180
XVP500P-24	1-1/2	2-1/8	2-1/8	6.22	8.23	4.02	4.52	1.500
XVP500P-32	2	2-11/16	2-11/16	6.22	8.60	4.76	5.07	1.890
For use with 9/32" Ø shank lock; .31Ø								



OSHA 29 CFR Part 1910 Vented, Locking Handle, Female Pipe Ends XVVP500P

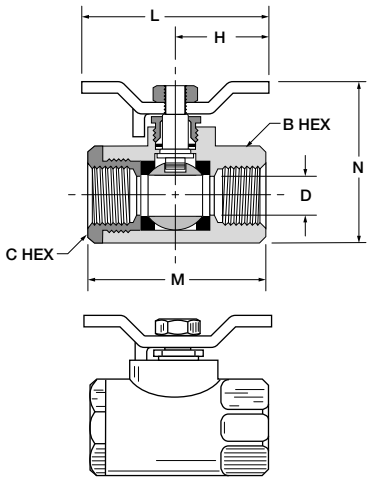
PART NO.	PIPE THREAD	B HEX	C HEX	K	H	L	M	N	D FLOW Ø
XVVP500P-4	1/4	15/16	15/16	1.11	3.96	4.90	2.03	2.47	.375
XVVP500P-6	3/8	15/16	15/16	1.11	3.96	4.90	2.03	2.47	.375
XVVP500P-8	1/2*	1-1/16	1-1/16	1.23	3.96	5.00	2.20	2.58	.500
XVVP500P-12	3/4**	1-1/4	1-5/16	1.45	3.96	5.25	2.42	2.81	.685
XVVP500P-16	1**	1-1/2	1-9/16	1.58	3.96	5.34	2.75	3.08	.875
For use with 5/16" Ø shank lock									



*PTF special short. **PTF special extra short

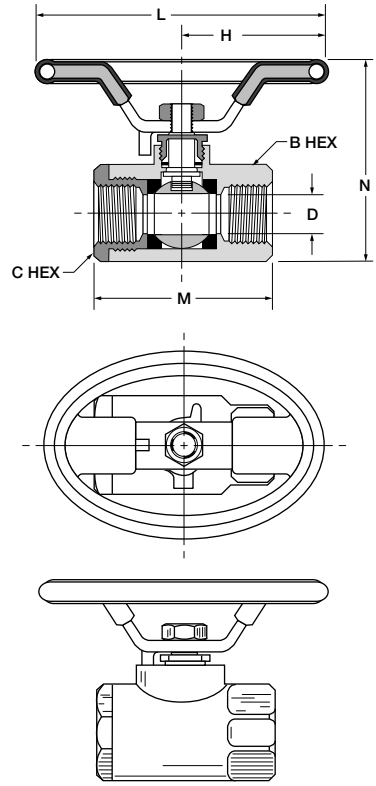
Tee Handle, Female Pipe Ends XV500P-X-04

PART NO.	PIPE THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV500P-4-04	1/4	15/16	15/16	1.25	2.50	2.03	1.87	.375
XV500P-6-04	3/8	15/16	15/16	1.25	2.50	2.03	1.87	.375
XV500P-8-04	1/2*	1-1/16	1-1/16	1.25	2.50	2.20	1.98	.500
XV500P-12-04	3/4**	1-1/4	1-5/16	1.25	2.50	2.42	2.20	.685
XV500P-16-04	1**	1-1/2	1-9/16	1.25	2.50	2.75	2.48	.875



Oval Handle, Female Pipe Ends XV500P-X-21

PART NO.	PIPE THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV500P-4-21	1/4	15/16	15/16	1.74	3.49	2.03	2.38	.375
XV500P-6-21	3/8	15/16	15/16	1.74	3.49	2.03	2.38	.375
XV500P-8-21	1/2*	1-1/16	1-1/16	1.74	3.49	2.20	2.49	.500
XV500P-12-21	3/4**	1-1/4	1-5/16	1.74	3.48	2.42	2.71	.685
XV500P-16-21	1**	1-1/2	1-9/16	1.74	3.48	2.75	2.99	.875



*PTF special short. **PTF special extra short

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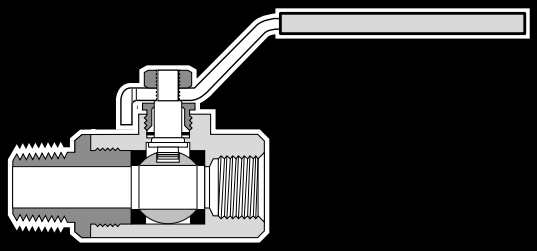


Male/Female Ball Valves Series 501

Advantages

Parker's forged body ball valve provides extended service life and resists failure caused by severe temperature applications. Optimum flow design assures maximum system efficiency. Highly inert PTFE seats and seals provide resistance to chemical corrosion. Parker also provides a blow-out proof stem, chrome plated brass ball and a specially designed handle enabling increased turning leverage for ease of opening and closing. Parker's ball valve can be readily identified assuring high quality engineering and reliability. This economical ball valve is available in 1/4", 3/8", 1/2", 3/4" and 1" female/male pipe sizes. Parker's ball valve bodies are machined from high quality CA 377 forgings.

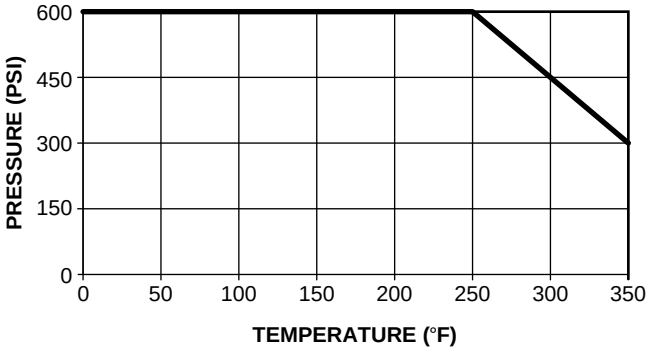
Applications

Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle.

For use as fuel line shutoffs for gasoline and diesel powered over highway, off highway, and construction equipment vehicles. Water and air service lines on capital equipment and plant design plumbing that require total shutoff capability.

Working Pressure and Temperatures

Saturated steam service up to 150 PSI and 400° F
Vacuum, 29 Inches of Mercury
Vented up to 250 PSI



Operating Instructions

Quarter turn is "ON" or "OFF".
(Provides positive stop action for full shutoff.)

NOTE: PERIODICALLY CHECK THE ADJUSTABLE PACKING NUT AND TIGHTEN AS REQUIRED.

Style	Type	Material	Size	Options
V	501	P	-4	-00
Style	V-Valve VP-Valve, Padlocking Handle VV-Valve, Vented VVP-Valve, Vented, Padlocking Handle			
Type	501-Male/Female PTF Ports			
Material	P- Brass PN-Nickel Plated			
Size	4-1/4" 6-3/8" 8-1/2" 12-3/4" 16-1"			
Options	01-Stainless Steel Ball & Stem 02-Stainless Steel Handle & Nut 03-Stainless Steel Ball, Stem, Handle & Nut 04-Tee Handle 08-Unmarked Yellow Vinyl Handle Cover 21-Oval Handle			

Flow Data

VALVE SIZE	CV
1/4	6.3
3/8	5.7
1/2	10.0
3/4	25.0
1	35.0

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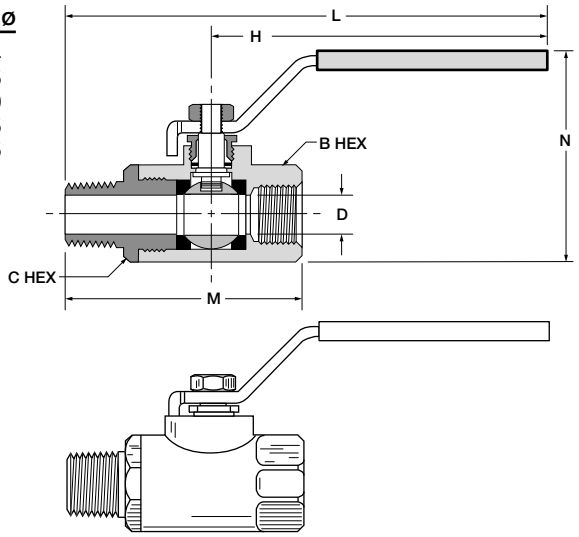
Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

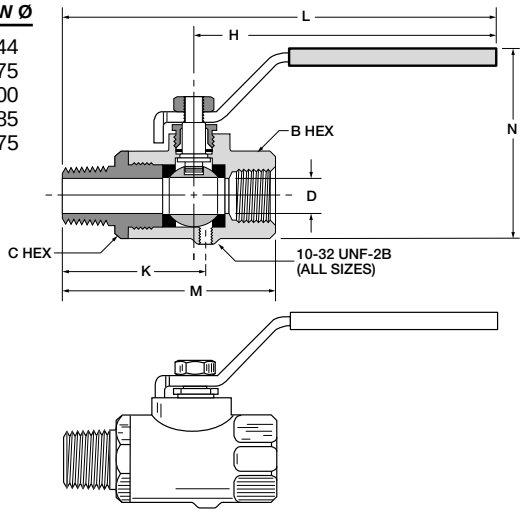
Male-Female Pipe Ends XV501P

PART NO.	PIPE THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV501P-4	1/4	15/16	15/16	3.96	5.46	2.59	2.47	.344
XV501P-6	3/8	15/16	15/16	3.96	5.46	2.59	2.47	.375
XV501P-8	1/2*	1-1/16	1-1/16	3.96	5.75	2.94	2.58	.500
XV501P-12	3/4**	1-1/4	1-5/16	3.96	5.83	3.00	2.81	.685
XV501P-16	1**	1-1/2	1-9/16	3.96	6.19	3.60	3.08	.875



Vented, Male-Female Pipe Ends XVV501P

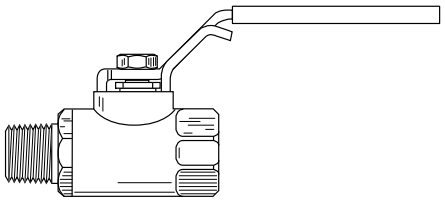
PART NO.	PIPE THREAD	B HEX	C HEX	K	H	L	M	N	D FLOW Ø
XVV501P-4	1/4	15/16	15/16	1.67	3.96	5.46	2.59	2.47	.344
XVV501P-6	3/8	15/16	15/16	1.67	3.96	5.46	2.59	2.47	.375
XVV501P-8	1/2*	1-1/16	1-1/16	1.98	3.96	5.75	2.95	2.58	.500
XVV501P-12	3/4**	1-1/4	1-5/16	2.03	3.96	5.83	3.00	2.81	.685
XVV501P-16	1**	1-1/2	1-9/16	2.43	3.96	6.19	3.60	3.08	.875

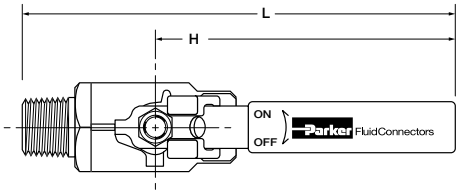


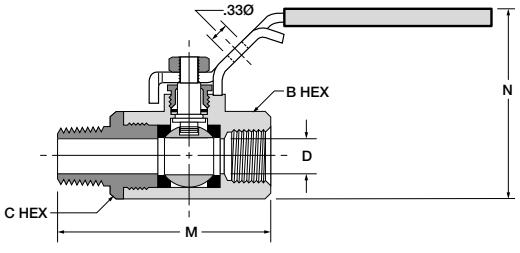
Locking Handle, Male-Female Pipe Ends XVP501P

PART NO.	PIPE THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XVP501P-4	1/4	15/16	15/16	3.96	5.46	2.59	2.47	.344
XVP501P-6	3/8	15/16	15/16	3.96	5.46	2.59	2.47	.375
XVP501P-8	1/2*	1-1/16	1-1/16	3.96	5.75	2.95	2.58	.500
XVP501P-12	3/4**	1-1/4	1-5/16	3.96	5.83	3.00	2.81	.685
XVP501P-16	1**	1-1/2	1-9/16	3.96	6.19	3.60	3.08	.875

For use with 5/16" Ø shank lock







*PTF special short. **PTF special extra short

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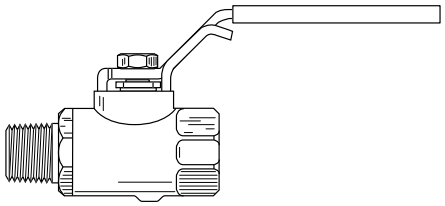
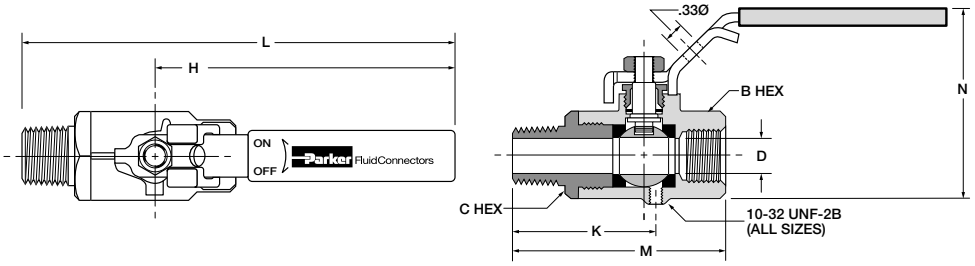
Otsego, Michigan

OSHA 29 CFR Part 1910
Vented, Locking Handle, Male-Female Pipe Ends XVVP501P

PART NO.	PIPE THREAD	B HEX	C HEX	K	H	L	M	N	D FLOW Ø
XVVP501P-4	1/4	15/16	15/16	1.67	3.96	5.46	2.59	2.47	.344
XVVP501P-6	3/8	15/16	15/16	1.67	3.96	5.46	2.59	2.47	.375
XVVP501P-8	1/2*	1-1/16	1-1/16	1.98	3.96	5.75	2.95	2.58	.500
XVVP501P-12	3/4**	1-1/4	1-5/16	2.03	3.96	5.83	3.00	2.81	.685
XVVP501P-16	1**	1-1/2	1-9/16	2.43	3.96	6.19	3.60	3.08	.875

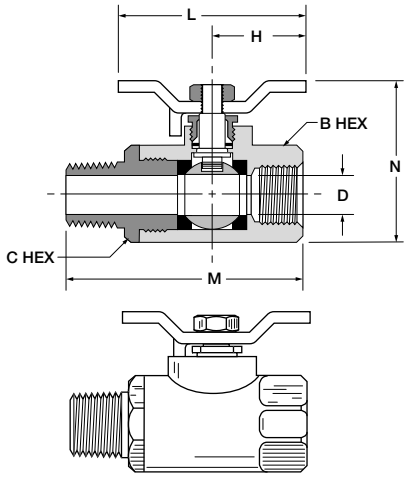
For use with 5/16" Ø shank lock





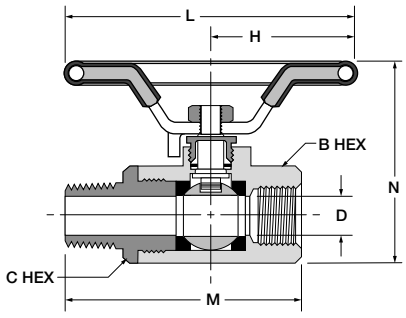
Tee Handle, Male-Female Pipe Ends XV501P-X-04

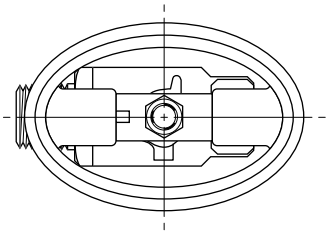
PART NO.	PIPE THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV501P-4-04	1/4	15/16	15/16	1.25	2.50	2.59	1.87	.344
XV501P-6-04	3/8	15/16	15/16	1.25	2.50	2.59	1.87	.375
XV501P-8-04	1/2*	1-1/16	1-1/16	1.25	2.50	2.95	1.98	.500
XV501P-12-04	3/4**	1-1/4	1-5/16	1.25	2.50	3.00	2.20	.685
XV501P-16-04	1**	1-1/2	1-9/16	1.25	2.50	3.60	2.48	.875

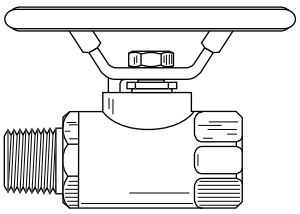


Oval Handle, Male-Female Pipe Ends XV501P-X-21

PART NO.	PIPE THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV501P-4-21	1/4	15/16	15/16	1.74	3.49	2.59	2.38	.344
XV501P-6-21	3/8	15/16	15/16	1.74	3.49	2.59	2.38	.375
XV501P-8-21	1/2*	1-1/16	1-1/16	1.74	3.49	2.95	2.49	.500
XV501P-12-21	3/4**	1-1/4	1-5/16	1.74	3.48	3.00	2.71	.685
XV501P-16-21	1**	1-1/2	1-9/16	1.74	3.48	3.60	2.99	.875







*PTF special short. **PTF special extra short

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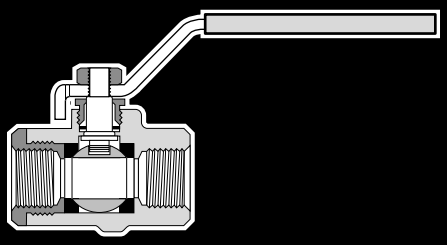


Brass Panel Mount Ball Valves Series 502

Advantages

Parker's forged body ball valve provides extended service life and resists failure caused by severe temperature applications. Optimum flow design assures maximum system efficiency. Highly inert PTFE seats and seals provide resistance to chemical corrosion. Parker also provides a blow-out proof stem, chrome plated brass ball and a specially designed handle enabling increased turning leverage for ease of opening and closing. Parker's ball valve can be readily identified assuring high quality engineering and reliability. This economical ball valve is available in female pipe sizes. Parker's ball valve bodies are machined from high quality CA 377 forgings.

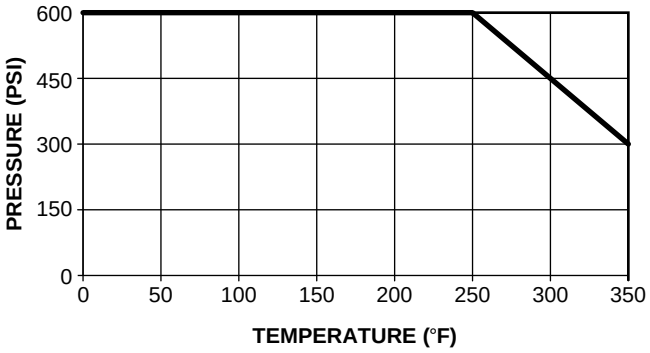
Applications

Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle.

For use as fuel line shutoffs for gasoline and diesel powered over the highway, off highway, and construction equipment vehicles. Water and air service lines on capital equipment and plant design plumbing that require total shutoff capability.

Working Pressure and Temperature

Saturated steam service up to 150 PSI and 400° F
Vacuum, 29 Inches of Mercury
Vented up to 250 PSI



Operating Instructions

Quarter turn is "ON" or "OFF".
(Provides positive stop action for full shutoff.)

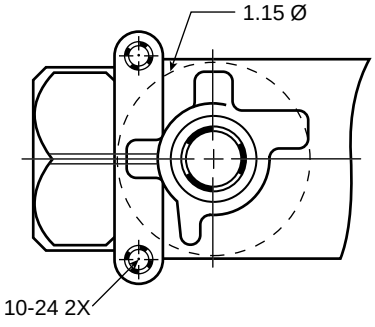
NOTE: PERIODICALLY CHECK THE ADJUSTABLE PACKING NUT AND TIGHTEN AS REQUIRED.

Style	Type	Material	Size	Options
V	502	P	-4	-00
Style	V-Valve VP-Valve, Padlocking Handle VV-Valve, Vented VVP-Valve, Vented, Padlocking Handle			
Type	502-Female/Female PTF Ports			
Material	P- Brass PN-Nickel Plated			
Size	4-1/4" 6-3/8" 8-1/2" 12-3/4" 16-1"			
Options	01-Stainless Steel Ball & Stem 02-Stainless Steel Handle & Nut 03-Stainless Steel Ball, Stem, Handle & Nut 04-Tee Handle 08-Unmarked Yellow Vinyl Handle Cover 21-Oval Handle			

Flow Data

VALVE SIZE	CV
1/4	4.0
3/8	5.8
1/2	12.0
3/4	25.0
1	35.0

Mounting detail for all sizes



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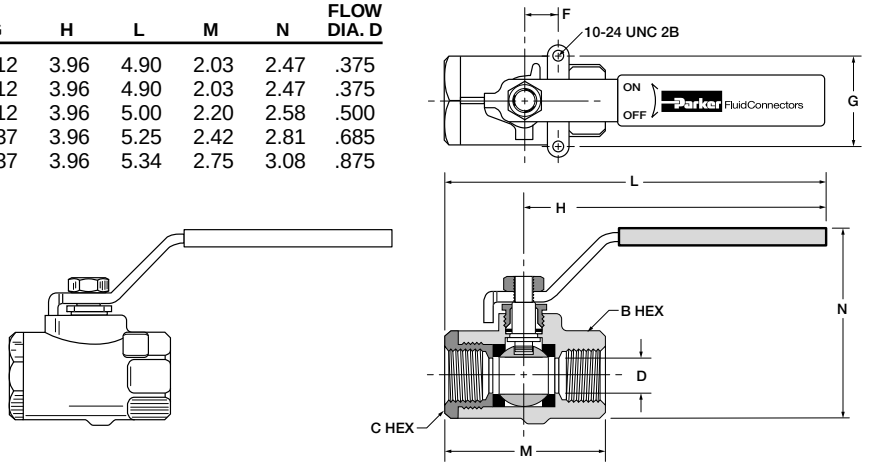
Otsego, Michigan

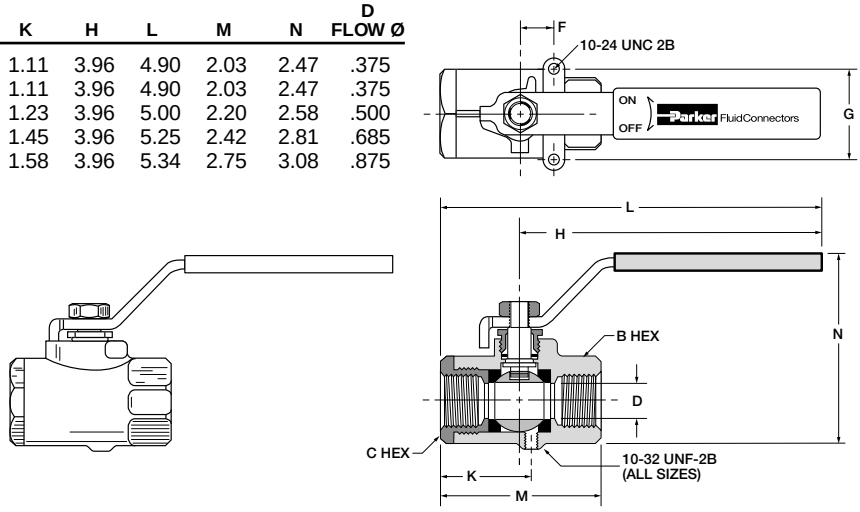
Female-Female Pipe Ends, Panel Mount XV502P

PART NO.	PIPE THD.	B HEX	C HEX	F	G	H	L	M	N	FLOW DIA. D
XV502P-4	1/4	15/16	15/16	.50	1.12	3.96	4.90	2.03	2.47	.375
XV502P-6	3/8	15/16	15/16	.50	1.12	3.96	4.90	2.03	2.47	.375
XV502P-8	1/2*	1-1/16	1-1/16	.50	1.12	3.96	5.00	2.20	2.58	.500
XV502P-12†	3/4**	1-1/4	1-5/16	.87	1.37	3.96	5.25	2.42	2.81	.685
XV502P-16†	1**	1-1/2	1-9/16	.87	1.37	3.96	5.34	2.75	3.08	.875



Vented, Female-Female Pipe Ends, Panel Mount XVV502P

PART NO.	PIPE THD.	B HEX	C HEX	F	G	K	H	L	M	N	D FLOW Ø
XVV502P-4	1/4	15/16	15/16	.50	1.12	1.11	3.96	4.90	2.03	2.47	.375
XVV502P-6	3/8	15/16	15/16	.50	1.12	1.11	3.96	4.90	2.03	2.47	.375
XVV502P-8	1/2*	1-1/16	1-1/16	.50	1.12	1.23	3.96	5.00	2.20	2.58	.500
XVV502P-12	3/4**	1-1/4	1-5/16	.87	1.37	1.45	3.96	5.25	2.42	2.81	.685
XVV502P-16	1**	1-1/2	1-9/16	.87	1.37	1.58	3.96	5.34	2.75	3.08	.875



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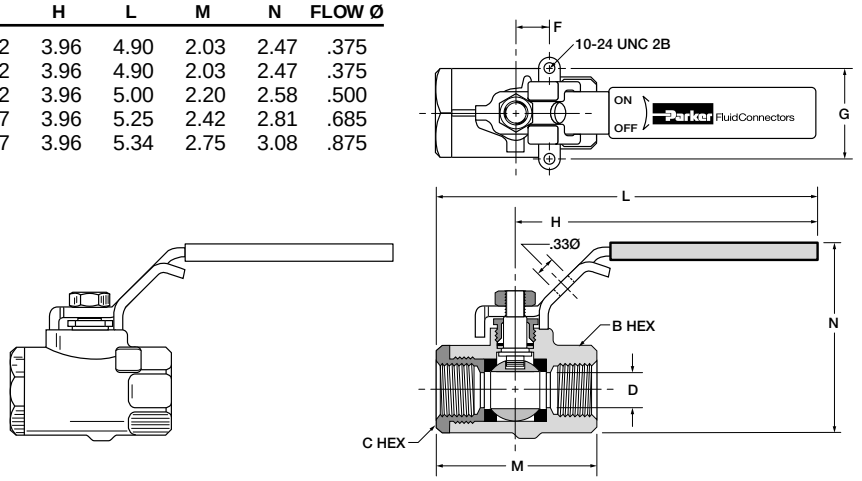
Locking Handle, Female Pipe Ends, PanelMount XVP502P

PART NO.	PIPE THD.	B HEX	C HEX	F	G	H	L	M	N	D FLOW Ø
XVP502P-4	1/4	15/16	15/16	.50	1.12	3.96	4.90	2.03	2.47	.375
XVP502P-6	3/8	15/16	15/16	.50	1.12	3.96	4.90	2.03	2.47	.375
XVP502P-8	1/2*	1-1/16	1-1/16	.50	1.12	3.96	5.00	2.20	2.58	.500
XVP502P-12	3/4**	1-1/4	1-5/16	.87	1.37	3.96	5.25	2.42	2.81	.685
XVP502P-16	1**	1-1/2	1-9/16	.87	1.37	3.96	5.34	2.75	3.08	.875

For use with 5/16" Ø shank lock



*PTF special short. **PTF special extra short

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Otsego, Michigan

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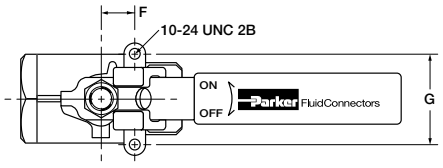
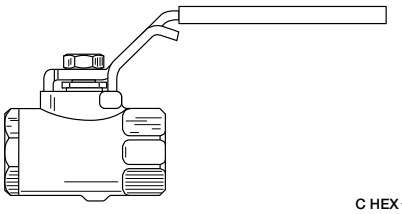
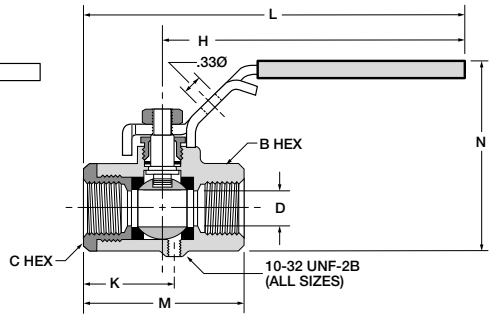
Vented, Locking Handle, Female Pipe Ends, Panel Mount XVVP502P

PART NO.	PIPE THD.	B HEX	C HEX	F	G	K	H	L	M	N	D FLOW Ø
XVVP502P-4	1/4	15/16	15/16	.50	1.12	1.11	3.96	4.90	2.03	2.47	.375
XVVP502P-6	3/8	15/16	15/16	.50	1.12	1.11	3.96	4.90	2.03	2.47	.375
XVVP502P-8	1/2*	1-1/16	1-1/16	.50	1.12	1.23	3.96	5.00	2.20	2.58	.500
XVVP502P-12	3/4**	1-1/4	1-5/16	.87	1.37	1.45	3.96	5.25	2.42	2.81	.685
XVVP502P-16	1**	1-1/2	1-9/16	.87	1.37	1.58	3.96	5.34	2.75	3.08	.875

For use with 5/16" Ø shank lock

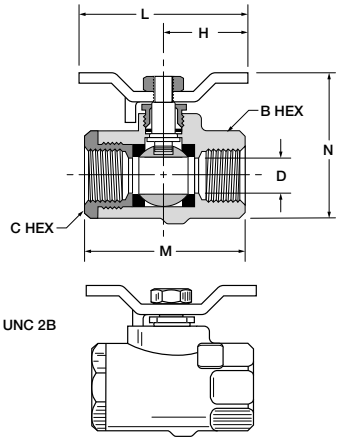






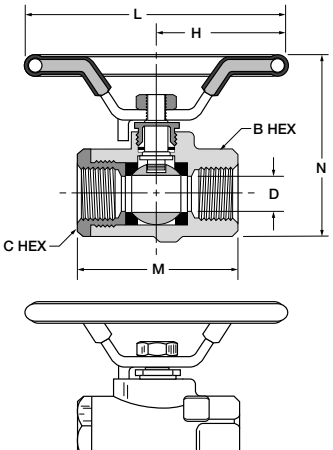
Tee Handle, Female Pipe Ends, Panel Mount XV502P-X-04

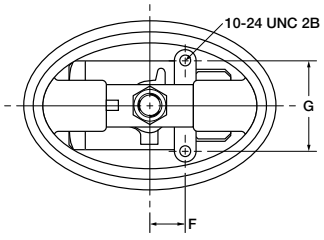
PART NO.	PIPE THD.	B HEX	C HEX	F	G	H	L	M	N	D FLOW Ø
XV502P-4-04	1/4	15/16	15/16	.50	1.12	1.25	2.50	2.03	1.87	.375
XV502P-6-04	3/8	15/16	15/16	.50	1.12	1.25	2.50	2.03	1.87	.375
XV502P-8-04	1/2*	1-1/16	1-1/16	.50	1.12	1.25	2.50	2.20	1.98	.500
XV502P-12-04	3/4**	1-1/4	1-5/16	.87	1.37	1.25	2.50	2.42	2.20	.685
XV502P-16-04	1**	1-1/2	1-9/16	.87	1.37	1.25	2.50	2.75	2.48	.875



Oval Handle, Female Pipe Ends, Panel Mount XV502P-X-21

PART NO.	PIPE THD.	B HEX	C HEX	F	G	H	L	M	N	D FLOW Ø
XV502P-4-21	1/4	15/16	15/16	.50	1.12	1.74	3.49	2.03	2.38	.375
XV502P-6-21	3/8	15/16	15/16	.50	1.12	1.74	3.49	2.03	2.38	.375
XV502P-8-21	1/2*	1-1/16	1-1/16	.50	1.12	1.74	3.49	2.20	2.49	.500
XV502P-12-21	3/4**	1-1/4	1-5/16	.87	1.37	1.74	3.48	2.42	2.71	.685
XV502P-16-21	1**	1-1/2	1-9/16	.87	1.37	1.74	3.48	2.75	2.99	.875





*PTF special short. **PTF special extra short

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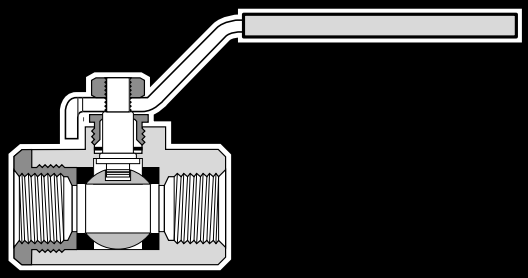
Otsego, Michigan



Female/Female Straight Thread Brass Ball Valve Series 506

Advantages

Parker's forged body ball valve provides extended service life and resists failure caused by severe temperature applications. Optimum flow design assures maximum system efficiency. Highly inert PTFE seats and seals provide resistance to chemical corrosion. Parker also provides a blow-out proof stem, chrome plated brass ball and a specially designed handle enabling increased turning leverage for ease of opening and closing. Parker's ball valve can be readily identified assuring high quality engineering and reliability. This ball valve is available in 1/4" through 2" female straight thread sizes. Parker's ball valve bodies are machined from high quality CA 377 forgings.

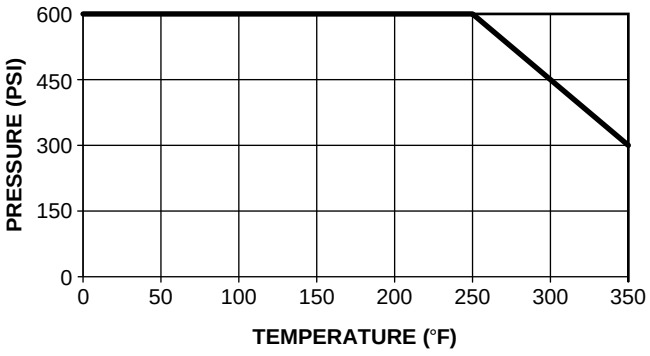
Applications

Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle.

For use on construction equipment, chemical processing, plastic and rubber manufacturing, pumps and specialized industrial machinery requiring total shut-off capability.

Working Pressure and Temperature

Saturated steam service up to 150 PSI and 400° F
Vacuum, 29 Inches of Mercury



Operating Instructions

Quarter turn is "ON" or "OFF".
(Provides positive stop action for full shutoff.)

NOTE: PERIODICALLY CHECK THE ADJUSTABLE PACKING NUT AND TIGHTEN AS REQUIRED.

Style	Type	Material	Size	Options
V	**506**	**P**	**-4**	**-00**
Style	V-Valve VP-Valve, Padlocking Handle			
Type	506 Female/Female			
Material	P- Brass			
Size	4-1/4" 6-3/8" 8-1/2" 12-3/4" 16-1"			
Options	01-Stainless Steel Ball & Stem 02-Stainless Steel Handle & Nut 03-Stainless Steel Ball, Stem, Handle & Nut 04-Tee Handle 08-Unmarked Yellow Vinyl Handle Cover 21-Oval Handle			

Flow Data

VALVE SIZE	CV
1/4	4.0
3/8	5.8
1/2	12.0
3/4	25.0
1	35.0

Style	Type	Material	Size
V	**506**	**P**	**-20**
Style	V-Valve		
Type	506 Female/Female		
Material	P- Brass		
Size	20 - 1 1/4" 24 - 1 1/2" 32 - 2"		

Flow Data

VALVE SIZE	CV
1-1/4	57.0
1-1/2	92.0
2	224.0

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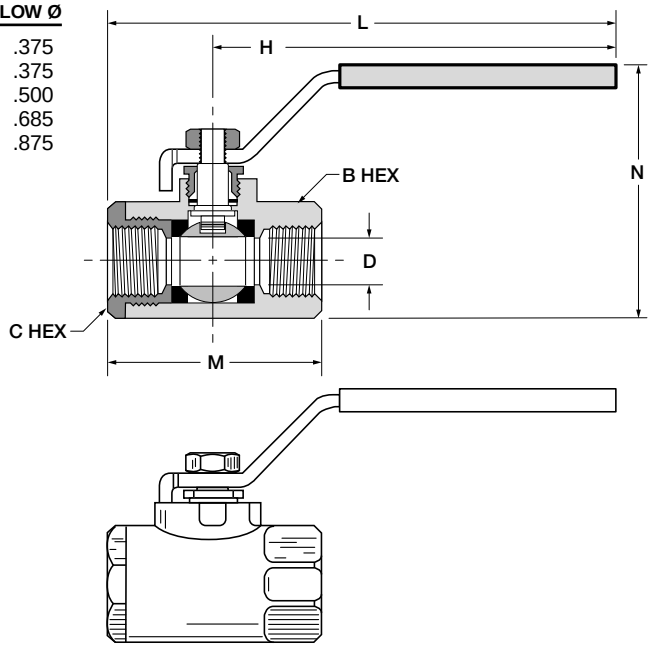
Otsego, Michigan

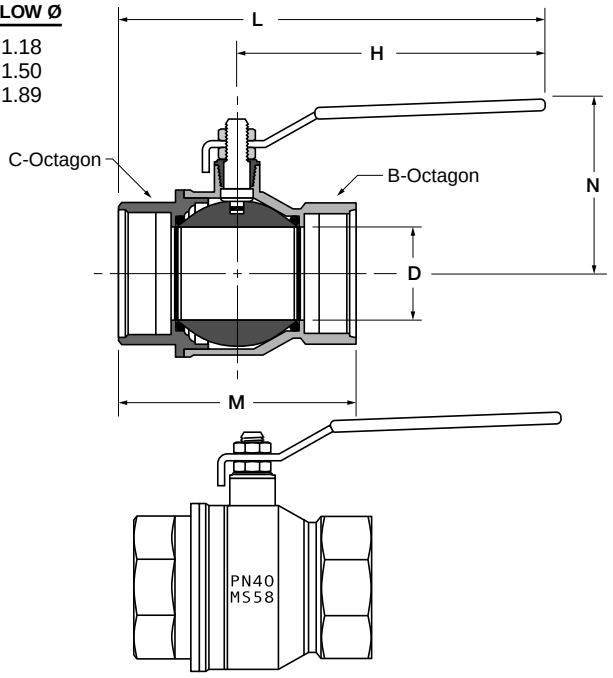
Female/Female, Straight Thread O-Ring Port XV506P

PART NO.	STRT. THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV506P-4	7/16-20	15/16	15/16	3.96	5.01	2.20	2.47	.375
XV506P-6	9/16-18	15/16	15/16	3.96	5.07	2.26	2.47	.375
XV506P-8	3/4-16	1-1/16	1-1/16	3.96	5.18	2.42	2.60	.500
XV506P-12	1-1/16-12	1-1/4	1-5/16	3.96	5.87	3.46	2.81	.685
XV506P-16	1-5/16-12	1-1/2	1-9/16	3.96	5.96	3.68	3.08	.875



Female/Female, Straight Thread O-Ring Port XV506P-20, XV506P-24, XV506P-32

PART NO.	STRT. THREAD	B OCT	C OCT	H	L	M	N	D FLOW Ø
XV506P-20	1 5/8-12	1.93	1.93	6.22	8.05	3.66	3.01	1.18
XV506P-24	1 7/8-12	2.13	2.13	6.22	8.23	4.02	3.25	1.50
XV506P-32	2 1/2-12	2.85	2.85	6.22	8.60	4.76	3.52	1.89



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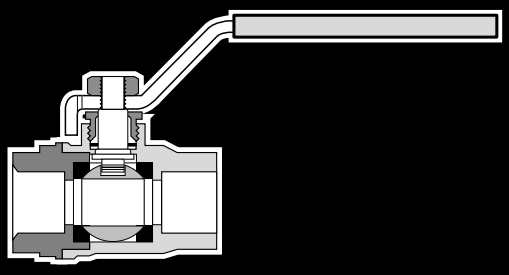


Solder End Ball Valves Series 509

Advantages

Parker forged body ball valve provides extended service life and resists failure caused by severe temperature applications. Optimum flow design assures maximum system efficiency. Highly inert PTFE seats and seals provide resistance to chemical corrosion. Parker also provides a blow-out proof stem, chrome plated brass ball and a specially designed handle enabling increased turning leverage for ease of opening and closing. The Parker series 509 is designed to be soft soldered into lines without disassembly. This allows the valve to be installed without disturbing the seats and seals in any way.

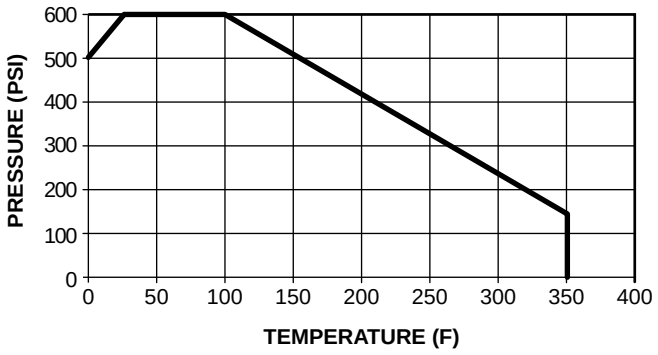
Applications

Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle.

These valves are ideal for water and air service lines on capital equipment and plant design plumbing that require total shut-off capability. Use with ASTM B88 copper water tubing.

Working Pressure and Temperature

Saturated steam service up to 150 PSI and 400° F. Solder temperature not to exceed 470ºF.



Operating Instructions

Quarter turn is "ON" or "OFF".
(Provides positive stop action for full shutoff.)

NOTE: PERIODICALLY CHECK THE ADJUSTABLE PACKING NUT AND TIGHTEN AS REQUIRED.

	Melting Range	Working Temp.	Maximum Working Pressure (PSI)	
Joining Material	Degrees F	Degrees F	Size 1/2"-1"	Size 1-1/4"-2"
50-50 Tin-Lead Solder	361-421	100 150 200 250	200 150 100 85	175 125 90 75
95-5 Tin Antimony Solder	450-464	100 150 200 250	400 400 300 200	400 350 250 175

Style	Type	Material	Size
V	**509**	**P**	**-4**
Style	V-Valve		
Type	509-Solder Ends		
Material	P- Brass		
Size	8-1/2" 12-3/4" 16-1" 20-1 1/4" 24-1 1/2" 32-2"		

Flow Data

VALVE SIZE	CV
1/2"	26
3/4"	69
1"	91
1 1/4"	127
1 1/2"	299
2"	425

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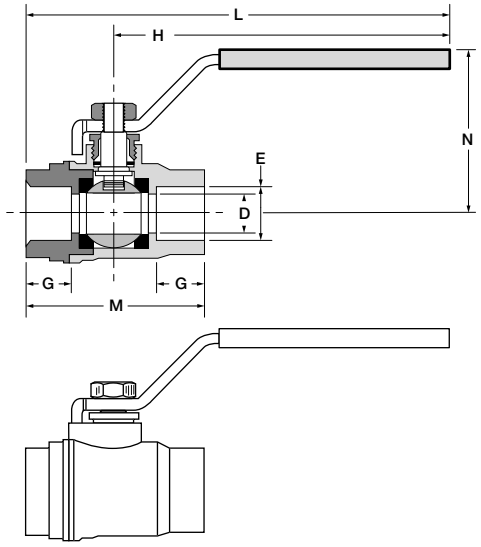
Solder Cup Ends XV509P

PART NO.	TUBE SIZE	E	G	H	L	M	N	FLOW DIA. D
XV509P-8	1/2	.630	.49	3.94	5.00	2.24	1.69	.55
XV509P-12	3/4	.877	.75	4.72	6.10	2.85	1.97	.75
XV509P-16	1	1.128	.90	4.72	6.40	3.35	2.13	.94
XV509P-20	1 1/4	1.378	.96	6.22	8.13	3.82	3.01	1.18
XV509P-24	1 1/2	1.628	1.00	6.22	8.46	4.49	3.25	1.50
XV509P-32	2	2.128	1.10	6.22	8.94	5.43	3.52	1.89



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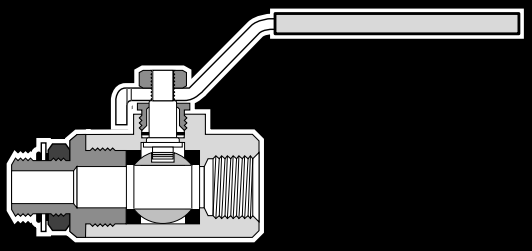


Male/Female Straight Thread Ball Valves Series 510

Advantages

Parker's forged body ball valve provides extended service life and resists failure caused by severe temperature applications. Optimum flow design assures maximum system efficiency. Highly inert PTFE seats and seals provide resistance to chemical corrosion. Parker also provides a blow-out proof stem, chrome plated brass ball and a specially designed handle enabling increased turning leverage for ease of opening and closing. Parker's ball valve can be readily identified assuring high quality engineering and reliability. This economical ball valve is available in 1/4", 3/8", 1/2", 5/8", 3/4" and 1" male/female straight thread sizes. Parker's ball valve bodies are machined from high quality CA 377 forgings.

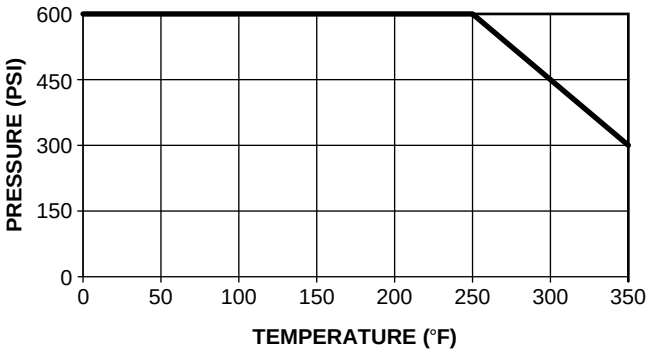
Applications

Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle.

For use on construction equipment, chemical processing, plastic and rubber manufacturing, pumps and specialized industrial machinery requiring total shut-off capability.

Working Pressure and Temperature

Saturated steam service up to 150 PSI and 400° F
Vacuum, 29 Inches of Mercury
Vented up to 250 PSI



Operating Instructions

Quarter turn is "ON" or "OFF".
(Provides positive stop action for full shutoff.)

NOTE: PERIODICALLY CHECK THE ADJUSTABLE PACKING NUT AND TIGHTEN AS REQUIRED.

Style	Type	Material	Size	Options
V	**510**	**P**	**-4**	**-00**
Style	V-Valve VP-Valve, Padlocking Handle			
Type	510 Male/Female Straight Thread O-Ring			
Material	P- Brass			
Size	4-1/4" 6-3/8" 8-1/2" 12-3/4" 16-1"			
Options	01-Stainless Steel Ball & Stem 02-Stainless Steel Handle & Nut 04-Tee Handle 08-Unmarked Yellow Vinyl Handle Cover 21-Oval Handle			

Flow Data

VALVE SIZE	CV
1/4	0.8
3/8	2.1
1/2	5.3
5/8	7.6
3/4	13.0
1	33.0

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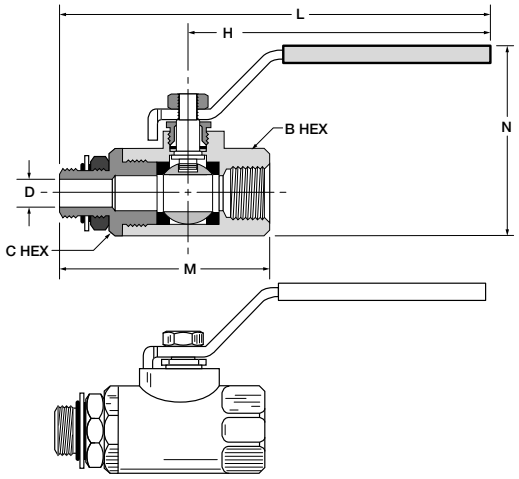
Male-Female, Straight Thread O-Ring Port XV510P

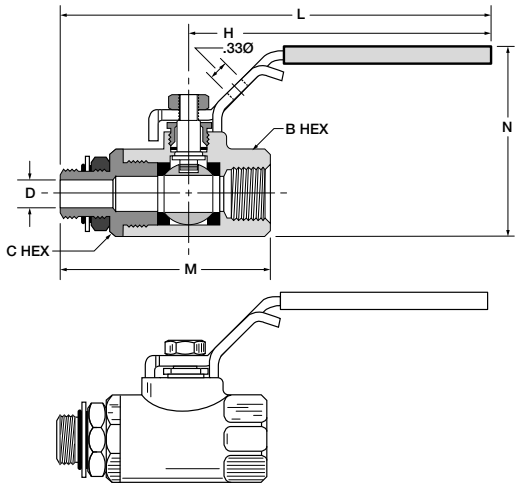
PART NO.	STRT. THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV510P-4	7/16-20	15/16	15/16	3.96	5.61	2.85	2.47	.188
XV510P-6	9/16-18	15/16	15/16	3.96	5.68	2.92	2.47	.281
XV510P-8	3/4-16	1-1/16	1-1/16	3.96	5.88	3.17	2.58	.422
XV510P-10	7/8-14	1-1/4	1-5/16	3.96	6.31	3.90	2.81	.500
XV510P-12	1-1/16-12	1-1/4	1-5/16	3.96	6.44	4.03	2.81	.656
XV510P-16	1-5/16-12	1-1/2	1-9/16	3.96	6.56	4.28	3.08	.875



Locking Handle, Straight Thread O-Ring Port XVP510P

PART NO.	STRT. THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XVP510P-4	7/16-20	15/16	15/16	3.96	5.61	2.85	2.47	.188
XVP510P-6	9/16-18	15/16	15/16	3.96	5.68	2.92	2.47	.281
XVP510P-8	3/4-16	1-1/16	1-1/16	3.96	5.88	3.17	2.58	.422
XVP510P-10	7/8-14	1-1/4	1-5/16	3.96	6.31	3.90	2.81	.500
XVP510P-12	1-1/16-12	1-1/4	1-5/16	3.96	6.44	4.03	2.81	.656

For use with 5/16" Ø shank lock



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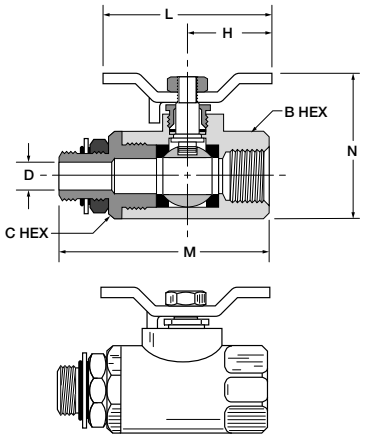
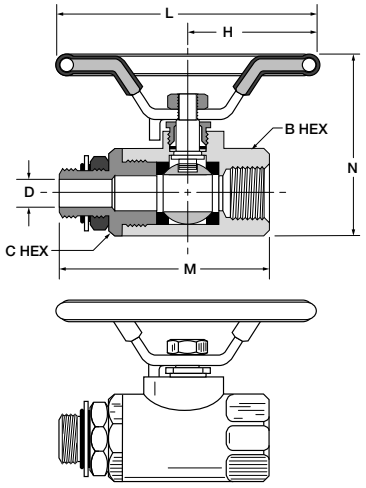
Tee Handle, Straight Thread O-Ring Port XV510P-X-04

PART NO.	STRT. THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV510P-4-04	7/16-20	15/16	15/16	1.25	2.50	2.85	1.87	.188
XV510P-6-04	9/16-18	15/16	15/16	1.25	2.50	2.92	1.87	.281
XV510P-8-04	3/4-16	1-1/16	1-1/16	1.25	2.50	3.17	1.98	.422
XV510P-10-04	7/8-14	1-1/4	1-5/16	1.25	2.50	3.90	2.20	.500
XV510P-12-04	1-1/16-12	1-1/4	1-5/16	1.25	2.50	4.03	2.20	.656
XV510P-16-04	1-5/16-12	1-1/2	1-9/16	1.25	2.50	4.28	2.48	.875



Oval Handle, Straight Thread O-Ring Port XV510P-X-21

PART NO.	STRT. THREAD	B & C HEX	H	L	M	N	D FLOW Ø
XV510P-4-21	7/16-20	15/16	1.74	3.49	2.85	2.38	.188
XV510P-6-21	9/16-18	15/16	1.74	3.49	2.92	2.38	.281
XV510P-8-21	3/4-16	1 1/16	1.74	3.49	3.17	2.49	.422



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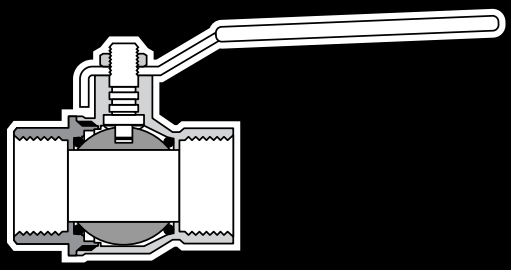


Brass Ball Valves Series 520

Advantages

Parker's forged body ball valve provides extended service life and resists failure caused by severe temperature applications. Full flow design assures maximum system efficiency. Highly inert PTFE seats provide resistance to chemical corrosion. Two Fluorocarbon o-rings at the stem provide maximum safety with no maintence. The blow-out proof stem, chrome plated brass ball and a specially designed handle enable increased turning leverage for ease of opening and closing. Parker's ball valve can be readily identified, assuring high quality engineering and reliability. This economical ball valve is available in female pipe sizes.

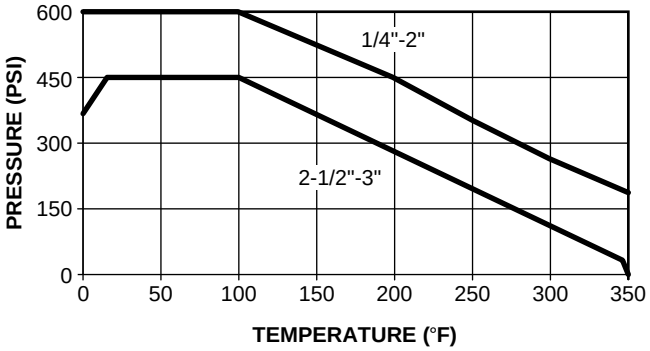
Applications

Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle.

For use as shutoffs for highway, off highway, and construction equipment vehicles. Water and air service lines on capital equipment and plant design plumbing that require total shutoff capability.

Working Pressure and Temperature

Saturated steam service up to 150 PSI and 350° F
Vacuum, 29 Inches of Mercury



Style	Type	Material	Size
V	**520**	**P**	**-4**
Style	V-Valve		
Type	520-Female/Female NPT Ports		
Material	P- Brass		
Size	4-1/4" 6-3/8" 8-1/2" 12-3/4" 16-1"	20-1 1/4" 24-1 1/2" 32-2"	
Options	04-Tee Handle		

Operating Instructions

Quarter turn is "ON" or "OFF".
(Provides positive stop action for full shutoff.)

U.L. Listed

U.L. Category:	
YSDT	LP-Gas Shut-off Valves
YRBX	Flammable Liquid Shut-off Valves
YRPV	Gas Shut-off Valves
YQNZ	Compressed Gas Shut-off Valves

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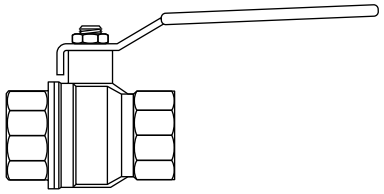
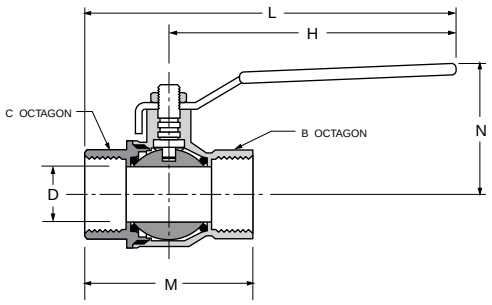
Brass Ball Valve XV520P

PART NO.	PIPE THREAD	B OCTAGON	C OCTAGON	H	L	M	N	D FLOW Ø
XV520P-4	1/4-18	.79	.79	3.94	4.83	1.77	1.50	.310
XV520P-6	3/8-18	.79	.79	3.94	4.83	1.77	1.50	.400
XV520P-8	1/2-14	.98	.98	3.94	5.10	2.32	1.69	.600
XV520P-12	3/4-14	1.22	1.22	4.72	5.98	2.52	1.97	.790
XV520P-16	1-11.5	1.57	1.57	4.72	6.32	3.19	2.13	1.000
XV520P-20	1-1/4	1.93	1.93	6.22	8.05	3.66	2.82	1.250
XV520P-24	1-1/2	2.13	2.13	6.22	8.23	4.02	3.06	1.570
XV520P-32	2	2.69	2.69	6.22	8.58	4.76	3.33	2.000
XV520P-40	2-1/2	3.35	3.35	10.04	13.11	6.14	5.20	2.520
XV520P-48	3	3.89	3.89	10.04	13.52	6.97	5.51	3.000





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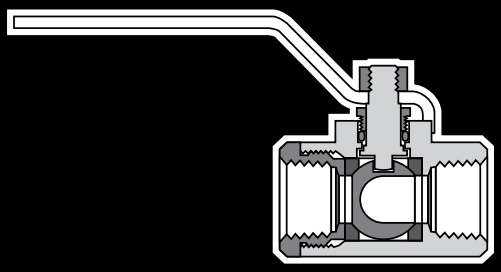


Brass Ball Valves
Series 533 3-Way Diversion / Series 540 4-Way

Advantages
Parker's forged body ball valve provides extended service life and resists failure caused by severe temperature applications. Optimum flow design assures maximum system efficiency. Highly inert PTFE seats and seals provide resistance to chemical corrosion. Parker's ball valve can be readily identified assuring high quality engineering and reliability. This ball valve is available with female PTF ports. Parker's ball valve bodies are machined from high quality CA 377 forgings.

Applications
Designed for applications requiring flow diversion making tank selection and fluid transfer easy.

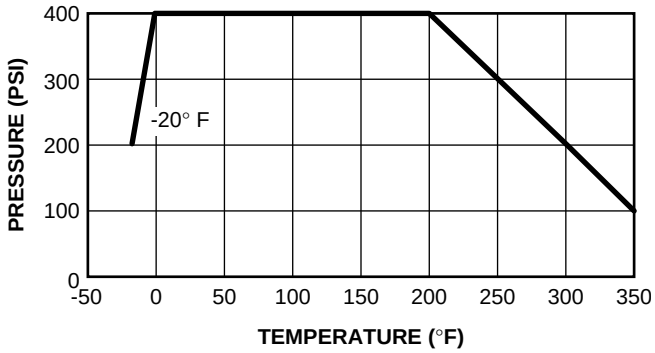
For use on construction equipment, chemical processing, pumps and specialized industrial machinery.

NOTE: Diversion valves do not have off positions, therefore, the center port can not be used for shut-off purposes.

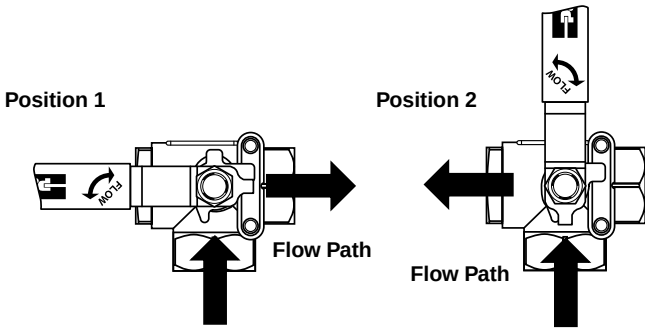
Style	Type	Material	Size	Options
V	533	P	-4	-00
Style	V-Valve			
Type	533 3-Way Diversion, 540 4-Way			
Material	P-Brass			
Size	4-1/4" 6-3/8" 8-1/2" 12-3/4" 16-1"			
Options	02-Stainless Steel Handle & Nut 08-Unmarked Yellow Vinyl Handle Cover			

Working Pressure and Temperature
400 PSI and 250º F

Vacuum to 29 inches Hg

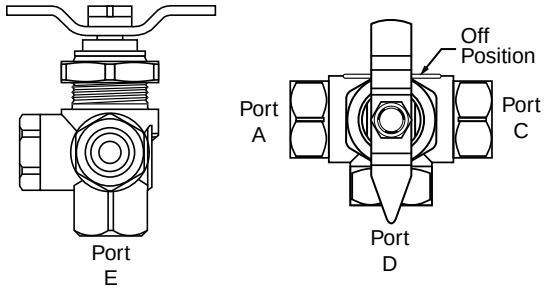


XV533P Handle Positions



XV540P Handle Positions

Pointer Over	Flow Path
A	A to E
Off	Closed
C	C to E
D	D to E



NOTE: PERIODICALLY CHECK THE ADJUSTABLE PACKING NUT AND TIGHTEN AS REQUIRED.

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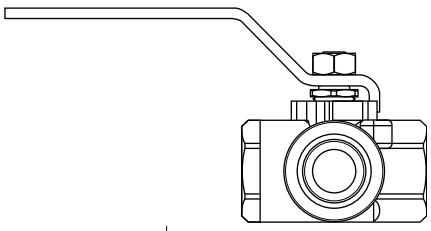
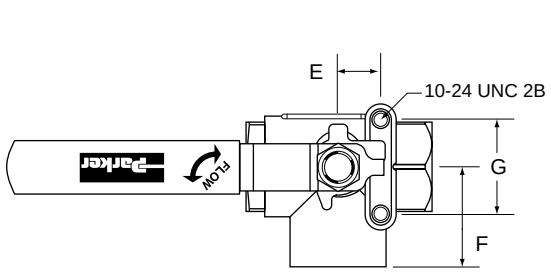
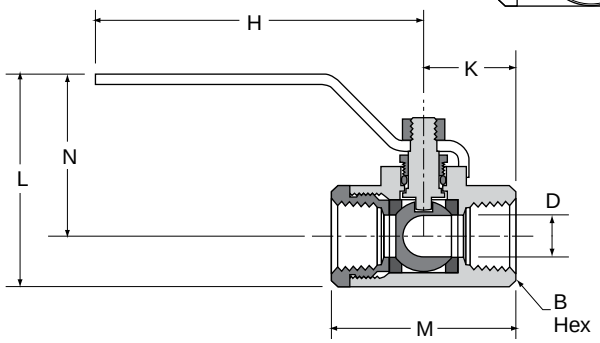
Female-Female-Female Pipe Ends XV533P

PART NO.	PIPE THREAD (PTF)	B HEX	E	F	G	H	K	L	M	N	FLOW DIA. D
XV533P-4	1/4	15/16	.50	1.08	1.12	3.96	1.03	2.47	2.03	1.94	.375
XV533P-6	3/8	15/16	.50	1.08	1.12	3.96	1.03	2.47	2.03	1.94	.375
XV533P-8	1/2	1-1/16	.50	1.18	1.12	3.96	1.11	2.58	2.20	1.98	.500
XV533P-12	3/4	1-1/4	.87	1.43	1.37	3.96	1.42	2.90	2.83	2.17	.685
XV533P-16	1	1-9/16	.87	1.62	1.37	3.96	1.58	3.21	3.16	2.32	.875

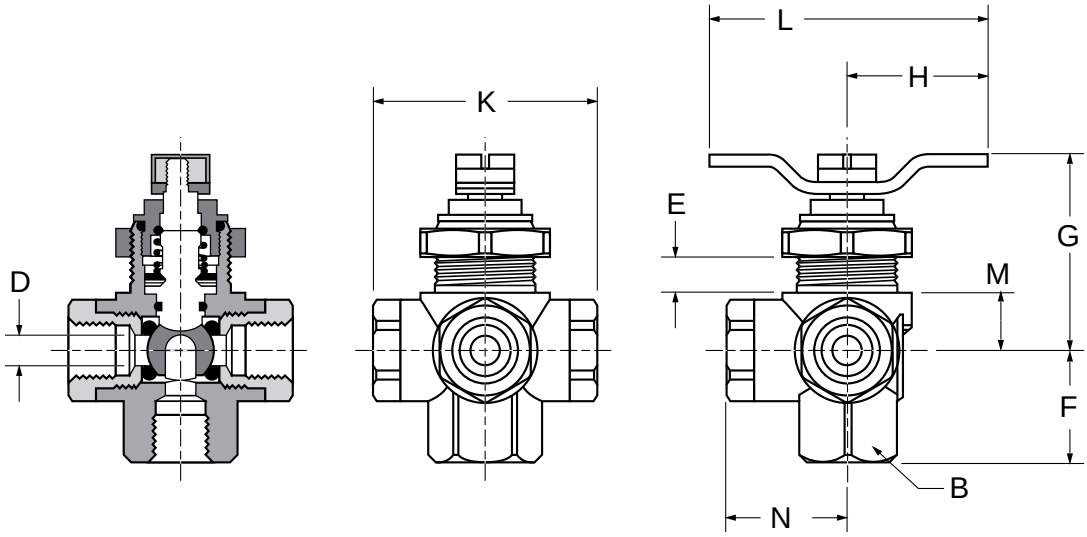






Female-Female-Female-Female Pipe Ends XV540P

PART NO.	PIPE THREAD (PTF)	B HEX	E	F	G	H	K	L	M	N	FLOW DIA. D
XV540P-4	1/4	7/8	.32	1.00	1.76	1.25	1.98	2.49	.52	1.07	.250



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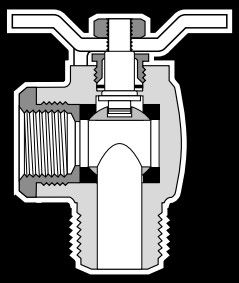


90° Ball Valves Series 590/591

Advantages

Parker's forged body valve provides extended service life and resists failure caused by severe temperature applications. Optimum flow design assures maximum system efficiency. Highly inert PTFE seats and seals provide resistance to chemical corrosion. Parker also provides a blow-out proof stem and chrome plated brass ball on all series 590/591 valves. Parker's 590/591 series valve bodies are machined from high quality CA377 forgings.

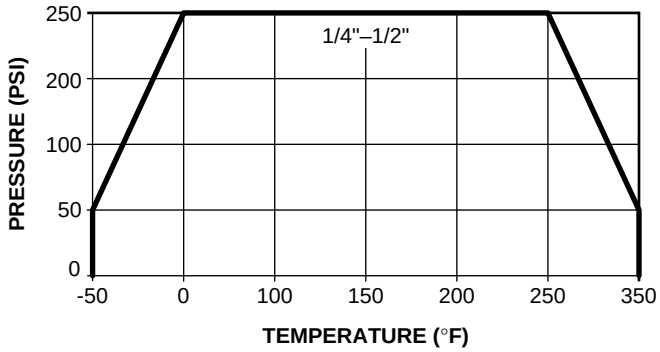
Applications

Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle.

For use as fuel line shutoffs for gasoline and diesel powered over the highway, off highway and construction equipment vehicles. Water and air service lines on capital equipment and plant design plumbing that require total shut-off capability.

Working Pressure and Temperature

Saturated steam service up to 150 PSI and 400° F
Vacuum, 29 Inches of Mercury



Operating Instructions

Quarter turn is "on" or "off".
(Provides positive stop action for full shut-off.)

NOTE: PERIODICALLY CHECK THE ADJUSTABLE PACKING NUT AND TIGHTEN AS REQUIRED.

Style	Type	Material	Size	Options
V	**590**	**P**	**-8**	**-00**
Style	V-Valve			
Type	590-90 Male/Female 591-90 Male/Male			
Material	P- Brass			
Size	4-1/4" 6-3/8" 8-1/2"			
Options	04-Lever Handle 08-Unmarked Yellow Vinyl Handle Cover			

Note: 90° Ball Valve Series 590/591 has a tee handle as standard. A Lever Handle is available as option 04.

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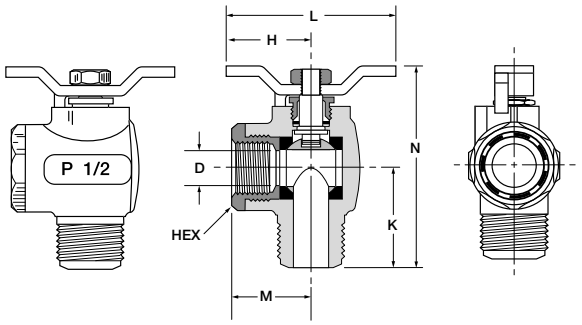
Otsego, Michigan

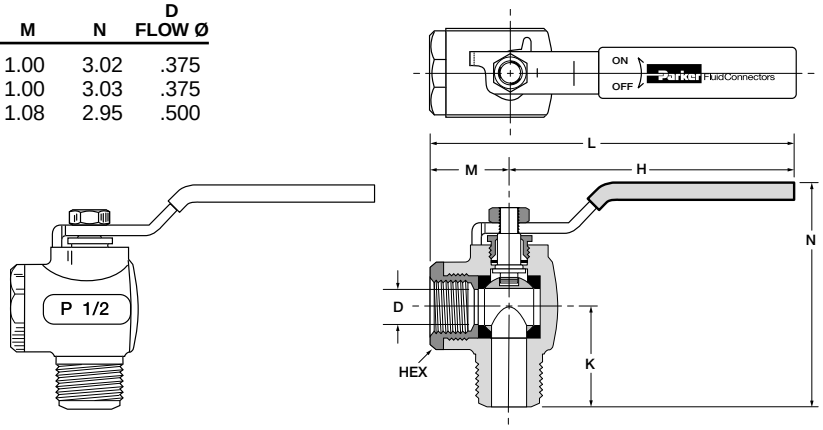
90° Flow, Male-Female Pipe Ends XV590P

PART NO.	PIPE PTF THREAD	HEX	H	K	L	M	N	D FLOW Ø
XV590P-4	1/4	15/16	1.25	1.08	2.50	1.00	2.42	.375
XV590P-6	3/8	15/16	1.25	1.09	2.50	1.00	2.43	.375
XV590P-8	1/2*	1-1/16	1.25	1.30	2.50	1.08	2.67	.500



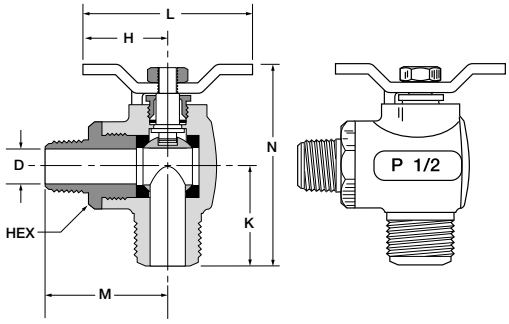
Lever Handle, 90° Flow, Male-Female Pipe Ends XV590P-X-04

PART NO.	PIPE PTF THREAD	HEX	H	K	L	M	N	D FLOW Ø
XV590P-4-04	1/4	15/16	3.96	1.08	4.96	1.00	3.02	.375
XV590P-6-04	3/8	15/16	3.96	1.09	4.96	1.00	3.03	.375
XV590P-8-04	1/2*	1-1/16	3.80	1.30	4.88	1.08	2.95	.500



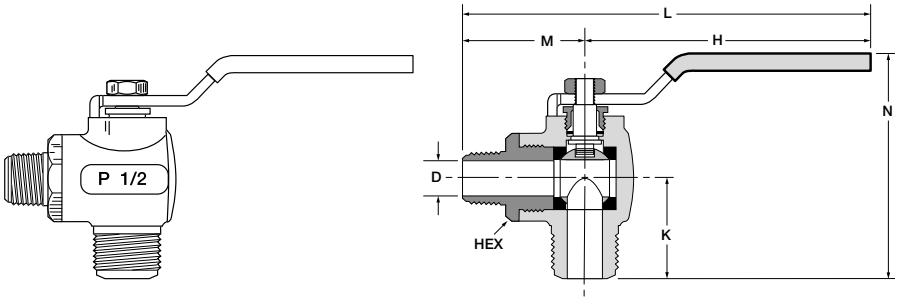
90° Flow, Male-Male Pipe Ends XV591P

PART NO.	PIPE THREAD	HEX	H	K	L	M	N	D FLOW Ø
XV591P-4	1/4	15/16	1.25	1.08	2.50	1.56	2.42	.375
XV591P-6	3/8	15/16	1.25	1.09	2.50	1.56	2.43	.375
XV591P-8	1/2	1-1/16	1.25	1.30	2.50	1.84	2.67	.500



Lever Handle, 90° Flow, Male-Male Pipe Ends XV591P-X-04

PART NO.	PIPE THREAD	HEX	H	K	L	M	N	D FLOW Ø
XV591P-4-04	1/4	15/16	3.96	1.08	5.52	1.56	3.02	.375
XV591P-6-04	3/8	15/16	3.96	1.09	5.52	1.56	3.03	.375
XV591P-8-04	1/2	1-1/16	3.80	1.30	5.64	1.84	2.95	.500



*PTF special short

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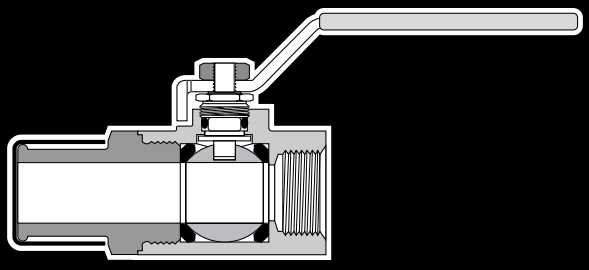


Brass Hose Barb Ball Valves Series 500HB

Advantages

Parker's forged body ball valve provides extended service life and resists failure caused by severe temperature applications. Optimum flow design assures maximum system efficiency. Highly inert PTFE seats and seals provide resistance to chemical corrosion. The hose barb end configuration eliminates as fitting and possible leak path. Parker also provides a blow-out proof stem, chrome plated brass ball and a specially designed handle enabling increased turning leverage for ease of opening and closing. Parker's ball valve can be readily identified assuring high quality engineering and reliability. Parker's ball valve bodies are machined from high quality CA 377 forgings.

Applications

Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle. For use on construction equipment, chemical processing, plastic and rubber manufacturing, pumps, power units, and specialized industrial machinery requiring total shut-off capability.

Working Pressure and Temperature

150 psi WOG and 350° F
Saturated steam service up to 150 PSI and 350° F
Vacuum, 29 Inches of Mercury

Operating Instructions

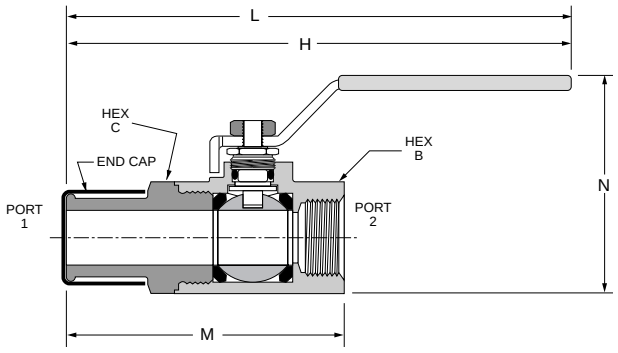
Quarter turn is "ON" or "OFF".
(Provides positive stop action for full shutoff.)

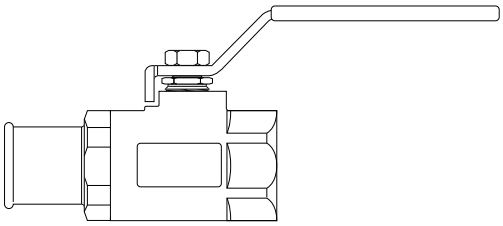
Note: Periodically check the adjustable packing nut and tighten as required.

Brass Hose Barb Ball Valve XV500P-HB

PART NO.	PORT 1	PORT 2 PTF	B HEX	C HEX	H	L	M	N	FLOW DIA. D
XV500P-12-16HB	1	3/4*	1-1/4	1-5/16	3.96	6.25	3.41	2.81	.685

*PTF special extra short





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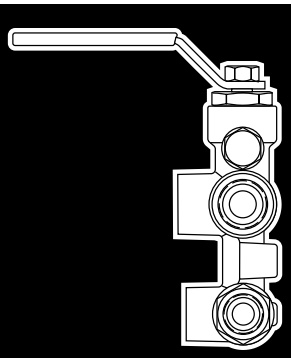


Brass Ball Valves Series 600 Six Port Diversion

Advantages
Parker's forged body ball valve provides extended service life and resists failure caused by severe temperature applications. Full flow design assures maximum system efficiency. Highly inert PTFE seats and seals provide resistance to chemical corrosion. Viton o-rings seal between the upper and lower halves protect against cross-contamination of fluids. Parker's ball valve can be readily identified assuring high quality engineering and reliability. This ball valve is available with female PTF ports. Parker's ball valve bodies are machined from high quality CA 377 forgings.

Applications
This valve can be used on applications where a fluid return or spillback is required.

For use on construction equipment, chemical processing, diesel engines, filter banks, pumps and specialized industrial machinery.

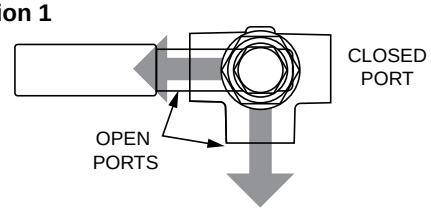
NOTE: Diversion valves do not have off positions, therefore, the center ports can not be used for shut-off purposes.

Working Pressure and Temperature
150 PSI and 250° F
Vacuum, 29 Inches of Mercury

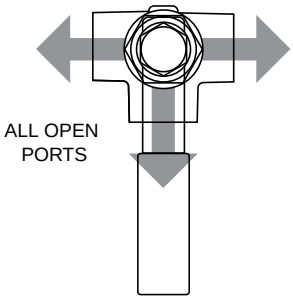
Operating Instructions
Position handle in quarter-turn increments to desired flow configuration. Detent mechanism assits in accurately positioning handle.

Series 600 Handle Positions

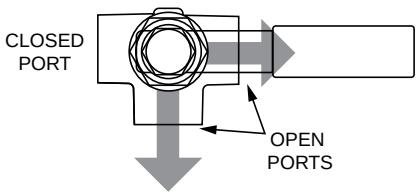
Position 1



Position 2

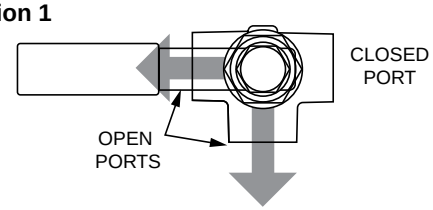


Position 3

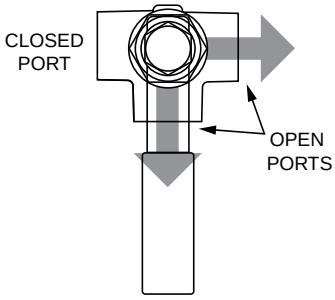


Series 633 Handle Positions

Position 1



Position 2



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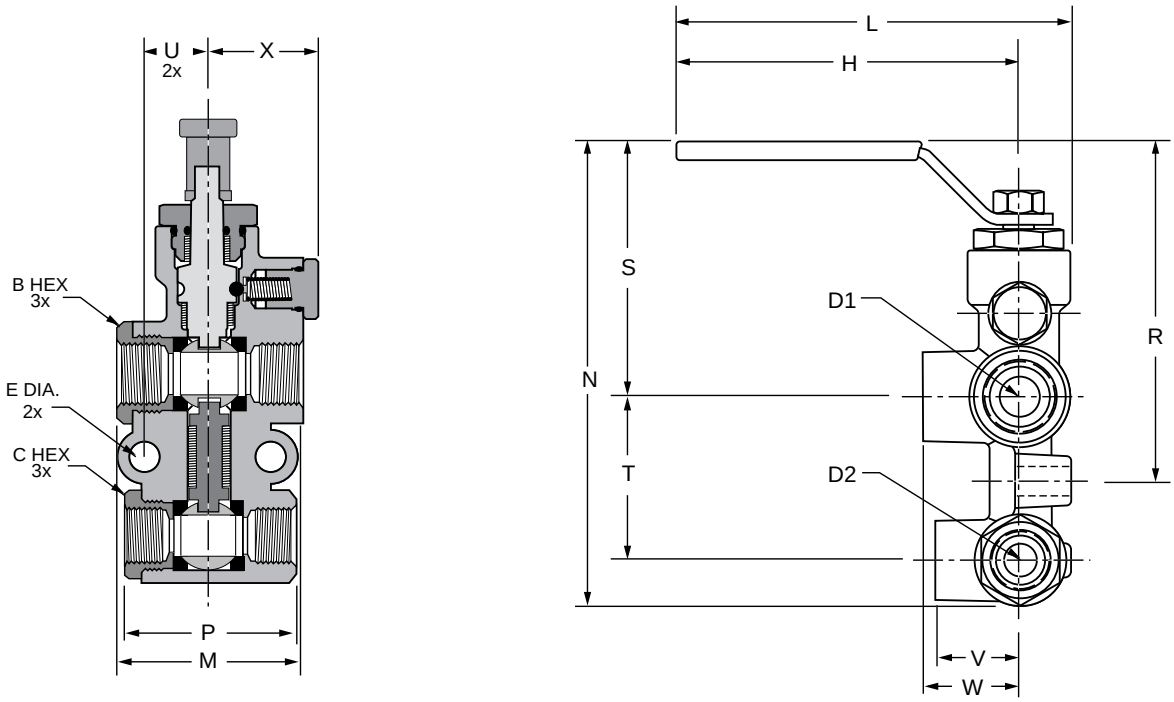
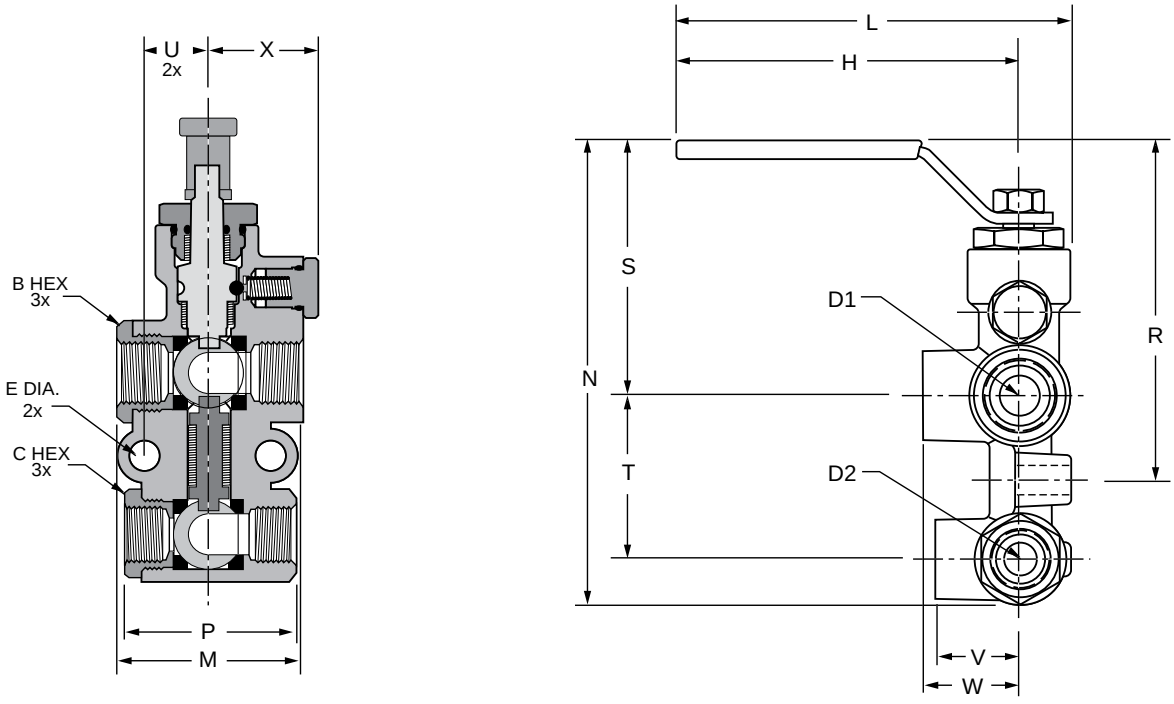
Six Port Diversion Brass Valve XV600P

PART NO.	PIPE THD. TOP PORT SPL SHORT	PIPE THD. BOTTOM PORT PTF	B HEX	C HEX	D1 FLOW	D2 FLOW	E	H	L	M	N	P	R	S	T	U	V	W	X
XV600P-8-6	1/2	3/8	1 1/16	15/16	.500	.375	.34	3.96	4.56	2.20	5.43	2.03	3.98	2.99	1.91	.73	.98	1.12	1.31



Six Port Diversion Brass Valve XV633P

PART NO.	PIPE THD. TOP PORT SPL SHORT	PIPE THD. BOTTOM PORT PTF	B HEX	C HEX	D1 FLOW	D2 FLOW	E	H	L	M	N	P	R	S	T	U	V	W	X
XV633P-8-6	1/2	3/8	1 1/16	15/16	.500	.375	.34	3.96	4.56	2.20	5.43	2.03	3.98	2.99	1.91	.73	.98	1.12	1.31



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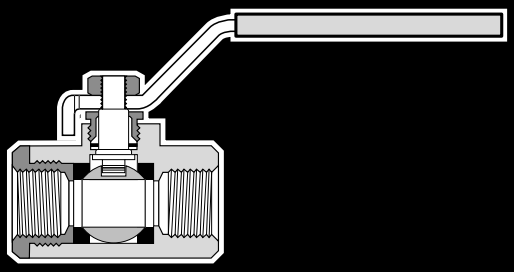


Carbon Steel Ball Valves Series 500CS/502CS

Advantages

Parker's carbon steel ball valves have a hex shaped body for easy installation. Highly inert PTFE seats and seals combined with an external phosphate coating provide superior corrosion resistance. Parker also provides a blow-out proof stem and a specially designed handle enabling increased turning leverage for ease of opening and closing. Parker's ball valve can be readily identified assuring high quality engineering and reliability. This economical ball valve is available in female pipe sizes.

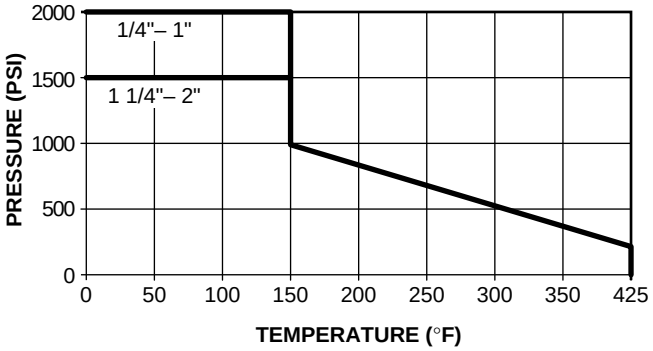
Applications

Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle.

For use as fuel line shutoffs for gasoline and diesel powered over the highway, off highway, and construction equipment vehicles. Hydraulic and general industrial applications on capital equipment and plant design plumbing that require total shutoff capability.

Working Pressure and Temperature

Saturated steam service up to 150 PSI



Operating Instructions

Quarter turn is "ON" or "OFF".
(Provides positive stop action for full shutoff.)

NOTE: PERIODICALLY CHECK THE ADJUSTABLE PACKING NUT AND TIGHTEN AS REQUIRED.

Style	Type	Material	Size	Options
V	**500**	**CS**	**-4**	**-00**
Style	V-Valve VP-Valve, Padlocking Handle			
Type	500-Female/Female PTF Ports			
Material	CS- Carbon Steel			
Size	4-1/4" 6-3/8" 8-1/2" 12-3/4" 16-1"			
Options	04-Tee Handle 21-Oval Handle			

Style	Type	Material	Size	Options
V	**502**	**CS**	**-20**	**-00**
Style	V-Valve VP-Valve, Padlocking Handle			
Type	502-Female/Female PTF Ports			
Material	CS- Carbon Steel			
Size	20-1 1/4" 24-1 1/2" 32-2"			
Options	04-Tee Handle 21-Oval Handle			

Flow data

VALVE SIZE	CV
1/4	6.0
3/8	12.0
1/2	15.0
3/4	23.0
1	36.0
1 1/4	44.0
1 1/2	64.0
2	114.0

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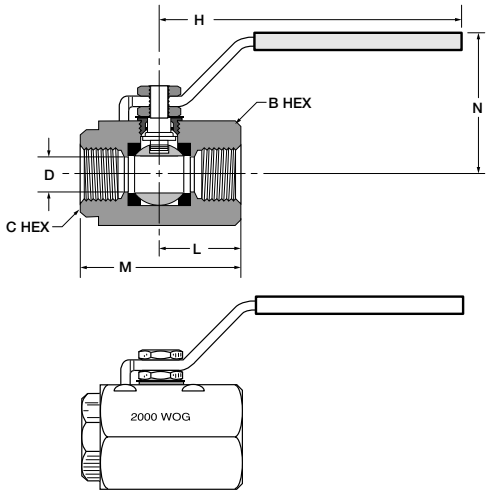
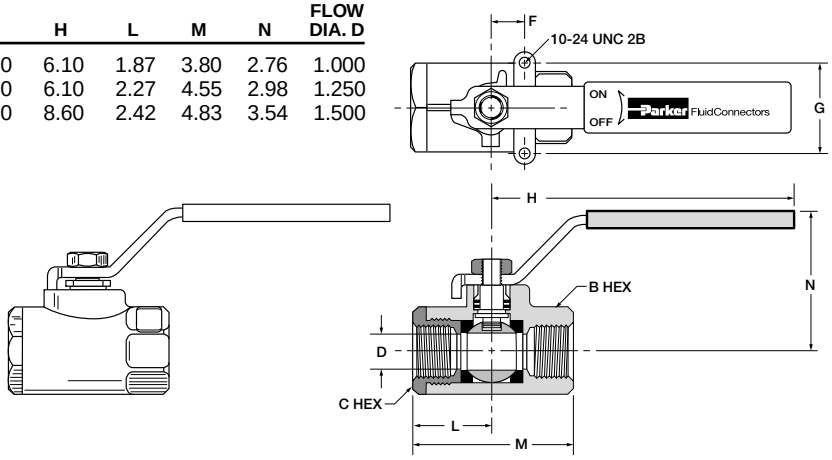
Female-Female Pipe Ends XV500CS

PART NO.	PIPE THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV500CS-4	1/4	1-1/16	15/16	3.78	1.00	2.00	1.63	.400
XV500CS-6	3/8	1-1/16	15/16	3.78	1.00	2.00	1.63	.400
XV500CS-8	1/2	1-1/4	1-1/16	3.78	1.25	2.37	1.73	.540
XV500CS-12	3/4	1-5/8	1-3/8	5.10	1.50	2.90	2.08	.680
XV500CS-16	1	2	1-5/8	5.10	1.76	3.41	2.30	.880



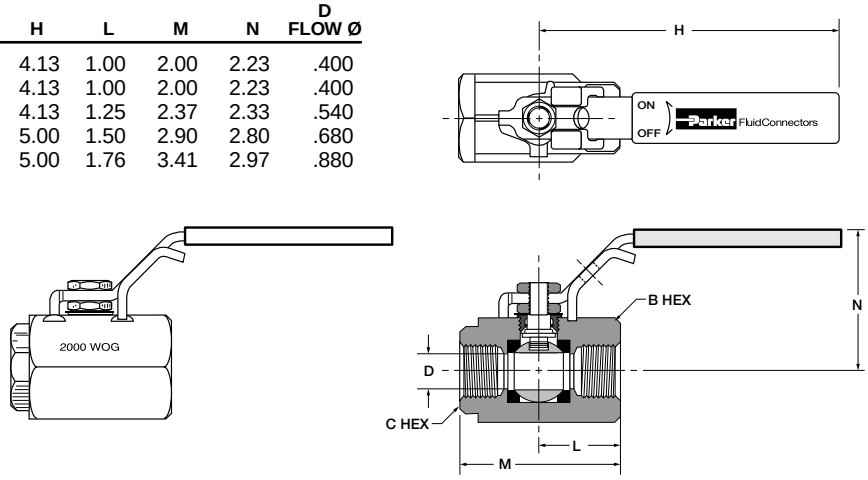
Female-Female Pipe Ends, Panel Mount XV502CS

PART NO.	PIPE THREAD	B HEX	C HEX	F	G	H	L	M	N	FLOW DIA. D
XV502CS-20	1-1/4	2	2-1/4	.94	1.50	6.10	1.87	3.80	2.76	1.000
XV502CS-24	1-1/2	2-5/16	2-1/2	.94	1.50	6.10	2.27	4.55	2.98	1.250
XV502CS-32	2	2-3/4	3	1.03	2.00	8.60	2.42	4.83	3.54	1.500



Locking Handle, Female Pipe Ends XVP500CS

PART NO.	PIPE THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XVP500CS-4	1/4	1-1/16	15/16	4.13	1.00	2.00	2.23	.400
XVP500CS-6	3/8	1-1/16	15/16	4.13	1.00	2.00	2.23	.400
XVP500CS-8	1/2	1-1/4	1-1/16	4.13	1.25	2.37	2.33	.540
XVP500CS-12	3/4	1-5/8	1-3/8	5.00	1.50	2.90	2.80	.680
XVP500CS-16	1	2	1-5/8	5.00	1.76	3.41	2.97	.880



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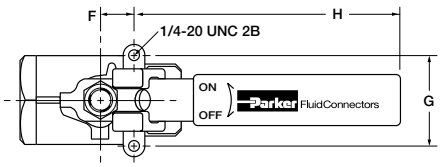
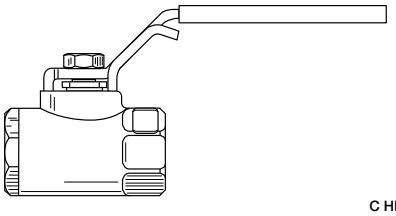
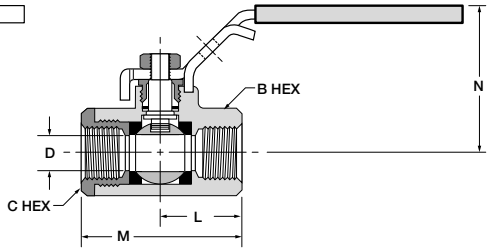
Locking Handle, Female Pipe Ends, Panel Mount XVP502CS

PART NO.	PIPE THREAD	B HEX	C HEX	F	G	H	L	M	N	FLOW DIA. D
XVP502CS-20	1-1/4	2	2-1/4	.94	1.50	7.50	1.87	3.80	3.15	1.000
XVP502CS-24	1-1/2	2-5/16	2-1/2	.94	1.50	7.50	2.27	4.55	3.37	1.250
XVP502CS-32	2	2-3/4	3	1.03	2.00	8.75	2.42	4.83	3.46	1.500

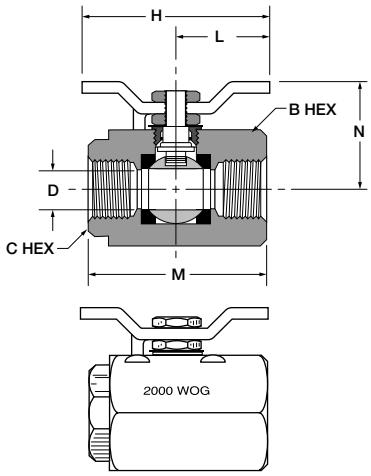






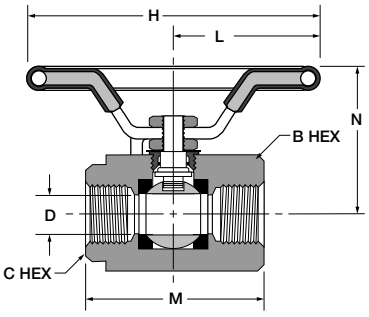
Tee Handle, Female Pipe Ends XV500CS-X-04

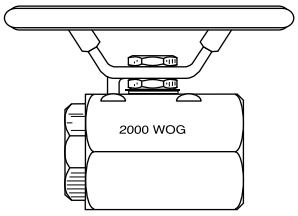
PART NO.	PIPE THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV500CS-4-04	1/4	1-1/16	15/16	2.16	1.08	2.00	1.41	.400
XV500CS-6-04	3/8	1-1/16	15/16	2.16	1.08	2.00	1.41	.400
XV500CS-8-04	1/2	1-1/4	1-1/16	2.90	1.45	2.37	1.66	.540
XV500CS-12-04	3/4	1-5/8	1-3/8	3.63	1.81	2.90	2.06	.680
XV500CS-16-04	1	2	1-5/8	3.63	1.81	3.41	2.23	.880

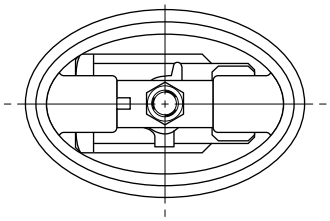


Oval Handle, Female Pipe Ends XV500CS-X-21

PART NO.	PIPE THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV500CS-4-21	1/4	1-1/16	15/16	3.50	1.00	2.00	1.66	.400
XV500CS-6-21	3/8	1-1/16	15/16	3.50	1.00	2.00	1.66	.400
XV500CS-8-21	1/2	1-1/4	1-1/16	3.50	1.13	2.37	1.76	.540
XV500CS-12-21	3/4	1-5/8	1-3/8	5.00	1.46	2.90	2.13	.680
XV500CS-16-21	1	2	1-5/8	5.00	1.58	3.41	2.29	.880

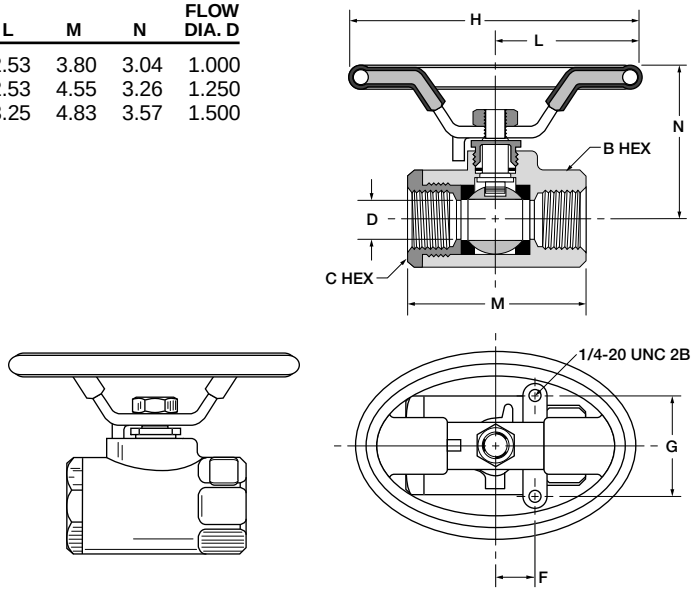






Oval Handle, Female Pipe Ends, Panel Mount XV502CS-X-21

PART NO.	PIPE THREAD	B HEX	C HEX	F	G	H	L	M	N	FLOW DIA. D
XV502CS-20-21	1-1/4	2	2-1/4	.94	1.50	5.07	2.53	3.80	3.04	1.000
XV502CS-24-21	1-1/2	2-5/16	2-1/2	.94	1.50	5.07	2.53	4.55	3.26	1.250
XV502CS-32-21	2	2-3/4	3	1.03	2.00	6.50	3.25	4.83	3.57	1.500



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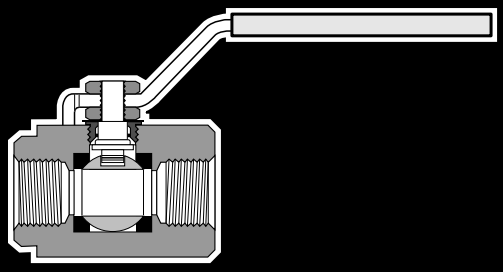


Carbon Steel Ball Valves Series 506CS

Advantages

Parker's carbon steel ball valves have a hex shaped body for easy installation. Highly inert PTFE seats and seals combined with an external phosphate coating provide superior corrosion resistance. Parker also provides a blow-out proof stem and a specially designed handle enabling increased turning leverage for ease of opening and closing. Parker's ball valve can be readily identified assuring high quality engineering and reliability. This economical ball valve is available in female SAE straight thread sizes. The full flow design allows for minimum flow restriction.

Applications

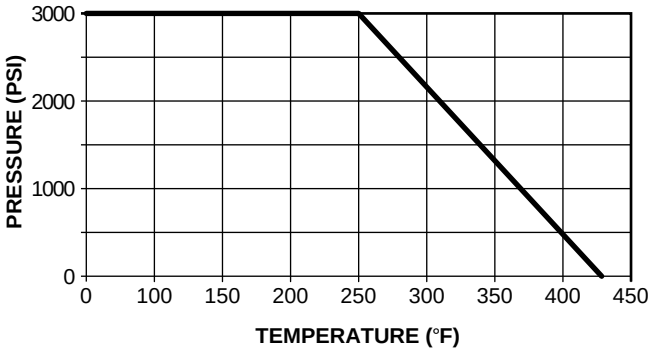
Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle.

For use as fuel line shutoffs for gasoline and diesel powered over the highway, off highway, and construction equipment vehicles. Hydraulic and general industrial applications on capital equipment and plant design plumbing that require total shutoff capability.

Working Pressure and Temperature

Saturated steam service up to 150 PSI

Vacuum, 29 inches of Mercury



Operating Instructions

Quarter turn is "ON" or "OFF".
(Provides positive stop action for full shutoff.)

Style	Type	Material	Size
V	**506**	**CS**	**-4**
Style	V-Valve VP-Valve, Padlocking Handle		
Type	506-Female/Female SAE Straight Thread Ports		
Material	CS-Carbon Steel		
Size	4-1/4" 6-3/8" 8-1/2" 12-3/4" 16-1"		

Flow data

VALVE SIZE	CV
1/4	6.0
3/8	12.0
1/2	15.0
3/4	34.0
1	54.0

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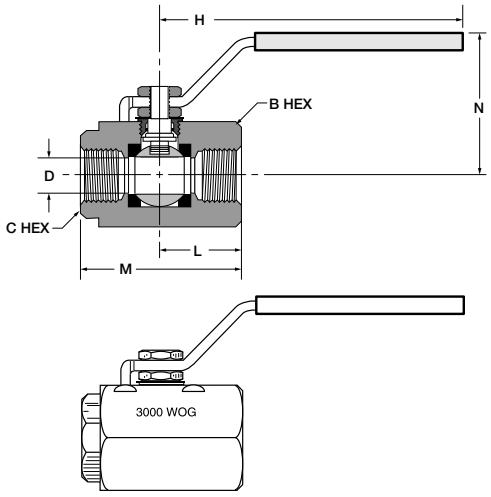
Otsego, Michigan

Female-Female SAE Straight Thread Ports XV506CS

PART NO.	STRAIGHT THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV506CS-4	7/16-20	1-1/16	15/16	3.78	1.00	2.00	1.63	.400
XV506CS-6	9/16-18	1-1/16	15/16	3.78	1.00	2.00	1.63	.400
XV506CS-8	3/4-16	1-5/8	1-1/4	4.78	1.32	2.84	2.16	.500
XV506CS-12	1-1/16-12	1-7/8	1-5/8	4.78	1.66	3.71	2.35	.750
XV506CS-16	1-5/16-12	2-1/2	2-1/8	6.10	1.88	4.15	2.85	1.000



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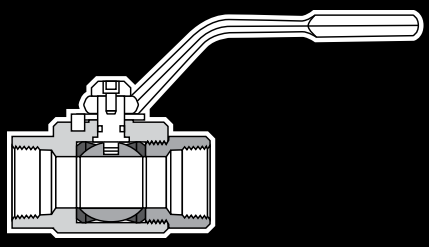
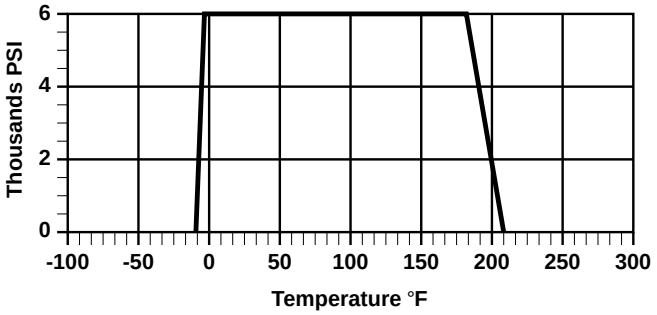


High Pressure Carbon Steel Ball Valves
Series 500HP, 506HP, 507HP

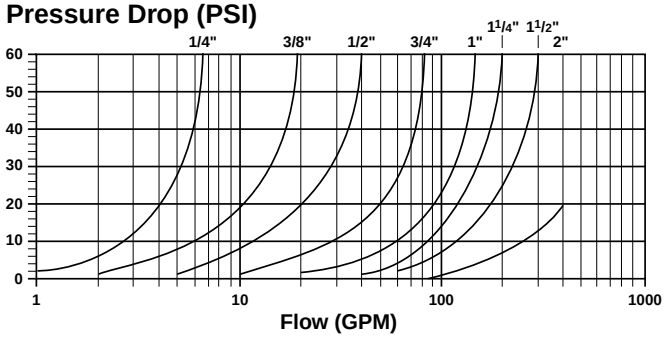
Advantages
Parker's high pressure carbon steel ball valves feature a round or square body with hex shaped ports for easy installation. Delrin™ seats with Molybdenum disulphide (MoS_2) results in lower actuation torque and will increase high duty life cycle expectancy. The stem seals are Nitrile O-Rings. All sizes are full ported, which means an unrestricted bore and minimum flow restriction. Available port configurations are NPT and SAE straight thread and ISO 6149 threads 1/4 inch through 2 inch.

Applications
Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle.

For use as fuel line shutoffs for gasoline and diesel powered over the highway, off highway, and construction equipment vehicles. Hydraulic and general industrial applications on capital equipment and plant design plumbing that require total shutoff capability.



Pressure Drop (PSI)



Working Pressure and Temperature

Operating Instructions
Quarter turn is "ON" or "OFF".
(Provides positive stop action for full shutoff.)

Style	Type	Material	Size
V	**500**	**HP**	**-4**
Style	V-Valve VP-Valve, Padlocking Handle		
Type	500-Female/Female NPT Ports		
Material	HP-High Pressure Carbon Steel		
Size	4-1/4" 6-3/8" 8-1/2" 12-3/4"	16-1" 20-1 1/4" 24-1 1/2" 32-2"	

Style	Type	Material	Size
V	**506**	**HP**	**-20**
Style	V-Valve VP-Valve, Padlocking Handle		
Type	506-Female/Female SAE Straight Thread Ports		
Material	HP-High Pressure Carbon Steel		
Size	4-1/4" 6-3/8" 8-1/2" 12-3/4"	16-1" 20-1 1/4" 24-1 1/2" 32-2"	

Style	Type	Material	Size
V	**507**	**HP**	**-M18**
Style	V-Valve		
Type	507-Female / Female ISO 6149 Ports		
Material	HP-High Pressure Carbon Steel		
Size	M18x1.5 M27x2		

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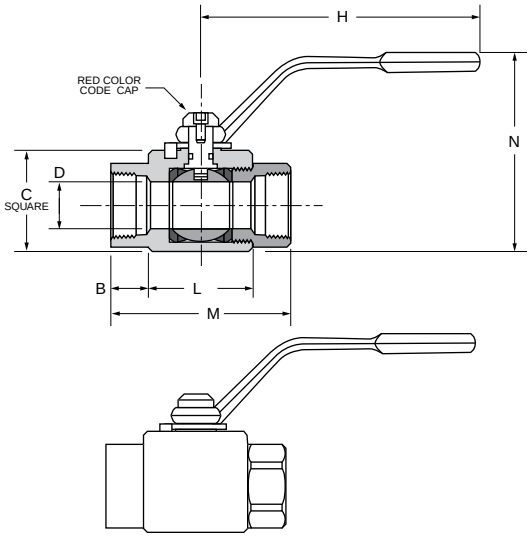
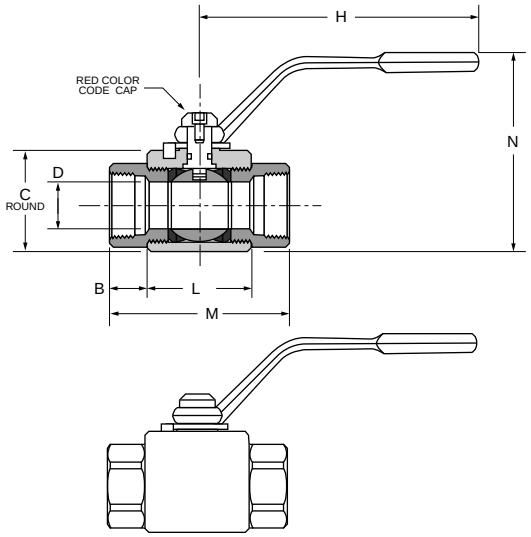
6000 PSI Female-Female Pipe Ends XV500HP-X

PART NO.	PIPE THREAD [NPT]	B	C	H	L	M	N	FLOW DIA. D
XV500HP-4	1/4-18	.69	1.38	4.50	1.44	2.75	2.94	.240
XV500HP-6	3/8-18	.56	1.50	4.50	1.69	2.88	3.06	.390
XV500HP-8	1/2-14	.75	1.63	4.50	1.88	3.38	3.19	.510
XV500HP-12	3/4-14	.69	2.25	7.00	2.41	3.81	4.69	.790
XV500HP-16	1-11.5	.94	2.50	7.00	2.56	4.50	4.94	.950



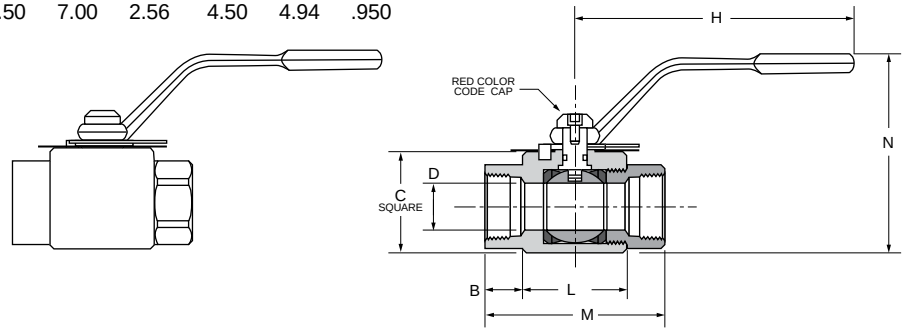
6000 PSI Female-Female Pipe Ends XV500HP-X (LARGE)

PART NO.	PIPE THREAD [NPT]	B	C	H	L	M	N	FLOW DIA. D
XV500HP-20	1 1/4-11.5	.85	3.25	10.00	3.15	4.84	6.31	1.26
XV500HP-24	1 1/2-11.5	.99	3.75	10.00	3.35	5.33	6.76	1.50
XV500HP-32	2-11.5	1.30	4.50	10.00	3.94	6.54	7.42	1.89



6000 PSI Locking-Female-Female Pipe Ends XVP500HP-X

PART NO.	PIPE THREAD [NPT]	B	C	H	L	M	N	FLOW DIA. D
XVP500HP-4	1/4-18	.69	1.38	4.50	1.44	2.75	2.94	.240
XVP500HP-6	3/8-18	.56	1.50	4.50	1.69	2.88	3.06	.390
XVP500HP-8	1/2-14	.75	1.63	4.50	1.88	3.38	3.19	.510
XVP500HP-12	3/4-14	.69	2.25	7.00	2.41	3.81	4.69	.790
XVP500HP-16	1-11.5	.94	2.50	7.00	2.56	4.50	4.94	.950



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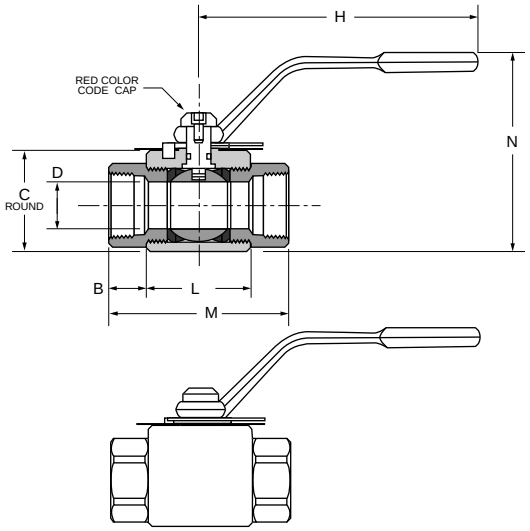
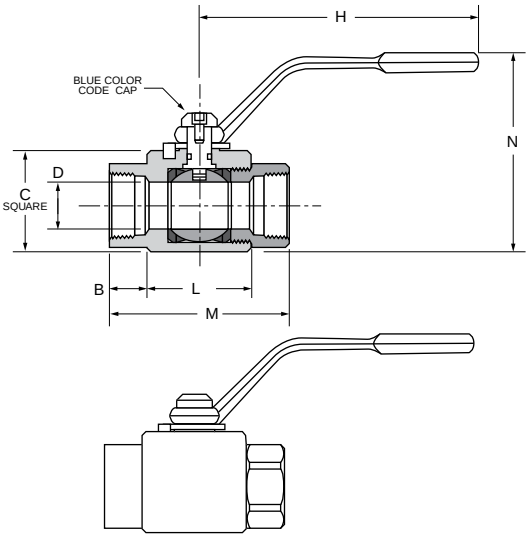
6000 PSI Locking-Female-Female Pipe Ends XVP500HP-X (LARGE)

PART NO.	PIPE THREAD [NPT]	B	C	H	L	M	N	FLOW DIA. D
XVP500HP-20	1 1/4-11.5	.85	3.25	10.00	3.15	4.84	6.31	1.26
XVP500HP-24	1 1/2-11.5	.99	3.75	10.00	3.35	5.33	6.76	1.50
XVP500HP-32	2-11.5	1.30	4.50	10.00	3.94	6.54	7.42	1.89



6000 PSI Female-Female Straight Thread Ends XV506HP-X

PART NO.	SAE J1926-1 THREAD	B	C	H	L	M	N	FLOW DIA. D
XV506HP-4	7/16-20 UNF	.69	1.38	4.50	1.44	2.75	2.94	.240
XV506HP-6	9/16-18 UNF	.56	1.50	4.50	1.69	2.88	3.06	.390
XV506HP-8	3/4-16 UNF	.75	1.63	4.50	1.88	3.38	3.19	.510
XV506HP-12	1 1/16-12 UNF	.69	2.25	7.00	2.41	3.81	4.69	.790
XV506HP-16	1 5/16-12 UNF	.94	2.50	7.00	2.56	4.50	4.94	.950



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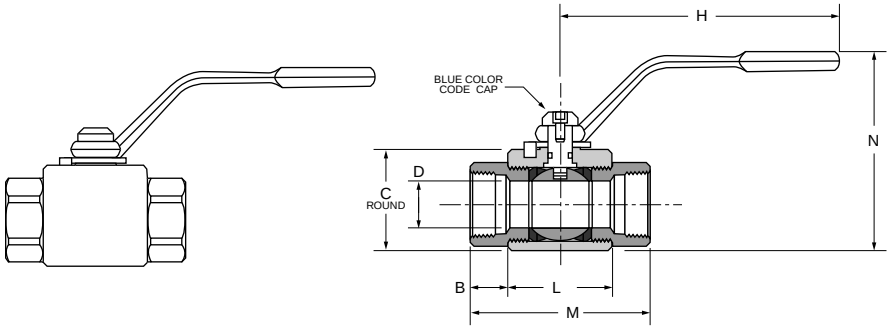
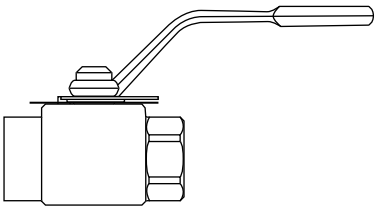
6000 PSI Female-Female Straight Thread Ends XV506HP-X (LARGE)

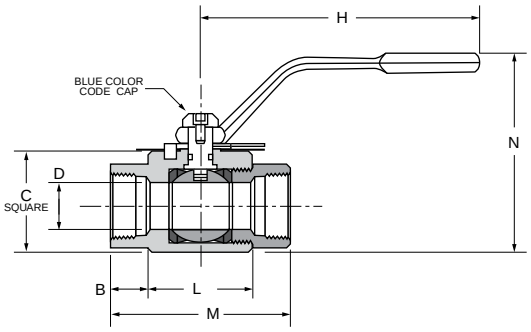
PART NO.	SAE J1926-1 THREAD	B	C	H	L	M	N	FLOW DIA. D
XV506HP-20	1 5/8-12 UNF	.85	3.25	10.00	3.15	4.84	6.31	1.26
XV506HP-24	1 7/8-12 UNF	.99	3.75	10.00	3.35	5.33	6.76	1.50
XV506HP-32	2 1/2-12 UNF	1.30	4.50	10.00	3.94	6.54	7.42	1.89



6000 PSI Locking-Female-Female Straight Thread Ends XVP506HP-X

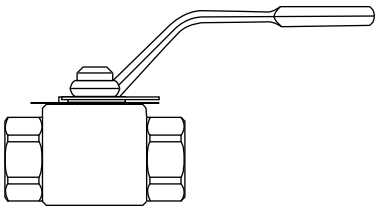
PART NO.	SAE J1926-1 THREAD	B	C	H	L	M	N	FLOW DIA. D
XVP506HP-4	7/16-20 UNF	.69	1.38	4.50	1.44	2.75	2.94	.240
XVP506HP-6	9/16-18 UNF	.56	1.50	4.50	1.69	2.88	3.06	.390
XVP506HP-8	3/4-16 UNF	.75	1.63	4.50	1.88	3.38	3.19	.510
XVP506HP-12	1 1/16-12 UNF	.69	2.25	7.00	2.41	3.81	4.69	.790
XVP506HP-16	1 5/16-12 UNF	.94	2.50	7.00	2.56	4.50	4.94	.950

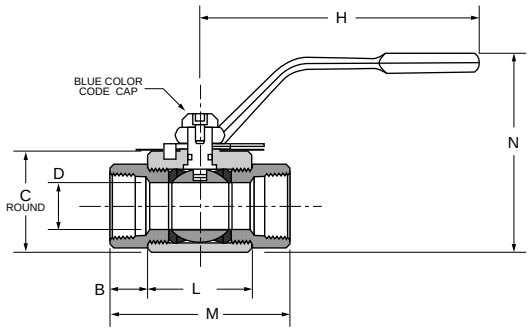




6000 PSI Locking-Female-Female Straight Thread Ends XVP506HP-X (LARGE)

PART NO.	SAE J1926-1 THREAD	B	C	H	L	M	N	FLOW DIA. D
XVP506HP-20	1 5/8-12 UNF	.85	3.25	10.00	3.15	4.84	6.31	1.26
XVP506HP-24	1 7/8-12 UNF	.99	3.75	10.00	3.35	5.33	6.76	1.50
XVP506HP-32	2 1/2-12 UNF	1.30	4.50	10.00	3.94	6.54	7.42	1.89





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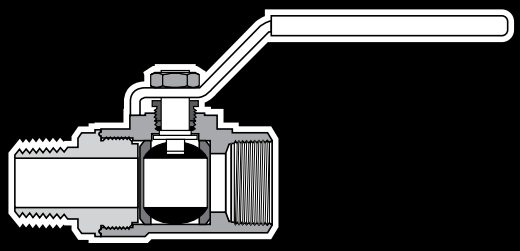


Stainless Steel Ball Valves Series 501SS

Advantages

Parker's Cast Body is manufactured from CF-8M Stainless Steel, the cast equivalent of 316 Stainless Steel. They are ideal for corrosive environments such as chemical plants and refineries. The full flow design assures maximum operating efficiency. The reinforced PTFE seats and seals, coupled with the 316 Stainless Ball and blow-out proof stem, result in the utmost reliability. This ball valve is available in 1/4", 3/8", 1/2", 3/4" and 1" female pipe sizes.

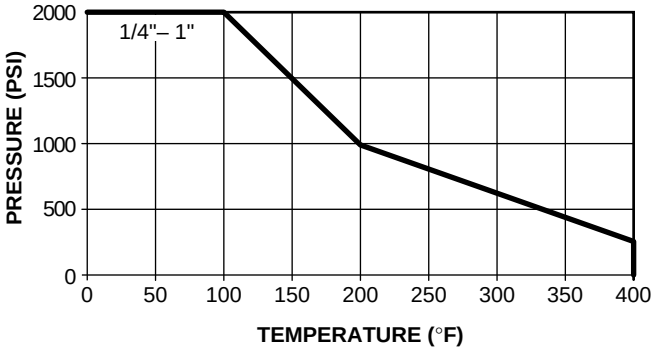
Applications/Approvals

Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle.

Applications include chemical plants, refineries, steel mills, industrial fuel lines and agricultural equipment. Meets material requirements of NACE MR-01-75.

Working Pressure/Temperature

Saturated steam service rating up to 150 PSI and 400° F.



Operating Instructions

Quarter turn is "ON" or "OFF".
(Provides positive stop action for full shutoff.)

NOTE: PERIODICALLY CHECK THE ADJUSTABLE PACKING NUT AND TIGHTEN AS REQUIRED.

Style	Type	Material	Size	Options
V	**501**	**SS**	**-4**	**-00**
Style	V-Valve			
Type	501-Male/Female NPT Ports			
Material	SS-Stainless Steel			
Size	4-1/4" 6-3/8" 8-1/2" 12-3/4" 16-1"			

Flow data

VALVE SIZE	CV
1/4	4.0
3/8	6.0
1/2	14.0
3/4	35.0
1	54.0

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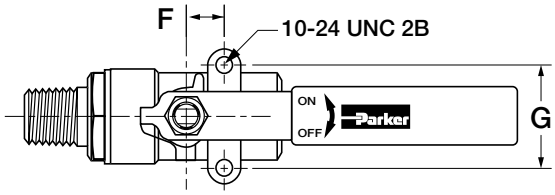
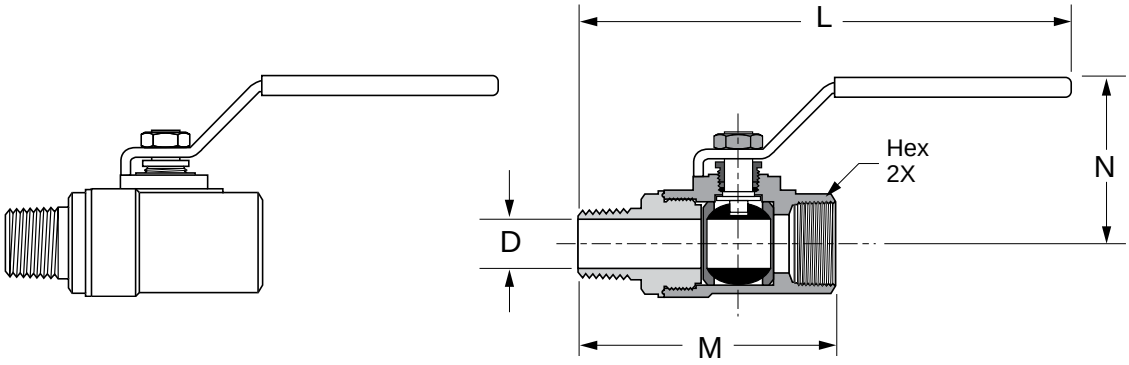
Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Male-Female Pipe Ends XV501SS

PART NO.	PIPE THREAD [NPT]	HEX	F	G	L	M	N	D FLOW Ø
XV501SS-4	1/4	15/16	.50	1.12	5.60	2.65	1.97	.280
XV501SS-6	3/8	15/16	.50	1.12	5.60	2.65	1.97	.375
XV501SS-8	1/2	1-1/16	.50	1.12	5.85	3.05	2.00	.500
XV501SS-12	3/4	1-3/8	.88	1.37	7.27	3.85	2.55	.720
XV501SS-16	1	1-5/8	.88	1.37	7.48	4.25	2.68	.940





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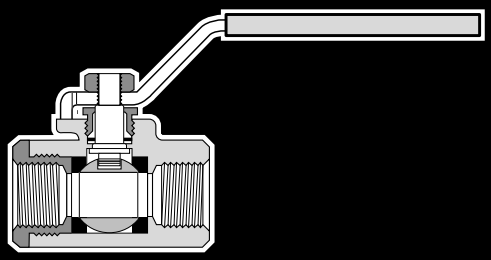


Stainless Steel Ball Valves Series 502SS

Advantages

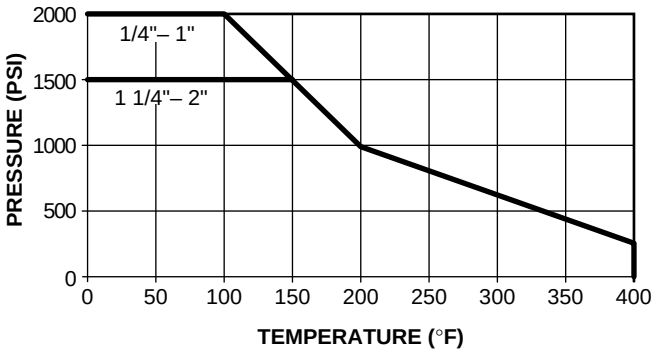
Parker's Cast Body is manufactured from CF-8M Stainless Steel, the cast equivalent of 316 Stainless Steel. They are ideal for corrosive environments such as chemical plants and refineries. The full flow design assures maximum operating efficiency. The reinforced PTFE seats and seals, coupled with the 316 Stainless Ball and blow-out proof stem, result in the utmost reliability. These ball valves are available in 1/4", 3/8", 1/2 (502SS), and 3/4", 1", 1-1/4", 1-1/2" and 2" (500SS) female pipe sizes.

Applications/Approvals

Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle.

Applications include chemical plants, refineries, steel mills, industrial fuel lines and agricultural equipment. Meets material requirements of NACE MR-01-75.

Working Pressure/Temperature



Saturated steam service rating up to 150 PSI and 400° F.

Operating Instructions

Quarter turn is "ON" or "OFF".
(Provides positive stop action for full shutoff.)

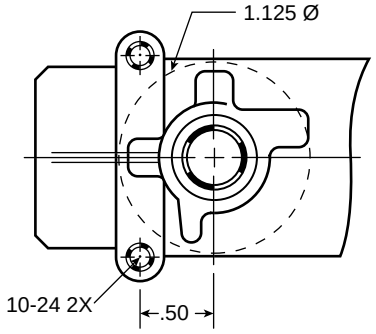
NOTE: PERIODICALLY CHECK THE ADJUSTABLE PACKING NUT AND TIGHTEN AS REQUIRED.

Style	Type	Material	Size	Options
V	**502**	**SS**	**-4**	**-00**
Style	V-Valve VP-Valve, Padlocking Handle			
Type	502-Panel Mount Female/Female PTF Ports			
Material	SS-Stainless Steel			
Size	4-1/4" 6-3/8" 8-1/2" 12-3/4"	16-1" 20-1 1/4" 24-1 1/2" 32-2"		
Options	20-Short Handle 21-Oval Handle 35-Welded Retainer Nut			

Flow data 502SS

VALVE SIZE	CV
1/4	4.0
3/8	6.0
1/2	14.0
3/4	35.0
1	54.0
1 1/4	74.0
1 1/2	120.0
2	226.0

502SS Mounting detail



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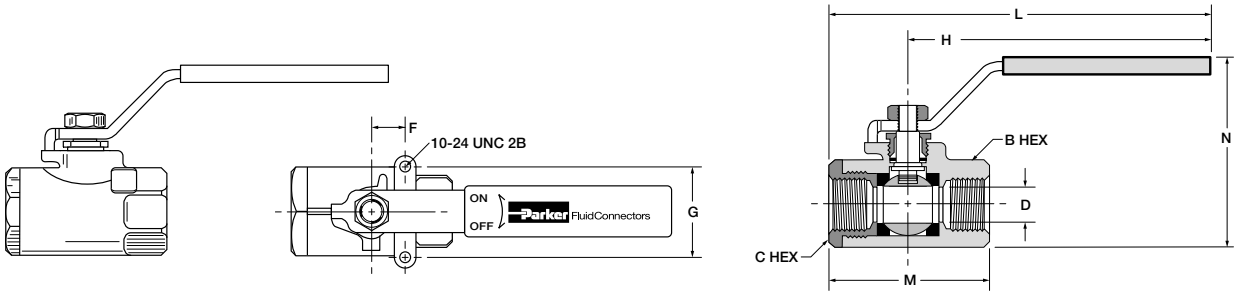
Parker Brass Products Division
Otsego, Michigan

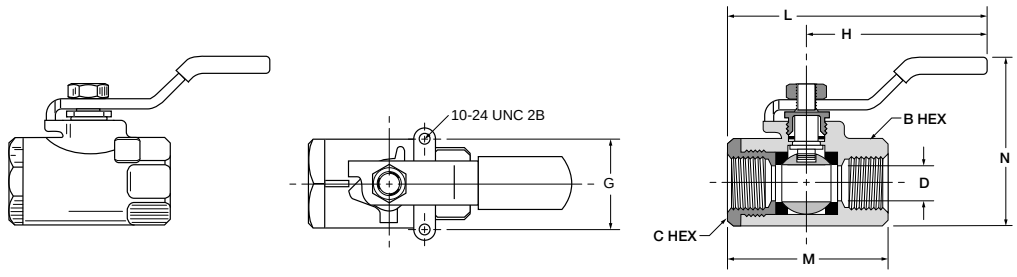
Female Pipe Ends, Panel Mount XV502SS

PART NO.	PIPE THREAD (NPT)	B/C HEX	F	G	H	I THREAD	L	M	N	FLOW DIA. D	PANEL HOLE DIA.
XV502SS-4	1/4	15/16	.500	1.125	4.00	10-24 UNC	5.03	2.07	2.52	.380	1.125
XV502SS-6	3/8	15/16	.500	1.125	4.00	10-24 UNC	5.03	2.07	2.52	.380	1.125
XV502SS-8	1/2	1-1/16	.500	1.125	4.00	10-24 UNC	5.13	2.27	2.65	.500	1.125
XV502SS-12	3/4	1-3/8	.875	1.375	5.00	10-24 UNC	6.67	3.35	3.46	.790	1.500
XV502SS-16	1	1-5/8	.875	1.375	5.00	10-24 UNC	6.77	3.54	3.74	1.000	1.500
XV502SS-20	1-1/4	2	1.000	1.500	7.00	1/4-20 UNC	9.00	4.00	4.55	1.250	2.000
XV502SS-24	1-1/2	2-3/8	1.000	1.500	7.00	1/4-20 UNC	7.19	4.38	5.42	1.500	2.000
XV502SS-32	2	3	1.000	1.500	7.00	1/4-20 UNC	9.75	5.50	5.68	2.000	2.000



Short Handle, Female Pipe Ends, Panel Mount XV502SS-X-20

PART NO.	PIPE THREAD [NPT]	B/C HEX	G	H	L	M	N	FLOW DIA. D
XV502SS-4-20	1/4	15/16	1.12	2.28	3.32	2.07	2.53	.375
XV502SS-6-20	3/8	15/16	1.12	2.28	3.32	2.07	2.53	.375
XV502SS-8-20	1/2	1-1/16	1.12	2.22	3.37	2.25	2.63	.500



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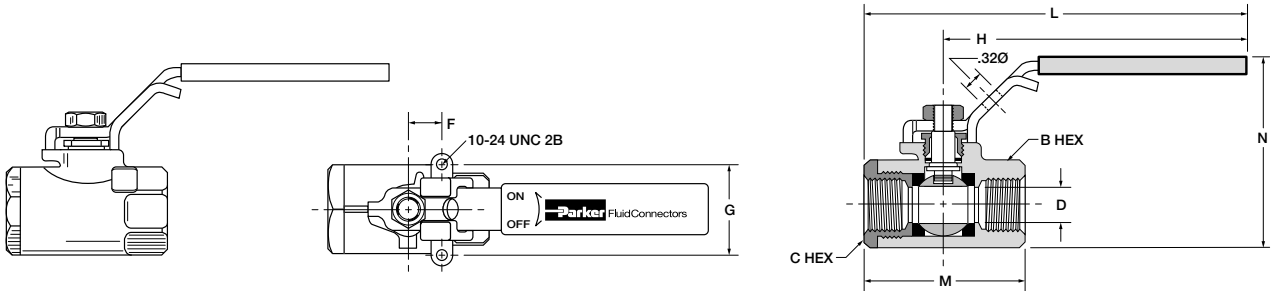
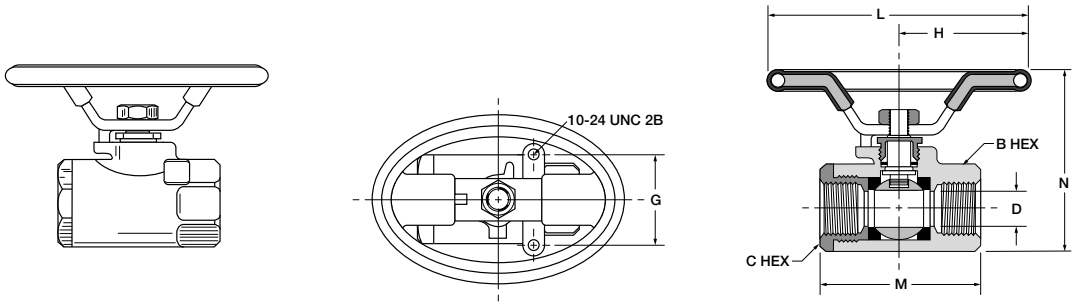
Locking Handle, Female Pipe Ends, Panel Mount XVP502SS

PART NO.	PIPE THREAD (NPT)	B/C HEX	F	G	H	I THREAD	L	M	N	FLOW DIA. D	PANEL HOLE DIA.
XVP502SS-4	1/4	15/16	.500	1.125	4.00	10-24 UNC	5.03	2.07	2.52	.380	1.125
XVP502SS-6	3/8	15/16	.500	1.125	4.00	10-24 UNC	5.03	2.07	2.52	.380	1.125
XVP502SS-8	1/2	1-1/16	.500	1.125	4.00	10-24 UNC	5.13	2.27	2.65	.500	1.125
XVP502SS-12	3/4	1-3/8	.875	1.375	5.00	10-24 UNC	6.67	3.35	3.46	.790	1.500
XVP502SS-16	1	1-5/8	.875	1.375	5.00	10-24 UNC	6.77	3.54	3.74	1.000	1.500
XVP502SS-20	1-1/4	2	1.000	1.500	7.00	1/4-20 UNC	9.00	4.00	4.55	1.250	2.000
XVP502SS-24	1-1/2	2-3/8	1.000	1.500	7.00	1/4-20 UNC	7.19	4.38	5.42	1.500	2.000
XVP502SS-32	2	3	1.000	1.500	7.00	1/4-20 UNC	9.75	5.50	5.68	2.000	2.000



Oval Handle, Female Pipe Ends, Panel Mount XV502SS-X-21

PART NO.	PIPE THREAD (NPT)	B/C HEX	G	H	L	I THREAD	M	N	FLOW DIA. D	PANEL HOLE DIA.
XV502SS-4-21	1/4	15/16	1.125	1.74	3.48	10-24 UNC	2.07	2.43	.380	1.125
XV502SS-6-21	3/8	15/16	1.125	1.74	3.48	10-24 UNC	2.07	2.43	.380	1.125
XV502SS-8-21	1/2	1-1/16	1.125	1.74	3.48	10-24 UNC	2.27	2.54	.500	1.125
XV502SS-12-21	3/4	1-3/8	1.375	2.68	5.36	10-24 UNC	3.35	3.45	.790	1.500
XV502SS-16-21	1	1-5/8	1.375	2.68	5.36	10-24 UNC	3.54	3.74	1.000	1.500
XV502SS-20-21	1-1/4	2	1.500	3.27	6.53	1/4-20 UNC	4.00	4.54	1.250	2.000
XV502SS-24-21	1-1/2	2-3/8	1.500	3.27	6.53	1/4-20 UNC	4.38	4.93	1.500	2.000
XV502SS-32-21	2	3	1.500	3.27	6.53	1/4-20 UNC	5.50	5.67	2.000	2.000



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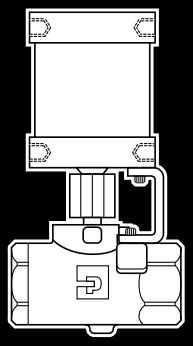


Rotary Actuator Ball Valves Series ACT

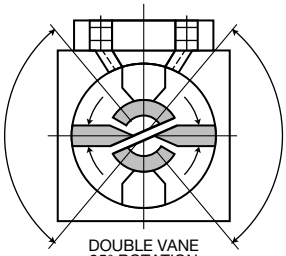
Parker… Leading the Industry

Parker combines many years of vane actuator experience with innovative product design to lead the industry in the development of reliable and efficient rotary actuators. When you specify Parker rotary vane actuators, you can rely on reduced maintenance costs and increased productivity.

How Do Vane Actuators Work?

Parker vane actuators provide the maximum amount of output torque from the smallest possible envelope size. They convert fluid power pressure into rotary motion for a wide variety of industrial applications. Double vane units produce twice the torque output of single vane actuators from identical envelope dimensions and have a maximum rotation of 95°.

A short cylindrical chamber encloses a vane attached to a central shaft. Fluid pressure differential is applied through a stationary barrier (stator) within the cylinder to one side of the vane. The opposite side of the vane is connected to exhaust through the stator. This pressure differential produces rotation of the vane and central shaft. Due to vane actuator design there will always be some internal bypass in these units.



DOUBLE VANE
95° ROTATION

Why Use Parker Vane Style Rotary Actuator Ball Valves?

- Provides uniform torque in both directions.
- Zero backlash allows precise positioning.
- Simplicity of design.
- Performs under the most adverse ambient conditions.
- No external linkage needed for rotary motion.
- Guaranteed zero external leakage.
- More efficient operation and longer time between servicing.

Where Can Parker Rotary Actuator Ball Valves Be Used?

- Remote Valve Actuation
- Material Handling
- Machine Tool
- Rubber and Plastics
- Machinery
- Mobile Equipment
- Robotics
- Packaging
- Multi-Process Industry
- Military/Commercial Marine
- Food Processing
- Electronics Manufacturing
- Transfer Lines

Act Series Features

- ON - OFF indicator
- Compact Profile
- Actuator ambient temperature with nitrile seals is -40° to 180°F
- 150 PSI maximum air pressure to actuator
- See specific part number for the minimum breakaway pressure
- Stainless steel ball and stem as standard

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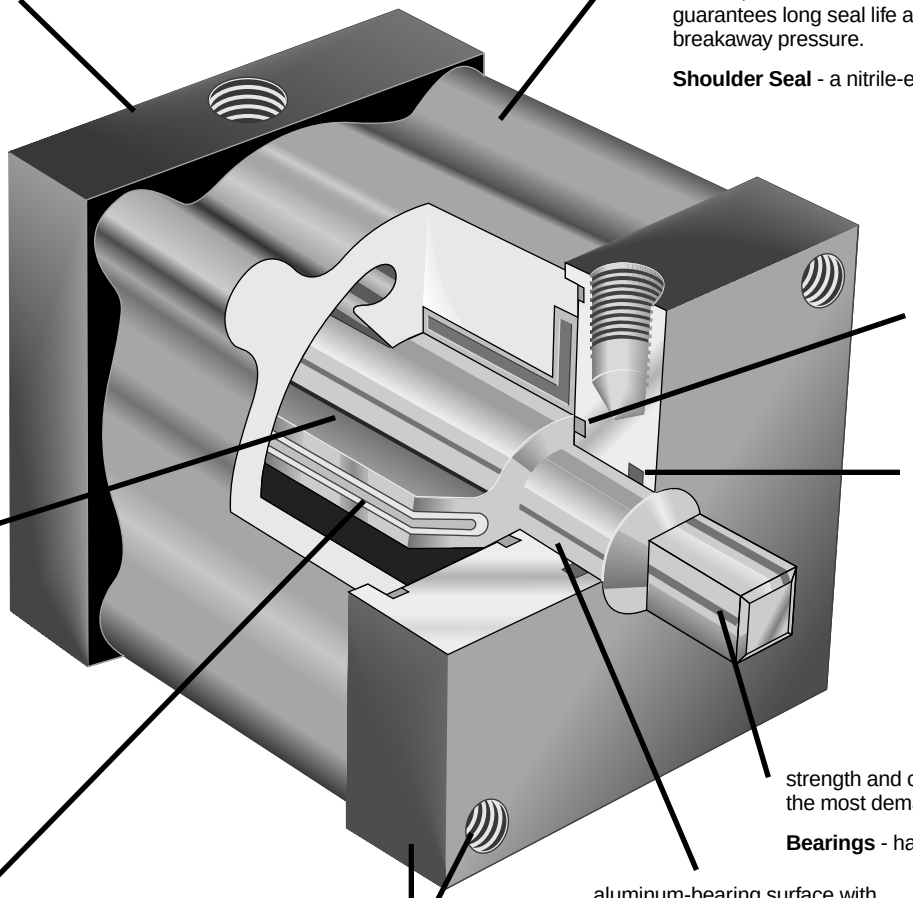
Heads-are precision machined from aluminum, then hard-coat anodized and PTFE impregnated to ensure long seal life and low breakaway pressure.

Body - is machined from a one-piece aluminum extrusion that incorporates the stator for superior rigidity. The extrusion is hard-coat anodized and PTFE impregnated, resulting in a smooth, slick seal surface which guarantees long seal life and low breakaway pressure.

Shoulder Seal - a nitrile-energized, PTFE seal is used to reduce bypass flow and friction, providing superior performance and long life.



Shaft Seal - the high-quality, self-lubricated, abrasion-resistant nitrile seal is a multiple lobe construction for leakfree operation and greater reliability.

Vane - a hard-coat anodized aluminum extrusion permanently affixed to shaft, forming a structurally sound assembly. The light weight also reduces inertia allowing faster operating speeds.

Shaft - stainless steel provides high strength and corrosion resistance for the most demanding applications.

Bearings - hard-coat anodized aluminum-bearing surface with permanent solid film lubricant provides substantial shaft support and wear resistance, ensuring continuous lubrication, high performance, and long life.

Vane Seal - a special self-lubricated, abrasion-resistant nitrile compound is molded into a one-piece vane seal, providing low breakaway pressure and long life, even with no lubrication. The vane seal is also removable so that field repairs can be made, if necessary.

base mounting offer flexibility in application and design.

Mounting - combination face and

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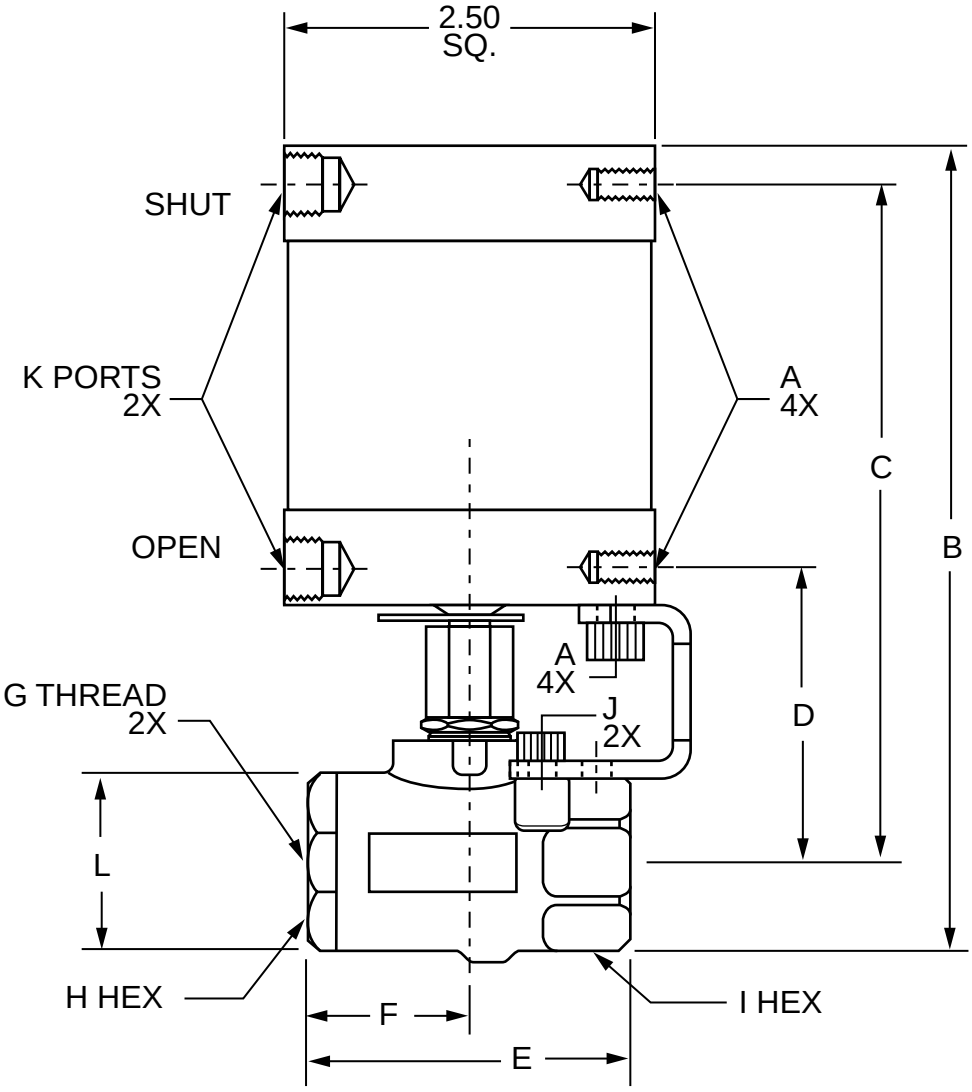
Rotary Actuator, Female Pipe Ends XV502P-X-ACT

PART . NO	SIZE	A MTG. HOLES	B	C	D	E	F	G	H HEX	I HEX	J UNC	K NPTF	L	FLOW DIA.	FLOW CV	MIN. ACT PRESSURE (PSI)
XV502P-4-ACT	1/4	1/4-20 UNC	5.25	4.47	1.91	2.03	1.00	1/4-18PTF	15/16	15/16	10-24	1/8-27	1.06	.375	4.0	50
XV502P-6-ACT	3/8	1/4-20 UNC	5.25	4.47	1.91	2.03	1.00	3/8-18PTF	15/16	15/16	10-24	1/8-27	1.06	.375	5.8	50
XV502P-8-ACT	1/2	1/4-20 UNC	5.38	4.54	1.98	2.20	1.09	1/2-14PTF*	1-1/16	1-1/16	10-24	1/8-27	1.19	.500	12.0	50
XV502P-12-ACT	3/4	1/4-20 UNC	5.57	4.63	2.07	2.42	1.29	3/4-14PTF**	1-5/16	1-1/4	10-24	1/8-27	1.38	.685	25.0	75
XV502P-16-ACT	1	1/4-20 UNC	5.85	4.76	2.20	2.75	1.38	1-11.5PTF**	1-9/16	1-1/2	10-24	1/8-27	1.67	.875	35.0	75

Stainless Steel Rotary Actuator, Female Pipe Ends XV502SS-X-ACT

PART . NO	SIZE	A MTG. HOLES	B	C	D	E	F	G	H / I HEX	J	K NPTF	L	FLOW DIA.	FLOW CV
XV502SS-4-ACT	1/4	1/4-20 UNC	5.41	4.61	2.05	2.07	1.04	1/4-18 NPT	15/16	10-24	1/8-27	1.10	.375	4.0
XV502SS-6-ACT	3/8	1/4-20 UNC	5.41	4.61	2.05	2.07	1.04	3/8-18 NPT	15/16	10-24	1/8-27	1.10	.375	6.0
XV502SS-8-ACT	1/2	1/4-20 UNC	5.53	4.64	2.08	2.27	1.17	1/2-14 NPT	1 1/16	10-24	1/8-27	1.28	.500	14.0



*PTF special short. **PTF special extra short

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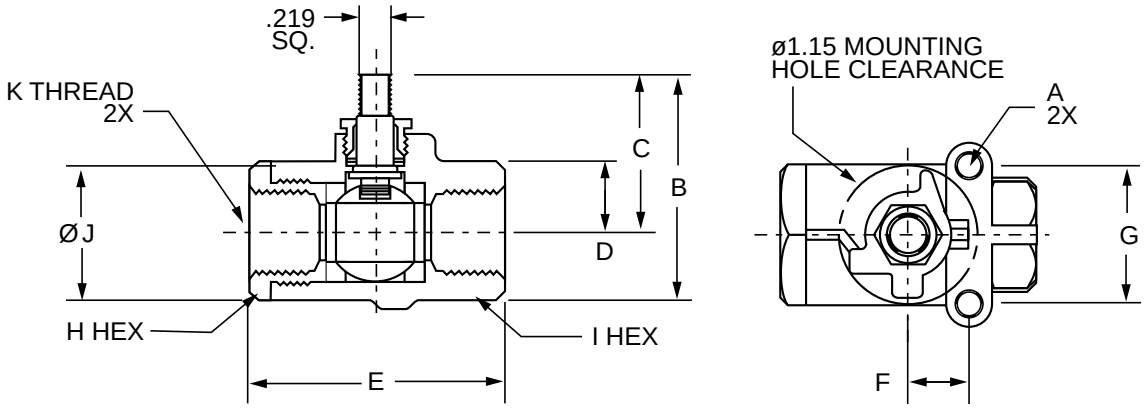
Otsego, Michigan

Actuator Sub-Assembly XV502P-X-SUB

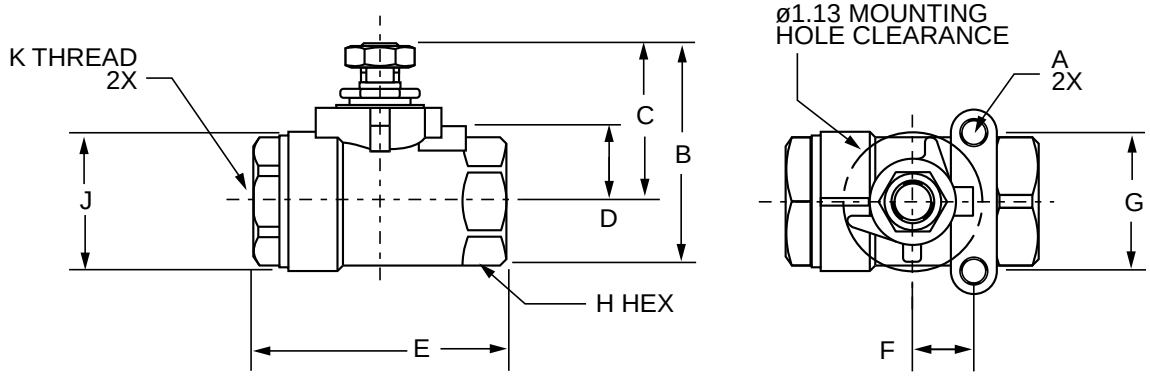
PART NO	SIZE	A UNC	B	C	D	E	F	G	H HEX	I HEX	J	K
XV502P-4-SUB	1/4	10-24	1.68	1.15	.495	2.03	.50	1.12	15/16	15/16	1.06	1/4-18 PTF
XV502P-6-SUB	3/8	10-24	1.68	1.15	.495	2.03	.50	1.12	15/16	15/16	1.06	3/8-18 PTF
XV502P-8-SUB	1/2	10-24	1.78	1.19	.565	2.20	.50	1.12	1-1/16	1-1/16	1.19	1/2-14 PTF*
XV502P-12-SUB	3/4	10-24	2.09	1.40	.655	2.42	.87	1.37	1-5/16	1-1/4	1.38	3/4-14 PTF**
XV502P-16-SUB	1	10-24	2.38	1.54	.785	2.75	.87	1.37	1-9/16	1-1/2	1.67	1-11.5 PTF**

* PTF Special Short
** PTF Special Extra Short



Actuator Sub-Assembly XV502SS-X-SUB

PART NO	SIZE	A UNC	B	C	D	E	F	G	H HEX	J	K
XV502SS-4-SUB	1/4	10-24	1.88	1.32	.63	2.07	.50	1.12	15/16	1.10	1/4-18 NPT
XV502SS-6-SUB	3/8	10-24	1.88	1.32	.63	2.07	.50	1.12	15/16	1.10	3/8-18 NPT
XV502SS-8-SUB	1/2	10-24	2.00	1.35	.66	2.27	.50	1.12	1-1/16	1.28	1/2-14 NPT



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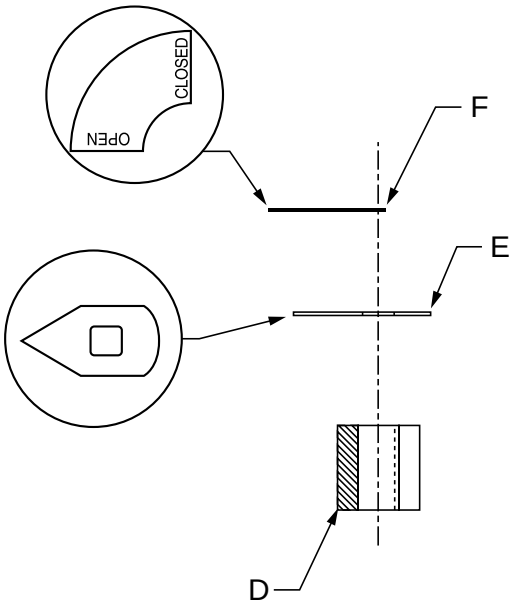
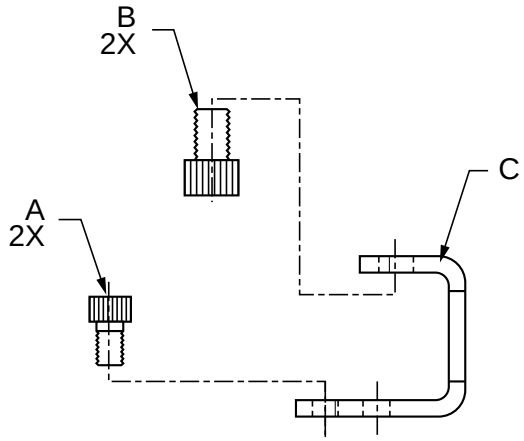
ACT-P-X-KIT

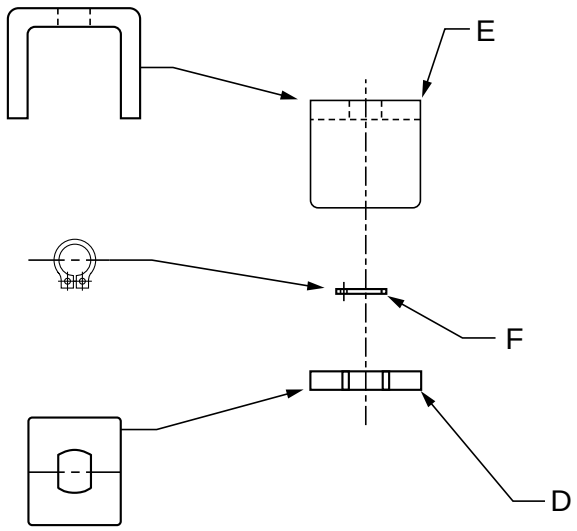
PART NO.	FOR USE WITH	A	B	C	D	E	F
ACT-P-1-KIT	XV502P-4, 6, 8-ACT	10-24 UNC	1/4-20 UNC	BRACKET	.60 LONG COUPLING	POSITION INDICATOR	POSITION LABEL
ACT-P-2-KIT	XV502P-12, 16-ACT	10-24 UNC	1/4-20 UNC	BRACKET	.55 LONG COUPLING	POSITION INDICATOR	POSITION LABEL

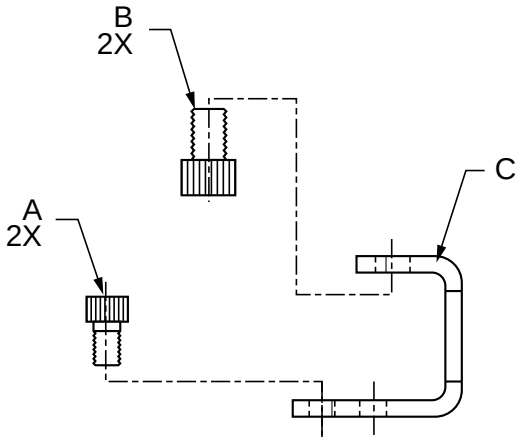




ACT-SS-X-KIT

PART NO.	FOR USE WITH	A	B	C	D	E	F
ACT-SS-1-KIT	XV502SS-4, 6, 8-ACT	10-24 UNC	1/4-20 UNC	BRACKET	CLIP	HANDLE YOKE	SNAP RING





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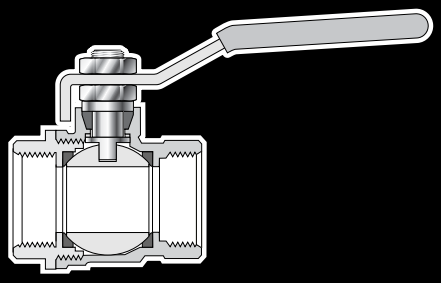
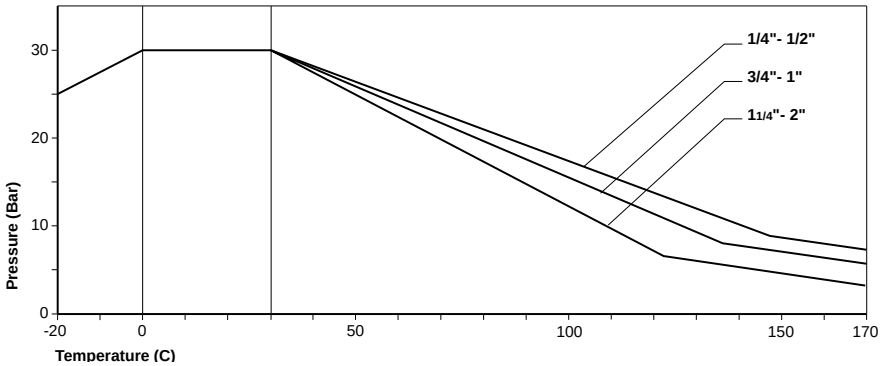


Parker Metric Ball Valves Series BVGC

Principle

Parker BVGC series economy ball valves are designed for use in a wide variety of fluid applications. Available with BSPP female/ female* short threads to ISO-228, they are full flow valves giving minimum pressure drop. The BVGC series has a double PTFE seal on the ball enabling the valve to be used with flow in either direction. All seals are treated with a silicone free lubricant enabling the valves to be used in water-based paint spray applications. BVGC series valves have an adjustable PTFE packing gland for easy maintenance and longer service life. For operator safety the BVGC series valves are fitted with anti-extrusion stems to prevent blow out and all valves are 100% pressure tested twice to ensure zero leakage. For other thread configurations please consult your Parker sales engineer.

Operating pressures and temperatures



N.B. This chart gives general information. Only testing under operating conditions will finally determine which valve should be selected.

Technical Features

BODY	LEVER HANDLE	COMPACT HANDLE	ANTI EXTRUSION STEM	STEM PACKAGING GLAND	BALL	ANTI FRICTION RING	FORCING NUT	THREADS
Brass Nickel Plated to DIN 17660 and UNI 5705 Spec.	Carbon Steel with Yellow PVC Coating	Aluminum with Yellow Epoxy Coating	Brass Nickel Plated	PTFE	Brass Chrome Plated	PTFE	Brass Nickel Plated	1/4" to 2" BSPP to ISO 228/ DIN 259

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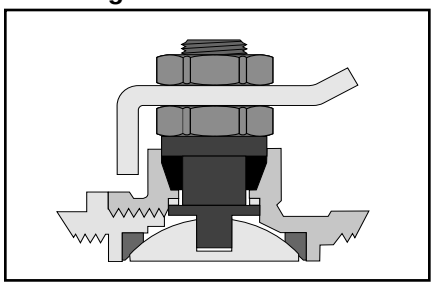
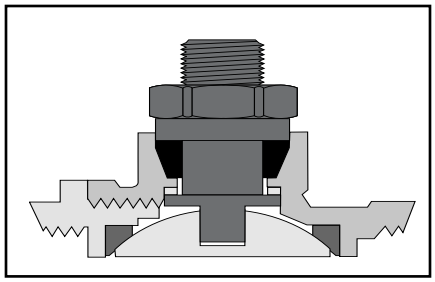
Advantages



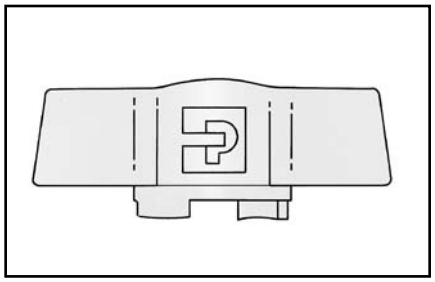
Adjustable packing

The PTFE packing gland and adjustable washer are designed to give longer service life and lower operating torques.



Anti extrusion stem

The BVGC series ball valves are fitted with an anti-extrusion stem to prevent blow out in the case of pressure peaks.



Compact handle

For applications where space is at a premium, the BVGC series valve is available with a compact handle in sizes up to 1”.

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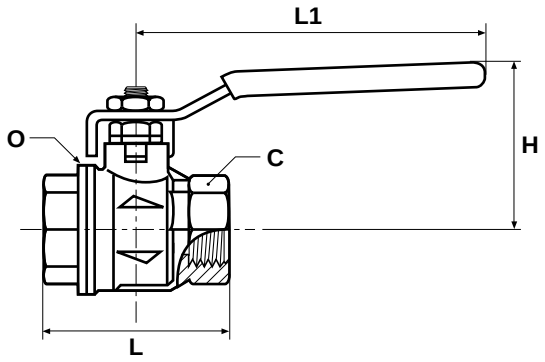
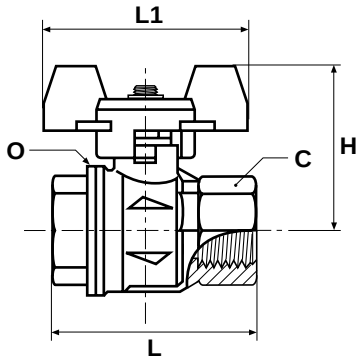
BVGC BSPP Female/Female Valve With Lever Handle

PART NO.	DN MM	THREAD BSPP	C	H	L	L1	O
BVG4-1/4C	8	1/4	20	39.5	39	82	25.0
BVG4-3/8C	10	3/8	20	39.5	39	82	25.0
BVG4-1/2C	15	1/2	25	44.0	50	100	32.5
BVG4-3/4C	20	3/4	31	50.0	54	120	39.0
BVG4-1C	25	1	38	54.0	67	120	47.5
BVG4-1.1/4C	32	1.1/4	48	76.5	77	158	59.0
BVG4-1.1/2C	40	1.1/2	54	82.5	90	158	71.5
BVG4-2C	50	2	66	89.5	106	158	86.0



BVGTC BSPP Female/Female Valve With Compact Handle

PART NO.	DN MM	THREAD BSPP	C	H	L	L1	O
BVGT4-1/4C	8	1/4	20	40	39	50	25.0
BVGT4-3/8C	10	3/8	20	40	39	50	25.0
BVGT4-1/2C	15	1/2	25	44	50	50	32.5
BVGT4-3/4C	20	3/4	31	49	54	60	39.0
BVGT4-1C	25	1	38	53	67	60	47.5



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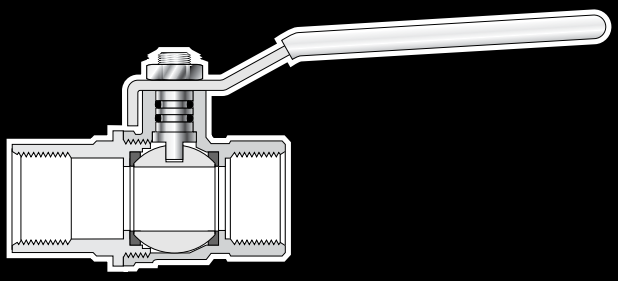
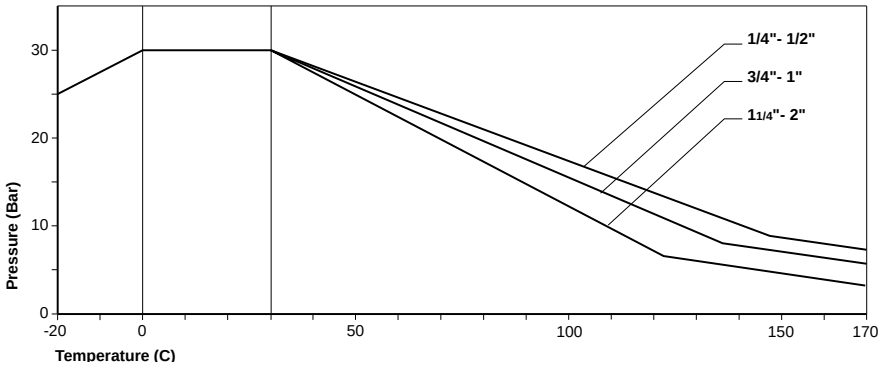


Parker Metric Ball Valves Series BVGL

Principle

Parker BVGL series valves are designed for use in fluid and gas applications and are DVGW approved. The valve dimensions are in accordance with DIN3357 for interchange-ability and are available with BSPP female/female* long threads to DIN 2999 / ISO228. These full flow ball valves have a chrome plated ball with a double PTFE seal system enabling the valve to be used with flow in either direction. All seals are treated with a silicone free lubricant enabling the valves to be used in water based paint spray applications. BVGL series valves are fitted with an anti-extrusion stem with two Fluorocarbon seals for maximum safety and performance. After assembly all valves are 100% pressure tested twice to ensure zero leakage. For other thread configurations please consult us.

Operating pressures and temperatures



N.B. This chart gives general information. Only testing under operating conditions will finally determine which valve should be selected.

Technical Features

BODY	LEVER HANDLE	COMPACT HANDLE	ANTI EXTRUSION STEM	STEM SEAL	BALL	ANTI FRICTION RING	FORCING NUT	VALVE DIMENSIONS
Brass Nickel Plated to DIN 17660 and UNI 5705 Spec.	Carbon Steel with Yellow PVC Coating	Aluminum with Yellow Epoxy Coating	Brass Nickel Plated	Two Viton O-Rings	Brass Chrome Plated	PTFE	Brass Nickel Plated	In Accordance with DIN 3357

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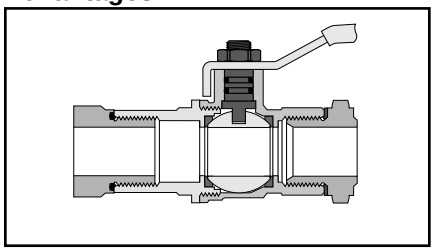
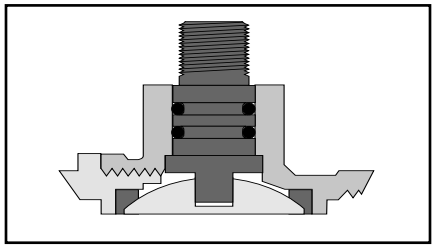
Advantages



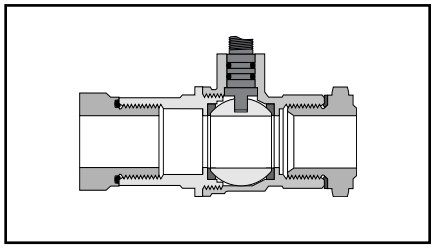
Long female threads

BVGL series valves are manufactured with long female threads in accordance to DIN 2999/ISO 228. This enables the valves to be used with Prestolok, Metru-Lok and brass adaptors but also Parker's range of steel hydraulic fittings, e.g. Triple-Lok, O-Lok, EO, and BSPP coned adaptors.



Anti extrusion stem

The BVGL series ball valves are fitted with an anti extrusion stem to prevent blow out in the case of pressure peaks. The stem is sealed with two Fluorocarbon O-rings for maximum safety and performance.



Full flow

All BVGL series valves are full-flow. This limits the turbulence created by the passage of fluid across the valve, minimizing pressure drop.

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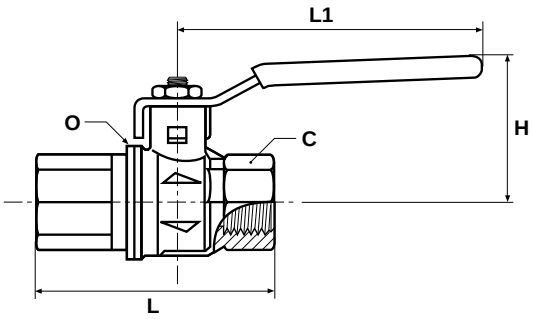
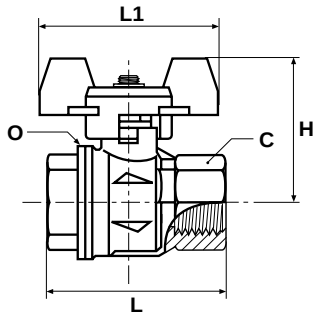
BVGL BSPP Female/ Female Valve With Lever Handle

PART NO.	DN MM	THREAD BSPP	C	H	L	L1	O
BVG4-1/4L	8	1/4	20	38	50	82	25.0
BVG4-3/8L	10	3/8	20	38	60	82	25.0
BVG4-1/2L	15	1/2	25	43	75	100	32.5
BVG4-3/4L	20	3/4	32	50	80	120	39.0
BVG4-1L	25	1	41	54	90	120	47.5
BVG4-1.1/4L	32	1 1/4	50	73	110	158	59.0
BVG4-1.1/2L	40	1 1/2	55	79	120	158	71.5
BVG4-2L	50	2	70	86	140	158	86.0



BVGTL BSPP Female/Female Valve With Compact Handle

PART NO.	DN MM	THREAD BSPP	C	H	L	L1	O
BVGT4-1/4L	8	1/4	20	39	50	50	25.0
BVGT4-3/8L	10	3/8	20	39	60	50	25.0
BVGT4-1/2L	15	1/2	25	43	75	50	32.5
BVGT4-3/4L	20	3/4	32	47	80	60	39.0
BVGT4-1L	25	1	41	51	90	60	47.5



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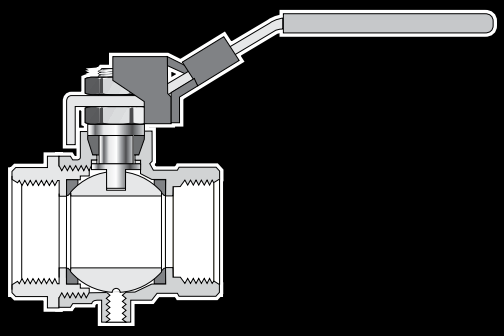


Parker Metric Ball Valves Series BVGPLOCK

Principle

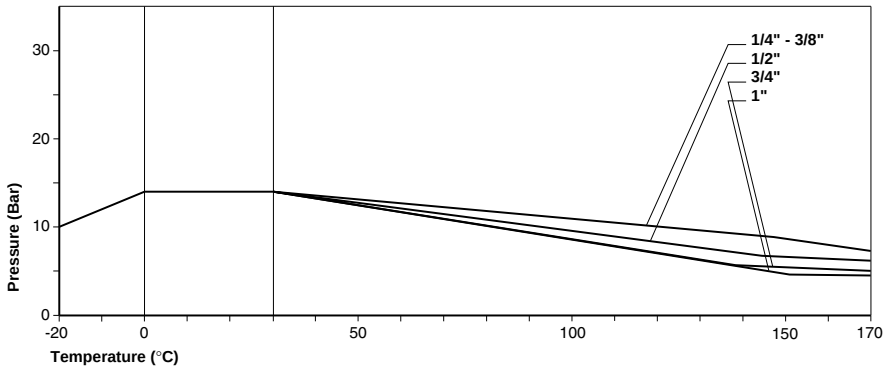
Parker BVGPLOCK series of ball valves has been developed to meet the requirements of European Directive DI 89/392/CEE relating to the isolation of power supply and to meet the health and safety requirements for machines and materials in paragraphs L233-5 of the code du Travail.

The BVGPLOCK series of ball valves incorporate two specific safety features:

- An M5 threaded venting port enabling downstream pressure to be vented when the valve is closed.
- All valves are fitted with a locking mechanism enabling the valve to be padlocked in the closed position, thus preventing tampering or accidental opening of the valve during operation.

All seals are treated with a silicone free lubricant enabling them to be used in water based paint spray applications.

Operating pressures and temperatures



N.B. This chart gives general information. Only testing under operating conditions will finally determine which valve should be selected.

Technical Features

BODY	LEVER HANDLE	ANTI EXTRUSION STEM	STEM PACKING GLAND	BALL	ANTI FRICTION RING	FORCING NUT	VALVE DIMENSIONS	PRESSURE
Brass nickel plated to DIN17660 and UNI5705 spec.	Carbon steel with yellow PVC coating	Brass nickel plated	PTFE	Brass chrome plated	PTFE	Brass nickel plated	In accordance with DIN3357	See chart below

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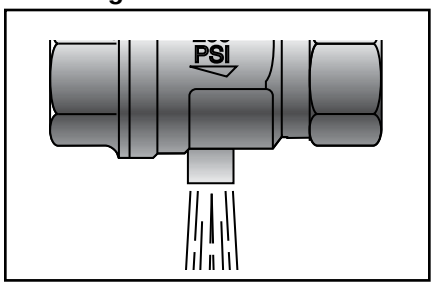
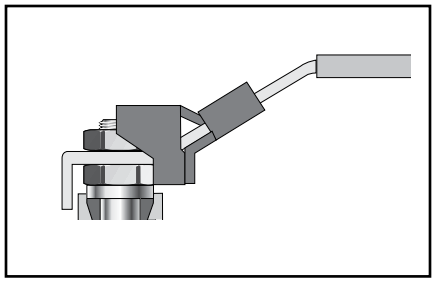
Parker Brass Products Division
Otsego, Michigan

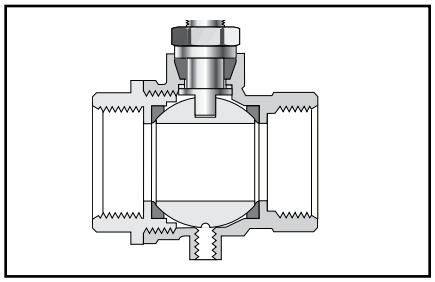
Advantages



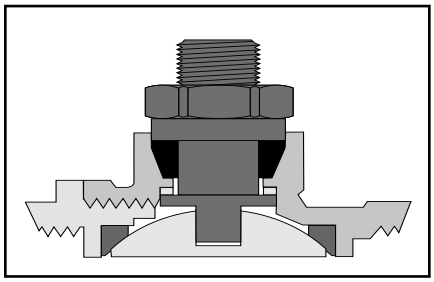
Threaded Exhaust
BVGPLOCK series ball valves are manufactured with an M5 threaded exhaust port, this safety feature enables the downstream air pressure to be vented when the valve is closed.



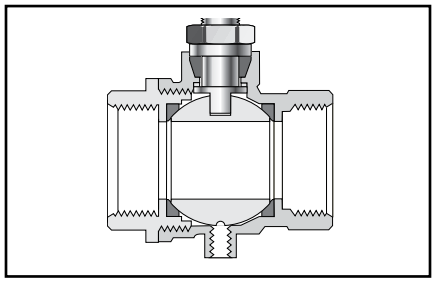
Lockable Handle
The BVGPLOCK series ball valves are fitted with a handle that can be locked in the closed position with a padlock. This safety feature ensures the valve cannot be accidentally opened, and only authorized personnel can operate the valve.



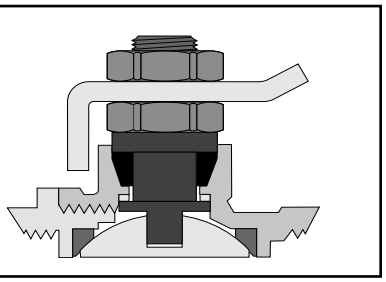
DIN 2999 / ISO 228 Female Threads
BVGPLOCK series valves are manufactured with long female threads in accordance to DIN2999/ISO228. This enables the valves to be used with Prestolok, Metrulok and brass adaptors but also Parker's range of steel hydraulic fittings and EO-fittings form "A" or "C" to DIN 3852.



Anti Extrusion Stem
The BVGPLOCK series ball valves are fitted with an anti-extrusion stem to prevent blow out in the case of pressure peaks.



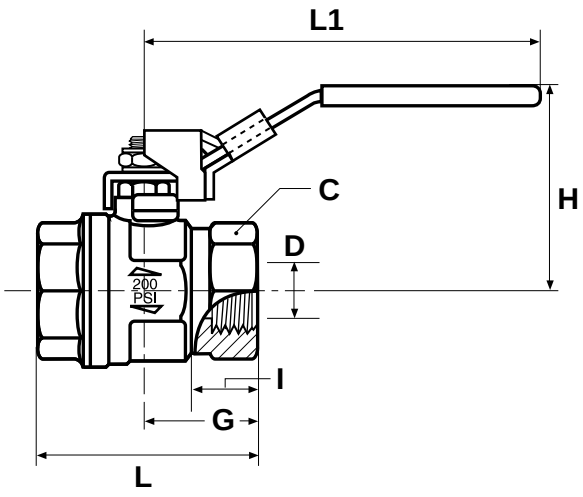
Full Flow
All BVGPLOCK series valves are full-flow. This limits the turbulence created by the passage of fluid across the valve, minimizing pressure drop.



Adjustable Packing
The PTFE packing gland and adjustable washer are designed to give longer service like and lower operating torques.

BVG4PLOCK BSPP Female/Female, Vented, Locking Handle

PART NO.	D FLOW Ø	THREAD BSPP	C	G	H	I	L	L1
BVG4P-1/4 LOCK	8.0	1/4	20	22.5	47.5	12.0	45	96
BVG4P-3/8 LOCK	9.5	3/8	20	22.5	47.5	12.0	45	96
BVG4P-1/2 LOCK	15.0	1/2	25	29.5	52.0	15.5	59	96
BVG4P-3/4 LOCK	19.0	3/4	31	32.0	59.5	17.0	64	117
BVG4P-1 LOCK	24.0	1	40	40.5	63.5	21.0	81	117
BVG4P-1.1/4LOCK	32.0	1-1/4	49	46.5	76.5	23.0	93	158
BVG4P-1.1/2LOCK	40.0	1-1/2	54	51.0	82.5	23.0	102	158
BVG4P-2LOCK	50.0	2	69	60.5	89.5	26.5	121	158



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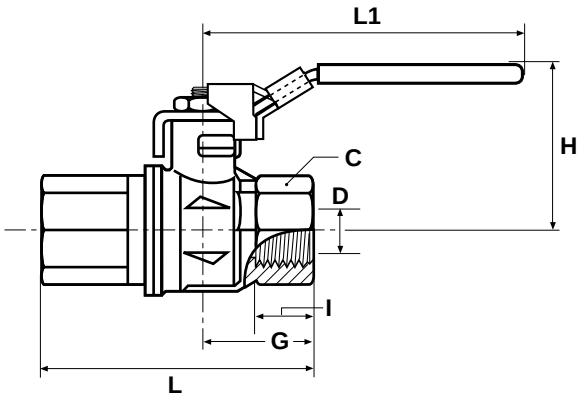
BVG4-LOCK BSPP Female/Female, Locking Handle

PART NO.	D FLOW Ø	THREAD BSPP	C OCTAGON	H	L1	L	G
BVG4-1/4 LOCK	8.0	1/4	20	46.5	96.0	50	22.6
BVG4-3/8 LOCK	9.5	3/8	20	46.5	96.0	60	22.6
BVG4-1/2 LOCK	15.0	1/2	25	51.3	96.0	75	29.5
BVG4-3/4 LOCK	19.0	3/4	31	59.5	117.1	80	32.0
BVG4-1 LOCK	24.0	1	40	63.5	117.1	90	40.4
BVG4-1.1/4LOCK	32.0	1-1/4	49	77.0	156.5	110	46.5
BVG4-1.1/2LOCK	40.0	1-1/2	54	83.0	156.5	120	51.1
BVG4-2LOCK	50.0	2	69	89.9	156.5	140	60.5



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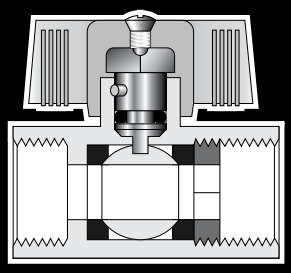
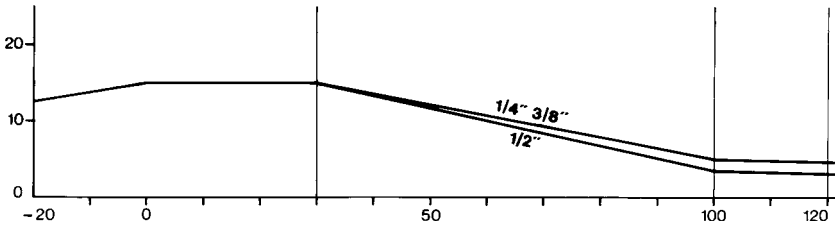


Parker Metric Ball Valves Series MBVG

Principle

The MBVG series ball valves with their compact design offer the solution to applications where space is an important factor. The body is of a particularly robust design. The integrity of the sealing on the ball is obtained by the use of PTFE seats. The valves are available with BSPP female threads ISO-228/1 (DIN 299) in : 1/4" & 3/8".

Operating pressures and temperatures

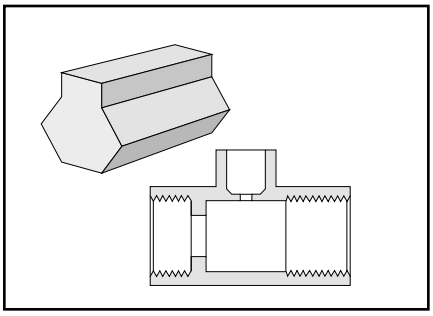


N.B. This chart gives general information. Only testing under operating conditions will finally determine which valve should be selected.

Technical Features

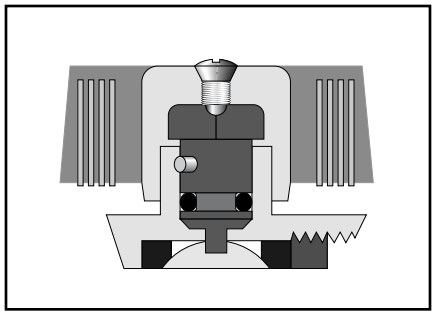
BODY	HANDLE RETENTION SCREW	HANDLE	STEM	STEM SEAL	BALL	ANTI EXTRUSION GUIDE PIN	NUT	SEAT SEALS
Brass Chromium Plated	Brass Chromium Plated	Polyamide	Brass	Viton	Brass Chromium Plated	Stainless Steel	Brass	PTFE

Advantages



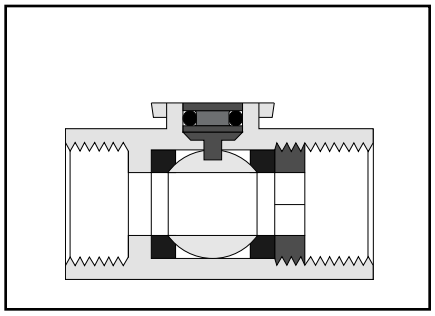
Design of the body

The valve is manufactured from a solid section which incorporates the stem housing in the body. This design allows excellent guidance of the stem, which increases its lifespan.



Stem tightness

A Fluorocarbon O-Ring assembled under compression automatically compensates for minute friction wear. Thus a high standard of seal is attained.



Tightness of the seals

The perfect tightness of the seals on the casing is obtained by the preset force of the nut, adjusted during assembly.

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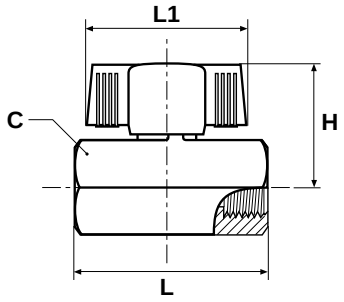
MBVG BSPP Female/Female Valve

PART NO.	DN MM	THREAD BSPP	C	H	L	L1
MBVG4-1/4	8	1/4	21	31.5	41.5	39
MBVG4-3/8	8	3/8	21	31.5	41.5	39
MBVG4-1/2	10	1/2	25	33.5	48.0	39



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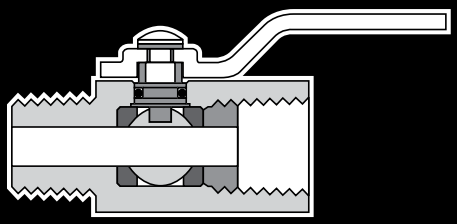


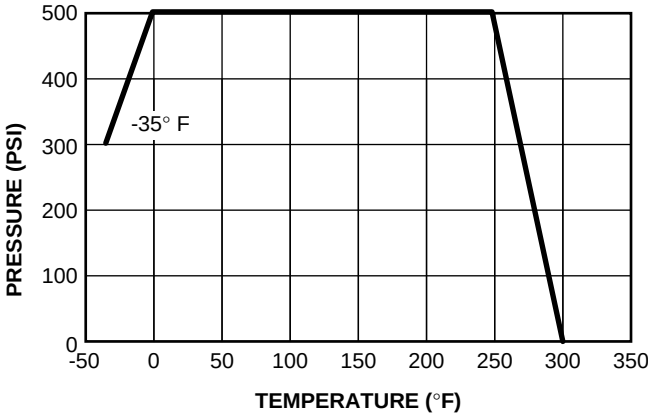
Micro Ball Valve Series 708 / 709

Advantages
The Parker Micro-Valve is designed to be used in confined and hard to reach applications. This miniature 2 way valve has a barstock body for extended service life and is offered with either male / female or female / female pipe ends. Features of the MV708 / 709 valves include chrome plate ball, PTFE seats, nitrile stem seal and a low profile chrome plated steel handle.

Applications
Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and / or inability to turn the valve handle.

Working Pressure and Temperatures
These valves are designed and built for use at pressures and temperatures within the stated ranges. Consult the factory for any use outside of these ranges.

Vacuum to 29 inches Hg



Operating Instructions
Quarter turn is "ON" or "OFF".
(Provides positive stop action for full shutoff.)

Style	Type	Size
MV	**708** **709**	**-4**
Style	MV-Micro Valve	
Type	708 - Male / Female 709 - Female / Female	
Size	4-1/4"	

Flow data

VALVE SIZE	MV708 CV	MV709 CV
1/4	.95	.95

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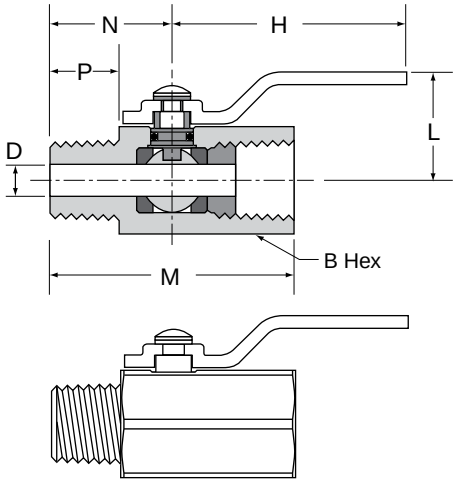
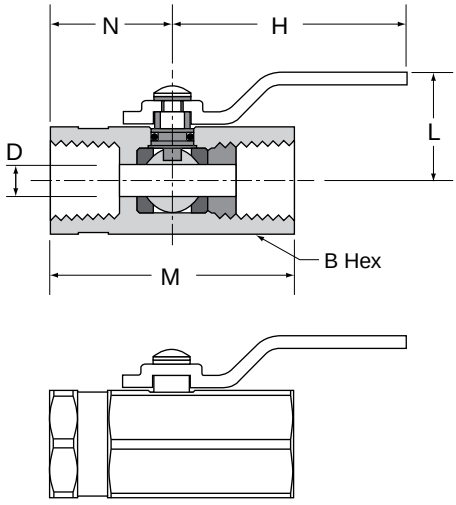
Male-Female Pipe Ends, Mini Ball Valve MV708

PART NO.	PIPE THREAD	B HEX	H	L	M	N	P	FLOW DIA. D
MV708-2	1/8	9/16	1.18	.63	1.62	.93	.38	.180
MV708-4	1/4	11/16	1.52	.70	1.57	.79	.50	.210



Female Pipe Ends, Mini Ball Valve MV709

PART NO.	PIPE THREAD	B HEX	H	L	M	N	FLOW DIA. D
MV709-2	1/8	9/16	1.18	.63	1.52	.68	.180
MV709-4	1/4	11/16	1.52	.70	1.57	.76	.210



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Replacement Handles

Valve	Plated Steel Lever w/Cover	S.S. Lever (No Cover)	S.S. Lever w/Cover	Tee (No Cover)	Oval (w/Cover)	Short Lever (No Cover)	Plated Steel Lkg. Lever w/Cover	S.S. Locking Lever w/Cover
XV500P (501,502,506,510,590,591)								
-4	2560-10082	2566-00105		2566-00147	2566-00215	2566-00231	2560-10080	2560-10081
-6	2560-10082	2566-00105		2566-00147	2566-00215	2566-00231	2560-10080	2560-10081
-8	2560-10082	2566-00105		2566-00147	2566-00215	2566-00231	2560-10080	2560-10081
-10	2560-10097	2566-00178		2566-00179			2566-10100	
-12	2560-10097	2566-00178		2566-00179	2566-00180	—	2560-10100	2560-10101
-16	2560-10097	2566-00178		2566-00179	2566-00180	—	2560-10100	2560-10101
-20	2566-00143	2566-00153		—	—	2566-00142	2566-00135	—
-24	2566-00143	2566-00153		—	—	2566-00142	2566-00135	—
-32	2566-00143	2566-00153		—	—	2566-00142	2566-00135	—
XV501SS & XV502SS								
-4	—		2566-00132	—	2566-00108	2566-00146	—	2566-00138
-6	—		2566-00132	—	2566-00108	2566-00146	—	2566-00138
-8	—		2566-00132	—	2566-00108	2566-00146	—	2566-00138
-12	—		2566-00133	—	2566-00109	—	—	2566-00184
-16	—		2566-00133	—	2566-00109	—	—	2566-00184
XV502SS								
-20	—		2566-00134	—	2566-00110	—	—	2566-00185
-24	—		2566-00134	—	2566-00110	—	—	2566-00185
-32	—		2566-00134	—	2566-00110	—	—	2566-00185
XV500CS & XV502CS								
-4	2566-00158			2566-00170	2566-00166		2566-00162	
-6	2566-00158			2566-00170	2566-00166		2566-00162	
-8	2566-00158			2566-00171	2566-00166		2566-00162	
-12	2566-00159			2566-00172	2566-00167		2566-00163	
-16	2566-00159			2566-00172	2566-00167		2566-00163	
-20	2566-00160				2566-00168		2566-00164	
-24	2566-00160				2566-00168		2566-00164	
-32	2566-00161				2566-00169		2566-00165	
XV506CS								
-4	2566-00158				2566-00166		2566-00162	
-6	2566-00158				2566-00166		2566-00162	
-8							2566-00234	
-12	—						2566-00235	
-16	—						2566-00236	

Replacement Handle Nuts

Valve	Plated Steel	Stainless Steel
XV500P-4	2567-00020	2567-00023
XV500P-6	2567-00020	2567-00023
XV500P-8	2567-00020	2567-00023
XV500P-12	2567-00055	2567-00057
XV500P-16	2567-00055	2567-00057
XV500P-20	2567-00051	2567-00052
XV500P-24	2567-00051	2567-00052
XV500P-32	2567-00051	2567-00052

Replacement Handle Covers

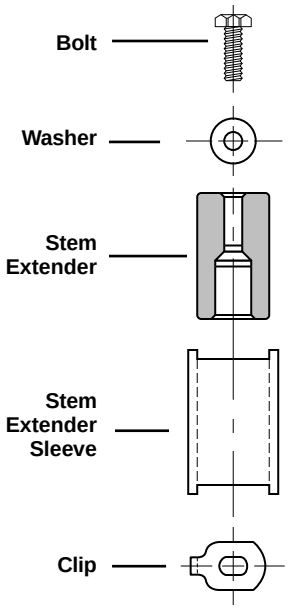
Valve	Lever	Short Lever	Tee
XV500P-4	2569-00108		2569-00155
XV500P-6	2569-00108		2569-00155
XV500P-8	2569-00108		2569-00155
XV500P-12	2569-00296		2569-00155
XV500P-16	2569-00296		2569-00155
XV500P-20	2569-00229	2569-00234	
XV500P-24	2569-00229	2569-00234	
XV500P-32	2569-00229	2569-00234	
XV502SS-4		2569-00203	
XV502SS-6		2569-00203	
XV502SS-8		2569-00203	

STX	Stem Extension Kit
P	For use on Brass Ball Valves
1	1: 1/4" thru 1/2" valves 2: 3/4" thru 1" valves
125	125: 1-1/4" extension length 225: 2-1/4" extension length

STX	Stem Extension Kit
SS	For use on Stainless Steel Ball Valves
1	1: 1/4" thru 1/2" valves 2: 3/4" thru 1" valves 3: 1-1/4"-2" valves
125	125: 1-1/4" extension length 225: 2-1/4" extension length

All stem extension kit componentry is made from high quality, corrosion resistant stainless steel

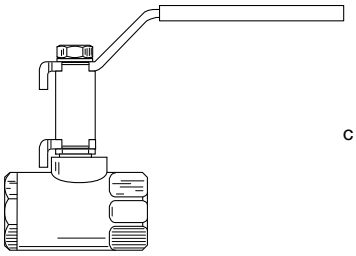
Note: Stem extensions cannot be used with series 509 and series 520.

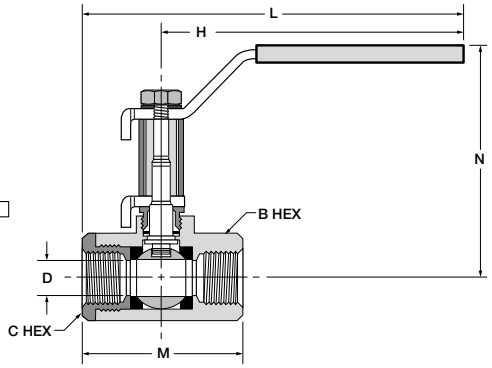


Brass Valve Extension Dimensions STX-P-1-125

PART NO.	VALVE SIZE	B HEX	C HEX	H	L	M	N	D FLOW Ø
STX-P-1-125	1/4	15/16	15/16	3.96	4.96	2.03	3.73	.375
STX-P-1-125	3/8	15/16	15/16	3.96	4.96	2.03	3.73	.375
STX-P-1-125	1/2	1-1/16	1-1/16	3.96	5.05	2.20	3.84	.500
STX-P-2-125	3/4	1-1/4	1-5/16	3.96	5.25	2.42	4.06	.685
STX-P-2-125	1	1-1/2	1-9/16	3.96	5.89	2.75	4.33	.875

Note: Drawing shows STX-P assembled to XV500P series-not included

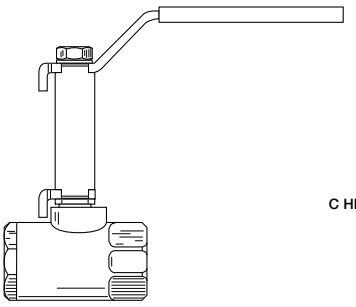


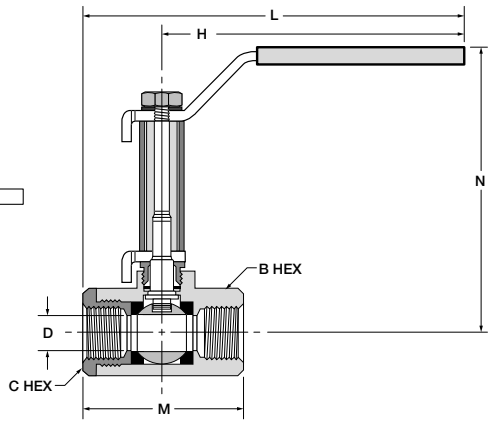


Brass Valve Extension Dimensions STX-P-1-225

PART NO.	VALVE SIZE	B HEX	C HEX	H	L	M	N	D FLOW Ø
STX-P-1-225	1/4	15/16	15/16	3.96	4.96	2.03	4.73	.375
STX-P-1-225	3/8	15/16	15/16	3.96	4.96	2.03	4.73	.375
STX-P-1-225	1/2	1-1/16	1-1/16	3.96	5.05	2.20	4.84	.500
STX-P-2-225	3/4	1-1/4	1-5/16	3.96	5.25	2.42	5.06	.685
STX-P-2-225	1	1-1/2	1-9/16	3.96	5.89	2.75	5.33	.875

Note: Drawing shows STX-P assembled to XV500P series-not included





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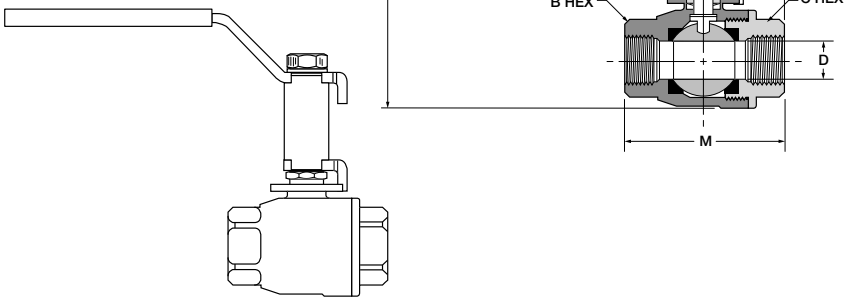
Stainless Steel Valve Extension Dimensions STX-SS-1-X

PART NO.	VALVE SIZE	B HEX	C HEX	H	L	M	N	D FLOW Ø
STX-SS-1-125	1/4	15/16	15/16	4.00	5.04	2.07	3.78	.375
STX-SS-1-125	3/8	15/16	15/16	4.00	5.04	2.07	3.78	.375
STX-SS-1-125	1/2	1-1/16	1-1/16	4.00	5.17	2.27	3.90	.500
STX-SS-1-225	1/4	15/16	15/16	4.00	5.04	2.07	4.78	.375
STX-SS-1-225	3/8	15/16	15/16	4.00	5.04	2.07	4.78	.375
STX-SS-1-225	1/2	1-1/16	1-1/16	4.00	5.17	2.27	4.90	.500

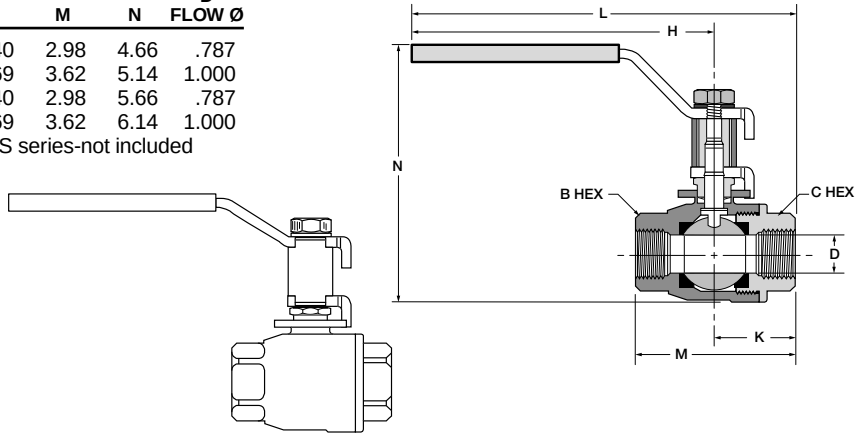
Note: Drawing shows STX-SS assembled to XV502SS series-not included



Stainless Steel Valve Extension Dimensions STX-SS-2-X

PART NO.	VALVE SIZE	B/C HEX	H	K	L	M	N	D FLOW Ø
STX-SS-2-125	3/4	1-1/16	4.94	1.52	6.40	2.98	4.66	.787
STX-SS-2-125	1	1-5/8	4.94	1.88	6.69	3.62	5.14	1.000
STX-SS-2-225	3/4	1-1/16	4.94	1.52	6.40	2.98	5.66	.787
STX-SS-2-225	1	1-5/8	4.94	1.88	6.69	3.62	6.14	1.000

Note: Drawing shows STX-SS assembled to XV500SS series-not included

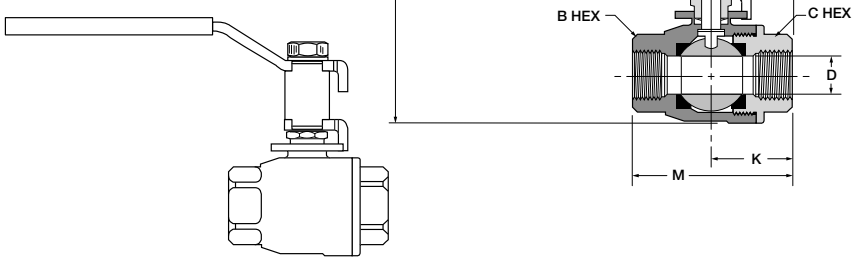


Stainless Steel Valve Extension Dimensions STX-SS-3-X

PART NO.	VALVE SIZE	B/C OCT	H	K	L	M	N	D FLOW Ø
STX-SS-3-125	1-1/4	2*	6.94	2.00	8.95	4.00	5.71	1.25
STX-SS-3-125	1-1/2	2-3/8	6.94	2.22	9.21	4.49	6.05	1.50
STX-SS-3-125	2	2-3/4	6.94	2.73	9.65	5.43	7.01	2.00
STX-SS-3-225	1-1/4	2*	6.94	2.00	8.95	4.00	6.71	1.25
STX-SS-3-225	1-1/2	2-3/8	6.94	2.22	9.21	4.49	7.05	1.50
STX-SS-3-225	2	2-3/4	6.94	2.73	9.65	5.43	8.01	2.00

*Hex bolt

Note: Drawing shows STX-SS assembled to XV500SS series-not included



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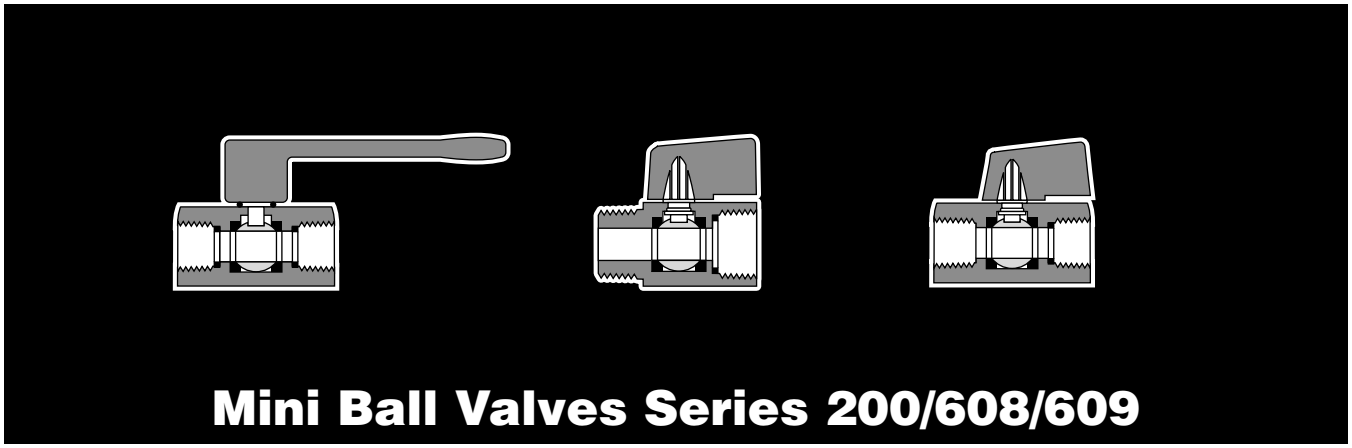


Mini Ball Valves Series 200/608/609

Advantages

The Parker Mini-Valve is to be used in confined and hard to reach applications. The Brass extruded body allows for extended service life and is chrome plated as standard. Features of the MV608/609 valves include blowout proof stem, hard chrome plate ball, PTFE seats, viton stem seals, and standard yellow handle. MV200 valve features a black lever handle. This economical ball valve is available in 1/8",1/4", 3/8" and 1/2" sizes.

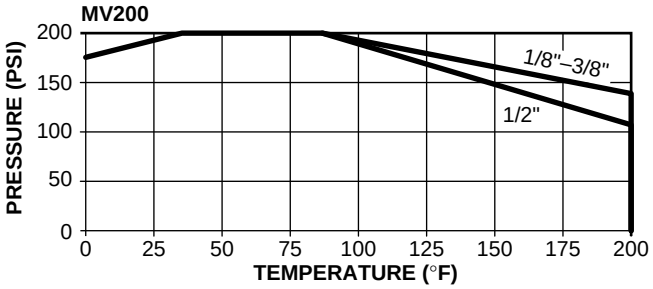
Applications

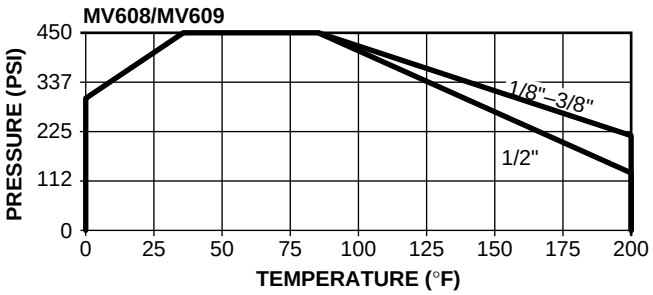
Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle.

For use on water and air service lines on capital equipment and plant design plumbing that require total shutoff capability.

Working Pressure and Temperatures

These valves are designed and built for use at pressures and temperatures within the stated ranges. Consult the factory for any use outside of these ranges.





Operating Instructions

Quarter turn is "ON" or "OFF".
(Provides Positive stop action for full shutoff.)

Style	Type	Size
MV	**608** **609**	**-2**
Style	MV-Mini Valve	
Type	608-Male/Female 609-Female/Female	
Handle Color	MV200 features a black lever handle MV608/MV609 features-yellow wedge handles	
Size	2-1/8" 4-1/4" 6-3/8" 8-1/2"	

Style	Type	Size
MV	**200**	**-2**
Style	MV-Mini Valve	
Type	200-Female/Female Lever Handle	
Size	2-1/8" 4-1/4" 6-3/8" 8-1/2"	

Flow data

VALVE SIZE	MV200 CV	MV608 CV	MV609 CV
1/8	1.3	1.2	1.4
1/4	4.0	5.8	4.3
3/8	3.7	3.9	3.6
1/2	5.8	5.6	6.0

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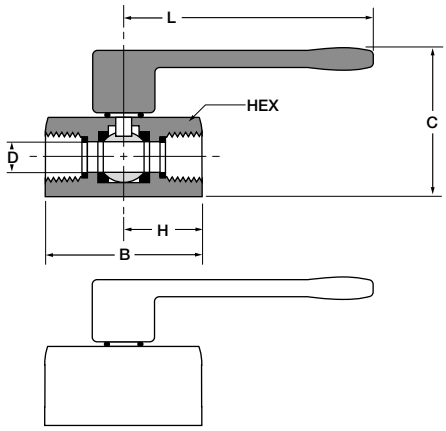
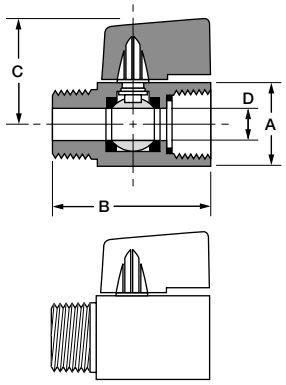
Female Pipe Ends, Lever Handle, Mini Ball Valve MV200

PART NO.	PIPE THREAD	HEX	B	C	H	L	FLOW DIA.D
MV200-2	1/8	.83	1.71	1.20	.91	2.83	.31
MV200-4	1/4	.83	1.71	1.20	.91	2.83	.31
MV200-6	3/8	.83	1.71	1.20	.91	2.83	.31
MV200-8	1/2	.98	2.11	1.28	1.10	2.83	.39



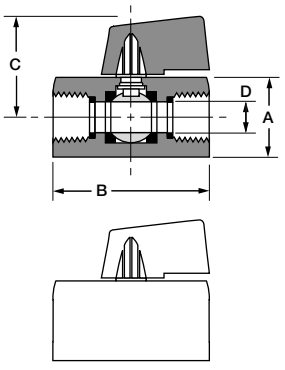
Male-Female Pipe Ends, Compact Handle, Mini Ball Valve MV608

PART NO.	PIPE THREAD	A HEX	B	C	FLOW DIA.D
MV608-2	1/8	.83	1.72	1.22	.20
MV608-4	1/4	.83	1.72	1.22	.31
MV608-6	3/8	.83	1.72	1.22	.31
MV608-8	1/2	.98	2.11	1.30	.39



Female Pipe Ends, Compact Handle, Mini Ball Valve MV609

PART NO.	PIPE THREAD	A HEX	B	C	FLOW DIA.D
MV609-2	1/8	.83	1.71	1.22	.24
MV609-4	1/4	.83	1.71	1.22	.31
MV609-6	3/8	.83	1.71	1.22	.31
MV609-8	1/2	.98	2.11	1.30	.39
MV609-6-4	3/8x1/4	.83	1.71	1.22	.31



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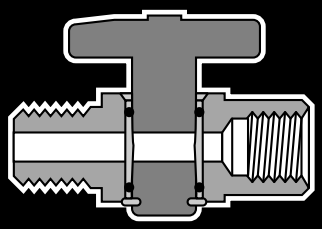

Plug Valves Series PV

Advantages
Compact design features internal nitrile seals and a one-piece extruded brass body, offering compatibility with a wide range of media. The one-piece stem/handle combination is constructed of glass reinforced acetal copolymer. Parker plug valves feature 1/4 turn shutoff allowing for ease of operation. All plug valves are 100% leak tested and are certified to be leak free to one SCCM.

Materials
Extruded Bodies: CA 360
Stem/Handle: Acetal Copolymer
O-Rings: Nitrile (other compounds available)
Stop Pin: 420SS
Spiral Ring: 302SS

Temperature and Working Pressure Ranges
From -40° to +175°F at 250 PSI maximum.

Applications
Manufactured for use with air, water, oil and certain other fluids. Contact factory for special fluid requirements

Installation Instructions
To assure sealability and reliable performance, the valve must be installed so that the flow media travels in the direction of the arrow on the valve handle.

Order
By part number and name.

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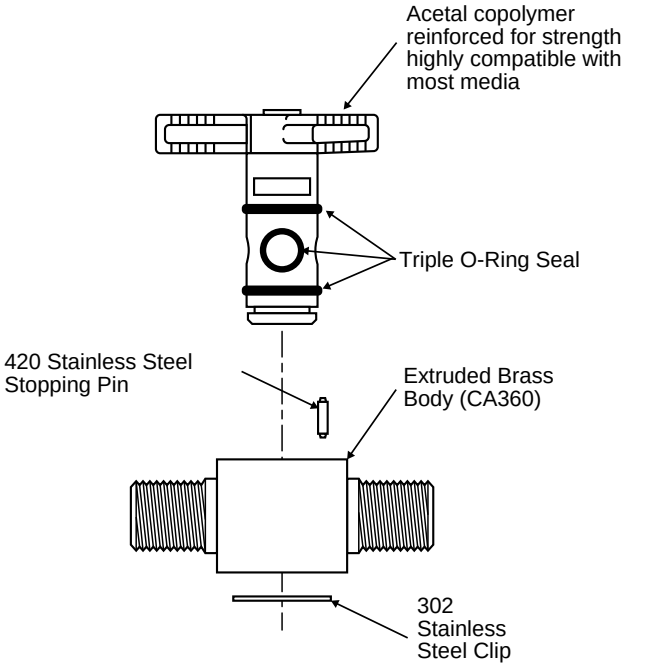
Nomenclature
Part numbers are constructed from symbols that identify the style and size of the fitting. The first series of numbers and letters identifies the style and type fitting. The second series of numbers describes the size.

Example:

PV	607	-2	-OPTIONS
Plug Valve			
	Male to Male		
		1/8" (2/16) Male	
			N-Neoprene(brown)
			V-Fluorocarbon (red)

Special Valves
Fitting configurations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry.

Features



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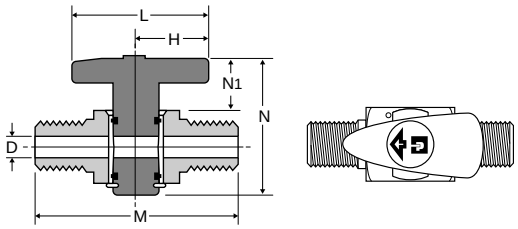
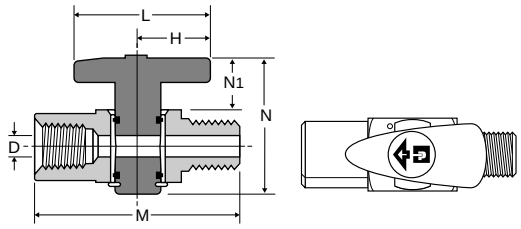
Male Pipe to Male Pipe Plug Valve PV607

PART NO.	PIPE THREAD	H	L	M	N	N1	FLOW DIA. D
PV607-2	1/8	.67	1.34	1.66	1.38	.51	.200
PV607-4	1/4	.67	1.34	2.02	1.38	.51	.200



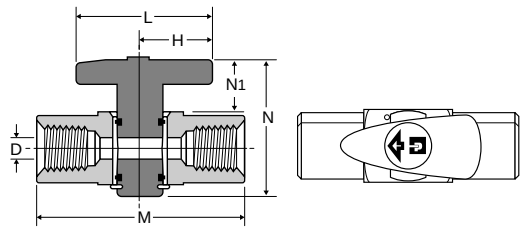
Female Pipe to Male Pipe Plug Valve PV608

PART NO.	PIPE THREAD	H	L	M	N	N1	FLOW DIA. D
PV608-2	1/8	.67	1.34	1.67	1.38	.51	.200
PV608-4	1/4	.67	1.34	2.06	1.38	.51	.200



Female Pipe to Female Pipe Plug Valve PV609

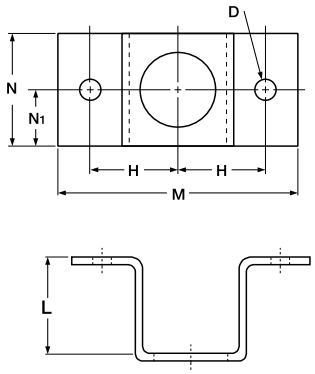
PART NO.	PIPE THREAD	H	L	M	N	N1	FLOW DIA. D
PV609-2	1/8	.67	1.34	1.68	1.38	.51	.200
PV609-4	1/4	.67	1.34	2.10	1.38	.51	.200



Mounting Bracket PVMB-001

PART NO.	H	L	M	N	N1	D
PVMB-001	.68	.75	1.86	.90	.45	.135

Note: 1" diameter hole required in panel when using mounting bracket



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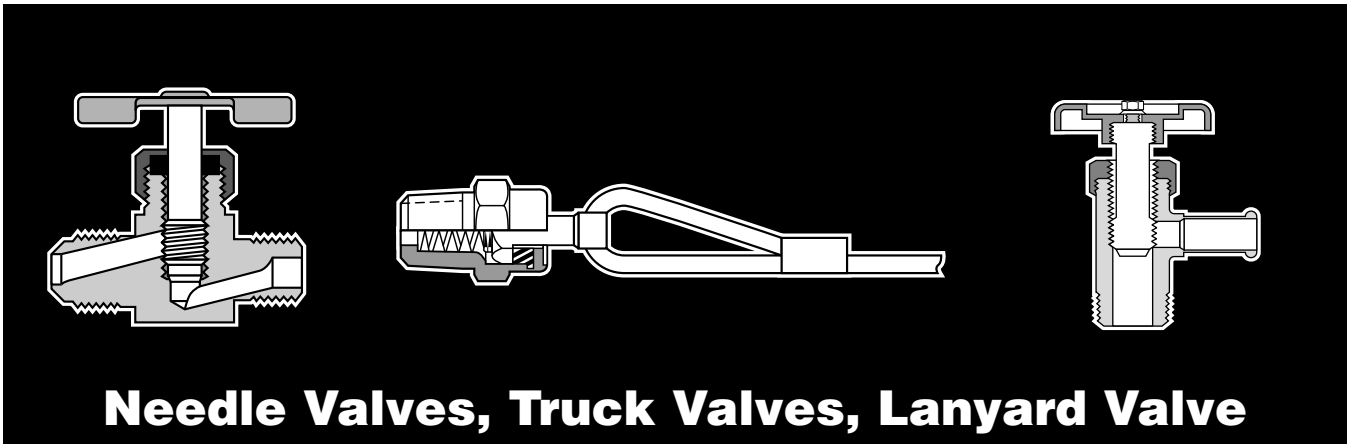

Needle Valves, Truck Valves, Lanyard Valve

Advantages
Parker Needle and Truck Valves have metal-to-metal seats, with fine-thread screwdown. This enables positive sealing up to the capacity of the valve.

The Lanyard Valves' compact design is ideally suited for releasing condensate from air tanks. Available with various lengths of cable. Brass construction with specially formulated low temperature seal which remains elastic to temperatures as low as -40°F. It is manufactured for use with low pressure air systems such as air tanks on heavy trucks. Consult division for use with other fluids.

Working Pressure and Temperature
Valves are designed to withstand up to 150 PSI working pressure, unless otherwise noted. See specific part number for temperature range.

Needle Valves Installation Instructions
Series NV valves should always be installed with the pressure against the seat. Refer to drawing to determine correct direction of flow.

Lanyard Valve Operating Instructions
A pulling action exerted on the cable cocks the stem, allowing condensate to pass through the valve. Releasing the cable resets the stem which returns the valve to its closed position.

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 identifies the style and type fitting. The second series of numbers describes the size.

Example: **NV** **101** **F** **–4** **–2**

- Needle Valve
- Angle Needle Valve
- Flared to Male Pipe
- 1/4" (4/16) Tube O.D.
- 1/8" (2/16) Pipe Thread

Example: **LV91** **–4** **–060**

- Lanyard Valve
- 1/4" Pipe Thread
- Length of Cable in inches

Special Valves
Valve configurations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be sumbitted with the inquiry.

Pricing
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

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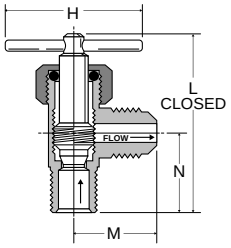
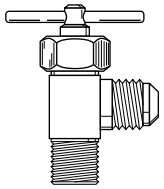
Otsego, Michigan

Angle Needle Valve NV101F

Flare to Male Pipe
Temperature Range: -45° to +250° F

PART NO.	TUBE SIZE	PIPE THREAD	H	L	M	N
NV101F-4-2	1/4	1/8	1.50	1.58	.75	.66
NV101F-6-4	3/8	1/4	1.38	1.86	.95	.90

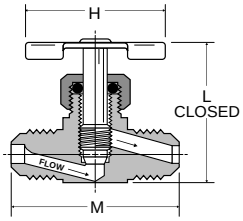


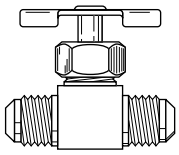


Needle Valve NV102F

Flare to Flare *Provided with Pin Handle
Temperature Range: -45° to +250° F

PART NO.	TUBE SIZE	H	L	M
NV102F-4*	1/4	1.50	1.34	1.50
NV102F-6	3/8	1.38	1.55	1.86

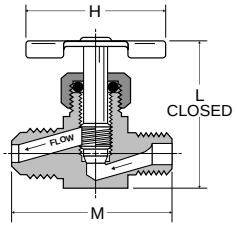


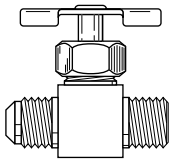


Needle Valve NV103F

Flare to Male Pipe *Provided with Pin Handle
Temperature Range: -45° to +250° F

PART NO.	TUBE SIZE	PIPE THREAD	H	L	M
NV103F-4-2*	1/4	1/8	1.50	1.33	1.35
NV103F-6-4	3/8	1/4	1.38	1.56	1.73

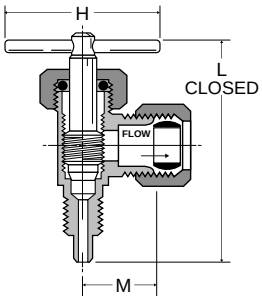


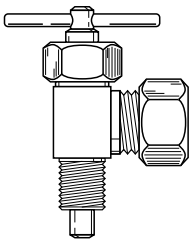


Humidifier Valve HV104C

Temperature Range: -45° to +250° F

PART NO.	TUBE SIZE	PIPE THREAD	H	L	M
HV104C-4-2	1/4	1/8	1.50	1.89	.53

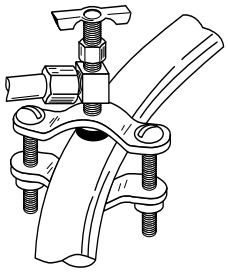




Humidifier Valve clamp kit HV104C-kit

Temperature Range: -30° to +250° F
Clamp fits 3/8" O.D. through 1.315" O.D. tube or pipe. Kit includes 60PT-4 and 63PT-4 for assembly with plastic or nylon tubing. For complete kit, specify entire part number as shown below:

PART NO.	TUBE SIZE	PIPE THREAD
HV104C-4-2 KIT	1/4	1/8



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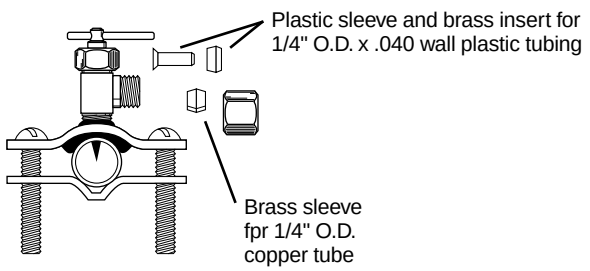
Self-Piercing Humidifier Valve clamp kit SPV104C-kit

Temperature Range: -30° to +250° F
Clamp fits 3/8" O.D. through 1.315" O.D. tube or pipe. Kit includes 60PT-4 and 63PT-4 for assembly with plastic or nylon tubing. For complete kit, specify entire part number as shown below:

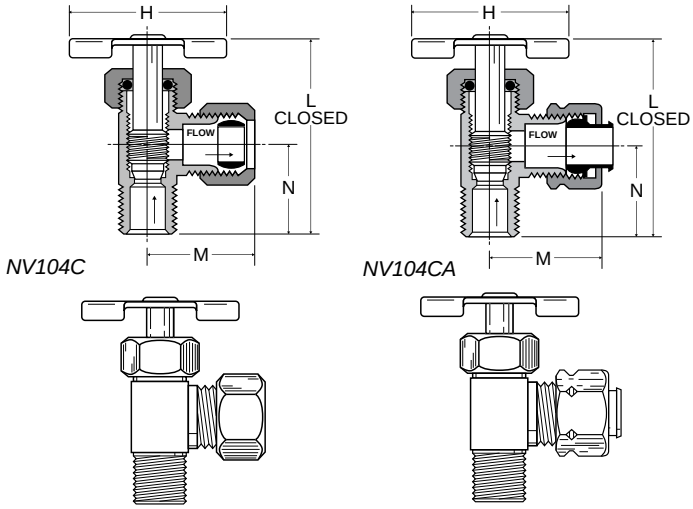
PART NO.	TUBE SIZE	PIPE THREAD
SPV104C KIT	1/4	1/8



Angle Needle Valve NV104C-NV104CA

Compression to Male Pipe *Provided with Pin Handle
Temperature Range: -45° to +250° F

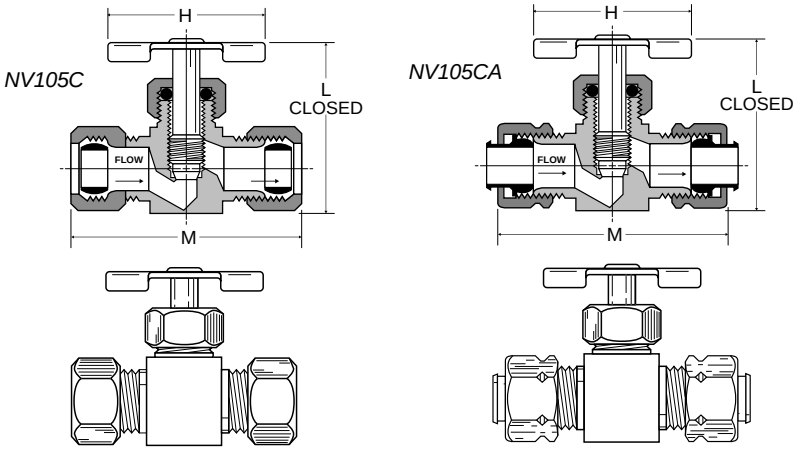
PART NO.	TUBE SIZE	PIPE THREAD	H	L	M	N
NV104C-4-2*	1/4	1/8	1.50	1.54	.88	.67
NV104CA-4-2*	1/4	1/8	1.50	1.49	.77	.66
NV104C-4-4	1/4	1/4	1.38	1.80	.93	.75
NV104C-5-2*	5/16	1/8	1.50	1.63	.88	.68
NV104C-6-4	3/8	1/4	1.38	1.76	.94	.81



Needle Valve NV105C-NV105CA

Compression to Compression *Provided with Pin Handle
Temperature Range: -45° to +250° F

PART NO.	TUBE SIZE	H	L	M
NV105C-4*	1/4	1.50	1.41	1.75
NV105C-5*	5/16	1.50	1.35	1.73
NV105C-6	3/8	1.38	1.55	1.93
NV105CA-4*	1/4	1.50	1.41	1.64
NV105CA-6	3/8	1.38	1.55	1.78



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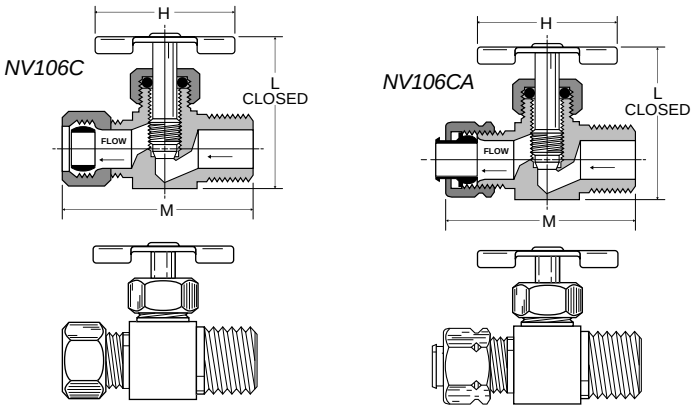
Needle Valve NV106C-NV106CA

Compression to Male Pipe *Provided with Pin Handle
Temperature Range: -45° to +250° F

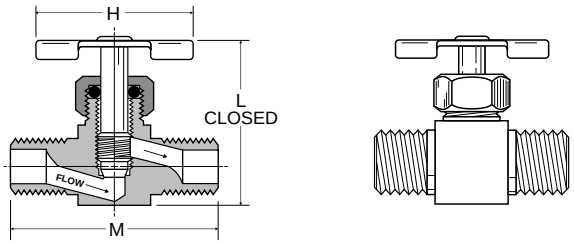
PART NO.	TUBE SIZE	PIPE THREAD	H	L	M
NV106C-4-2*	1/4	1/8	1.50	1.41	1.53
NV106C-4-4*	1/4	1/4	1.50	1.40	1.55
NV106C-5-2*	5/16	1/8	1.50	1.35	1.50
NV106C-6-4	3/8	1/4	1.38	1.56	1.75
NV106CA-4-2	1/4	1/8	1.50	1.41	1.47
NV106CA-4-4*	1/4	1/4	1.50	1.33	1.52
NV106CA-6-4	3/8	1/4	1.38	1.53	1.78



Needle Valve NV107P

Male Pipe to Male Pipe *Provided with Pin Handle
Temperature Range: -45° to +250° F

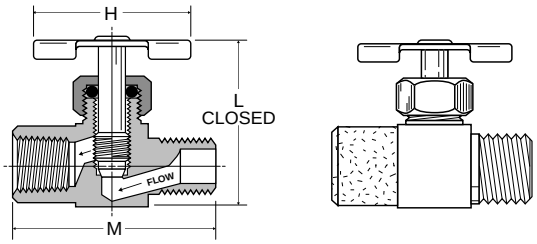
PART NO.	PIPE THREAD	H	L	M
NV107P-2*	1/8	1.50	1.35	1.25
NV107P-4	1/4	1.38	1.54	1.65



Needle Valve NV108P

Female Pipe to Male Pipe *Provided with Pin Handle
Temperature Range: -45° to +250° F

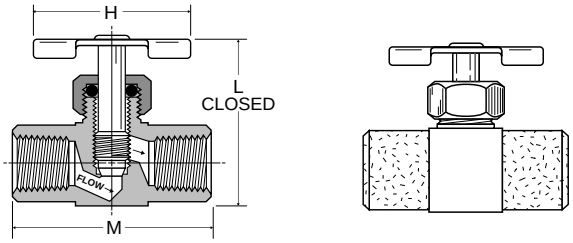
PART NO.	PIPE THREAD	H	L	M
NV108P-2*	1/8	1.50	1.36	1.25
NV108P-4	1/4	1.38	1.56	1.61



Needle Valve NV109P

Female Pipe to Female Pipe *Provided with Pin Handle
Temperature Range: -45° to +250° F

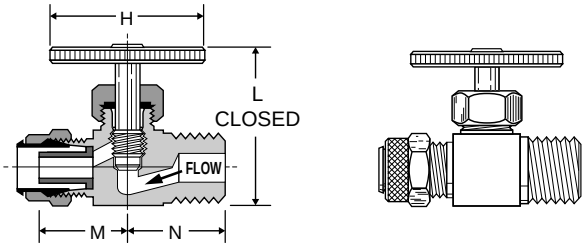
PART NO.	PIPE THREAD	H	L	M
NV109P-2*	1/8	1.50	1.35	1.25
NV109P-4	1/4	1.38	1.53	1.60



Needle Valve NV311P

Poly-Tite to Male Pipe
Temperature Range: 0° to +150° F

PART NO.	TUBE SIZE	PIPE THREAD	H	L	M	N
NV311P-4-2	1/4	1/8	1.07	1.17	.50	.63
NV311P-4-4	1/4	1/4	1.07	1.18	.50	.72
NV311P-6-4	3/8	1/4	1.07	1.19	.56	.72



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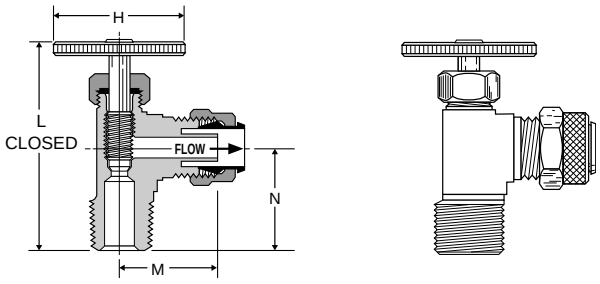
Angle Needle Valve NV312P

Ploy-Tite to Male Pipe
Temperature Range: 0° to +150° F

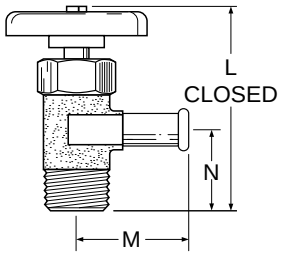
PART NO.	TUBE SIZE	PIPE THREAD	H	L	M	N
NV312P-4-2	1/4	1/8	1.07	1.53	.48	.68
NV312P-4-4	1/4	1/4	1.07	1.72	.56	.86
NV312P-6-4	3/8	1/4	1.07	1.68	.64	.86



Truck Valve V404P

Hose to Male Pipe
Temperature Range: -30° to +250° F

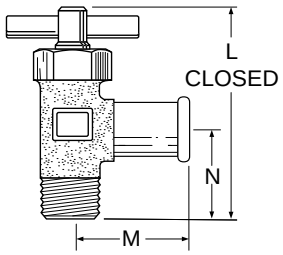
PART NO.	HOSE I.D.	PIPE THREAD	FLOW	L	M	N
V404P-6-6	3/8	3/8	.281	2.35	1.36	.94
V404P-10-6	5/8	3/8	.406	2.75	1.31	1.15



Truck Valve V404PH

Hose to Male Pipe with Pin Handle
Temperature Range: -30° to +250° F

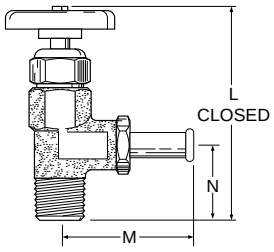
PART NO.	HOSE I.D.	PIPE THREAD	FLOW	L	M	N
V404PH-10-6	5/8	3/8	.406	2.47	1.31	1.09



Truck Valve SV404P

Hose to Male Pipe
Temperature Range: -30° to +250° F

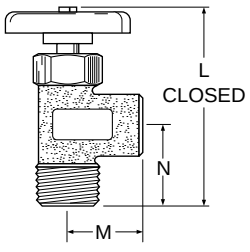
PART NO.	HOSE I.D.	PIPE THREAD	FLOW	L	M	N
SV404P-10-8	5/8	1/2	.468	3.71	2.31	1.34
SV404P-12-6	3/4	3/8	.438	3.73	2.31	1.34
SV404P-12-8	3/4	1/2	.562	3.73	2.31	1.34



Truck Valve V405P

Female Pipe to Male Pipe
Temperature Range: -30° to +250° F

PART NO.	FEMALE PIPE THREAD	MALE PIPE THREAD	FLOW	L	M	N
V405P-6-6	3/8	3/8	.406	2.72	.91	1.19
V405P-6-8	3/8	1/2	.406	2.95	.91	1.31
V405P-8-8	1/2	1/2	.562	3.15	1.17	1.34



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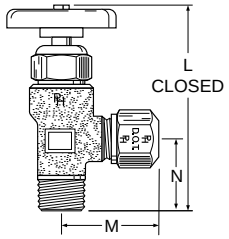
Truck Valve V408NTA

Tube to Male Pipe
Temperature Range: -30° to +250° F

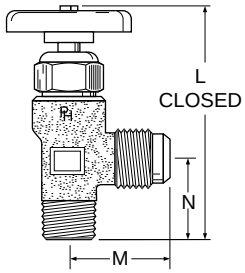
PART NO.	TUBE SIZE	PIPE THREAD	FLOW	L	M	N
V408NTA-8-8	1/2	1/2	.328	3.28	1.15	1.19



Truck Valve V409F

Flare to Male Pipe
Temperature Range: -30° to +250° F

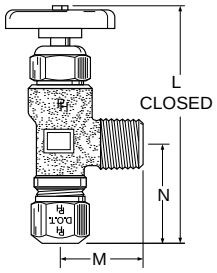
PART NO.	TUBE SIZE	PIPE THREAD	FLOW	L	M	N
V409F-8-6	1/2	3/8	.406	3.07	1.31	1.00
V409F-8-8	1/2	1/2	.406	3.28	1.31	1.19
V409F-10-8	5/8	1/2	.500	3.47	1.50	1.25
V409F-12-8	3/4	1/2	.562	3.70	2.31	1.34



Truck Valve V410NTA

Tube to Male Pipe
Temperature Range: -30° to +250° F

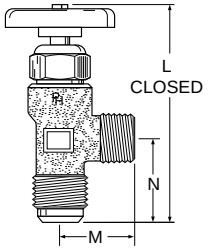
PART NO.	TUBE SIZE	PIPE THREAD	FLOW	L	M	N
V410NTA-8-8	1/2	1/2	.328	3.58	1.38	1.31



Truck Valve V412F

Tube to Male Pipe
Temperature Range: -30° to +250° F

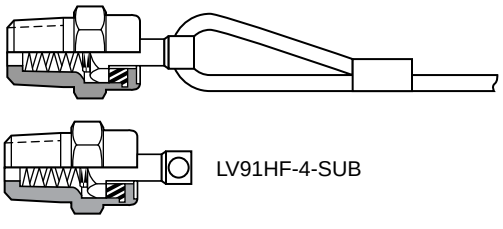
PART NO.	TUBE SIZE	PIPE THREAD	FLOW	L	M	N
V412F-10-8	5/8	1/2	.500	3.60	1.38	1.31



Lanyard Valve LV91

Temperature Range: -40° to +200° F

PART NO.	PIPE THREAD	CABLE LENGTH INCHES
LV91-4-036	1/4	36
LV91-4-048	1/4	48
LV91-4-060	1/4	60
LV91HF-4-SUB	1/4	--



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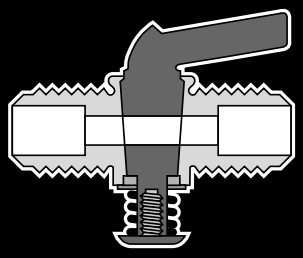

Drain Cocks/Ground Plug Shutoff

Drain Cock Advantages
Both external-seat and internal-seat drain cocks are manufactured to the highest quality standards. Hand-tightening provides a metal-to-metal seal.

Ground Plug Shutoff Advantages
These economical valves are available in several styles. Brass castings or forged bodies for extra strength.

Applications
Manufactured for use with low pressure air, water, gas and certain other fluids. (Note: lubricant may not be compatible with some fluids, contact factory for special fluid requirements.)

Temperature and Working Pressure Ranges
System temperature and the type of tubing used should be considered. Ground plug shutoffs are designed to withstand 30 PSI working pressure. Drain cocks are designed to withstand 150 PSI working pressure, except where noted. See specific part number for temperature range.

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 identifies the style and type fitting. The second series of numbers describes the size.

Example:

DC	604	–2
Drain Cock	External Seat	1/8" (2/16) Pipe Thread

Example:

V	204	F	–4	–2
Valve	Flared to Male Pipe	Flared	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.

Special Valves
Fitting configurations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry.

Pricing
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

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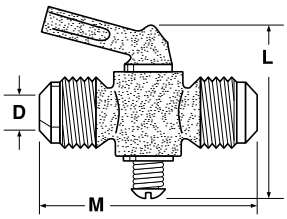
Ground Plug Shutoff V203F

Flare to Flare
Temperature Range: +32° to +125° F

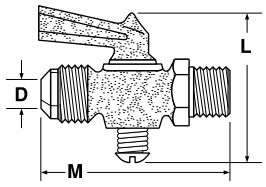
PART NO.	TUBE SIZE	L	M	FLOW DIA. D
V203F-6-6	3/8	2.26	2.14	.220
V203F-8-8	1/2	2.26	2.42	.281



Ground Plug Shutoff V204F

Flare to Male Pipe
Temperature Range: +32° to +125° F

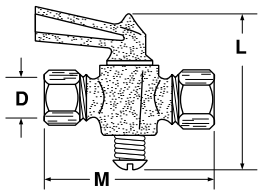
PART NO.	TUBE SIZE	PIPE THREAD	L	M	FLOW DIA. D
V204F-4-2	1/4	1/8	1.85	2.00	.188
V204F-6-4	3/8	1/4	1.85	2.05	.218

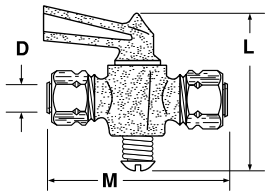


Ground Plug Shutoff V303C / V303CA

Compression to Compression
Temperature Range: +32° to +125° F

PART NO.	TUBE SIZE	L	M	FLOW DIA. D
V303C-4-4	1/4	1.88	2.33	.188
V303CA-4-4	1/4	1.90	1.75	.188
V303C-6-6	3/8	2.26	2.45	.218
V303CA-6-6	3/8	1.76	1.60	.218

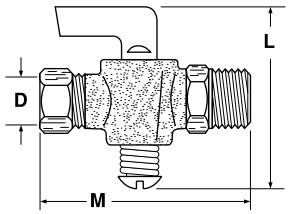


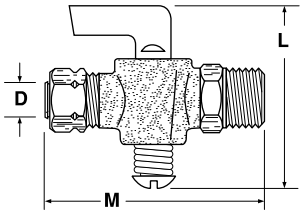


Ground Plug Shutoff V304C / V304CA

Compression to Male Pipe
Temperature Range: +32° to +125° F

PART NO.	TUBE SIZE	PIPE THREAD	L	M	FLOW DIA. D
V304C-4-2	1/4	1/8	1.90	2.29	.188
V304CA-4-2	1/4	1/8	1.88	2.00	.188
V304C-4-4	1/4	1/4	1.90	2.15	.188
V304CA-4-4	1/4	1/4	1.86	2.08	.188
V304C-6-4	3/8	1/4	1.83	2.24	.218
V304CA-6-4	3/8	1/4	1.83	2.11	.218

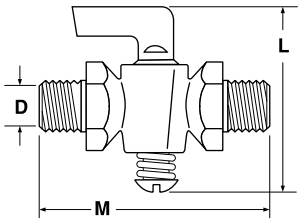




Ground Plug Shutoff V401P

Male Pipe to Male Pipe
Temperature Range: +32° to +125° F

PART NO.	PIPE THREAD	L	M	FLOW DIA. D
V401P-2-2	1/8	1.90	2.25	.188
V401P-4-4	1/4	1.90	1.98	.188



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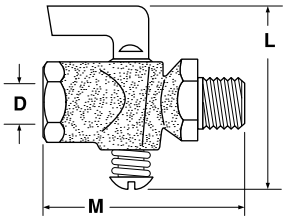
Ground Plug Shutoff V402P

Female Pipe to Male Pipe
Temperature Range: +32° to +125° F

PART NO.	FEMALE PIPE THREAD	PIPE THREAD	L	M	FLOW DIA. D
V402P-2-2	1/8	1/8	1.85	1.78	.218
V402P-4-4	1/4	1/4	1.86	2.26	.218
V402P-6-6	3/8	3/8	2.34	2.21	.245

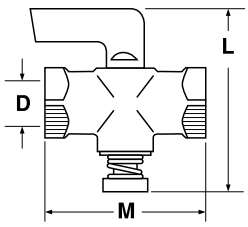


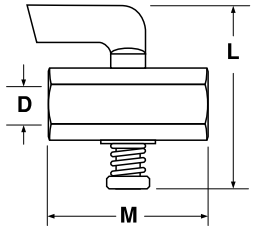
Ground Plug Shutoff V403P

Female Pipe to Female Pipe
Temperature Range: +32° to +125° F

PART NO.	FEMALE PIPE THREAD	L	M	FLOW DIA. D
V403P-2-2	1/8	1.90	1.51	.218
V403P-4-4	1/4	1.90	1.65	.188
V403P-6-6*	3/8	2.25	2.00	.250

*Made from extruded bar stock

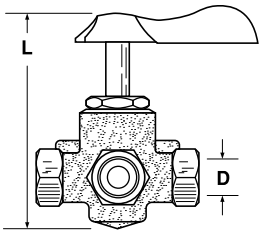




Three-way valve V406P

Female Pipe three ends
Temperature Range: -40° to +180° F

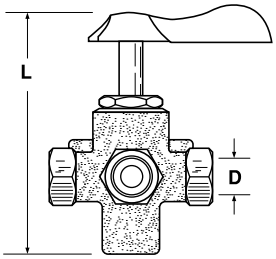
PART NO.	PIPE THREAD	L	FLOW DIA. D
V406P-4	1/4	3.10	.281



Four-way valve V407P

Female Pipe four ends
Temperature Range: -40° to +180° F

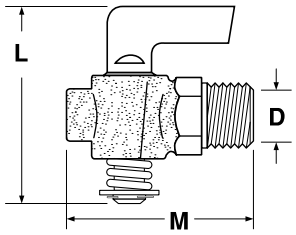
PART NO.	PIPE THREAD	L	FLOW DIA. D
V407P-4	1/4	3.30	.281



Ground Plug Shutoff DC601

Temperature Range: +32° to +125° F

PART NO.	PIPE THREAD	L	M	FLOW DIA. D
DC601-2	1/8	1.90	1.40	.170
DC601-4	1/4	1.90	1.52	.170
DC601-6	3/8	2.26	1.74	.281
DC601-8	1/2	2.29	1.82	.281



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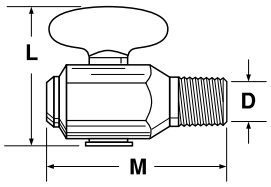
Drain Cock DCR601

Temperature Range: -30° to +250° F

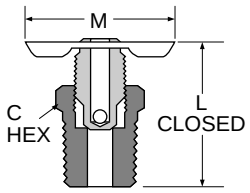
PART NO.	PIPE THREAD	L	M	FLOW DIA. D
DCR601-4	1/4	1.41	1.73	.188

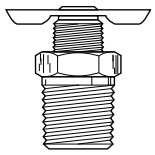


Internal Seal Drain Cock DC602

Temperature Range: -65° to +250° F

PART NO.	PIPE THREAD	C HEX	L	M
DC602-2	1/8	13/32	.92	1.25
DC602-4	1/4	9/16	.94	1.25

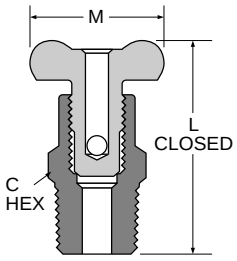


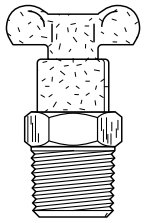


Drain Cock DC603

Temperature Range: -65° to +250° F

PART NO.	PIPE THREAD	C HEX	L	M
DC603-2	1/8	5/8	1.41	1.00
DC603-4	1/4	5/8	1.54	1.16
DC603-6	3/8	11/16	1.63	1.16



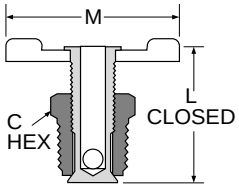


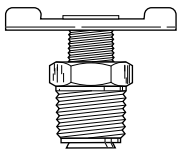
External Seal Drain Cock DC604

Temperature Range: -25° to +250° F

PART NO.	PIPE THREAD	C HEX	L	M
DC604-2*	1/8	7/16	.85	1.25
DC604-4	1/4	9/16	1.00	1.38
DC604-6*	3/8	11/16	1.22	1.68

*When assembled handle wings are down facing

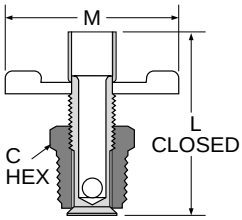


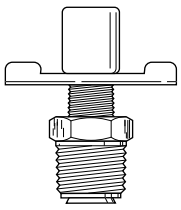


External Seal Drain Cock DC606

Temperature Range: -65° to +250° F

PART NO.	PIPE THREAD	C HEX	L	M
DC606-4	1/4-18	9/16	1.50	1.38

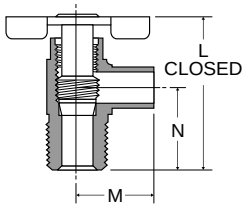


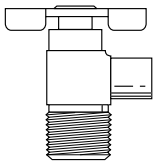


Bib Drain Valve DC607

Temperature Range: -65° to +250° F

PART NO.	HOSE SIZE	PIPE THREAD	FLOW	L	M	N
DC607-4	3/8	1/4	.31	1.32	.67	.71





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Notes

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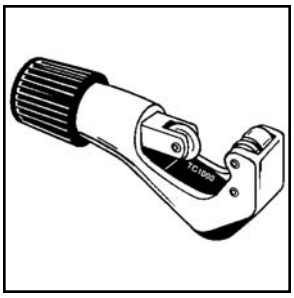
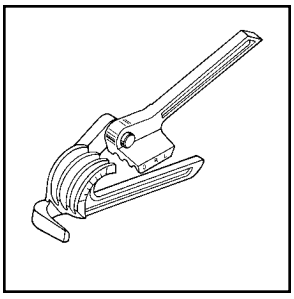
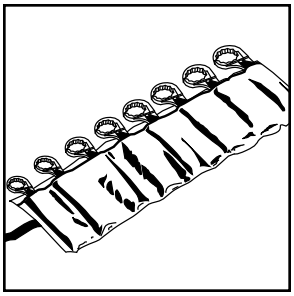
Tube Fabricating Equipment



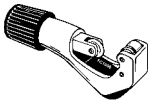
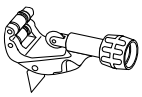
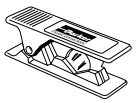
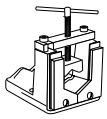
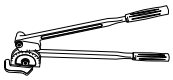
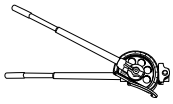
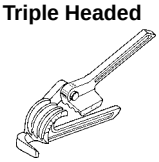
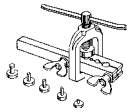
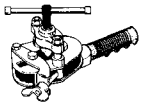
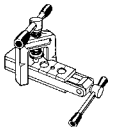
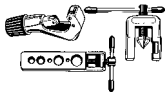
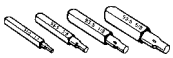
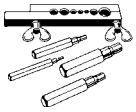
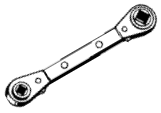
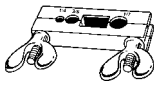




Tube Fabricating Equipment

- Tube cutters
- Tube Benders
- Flaring Tools
- Flaring Tool Kits
- Swaging Tools
- Testing & Service Tools
- Deburring Tool

The World Standard

Tube Cutters	**Tube Cutters** Sizes 2 to 64  Page L3	**Kloskut Cutters** Sizes 2 to 32  Page L4	**PTC-001** Plastic Tube Cutter  Page L4	**Sawing Vise**  Page L14	**Benders**	**Hand Benders**  Page L5
Ratchet Benders  Page L5	**Triple Headed**  Page L6	**Spring Type**  Page L6	**Flaring Tools**	**Combination Tools**  Page L7	**Rolo-Flair**  Page L8	**Metric Flaring**  Page L9
Tubing Tool Kits	**Combination Kits**  Page L10	**Swaging Tools**	**Punch-Type**  Page L11	**Swaging Kits**  Page L11	**Wrenches**	**Ratchet Wrenches**  Page L12
Par-Lock Wrenches  Page L13	**Testing and Service Tools**	**Pinch Off Tool**  Page L12	**Deburring Tools**	**In-Ex** Deburring Tool  Page L14		

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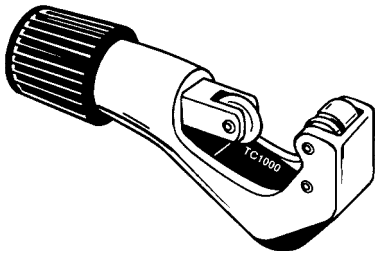
	PART NO.	DESCRIPTION

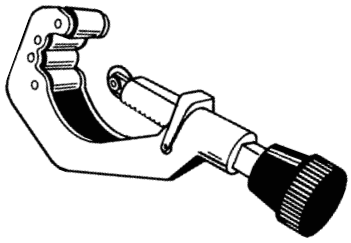
Tube Cutters

For hard or soft copper, aluminum, brass, thin wall steel, stainless steel, monel, titanium and other metal tubing



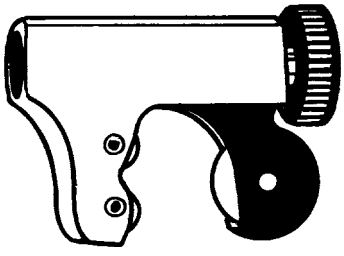
Rollers have flare cut-off groove, fold away reamer and spare cutting wheel.

TC-1000-BPD	For 1/8" to 1 1/8" (4 to 28 mm) O.D. tubing, (1/8" to 1" nom.). Length: 4 15/16" Weight: 6 1/2 oz.
312-FC-BPD	For 1/4" to 1 5/8" (7 to 41 mm) O.D. tubing, (1/8" to 1 1/2" nom.). Length: 5 1/2" Weight: 7 oz.
TC-1020-BPD	Combination tube constictor and cutter for 1/8" to 1 1/8" (4 to 28 mm) O.D. tubing. Includes roller for making brazed connections.
	Replacement Parts:
S75015-BPD	Standard cutting wheel
S75046-BPD	Cutting wheel for stainless steel and hard temper tubing
S74762-BPD	Screw for cutting wheel



Ratchet feed mechanism speeds up cutting operation. Extra wide rollers stabilize tubing. Spare cutting wheel included.

206-FB-BPD	For 3/8" to 2 5/8" (10 to 66 mm) O.D. tubing, (1/4" to 2 1/2" nom.). Length (closed): 7 3/4" Weight: 2 lbs.
406-FA-BPD	2" to 4" cutter for 2" to 4 1/8" (51 to 104 mm) O.D. tubing, (2" to 4" nom.) Length (closed): 11 1/4" Weight: 3 1/2" lbs.
	Replacement Parts:
S74761-BPD	Cutting wheel for 206-FB-BPD



TC-1050-BPD	For 1/8" to 5/8" (4 to 15 mm) O.D. tubing, (1/8" to 1/2" nom.) Requires only 1 1/4" swing radius. (Requires only 1 3/8" swing radius with 5/8" tube.)

Repositioned rollers to bottom of tool allows for easier cutter engagement on tubing. Enclosed feed-screw minimized contamination, assuring continued free operation. Redesigned feed mechanism improves overall cutting action.

Size: 1 3/4" x 1 1/4" x 1/2"
Weight: 2 1/2 oz.

TC-2050-BPD	For 3/16" to 7/8" (5 to 22 mm) O.D. tubing. (Requires only 1 11/16" swing radius.)
	Replacement Parts:
S74762-BPD	Screw for cutting wheel TC-1050-BPD
S32633-BPD	Cutting wheel for TC-1050-BPD

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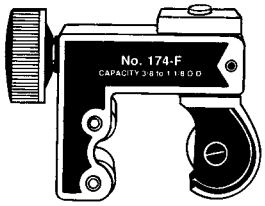
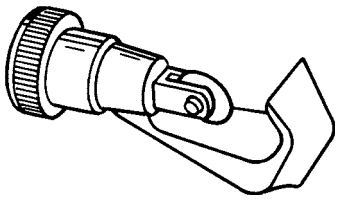
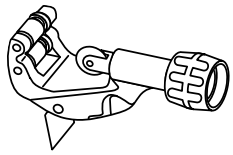
	PART NO.	DESCRIPTION
	**174-F-BPD**	For 3/8" to 1 1/8" (10 to 28 mm) O.D. tubing, (1/4" to 1" nom.). Requires only 1 15/16" swing radius. (Requires only 2 1/4" swing radius with 1 1/8" tube.) Size: 2 11/16" x 2 1/32" x 1 1/8" Weight: 5 oz.
		Replacement Parts:
	S75015-BPD	Cutting wheel
	S75046-BPD	Cutting wheel for stainless steel and hard temper tubing
	**227-FA-BPD**	For 1/8" to 3/4" (4 to 19 mm) O.D. tubing, (1/8" to 5/8" nom.). Enclosed feed mechanism. Length: 3 1/2" Weight: 5 oz.
		Replacement Parts:
	S32633-BPD	Cutting wheel

Kloskut® Tube Cutters

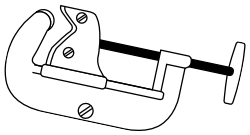
Adjustable tube cutters to produce square cut ends with no external burr and minimum internal burring when used on fully annealed copper, brass, aluminum, and steel tubing. Features a hardened and burnished tool-steel cutting wheel, flare cut-off grooves in rollers for removal of old flares, swing-away reamer for removing internal burrs.

Handle feeds and adjusts cutting wheel to uniformly cut tubing as the cutter is rotated.

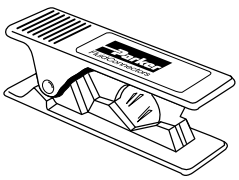
NOTE: Tube cutters are not recommended for use with stainless steel tubing because of the work hardening effect. The use of a hacksaw with a "Tru-Kut" Sawing Vise or a rotary teeth saw is best recommended for stainless steel.



218B-BPD



1232-BPD

	218B-BPD	**Medium Kloskut** For tubing sizes -2 (1/8" O.D.) to -18(1 1/8" O.D.) Weigth: 11 oz.
	1232-BPD	**Large Kloskut** For tubing sizes -12 (3/4" O.D.) to -32 (2" O.D.) Die-cast aluminum frame.
		Replacement Parts
	218B Wheel-BPD	**Cutter wheel for No. 218B Tube Cutter**
	1232 Wheel-BPD	**Cutter Wheel for No. 1232 Tube Cutter**
	**PTC-001**	**Plastic Tube Cutter** May be used with polyethylene, Polypropylene, nylon and other thermo-plastic tubing. For tube O.D. sizes 1/8" to 1/2"
	PTC-001RB	Replacement blades

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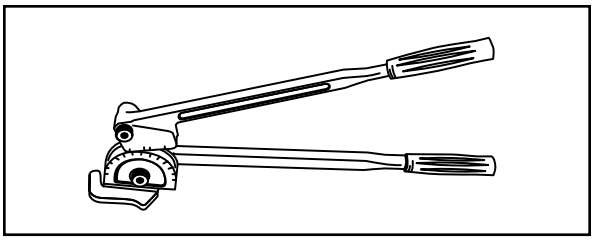
Hand Tube Benders

Sturdy, easy-to-use hand tools for fast accurate bending without kinks or visable flattening. Individual sizes in three modest from size 2 (1/8" O.D.) to 16 (1" O.D.). See Table O3 for part numbers and technical data.

Medium Duty Hand Tube Benders

Designed and built for fast accurate bends and long service life.

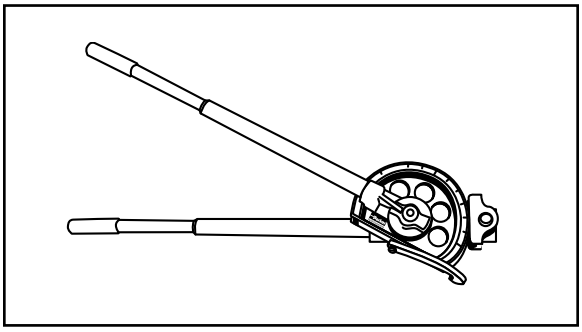
Individual benders for six tube sizes 1/8, 3/16, 1/4, 5/16, 3/8, and 1/2 inch. Will bend copper, aluminum, annealed steel and stainless steel. Can be used in hands or mounted in a bench vise for heavier wall thickness tube. Simply align marks on slide block and radius block then bend tube to desired angle (up to 180°) by pulling steadily on slide block handle. Angles are indicated on radius block both front and back. (Detailed instructions are included with each bender.) This style of bender is also available in metric sizes. See Table O4 for part numbers and technical data.



Medium Hand Tube Bender

Ratchet Hand Tube Benders

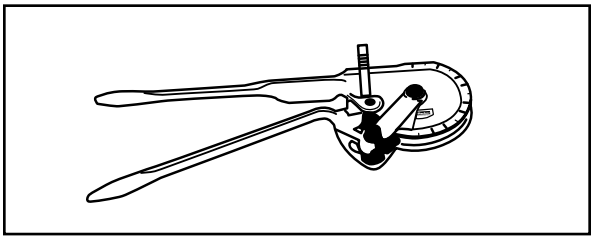
Individual benders for two tubing sizes 5/8 and 3/4, and inches in copper, aluminum, annealed steel and stainless steel. Can be used in hands or mounted in a bench vise for heavier wall thickness tube. Position tube in bender, close latch and pull ratchet handle away from radius block handle until desired angle (up to 180°) is formed. Angles are indicated on radius block. (Detailed instructions are included with each bender.)



Ratchet Hand Tube Bender

1" Hand Tube Bender

For tubing size 1" O.D. in soft copper and aluminum. Can be used in hands, but suggest mounting on bench vise - especially for heavier wall thickness tube. Align marks and bend tube to desired angle (up to 180°) by pulling steadily on operating handle. Handle may be repositioned for maximum leverage. Angles are indicated on radius block. (Detailed instructions are included with bender.)



1" Hand Tube Bender

PART NUMBER	TYPE OF BENDER	SIZE	TUBE O.D. (IN.)	RADIUS TO TUBE CENTERLINE (INCHES)	MIN. WALL WITHOUT FLATTENING (INCHES)	RECOMMENDED MAX. WALL THIKNESS	
						COPPER ALUMINUM	STEEL STAINLESS STEEL (IN.)
2-2829S-BPD	MED. DUTY	2	1/8	7/16	0.012	ANY	0.032
3-2829S-BPD	MED. DUTY	3	3/16	9/16	0.020		0.032
4-2829S-BPD	MED. DUTY	4	1/4	9/16	0.028		0.083
5-2829S-BPD	MED. DUTY	5	5/16	15/16	0.032		0.083
6-2829S-BPD	MED. DUTY	6	3/8	15/16	0.032		0.083
8-2829S-BPD	MED. DUTY	8	1/2	1 1/2	0.042		0.083
10-2829S-BPD	MED. DUTY	10	5/8	2 1/2	0.042		0.049
12-2829S-BPD	MED. DUTY	12	3/4	3	0.049		0.065
10-2829-BPD	RATCHET	10	5/8	3	0.042	ANY	0.049
12-2829-BPD	RATCHET	12	3/4	3 3/4	0.049		0.065
16-2829-BPD	1#	16	1	3 1/2	0.065	ANY	Not Recommended

TUBE O.D. (mm)	PART NUMBER	BEND RADIUS	MAX. WALL STEEL/SS
5	2829-5mm-BPD	14.3	1.2
6	2829-6mm-BPD	14.3	1.6
8	2829-8mm-BPD	23.8	1.6
10	2829-10mm-BPD	23.8	2.1
12	2829-12mm-BPD	38.1	2.1
14	2829-14mm-BPD	38.1	2.1

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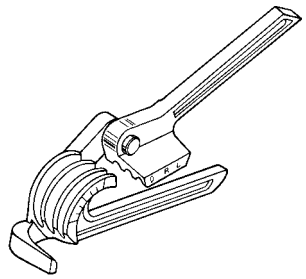
Tube Benders, Lever Type

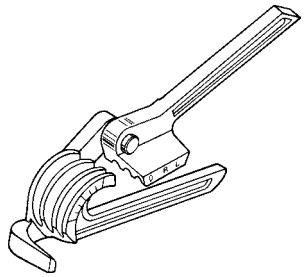
For soft copper, aluminum, brass, steel and other metal tubing



Triple Header Benders
Calibrated markings for making accurate left-hand, right-hand and offset bends. Ninety degree start requires less effort - making bending fast and easy.

PART NO.	DESCRIPTION
367-FH-BPD	For 1/8", 3/16" and 1/4" (3, 4, and 6 mm) O.D. tubing, 9/16" radius to center of tube.
368-FH-BPD	For 1/4", 5/16" and 3/8" (6 and 8 mm) O.D. tubing, 15/16" radius to center of tube.

Metric Tube Benders



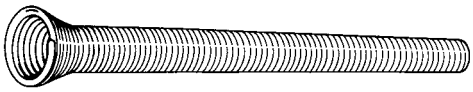
Triple Header Benders
For annealed copper, aluminum, steel, stainless steel and hard copper tubing of bending temper.

Lever type, multiple size benders. Calibrated markings for making accurate left-hand, right-hand, and offset bends. Ninety degree start requires less effort; makes bending fast and easy.

	BENDING RANGE			
	Tube O.D. (Inches)	(mm)	Radius to Center of Tube (Inches)	(mm)
367-FH-BPD	1/8, 3/16, 1/4	3,4, 6	9/16	14.2
368-FH-BPD	1/4, 5/16, 3/8	6, 8	15/16	17.5

Tube Benders, Spring Type

For soft copper and aluminum tubing



For 1/4" to 5/8" O.D. tubing.
Tools allow hand bending of soft tubing to any shape without collapsing walls. Special spring steel, nickel finished. End belled for quick tube removal.

	BENDER		
	TUBE O.D. (INCHES)	LENGTH (INCHES)	WEIGHT (OZ.)
102-F-04-BPD	1/4	10	3
102-F-05-BPD	5/16	10	3
102-F-06-BPD	3/8	10	4
102-F-07-BPD	7/16	12	6 1/4
102-F-08-BPD	1/2	12	6 1/2
102-F-10-BPD	5/8	12	8

201-F-BPD	Set of 8 benders for 1/4", 5/16", 3/8", 7/16", 1/2", 5/8", 3/4" and 7/8" O.D. tubing.
112-F-BPD	Set of 3 benders for 1/4", 5/16" and 3/8" O.D. tubing.
163-F-BPD	Set of 4 benders for 1/4", 3/8", 1/2" and 5/8" O.D. tubing.

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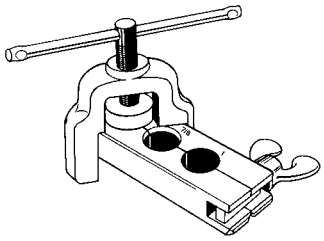
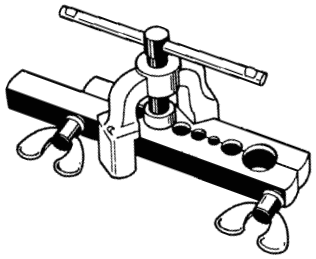
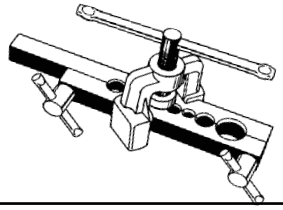
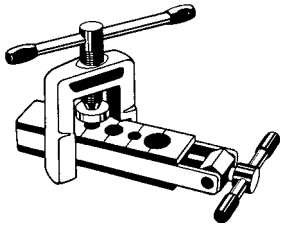
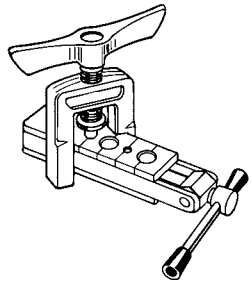
45° Flaring Tools

For soft copper, aluminum and brass tubing

	PART NO.	DESCRIPTION
		Tools for flaring larger tubesizes. Quick slip-on yoke. Positive clamping action of flaring bar eliminates tube movement. Weight: 3 3/4 lbs.
	103-FS-BPD	For 3/4", 7/8" and 1" O.D. tubing, (5/8" and 3/4" nom.).
	203-FA-BPD	For 5/8", 3/4", 7/8" and 1 1/8" O.D. tubing, (1/2", 5/8", 3/4" and 1" nom.).
	**195-FC-BPD**	For 3/16", 1/4", 5/16", 3/8", 7/16", 1/2" and 5/8" O.D. tubing, (1/8", 1/4", 3.8" and 1/2" nom.). Self-centering yoke with swivel-type, hard chrome-finished flaring cone forms better flares with less effort. Design of yoke permits flaring where there is little space between nut and tube end. Weight: 2 lbs.
	**296-FC-BPD**	For 3/16", 1/4", 5/16", 3/8", 1/2", and 5/8" O.D. tubing, (1/8", 1/4", 3/8" and 1/2" nom.). Economical and fast operating. Swivel type, hard chrome-finished cone assures smooth flares. Bar is lighter than 195-FC-BPD and is not hardened. Weight: 1 3/4 lbs.
	**300-FB-BPD**	For 3/16", 1/4", 5/16", 3/8", 1/2" and 5/8" O.D. tubing, (1/8", 1/4", 3/8", and 1/2" nom.). Hard chrome-finished cone makes exceptionally smooth, high strength flares with a radius at base of flare - instead of the sharp angle formed by ordinary tools. Positive gripping and self-gauging of tube for exact flare size. Weight: 1 5/8 lbs.
	**500-FC-BPD**	For flaring and burnishing 3/16", 1/4", 5/16", 3/8", 1/2" and 5/8" O.D. tubing, (1/8", 1/4", 3/8" and 1/2" nom.). Flares rolled out above die bar by super-smooth faceted conve. Automatically burnished flare face. Slip-on yoke permits use in tight quarters. Heat treated dies grip tubing without scoring. Weight: 1 1/2 lbs.

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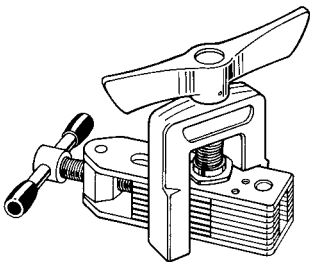
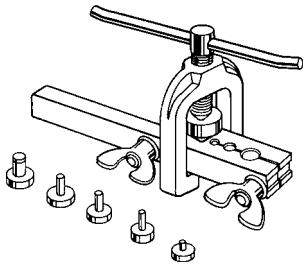
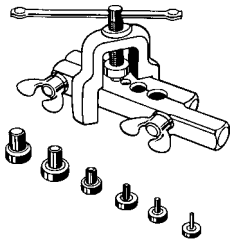
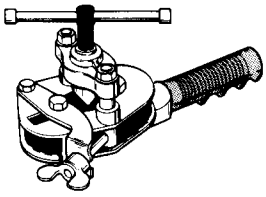
	PART NO.	DESCRIPTION
	**525-F-BPD**	Flares and burnishes 3/16" to 5/8" (5 to 16 mm) O.D. tubing. Unique, self-adjusting, tube holding mechanism permits use in tight quarters. Faceted, hard chrome finished cone rolls out and burnishes perfect 45° flare above the tube holding mechanism. Weight: 1 3/4 lbs.
	**93-FB-BPD**	For 3/16", 1/4", 5/16", 3/8" and 1/2" O.D. tubing. Recommended for Bundy, GM and other brazed or welded soft steel tubing (wall thickness to .035"). Also makes single or double flares in soft copper or aluminum tubing. Forged steel yoke; swivel-type hard chrome-finished flaring cone. Weight: 3 lbs.
	**195-FB-BPD**	For 1/4", 5/16", 3/8", 1/2", 5/8" and 3/4" O.D. tubing Designed for automotive air conditioning service. Makes double flares in soft copper or aluminum tubing (wall thickness to .035"). Easy operating, ball bearing, swivel-type, hard chrome-finished, flaring cone. Makes flare with double-thick, double-strength walls. Also makes single and oversize flares. Weight: 5 1/2 lbs.
	**945TH-BPD**	**Rolo-flair® Manual Rotary Flaring Tool** For soft metal tubing. Precision burnished 45° flares in tube sizes from 2 (1/8" O.D.) to 12 (3/4" O.D.) with an easy turn of the handle. For copper and aluminum alloy. Weight: 2 1/2 lbs.

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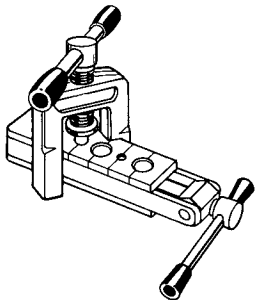
	PART NO.	DESCRIPTION

Metric Flaring Tools

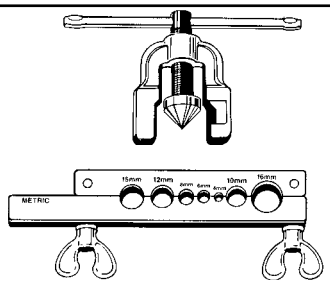


293-F-BPD

Bubble Flaring Tool
For 4.75 (3/16"), 6, 8 and 10 mm O.D. tubing

Flares soft double wall steel tubing with a wall thickness to .028". For soft copper and aluminum tubing.

Also forms international Standard bubble flare in one fast operation. Flares metric hydraulic brake lines used on European, Japanese and domestic automobiles and light trucks. Can also be used for industrial applications where movement or vibration is a problem.

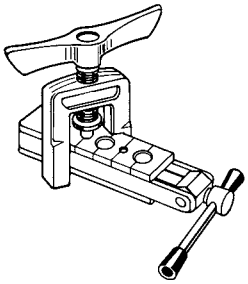


395-FAM-BPD

45° Flaring Tool
For 4, 6, 8, 10, 12, 15 and 16 mm O.D. tubing.

Flares soft copper, aluminum and brass.

Forged steel slip-on yoke and hardened flaring bar. Positive clamping action of bar prevents tube slippage. Self-centering yoke with swivel-type, hard chrome-finished flaring conve forms better flares with less effort. Design of yoke permits flaring where there is little space between nut and tube end.

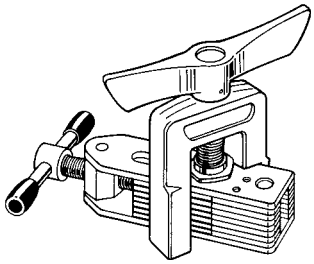


500-FCM-BPD

45° Flaring Tool
For flaring and burnishing 6, 8, 10, 12, 15 and 16 mm O.D. tubing.

For soft copper, aluminum and brass.

Flares folled out above die bar by super-smooth faceted cone. Automatically burnishes flare face. Slip-on yoke permits use in tight quarters. Heat treated dies grip tubing without scoring.



525-F-BPD

45° Flaring Tool
For flaring and burnishing 5 to 16 mm O.D. tubing.

For soft copper, aluminum and brass.

Unique, self-adjusting tube holding mechanism permits flaring any size tubing within the range of 5 to 16 mm O.D. Single opening design is compact and easy to use. Faceted, hard chrome-finished cone rolls out and burnishes perfect flares above the tube holding mechanism. Slip-on self-centering yoke.

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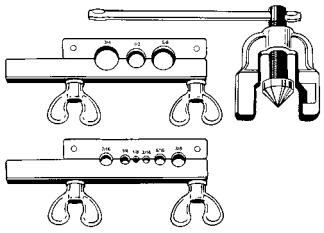
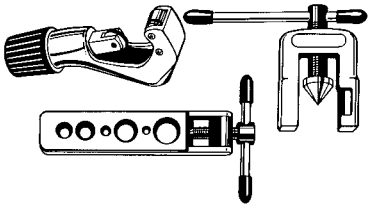
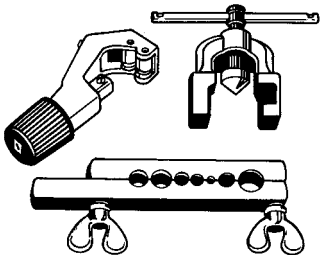
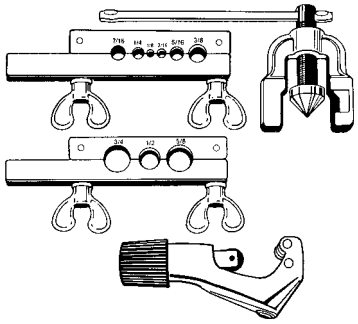
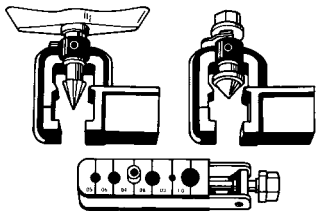
Tubing Tool Kits

For soft copper, aluminum and brass tubing

	PART NO.	DESCRIPTION
		**45° Flaring Kits** Compact kits contain two flaring bars and one yoke. Self-centering forged steel yoke has slip-on feature. Swivel-type flaring conve reduces effort required. Positive clamping action of flaring bars eliminates tube movement. In plastic case.
	375-FS-BPD	For 1/8" 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8", and 3/4" O.D. tubing, (1/8", 1/4", 3/8", 1/2" and 5/8" nom.). Weight: 4 3/4 lbs.
	376-FS-BPD	For 1/2", 5/8", and 3/4" O.D. tubing, (3/8", 1/2" and 5/8" nom.). Weight: 2 lbs.
	**124-FA-BPD**	Contains TC 1000 tube cutter, 500-FB flaring tool (same range as 300-FB).
	**1226-FA-BPD**	**45° Flaring and Cutting Kit** Contains TC 1000 tube cutter for 1/8" to 1 1/8" O.D. tubing and 195-FC flaring tool for 3/16", 1/4", 5/16", 3/8", 7/16", 1/2" and 5/8" O.D. tubing, (1/8", 1/4", 3/8" and 1/2" nom.). Weight: 3 lbs.
	**120-F-BPD**	**45° Flaring and Cutting Kit** Contains TC 1000 cutting tool and 375-FS multiple-size flaring tool for 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8" and 3/4" O.D. tubing, (1/8", 1/4", 3/8", 1/2" and 5/8" nom.). In plastic carrying case. Weight: 5 1/4 lbs.
	121-F-BPD	**All Purpose Tubing Tool Kit** Contains tools listed above plus three 102-F bending springs for 1/4", 3/8" and 1/2" O.D. tubing; and our 123-C ratchet wrench with 1/4" ratchet, 3/16" and 1/4" Square opening and 1/2" hex in handle. In steel carrying case. Weight: 5 3/4 lbs.
	**402-FA-BPD**	**Flaring and Reaming Kit** Contains 400-F flaring tool and 401-FA reaming yoke for 1/4" to 5/8" O.D. tubing. In plastic kit. Weight: 3 1/8 lbs.

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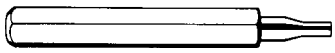
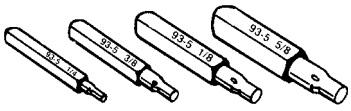
Swaging Tools

For soft copper, aluminum and brass tubing



93-S-BPD

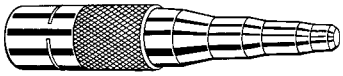


193-S-BPD

Punch-Type Swaging Tools

Use these tools for making tubing connections without fittings. Enlarge end of tube, insert another tuber, solder like a sweat fitting.

PART NO.		O.D. SIZE (INCHES)	NOM. SIZE (INCHES)	WEIGHT
93-S-03-BPD	Swaging punch.	3/16		3 oz.
93-S-04-BPD	Swaging punch.	1/4	1/8	3 oz.
93-S-06-BPD	Swaging punch.	3/8	1/4	1/4 lb.
93-S-10-BPD	Swaging punch.	5/8	1/2	1/2 lb.
94-S-BPD	Swaging punch.	1/2	3/8	1 lb.
			5/8	1/2
			7/8	3/4



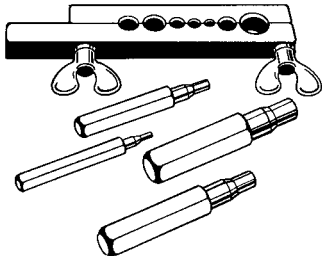
94-S-BPD

193-S-BPD **Swaging Punch Kit**

Contains four swaging punches - 1/4", 3/8", 1/2" and 5/8" O.D., (1/8", 1/4", 3/8" and 1/2" nom.) in vinyl case.

Weight: 1 lb.

195-SA-BPD **Swaging Punch Kit**



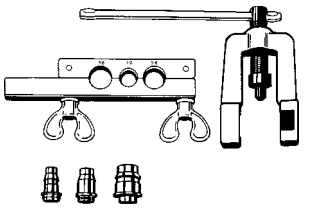
195-SA-BPD

Contains flaring bar and four swaging punches - 1/4", 3/8", 1/2" and 5/8" O.D., (1/8", 1/4", 3/8" and 1/2" nom.). In steel kit.

Weight: 2 lbs.

75531-BPD **Flaring bar only.**

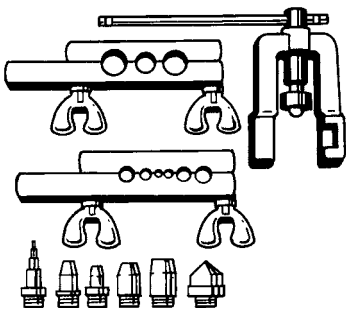
Weight: 1 lb.



194-S-BPD

For 1/2", 5/8" and 7/8" O.D. tubing, (3/8", 1/2" and 3/4" nom.). Screw-type swaging tool provides perfect swage alignment of tube every time. Adapters change quickly. In plastic kit.

Weight: 2 1/8 lbs.



275-FS-BPD **45° Flaring and Swaging Tool**

For 1/8", 3/16", 1/4", 5/16" 3/8", 7/16", 1/2", 5/8" and 3/4" O.D. tubing, (1/8", 1/4", 3/8", 1/2" and 5/8" nom.).

Includes five swage adapters for 3/16", 1/4", 5/16", 3/8", 1/2" and 3/4" O.D. tubing, (1/8", 1/4", 3/8", 1/2" and 5/8" nom.).

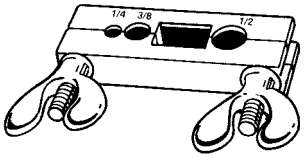
Flares or swages. Converts quickly. Screw-type-feed. Ideal close quarters tool. Swivel-type swaging adapters and spreader cone are hard chrome-finished for easy opertation. Self-centering, slip-on forged steel yoke. In plastic kit.

Weight: 3 1/2 lbs.

L

	PART NO.	DESCRIPTION

Testing and Service Tools



105-FF-BPD

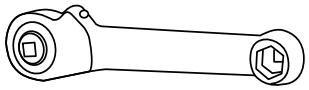
Pinch Off Tool
1/4", 3/8" and 1/2" O.D.

Temporarily closes soft copper, aluminum or steel tubing so no liquid or gas passes sealed part. Opens tubing and rounds ti back to shape.

Weight: 3/4 lb.

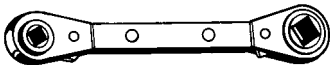
Ratchet Wrenches

For refigeration/air conditioning service



123-C-BPD

Steel forged. For use on small refrigerant cylinders, shut-off valves, packing gland wrenches, etc. Ratchet has 1/4" square drive and raised face. Handle has 3/16" and 1/4" square drives and 1/2" hex.



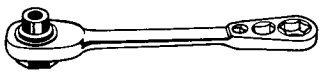
124-C-BPD

Combination wrench with the four sizes most needed for servicing automotive air conditioning:
* 9/16" hex for dust cap on Schrader type valves and plug oil check on York compressor

* 1/2" hex for mounting bolts on Tecumseh, York and Airtemp compressors

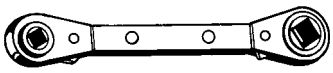
* 1/4" square for valve stem on York and Tecumseh service valves and old style compressor valves

* 3/16" square for valve on old style refrigerant charging tanks.



125-C-BPD

Rugged, steel forged wrench with four sizes covering almost any application.
1/4" square ratchet for valve stem on York and tecumseh service valves, and old style compressor valves. Other end has 3/16" and 5/16" square openings, plus 9/16" hex opening for dust cap on Schrader type valves, and plug for oil chekc on York compressor.



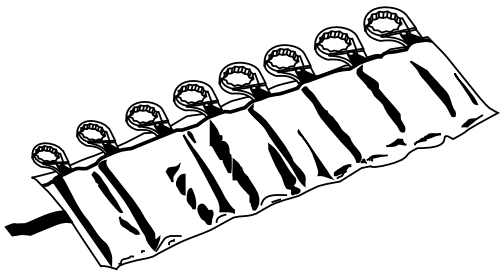
127-C-BPD

Compressor access valve wrench. Chrome plated. Has 1/4", 3/8", 3/16" and 5/16" square drive ratchets and is specially designed for use on compressors with access valves in hard to reach places. Reversible ratchets.

L

Par-Lok® Wrench

360° Snap-action ratchet wrench for hex sizes from 3/8" to 2 1/4" across the flats and metric from 10mm to 22mm. Inch sizes meet government specifications and are listed as NSN-5120-00-474-7227.



Install Tube Fittings Faster

Easy across ratchet wrench speeds fittings installation in tight locations. Rugged, snap-action jaws can be opened over tuve lines, locked onto fitting hex and ratcheted within 1/8 turn. Full six point contact prevents fitting distortion common with wrench slippage. Ideal for tube line installations where compact runs require multiple fitting make-up, disassembly and remakes.

Specifications

Most Par-Lok wrenches are available individually or in 3 different kit combinations. Par-Lok jaws are constructed fromdrop-forged, high carbon steel material with a black conversion coat finish. Par-Lok handles are made from heavy guage steel material, heat treated and with a corrosion resistant black finish. Solid stainless steel rivets and tempered jaw springs are designed into every wrench for maximum stringth.

INCH SIZES				METRIC SIZES	
PART NO.	**HEX SIZE**	**PART NO.**	**HEX SIZE**	**PART NO.**	**HEX SIZE**
860062-6-BPD	3/8	860062-18-BPD	1 1/8	860063-10-BPD	10 mm
860062-7-BPD	7/16	860062-20-BPD	1 1/4	860063-11-BPD	11 mm
860062-8-BPD	1/2	860062-22-BPD	1 3/8	860063-12-BPD	12 mm
860062-9-BPD	9/16	860062-24-BPD	1 1/2	860063-13-BPD	13 mm
860062-10-BPD	5/8	860062-26-BPD	1 5/8	860063-14-BPD	14 mm
860062-11-BPD	11/16	860062-30-BPD	1 7/8	860063-16-BPD	16 mm
860062-12-BPD	3/4	860062-32-BPD	2	860063-17-BPD	17 mm
860062-13-BPD	13/16	860062-36-BPD	2 1/4	860063-19-BPD	19 mm
860062-14-BPD	7/8	860062-KIT2-BPD	Full Kit-	860063-21-BPD	21 mm
860062-15-BPD	15/16		8 Wrenches	860063-22-BPD	22 mm
860062-16-BPD	1			860063-KIT-BPD	Full Kit-
860062-KIT-BPD	Full Kit-				10 Sizes
	11 Sizes				

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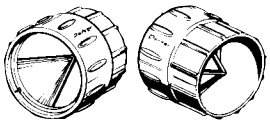
Otsego, Michigan

	PART NO.	DESCRIPTION

In-Ex® Tube Deburring Tool



226-BPD

A quick twist of the wrist will deburr either the O.D. or the I.D. of the tube end. Parker's In-Ex deburrer can be used on annealed steel, stainless steel, copper and aluminum, for tube sizes 1/8" to 1 5/8" O.D.

Insert tube into the convexed end of the In-Ex for inside deburring and the opposite end for outside deburring Rotate in either direction. Replacement blades can be ordered. See bulletin 4391-B226 for details.

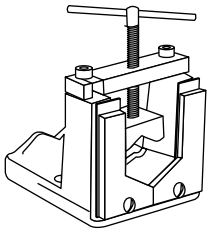
Weight: 10 oz.

226RB-BPD Replacement Blades

208-FSS-BPD Reamer for aircraft grade stainless steel tubing. Black finish

Weight: 10 oz.

Tru-Kut® Sawing Vise



710439-BPD

Hacksaw quide will accommodate tube, pipe and hose from sizes 3 (3/16" O.D.) to 32 (2" O.D.). Assures square cut-offs within ± 1°. Use a fine tooth hacksaw blade for smoother cuts.

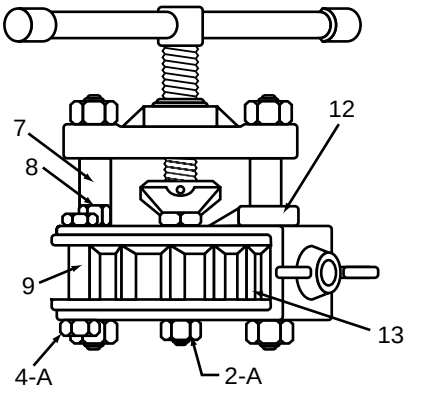
How To Use: Mount in vise or bolt to bench. Clamp tubing, pipe or hose into the Tru-Kut vise and cut off; guide ensures accurate square cuts.

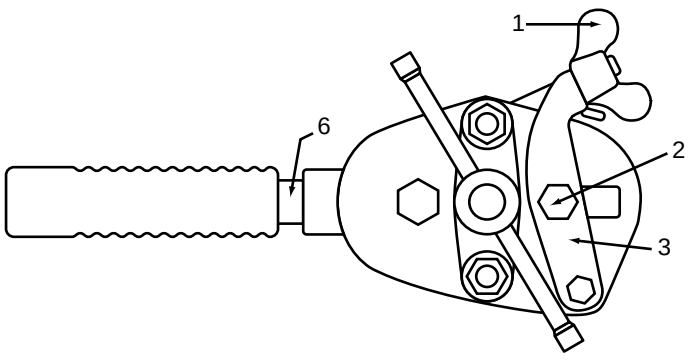
Rolo-Flair® for 45° Flare 945TH-BPD

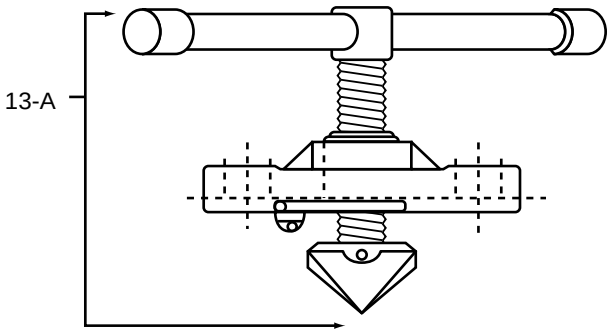
DRAWING ITEM NUMBER	PARKER PART NUMBER	PART DESCRIPTION	NUMBER PIECES REQUIRED
1	642685	Wing Nut	1
2	642694	Hex Bolt	1
2-A	642696	Jam Nut	1
3	642759	Clamping Yoke	1
4-A	642698	Jam Nut	1
6	642764	Handle	1
7	642689	Spacer	2
8	642681	Hex Stud	2
9	2603-00006	Spacer	1
12	2600-03001	Top Plate	1
13	2600-03004	Flaring Die Sub-Assy.	1
13-A	2600-03045	Cross Yoke Sub-Assy.	1
		Burnishing Cone	1

Rolo-Flair® Repair Parts

We do not repair the flaring tool-however, we do offer repair parts-stock available in Otsego, Michigan, only.







L

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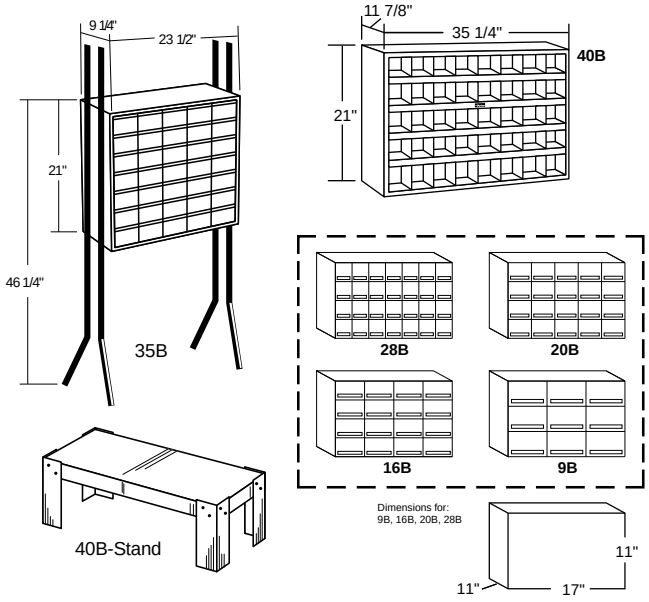
Parker Brass Products Division
Otsego, Michigan

Bins/Cabinets

Compact, expandable, point-of-purchase display with drawers, Part No. 35B is suitable for production or maintenance inventory.

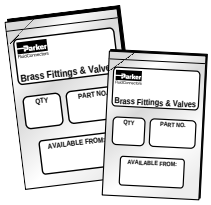
PART NO.	DESCRIPTION
9B	9 drawer cabinet
16B	16 drawer cabinet
20B	20 drawer cabinet
28B	28 drawer cabinet
35B	35 drawer cabinet
35BCL	Legs for 35B cabinet
35BCD-KIT	10 replacement drawers with 20 dividers
35BCD-DIVIDERS	Dividers only
40B	Cabinet stock bin
40B-Stand	Parker Brass Products Base Stand for 40B Cabinets. Stands are 12" high and designed for use with 40B Cabinets. Each Stand includes a 15 piece bolt and nut set package for assembly.



Clear Plastic Shipping Bags PSB

Reusable, clear polyethylene, zip-lock style bags with panels for marking part number, quantity, and availability information. Features easy visual part identification. Ideal for custom packaging of less than box quantities.

PART NO.	SIZE
4X6PSB	4” x 6”
6X8PSB	6” x 8”



Bin Labels

Self adhesive Bin Labels for identifying Brass Fittings and valves stored in cabinets and bins. Ideal for use with Parker cabinets 40B and 35B. General line set includes all product lines, or labels can be ordered by individual product lines.

PRODUCT LINE	PART NO.	PRODUCT LINE	PART NO.
General Line	3501-B1	Vibra-Lok	3501-B9
45° Flared	3501-B2	Prestolok	3501-B10
Inv. Flared	3501-B3	Dubl-Barb	3501-B11
Compression	3501-B4	NTA	3501-B12
Pipe	3501-B5	Compress-Align	3501-B13
Garden Hose/Hose Barb	3501-B6	Poly-Tite	3501-B14
Valves (Ball/Plug/Needle/Truck)	3501-B7	Prestomatic	3501-B18
Air Brake Fittings/Hose Ends	3501-B8	Euro Brass Fittings & Valves	3550-B1

Copper Tubing

Copper tubing meets A.S.T.M. specification B-280 (copper tube for refrigeration field service)

PART NO.	TUBE O.D.	TUBE I.D.	WALL THICKNESS	FEET PER COIL
X50CT-2-30	1/8	.065	.030	50
X50CT-3-30	3/16	.128	.030	50
X50CT-4-30	1/4	.190	.030	50
X50CT-5-32	5/16	.249	.032	50
X50CT-6-32	3/8	.311	.032	50
X50CT-8-32	1/2	.436	.032	50

M

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Parker Brass Products Division
Otsego, Michigan

Notes

Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Parker

General Technical

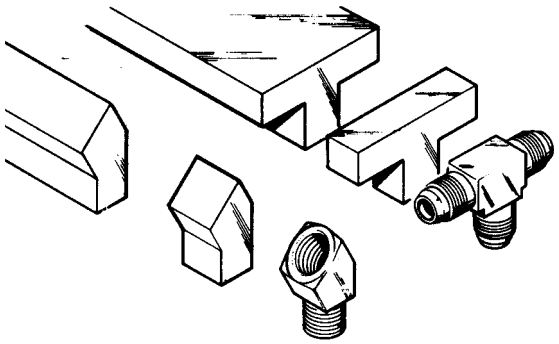
The World Standard

Manufacturing Techniques

Parker Extruded fittings

Hexagon, round and shaped bars are extruded in the configuration required, drawn to size, cut to length and straightened. First a solid round billet (8 to 12 inches in diameter) is heated to the pliable state and forced by pressure of approximately 80,000 pounds per square inch through a die. The resulting continuous length of bar is cooled and then drawn through dies to the desired external size. (The drawing process also controls the temper.) After straightening, the bar is ready for machining.

The process produces a dense, nonporous material somewhat stronger in the longitudinal direction due to an orientated flow of the grain.



Material used for Parker Brass Fittings

(Reference SAE J461)

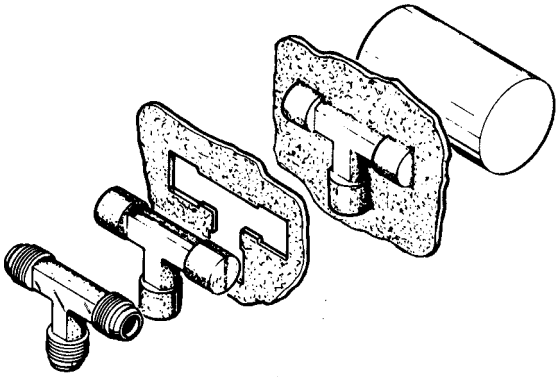
Straight bodies:	barstock CA 360 or CA 345
Shape bodies:	extruded barstock CA 360
Shape bodies:	forged CA 377
Nuts:	barstock CA 360
Nuts:	forged CA 377

Parker Forged Fittings

Material for forgings is extruded in round bars, cut to length and straightened. (At this point in the process, forging rod differs from round extruded machinable bars only in temper and chemical properties.) After straightening, the bars are cut again into slugs (short lengths), reheated to the pliable state and pressed under a pressure of approximately 25,000 pounds per square inch between upper and lower die cavities. After cooling the flash is trimmed away and the forging blank is ready for machining.

This process of forming under extreme pressure produces a uniformly dense material of exceptional strength. Because grain flow follows the contour, the fitting has high impact strength and is more resistant to mechanical shock and vibration.

Of the major brass fittings producers, only Parker offers elbows and tees machined from both extruded and forged shapes.



N

Tubing Compatibility Chart

Fitting Line	Copper	Aluminum	Steel	Polyethylene E	Polyethylene FRPE	Nylon N	Nylon PAT	Nylon NR	Polypropylene PP	Polyurethane U	Polyurethane HU	Polyurethane LU	Vinyl	Nylon SAE J844	Diesel Fuel FL	GPH Hose	SAE J1402	TFE	FEA	PFA
SAE 45 Flare	✖	✖	✖																	
Inverted Flare	✖	✖	✖																	
Compression	✖	✖		✖†	✖†	✖†	✖†	✖†	✖†									✖†	✖†	✖†
Compress-Align	✖	✖		✖*	✖*	✖*	✖*	✖*	✖*									✖*	✖*	✖*
Metru-Lok	✖	✖		✖*		✖		✖	✖											
Poly-Tite®	✖			✖		✖++			✖++				✖							
Hi-Duty Fitting	✖	✖	✖	✖*	✖*	✖*	✖*	✖*	✖*											
Dubl-Barb®				✖	✖															
Prestolok				✖		✖				✖	✖									
Prestolok II				✖		✖				✖	✖									
Microlok				✖		✖				✖	✖	✖								
Flow Controls				✖		✖														
Prestomatic						✖								✖	✖					
PTC						✖								✖	✖					
Cartridges				✖		✖								✖	✖					
Air Brake-AB	✖																			
Air Brake-NTA®						✖	✖							✖	✖					
Transmission						✖								✖						
Air Brake Hose Ends																✖				
Vibra-Lok	✖	✖	✖																	
Hose Barb																✖**				

Ratings are based on static pressure conditions
* Tube support is recommended
** Clamp required
++ Brass sleeve recommended
† Plastic sleeve and brass tube support is recommended

Tube Line Fabrication Guide for Leak Free Systems

Every hydraulic, pneumatic and lubrication system requires some form of tube line fabrication and fitting installation for completion. Proper fabrication and installation are essential for the overall efficiency, leak free performance, and general appearance of any system.

Start by planning ahead. After sizing the tube lines and selecting the appropriate style of fitting, consider the following in the design of your system:

1. Accessibility of joints
2. Proper routing of lines
3. Adequate tube line supports
4. Available fabricating tools

Routing of Lines

Routing of lines is probably the most difficult yet most significant of these system design considerations. Proper routing involves getting a connecting line from one point to another through the most logical path.

Always try to leave fitting joints as accessible as possible. Hard to reach joints are hard to assemble and tighten properly. Inaccessible joints are also more difficult and time consuming to service.

The most logical path should have the following characteristics:

- **Avoid excessive strain on joint —** A strained joint will eventually leak. (See Figures A14 through A21.)
- **Allow for expansion and contraction —** Use a “U” bend or a hose in long lines to allow for expansion and contraction. (See Figure A22.)

N

- **Allow for motion under load —** Even some apparently rigid systems do move under load. (See Figure A23.)
- **Get around obstructions without using excessive amount of 90° bends —** Pressure drop due to one 90° bend is greater than that due to two 45° bends. (See Figures A24 and A25.)
- **Keep tube lines away from components that require regular maintenance.** (See Figures A26 and A27.)
- **Have a neat appearance and allow for easy troubleshooting, maintenance and repair.** (See Figures A28 and A29.)

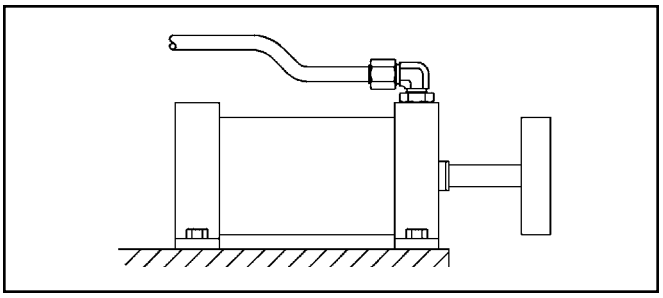


Fig. A23 — Bent Tube Allowing for Motion Under Load

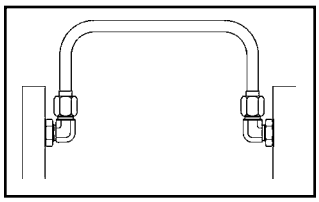


Fig. A14 — Correct Routing

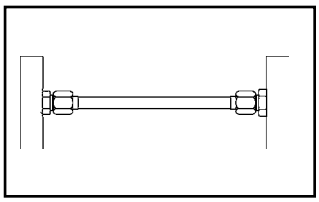


Fig. A15 — Incorrect Routing

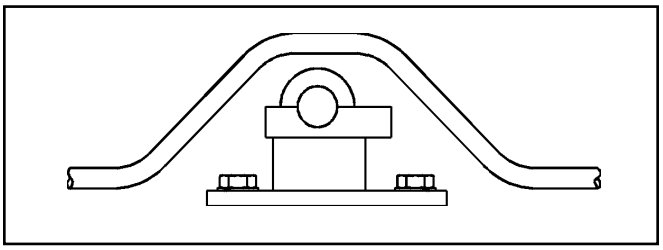


Fig. 24 — Correct

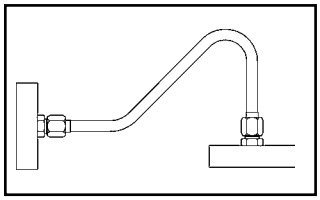


Fig. A16 — Correct Routing

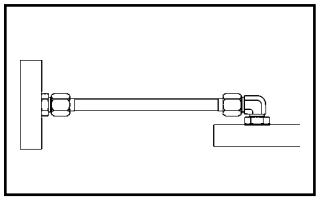


Fig. A17 — Incorrect Routing

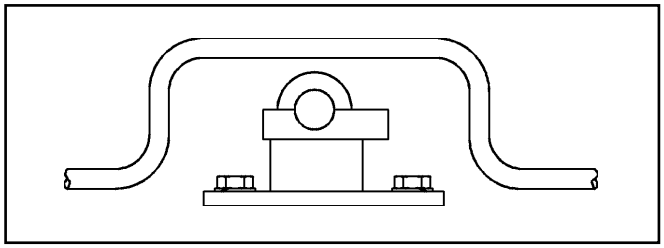


Fig. A25 — Incorrect

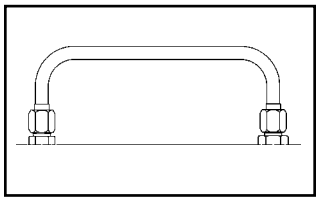


Fig. A18 — Correct Routing

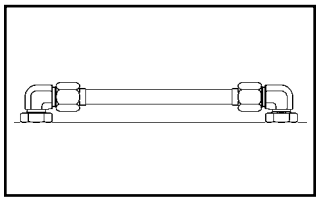


Fig. A19 — Incorrect Routing

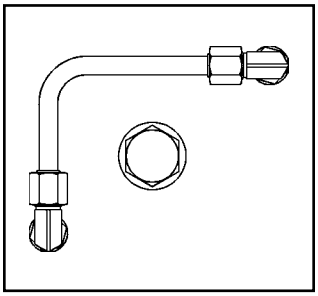


Fig. A26 — Correct

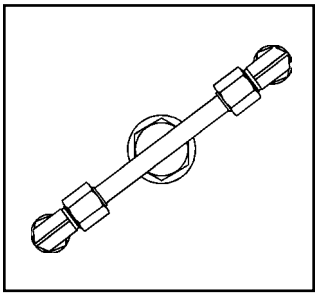


Fig. A27 — Incorrect

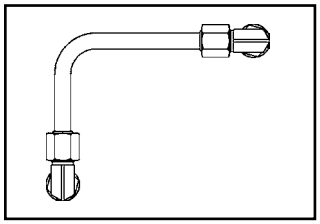


Fig. A20 — Correct Routing

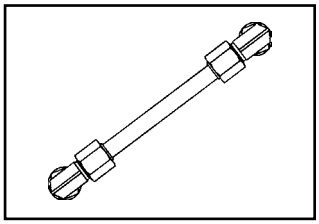


Fig. A21 — Incorrect Routing

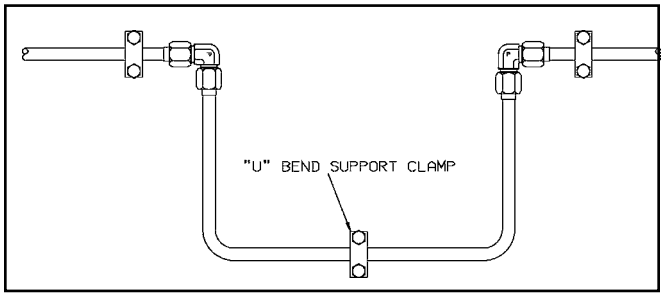


Fig. A22 — U-Bend Allowing Expansion and Contraction

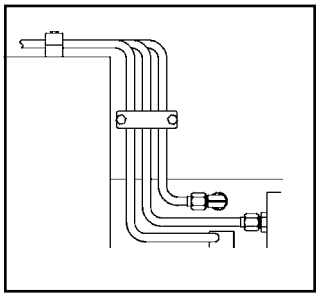


Fig. A28 — Correct

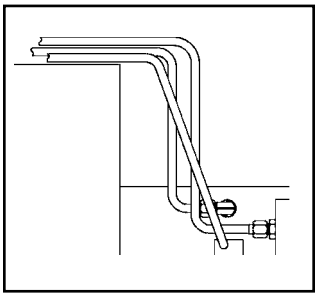


Fig. A29 — Incorrect

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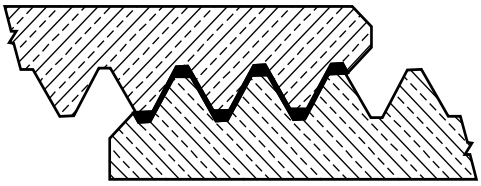
Parker Brass Products Division
Otsego, Michigan

Thread Specifications

Dryseal Pipe Threads

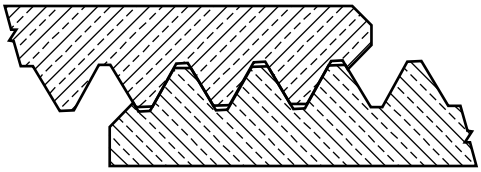
All dryseal pipe threads are manufactured in accordance with the American National Standards Institute (ANSI) B1.20.3 specification and designed to seal pressure tight joints. The threads may incorporate the NPTF (National Standard Pipe Taper Fuel and Oil), PTF-SAE Short, PTF-SPL Short or PTF-SPL Extra Short form. Dryseal threads are used on brass products found within this catalog. Use of a thread sealant is recommended.



Dryseal Pipe Thread
Metal to metal contact. Crests of thread are crushed by the roots when wrench-tightened to form seal.

Non-Dryseal Pipe Threads

All non-dryseal pipe threads are manufactured in accordance with the American National Standards Institute (ANSI) B1.20.1 specification. These tapered pipe threads are used on our carbon and stainless steel products. Use of a thread sealant is recommended.



Non-Dryseal Pipe Thread
Flanks are in contact with possible clearance between the roots and crests. Will not prevent spiral leakage

Nickel Plating

Nickel plating is available for all standard product fittings. Plating will increase male pitch diameters and decrease female pitch diameters of threads. This will affect the assembly characteristics on standard products.

Nickel plating provides a corrosion resistant coating which is desirable in many applications. Electrolytic nickel plating is the standard plating supplied unless otherwise specified. This will provide a uniform coverage of external surfaces; however, internal surfaces may be uncoated.

Unified Threads

All threads in the columns headed “Straight Thread” found within this catalog are manufactured in accordance with the American National Standards Institute (ANSI) B1.1 specification.

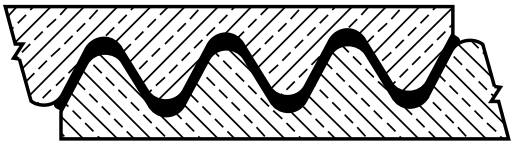
British Standard Pipe Threads BSPT and BSPP

Pressure Tight

The British pipe threaded products found within this catalog intended for use where pressure tight joints are made on the threads are manufactured in accordance with British Standard (BS) 21 and International Standards Organization (ISO) 7-1. The threads are designated as follows:

- Rp: Internal parallel
- Rc: Internal taper
- Rs: Special external parallel
- R: External taper

Use of a thread sealant is recommended with the R series thread. An elastomeric peripheral seal should be used with the Rs thread.

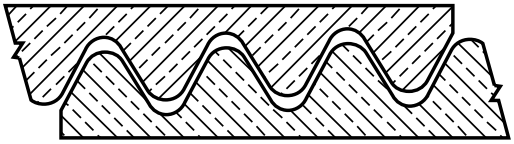


BS21 British Standard Pipe Thread for Pressure Tight Joints
Metal to metal contact provides seal as tapered thread is wrench-tightened.

Non-Pressure Tight

All British Standard parallel pipe threads manufactured in this catalog according to BS2779 and ISO 228-1 are intended for use where pressure tight joints are not made on the threads. An elastomeric peripheral seal should be used. These threads are designated as follows:

- G: Internal Thread
  - GA, External thread, tight tolerance classification
  - GB, External thread, general purpose and assumed if no classification designation is given



BS2779 British Standard Pipe Thread for Non-Pressure Tight Joints
Thread tolerances allow for possible clearance between threads. Will not prevent leakage paths.

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Pipe Thread Assembly

The two British Standard pipe thread forms used for Parker's standard product are manufactured in a tighter tolerance range than required by the standards in order to facilitate the assembly and mating of fittings produced by the two different standards. In general, BS21 threads do not necessarily mate with BS2779 threads at tolerance overlap conditions, but fittings located within this catalog can be assembled as follows:

External Thread	Mating Internal Thread
G-BS2779 (parallel)	G-BS2779 (parallel) Rp-BS21* (parallel)
Rs-BS21 (parallel)	Rp-BS21 (parallel) G-BS2779 (parallel)
R-BS21 (taper)	Rp-BS21 (parallel) Rc-BS21 (taper) G-BS2779 (parallel)

*This thread must be manufactured within a reduced tolerance range to always assemble with the G series external thread.

British Standard ISO Metric Screw Threads

They are commonly used in miniature pneumatic applications because of the availability of small thread diameters and are also used extensively in the automotive industry. There are two forms of sealing on metric screw threads.

- O-ring sealing into a profiled port in accordance with ISO 6149.
- Peripheral sealing with a copper or bonded washer in accordance with ISO 261 and 262.

Peripheral sealing of parallel threads

Pressure-tight joints of screwed connections with parallel threads are achieved by placing a seal between the two machined faces

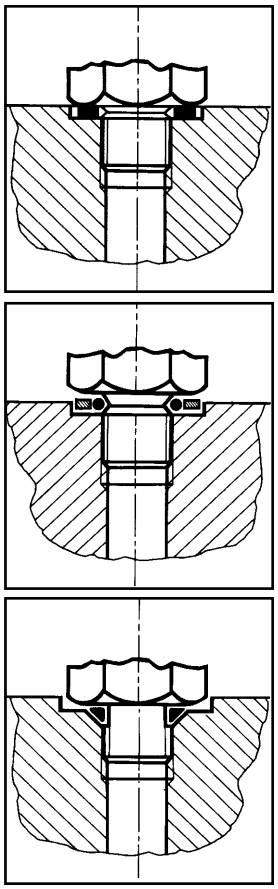
Flat seals

Washers and rings are manufactured in many different materials including copper, aluminium, fiber, plastics, etc.

The tightening torque at assembly must be carefully selected so as to avoid compressing the seal to the point of extrusion. As a general rule, the fitting should be tightened with an additional 1/4 wrench turn from the fingertight position.

O-rings

Depending upon the configuration of the female port or male thread, O-Ring seals are fitted with or without back-up washers, and can be fully retained in a captive seal.



Flaring Instructions

In order to properly flare copping tubing for use with Parker 45° Flared Fittings and Inverted Flared Fittings, the following procedures and specifications should be met in preparation and make-up of flares.

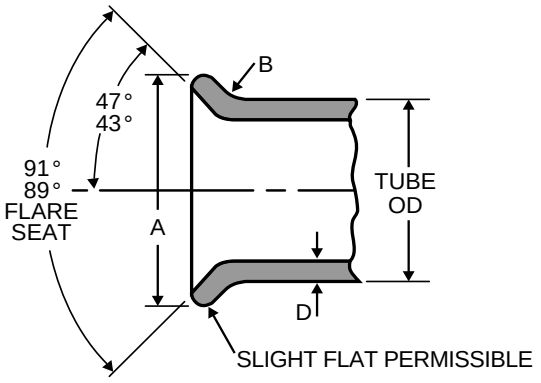
1) CUT TUBE WITH TUBE CUTTER:
To minimize the burr and workhardening, use a light feed on the cutting wheel and make several revolutions.

2) REAM THE TUBING:
Cutting with a tube cutter will always create a burr. The burr must be removed to obtain maximum sealing surface. Remove only the burr, do not remove material from the original wall thickness. Also clean the tube end thoroughly to remove burrs.

3) FLARE TUBING:
Flare with a compression or generating type flaring tool. Follow tool manufacturer's instructions for: (A) positioning the tube in tool and (B) for the correct number of turns on the feed handle.

4) INSPECT TUBING:
The flare cone should be checked for a smooth surface on the I.D. of the cone and measure with micrometer over largest O.D. for proper size. (See dimensions below for flare size for each tubing size.)

Nominal Tube	A Single Flare Diameter		B Single Flare Radius	D Single Flare Wall Thickness
in	in		in	in
	Max.	Min.	?0.01	Max.
1/8	0.181	0.171	0.02	0.035
3/16	0.249	0.239	0.02	0.035
1/4	0.325	0.315	0.02	0.049
5/16	0.404	0.388	0.02	0.049
3/8	0.487	0.471	0.02	0.065
7/16	0.561	0.545	0.02	0.065
1/2	0.623	0.607	0.02	0.083
9/16	0.676	0.660	0.02	0.083
5/8	0.748	0.732	0.02	0.095
3/4	0.916	0.900	0.02	0.109
7/8	1.041	1.025	0.02	0.109
1	1.157	1.141	0.02	0.120



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Parker Brass Products Division
Otsego, Michigan

Thread Designations and Standards for Threads Used in Fluid Connectors

Abbreviation	Description	Applicable Std.
Straight Pipe		
NPSC	American Standard Straight Pipe Threads in Pipe Couplings Couplings	ANSI B1.20.1 FED-STD-H28/7
NPSF	Dryseal American Standard Fuel Internal Straight Pipe Threads (generally used in soft or ductile materials to mate with NPTF external taper threads)	SAEJ476 ANSI B1.20.3 FED-STD-H28/8
NPSI	Dryseal American Intermediate Internal Straight Pipe Threads (for brittle or hard materials; intended to mate with PTF-SAE short external taper threads)	SAE J476 ANSI B1.20.3 FED-STD-H28/8
NPSM	American Standard Straight Pipe Threads for Free-Fitting Mechanical Joints for Fixtures (these threads fit freely over NPTF threads. They are used in swivel nuts of 07 adapters)	ANSI B1.20.1 FED-STD-H28/7
Taper Pipe		
ANPT	Aeronautical National Taper Pipe Threads (similar to NPT with various additional requirements in gaging)	MIL-P-7105
NPT	American Standard Taper Pipe Threads for General Use	ANSI B1.20.1 FED-STD-H28/7
NPTF	Dryseal American Standard Taper Pipe Threads (used in all of our steel and brass fittings)	SAE J476 ANSI B1.20.3 FED-STD-H28/8
PTF — SAE Short	Dryseal SAE Short Taper Pipe Threads (mainly used in low pressure pneumatic and fuel applications)	SAE J476 ANSI B1.20.3 FED-STD-H28/8
PTF — SPL Short[1)]	Dryseal Special Short Taper Pipe Threads	ANSI B1.20.3
PTF — SPL Extra Short[1)]	Dryseal Special Extra Short Taper Pipe Threads	ANSI B1.20.3
Unified Threads		
UN	Unified Constant Pitch Threads (standard series: 4, 6, 8, 12, 16, 20, 28, 32)	ANSI B1.1 FED-STD-H28/2
UNC	Unified Coarse Threads	ANSI B1.1 FED-STD-H28/2
UNEF	Unifed Extra Fine Threads	ANSI B1.1 FED-STD-H28/2
UNF	Unified Fine Threads	ANSI B1.1 FED-STD-H28/2
UNS	Unified Special Pitch Threads	ANSI B1.1 FED-STD-H28/3
UNJ	Unified Controlled Root Radius Threads	ANSI B1.15 FED-STD-H28/4

Table A48 — Thread Designations and Standards for Threads Used in Fluid Connectors (continued on the next page)

1) Used in some pneumatic components where shortened thread depth is required because of lack of enough material due to component size limitations.

Abbreviation	Description	Applicable Std.
Metric Threads		
M	Metric Screw Threads — M profile	ISO 261 ANSI B1.13M FED-STD-H28/21
M — Keg	Metric Taper Threads (mainly used in Germany)	DIN 158
British Standard Pipe Threads		
R (BSPT)	British Standard Taper Pipe Threads, External	BS 21 ISO 7/1
Rc (BSPT)	British Standard Taper Pipe Threads, Internal	BS 21 ISO 7/1
Rp or G (BSPP)	British Standard Pipe (Parallel) Threads	BS 2779 ISO 228/1
Japanese Standard Pipe Threads		
PF[1)]	JIS Parallel Pipe Threads	JIS B202 ISO 228/1
PT[1)]	JIS Taper Pipe Threads	JIS B203 ISO 7/1
PS	JIS Parallel Internal Pipe Threads (to mate with PT threads)	JIS B203

Table A48 (Cont'd) — Thread Designations and Standards for Threads Used in Fluid Connectors

1) PF and PT threads are functionally interchangeable with BSPP and BSPT threads, respectively.
These are old designations. They are being replaced with G (for PF) and R and Rc (for PT) as documents are revised.

Straight Thread Size Comparison Chart

	Tube O.D.										
	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1
SAE 45° Flared	5/16 -24	3/8 -24	7/16 -20	1/2 -20	5/8 -18	11/16 -16	3/4 -16	7/8 -14	1-1/16 -14	1-1/4 -12	-
Inverted Flared	5/16 -28	3/8 -24	7/16 -24	1/2 -20	5/8 -18	11/16 -18	3/4 -18	7/8 -18	1-1/16 -16	1-3/16 -16	-
Air Brake/NTA	-	-	7/16 -24	-	17/32 -24	-	11/16 -20	13/16 -18	1 -18	-	1 1/4 -16
Std. Comp./ Compress-Align	5/16 -24	3/8 -24	7/16 -24	1/2 -24	9/16 -24	5/8 -24	11/16 -20	13/16 -18	1 -18	1-1/8 -18	1 1/4 -18
Poly-Tite	5/16 -24	3/8 -24	3/8 -24	7/16 -24	1/2 -24	-	11/16 -20	-	-	-	-
Vibra-Lok	3/8 -24	7/16 -24	1/2 -24	9/16 -24	5/8 -24	-	13/16 -18	1 -18	1-1/8 -18	-	-
V510 Ball Valves	-	-	7/16 -20	-	9/16 -18	-	3/4 -16	7/8 -14	1-1/16 -12	-	1-5/16 -12
Hi-Duty Flareless Tube Fittings	5/16 -24	3/8 -24	7/16 -24	1/2 -20	9/16 -20	-	11/16 -16	7/8 -18	-	-	-

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S.A.E. Part Index

SAE Standards (Current)

J246: Spherical and Flanged Sleeve (Compression) Tube Fittings
Tubing: Copper and J844 Nylon
Fittings: NTA and Air Brake

J476: Dryseal Pipe Threads

J512: Automotive Tube Fittings
Tubing: Copper and Nylon
Fittings: 45° Flare, Inverted Flare, Compression

J513: Refrigeration Tube Fittings
Tubing: Annealed Copper
Fittings: 45° Flare

J530: Automotive Pipe Fittings
Fittings: Pipe

J531: Automotive Pipe, Filler and Drain Plugs
Fittings: Pipe Plugs

J844: Nonmetallic Air Brake System Tubing
Tubing: Non-reinforced Type A, reinforced Type B

J1131: Performance Requirements for SAE J844 Nonmetallic Tubing and Fitting
Assemblies Used in Automotive Air Brake Systems
Tubing: J844 Nylon
Fittings: NTA and Prestomatic

J1615: Thread Sealants

J2494: Brass Body Push-to-Connect Fittings
Tubing: J844 Nylon
Fittings: Prestomatic

N

U.L. LISTED FITTINGS

Many of the Brass Products Division's fittings have been listed by the Underwriter's Laboratory. The listings fall under 1 of 5 categories, depending upon application. Underwriter's requires that the smallest unit package carry the U.L. symbol and each carton be printed in accordance with the specification of each category. Fittings requiring gas listing must be stamped with the identification symbol G and our trademark.

FLAMMABLE LIQUID APPLICATION MARINE APPLICATION

All cartons containing U.L. approved fittings for flammable liquid and marine applications will be labeled with the appropriate U.L. listing at no extra charge. The fitting will not be stamped with the UL or G symbols.

GAS – MANUFACTURED, NATURAL AND L.P. (LIQUEFIED PETROLEUM) REFRIGERATION APPLICATION

U.L. listed fittings for gas or refrigeration application will be furnished only when specified on purchase order. Fittings will be stamped with the G symbol and cartons will be labeled with the appropriate U.L. listing.

ORDERING INSTRUCTIONS FOR U.L. LISTINGS

The Brass Division labels all cartons with the appropriate U.L. listing. The gas identification symbol G will be stamped on each fitting only when the listing is required and specified on the purchase order.

List of U.L. Fittings

No G Marking Required

FITTINGS, FLAMMABLE LIQUID				
1F	60C	151F	176C	264CA
2GF	61C	155F	176CA	265C
3GF	61CA	159F	177C	265CA
14FL	61CL	164C	177CA	269C
14FSV	62C	164CA	244F	269CA
14FSX	62CA	165C	244IFHD	270C
41FL	62CABH	165CA	245IFHD	270CA
41FS	62CBH	168C	249F	639C
41FX	66C	168CA	249IF	639CA
41IF	66CA	169C	249IFHD	639F
41IFS	68C	169CA	250IFHD	640F
42F	68CA	170C	251IFHD	660FHD
42IFHD	144F	170CA	252IFHD	661FHD
46F	145F	171C	256IF	664FHD
46IFHD	147F	171CA	259IFHD	
48F	149F	172C	264C	
48IFHD	150F	172CA		

FITTINGS, FUEL EQUIPMENT, MARINE				
2GF	46F	147F	155F	660FHD
3GF	48F	149F	159F	661FHD
14FL	144F	150F	639F	664FHD
42F	145F	151F	640F	

SHUT-OFF VALVES, FLAMMABLE LIQUIDS, LP GAS AND COMPRESS GAS	
XV520P-4	XV520P-32
XV520P-6	XV520P-40
XV520P-8	XV520P-48
XV520P-12	XV500P-20
XV520P-16	XV500P-24
XV520P-20	XV500P-32
XV520P-24	

G Marking Required

FITTINGS, REFIGERATION		
1F	48F	159F
2GF	144F	244F
3GF	145F	249F
14FL	147F	639F
14FS	149F	640F
14FSV	150F	660FHD
42F	151F	661FHD
46F	155F	664FHD

FITTINGS, GAS		
1F	48F	249F
2GF	48IFHD	249IFHD
3GF	144F	250IFHD
14FL	145F	251IFHD
14FS	147F	252IFHD
14FSV	149F	255IFHD
14FSX	150F	259IFHD
41IF	151F	639F
41IFS	155F	640F
42F	159F	660FHD
42IFHD	244F	661FHD
46F	244IFHD	664FHD
46IFHD	245IFHD	

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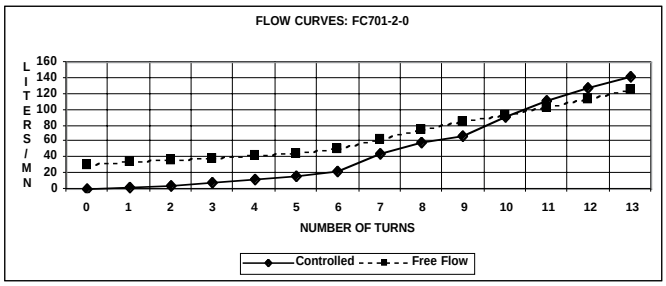
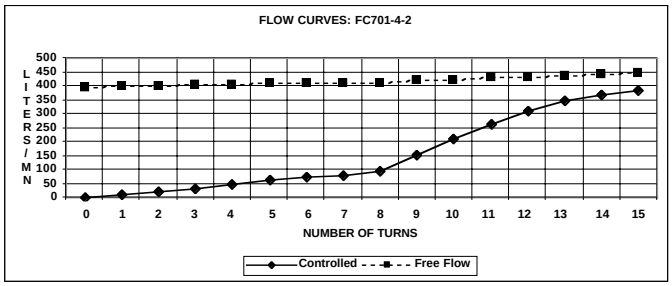
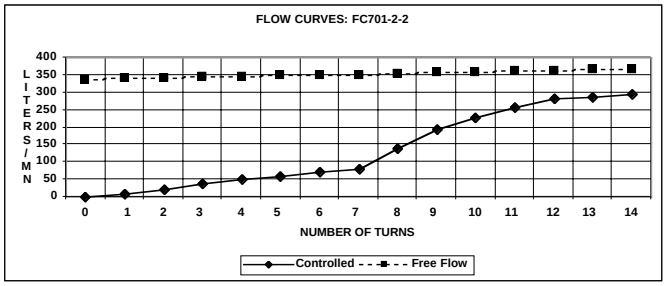
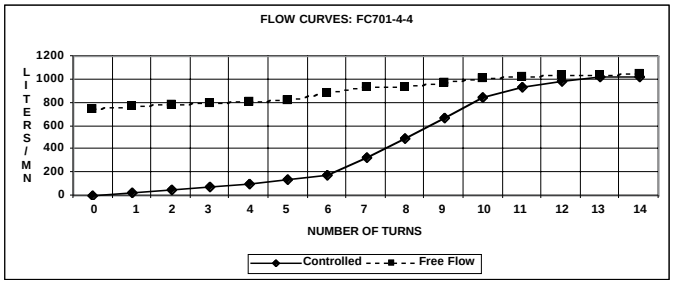
Flow Curves

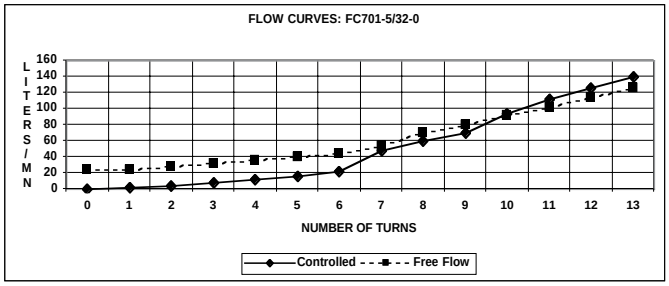
FC701 Flow Curves

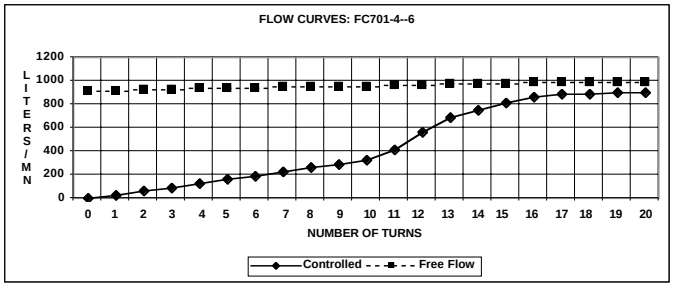


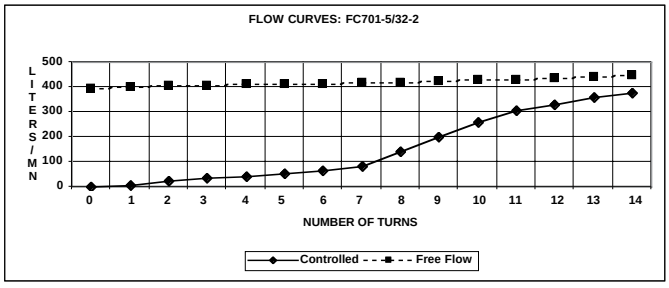


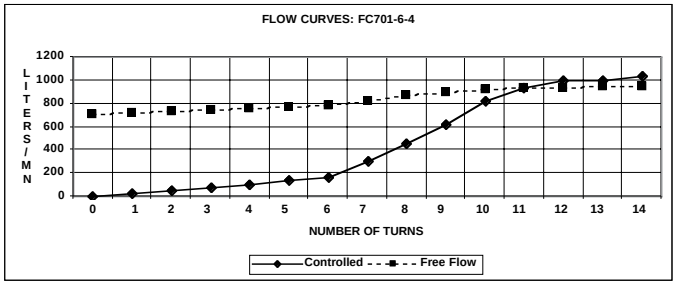


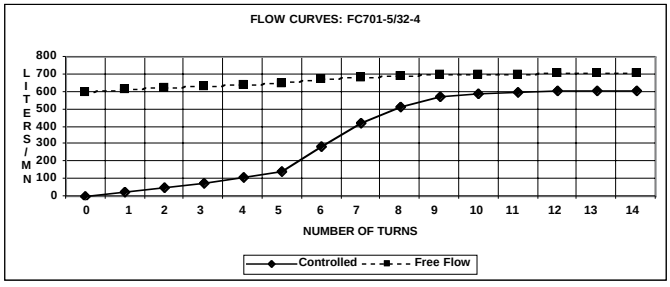


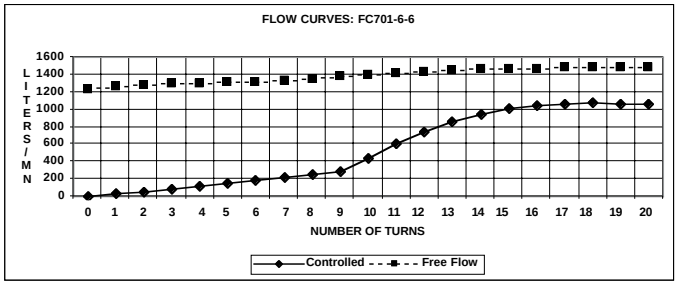










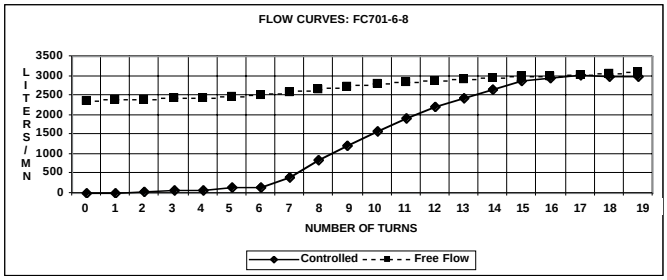


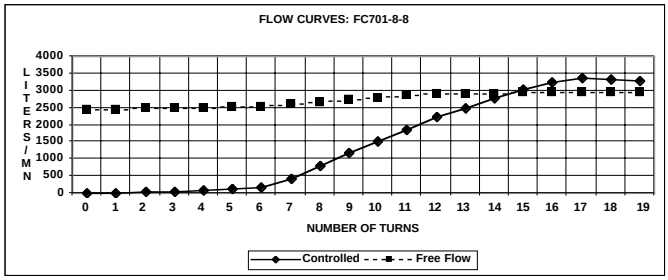
Note: All tests were conducted at 90PSI

N

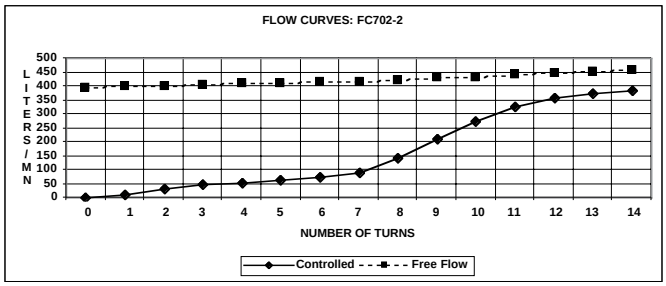
Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

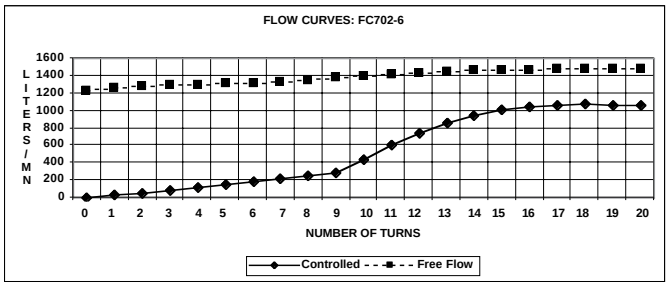
FC701 Flow Curves

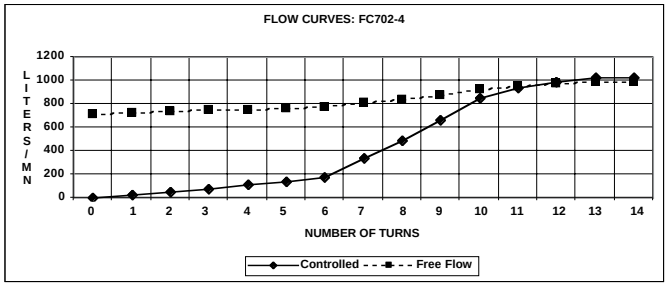


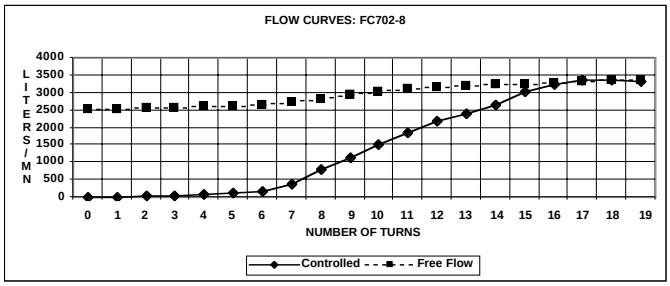


FC702 Flow Curves









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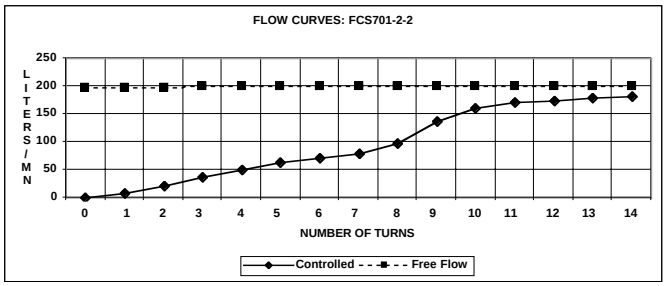
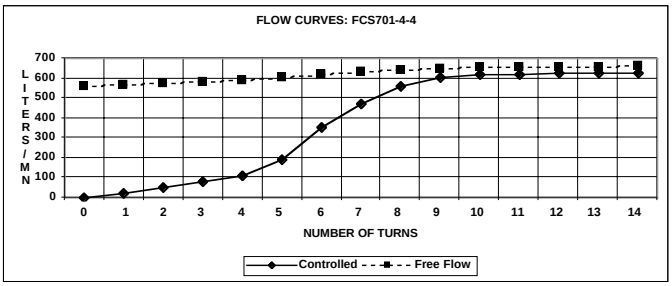
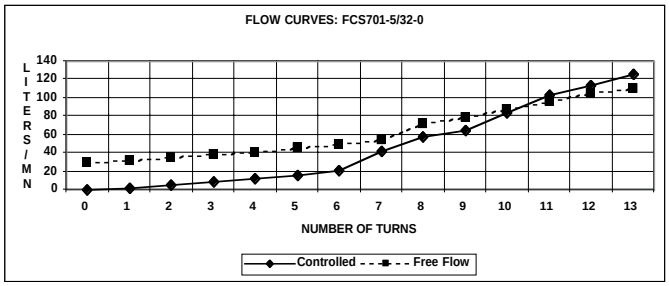
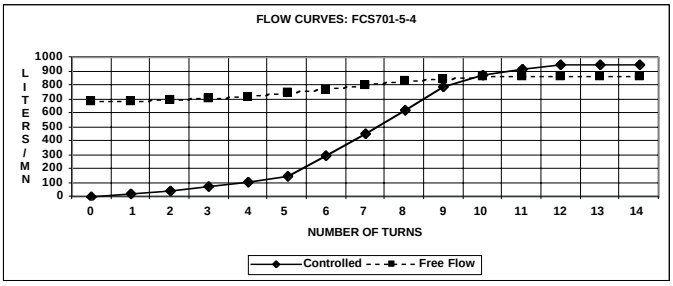
Note: All tests were conducted at 90PSI

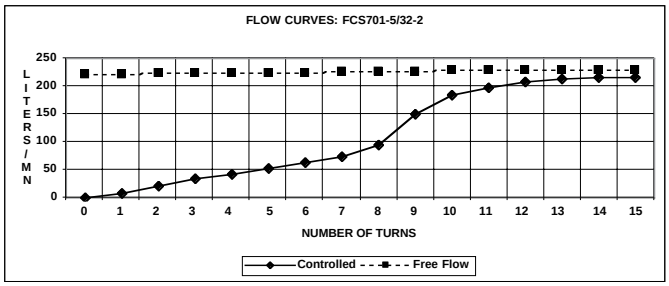
FCS701 Flow Curves

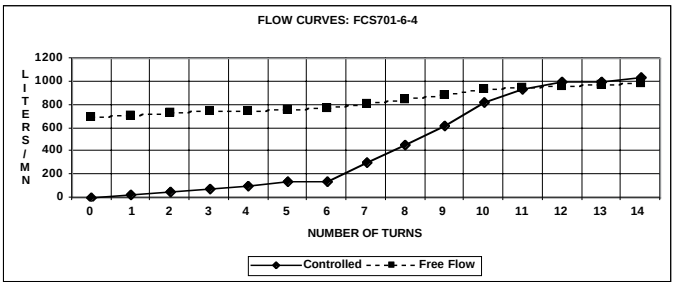


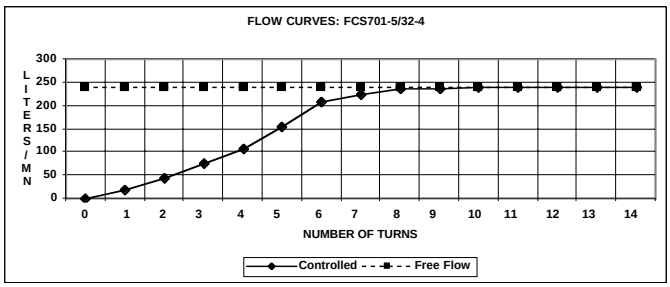


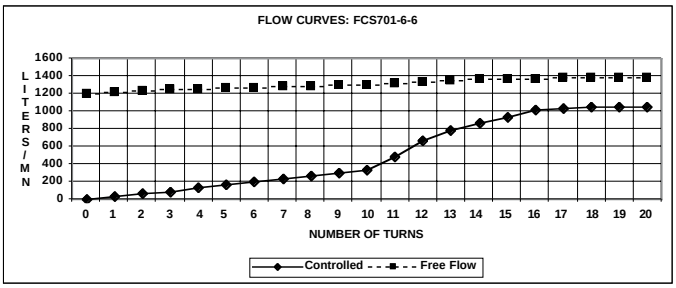


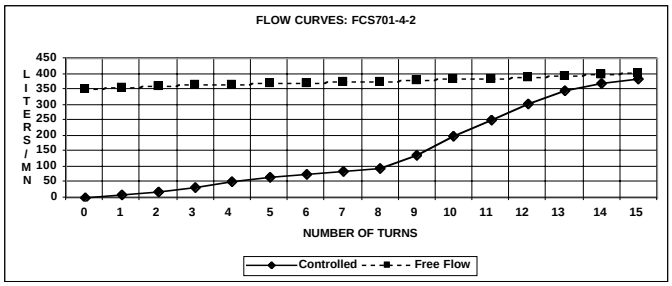


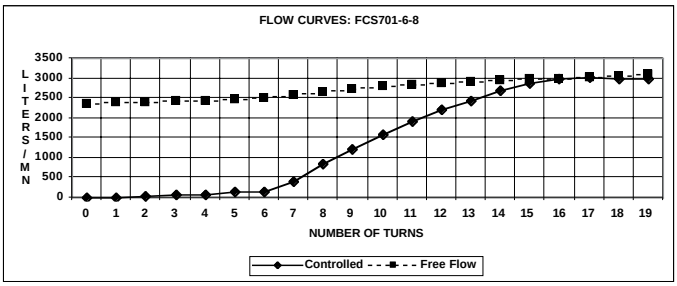












Note: All tests were conducted at 90PSI

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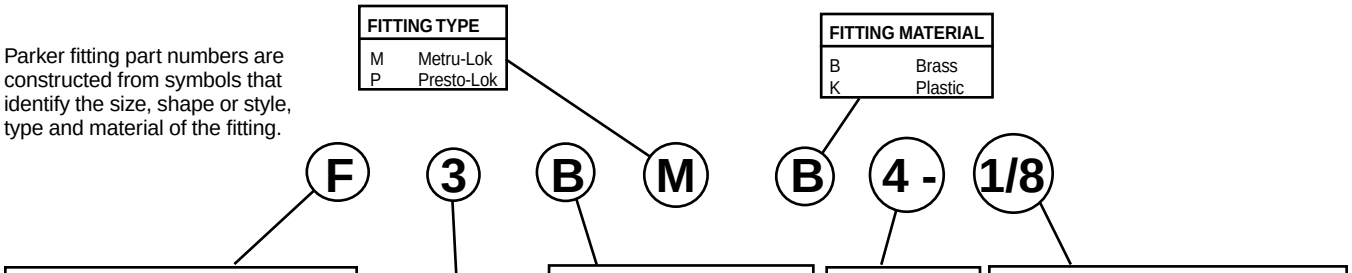
Metric Fitting Nomenclature

Parker fitting part numbers are constructed from symbols that identify the size, shape or style, type and material of the fitting.



FITTING TYPE

M	Metru-Lok
P	Presto-Lok

FITTING MATERIAL

B	Brass
K	Plastic

FITTING STYLE

B	Nut
C	90° male elbow connector
C6	90° male elbow connector, swivel
CD	90° male/female elbow adapter
CD43	90° male/female BSPT/BSPP adapter
D	90° female elbow connector
DD	90° female elbow adapter
DD44	90° female BSPP elbow adapter (DD4 in USA)
E	90° elbow union connector
F	Straight thread stud connector (male connector)
FF	Straight thread long connector or male straight adapter
FG	Male to female adapter, straight
FF33	Male BSPT straight adapter
FF44	Male BSPP straight connector
FG	Male/female jump size adapter
FG43	Male/female BSPT/BSPP jump size adapter (F3G4 in USA)
FN	Cap
G	Female straight connector
GG44	Female BSPP straight adapter (GG4 in USA)
H	Straight union connector
HHP	Hollow hex head plug
HHP3	BSPT hollow hex head plug
HP3	BSPT hollow hex head plug
J	Union tee connector
K	Union cross connector
KMM00	Female cross adapter
KMM004	Female BSPP cross adapter
MMO	Female tee adapter
MMO444	Female BSPP tee adapter
MMS	Female/female/male tee adapter
MMS443	Female/female/male BSPP/ BSPP/BSPT tee adapter
PN	Plug
PTR34	Male/female BSPT/BSPP reducing adapter
PTR44	Male/female BSPP reducing adapter (PTR4 in USA)
R	Male stud run tee connector
R6	Male run tee connector, swivel
S	Male stud branch tee connector
S6	Male branch tee connector, swivel
T	Sleeve
T2HF	Standpipe to male
T2HG	Standpipe to female
T23	Insert (for thin walled or plastic tube)
T23HF	Standpipe to male BSPT
T24HG	Standpipe to female
T28HF	Standpipe to metric straight thread
TE	Tube end size jumper
TR	Tube end reducer
W	Straight bulkhead union connector
WE	90° bulkhead union elbow connector
WGG	Straight female bulkhead adapter
WGG44	Straight female BSPP bulkhead adapter (WGG4 in USA)

THREAD TYPE (PORT END)

Without	NPT (brass, stainless) - NPTF (steel)
2	NPTF
3	BSPT (male only)
4	BSPP (male or female)
40	BSPP O-Ring and retaining ring (male) only
41	BSPP cutting seal (male only)
6	Swivel nut (swivel end)
63	Adjustable swivel connector with BSPT thread
64	Adjustable swivel connector with BSPP thread
68	Adjustable swivel connector with metric parallel thread
69	Adjustable swivel connector with metric taper thread
7	(Metric taper in USA)
8	Metric parallel
80	Metric parallel O-Ring and retaining ring (male only)
81	Metric parallel cutting seal (male only)
85	Metric parallel Eolastic seal (male only)
0	With O-Ring

ASSEMBLED FITTING

Without	Unassembled fitting. i.e. fitting adapter for use with hose fittings, etc.
B	Assembled fitting except for Prestolok upgraded versions (plastic and brass)

TUBE SIZE

DASH NO.	TUBE O.D.
4	4mm
6	6mm
8	8mm
10	10mm
12	12mm
14	14mm
16	16mm
18	18mm
20	20mm
22	22mm

PORT END THREAD SIZE RANGES

			"8"
METRIC			
	"3"	"4"	
STRAIGHT			
NPT	BSPT	BSPP	THREAD
1/16	1/8	1/8	M3X0.5
1/8	1/4	1/4	M5X0.8
1/4	3/8	3/8	M10X1
3/8	1/2	1/2	M12X1,5
1/2	3/4	3/4	M14X1,5
3/4		1	M16X1,5
		1.1/4	M18X1,5
		1.1/2	M22X1,5
		2	

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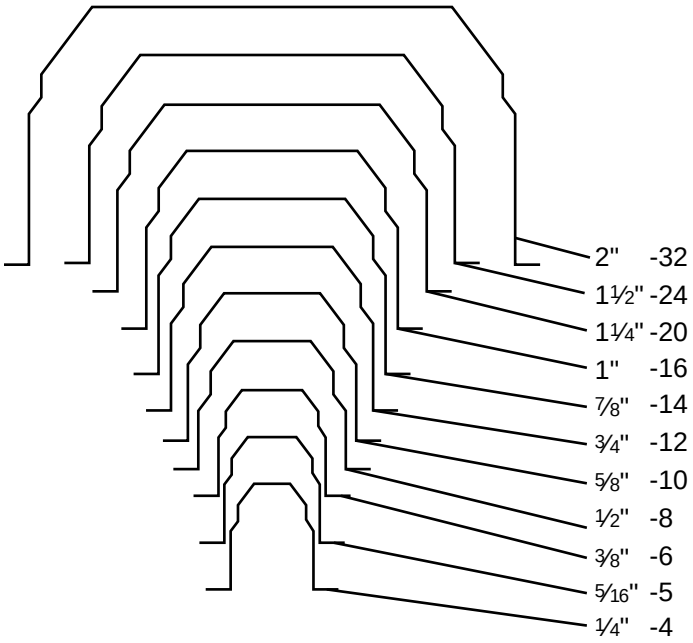
Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Flare and Thread Profiles

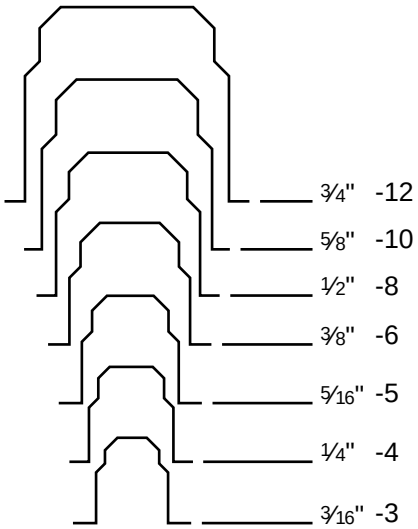
SAE (JIC) 37° Flare Nose Sizes

Actual Size

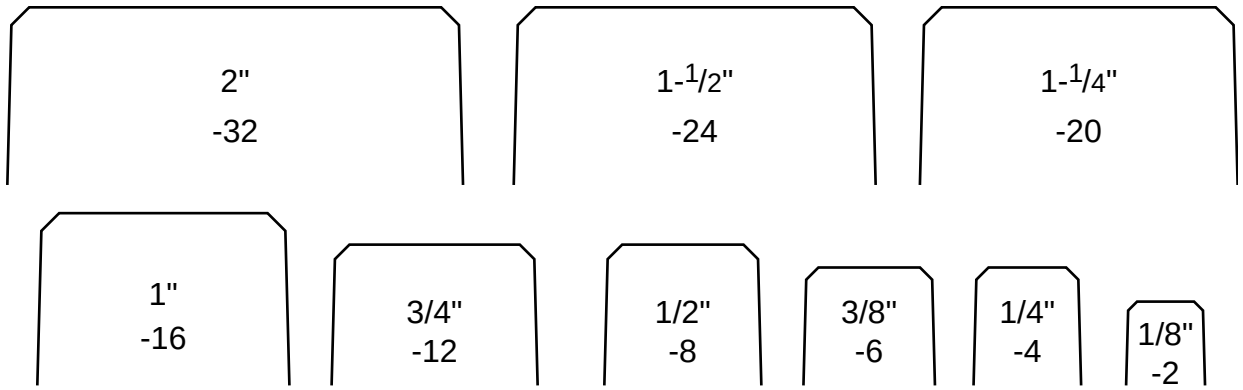


SAE 45° Flare Nose Sizes

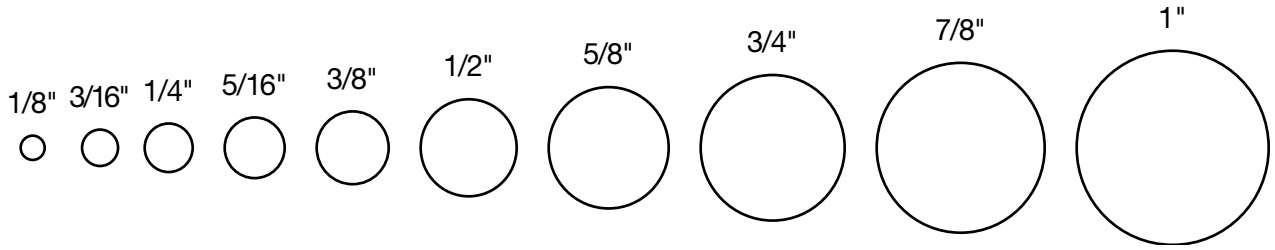
Actual Size



Male Pipe Thread Sizes



Actual Outside Diameters of Tubing



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Parker Brass Products Division
Otsego, Michigan

Pressure Conversions

Kilopascals (KPa)	Megapascals (MPa)	Bar (bar)	Kilograms Per Square Centimeter (Kgf/cm2)	Pounds Per Square Inch(psi)	Pounds Per Square Inch(psi)	Kilopascals (KPa)	Megapascals (MPa)	Bar (bar)	Kilograms Per Square Centimeter (Kgf/cm2)
100	1.0	1	1.02	14.50	10	68.90	0.07	0.70	0.70
200	0.2	2	2.04	29.00	20	137.90	0.14	1.41	1.41
300	0.3	3	3.06	43.50	30	206.80	0.21	2.10	2.11
400	0.4	4	4.08	58.00	40	275.80	0.28	2.80	2.81
500	0.5	5	5.10	72.50	50	344.70	0.34	3.40	3.52
600	0.6	6	6.12	87.00	60	413.70	0.41	4.10	4.22
700	0.7	7	7.14	101.50	70	482.60	0.48	4.80	4.92
800	0.8	8	8.16	116.00	80	551.60	0.55	5.50	5.63
900	0.9	9	9.18	130.50	90	620.50	0.62	6.20	6.33
1000	1.0	10	10.20	145.00	100	689.00	0.70	6.90	7.00
2000	2.0	20	20.40	290.10	200	1379.00	1.40	13.80	14.10
3000	3.0	30	30.60	435.10	300	2068.00	2.10	20.70	21.10
4000	4.0	40	40.80	580.20	400	2758.00	2.80	27.60	28.10
5000	5.0	50	51.00	725.20	500	3447.00	3.40	34.50	35.20
6000	6.0	60	61.20	870.20	600	4137.00	4.10	41.40	42.20
7000	7.0	70	71.40	1015.30	700	4826.00	4.80	48.30	49.20
8000	8.0	80	81.60	1160.30	800	5516.00	5.50	55.20	56.30
9000	9.0	90	91.80	1305.30	900	6205.00	6.20	62.10	63.30
10000	10.0	100	102.00	1450.00	1000	6895.00	6.90	68.90	70.30
20000	20.0	200	204.00	2901.00	2000	13790.00	13.80	137.90	140.70
30000	30.0	300	306.00	4351.00	3000	20684.00	20.70	206.80	211.00
40000	40.0	400	408.00	5802.00	4000	27579.00	27.60	275.80	281.30
50000	50.0	500	510.00	7252.00	5000	34474.00	34.50	344.70	351.60
60000	60.0	600	612.00	8702.00	6000	41369.00	41.40	413.70	421.90
70000	70.0	700	714.00	10153.00	7000	48263.00	48.30	482.60	492.30
80000	80.0	800	816.00	11603.00	8000	55158.00	55.20	551.60	562.60
90000	90.0	900	918.00	13053.00	9000	62053.00	62.10	620.50	632.90
100000	100.0	1000	1020.00	14504.00	10000	68948.00	68.90	689.00	703.00
200000	100.0	2000	2040.00	29008.00	20000	137895.00	137.90	1379.00	1406.00
300000	300.0	3000	3060.00	43511.00	30000	206843.00	206.80	2068.00	2110.00
					40000	275790.00	275.80	2758.00	2813.00

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English/Metric Conversions

Inches x 25.4 = Millimeters (mm)
Inches x 2.54 = Centimeters (cm)
Inches x .254 = Decimeters (dm)
Feet x .3048 = Meters (m)
Yards x .9144 = Meters (m)
Psi x .0689 = Bars (Bar)
Bars x 100 = Kilopascals (kPa)
Psi x .0069 = Megapascals (MPa)
Pound Inches x .113 = Newton Meters (N•m)
Pound Feet x 1.356 = Newton Meters (N•m)

Millimeters x .0394 = Inches
Centimeters x .3937 = Inches
Meters x 3.281 = Feet
Meters x 1.0936 = Yards
Bars x 14.5 = Psi Megapascals x 145 = Psi
Newton Meters x 8.85 = Pound Inches
Newton Meters x .737 = Pound Feet

Millimeters to Fractions to Decimals

mm	Inches		mm	Inches		mm	Inches		mm	Inches	
	Fraction	Decimal		Fraction	Decimal		Fraction	Decimal		Fraction	Decimal
0.3969	1/64	0.0156	6.7469	17/64	0.2656	13.0969	33/64	0.5156	19.4469	49/64	0.7656
0.7938	1/32	0.0312	7.1438	9/32	0.2812	13.4938	17/32	0.5312	19.8438	25/32	0.7812
1.1906	3/64	0.0468	7.5406	19/64	0.2968	13.8906	35/61	0.5468	20.2406	51/64	0.7968
1.5875	1/16	0.0625	7.9375	5/16	0.3125	14.2875	9/16	0.5625	20.2375	13/16	0.8125
1.9844	5/64	0.0781	8.3344	21/64	0.3281	14.6844	37/64	0.5781	21.0344	53/64	0.8281
2.3812	3/32	0.0937	8.7312	11/32	0.3437	15.0812	19/32	0.5937	21.4312	27/32	0.8437
2.7781	7/64	0.1093	9.1281	23/64	0.3593	14.4781	39/64	0.6093	21.8281	55/64	0.8593
3.1750	1/8	0.1250	9.5250	3/8	0.3750	15.8750	5/8	0.6250	22.2250	7/8	0.8750
3.5719	9/64	0.1406	9.9219	25/64	0.3906	16.2719	41/64	0.6406	22.6219	57/64	0.8906
3.9688	5/32	0.1562	10.3188	13/32	0.4062	16.6688	21/32	0.6562	23.0188	29/32	0.9062
4.3656	11/64	0.1718	10.7156	27/64	0.4218	17.0656	43/64	0.6718	23.4156	59/64	0.9218
4.7625	3/16	0.1875	11.1125	7/16	0.4375	17.4625	11/16	0.6875	23.8125	15/16	0.9375
5.1594	13/64	0.2031	11.5094	29/64	0.4531	17.8594	45/64	0.7031	24.2094	61/64	0.9531
5.5562	7/32	0.2187	11.9062	15/32	0.4687	18.2562	23/32	0.7187	24.6062	31/32	0.9687
5.9531	15/64	0.2343	12.3031	31/64	0.4843	18.6531	47/64	0.7343	25.0031	63/64	0.9843
6.3500	1/4	0.2500	12.7000	1/2	0.5000	19.0500	3/4	0.7500	25.4000	1	1.0000

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Fluid Compatibility Guide

The following pages list general recommendations for the selection of valve materials. For specific cases, and for those not included in the Fluid Compatibility Chart, it is advisable to check with your Parker representative.

There are many specific environmental factors which might affect corrosion rate such as temperature, solution, concentration and presence of impurities. Therefore, we suggest that the information be used as a rough guide to material selection. If any questions exist regarding the expected performance of a material in a given application, actual tests should be performed to determine the suitability of the materials in question.

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
ACETALDEHYDE	P	G	E	P	G	G	P	E	U	
ACETAMINE	G	G	G	E	G			E		
ACETATE SOLVENTS	E	E	E	P			U	E	U	
ACETIC ACID VAPORS	U		U	U				E		
ACETIC ACID (10%)	P	P	E	U	P	G	U	E	U	U
ACETIC ACID (80%)	P	P	E	U	U	P	U	E	U	U
ACETIC ACID (AERATED)	P	P	E	G	G		P	E	U	
ACETIC ACID (AIR FREE)	P	P	E	G	G		U	E	U	
ACETIC ACID (CRUDE)	P	P	E	U	U		U	E	U	
ACETIC ACID (GLACIAL)			U	U	P	G	P	E		U
ACETIC ACID (PURE)	P	U	E	U	U		U	E	U	
ACETIC ANHYDRIDE	U	U	G	U	P	P	U	E	U	U
ACETONE	E	E	E	U	U	E	U	E	E	E
ACETOPHENONE	G	G	G	U	U	E	U			
ACETYL CHLORIDE	E	G	P	U	U	U	U	E		
ACETYLENE	G	E	E	G	P	E	E	E	E	
ACID FUMES	U	U	G	P	G			E		
ACRYLONITE	E	E	E	U	U	U	P	E		
AIR	E	E	E	E	E	E	E	E	E	
ALCOHOL, AMYL	G	G	E	P	P	E	G	E	E	
ALCOHOL, BUTYL	G	G	E	G	G	P	E	E	E	
ALCOHOL, DIACETONE	E	E	E	U	P	G	U	E		
ALCOHOL, ETHYL	G	G	G	E	G	E	E	E	E	
ALCOHOL, ISOPROPYL	G	G	G	P	G	E	E	E	E	
ALCOHOL, METHYL	E	G	E	G	E	E	P	E	E	
ALCOHOL, PROPYL	E	G	E	G	G	E	E	E		
ALCOHOLS, FATTY	G	G	E	G	G			E		
ALUM	U		G	G	G		G	E		
ALUMINA	U		E	E	E	E		E		
ALUMINUM ACETATE	G		E	U	U	E	U	E		
ALUMINUM BROMIDE				E	E	E	E			
ALUMINUM CHLORIDE DRY	U	P	P	G	G	E	E	E	E	
ALUMINUM CHLORIDE SOLUTION			U	G	G		E	E		U
ALUMINUM FLUORIDE	U	U	P	E	E	E	E	E		U
ALUMINUM HYDROXIDE	E	U	E	E	E	E	E	E		
ALUMINUM NITRATE	U	U	P	G	G	G	U	E		
ALUMINUM OXALATE			U					E		
ALUMINUM SALTS				E	E	E	E			
ALUMINUM SULFATE	P	U	G	E	E	E	E	E	E	P
AMINES	G	G	E	U	U	P	U	E	E	
AMLY CHLORIDE	G		E	U	P	U	U	E		
AMMOMIUM BICARBONATE	G	P	G	G	E	E	E	E	E	
AMMONIA, ALUM			E	G	G			E		
AMMONIA, ANHYDROUS LIQUID	U	E	E	G	P	G	U	E		
AMMONIA, AQUEOUS	U	E	E	G	G		E	E		
AMMONIA, GAS, HOT	U	G	E	P	E	E	U	E		
AMMONIA LIQUOR			E					E		
AMMONIA SOLUTIONS	U	G	E	G	G	G	U	E		
AMMONIUM ACETATE	U		G	G	G	E	U	E		
AMMONIUM BROMIDE 5%			G					E		

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

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Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
AMMONIUM CARBONATE	G	G	G	P	E	E	G	E	E	
AMMONIUM CHLORIDE	U	U	P	G	E	E	E	E	E	U
AMMONIUM HYDROXIDE 28%	U	P	G	G	E	G	E	E		
AMMONIUM HYDROXIDE CONC.	U	P	G	P	E	E	E	E	E	
AMMONIUM MONOSULFATE			E					E		
AMMONIUM NITRATE	U	U	E	E	E	E	E	E	E	U
AMMONIUM OXALATE 5%			E					E		
AMMONIUM PERSULFATE	P	U	E	U	P	G	G	E		U
AMMONIUM PHOSPHATE	U	U	G	E	E	E	E	E	G	P
AMMONIUM PHOSPHATE DI-BASIC	P	U	G	E	E		E	E	E	
AMMONIUM PHOSPHATE TRI-BASIC	P	U	G	E	E		E	E	E	
AMMONIUM SULFATE	P	P	G	E	E	E	G	E	E	U
AMMONIUM SULFIDE	U	U	G	E	G	E	U	E		
AMMONIUM SULFITE	P	P	E	G	E	G	E	E	E	
AMYL ACETATE	G	P	G	U	U	G	U	E	G	P
AMYL BORATE				E	E	U	E			
AMYL CHLORONAPHTHALENE				U	U	U	E			
AMYL NAPTHHALENE				U	U	U	E			
ANILINE	U	P	G	U	U	P	P	E	E	P
ANILINE DYES	P	P	E	P	P	P	G	E	E	
ANIMAL OIL	G	G	G	E	G	G	E			
ANTIMONY TRICHLORIDE	U	U	U	P			G	E		
APPLE JUICE	P	U	G	E	E	G	E	E		
AQUA REGIA (STRONG ACID)	U	U	G	U	U	U	U	E		U
AROCLOR 1248	G	U	U	U	U	G	E			
AROCLOR 1254	G	U	U	U	U	G	E			
AROCLOR 1260	G	U	U	E	E		E			
AROMATIC SOLVENTS	E	P	E	U	U	U		E		
ARSENIC ACID	U	U	G	E	E	G	E	E	E	U
ASPHALT EMULSION	E	G	E	U	P	U	E	E	E	
ASPHALT LIQUID	E	G	E	P	P	U	E	E	E	
ASTM OIL, NO. 1	E	E	E	E	E	U	E			
ASTM OIL, NO. 2	E	E	E	E	G	U	E			
ASTM OIL, NO. 3	E	E	E	E	U	U	E			
ASTM OIL, NO. 4	E	E	E	G	U	U	E			
ASTM REFERENCE FUEL A	U	G	E	E	G	U	E			
ASTM REFERENCE FUEL B	U	G	E	E	U	U	E			
ASTM REFERENCE FUEL C	U	G	E	G	U	U	E			
BARIUM CARBONATE	G	G	G	G	E	E	E	E	E	
BARIUM CHLORIDE	G	P	G	E	E	E	E	E	E	E
BARIUM CYANIDE	P		G	G	G	G	G	E		
BARIUM HYDRATE	U		E					E		
BARIUM HYDROXIDE	P	P	G	E	E	G	E	E	E	
BARIUM NITRARE			E		G			E		
BARIUM SALTS				E	E	E	E			
BARIUM SULFATE	P	P	E	E	E	G	E	E	E	E
BARIUM SULFIDE	U	P	G	E	G	E	E	E	E	
BEER	G	U	E	G	G	G	E	E	E	U
BEET SUGAR LIQUORS	E	G	E	E	E	G	E	E	E	
BENZALDEHYDE	E	E	E	U	U	E	U	E	E	E
BENZENE	G	G	G	U	U	U	G	E		E
BENZENESULFONIC ACID, 10%	U	U	U	U	G	U	E			
BENZLY CHLORIDE	U	U	G	U	U	U	E			
BENZOIC ACID	G	U	G	P	P	U	G	E		P
BENZYL ALCOHOL		U	E	U	G	G	E			
BERRYLLIUM	G		G	G	G	G	G	E		
BLEACH LIQUOR				U	G	E	E			
BLEACHING POWDER WET	G		P	U	E	G	G	E		
BLOOD	G		E	G	G	G	G	E		
BORAX	U	P	E	G	U	E	E	E	E	E
BORAX LIQUORS	E	P	G		P	E	E	E	E	
BORDEAUX MIXTURE			E					E		
BORIC ACID	P	U	G	G	G	G	E	E	E	G
BRAKE FLUID	G		G	U	P	G	U	E		
BRINES, SATURATED	G	U	G	E	G	E	E	E	E	
BROMINE, DRY	G	U	U	U	U	U	G	E		
BROMINE, WET	U	U	U	U	U		G	E		

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

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Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
BUNKER OILS (FUEL)	G	G	E	G	G		E	E	E	
BUTADIENE	P	G	E	P	P	P	G	U		
BUTANE	E	G	E	G	G	U	E	E	E	
BUTTER	G	U	E	G	G			E		
BUTTERMILK	U	U	E	E	E	G	E	E	E	
BUTYL ACETATE	G		G	U	U	U	U	E		E
BUTYL ALCOHOL	E	P	E	G	G		G	E		
BUTYL AMINE	G	G	E	U	U		U	E		
BUTYL BUTYRATE				U	U	E	E			
BUTYL CARBITOL	E	P	E	U	U		U	E		
BUTYL CELLOSOLVE	E	P	E	U	U		G	E		
BUTYL STEARATE				G	U	U	E			
BUTYLENE	E	E	E	U	U	U	U	E		
BUTYRIC ACID	P	U	G	P	P	P	P	E	E	U
CALCINE LIQUORS				E		E	E			
CALCIUM ACETATE				G	G	E	U			
CALCIUM BISULFITE	P	U	G	E	E	U	E	E	E	
CALCIUM CARBONATE	P	U	G	E	E	G	E	E	E	
CALCIUM CHLORATE	U		G	G	G	G	G	E		
CALCIUM CHLORIDE	G	P	G	E	E	G	E	E	E	U
CALCIUM HYDROXIDE	P	P	G	E	G	E	E	E	E	
CALCIUM HYPOCHLORITE	U	U	P	P	P		E	E		U
CALCIUM NITRATE			G	G	G	G		E		
CALCIUM PHOSPHATE	P		G	G	G	G	G	E		
CALCIUM SALTS				E	E	E	E			
CALCIUM SILICATE	P		G	G	G	G	G	E		
CALCIUM SULFATE	P	P	G	E	E	G	E	E	E	U
CALCIUM SULFIDE	U	U	G	E	E	E	E			
CALICHE LIQUOR		G	E	G	G			E		
CAMPHOR	P		G	G	G	G	G	E		
CANE SUGAR LIQUORS	G	G	E	G	G	G	G	E		
CARBOLIC ACID	U	U	G	G	G	G	E	E	U	
CARBON BISULFIDE	P	G	G	U	U	U	E	E	E	
CARBON DIOXIDE, DRY	E	E	E	P	G	G	G	E		
CARBON DISULFIDE	U	P	E	U	U		E	E		
CARBON MONOXIDE	E	E	E	G	U	G	G	E		
CARBON TETRACHLORIDE, DRY	P	G	E	U	U	U	G	E	E	
CARBON TETRACHLORIDE, WET	U	U	G	U	U	U	G	E	E	
CARBONATED BEVERAGE	G	U	G	G	G	G	G	G	E	
CARBONATED WATER	G	G	E	E	E	E	E	E	E	
CASEIN	P			G	G	G	G	G	E	
CASTER OIL	E	G	E	E	G	G	E	E	E	
CAUSTIC POTASH			E	G	G			E		
CAUSTIC SODA		G	E	P		G	G	E		
CELLULOSE ACETATE	G		G	U	U	G	U	E		
CELLULUBE	E	P	E	U	U		U	E		
CHINA WOOD OIL	P	P	E	E	G	U	E	E	E	
CHLORACETIC ACID	P	U	U	U	P		P	E		U
CHLORINATED SOLVENTS	P	P	E	U	U	U	P	E	E	
CHLORINATED WATER	U	P	G	E		E	E	E	U	U
CHLORINE, WET	U	U	U	U	U			E		
CHLORINE GAS	P	G	G	P	U	U	G	E	E	
CHLORO BROMO METHANE	G	U	G	U	U		G	E		
CHLOROBENZENE, DRY	G	G	E	U	U	U	E	E	E	E
CHLOROBUTADIENE				U	U	U	E			
CHLOROFORM, DRY	G	G	E	U	U	U	G	E	E	U
CHLOROPHYLL, DRY	G		G	G	G	G	G	E		
CHLOROSULFONIC ACID, DRY	P	G	G	U	U	U	U	E		U
CHLOROSULFONIC ACID, WET	U	U	U	U	U		P	E		
CHLORPHENOL				U	U	U	E			
CHROME ALUM	P	G	E	G	G	G	G	E		
CHROMIC ACID <50%	U	U	P	U	U	P	P	E	U	U
CHROMIC ACID >50%	U	U	P	U	U	P	P	E	U	
CHROMIUM SULFATE	P		G	G	G	G	G	E		
CIDER			E					E		
CITRIC ACID	P	U	G	G	E	G	E	E		P
CITRUS JUICES	G	U	G	E	E		E	E	E	

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

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Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
COCA-COLA SYRUP			E	G	G		G	E		
COCONUT OIL	G	P	G	E	P	E	E	E	E	
COFFEE	E		E	E	E	E	E	G		
COFFEE EXTRACTS, HOT	G	P	E					E		
COKE OVEN GAS	P	G	E	P	U	U	G	E		
COOKING OIL	G	G	E	E	G	U	E	E	E	
COPPER ACETATE	U	U	E	P	P	G	U	E		
COPPER CARBONATE			E					E		
COPPER CHLORIDE	U	U	P	G	G		E	E		U
COPPER CYANIDE	U		E	E	E	G	G	E		E
COPPER NITRATE	U	U	G	E	E	G	E	E	E	U
COPPER SALTS					E	E	E	E		
COPPER SULFATE	U	U	G	E	E	E	E	E	E	P
CORN OIL	G	P	G	E	P	P	E	E	E	
COTTONSEED OIL	G	P	G	E	G	P	G	E	E	
CREOSOTE OIL	G	G	G	P	U	U	E	E	U	
CREOSOLS	U	G	G	U	U	U	U	E		
CRESYLIC ACID	P	P	G	U	U	U	G	E	U	U
CRUDE OIL, SOUR	P	G	E	E	G	U	E	E		
CRUDE OIL, SWEET	G	G	E	E	G		E	E		
CUPRIC NITRATE			E					E		
CUTTING OILS, WATER EMULSIONS	E	G	E	E	G		E	E	E	
CYANIDE PLATING SOLUTION	U		G	G	G	G	G	E		
CYCLOHEXANE	E	E	E	P	U	U	E	E	E	
CYCLOHEXANONE	G		E	U	U			E		
DECANE				E	U	U	E			
DENATURED ALCOHOL				E	E	E	E			
DETERGENTS, SYNTHETIC	G	U	G	G	G	G	E	E		
DEXTRIN	G		G	G	G	G	G	E		
DIACETONE ALCOHOL	E	E	E	U	P			E		
DICHLOROETHANE			P	U	U	U		E		
DICHLOROETHYL ETHER	G		G	U	U	U	U	E		
DIESEL OIL FUELS	E	E	E	E	P	U	E	E		
DIETHYL BENZENE			G	U	U	U		E		
DIETHYL SULFATE	G		G	P	P	P	G	E		
DIETHYLAMINE	G	E	E	G	P	P	U	E		
DIETHYLENE GLYCOL	G	E	E	E	E	E	G	E		
DIMETHLY FORMAMIDE	G		E	G	U	U	U	E		
DIMETHYL PHTHALATE			U	G	G		U	E		
DIOCTYL PHTHALATE	E		E	P	U		P	E		
DIOXANE	G		G	U	U	P	U	E		
DIPENTANE	E		E	G	U	U	G	E		
DISODIUM PHOSPHATE			G	G	G		G	E		
DOW CHEMICAL HD50-4					G	E	U			
DOW CORNING 200, 510, 550				G	E	E	E			
DOWTHERM	E	G	E	U	U	U	E	E	E	
DRILLING MUD	G	G	E	E	P	E	E	E	E	
DRY CLEANING FLUIDS	P	G	E	U	U		G	E	E	
DRYING OIL	P	P	G	E	G			E	E	
ENAMEL	E		E	G	G	U		E		
EPSOM SALTS	G	P	G	E	E		E	E	E	
ETHANE	G	P	G	E	G	U	E	E	E	
ETHANOL	E	U	U	U	E	E	U			
ETHANOLAMINE	U	G	E	G	P		U	E		
ETHERS	G	E	E	U	U	P	P	E	P	
ETHYL ACETATE	P	G	G	U	U	P	U	E	E	E
ETHYL ACRYLATE	G	P	E	U	U	P	U	E		
ETHYL ALCOHOL	G	G	G	E	E		E	E		
ETHYL BENZENE			G	P	U	U		E	E	
ETHYL BROMIDE	E		G	G	G	G	G	E		
ETHYL CHLORIDE, DRY	G	G	E	P	P	P	G	G	E	E
ETHYL CHLORIDE, WET	P	U	G	P	P	G	G	E		
ETHYL ETHER	G		E	U	U	U	U	E		
ETHYL HEXANOL				E	E	E	E			
ETHYL SILICATE	G		G	G	P	G	G	E		
ETHYL SULFATE			G	G	G	P	E	E	E	

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FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
ETHYLENE CHLORIDE			E	U	E		U	E		
ETHYLENE DICHLORIDE	U	U	G	U	U	U	U	E		
ETHYLENE GLYCOL	G	G	G	E	G	E	E	E		
ETHYLENE OXIDE	P	G	G	U	U	U	U	E		
FATTY ACIDS	P	U	E	G	G	U	E	E	E	U
FERRIC CHLORIDE	U	U	U	E	U		E	E		U
FERRIC HYDROXIDE			E	G				E		
FERRIC NITRATE	U	U	P	E	E	E	E	E	E	U
FERRIC SULFATE	U	U	G	E	E	E	E	E	E	U
FERROUS AMMONIUM CITRATE			G					E		
FERROUS CHLORIDE	G	U	U	E	E	E	E	E	E	U
FERROUS SULFATE	G	U	G	E	E	E	E	E	E	U
FERROUS SULFATE, SATURATED	P	P	E	P	P	G	G	E		
FERTILIZER SOLUTIONS	P	G	G	G	G			E	G	
FISH OILS	G	G	E	E	G	U	E	E	G	
FLUE GASES	G		E	P	P	U	P	E	P	
FLUOBORIC ACID			G	E	G			E		U
FLUORINE, DRY	U		U	U					E	
FLUOROSILICIC ACID	G	U	G	P	P	P	P	E		U
FOOD FLUIDS & PASTES	G	P	E	G	E			E		
FORMALDEHYDE, COLD	E	E	E	G	P	G	U	E	E	U
FORMALDEHYDE, HOT	G	U	P	G	G			E	E	U
FORMIC ACID, COLD	G	U	G	U	G		G	E	U	E
FORMIC ACID, HOT	G	U	G	U	E		E	E	U	
FRUIT JUICES	G	U	E	E	E	E	E	E	E	
FUEL OIL	G	G	E	E	P	U	E	E	E	
FUMARIC ACID				G	G			E		
FURFURAL	E	E	E	U	P	P	U	E	E	E
GALIC ACID 5%	P	U	G	G	G	P	E	E	E	
GAS, NATURAL	G	G	E	E	E	U	E	E	E	
GAS, ODORIZERS	E	G	G	G	G		E	E	E	
GAS MFG.	G	G	G	E			E	E	E	
GASOLINE, AVIATION	E	E	E	P	U		E	E	E	
GASOLINE, LEADED	E	E	E	P	U		E	E	E	
GASOLINE, MOTOR	E	E	E	P	U	U	E	E	E	
GASOLINE, REFINED	G	G	E	P	P	U	E	E		
GASOLINE, SOUR	G	G	E	P	U	U	E	E	E	
GASOLINE, UNLEADED	E	E	E	P	U		E	E	E	E
GELATIN	E	U	E	E	E	E	E	E	E	
GLUCOSE	E	G	E	E	E	E	E	E	E	
GLUG	E	G	E	E	G	E	E			
GLYCERINE	G	P	E	P	U	E	G	E	P	E
GLYCOL	G	P	G	G	E	E	E	E	P	
GLYCOL AMINE	U		G	E		U	U			
GRAPHITE	G		G	G	G	G	G	E		
GREASE	P	E	E	E	G	U	E	E		
GULF-FR FLUID, EMULSION				E	G	U	E			
GULF-FR FLUID G				E	E	E	E			
GULF-FR FLUID P				U	U	G	G			
HELIUM GAS	G	E	E	G	G	G	G	E		
HEPTANE	E	G	E	E	G	U	E	E	E	
HEXANE	G	G	E	E	P	U	E	E	E	E
HEXANOL, TERTIARY	E	E	E	E	P	U	G	E		
HEXYL ALCOHOL	E	P	E	U	P		E	E		
HYDRAULIC OIL, PETROLEUM BASE	G	E	E	E	G	U	E	E	E	
HYDRAZINE	U	U	G	P	P	G	U	E		
HYDRIGEN SULFIDE, DRY	P	G	E	P	E	E	E	E		
HYDROCHLORIC ACID, AIR FREE	U	U	U	G	P		E	E		U
HYDROCYANIC ACID	U	U	E	G	G	G	E	E	U	
HYDROFLUORIC ACID	U	U	U		G					U
HYDROFLUOSILICIC ACID	E	U	P	G	G	G	E	E		U
HYDROGEN GAS, COLD	G	G	E	G	G	G	E	E		
HYDROGEN GAS, HOT	G	G	G	G	G		E			
HYDROGEN PEROXIDE, CONCENTRATED	U	U	G	U	U	G	G	E		U
HYDROGEN PEROXIDE, DILUTE	P	U	G	E	G	G	E	E	G	U
HYDROGEN SULFIDE, WET	U	P	G	P	G	G	E	E	E	

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

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Parker Hannifin Corporation
Parker Brass Products Division
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FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
HYDROLUBE				E	G	E	E			
HYPO (SODIUM THIOSULFATE)	P	U	G	E	E	E	E	E	E	
HYPOCHLORITES, SODIUM	U	U	P	P			E	E		
ILLUMINATING GAS	E	E	E	P	P	U	E	E		
INK, NEWSPRINT	P	U	E	E	G	G	E	E	E	
IODINE, WET	U	U	U	G			E	E		
IODOFORM	P	G	E				E	E	E	
ISOPROPYL ACETATE			G	U	U	U		E		
ISOPROPYL ALCOHOL	G	G	G	P	G		E	E		
ISOPROPYL ETHER	E	E	E	P	P	U	U	E		
ISO-BUTANE			G	G	U	U		E		
ISO-OCTANE	E	E	E	E	P	U	E	E	E	
J P-4 FUEL	E	E	E	E	P		E	E	E	
J P-5 FUEL	E	E	E	G	P		E	E	E	
J P-6 FUEL	E	E	E	E	P		E	E	E	
KEROSENE	E	G	E	E	P	U	E	E	E	
KETCHUP	U	U	E	E	E		E	E	E	
KETONES	E	E	E	U	U	U	U	E	E	
LACTIC ACID, CONC. COLD	U	U	E	G	E	G	E	E	U	U
LACTIC ACID, CONC. HOT	U	U	G	P	P	G	G	E	U	U
LACTIC ACID, DILUTE COLD	U	U	E	G	E	G	E	E	U	U
LACTIC ACID, DILUTE HOT	U	U	E	P	U		U	E	U	U
LACTOSE	G		G	G	P	G	G	E		
LAQUER	E	P	E	U	U	U	U	E	E	E
LARD	G	E	E	G	P	P		E		
LARD OIL	G	P	G	E	G	G	E	E	E	
LEAD ACETATE	P	U	G	E	G	G	G	E	E	E
LEAD SULFATE	P		G	G	G	G	G	E		
LECITHIN	P		G	U	U	U	G	E		
LINOLEIC ACID	G	G	E	G	G	U	G	E	E	
LINSEED OIL	G	E	E	E	P	U	E	E	E	
LITHIUM CHLORIDE	G		G	G	G	G	G	E		
LPG	E	G	G	E	G	U	E	E	E	
LUBRICATING OIL	G	E	E	E	G	U	E	E	E	
LUDOX	U		G	G	G	G	G	E		
MAGNESIUM BISULFATE	G	G	E	G	G	G	G	E		
MAGNESIUM BISULFIDE	U		G	G	G	G	G	E		
MAGNESIUM CARBONATE	G		E	G	G	G	G	E		
MAGNESIUM CHLORIDE	G	P	G	E	E	E	E	E	E	E
MAGNESIUM HYDROXIDE	G	G	E	E	E	E	E	E	E	
MAGNESIUM HYDROXIDE HOT	U	G	E	G	G		E	E	E	
MAGNESIUM NITRATE			E	G	E		G	E		E
MAGNESIUM SALTS				E	E	E	E			
MAGNESIUM SULFATE	G	G	E	E	E	E	E	E	E	E
MALEIC ACID	G	G	G	G	G	U	E	E	E	
MALEIC ANHYDRIDE	G		G	U	U	U	G	E		
MALIC ACID	G	U	G	E	G		E	E	E	
MALT BEVERAGES			E	E	E	G	E	E		
MANGANESE CARBONATE			G	G				E		
MANGANESE SULFATE	G		E	G	G	G	G	E		
MAYONNAISE	U	U	E	E	E		E	E	E	
MEAT JUICES	U		E	G	G			E		
MELAMINE RESINS			P	G	G			E		
MERCURIC CHLORIDE	U	U	G	E	G	E	E	E		
MERCURIC CYANIDE	U	U	E	E	G	E	E	E		
MERCUROUS NITRATE	U		E				G	E		
MERCURY	U	E	E	E	E	E	E	E	E	
METHANE	E	G	E	E	G		E	E	E	
METHANOL	E	E		E	E	E	U			
METHANOL	G		E	G	G	U	G	E		
METHYL ACETATE	E	G	E	U	U	G	U	E		
METHYL ACETONE	E	E	E	U	U	E	U	E		
METHYL ALCOHOL	G	G	G	E	G		P	E		E
METHYL BROMIDE 100%	P	G	G	G	U	U	G	E		
METHYL CELLOSOLVE	E	G	E	P	U	G	U	E		
METHYL CELLULOSE			E	U	U			E		
METHYL CHLORIDE	G	G	E	U	U	U	G	E	E	

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

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Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
METHYL ETHER				E	U	U	E			
METHYL ETHYL KETONE	E	E	E	U	U	G	U	E	E	E
METHYL FORMATE	E	P	G	U	G	G	U	E		
METHYL ISOBUTYLE KETONE			E	U	U			E		
METHYLAMINE	U	G	E	U	U	G	U	E		
METHYLENE CHLORIDE	E	G	E	U	U	U	P	E		U
MILK & MILK PRODUCTS	G	U	E	E	E	E	E	E	E	
MIL-F-81912, JP-9	E	E	E	U	U	U	E			
MIL-H-5606	E	E	E	E	G	U	E			
MIL-H-6083	E	E	E	E	E	U	E			
MIL-H-7083	E	E	E	E	G	E	G			
MIL-H-8446	G	E	E	G	E	U	E			
MIL-L-2104 &2104B	E	E	E	E	G	U	E			
MIL-L-7808	U	G	E	G	U	U	E			
MINE WATERS, ACID	P	U	P	E			E	E		
MINERAL OILS	G	G	E	E	G	U	E	E	E	
MINERAL SPIRITS	G	G	G	E	P		E	E	E	
MIXED ACIDS, COLD	U	P	G	U	U	U	G	E	U	
MLO-7277 & MLO-7557	G	E	E	U	U	U	E			
MOBILE HF	E	E	E	E	G	U	E			
MOLASSES, CRUDE	E	E	E	E	E		E	E	E	
MOLASSES, EDIBLE	E	P	E	E	E		E	E	E	
MOLYBDIC ACID			E					E		
MONOCHLORO BENZENE DRY			G	U	U			E		
MONOMETHYL HYDRAZINE				G	G	E				
MORPHOLINE	G		E	U	U	G	U	E		
MURIATIC ACID	U	U	U	G			E	E		
MUSTARD	E	G	E	E	E		E	E	E	
NAPHTHENIC ACID	G	E	G	G	U	U	E			
NAPTHA	G	G	G	G	P	U	E	E	E	
NAPTHALENE	G	G	G	U	U	U	E	E	E	
NATURAL GAS, SOUR	G	G	E	E	E	U	E	E		
NEATSFOOT OIL				E	U	G	E			
NICKEL ACETATE	U	G	E	G	G	E	U			
NICKEL AMMONIUM SULFATE	U	U	E	E	G	G	U	E		
NICKEL CHLORIDE	U	U	G	E	E	G	E	E	E	E
NICKEL NITRATE	U	U	G	E	E	E	E	E	E	
NICKEL SALTS				E	G	E	E			
NICKEL SULFATE	U	U	G	E	E	G	E	E	E	E
NITRIC ACID 100%	U	U	E	U	U	U	G	E	U	U
NITRIC ACID 10%	U	U	E	P	G		E	E	U	U
NITRIC ACID 30%	U	U	E	P	P	G	E	E	U	U
NITRIC ACID 80%	U	U	P	U	U	U	G	E	U	U
NITRIC ACID ANHYDROUS	U	U	E	U	U	U	E	E		
NITROBENZENE	U	G	E	U	U	P	P	E		E
NITROGEN	E	E	E	E	E	G	E	E	E	
NITROUS ACID 10%	U	U	G	P	E		E	E		
NITROUS GASES	U	G	E					E		
NITROUS OXIDE	G	G	G	G	G		E	E		
NOCOTINIC ACID	E	G	E	U	U	U	G	E		
OCTYL ALCOHOL	E	E	E	G	G	U	E			
OILS, ANIMAL	E	E	E	E	G	G	G	E		
OILS, PETROLEUM REFINED	G	E	E	E	G	U	E	E	E	
OILS, PETROLEUM SOUR	P	G	E	G	G	U	E	E		
OILS, WATER MIXTURE	E	G	E	E	G		E	E	E	
OILS & FATS			E	G		U		E		
OLAIC ACID			G	U	U		P	E		
OLEIC ACID	G	P	G	G	P	U	E	E	E	
OLEUM	P	G	G	U	U	U	P	E	U	
OLEUM SPIRITS	U		G	P	U	U	E	E		
OLIVE OIL	P	G	E	E	G	G	E	E	E	
ORTHO-DICHLOROBENZENE	G	G	G	U	U	U	E			
OTHER KETONES	E	E	E	U	U	U	U	E		
OXALIC ACID	G	U	G	P	G	G	E	E	P	U
OXYGEN	E	G	E	G	G	E	E	E	U	
OZONE, DRY	E	E	E	U	U	E	G	E		
OZONE, WET	G	P	E	U	U	G	G	E		

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

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FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
PAINTS & SOLVENTS	E	E	E	U	U	U	G	E		
PALM OIL	G	P	G	G	G	U	E	E	E	
PALMITIC ACID	G	P	G	G	G	G	E	E	E	
PAPER PULP	G		E	G	G	G	G	E		
PARAFFIN	E	G	E	E	P	U	E	E	E	
PARAFORMALDEHYDE	G	G	G	G	G	U		E	E	
PARALDEHYDE			G	G	G	U		E		
PARA-DICHLOROBENZENE	G	E	E	U	U	U	E			
PARKER O LUBE	E	E	E	E	E	U	E			
PEANUT OIL	G	E	E	E	U	U	E			
PENTANE	E	G	E	E	G	U	E	E	E	
PERCHLORETHYLENE, DRY	P	G	E	U	U	U	E	E		
PERCHLORIC ACID-2N	U	U	G	U	G	G	E			
PETROLATUM (PETROLEUM JELLY)	G	P	G	E	G		E	E	E	
PHENOL	G	U	E	U	U	U	G	E	U	E
PHOSPHATE ESTER	U	E	E	U		E		E		
PHOSPHORIC ACID 10%	U	U	U	G	E	G	E	E	U	U
PHOSPHORIC ACID 50% COLD	U	U	G	G	G	G	E	E	U	U
PHOSPHORIC ACID 50% HOT	U	U	U	G	G	G	E	E	U	U
PHOSPHORIC ACID 85% COLD	G	G	E	P	P		G	E	U	U
PHOSPHORIC ACID 85% HOT	P	P	G	P	P			E	U	U
PHOSPHORIC ANHYDRIDE			E	U	U		G	E	G	
PHOSPHOROUS TRICHLORIDE	U	G	E	U	U	G	G	E		
PHTHALIC ACID	G	P	G	P	P		E	E	E	
PHTHALIC ANHYDRIDE	G	P	G	P	P		E	E	E	
PICRIC ACID	P	U	G	P	E	G	G	E		
PINE OIL	G	G	E	E	U	U	E	E	E	
PINEAPPLE JUICE	P	P	E	E	E		E	E	E	
PITCH			E	P	P	U		E		
PLATING SOLUTIONS, CHROME	E	U	E		U	E	E			
PLATING SOLUTIONS, OTHER		E	E	E	U	E	E			
PNEUMATIC SERVICE	E	E	E	E	E	E	E	E		
POLYSULFIDE LIQUOR	U		G	G	G	G	G	E		
POLYVINYL ACETATE	G		G		P	G		E		
POLYVINYL CHLORIDE	G		G		P	G		E		
POTASSIUM ACETATE	G	E	G	G	G	E	U			
POTASSIUM BICARBONATE			E	G				E		E
POTASSIUM BICHROMATE			E	G	G		G	E	G	
POTASSIUM BISULFATE			E	G	G		E	E		
POTASSIUM BISULFITE	P	U	G	E	E	G	E	E	E	
POTASSIUM BROMIDE	P	U	E	E	E	G	E	E	E	P
POTASSIUM CARBONATE	G	G	G	E	E	G	E	E	E	E
POTASSIUM CHLORATE	G	G	G	E	E	G	E	E	E	P
POTASSIUM CHLORIDE	P	P	G	E	E	E	E	E	E	P
POTASSIUM CHROMATE	G		G	G	E	G	G	E		
POTASSIUM CYANIDE	U	G	G	E	E	E	E	E	E	E
POTASSIUM DICHROMATE	U	P	G	E	E	G	E	E	E	U
POTASSIUM DIPHOSPHATE	G	E	E	E			E	E		
POTASSIUM FERRICYANIDE	U	P	E	E	E	G	E	E	E	
POTASSIUM FERROCYANIDE	G	P	G	E	E		E	E	E	
POTASSIUM HYDROXIDEDILUTE COLD	U	E	G	E	G		U	E		E
POTASSIUM HYDROXIDE DILUTE HOT	U	G	G	G	G			E		
POTASSIUM HYDROXIDE TO 70% COLD										
POTASSIUM HYDROXIDE TO 70% HOT	U	E	G	P	G	E		E		
POTASSIUM HYDROXIDE TO 70% HOT	U	E	G	P	G	E		E		
POTASSIUM IODIDE	U	P	G	E	E	G	E	E	E	
POTASSIUM NITRATE	G	G	G	E	E	G	E	E	E	P
POTASSIUM OXALATE			E					E		
POTASSIUM PERMANGANATE	G	G	G	E	E	G	E	E	E	U
POTASSIUM PHOSOHATE	P		G	E	E	E	E	E		
POTASSIUM PHOSPHATE DI-BASIC	G	E	E	E	E	G	E	E	E	
POTASSIUM PHOSPHATE TRI-BASIC		E	G	G	G	G		E		
POTASSIUM SALTS				E	E	E	E			
POTASSIUM SULFATE	G	G	E	E	E	E	E	E	E	P
POTASSIUM SULFIDE	G	G	E	E	G	G	G	E		
POTASSIUM SULFITE	G	G	E	G	G	E	G	E		
PRODUCER GAS	G	G	G	E	G	U	E	E	E	

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

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Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
PROPANE GAS	E	G	G	E	G	U	E	E	E	
PROPYL ACETATE	U	E	E	U	U	G	U			
PROPYL ALCOHOL	E	G	G	E	E		E	E		
PROPYL BROMIDE	G		G	G	G	G	G	E		
PROPYLENE	E	E	E	U	U	U	E			
PROPYLENE GLYCOL	G	G	G	E	E	G	E	E	P	
PYDRAUL	E	P	E	U	U		G	E		
PYRIDINE			G	U	U		U	E		
PYROGARD 42, 43, 53, 55				U	U	E	E			
PYROGARD D				E	G	E	E			
PYROLGALIC ACID	G	G	G	E	E		E	E	E	
QUENCH OIL	G	G	E	E	G		E	E	E	
QUININE, SULFATE, DRY			E					E		
R P-1 FUEL	E	E	E	G	P		E	E	E	
RESINS & ROSINS	E	P	E	P	P		E	E		
RESORCINOL			G					E		
ROAD TAR	E	E	E	G	P	U	E	E	E	
ROOF PITCH	E	E	E	G	P		E	E	E	
ROSIN EMULSION	G	P	E	U	P		G	E		
RUBBER LATEX EMULSIONS	E	G	E				E	E	E	
RUBBER SOLVENTS	E	E	E	U	P		U	E	P	
SALAD OIL	G	P	G	E	E	G	E	E	E	
SALICYLIC ACID	P	U	E	E	E	G	E	E	E	
SALT	G	P	G	E	E		E	E	E	
SALT BRINE	G		G	E	U	G	G	E		
SAUERKRAUT ARINE			G					E		
SEA WATER	P	U	G	E	E	E	E	E	E	
SEWAGE	P	P	G	E	P	G	G	E		
SHELL IRUS 905				E	G	U	E			
SHELLAC	E	E	E	E	E			E		
SILICONE FLUIDS	G		G	G	G		G	E		
SILVER BROMIDE										
SILVER CYANIDE	U		E	G	G		G	E		
SILVER NITRATE	U	U	E	P	P	E	E	E	E	
SILVER PLATING SOL.			E		G			E		
SKYDROL 500	E	G	E	U	U		U	E		
SKYDROL 7000, TYPE 2	U	E	E	U	U	E	G			
SOAP SOLUTIONS	E	E	E	E	G	E	E	E		
SODIUM ACETATE	G	P	G	G	G	G	E	E	E	E
SODIUM ALUMINATE	G	P	E	E	E	G	E	E	E	
SODIUM BENZOATE			G					E		
SODIUM BICARBONATE	G	P	G	E	E	E	E	E	E	E
SODIUM BICHROMATE			G	U				E		
SODIUM BISULFATE 10%	G	U	E	E	E	G	E	E	E	P
SODIUM BISULFITE 10%	G	U	E	E	E	G	E	E	E	P
SODIUM BORATE	G	P	G	E	E	G	E	E	E	
SODIUM BROMIDE 10%	G	P	G	E	E	G	E	E	E	
SODIUM CARBONATE	G	G	E	E	E	G	E	E	E	E
SODIUM CHLORATE	G	P	G	E	E	G	E	E	E	P
SODIUM CHLORIDE	G	P	G	E	E	G	E	E	E	E
SODIUM CHROMATE	P	G	E	E	E	G	E	E	E	
SODIUM CITRATE			G					E		
SODIUM CYANIDE	U	G	E	E	E	G	E	E	E	E
SODIUM FERRICYANIDE			E					E		
SODIUM FLUORIDE	P	U	G	E	E	G	E	E	E	
SODIUM HYDROXIDE 20% COLD	E	E	E	E	E	G	G	E		E
SODIUM HYDROXIDE 20% HOT	E	G	E	G	G	G	P	E		
SODIUM HYDROXIDE 50% COLD	E	E	E	E	E	G	P	E		E
SODIUM HYDROXIDE 50% HOT	E	G	E	G	G		P	E		
SODIUM HYDROXIDE 70% COLD	E	E	E	G	P	G	P	E		
SODIUM HYDROXIDE 70% HOT	G	G	E	U	U	G	P	E		
SODIUM HYPOCHLORITE (BLEACH)	U	U	U				E	E		U
SODIUM HYPOSULFITE			G					E		
SODIUM LACTATE			E					E		
SODIUM METAPHOSPHATE	P	G	G	E	E	G		E		
SODIUM METASILICATE COLD	G	P	E	G	E		G	E		
SODIUM METASILICATE HOT	G	U	E					E		

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

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Parker Hannifin Corporation
Parker Brass Products Division
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FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
SODIUM NITRATE	G	G	E	P	G	G	E	E	E	E
SODIUM NITRITE			G	P	U	E	G	E	G	
SODIUM PERBORATE	G	G	G	P	G	E	E	E	E	
SODIUM PEROXIDE	U	P	G	P	G	E	E	E	E	
SODIUM PHOSPHATE	P	P	G	G	P	E	E	E	G	
SODIUM PHOSPHATE DI-BASIC	P	P	G	E	E	E	E	E	E	
SODIUM PHOSPHATE TRI-BASIC	P	P	G	G	G	E	E	E	E	
SODIUM POLYPHOSPHATE			G	G	G	E		E		
SODIUM SALICYLATE			E					E		
SODIUM SALTS										
SODIUM SILICATE	G	G	G	E	E	G	E	E	E	E
SODIUM SILICATE, HOT	P	P	G			G		E		
SODIUM SULFATE	G	G	E	E	E	E	E	E		E
SODIUM SULFIDE	U	G	G	E	E	G	E	E	E	E
SODIUM SULFITE	P		E	E	E	G	G	E		
SODIUM TETRABORATE			E	E	E	G		E		
SODIUM THIOSULFATE	P	G	G	E	E	E	E	E	E	
SOYBEAN	G	P	E	E	G	G	E	E	E	
STANNIC CHLORIDE	P	U	U	E	E		E	E		
STARCH	G	P	G	E	E	P	E	E	E	
STEAM (212 F)	E	E	E	U	U	G	P	E	U	
STEARIC ACID	P	P	G	E	P	G	E	E	E	
STODDARD SOLVENT	G	E	E	E	G	U	E			
STYRENE	E	E	E	U	U	U	G	E		
SUCROSE SOLUTIONS	E	E	E	E	G	E	E			
SUGAR, SYRUPS & JAM	G		E		G			E		
SUGAR LIQUIDS	E	G	E	E	E	G	E	E	E	
SULFATE, BLACK LIQUOR	P	P	G	P	G	G	P	E	E	
SULFATE, GREEN LIQUOR	P	P	G	P	G		P	E	E	
SULFATE, WHITE LIQUOR	P	P	G	P	G		P	E	E	
SULFUR	U	P	G	U	P	G	G	E	E	
SULFUR, MOLTEN	U	P	G	U	P	G	G	E		
SULFUR CHLORIDES	G	U	U	U	U	P	E	E	E	
SULFUR DIOXIDE, DRY	G	G	E	U	U	E	E	E	E	
SULFUR DIOXIDE, WET	U		E	U	U	G		E		
SULFUR HEXAFLUORIDE	G		E		G			E		
SULFUR TRIOXIDE	G	G	G	U	U		G	E		
SULFUR TRIOXIDE, DRY	G	G	G	U	U	G	E	E		
SULFURIC ACID 0 TO 77%	P	U	P	G	G		E	E	P	U
SULFURIC ACID 100%	P	P	E	U	U	P	G	E	U	U
SULFUROUS ACID	U	U	G	P	P	P	E	E	P	
SUNSAFE	U	E	E	E	G	U	E			
TALL OIL	G	G	G	G	G	U	E	E		
TANNIC ACID	G	P	G	G	G	G	E	E	E	U
TANNING LIQUORS			G	G	U			E		
TAR & TAR OILS	E	E	E	P	U	U	E	E		
TARTARIC ACID	G	U	E	P	G	G	E	E	E	
TERPINEOL				G	U	U	E			
TERTIARY BUTYL ALCOHOL	E	E	E	G	G	G	E			
TETRACHLOROETHANE		G	E	U	U	U	E			
TETRACHLOROETHYLENE	U	G	U	U	U	E				
TETRAETHYL LEAD	G	P	G					E	E	
TITANIUM TETRACHLORIDE	G	E	G	G	U	U	E			
TOLUOL (TOLUENE)	E	E	E	U	U	U	G	E	E	E
TOMATO JUICE	P	P	E	E	E		E	E	E	
TRANSFORMER OIL	G	E	E	E	G		E	E	E	
TRANSMISSION FLUID, TYPE A	E	E	E	E	G	U	E			
TRIBUTYL PHOSPHATE	E	E	E	U	U	G	U	E		
TRICHLORETHYLENE	G	G	G	U	U	U	G	E	E	U
TRICHLOROACETIC ACID	G		U	P	U		U	E		
TRICHLOROETHANE		G	E	U	U	U	E			
TRICRESYL PHOSPHATE		E	G	U	U	E	G			
TRIETHANOLAMINE			G	P	G	G		E		
TRIETHYLAMINE	G		G	G	G			E		
TRISODIUM PHOSPHATE			G	E	E	G	G	E		
TUNG OIL	G	G	E	E	G	U	E	E	E	
TURBINE OIL #15		G	E	G	U	U	E			

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

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Parker Brass Products Division
Otsego, Michigan

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
TURPENTINE	G	G	G	G	U	U	E	E	E	E
UREA	G	P	G	P	G	G	U	E	E	
URIC ACID			E					E		
VARNISH	E	P	E	P	G	U	G	E	E	
VEGETABLE OILS	G	G	E	E	G	U	E	E	E	
VINEGAR	G	U	E	U	U	E	U	E		E
VINYL ACETATE	G		G		G	E		E		
WATER, ACID MINE	U	U	G	G	E	E	U	E		
WATER, DISTILLED	U	U	E	P	G	G	E	E	E	
WATER, FRESH	P	P	E	P	G	G	E	E	E	
WAXES	E	E	E	E	G	P	E	E	E	
WHISKEY & WINES	G	U	E	G	G	E	E	E	E	
XYLENE (XYLOL), DRY	E	G	E	U	U	U	G	E	E	E
ZINC BROMIDE	G		G	G	G	G	G	E		
ZINC CHLORIDE	U	U	U	G	G		E	E		U
ZINC HYDROSULFITE	P	E	E	E	E	E	E	E	E	
ZINC SULFATE	G	U	G	E	E	E	E	E	E	P

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

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Parker Safety Guide for Selecting and Using Hose, Tubing, Fittings and Related Accessories

Parker Publication No. 4400-B.1
Revised: May, 2002

WARNING: Failure or improper selection or improper use of hose, tubing, fittings, assemblies or related accessories ("Products") can cause death, personal injury and property damage. Possible consequences of failure or improper selection or improper use of these Products include but are not limited to:

- Fittings thrown off at high speed.
- High velocity fluid discharge.
- Explosion or burning of the conveyed fluid.
- Electrocution from high voltage electric powerlines.
- Contact with suddenly moving or falling objects that are controlled by the conveyed fluid.
- Injections by high-pressure fluid discharge.
- Dangerously whipping Hose.
- Contact with conveyed fluids that may be hot, cold, toxic or otherwise injurious.
- Sparking or explosion caused by static electricity buildup or other sources of electricity.
- Sparking or explosion while spraying paint or flammable liquids.
- Injuries resulting from inhalation, ingestion or exposure to fluids.

Before selecting or using any of these Products, it is important that you read and follow the instructions below. Only Hose from Parker's Stratoflex Products Division is approved for in flight aerospace applications, and no other Hose can be used for such in flight applications.

1.0 GENERAL INSTRUCTIONS

1.1 Scope: This safety guide provides instructions for selecting and using (including assembling, installing, and maintaining) these Products. For convenience, all rubber and/or thermoplastic products commonly called "hose" or "tubing" are called "Hose" in this safety guide. All assemblies made with Hose are called "Hose Assemblies". All products commonly called "fittings" or "couplings" are called "Fittings". All related accessories (including crimping and swaging machines and tooling) are called "Related Accessories". This safety guide is a supplement to and is to be used with, the specific Parker publications for the specific Hose, Fittings and Related Accessories that are being considered for use.

1.2 Fail-Safe: Hose, and Hose Assemblies and Fittings can and do fail without warning for many reasons. Design all systems and equipment in a fail-safe mode, so that failure of the Hose or Hose Assembly or Fitting will not endanger persons or property.

1.3 Distribution: Provide a copy of this safety guide to each person that is responsible for selecting or using Hose and Fitting products. Do not select or use Parker Hose or Fittings without thoroughly reading and understanding this safety guide as well as the specific Parker publications for the products considered or selected.

1.4 User Responsibility: Due to the wide variety of operating conditions and applications for Hose and Fittings, Parker and its distributors do not represent or warrant that any particular Hose or Fitting is suitable for any specific end use system. This safety guide does not analyze all technical parameters that must be considered in selecting a product. The user, through its own analysis and testing, is solely responsible for:

- Making the final selection of the Hose and Fitting.
- Assuring that the user's requirements are met and that the application presents no health or safety hazards.
- Providing all appropriate health and safety warnings on the equipment on which the Hose and Fittings are used.
- Assuring compliance with all applicable government and industry standards.

1.5 Additional Questions: Call the appropriate Parker technical service department if you have any questions or require any additional information. See the Parker publication for the product being considered or used, or call 1-800-CPARKER, or go to www.parker.com, for telephone numbers of the appropriate technical service department.

2.0 HOSE AND FITTING SELECTION INSTRUCTIONS

2.1 Electrical Conductivity: Certain applications require that the Hose be nonconductive to prevent electrical current flow. Other applications require the Hose and the Fitting and the Hose/Fitting interface to be sufficiently conductive to drain off static electricity. Extreme care must be exercised when selecting Hose and Fittings for these or any other applications in which electrical conductivity or nonconductivity is a factor.

The electrical conductivity or nonconductivity of Hose and Fittings is dependent upon many factors and may be susceptible to change. These factors include but are not limited to the various materials used to make the Hose and the Fittings, Fitting finish (some Fitting finishes are electrically conductive while others are nonconductive), manufacturing methods (including moisture control), how the Fittings contact the Hose, age and amount of deterioration or damage or other changes, moisture content of the Hose at any particular time, and other factors.

The following are considerations for electrically nonconductive and conductive Hose. For other applications consult the individual catalog pages and the appropriate industry or regulatory standards for proper selection.

2.1.1 Electrically Nonconductive Hose: Certain applications require that the Hose be nonconductive to prevent electrical current flow or to maintain electrical isolation. For these applications that require Hose to be electrically nonconductive, including but not limited to applications near high voltage electric lines, only special nonconductive Hose can be used. The manufacturer of the equipment in which the nonconductive Hose is to be used must be consulted to be certain that the Hose and Fittings that are selected are proper for the application. Do not use any Parker Hose or Fitting for any such application requiring nonconductive Hose, including but not limited to applications near high voltage electric lines, unless (i) the application is expressly approved in the Parker technical publication for the product, (ii) the Hose is marked "nonconductive", and (iii) the manufacturer of the equipment on which the Hose is to be used specifically approves the particular Parker Hose and Fitting for such use.

2.1.2 Electrically Conductive Hose: Parker manufacturers special Hose for certain applications that require electrically conductive Hose.

Parker manufactures special Hose for conveying paint in airless paint spraying applications. This Hose is labeled "Electrically Conductive Airless Paint Spray Hose" on its layline and packaging. This Hose must be properly connected to the appropriate Parker Fittings and properly grounded in order to dissipate dangerous static charge buildup, which occurs in all airless paint spraying applications. Do not use any other Hose for airless paint spraying, even if electrically conductive. Use of any other Hose or failure to properly connect the Hose can cause a fire or an explosion resulting in death, personal injury, and property damage.

Parker manufactures a special Hose for certain compressed natural gas ("CNG") applications where static electricity buildup may occur. Parker CNG Hose assemblies comply with AGA Requirements 1-93, "Hoses for Natural Gas Vehicles and Fuel Dispensers". This Hose is labeled "Electrically Conductive for CNG Use" on its layline and packaging. This Hose must be properly connected to the appropriate Parker Fittings and properly grounded in order to dissipate dangerous static charge buildup, which occurs in, for example, high velocity CNG dispensing or transfer. Do not use any other Hose for CNG applications where static charge buildup may occur, even if electrically conductive. Use of other Hoses in CNG applications or failure to properly connect or ground this Hose can cause a fire or an explosion resulting in death, personal injury, and property damage. Care must also be taken to protect against CNG permeation through the Hose wall. See section 2.6, Permeation, for more information. Parker CNG Hose is intended for dispenser and vehicle use at a maximum temperature of 180°F. Parker CNG Hose should not be used in confined spaces or unventilated areas or areas exceeding 180°F. Final assemblies must be tested for leaks. CNG Hose Assemblies should be tested on a monthly basis for conductivity per AGA 1-93.

Parker manufacturers special Hose for aerospace in flight applications. Aerospace in flight applications employing Hose to transmit fuel, lubricating fluids and hydraulic fluids require a special Hose with a conductive inner tube. This Hose for in flight applications is available only from Parker's Stratoflex Products Division. Do not use any other Parker Hose for in flight applications, even if electrically conductive. Use of other Hoses for in flight applications or failure to properly connect or ground this Hose can cause a fire or an explosion resulting in death, personal injury , and property damage. These Hose assemblies for in flight applications must meet all applicable aerospace industry, aircraft engine, and aircraft requirements.

2.2 Pressure: Hose selection must be made so that the published maximum recommended working pressure of the Hose is equal to or greater than the maximum system pressure. Surge pressures or peak transient pressures in the system must be below the published maximum working pressure for the Hose. Surge pressures and peak pressures can usually only be determined by sensitive electrical instrumentation that measures and indicates pressures at millisecond intervals. Mechanical pressure gauges indicate only average pressures and cannot be used to determine surge pressures or peak transient pressures. Published burst pressure ratings for Hose is for manufacturing test purposes only and is no indication that the Product can be used in applications at the burst pressure or otherwise above the published maximum recommended working pressure.

2.3 Suction: Hoses used for suction applications must be selected to insure that the Hose will withstand the vacuum and pressure of the system. Improperly selected Hose may collapse in suction application.

2.4 Temperature: Be certain that fluid and ambient temperatures, both steady and transient, do not exceed the limitations of the Hose. Temperatures below and above the recommended limit can degrade Hose to a point where a failure may occur and release fluid. Properly insulate and protect the Hose Assembly when routing near hot objects (e.g. manifolds). Do not use any Hose in any application where failure of the Hose could result in the conveyed fluids (or vapors or mist from the conveyed fluids) contacting any open flame, molten metal, or other potential fire ignition source that could cause burning or explosion of the conveyed fluids or vapors.

2.5 Fluid Compatibility: Hose Assembly selection must assure compatibility of the Hose tube, cover, reinforcement, and Fittings with the fluid media used. See the fluid compatibility chart in the Parker publication for the product being considered or used. This information is offered only as a guide. Actual service life can only be determined by the end user by testing under all extreme conditions and other analysis.

Hose that is chemically compatible with a particular fluid must be assembled using Fittings and adapters containing likewise compatible seals.

2.6 Permeation: Permeation (that is, seepage through the Hose) will occur from inside the Hose to outside when Hose is used with gases, liquid and gas fuels, and refrigerants (including but not limited to such materials as helium, diesel fuel, gasoline, natural gas, or LPG). This permeation may result in high concentrations of vapors which are potentially flammable, explosive, or toxic, and in loss of fluid. Dangerous explosions, fires, and other hazards can result when using the wrong Hose for such applications. The system designer must take into account the fact that this permeation will take place and must not use Hose if this permeation could be hazardous. The system designer must take into account all legal, government, insurance, or any other special regulations which govern the use of fuels and refrigerants. Never use a Hose even though the fluid compatibility is acceptable without considering the potential hazardous effects that can result from permeation through the Hose Assembly.

Permeation of moisture from outside the Hose to inside the Hose will also occur in Hose assemblies, regardless of internal pressure. If this moisture permeation would have detrimental effects (particularly, but not limited to refrigeration and air conditioning systems), incorporation of sufficient drying capacity in the system or other appropriate system safeguards should be selected and used.

2.7 Size: Transmission of power by means of pressurized fluid varies with pressure and rate of flow. The size of the components must be adequate to keep pressure losses to a minimum and avoid damage due to heat generation or excessive fluid velocity.

2.8 Routing: Attention must be given to optimum routing to minimize inherent problems (kinking

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or flow restriction due to Hose collapse, twisting of the Hose, proximity to hot objects or heat sources).

2.9 Environment: Care must be taken to insure that the Hose and Fittings are either compatible with or protected from the environment (that is, surrounding conditions) to which they are exposed. Environmental conditions including but not limited to ultraviolet radiation, sunlight, heat, ozone, moisture, water, salt water, chemicals, and air pollutants can cause degradation and premature failure.

2.10 Mechanical Loads: External forces can significantly reduce Hose life or cause failure. Mechanical loads which must be considered include excessive flexing, twist, kinking, tensile or side loads, bend radius, and vibration. Use of swivel type Fittings or adapters may be required to insure no twist is put into the Hose. Unusual applications may require special testing prior to Hose selection.

2.11 Physical Damage: Care must be taken to protect Hose from wear, snagging, kinking, bending smaller that minimum bend radius, and cutting, any of which can cause premature Hose failure. Any Hose that has been kinked or bent to a radius smaller than the minimum bend radius, and any Hose that has been cut or is cracked or is otherwise damaged, should be removed and discarded.

2.12 Proper End Fitting: See instructions 3.2 through 3.5. These recommendations may be substantiated by testing to industry standards such as SAE J517 for hydraulic applications, or MIL-A-5070, AS1339, or AS3517 for Hoses from Parker's Stratoflex Products Division for aerospace applications.

2.13 Length: When establishing a proper Hose length, motion absorption, Hose length changes due to pressure, and Hose and machine tolerances and movement must be considered.

2.14 Specifications and Standards: When selecting Hose and Fittings, government, industry, and Parker specifications and recommendations must be reviewed and followed as applicable.

2.15 Hose Cleanliness: Hose components may vary in cleanliness levels. Care must be taken to insure that the Hose Assembly selected has an adequate level of cleanliness for the application.

2.16 Fire Resistant Fluids: Some fire resistant fluids that are to be conveyed by Hose require use of the same type of Hose as used with petroleum base fluids. Some such fluids require a special Hose, while a few fluids will not work with any Hose at all. See instructions 2.5 and 1.5. The wrong Hose may fail after a very short service. In addition, all liquids but pure water may burn fiercely under certain conditions, and even pure water leakage may be hazardous.

2.17 Radiant Heat: Hose can be heated to destruction without contact by such nearby items as hot manifolds or molten metal. The same heat source may then initiate a fire. This can occur despite the presence of cool air around the Hose.

2.18 Welding or Brazing: When using a torch or arc-welder in close proximity to hydraulic lines, the hydraulic lines should be removed or shielded with appropriate fire resistant materials. Flame or weld spatter could burn through the Hose and possibly ignite escaping fluid resulting in a catastrophic failure. Heating of plated parts, including Hose Fittings and adapters, above 450°F (232°C) such as during welding, brazing, or soldering may emit deadly gases.

2.19 Atomic Radiation: Atomic radiation affects all materials used in Hose assemblies. Since the long-term effects may be unknown, do not expose Hose assemblies to atomic radiation.

2.20 Aerospace Applications: The only Hose and Fittings that may be used for in flight aerospace applications are tHose available from Parker's Stratoflex Products Division. Do not use any other Hose or Fittings for in flight applications. Do not use any Hose or Fittings from Parker's Stratoflex Products Division with any other Hose or Fittings, unless expressly approved in writing by the engineering manager or chief engineer of Stratoflex Products Division and verified by the user's own testing and inspection to aerospace industry standards.

2.21 Unlocking Couplings: Ball locking couplings or other couplings with disconnect sleeves can unintentionally disconnect if they are dragged over obstructions or if the sleeve is bumped or moved enough to cause disconnect. Threaded couplings should be considered where there is a potential for accidential uncoupling.

3.0 HOSE AND FITTING ASSEMBLY AND INSTALLATION INSTRUCTIONS

3.1 Component Inspection: Prior to assembly, a careful examination of the Hose and Fittings must be performed. All components must be checked for correct style, size, catalog number, and length. The Hose must be examined for cleanliness, obstructions, blisters, cover looseness, kinks, cracks, cuts or any other visible defects. Inspect the Fitting and sealing surfaces for burrs, nicks, corrosion or other imperfections. Do NOT use any component that displays any signs of nonconformance.

3.2 Hose and Fitting Assembly: Do not assemble a Parker Fitting on a Parker Hose that is not specifically listed by Parker for that Fitting, unless authorized in writing by the engineering manager or chief engineer of the appropriate Parker division. Do not assemble a Parker Fitting on another manufacturers Hose or a Parker Hose on another manufacturers Fitting unless (i) the engineering manager or chief engineer of the appropriate Parker division approves the Assembly in writing or that combination is expressly approved in the appropriate Parker literature for the specific Parker product, and (ii) the user verifies the Assembly and the application through analysis and testing. For Parker Hose that does not specify a Parker Fitting, the user is solely responsible for the selection of the proper Fitting and Hose Assembly procedures. See instruction 1.4.
The Parker published instructions must be followed for assembling the Fittings on the Hose. These instructions are provided in the Parker Fitting catalog for the specific Parker Fitting being used, or by calling 1-800-CPARKER, or at www.parker.com.

3.3 Related Accessories: Do not crimp or swage any Parker Hose or Fitting with anything but the listed swage or crimp machine and dies in accordance with Parker published instructions. Do not crimp or swage another manufacturers Fitting with a Parker crimp or swage die unless authorized in writing by the engineering manager of chief engineer of the appropriate Parker division.

3.4 Parts: Do not use any Parker Fitting part (including but not limited to socket, shell, nipple, or insert) except with the correct Parker mating parts, in accordance with Parker published instructions, unless authorized in writing by the engineering manager or chief engineer of the appropriate Parker division.

3.5 Reusable/Permanent: Do not reuse any field attachable (reusable) Hose Fitting that has blown or pulled off a Hose. Do not reuse a Parker permanent Hose Fitting (crimped or swaged) or any part thereof. Complete Hose Assemblies may only be reused after proper inspection under section 4.0. Do not assemble Fittings to any previously used hydraulic Hose that was in service, for use in a fluid power application.

3.6 Pre-Installation Inspection: Prior to installation, a careful examination of the Hose Assembly must be performed. Inspect the Hose Assembly for any damage or defects. Do NOT use any Hose Assembly that displays any signs of nonconformance.

3.7 Minimum Bend Radius: Installation of a Hose at less than the minimum listed bend radius may significantly reduce the Hose life. Particular attention must be given to preclude sharp bending at the Hose to Fitting juncture. Any bending during installation at less than the minimum bend radius must be avoided. If any Hose is kinked during installation, the Hose must be discarded.

3.8 Twist Angle and Orientation: Hose Assembly installation must be such that relative motion of machine components does not produce twisting.

3.9 Securement: In many applications, it may be necessary to restrain, protect, or guide the Hose to protect it from damage by unnecessary flexing, pressure surges, and contact with other mechanical components. Care must be taken to insure such restraints do not introduce additional stress or wear points.

3.10 Proper Connection of Ports: Proper physical installation of the Hose Assembly requires a correctly installed port connection insuring that no twist or torque is transferred to the Hose when the Fittings are being tightened or otherwise during use.

3.11 External Damage: Proper installation is not complete without insuring that tensile loads, side loads, kinking, flattening, potential abrasion, thread damage, or damage to sealing surfaces are corrected or eliminated. See instruction 2.10.

3.12 System Checkout: All air entrapment must be eliminated and the system pressurized to the maximum system pressure (at or below the Hose maximum working pressure) and checked for proper function and freedom from leaks. Personnel must stay out of potential hazardous areas while testing and using.

3.13 Routing: The Hose Assembly should be routed in such a manner so if a failure does occur, the escaping media will not cause personal injury or property damage. In addition, if fluid media comes in contact with hot surfaces, open flame, or sparks, a fire or explosion may occur. See section 2.4.

4.0 HOSE AND FITTING MAINTENANCE AND REPLACEMENT INSTRUCTIONS

4.1 Even with proper selection and installation, Hose life may be significantly reduced without a continuing maintenance program. The severity of the application, risk potential from a possible Hose failure, and experience with any Hose failures in the application or in similar applications should determine the frequency of the inspection and the replacement for the Products so that Products are replaced before any failure occurs. A maintenance program must be established and followed by the user and, at minimum, must include instructions 4.2 through 4.7.

4.2 Visual Inspection Hose/Fitting: Any of the following conditions require immediate shut down and replacement of the Hose Assembly:
- Fitting slippage on Hose,
- Damaged, cracked, cut or abraded cover (any reinforcement exposed);
- Hard, stiff, heat cracked, or charred Hose;
- Cracked, damaged, or badly corroded Fittings;
- Leaks at Fitting or in Hose;
- Kinked, crushed, flattened or twisted Hose; and
- Blistered, soft, degraded, or loose cover.

4.3 Visual Inspection All Other: The following items must be tightened, repaired, corrected or replaced as required:
- Leaking port conditions;
- Excess dirt buildup;
- Worn clamps, guards or shields; and
- System fluid level, fluid type, and any air entrapment.

4.4 Functional Test: Operate the system at maximum operating pressure and check for possible malfunctions and leaks. Personnel must avoid potential hazardous areas while testing and using the system. See section 2.2.

4.5 Replacement Intervals: Hose assemblies and elastomeric seals used on Hose Fittings and adapters will eventually age, harden, wear and deteriorate under thermal cycling and compression set. Hose Assemblies and elastomeric seals should be inspected and replaced at specific replacement intervals, based on previous service life, government or industry recommendations, or when failures could result in unacceptable downtime, damage, or injury risk. See section 1.2.

4.6 Hose Inspection and Failure: Hydraulic power is accomplished by utilizing high-pressure fluids to transfer energy and do work. Hoses, Fittings, and Hose Assemblies all contribute to this by transmitting fluids at high pressures. Fluids under pressure can be dangerous and potentially lethal and, therefore, extreme caution must be exercised when working with fluids under pressure and handling the Hoses transporting the fluids. From time to time, Hose Assemblies will fail if they are not replaced at proper time intervals. Usually these failures are the result of some form of misapplication, abuse, wear, or failure to perform proper maintenance. When Hoses fail, generally the high-pressure fluids inside escape in a stream which may or may not be visible to the user. Under no circumstances should the user attempt to locate the leak by "feeling" with their hands or any other part of their body. High-pressure fluids can and will penetrate the skin and cause severe tissue damage and possibly loss of limb. Even seemingly minor hydraulic fluid injection injuries must be treated immediately by a physician with knowledge of the tissue damaging properties of hydraulic fluid.
If a Hose failure occurs, immediately shut down the equipment and leave the area until pressure has been completely released from the Hose Assembly. Simply shutting down the hydraulic pump may or may not eliminate the pressure in the Hose Assembly. Many times check valves, etc., are employed in a system and can cause pressure to remain in a Hose Assembly even when pumps or equipment are not operating. Tiny holes in the Hose, commonly known as pinholes, can eject small, dangerously powerful but hard to see streams of hydraulic fluid. It may take several minutes or even hours for the pressure to be relieved so that the Hose Assembly may be examined safely.
Once the pressure has been reduced to zero, the Hose Assembly may be taken off the equipment and examined. It must always be replaced if a failure has occurred. Never attempt to patch or repair a Hose Assembly that has failed. Consult the nearest Parker distributor or the appropriate Parker division for Hose Assembly replacement information.
Never touch or examine a failed Hose Assembly unless it is obvious that the Hose no longer contains fluid under pressure. The high-pressure fluid is extremely dangerous and can cause serious and potentially fatal injury.

4.7 Elastomeric seals: Elastomeric seals will eventually age, harden, wear and deteriorate under thermal cycling and compression set. Elastomeric seals should be inspected and replaced.

4.8 Refrigerant gases: Special care should be taken when working with refrigeration systems. Sudden escape of refrigerant gases can cause blindness if the escaping gases contact the eye and can cause freezing or other severe injuries if it contacts any other portion of the body.

4.9 Compressed natural gas (CNG): Parker CNG Hose Assemblies should be tested after installation and before use, and at least on a monthly basis per AGA 1-93 Section 4.2 "Visual Inspection Hose/Fitting". The recommended procedure is to pressurize the Hose and check for leaks and to visually inspect the Hose for damage.
Caution: Matches, candles, open flame or other sources of ignition shall not be used for Hose inspection. Leak check solutions should be rinsed off after use.

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1. Terms and Conditions of Sale: All descriptions, quotations, proposals, offers, acknowledgments, acceptances and sales of Seller's products are subject to and shall be governed exclusively by the terms and conditions stated herein. Buyer's acceptance of any offer to sell is limited to these terms and conditions. Any terms of conditions in addition to, or inconsistent with those stated herein, proposed by Buyer in any acceptance of an offer by Seller, are hereby objected to. No such additional, different or inconsistent terms and conditions shall become part of the contract between Buyer and Seller unless expressly accepted in writing by Seller. Seller's acceptance of any offer to purchase by Buyer is expressly conditional upon Buyer's assent to all the terms and conditions stated herein, including any terms in addition to, or inconsistent with those contained in Buyer's offer. Acceptance of Seller's products shall in all events constitute such assent.

2. Payment: Payment shall be made by Buyer net 30 days from the date of shipment of the items purchased hereunder. Parker reserves the right to charge interest on all past due amounts. Any claims by Buyer for omissions or shortages in a shipment shall be waived unless the Seller receives notice, thereof within 30 days after Buyer's receipt of the shipment.

3. Delivery: Unless otherwise provided on the face hereof, delivery shall be made F.O.B. Seller's plant. Regardless of the method of delivery, however, risk of loss shall pass to Buyer upon Seller's delivery to a carrier. Any delivery dates shown are approximate only and Seller shall have no liability for any delays in delivery.

4. Warranty: Seller warrants that the items sold hereunder shall be free from defects in material or workmanship for a period of 365 days from the date of shipment to Buyer, or 2,000 hours of use, whichever expires first. THIS WARRANTY COMPRISES THE SOLE AND ENTIRE WARRANTY PERTAINING TO ITEMS PROVIDED HEREUNDER. SELLER MAKES NO OTHER WARRANTY, GUARANTEE, OR REPRESENTATION OF ANY KIND WHATSOEVER. ALL OTHER WARRANTIES, INCLUDING BUT NOT LIMITED TO, MERCHANTABILITY AND FITNESS FOR PURPOSE, WHETHER EXPRESS, IMPLIED, OR ARISING BY OPERATION OF LAW, TRADE USAGE, OR COURSE OF DEALING ARE HEREBY DISCLAIMED.

NOTWITHSTANDING THE FOREGOING, THERE ARE NO WARRANTIES WHATSOEVER ON ITEMS BUILT OR ACQUIRED WHOLLY OR PARTIALLY, TO BUYER'S DESIGNS OR SPECIFICATIONS.

5. Limitation Of Remedy: SELLER'S LIABILITY ARISING FROM OR IN ANY WAY CONNECTED WITH THE ITEMS SOLD OR THIS CONTRACT SHALL BE LIMITED EXCLUSIVELY TO REPAIR OR REPLACEMENT OF THE ITEMS SOLD OR REFUND OF THE PURCHASE PRICE PAID BY BUYER, AT SELLER'S SOLE OPTION. IN NO EVENT SHALL SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY KIND OR NATURE WHATSOEVER, INCLUDING BUT NOT LIMITED TO LOST PROFITS ARISING FROM OR IN ANY WAY CONNECTED WITH THIS AGREEMENT OR ITEMS SOLD HEREUNDER, WHETHER ALLEGED TO ARISE FROM BREACH OF CONTRACT, EXPRESS OR IMPLIED WARRANTY, OR IN TORT, INCLUDING WITHOUT LIMITATION, NEGLIGENCE, FAILURE TO WARN OR STRICT LIABILITY.

6. Changes, Reschedules and Cancellations: Buyer may request to modify the designs or specifications for the items sold hereunder as well as the quantities and delivery dates thereof, or may request to cancel all or part of this order, however, no such requested modification or cancellation shall become part of the contract between Buyer and Seller unless accepted by Seller in a written amendment to this Agreement. Acceptance of any such requested modification or cancellation shall be at Seller's discretion, and shall be upon such terms and conditions as Seller may require.

7. Special Tooling: A tooling charge may be imposed for any special tooling, including without limitation, dies, fixtures, molds and patterns, acquired to manufacture items sold pursuant to this contract. Such special tooling shall be and remain Seller's property notwithstanding payment of any charges by Buyer. In no event will Buyer acquire any interest in apparatus belonging to Seller which is utilized in the manufacture of the items sold hereunder, even if such apparatus has been specially converted or adapted for such manufacture and notwithstanding any charges paid by Buyer. Unless otherwise agreed, Seller shall have the right to alter, discard or otherwise dispose of any special tooling or other property in its sole discretion at any time.

8. Buyer's Property: Any designs, tools, patterns, materials, drawings, confidential information or equipment furnished by Buyer or any other items which become Buyer's property, may be considered obsolete and may be destroyed by Seller after two (2) consecutive years have elapsed without Buyer placing an order for the items which are manufactured using such property. Seller shall not be responsible for any loss or damage to such property while it is in Seller's possession or control.

9. Taxes: Unless otherwise indicated on the face hereof, all prices and charges are exclusive of excise, sales, use, property, occupational or like taxes which may be imposed by any taxing authority upon the manufacture, sale or delivery of the items sold hereunder. If any such taxes must by paid by Seller of if Seller is liable for the collection of such tax, the amount thereof shall be in addition to the amounts for the items sold. Buyer agrees to pay all such taxes or to reimburse Seller therefore upon receipt of its invoice. If Buyer claims exemption from any sales, use or other tax imposed by any taxing authority, Buyer shall save Seller harmless from and against any such tax, together with any interest or penalties thereon which may be assessed if the items are held to be taxable.

10. Indemnity for Infringement of Intellectual Property Rights: Seller shall have no liability for infringement of any patents, trademarks, copyrights, trade dress, trade secrets or similar rights except as provided in this Part 10. Seller will defend and indemnify Buyer against allegations of infringement of U.S. patents, U.S. trademarks, copyrights, trade dress and trade secrets (hereinafter 'Intellectual Property Rights'). Seller will defend at its expense and will pay the cost of any settlement or damages awarded in an action brought against Buyer based on an allegation that an item sold pursuant to this contract infringes in the Intellectual Property Rights of a third party. Seller's obligation to defend and indemnify Buyer is contingent on Buyer notifying Seller within ten (10) days after Buyer becomes aware of such allegations of infringement, and Seller having sole control over the defense of any allegations or actions including all negotiations for settlement or compromise. If an item sold hereunder is subject to a claim that it infringes the Intellectual Property Rights of a third party, Seller may, at its sole expense and option, procure for Buyer the right to continue using said item, replace or modify said item so as to make it noninfringing, or offer to accept return of said item and return the purchase price less a reasonable allowance for depreciation. Notwithstanding the foregoing, Seller shall have no liability for claims of infringement based on information provided by Buyer, or directed to items delivered hereunder for which the designs are specified in whole or part by Buyer, or infringements resulting from the modification, combination or use in a system of any item sold hereunder. The foregoing provisions of the Part 10 shall constitute Seller's sole and exclusive liability and Buyer's sole and exclusive remedy for infringement of Intellectual Property Rights.

If a claim is based on information provided by Buyer or if the design for an item delivered hereunder is specified in whole or in part by Buyer, Buyer shall defend and indemnify Seller for all costs, expenses or judgments resulting from any claim that such item infringes any patent, trademark, copyright, trade dress, trade secret or any similar right.

11. Force Majeure: Seller does not assume the risk of and shall not be liable for delay for failure to perform any of Seller's obligations by reason of circumstances beyond the reasonable control of Seller (hereinafter 'Events of Force Majeure'). Events of Force Majeure shall include without limitation, accidents, acts of God, strikes or labor disputes, acts, laws, rules or regulations of any government or government agency, fires, floods, delays or failures in delivery of carriers or suppliers, shortages of materials and any other cause beyond Seller's control.

12. Entire Agreement/Governing Law: The terms and conditions set forth herein, together with any amendments, modifications and any different terms or conditions expressly accepted by Seller in writing, shall constitute the entire Agreement concerning the items sold, and there are no oral or other representations or agreements which pertain thereto. This Agreement shall be governed in all respects by the law of the State of Ohio. No actions arising out of the sale of the items sold hereunder or this Agreement may be brought by either party more than two (2) years after the cause of action accrues.

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Parker Hannifin Corporation
Parker Brass Products Division
Otsego, Michigan

Aerospace

Key Markets
- Commercial transports
- Military aircraft
- Regional transports
- Aircraft engines
- Business and general aviation

Key Products
- Flight control systems and components
- Hydraulic systems and components
- Fuel systems and components
- Pneumatic systems and components
- Inert oxygen generating systems
- Fluid metering, delivery and atomization devices
- Wheels and brakes
- Couplings, fittings, hoses and tubes

Automation

Key Markets
- Factory automation
- Transportation and automotive
- Life sciences and medical
- Machine tools
- Semiconductor and electronics

Key Products
- Pneumatic motion and control
- Air preparation
- Vacuum controls and sensors
- Electromechanical stepper and servo motors, drives, and controls
- Human machine interface
- Electric actuators, gantry robots, slides and linear motors
- Structural extrusion

Climate & Industrial Controls

Key Markets
- Refrigeration and air conditioning
- Transportation/mobile
- Process
- Industrial machinery
- Medical/life sciences
- Fuel cells
- Precision cooling

Key Products
- Pressure regulators
- Check, ball and service valves
- Value-added systems
- Thermostatic and expansion valves
- Electronic controllers
- Contaminant controls
- Heating/air conditioning hose
- Gerotors

Filtration

Key Markets
- Industrial machinery
- Process
- Mobile
- Marine
- Oil & gas
- Power generation and energy
- Transportation
- Food and beverage

Key Products
- Hydraulic, lubrication and coolant filters
- Process, chemical, water and microfiltration filters
- Compressed air and gas purification filters
- Condition monitoring
- Analytical gas generators
- Nitrogen, hydrogen and zero air generators
- Engine air, fuel, oil filtration and systems

Fluid Connectors

Key Markets
- Construction machinery
- Agriculture
- Transportation
- Mobile
- Industrial machinery
- Oil & gas

Key Products
- Rubber and thermoplastic hose
- Industrial hose
- Tube fittings and adaptors
- Tubing and plastic fittings
- Brass fittings and valves
- Hose couplings
- Quick disconnects

Hydraulics

Key Markets
- Construction machinery
- Agriculture
- Industrial machinery
- Oil & gas
- Truck hydraulics
- Power generation and energy

Key Products
- Hydraulic cylinders and accumulators
- Hydraulic valves and controls
- Hydraulic motors and pumps
- Power take-offs
- Hydraulic systems

Instrumentation

Key Markets
- Power generation
- Oil & gas
- Petrochemical
- Microelectronics
- Biopharmaceutical

Key Products
- Medium/high pressure fittings and valves
- Instrumentation fittings, valves, manifolds and regulators
- High purity fittings, valves and regulators
- Fluoropolymer fittings, valves, pumps and regulators
- Analytical systems

Seal

Key Markets
- Transportation
- Energy, oil & gas
- Semiconductor
- Aerospace
- Fluid power
- Life sciences
- Telecommunications

Key Products
- Elastomeric O-rings
- Homogeneous and inserted elastomeric shapes and diaphragms
- Metal and plastic retained composite seals
- Polymeric and plastic dynamic seals
- Rubber and plastic boots/bellows
- Extruded and precision-cut/fabricated elastomeric seals
- Thermoplastic engineered seals

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(319) 393-1224 FAX

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(216) 896-4022 FAX
Service Center
Toledo, OH
(419) 878-7000
(419) 878-7001 FAX
(419) 878-7420 FAX (FCG Kit Operations)
Service Center
Louisville, KY
(502) 937-1322
(502) 937-4180 FAX

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(269) 692-6634 FAX

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(763) 544-3418 FAX
Service Center
Minneapolis, MN
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(952) 469-5729 FAX

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