



Brass Fittings and Valves

*Catalog 3501E USA
January 2004*



The World Standard

GOODYEAR
RUBBER PRODUCTS INC.

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WARNING

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

Before selecting or using any Parker hose or fittings or related accessories, it is important that you read and follow Parker Safety Guide for Selecting and Using Hose, Fittings, and Related Accessories (Parker Publication No. 4400-B.1).

This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system, in the current catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements are met.

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.

Offer of Sale

The items described in this document are hereby offered for sale by Parker Hannifin Corporation, its subsidiaries or its authorized distributors. This offer and its acceptance are governed by the provisions stated on the separate page of this document entitled "Offer of Sale".

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Parker Hannifin Corporation
Fluid Connectors Group

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Compression Style, Pneumatic

Compression, Compress-Align, Metrulok, Poly-Tite, Hi-Duty

A**Push-to-Connect, Pneumatic**

Microlok, Prestolok/Prestolok II, Metric Prestolok 1, Metric Prestolok 2

B**Integrated Fittings**

Right Angle Flow Controls, Metric Right Angle Flow Controls, In-Line Flow Controls, Metric In-Line Flow Controls, Slow Start, Metric Slow Start, Blocking, Metric Blocking, Metric Combination, Metric Pressure Sensor, Metric Pressure Reducing, Metric Silencer

C**Flare Fittings**

45° Flare, Inverted Flare, Access Valves

D**Adapters**

Pipe, Metric Adapters, ISO Port Adapters, Garden Hose

E**Barbed Fittings**

Dubl-Barb, Hose Barbs

F**Compression Style, Transportation**

NTA, Transmission Fittings, Air Brake, Air Brake Hose Ends, Vibra-Lok

G**Push-to-Connect, Transportation**

Prestomatic, PTC, Metric Prestomatic

H**Cartridges & Manifolds**

SAE Cartridges, Encapsulated Cartridges, Tank Cartridges, Manifolds

I**Valves**

Ball Valves, Plug Valves, Needle Valves, Truck Valves, Lanyard Valve, Shutoff Cocks, Drain Cocks

J**Tube Fabricating Equipment**

Cutters, Benders, Flaring Tools, Tool Kits, Swaging Tools, Ratchet Wrenches, Deburring Tools, Sawing Vise, Brazing Torch

K**Accessories**

Bins, Bags, Copper Tubing

L**General Technical****M****Numerical Index**

Numerical Index, Parker Safety Guide, Offer of Sale

N

Compression Style Pneumatic	A1
Compression Fittings	A5
Compress-Align® Fittings	A13
Parker Metru-Lok™ Fittings	A20
Poly-Tite Fittings	A30
Hi-Duty Flareless Tube Fittings	A42

Push to Connect Pneumatic	B1
Microlok Fittings	B5
Prestolok/Prestolok II Fittings	B12
Parker Prestolok Metric Push-In Fittings	B23
Parker Prestolok 2 Metric Push-In Fittings	B34

Integrated Fittings	C1
Right Angle Flow Control Valves	C4
Metric Right Angle Flow Control Valves	C8
Slow Start Flow Control Valves	C14
Metric Slow Start Flow Control Valves	C15
Flow Control Blocking Valves	C17
Metric Flow Control Blocking Valves	C19
In-Line Flow Control Valves	C21
Metric In-Line Flow Control Valves	C23
Metric Combination Valves	C25
Metric Pressure Sensor Valves	C26
Metric Pressure Reducing Valves	C28
Metric Silencer and Flow Control Valves	C30
Non-Return Valves	C31

Flare Fittings	D1
SAE 45° Flared Fittings	D4
Inverted Flared Fittings	D14
Access Valves	D18

Adapters	E1
Pipe Fittings	E4
Parker Brass Metric Adapters	E12
ISO Port Adapters	E17
Garden Hose Fittings	E20

Barbed Fittings	F1
Dubl-Barb® Fittings	F3
Hose Barb Fittings	F9

Compression Style Transportation	G1
Air Brake-NTA® Fittings	G4
Transmission Fittings	G11
Air Brake-AB Fittings	G13
Air Brake Hose Ends	G18
Vibra-Lok Fittings	G22

Push to Connect Transportation	H1
Prestomatic Air Brake Push-In Fittings	H4
PTC Composite Push-In Air Brake Fitting	H13
Metric Prestomatic Air Brake Push-In Fittings	H17

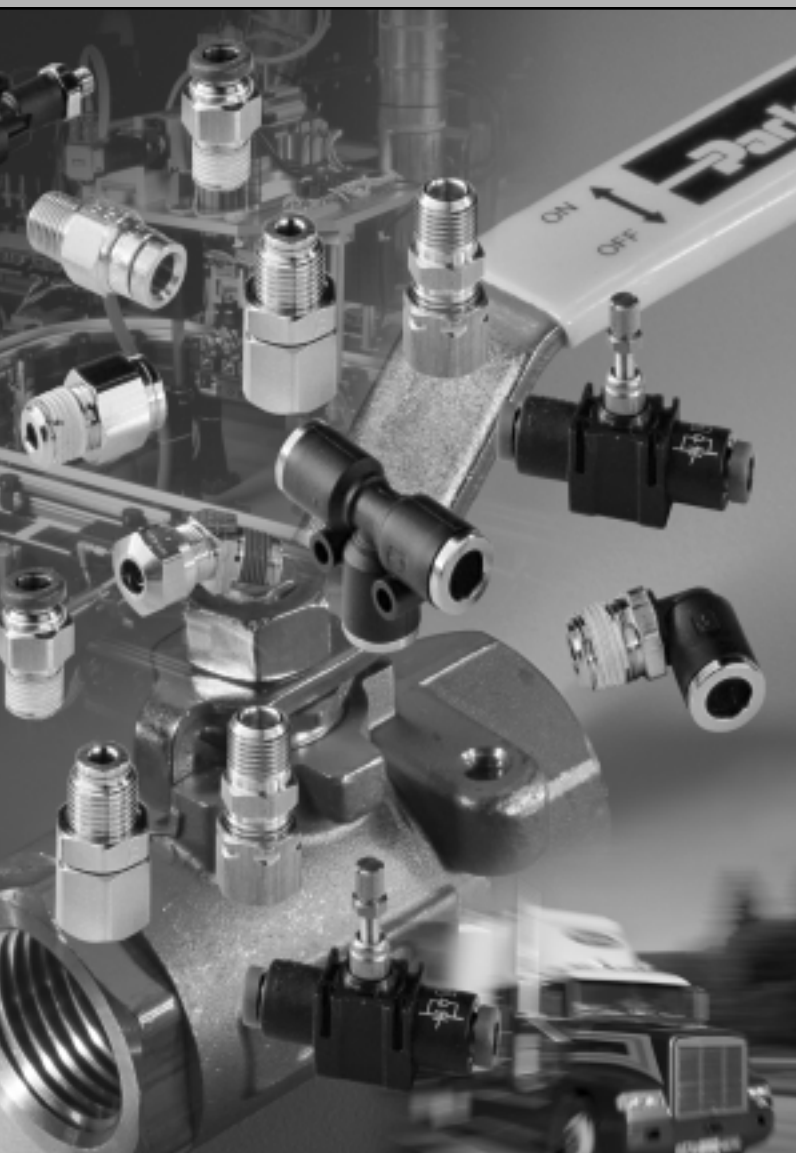
Cartridges & Manifolds	I1
Prestomatic SAE Encapsulated Cartridges	I3
Presto Encapsulated Cartridges	I5
Prestomatic Removable Tank Cartridges	I9
Brass Manifold	I11
Presto Manifold	I12

Valves J1	Tube Fabricating Equipment K1
Brass Ball Valves Series 500 J4	Tube Cutters K3
Male/Female Ball Valves Series 501 J8	Benders K5
Brass Panel Mount Ball Valves Series 502 J11	Flaring Tools K7
UL Ball Valves Series 500/501 PUL J14	Tubing Tool Kits K10
Female/Female Straight Thread Brass Ball Valve Series 506 J17	Swagging Tools K11
Solder End Ball Valves Series 509 J19	Wrenches K12
Male/Female Straight Thread Ball Valves Series 510 J21	Testing and Service Tools K12
Brass Ball Valves Series 520 J24	Deburring Tools K14
Brass Ball Valves Series 533 3-Way Diversion / Series 540 4-Way Diversion J26	Brazing Equipment K14
90° Ball Valves Series 590/591 J28	
Brass Hose Barb Ball Valves Series 500HB J30	Accessories L1
Brass Ball Valves Series 600 Six Port Diversion .. J31	
Carbon Steel Ball Valves Series 500CS/502CS... J33	General Technical M1
Carbon Steel Ball Valves Series 506CS J37	Manufacturing Techniques M2
High Pressure Carbon Steel Ball Valves Series 500HP/506HP/507HP J39	Tubing Compatibility Chart M3
Stainless Steel Ball Valves Series 501SS J43	Tube Line Fabrication Guide for Leak Free Systems M3
Stainless Steel Ball Valves Series 502SS J45	Thread Specifications M5
Stainless Steel Swing-Out Ball Valves Series 504SS J48	Flaring Instructions M6
Female/Female Straight Thread Stainless Steel Ball Valves Series 506SS J50	Thread Designations and Standards for Threads Used in Fluid Connectors M7
Rotary Actuator Ball Valves Series ACT J52	Straight Thread Size Comparison Chart M8
Parker Metric Ball Valves Series BVGC J57	S.A.E. Part Index M9
Parker Metric Ball Valves Series BVGL J59	SAE Standards M9
Parker Metric Ball Valves Series BVGPLOCK J61	U.L. Listed Fittings M10
Parker Metric Ball Valves Series MBVG J64	Flow Curves M11
Micro Ball Valve Series 708 / 709 J66	Metric Fitting Nomenclature M14
Replacement Componentry J68	Flare and Thread Profiles M15
Series STX J69	Pressure Conversions M16
Series STX-SS J70	English/Metric Conversions M17
Mini Ball Valves Series 200/608/609 J71	Fluid Compatibility Guide M18
Plug Valves Series PV J73	
Needle Valves, Truck Valves, Lanyard Valve J75	Numerical Index N1
Drain Cocks/Ground Plug Shutoff J81	Offer of Sale N12

Notes



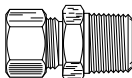
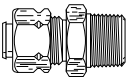
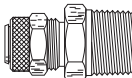
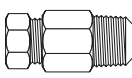
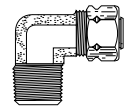
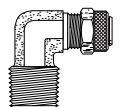
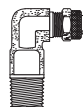
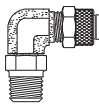
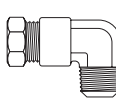
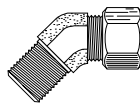
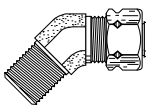
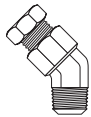
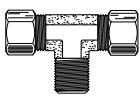
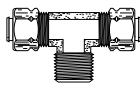
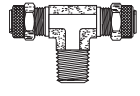
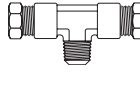
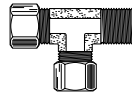
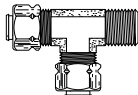
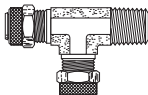
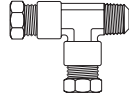
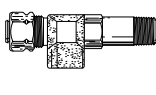
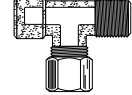
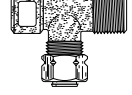
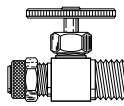
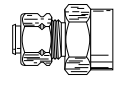
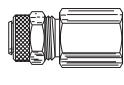
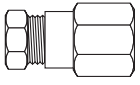
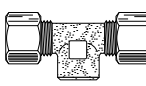
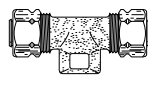
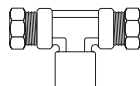
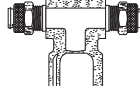
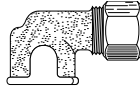
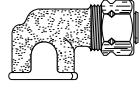
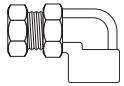
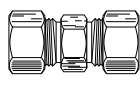
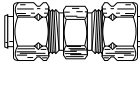
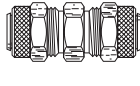
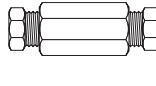
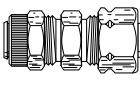
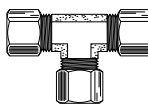
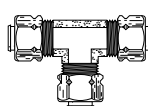
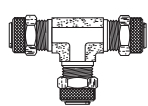
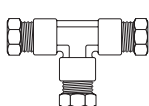
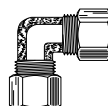
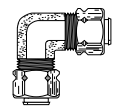
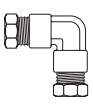
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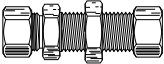
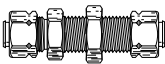
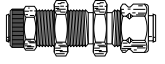
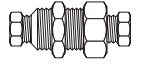
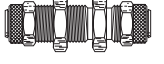
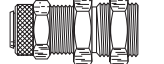
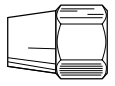
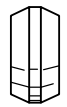
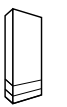
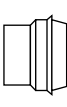
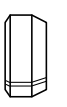
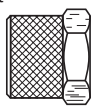
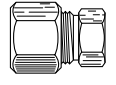
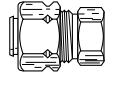
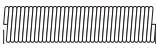
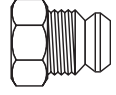
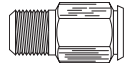
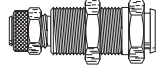
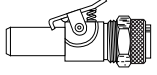
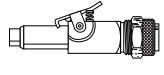
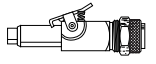
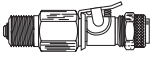
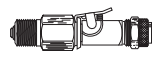
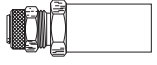


Compression Fittings	A5
Compress-Align® Fittings	A13
Parker Metru-Lok™ Fittings	A20
Poly-Tite Fittings	A30
Hi-Duty Flareless Tube Fittings	A42

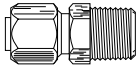
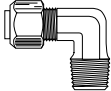
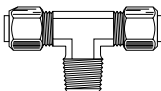
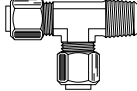
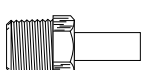
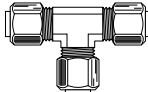
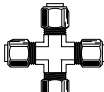
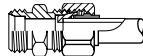
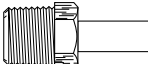
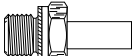
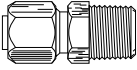
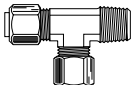
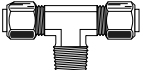
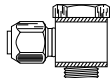
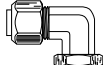
The World Standard

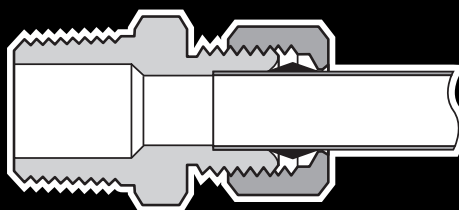
A

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
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	
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

Bulkhead Unions	62CBH Bulkhead Union  Page A7	62CABH Bulkhead Union  Page A14	62PCABH Bulkhead Union  Page A15	62HDBH Bulkhead Union  Page A43	62PBH Bulkhead Union  Page A32	62PTBH Bulkhead Union  Page A33
	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
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	394P & 394PSS Single Shutoff  Page A36	394PD & 394PDSS Double Shutoff  Page A36
	398P & 398PSS Single Shutoff  Page A37	398PD & 398PDSS Double Shutoff  Page A38	Tube Stubs	97P Tube End Reducer  Page A34		

A

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



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. Not recommended for application using gaseous media.

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

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

Order

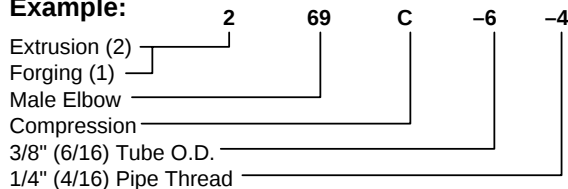
By part number and name.

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.

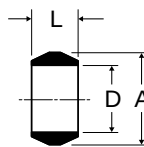
Pricing

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.

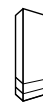
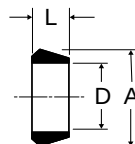
A**Sleeve 60C**

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**

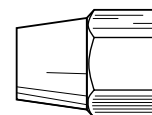
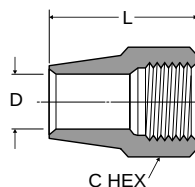
Ref. SAE 060110

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

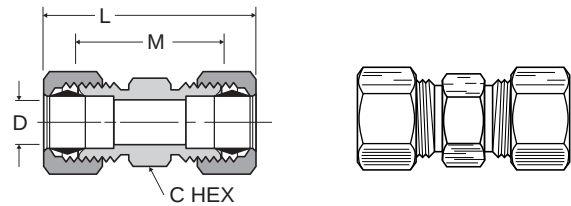
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
61CL-4	1/4	7/16-24	1/2	.255	.75
61CL-5	5/16	1/2-24	9/16	.318	.84
61CL-6	3/8	9/16-24	5/8	.382	.97
61CL-8	1/2	11/16-20	13/16	.507	1.06
61CL-10	5/8	13/16-18	15/16	.632	1.19
61CL-12	3/4	1-18	1-3/16	.758	1.38



Union 62C

Ref. SAE 060101 BA

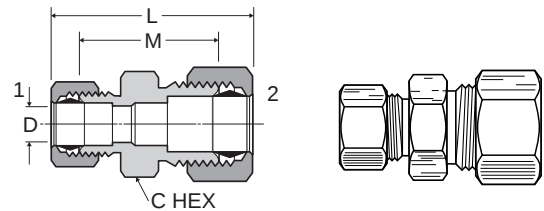
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
62C-2	1/8	5/16-24	5/16	1.05	.64	.094
62C-3	3/16	3/8-24	3/8	1.21	.72	.125
62C-4	1/4	7/16-24	7/16	1.33	.79	.188
62C-5	5/16	1/2-24	1/2	1.39	.85	.250
62C-6	3/8	9/16-24	9/16	1.52	.97	.312
62C-7	7/16	5/8-24	5/8	1.70	1.02	.312
62C-8	1/2	11/16-20	11/16	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

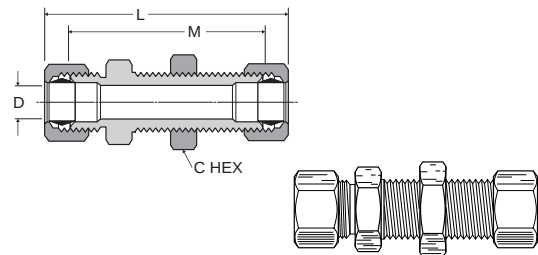
Ref. SAE 060101 BA

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



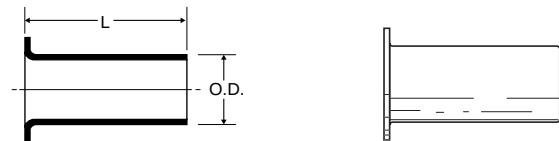
Brass Insert 63PT

(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

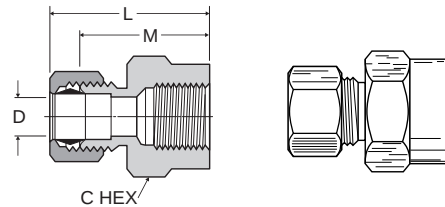
Derlin Sleeve 60PT and Brass Insert 63PT converts standard compression fittings for use with industrial grades of thermoplastic tubing.



A**Female Connector 66C**

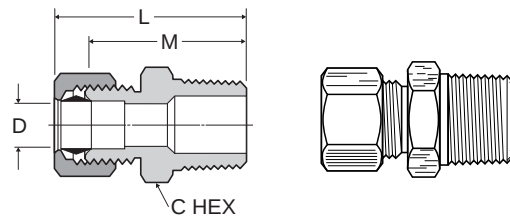
Ref. SAE 060103 BA

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

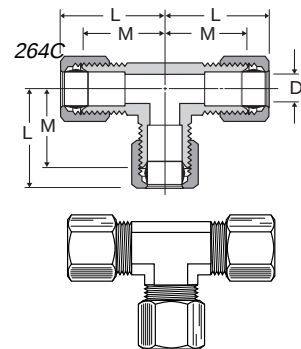
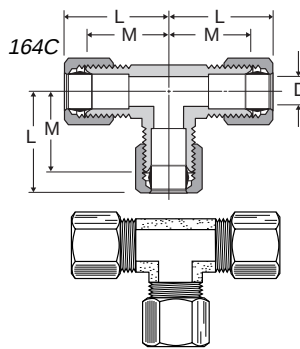
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
68C-2-1	1/8	1/16	5/16-24	11/32	.99	.78	.095
68C-2-2	1/8	1/8	5/16-24	7/16	.97	.77	.094
68C-3-1	3/16	1/16	3/8-24	3/8	1.08	.84	.125
68C-3-2	3/16	1/8	3/8-24	7/16	1.08	.84	.125
68C-3-4	3/16	1/4	3/8-24	9/16	1.27	1.03	.125
68C-4-2	1/4	1/8	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	1.62	1.22	.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



Union Tee 164C-264C

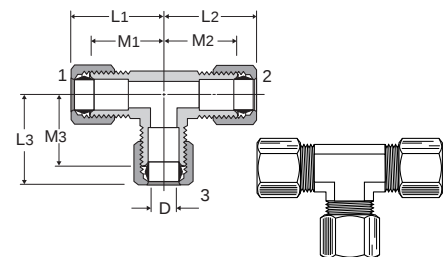
Ref. SAE 060401 BA

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	1 1/16-20	1.34	.93	.406
164C-10	5/8	1 3/16-18	1.54	1.08	.500
164C-12	3/4	1.00-18	1.65	1.17	.560

**Union Tee 164C-264C Combination Sizes**

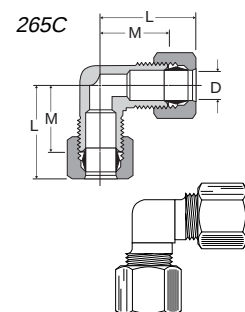
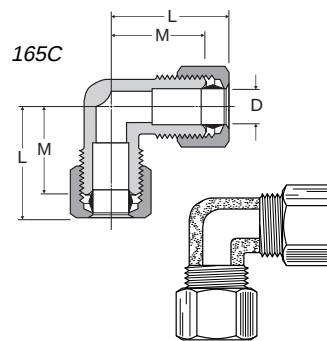
Ref. SAE 060401 BA

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

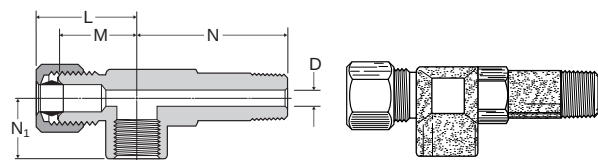
**Union Elbow 165C-265C**

Ref. SAE 060201 BA

PART NO.	TUBE SIZE	PIPE 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	1 1/16-20	1.34	.93	.406
165C-10	5/8	1 3/16-18	1.48	1.05	.500
165C-12	3/4	1-18	1.65	1.17	.560

**Compression Gauge Tee 168C**

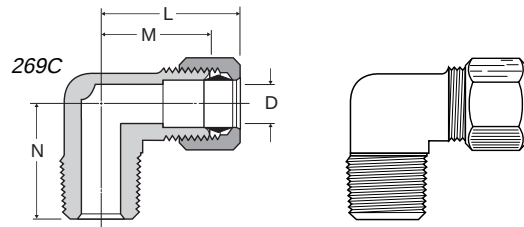
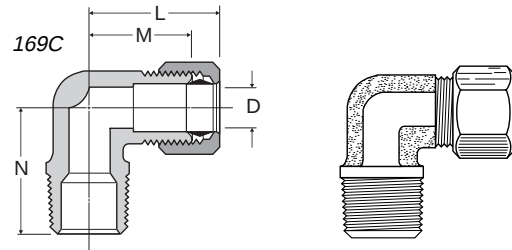
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	N1	FLOW DIA. D
168C-4-2	1/4	1/8	7/16-24	.96	.72	1.41	.56	.188



A**Male Elbow 169C-269C**

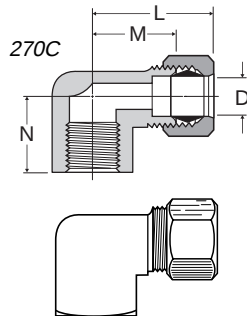
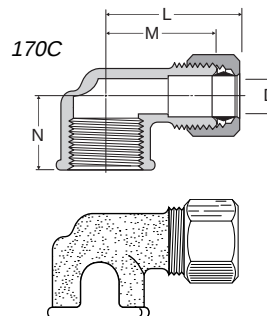
Ref. SAE 060202 BA

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**

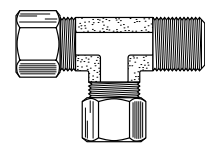
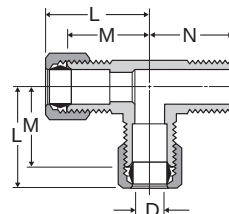
Ref. SAE 060203 BA

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

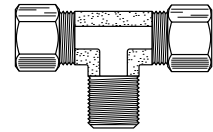
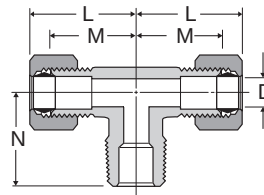
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
171C-2-2	1/8	1/8	5/16-24	.82	.61	.71	.094
171C-3-2	3/16	1/8	3/8-24	.86	.61	.71	.125
171C-4-2	1/4	1/8	7/16-24	.90	.64	.75	.188
171C-4-4	1/4	1/4	7/16-24	.93	.69	.92	.188
171C-6-4	3/8	1/4	9/16-24	1.09	.81	1.03	.312



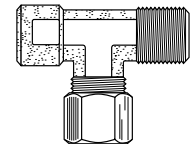
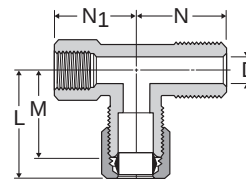
Male Branch Tee 172C

Ref. SAE 060425 BA

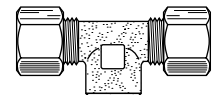
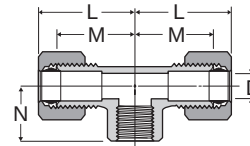
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
172C-2-2	1/8	1/8	5/16-24	.82	.61	.71	.094
172C-3-2	3/16	1/8	3/8-24	.86	.61	.71	.125
172C-4-2	1/4	1/8	7/16-24	.86	.61	.74	.188
172C-4-4	1/4	1/4	7/16-24	.93	.69	.92	.188
172C-6-2	3/8	1/8	9/16-24	1.03	.75	.75	.234
172C-6-4	3/8	1/4	9/16-24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

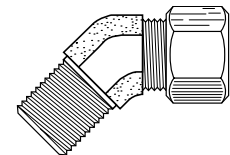
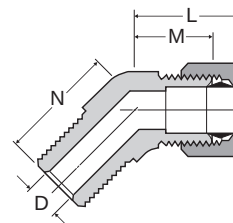
**Female Branch Tee 177C**

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

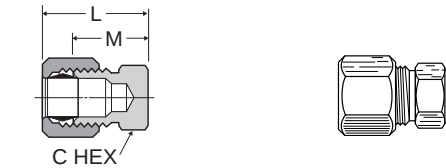
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
179C-4-2	1/4	1/8	7/16-24	.90	.66	.56	.188
179C-4-4	1/4	1/4	7/16-24	.80	.56	.84	.188
179C-6-2	3/8	1/8	9/16-24	.90	.63	.65	.234
179C-6-4	3/8	1/4	9/16-24	.90	.63	.84	.312
179C-6-6	3/8	3/8	9/16-24	.97	.75	.95	.312
179C-8-6	1/2	3/8	11/16-24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



A

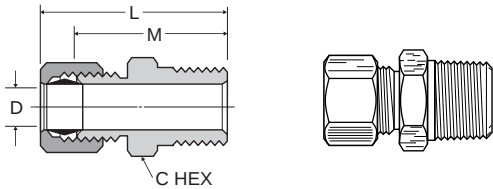
Seal Plug 639C

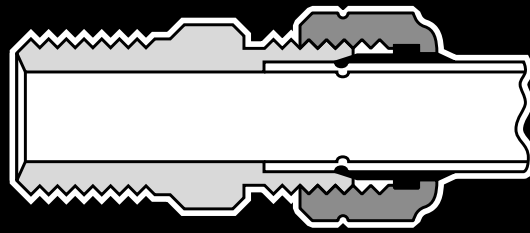
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M
639C-4	1/4	7/16-24	7/16	.74	.50



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





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.

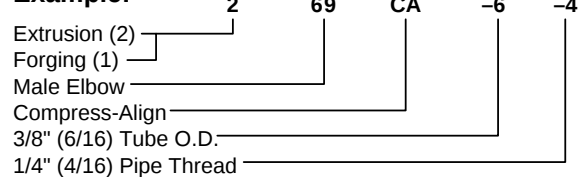
Order

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:



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

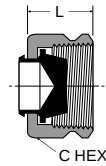
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

Remake Instructions

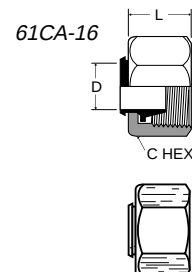
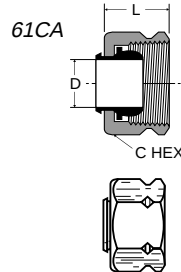
Tighten to original make-up position plus 1/16 turn to reseal sleeve. Approximately 8 remakes are possible using this reassembly method.

A**Plug 59CA**

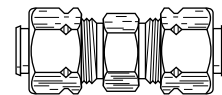
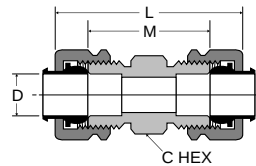
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L
59CA-4	1/4	7/16-24	1/2	.40
59CA-6	3/8	9/16-24	5/8	.45
59CA-8	1/2	11/16-20	13/16	.50

**Nut and Sleeve Assembly 61CA**

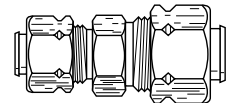
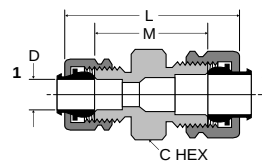
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
61CA-2	1/8	5/16-24	3/8	.130	.36
61CA-3	3/16	3/8-24	7/16	.194	.38
61CA-4	1/4	7/16-24	1/2	.255	.40
61CA-5	5/16	1/2-24	9/16	.318	.42
61CA-6	3/8	9/16-24	5/8	.382	.45
61CA-8	1/2	11/16-20	13/16	.507	.50
61CA-10	5/8	13/16-18	15/16	.632	.53
61CA-12	3/4	1-18	1-3/16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

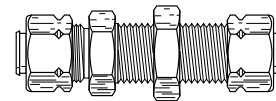
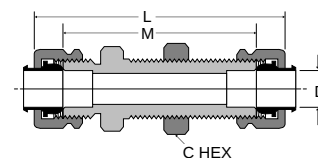
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
62CA-2	1/8	5/16-24	5/16	1.12	.64	.094
62CA-3	3/16	3/8-24	3/8	1.19	.72	.125
62CA-4	1/4	7/16-24	7/16	1.26	.79	.188
62CA-5	5/16	1/2-24	1/2	1.32	.85	.250
62CA-6	3/8	9/16-24	9/16	1.42	.97	.312
62CA-8	1/2	11/16-20	11/16	1.53	1.08	.406
62CA-10	5/8	13/16-18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

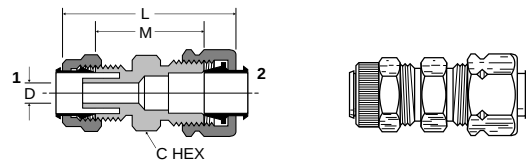
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M	BULKHEAD HOLE DIA.	FLOW DIA. D
62CABH-4	1/4	7/16-24	9/16	2.22	1.75	7/16	.188
62CABH-6	3/8	9/16-24	11/16	2.32	1.88	9/16	.312



Union 62PCA

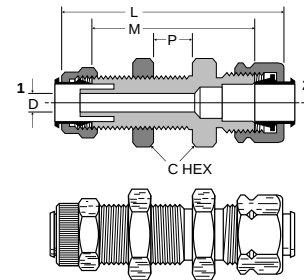
(Poly-Tite to Compress-Align)

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**

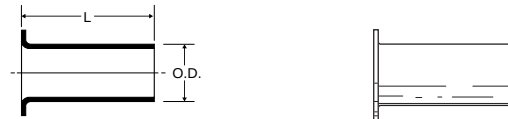
(Poly-Tite to Compress-Align)

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

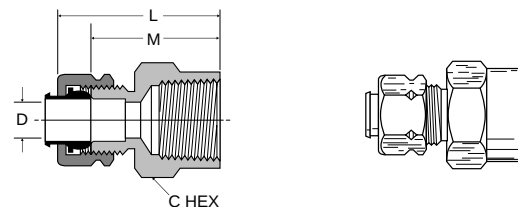
**Brass Insert 63PT**

(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

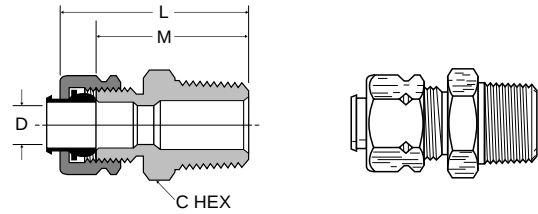
**Female Connector 66CA**

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

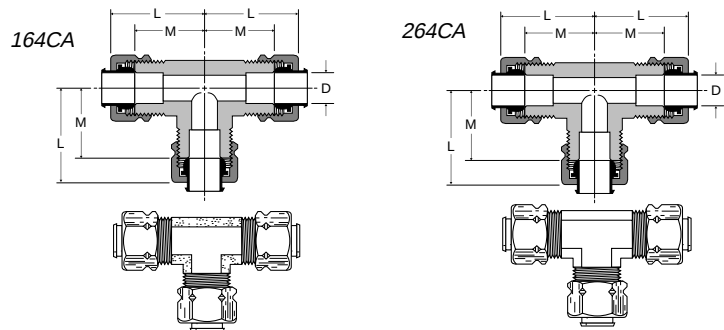


A**Male Connector 68CA**

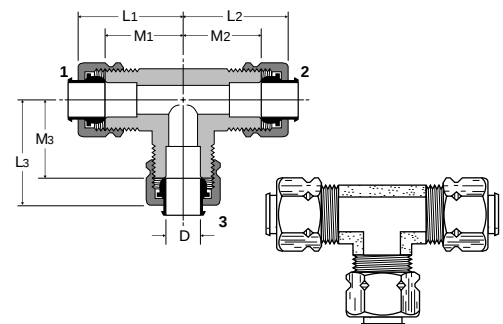
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
68CA-2-1	1/8	1/16	5/16-24	11/32	1.02	.78	.095
68CA-2-2	1/8	1/8	5/16-24	7/16	1.01	.77	.094
68CA-3-1	3/16	1/16	3/8-24	3/8	1.07	.84	.125
68CA-3-2	3/16	1/8	3/8-24	7/16	1.07	.84	.125
68CA-3-4	3/16	1/4	3/8-24	9/16	1.26	1.03	.125
68CA-4-2	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

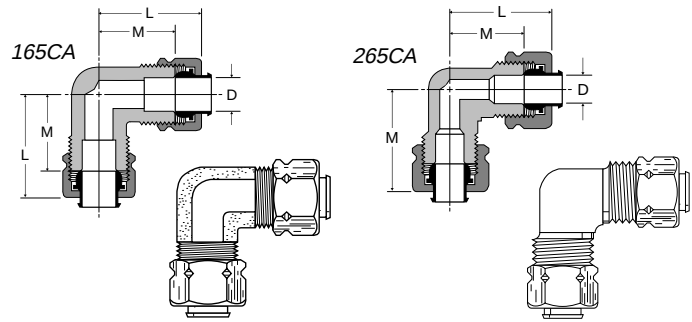
**Union Tee 164CA combination sizes**

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

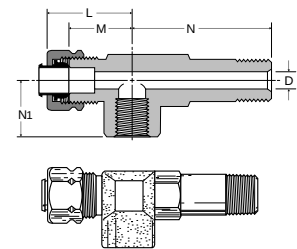


Union Elbow 165CA-265CA

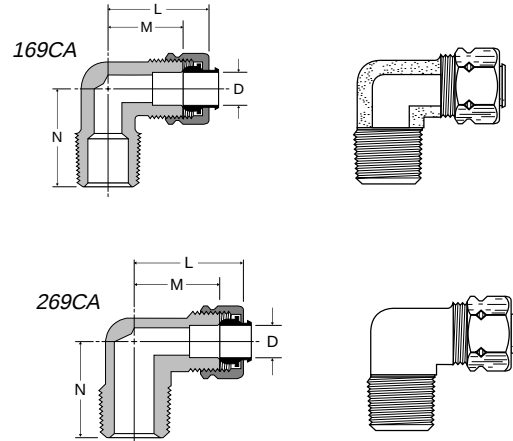
PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
165CA-2	1/8	5/16-24	.84	.61	.094
165CA-3	3/16	3/8-24	.84	.61	.125
165CA-4	1/4	7/16-24	.84	.61	.188
265CA-4	1/4	7/16-24	.84	.60	.188
165CA-5	5/16	1/2-24	.94	.71	.250
165CA-6	3/8	9/16-24	.96	.74	.312
165CA-8	1/2	1 1/16-20	1.15	.93	.406
165CA-10	5/8	1 3/16-18	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

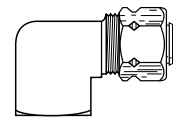
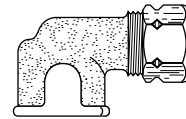
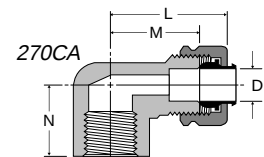
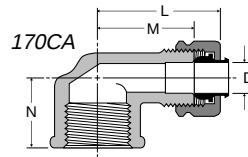
**Male Elbow 169CA-269CA**

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	1 1/16-20	1.17	.94	1.00	.312
169CA-8-6	1/2	3/8	1 1/16-20	1.15	.93	1.11	.406
169CA-8-8	1/2	1/2	1 1/16-20	1.23	1.00	1.37	.406
169CA-10-6	5/8	3/8	1 3/16-18	1.30	1.06	1.15	.406
169CA-10-8	5/8	1/2	1 3/16-18	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

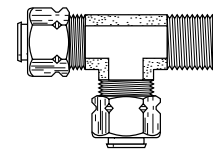
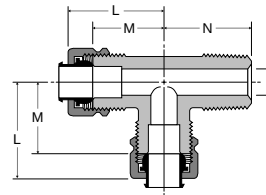


A**Female Elbow 170CA-270CA**

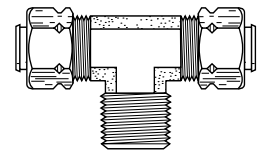
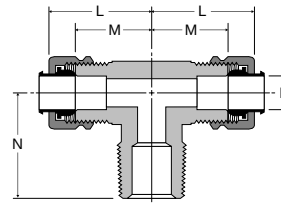
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
170CA-2-2	1/8	1/8	5/16-24	.93	.69	.56	.094
170CA-3-2	3/16	1/8	3/8-24	.98	.69	.56	.125
170CA-4-2	1/4	1/8	7/16-24	.98	.69	.56	.188
270CA-4-2	1/4	1/8	7/16-24	.91	.67	.54	.188
170CA-4-4	1/4	1/4	7/16-24	1.02	.78	.70	.188
170CA-6-4	3/8	1/4	9/16-24	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**

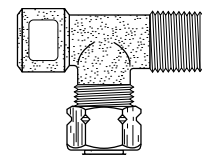
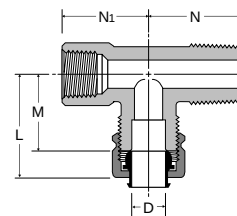
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
171CA-2-2	1/8	1/8	5/16-24	.84	.61	.71	.094
171CA-3-2	3/16	1/8	3/8-24	.83	.61	.71	.125
171CA-4-2	1/4	1/8	7/16-24	.88	.64	.75	.188
171CA-4-4	1/4	1/4	7/16-24	.93	.69	.92	.188
171CA-6-4	3/8	1/4	9/16-24	1.03	.81	1.03	.312

**Male Branch Tee 172CA**

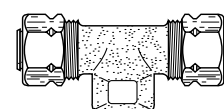
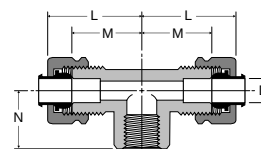
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
172CA-2-2	1/8	1/8	5/16-24	.84	.61	.71	.093
172CA-3-2	3/16	1/8	3/8-24	.83	.61	.71	.125
172CA-4-2	1/4	1/8	7/16-24	.84	.61	.74	.188
172CA-4-4	1/4	1/4	7/16-24	.93	.69	.92	.188
172CA-6-2	3/8	1/8	9/16-24	.97	.75	.75	.234
172CA-6-4	3/8	1/4	9/16-24	.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

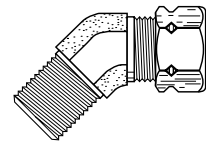
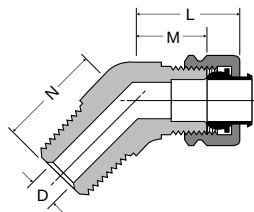
**Female Branch Tee 177CA**

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

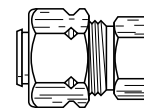
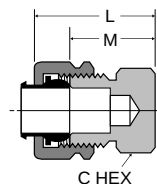


45° Elbow 179CA

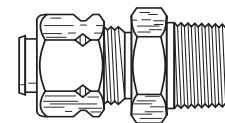
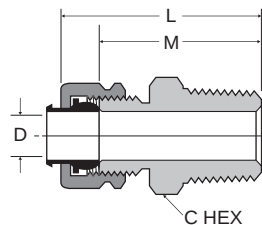
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
179CA-4-2	1/4	1/8	7/16-24	.89	.66	.56	.188
179CA-4-4	1/4	1/4	7/16-24	.80	.56	.84	.188
179CA-6-2	3/8	1/8	9/16-24	.85	.63	.65	.234
179CA-6-4	3/8	1/4	9/16-24	.85	.63	.84	.281
179CA-6-6	3/8	3/8	9/16-24	.97	.75	.95	.312
179CA-8-6	1/2	3/8	11/16-20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

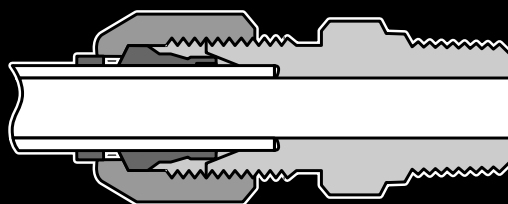
**A****Seal Plug 639CA**

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





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.

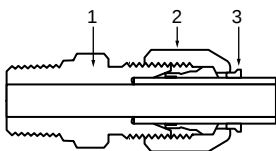
How to Use: Assembly

- 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

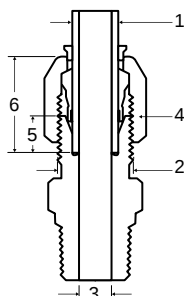
- The Metru-Lok fitting can be assembled and disassembled at least 15 times. At each remake, hand tighten the nut, then wrench tighten 1/16 of a turn.

Technical Features



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

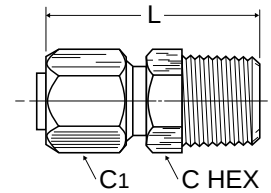
Fitting Dimensions



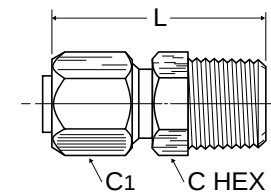
1 TUBE O.D. MM	2 METRIC STRAIGHT THREAD	3 INSIDE DIAMETER MM	4 HEX OF NUT MM	5 TUBE ENTRY BODY MM	6 TUBE ENTRY COMPL. FITTING MM	WRENCH TIGHTENING IN TURNS
4	M8x1	2	10	4	12	1 1/2
6	M10x1	4	12	5	13	1 1/2
8	M12x1	6	14	6	14	1 1/2
10	M14x1	8	17	6	14	1 1/2
12	M16x1	10	19	7	15	1 1/2
14	M18x1	12	22	8	16	1 1/2
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

FBMB Male Connector NPT

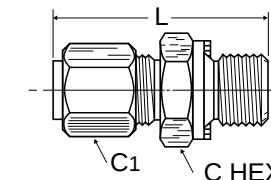
PART NO.	TUBE SIZE	NPT THREAD	C HEX	C1	L
FBMB4-1/16	4	1/16	8	10	26
FBMB4-1/8	4	1/8	11	10	27
FBMB6-1/8	6	1/8	11	12	28
FBMB6-1/4	6	1/4	14	12	32
FBMB8-1/8	8	1/8	12	14	29
FBMB8-1/4	8	1/4	14	14	33
FBMB10-1/4	10	1/4	14	17	33
FBMB10-3/8	10	3/8	19	17	34
FBMB12-3/8	12	3/8	19	19	35
FBMB12-1/2	12	1/2	22	19	40
FBMB14-3/8	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**

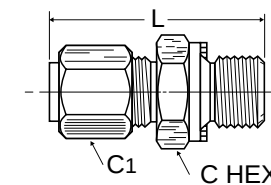
PART NO.	TUBE SIZE	BSPT THREAD	C HEX	C1	L
F3BMB4-1/8	4	1/8	10	10	25
F3BMB6-1/8	6	1/8	11	12	27
F3BMB6-1/4	6	1/4	14	12	31
F3BMB8-1/8	8	1/8	12	14	29
F3BMB8-1/4	8	1/4	14	14	32
F3BMB8-3/8	8	3/8	17	17	34
F3BMB10-1/4	10	1/4	14	17	32
F3BMB10-3/8	10	3/8	17	17	33
F3BMB12-3/8	12	3/8	17	19	34
F3BMB12-1/2	12	1/2	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**

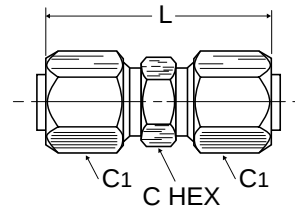
PART NO.	TUBE SIZE	MM THREAD	C HEX	C1	L
F8BMB4M5	4	M5x0.8	8	10	24
F8BMB12M16	12	M16x1.5	22	19	37
F8BMB12M22	12	M22x1.5	27	19	40
F8BMB14M16	14	M16x1.5	22	22	38
F8BMB14M22	14	M22x1.5	27	22	41
F8BMB16M16	16	M16x1.5	22	27	37
F8BMB16M22	16	M22x1.5	27	27	40



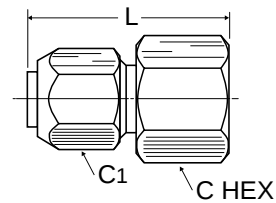
These parts are supplied with a copper seal.

A**HBMB Equal Union**

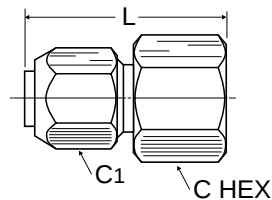
PART NO.	TUBE SIZE	C HEX	C1	L
HBMB4	4	8	10	31
HBMB6	6	10	12	34
HBMB8	8	12	14	37
HBMB10	10	14	17	37
HBMB12	12	17	19	39
HBMB14	14	19	22	41
HBMB16	16	22	27	41
HBMB18	18	24	30	51
HBMB20	20	27	32	51
HBMB22	22	30	36	54

**GBMB Female Connector NPT**

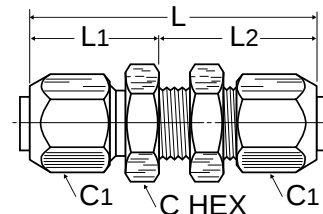
PART NO.	TUBE SIZE	NPT THREAD	C HEX	C1	L
GBMB6-1/8	6	1/8	14	12	29
GBMB6-1/4	6	1/4	19	12	32
GBMB8-1/8	8	1/8	14	14	30
GBMB8-1/4	8	1/4	19	14	33
GBMB10-1/4	10	1/4	19	17	33
GBMB10-3/8	10	3/8	22	17	35
GBMB12-3/8	12	3/8	22	19	36
GBMB12-1/2	12	1/2	27	19	38
GBMB14-3/8	14	3/8	22	22	37
GBMB14-1/2	14	1/2	27	27	39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

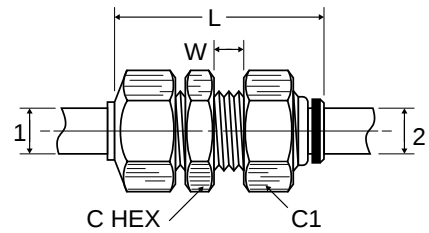
**WBMB Bulkhead Union**

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

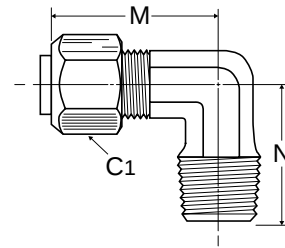


WBMPB Mixed Bulkhead Union

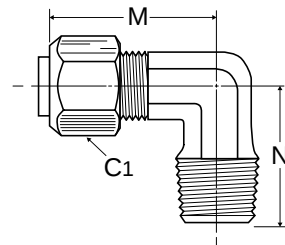
PART NO.	TUBE SIZE 1	TUBE SIZE 2	MM THREAD	C1	C HEX	L	W	BULKHEAD HOLE DIA.
WBMPB4	4	4	M8x1	10	12	34	5	8mm
WBMPB6	6	6	M10x1	12	12	37	5	10mm
WBMPB8	8	8	M12x1	14	16	39	5	12mm
WBMPB10	10	10	M14x1	17	19	45	5	14mm
WBMPB12	12	12	M16x1	19	22	49	5	16mm
WBMPB14	14	14	M18x1	22	22	52	7	18mm

**CBMB 90° Male Elbow NPT**

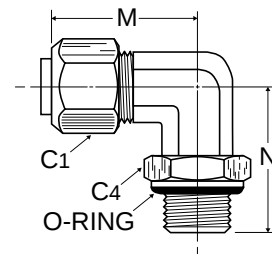
PART NO.	TUBE SIZE	NPT THREAD	C1	M	N
CBMB4-1/8	4	1/8	10	22	17
CBMB6-1/8	6	1/8	12	24	18
CBMB6-1/4	6	1/4	12	24	22
CBMB8-1/8	8	1/8	14	26	19
CBMB8-1/4	8	1/4	14	26	23
CBMB10-1/4	10	1/4	17	27	24
CBMB10-3/8	10	3/8	17	28	25
CBMB12-3/8	12	3/8	19	32	27
CBMB12-1/2	12	1/2	19	32	31
CBMB14-3/8	14	3/8	22	32	26
CBMB14-1/2	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

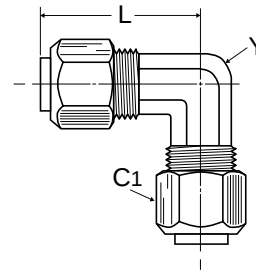
**C8BMB 90° Adjustable Male Elbow Metric Straight Thread**

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

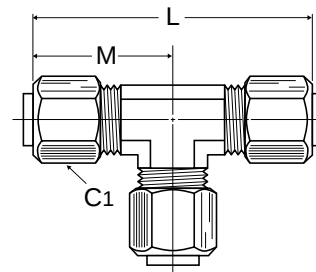


A**EBMB 90° Union Elbow**

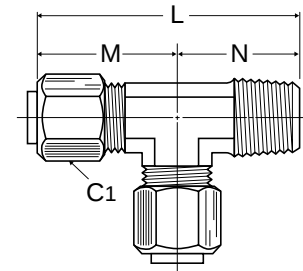
PART NO.	TUBE SIZE	C1	L	Y
EBMB4	4	10	22	7
EBMB6	6	12	24	8
EBMB8	8	14	26	10
EBMB10	10	17	27	12
EBMB12	12	19	32	14
EBMB14	14	22	32	16
EBMB16	16	27	35	18
EBMB18	18	30	41	20
EBMB20	20	32	45	24
EBMB22	22	36	46	24

**JBMB Union Tee**

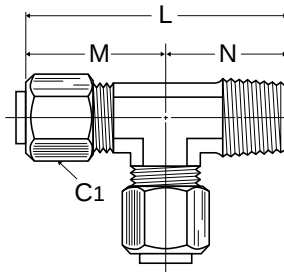
PART NO.	TUBE SIZE	C1	L	M
JBMB4	4	10	47	23.5
JBMB6	6	12	48	24.0
JBMB8	8	14	52	26.0
JBMB10	10	17	54	27.0
JBMB12	12	19	63	31.5
JBMB14	14	22	63	31.5
JBMB16	16	27	69	34.5
JBMB18	18	30	82	41.0
JBMB20	20	32	89	44.5
JBMB22	22	36	91	45.5

**RBMB Male Run Tee NPT**

PART NO.	TUBE SIZE	NPT THREAD	C1	L	M	N
RBMB6-1/8	6	1/8	12	42	24	18
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

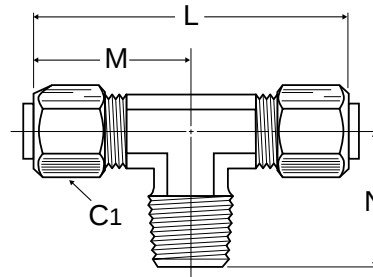
**R3BMB Male Run Tee BSPT**

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

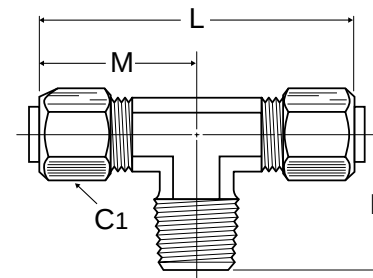


SBMB Male Branch Tee NPT

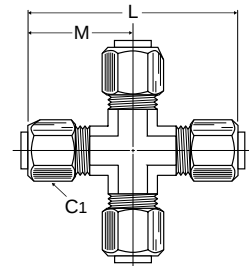
PART NO.	TUBE SIZE	NPT THREAD	C1	L	M	N
SBMB6-1/8	6	1/8	12	48	24.0	18
SBMB6-1/4	6	1/4	12	50	25.0	23
SBMB8-1/8	8	1/8	14	52	26.0	19
SBMB8-1/4	8	1/4	14	52	26.0	23
SBMB10-1/4	10	1/4	17	56	28.0	24
SBMB10-3/8	10	3/8	17	56	28.0	24
SBMB12-3/8	12	3/8	19	63	31.5	25
SBMB12-1/2	12	1/2	19	63	31.5	31
SBMB14-3/8	14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

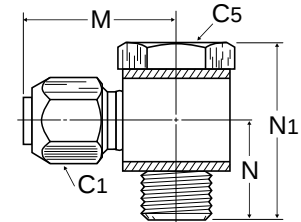
PART NO.	TUBE SIZE	BSPT THREAD	C1	L	M	N
S3BMB6-1/8	6	1/8	12	48	24.0	18
S3BMB6-1/4	6	1/4	12	49	24.5	23
S3BMB8-1/8	8	1/8	14	52	26.0	19
S3BMB8-1/4	8	1/4	14	52	26.0	23
S3BMB10-1/4	10	1/4	17	54	27.0	24
S3BMB10-3/8	10	3/8	17	56	28.0	24
S3BMB12-3/8	12	3/8	19	63	31.5	27
S3BMB12-1/2	12	1/2	19	63	31.5	31
S3BMB14-3/8	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
KBMB16	16	27	69	34.5

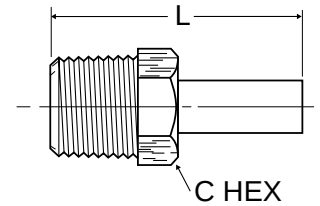
**COR4BMB Single Banjo BSPP**

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

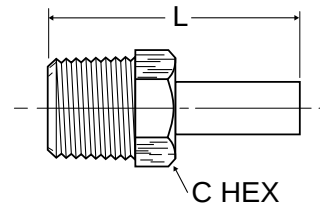


A**T2HFB Tube End Male Adapter NPT**

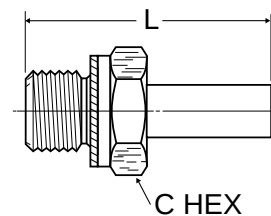
PART NO.	TUBE SIZE	NPT THREAD	C HEX	L
T2HFB6-1/8	6	1/8	11	31
T2HFB6-1/4	6	1/4	14	36
T2HFB8-1/8	8	1/8	11	32
T2HFB8-1/4	8	1/4	14	36
T2HFB10-1/4	10	1/4	14	37
T2HFB10-3/8	10	3/8	19	38
T2HFB12-3/8	12	3/8	19	38
T2HFB12-1/2	12	1/2	22	43
T2HFB14-3/8	14	3/8	19	39
T2HFB14-1/2	14	1/2	22	44
T2HFB16-1/2	16	1/2	22	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

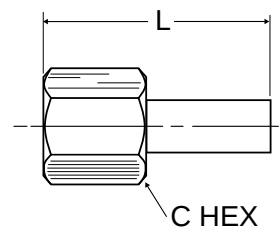
**T28HFB Tube Adapter Metric Straight Thread**

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

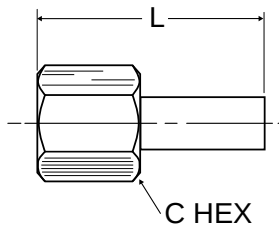


A**T2HGB Tube End Female Adapter NPT**

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
T2HGB10-3/8	10	3/8	22	39
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

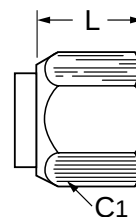
**BMB Nut**

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

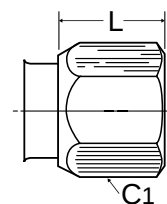


A**BTMB Nut and Ferrule**

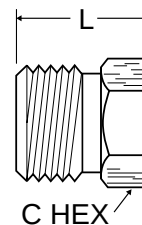
PART NO.	TUBE SIZE	C1	L
BTMB4	4	10	12
BTMB6	6	12	13
BTMB8	8	14	14
BTMB10	10	17	14
BTMB12	12	19	15
BTMB14	14	22	16
BTMB16	16	27	16
BTMB18	18	30	21
BTMB20	20	32	21
BTMB22	22	36	22

**FNMB Fitting Body Cap**

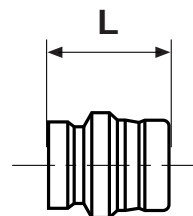
PART NO.	TUBE SIZE	C1	L
FNMB4	4	10	14
FNMB6	6	12	15
FNMB8	8	14	16
FNMB10	10	17	16
FNMB12	12	19	17
FNMB14	14	22	18
FNMB16	16	27	18
FNMB18	18	30	23
FNMB20	20	32	23
FNMB22	22	36	24

**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

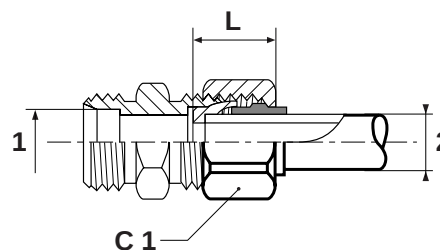
**TMB Ferrule**

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

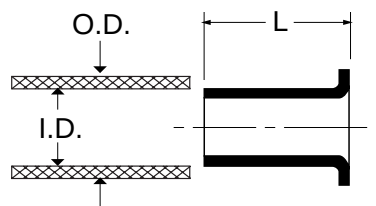


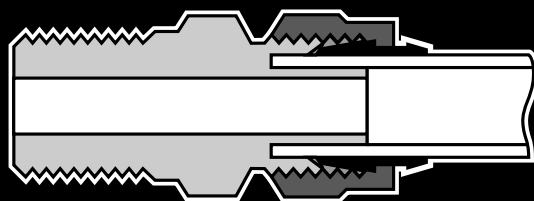
TRBMB Tube End Reducer

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	12
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

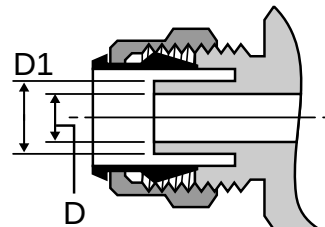
Fitting configurations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry.

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.

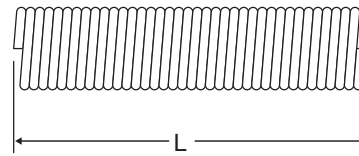
Tube Size Inches	* D1 Tube Support O.D.
1/4	.168
5/16	.185
3/8	.248
1/2	.373



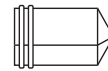
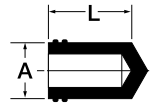
* Note: No tube support for sizes 1/8" and 3/16"

Spring Guard 56PSG

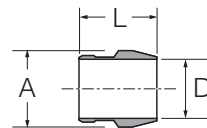
PART NO.	TUBE O.D.	L
56PSG-4	1/4	3.000
56PSG-5	5/16	3.000
56PSG-6	3/8	3.000
56PSG-8	1/2	3.000

**A****Plastic Cap 59P**

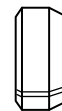
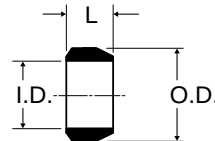
PART NO.	TUBE SIZE	A	L
59P-4	1/4	.247	.50
59P-5	5/16	.307	.53
59P-6	3/8	.372	.56
59P-8	1/2	.497	.63

**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

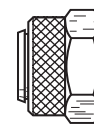
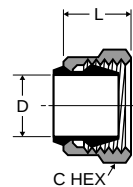
**Sleeve 60PB**

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

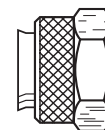
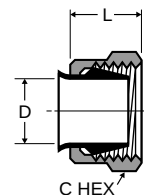
**Nut and Plastic Sleeve Assembly 61P**

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	1 1/16-20	3/4	.514	.44

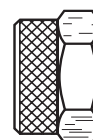
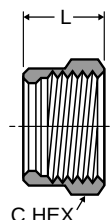
* Brass Sleeve

**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	1 1/16-20	3/4	.507	.44

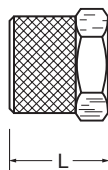
**Nut 61PN**

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	1 1/16-20	3/4	.44



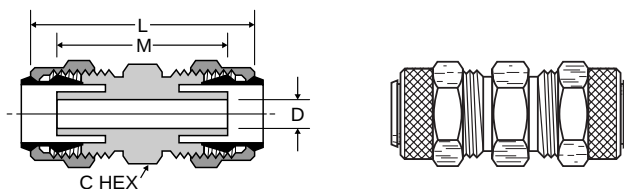
A**Nut only for use with Spring Gaurd 61PSGN**

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
61PSGN-8	1/2	.718	.812

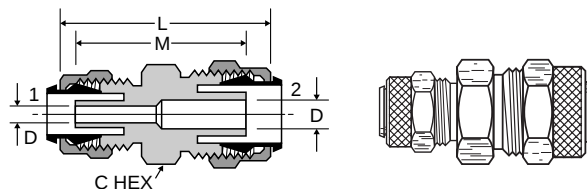
**Union 62P**

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	1 1/16-20	1 1/16	1.47	1.24	.323

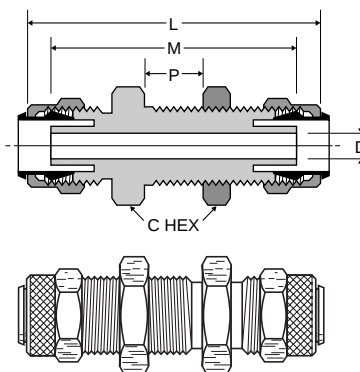
* Brass Sleeve, No Tube Support

**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

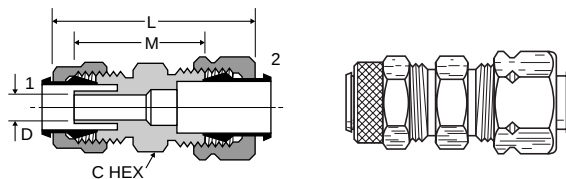
**Bulkhead Union 62PBH**

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	1 1/16	.47	1.89	1.65	1/2	.204
62PBH-8	1/2	1 1/16-20	7/8	.63	2.28	2.05	1 1/16	.323

**Union 62PCA**

(Tube to Compress-Align)

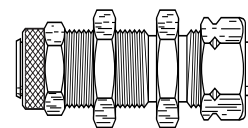
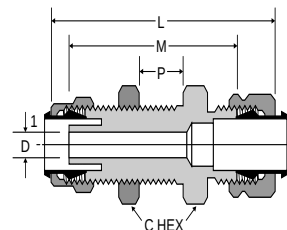
PART NO.	TUBE SIZE	1 STRAIGHT THREAD	2 STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
62PCA-4	1/4	3/8-24	7/16-24	7/16	1.25	.89	.125
62PCA-5	5/16	7/16-24	1/2-24	1/2	1.30	.92	.144
62PCA-6	3/8	1/2-24	9/16-24	9/16	1.37	.98	.204



Bulkhead Union 62PCABH

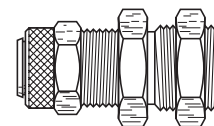
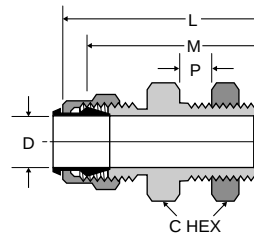
(Tube to Compress-Align)

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

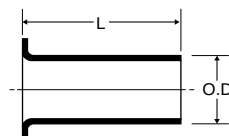
**Bulkhead Union 62PTBH**

(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

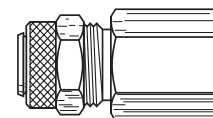
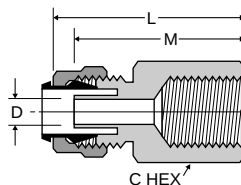
**Brass Insert 63PT**

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

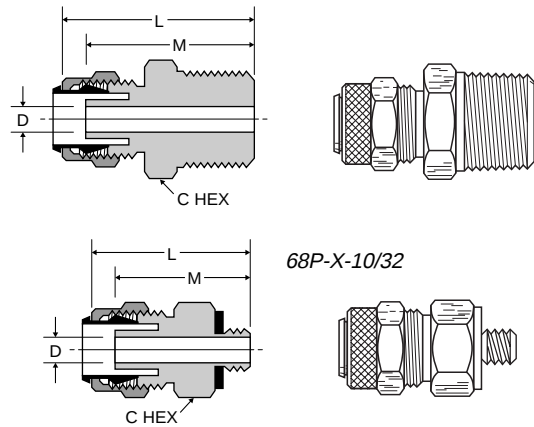
*Brass Sleeve, No Tube Support



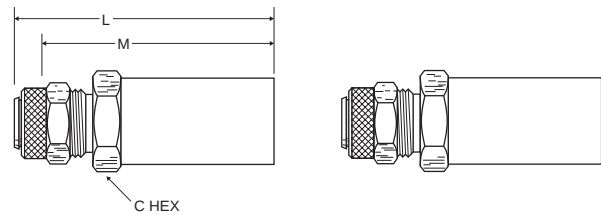
A**Male Connector 68P**

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

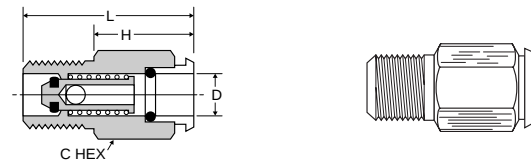
**Tube End Reducer 97P**

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**

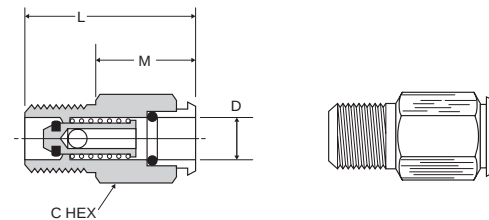
(Chrome Plated)

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)

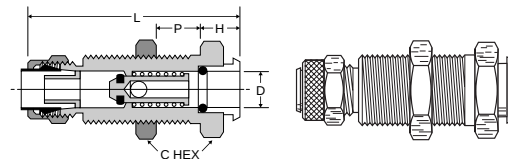
PART NO.	D INSERT DIA.	PIPE THREAD	L	C HEX	M
391PSS-4-2	1/4	1/8	1.271	.500	.900
391PSS-4-4	1/4	1/4	1.271	.562	.710
391PSS-6-4	3/8	1/4	1.40	.625	.840



Bulkhead Coupler Body 392P

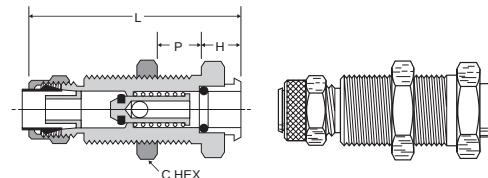
(Chrome Plated)

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**

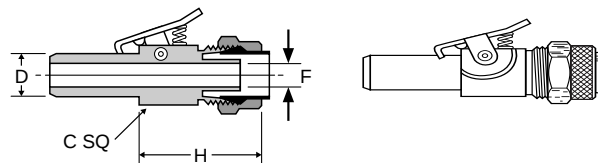
(Stainless Steel)

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**

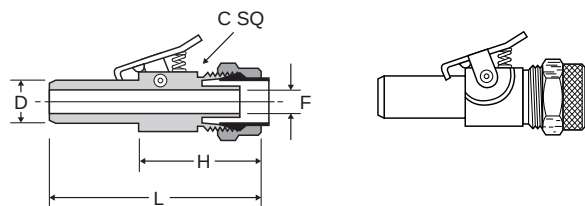
(Chrome Plated)

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**

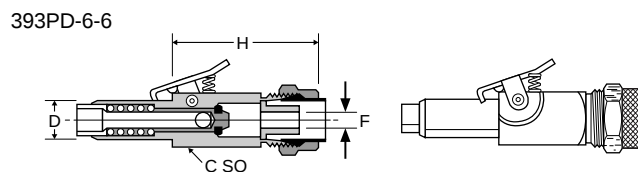
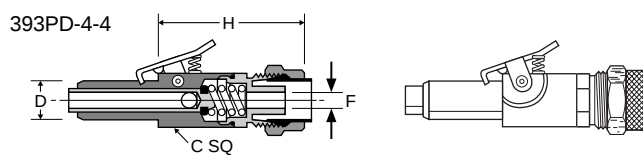
(Stainless Steel)

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

**Shutoff Type Insert 393PD**

(Chrome Plated)

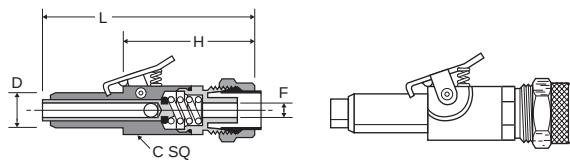
PART NO.	TUBE SIZE	D-INSERT DIA.	STRAIGHT THREAD	C SQUARE	H	FLOW DIA.F
393PD-4-4	1/4	1/4	3/8-24	7/16	1.61	.110
393PD-6-6	3/8	3/8	1/2-24	1/2	1.45	.187



A**Shut-Off Type Insert 393PDSS**

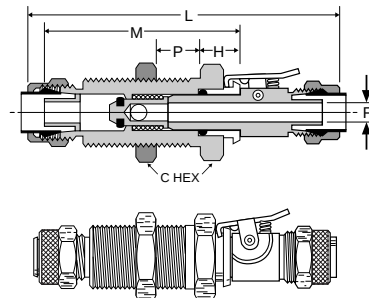
(Stainless Steel)

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

**Single End Shutoff Bulkhead Quick Coupler 394P**

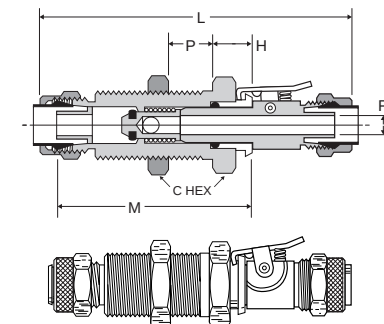
(Chrome Plated)

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**

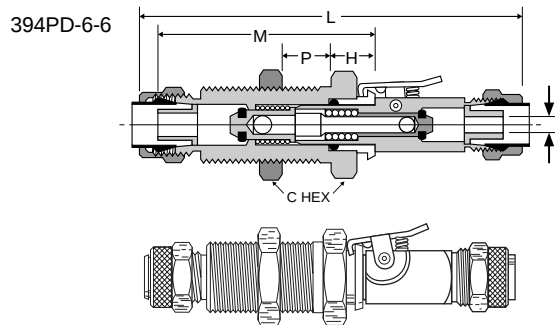
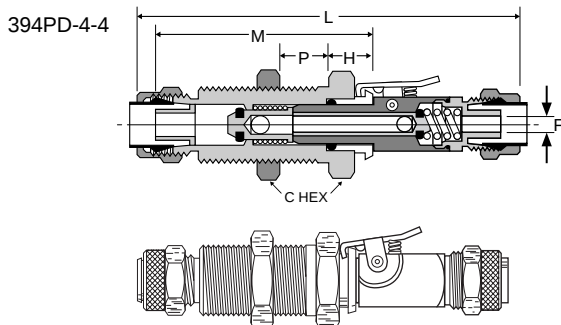
(Stainless Steel)

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)

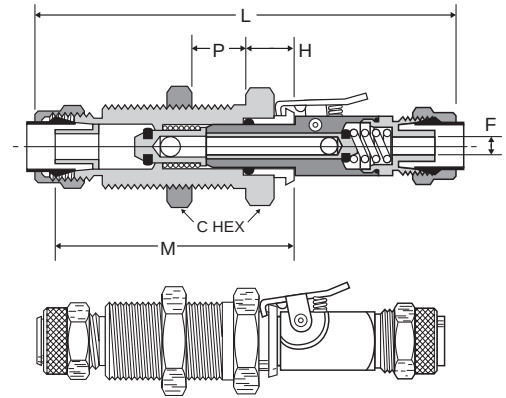
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	P MAX.	H	L	M	BULKHEAD HOLE DIA.	FLOW DIA. F
394PD-4-4	1/4	1/2-24	5/8	.84	.39	3.77	2.13	1/2	.125
394PD-6-6	3/8	11/16-24	13/16	.93	.37	3.48	2.01	11/16	.204



Double End Shut-Off Bulkhead Quick Coupler 394PDSS

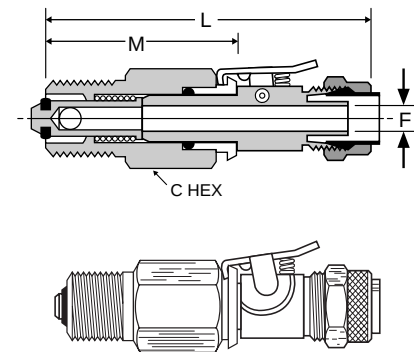
(Stainless Steel)

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	1 1/16-24	3.91	2.24	.812	.34	.93	.203

**Single End Shutoff Pipe Connector Quick Coupler 398P**

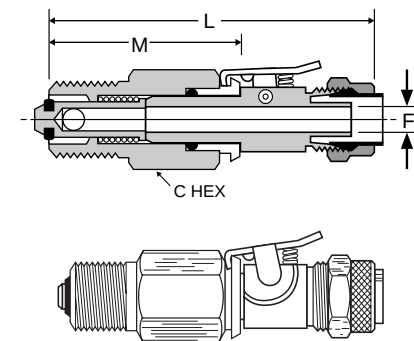
(Chrome Plated)

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)

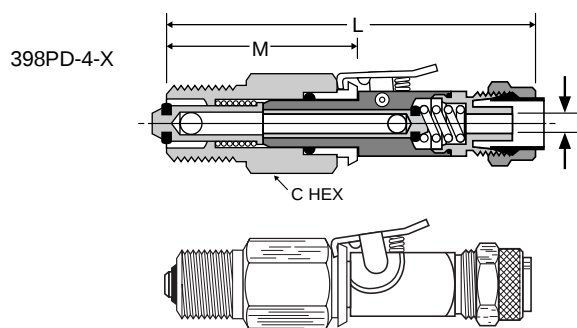
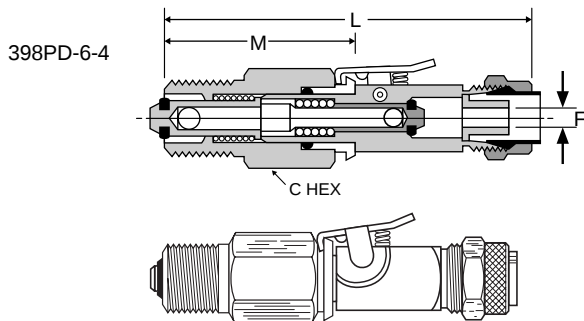
PART NO.	TUBE O.D.	PIPE THREAD	L	M	C HEX	FLOW DIA. F
398PSS-4-2	1/4	1/8	2.30	1.32	.500	.125
398PSS-4-4	1/4	1/4	2.30	1.32	.562	.125
398PSS-6-4	3/8	1/4	2.70	1.43	.625	.203



A**Double End Shutoff Pipe Connector Quick Coupler 398PD**

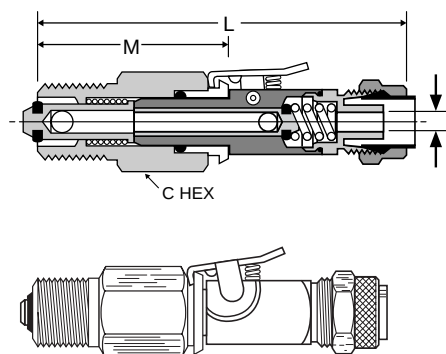
(Chrome Plated)

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

**Double End Shut-Off Pipe Connector Quick Coupler 398PDSS**

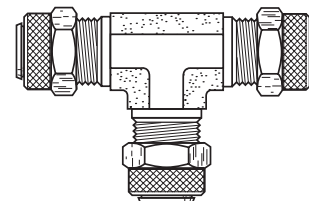
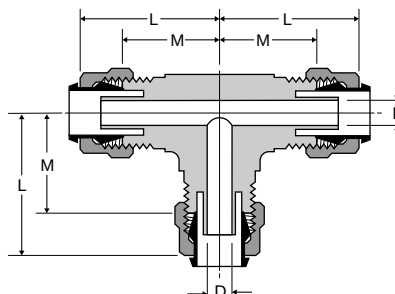
(Stainless Steel)

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**

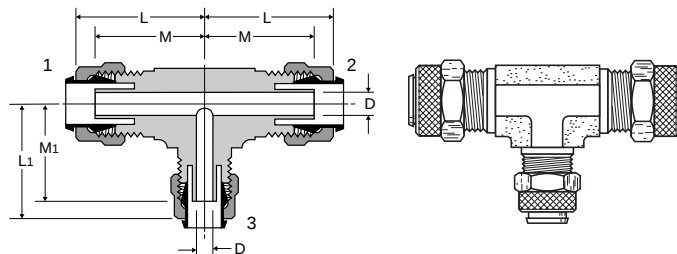
PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
164P-2*	1/8	5/16-24	.83	.61	.094
264P-3*	3/16	3/8-24	.83	.61	.125
164P-4	1/4	3/8-24	.84	.73	.125
164P-5	5/16	7/16-24	.83	.73	.144
164P-6	3/8	1/2-24	.98	.86	.203
164P-8	1/2	1 1/16-20	1.12	1.04	.323

*Brass Sleeve, No Tube Support



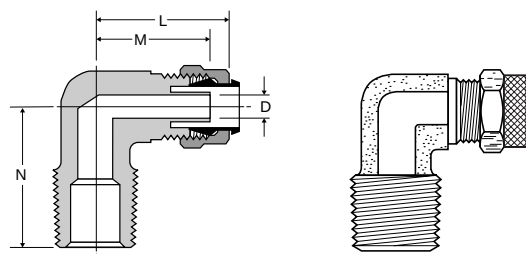
Union Tee 164P combination size

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

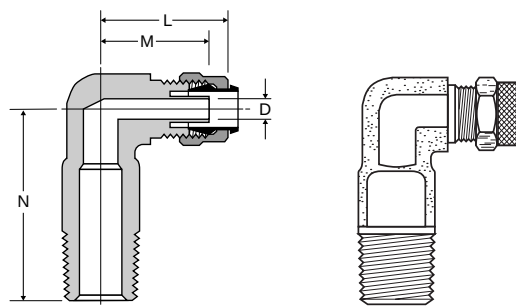
**Male Elbow 169P/269P**

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	1 1/16-20	1.12	1.04	1.13	.323

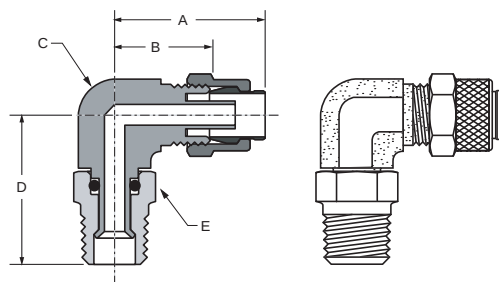
*Brass Sleeve, No Tube Support

**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**

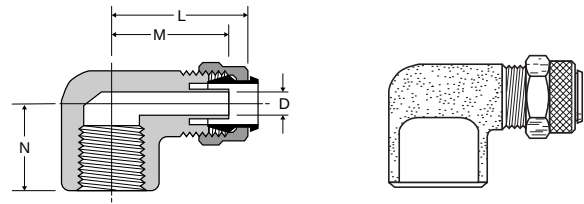
PART NO.	TUBE O.D.	PIPE THREAD	A	B	C HEX	D	E
169PS-4-2	1/4	1/8	.812	.594	.375	.862	.437
169PS-4-4	1/4	1/4	.906	.688	.562	1.218	.562
169PS-6-2	3/8	1/8	.875	.625	.437	.904	.437
169PS-6-4	3/8	1/4	.937	.685	.562	1.218	.562
169PS-6-6	3/8	3/8	.859	.602	.562	1.190	.687
169PS-8-6	1/2	3/8	1.031	.782	.500	1.218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



A**Female Elbow 170P**

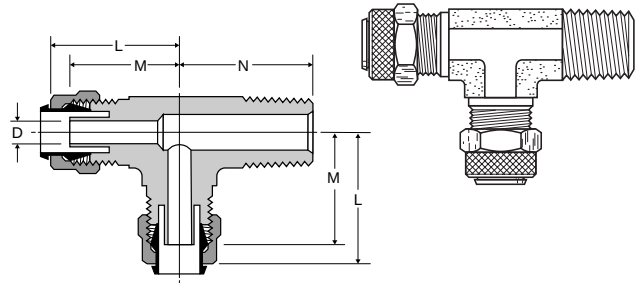
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA.D
170P-2-2*	1/8	1/8	5/16-24	.91	.69	.56	.094
170P-3-2*	3/16	1/8	3/8-24	.91	.69	.56	.125
170P-4-2	1/4	1/8	3/8-24	.90	.79	.56	.125
170P-4-4	1/4	1/4	3/8-24	1.00	.89	.69	.125
170P-6-4	3/8	1/4	1/2-24	1.01	.89	.69	.204
170P-8-6	1/2	3/8	11/16-20	1.19	1.11	1.13	.323

*Brass Sleeve, No Tube Support

**Male Run Tee 171P**

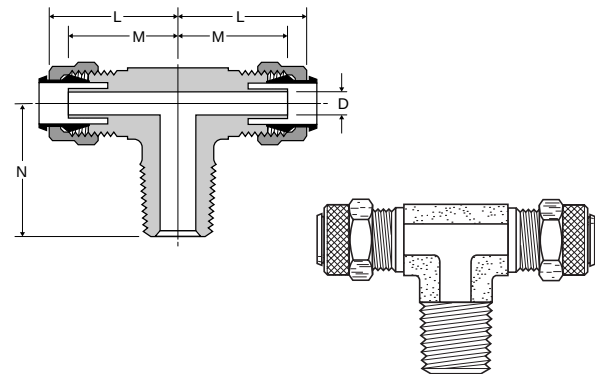
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA.D
171P-2-2*	1/8	1/8	5/16-24	.82	.60	.67	.094
171P-3-2*	3/16	1/8	3/8-24	.82	.60	.67	.125
171P-4-2	1/4	1/8	3/8-24	.84	.73	.72	.125
171P-4-4	1/4	1/4	3/8-24	.92	.81	.92	.125
171P-5-2	5/16	1/8	7/16-24	.83	.73	.72	.144
171P-6-4	3/8	1/4	1/2-24	.98	.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

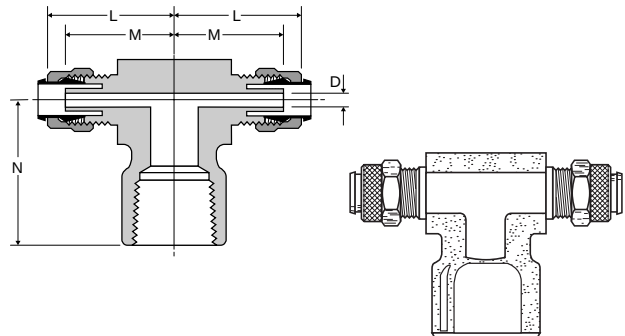
**Male Branch Tee 172P**

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**

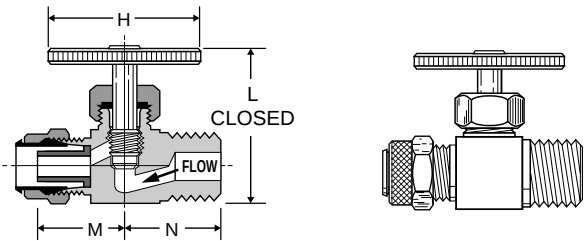
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA.D
177P-4-2	1/4	1/8	3/8-24	.92	.81	.88	.125
177P-4-4	1/4	1/4	3/8-24	.92	.81	1.03	.125
177P-4-6	1/4	3/8	3/8-24	1.03	.92	1.13	.125



A

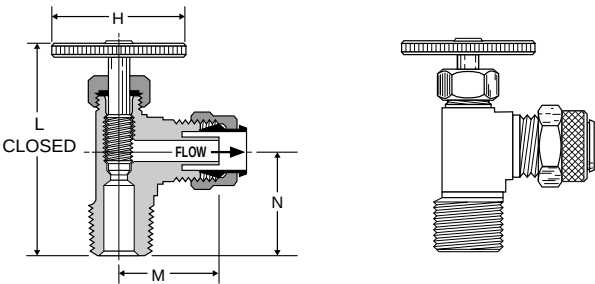
Needle Valve NV311P

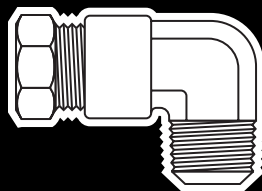
PART NO.	TUBE SIZE	PIPE THREAD	H	L OPEN	L CLOSED	M	N
NV311P-4-2	1/4	1/8	1.06	1.36	1.16	.64	.63
NV311P-4-4	1/4	1/4	1.06	1.38	1.18	.64	.72
NV311P-6-4	3/8	1/4	1.06	1.38	1.18	.64	.72



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





Hi-Duty Flareless Tube Fittings

Advantages

No flaring, soldering or other preparation of tubing is necessary. Pre-assembled 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

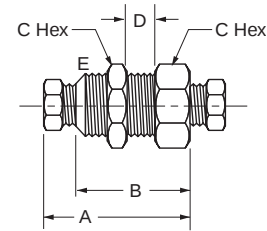
Fitting configurations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry.

Pricing

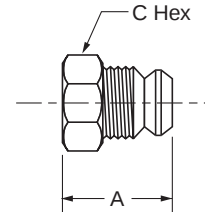
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

Bulkhead Union 62HDBH

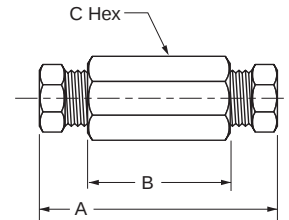
PART NO.	TUBE SIZE	MIN. ORIFICE SIZE	A	B	C	D	E
62HDBH-2	1/8	.093	1.781	1.156	.562	.625	7/16-24
62HDBH-4	1/4	.187	1.968	1.156	.687	.625	9/16-24

**Nut/Sleeve 61HD**

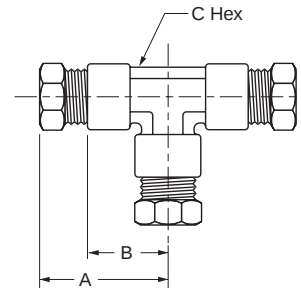
PART NO.	TUBE SIZE	A	C
61HD-2	1/8	.656	.312
61HD-3	3/16	.687	.375
61HD-4	1/4	.734	.437
61HD-5	5/16	.765	.500
61HD-6	3/8	.843	.562
61HD-8	1/2	.921	.688
61HD-10	5/8	1.078	.875

**Union 62HD**

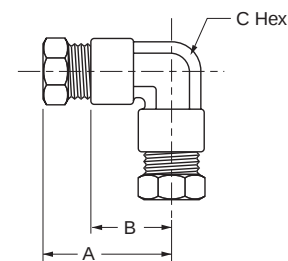
PART NO.	TUBE SIZE	MIN. ORIFICE SIZE	A	B	C
62HD-2	1/8	.093	1.687	1.062	.375
62HD-3	3/16	.125	1.781	1.031	.437
62HD-4	1/4	.187	1.906	1.093	.562
62HD-6	3/8	.312	2.187	1.375	.625
62HD-8	1/2	.437	2.437	1.562	.812
62HD-10	5/8	.500	2.937	1.812	1.062

**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

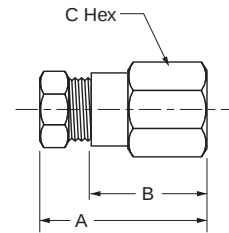
**Union Elbow 165HD**

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

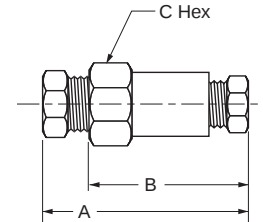


A**Female Connector 66HD**

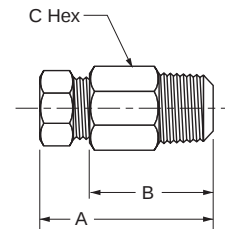
PART NO.	TUBE SIZE	PIPE THREAD	MIN. ORIFICE SIZE	A	B	C HEX
66HD-2-2	1/8	1/8	.093	1.312	1.000	.500
66HD-4-2	1/4	1/8	.187	1.406	1.000	.562
66HD-4-4	1/4	1/4	.187	1.593	1.187	.687
66HD-6-2	3/8	1/8	.312	1.531	1.125	.625
66HD-6-4	3/8	1/4	.312	1.718	1.312	.625
66HD-6-6	3/8	3/8	.312	1.750	1.343	.812

**Reducing Union 62HD**

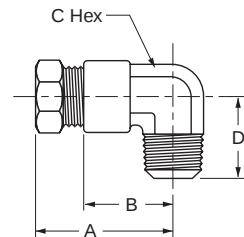
PART NO.	TUBE SIZE	MIN. ORIFICE SIZE	A	B	C HEX
62HD-6-4	3/8 X 1/4	.187	2.000	1.187	.625
62HD-8-4	1/2 X 1/4	.187	2.125	1.281	.812
62HD-8-6	1/2 X 3/8	.312	2.656	1.406	.812

**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

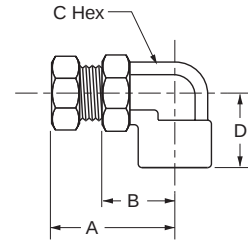
**Male Elbow 169HD**

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

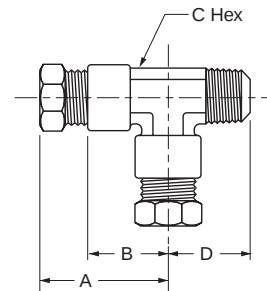


Female Elbow 170HD

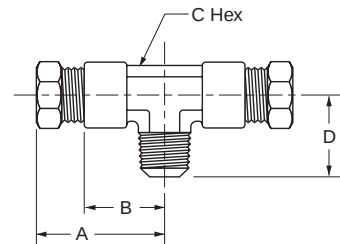
PART NO.	TUBE SIZE	PIPE THREAD	MIN. ORIFICE SIZE	A	B	C HEX	D
170HD-2-2	1/8	1/8	.093	1.005	.690	.500	.750
170HD-4-2	1/4	1/8	.187	1.084	.687	.500	.750
170HD-4-4	1/4	1/4	.187	1.234	.843	.562	.875
170HD-6-2	3/8	1/8	.312	1.281	.875	.562	.937
170HD-6-4	3/8	1/4	.312	1.376	.970	.615	1.093
170HD-6-6	3/8	3/8	.312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

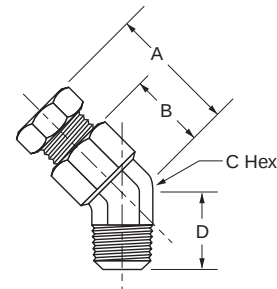
PART NO.	TUBE SIZE	PIPE THREAD	MIN. ORIFICE SIZE	A	B	C HEX	D
171HD-4-2	1/4	1/8	.187	1.144	.750	.500	.780
171HD-4-4	1/4	1/4	.187	1.207	.812	.500	.937
171HD-6-4	3/8	1/4	.312	1.376	.970	.562	1.000

**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**

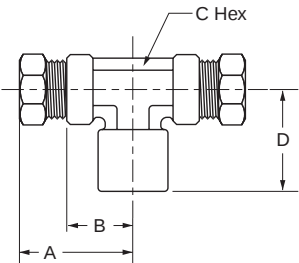
PART NO.	TUBE SIZE	PIPE THREAD	MIN. ORIFICE SIZE	A	B	C HEX	D
179HD-4-2	1/4	1/8	.187	1.093	.687	.562	.750
179HD-6-4	3/8	1/4	.280	1.138	.710	.550	.850



A

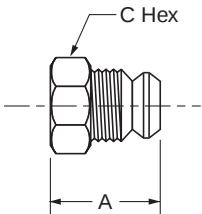
Female Branch Tee 177HD

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



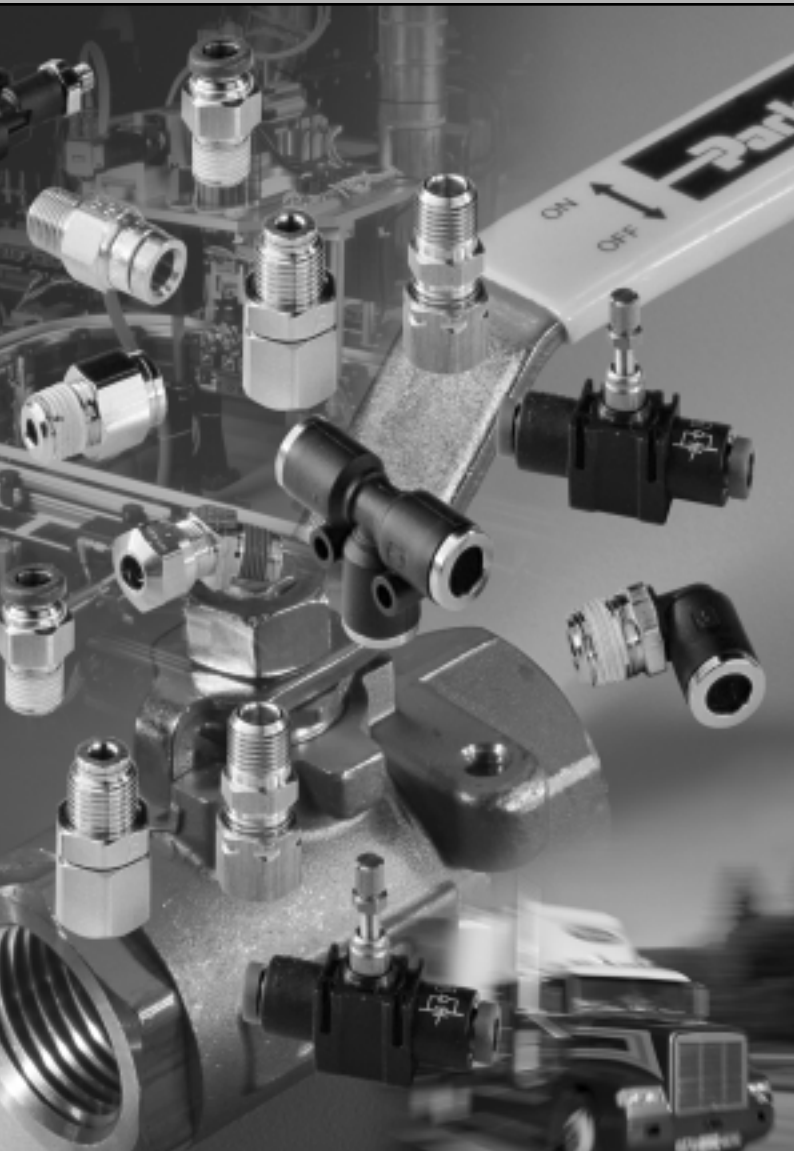
Plug 59HD

PART NO.	TUBE SIZE	A	C
59HD-4	1/4	.734	.437
59HD-6	3/8	.843	.625





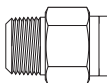
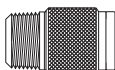
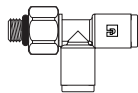
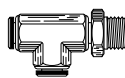
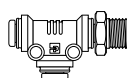
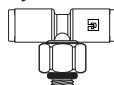
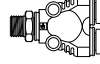
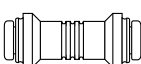
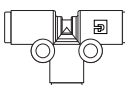
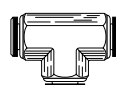
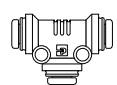
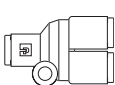
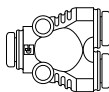
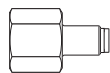
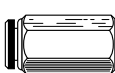
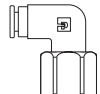
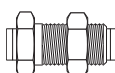
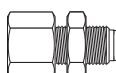
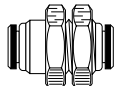
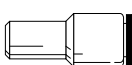
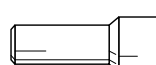
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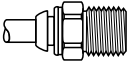
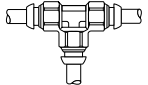
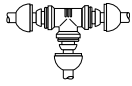
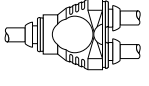
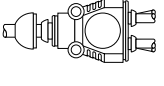
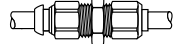
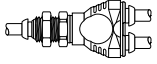
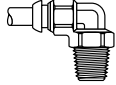
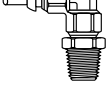
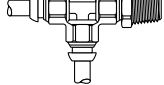
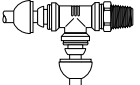
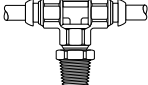
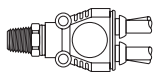
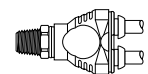
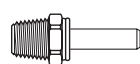
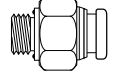
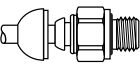
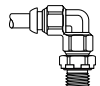
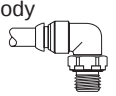
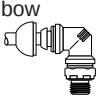
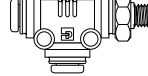
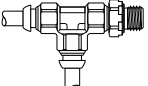
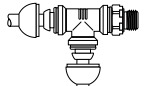
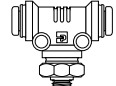
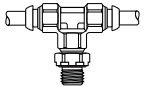
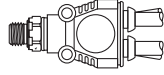
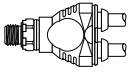
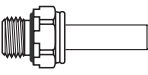
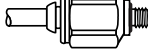
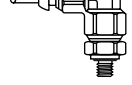


Microlok Fittings	B5
Prestolok/Prestolok II Fittings	B12
Parker Prestolok Metric Push-In Fittings	B23
Parker Prestolok 2 Metric Push-In Fittings	B34

The World Standard

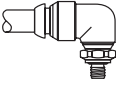
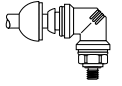
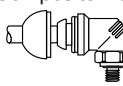
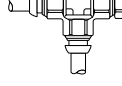
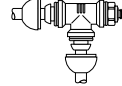
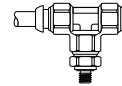
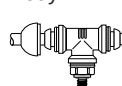
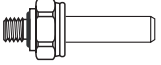
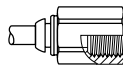
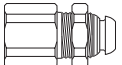
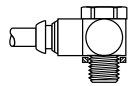
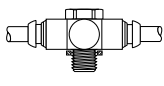
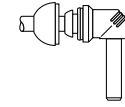
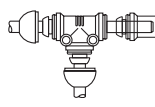
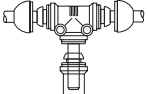
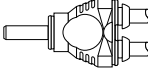
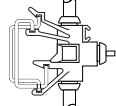
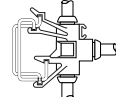
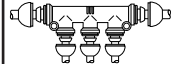
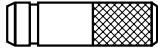
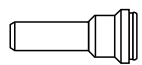
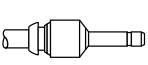
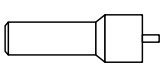
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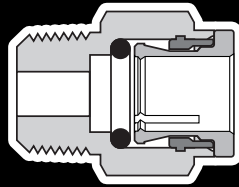
Tube to Male NPTF	W68PL Male Connector  Page B14	W68ML Male Connector  Page B7	W68MLR Male Connector  Page B7	W369ML Male Elbow Composite Body  Page B9	W369MLX Long Male Elbow Composite Body  Page B10	W169PL Male Elbow Brass Body  Page B16		
	W369PLC Compact Male Elbow Composite Body  Page B17	W369PL Male Elbow Composite Body  Page B17	W369PLX Long Male Elbow Composite Body  Page B18	W169PLNS Male Elbow Brass Body  Page B18	W371ML Male Run Tee Composite Body  Page B11	W171PL Male Run Tee Brass Body  Page B19	W371PL Male Run Tee Composite Body  Page B19	
	W372ML Male Branch Tee Composite Body  Page B11	W172PL Male Branch Tee Brass Body  Page B20	W372PL Male Branch Tee Composite Body  Page B20	W368ML Union Y Connector Composite Body  Page B9	W368PL Union Y Connector Composite Body  Page B22			
	Tube to Tube	62ML Union Brass Body  Page B6	32PL Union Composite Body  Page B13	62PL Union Brass Body  Page B13	364ML Union Tee Composite Body  Page B8	164PL Union Tee Brass Body  Page B15	364PL Union Tee Composite Body  Page B15	
		365ML Union Elbow Composite Body  Page B8	165PL Union Elbow Brass Body  Page B16	365PL Union Elbow Composite Body  Page B16	362ML Union Y Composite Body  Page B8	362PL Union Y Composite Body  Page B21		
Tube to Female NPTF		66ML Female Connector  Page B6	66PL Female Connector  Page B14	370PL Female Elbow Composite Body  Page B19	370ML Female Elbow Composite Body  Page B10	377PL Female Branch Tee Composite Body  Page B21	66PLBH Female Bulkhead  Page B14	
		Bulkhead Unions	62MLBH Bulkhead Union  Page B6	66MLBH Bulkhead Union  Page B7	62PLBH Bulkhead Union  Page B13	Auxiliary Components	67PPL Tube End Reducer  Page B14	639PL Plug  Page B21

Metric Tube to Male NPTF	FPB Male Connector  Page B25	C6PB Male Elbow Brass Elbow  Page B28	Metric Tube to Metric Tube	HPB Metric Union Brass Body  Page B27	HPK Metric Union Composite Body  Page B36	JPB Metric Union Tee Brass Body  Page B30
	JPK Metric Union Tee Composite Body  Page B39	EPB Metric Union Elbow Brass Body  Page B29		YJPK Metric Union Y Composite Body  Page B42	YJ5PK Metric Double Y Composite Body  Page B42	WBMPB Metric Bulkhead Union  Page B27
WPB Metric Bulkhead Union  Page B27	WE6PB Metric Bulkhead Union Elbow  Page B29	WE6PK Metric Bulkhead Union Elbow  Page B39	WYJ6PK Metric Bulkhead Union Y  Page B42	Metric Tube to Male BSPT	F23PB Male Connector  Page B25	F3PB Male Connector  Page B25
C3PB Compact Male Elbow  Page B27	C63LPB Long Male Elbow  Page B28	C63PB Male Elbow  Page B28	C63LPK Long Male Elbow Composite Body  Page B37		C63SPK Compact Male Elbow Composite Body  Page B37	R63PB Male Run Tee  Page B30
R63PK Male Run Tee Composite Body  Page B39	S63PB Male Branch Tee  Page B31	S63PK Male Branch Tee Composite Body  Page B41	YJ563PK Double Union Y Composite Body  Page B43	YJ63PK Male Union Y Composite Body  Page B43	T23FPK Tube End Male Adaptor  Page B45	
Metric Tube to Male BSPP	PLHBF4-B Male Connector  Page B15	F4PB Male Connector  Page B26	PLE2BF4-K Male Elbow Composite Body  Page B18	C64PB Male Elbow Brass Body  Page B28	C64SPB Compact Male Elbow Brass Body  Page B29	C64PK Male Elbow Composite Elbow  Page B37
	C64SPK Compact Male Elbow Composite Body  Page B38	PLR2BF4-K Male Run Tee  Page B20	R64PB Male Run Tee Brass Body  Page B30	R64PK Male Run Tee Composite Body  Page B40	PLSBF4-K Male Branch Tee  Page B21	S64PB Male Branch Tee Brass Body  Page B31
YJ564PK Union Double Y Composite Body  Page B43	YJ64PK Male Y Composite Body  Page B44	T24FPK Tube End Male Adaptor  Page B46	Metric Tube to Metric Straight Thread	F28PB Male Connector  Page B25	F8PB Male Connector  Page B26	C68PB Male Elbow  Page B29

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C68SPB Compact Male Elbow  Page B29	C68PK Male Elbow Composite Body  Page B38	C68SPK Compact Male Elbow Composite Body  Page B38	R68PB Male Run Tee  Page B30	R68PK Male Run Tee Composite Body  Page B40	S68PB Male Branch Tee  Page B31	S68PK Male Branch Tee Composite Body  Page B41
T28FPK Tube End Male Adaptor  Page B46	Metric Tube to Female BSPP	G4PB Female Connector  Page B26	WG4PB Female Bulkhead  Page B26	Metric Banjo Fittings	CORPB Single Body  Page B31	CORPBD Double Body  Page B32
COR8PB / COR4PB Single Banjo  Page B32	COR8PBD / COR4PBD Double Banjo  Page B32	SC4U / SC8U Single Banjo Bolt  Page B32	SC4UD / SC8UD Stacking Banjo Bolt  Page B32	Metric Plug-Ins	T2ESPK Compact Elbow  Page B38	T2JJPB Run Tee  Page B40
T2JPK Branch Tee  Page B41	YJ2PK Y Connector  Page B42	YJ52PK Double Y Connector  Page B43	Metric Manifolds	HS3PK 2 Tubes  Page B44	J3PK 3 Tubes  Page B44	J5PK Multiple Tee  Page B44
J6PK Multiple Tee  Page B44	J663PK Multiple Tee  Page B45	J664PK Multiple Tee  Page B45	Metric Auxiliary Components	TRPB Metric Tube End Reducer  Page B33	TR2PK Tube End Reducer Composite Body  Page B46	FNPB Metric Plug  Page B33
FNPB Composite Metric Plug  Page B45	TEPB Tube End Expander  Page B33	TS2PK Pressure Indicator  Page B46	Metric Tube to BSPT	T23HFPB  Page B33		



Microlok Fittings

Advantages

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

Materials

Microlok Straights: CA360, CA345 (nickel plated)
Microlok Shape Bodies: Reinforced Polyphenylene Oxide (PPO)
O-Ring: Nitrile (other compounds available on request)
Collet: Nickel Plated Brass

Applications

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

Working pressure and temperature ranges

32° to +150° F at up to 150 PSI depending on tubing being used

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

Assembly Instructions

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

Order

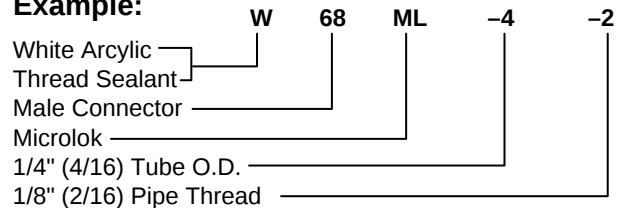
By part number and name.

Nomenclature

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

Note: 0 indicates 10-32 UNF Thread

Example:



Sizes

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

Specials

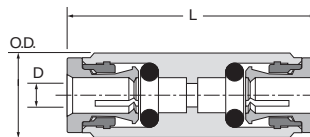
Fitting configurations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry.

Pricing

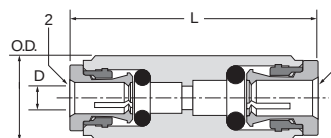
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

Equal Union 62ML

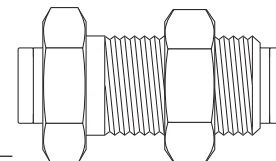
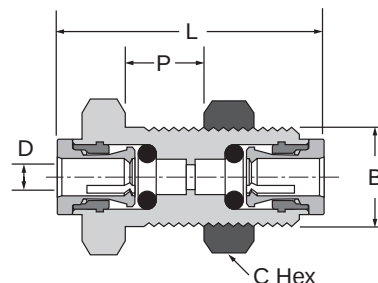
PART NO.	TUBE SIZE	O.D.	L	FLOW DIA. D.
62ML-2	1/8	.34	1.02	.093
62ML-5/32	5/32	.38	1.03	.110
62ML-4	1/4	.47	1.10	.190
62ML-6	3/8	.63	1.32	.312
62ML-8	1/2	.75	1.43	.440

**Unequal Union 62ML**

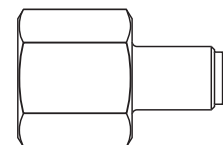
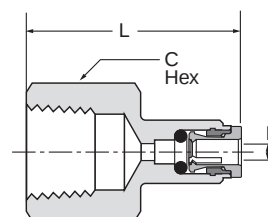
PART NO.	TUBE SIZE 1	TUBE SIZE 2	O.D.	L	FLOW DIA. D
62ML-5/32-2	5/32	1/8	.38	1.03	.093
62ML-4-2	1/4	1/8	.47	1.09	.093
62ML-4-5/32	1/4	5/32	.47	1.09	.110
62ML-4-6	1/4	3/8	.63	1.23	.190
62ML-6-8	3/8	1/2	.75	1.37	.312

**Bulkhead Union 62MLBH**

PART NO.	TUBE SIZE	B	C HEX	P MAX.	L	FLOW DIA. D
62MLBH-2	1/8	3/8	1/2	.51	1.02	.093
62MLBH-5/32	5/32	7/16	9/16	.51	1.03	.110
62MLBH-4	1/4	1/2	5/8	.55	1.10	.190
62MLBH-6	3/8	3/4	7/8	.55	1.32	.312
62MLBH-8	1/2	7/8	1	.60	1.43	.440

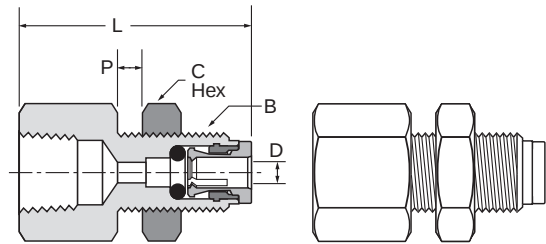
**Female Connector 66ML**

PART NO.	TUBE SIZE	PIPE THREAD NPTF	C HEX	L	FLOW DIA. D.
66ML-2-2	1/8	1/8	9/16	.99	.093
66ML-2-4	1/8	1/4	11/16	1.22	.093
66ML-5/32-2	5/32	1/8	9/16	.98	.110
66ML-5/32-4	5/32	1/4	11/16	1.19	.110
66ML-4-2	1/4	1/8	9/16	.99	.190
66ML-4-4	1/4	1/4	11/16	1.20	.190
66ML-4-6	1/4	3/8	13/16	1.24	.190
66ML-6-4	3/8	1/4	11/16	1.28	.312
66ML-6-6	3/8	3/8	13/16	1.36	.312
66ML-6-8	3/8	1/2	1	1.38	.312
66ML-8-6	1/2	3/8	13/16	1.35	.440
66ML-8-8	1/2	1/2	1	1.58	.440



Female Bulkhead 66MLBH

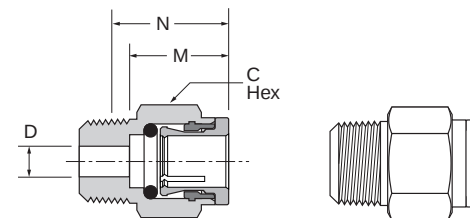
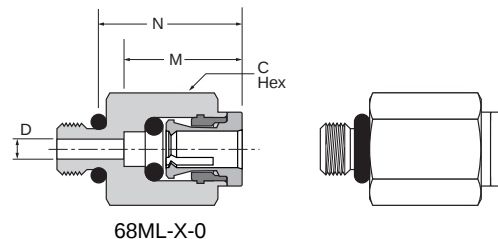
PART NO.	TUBE SIZE	PIPE THREAD NPTF	B THREAD	C HEX	P MAX	L	FLOW DIA. D.
66MLBH-2-4	1/8	1/4	3/8-24	11/16	.31	1.22	.093
66MLBH-5/32-2	5/32	1/8	7/16-24	9/16	.36	1.07	.110
66MLBH-5/32-4	5/32	1/4	7/16-24	11/16	.36	1.29	.110
66MLBH-4-2	1/4	1/8	1/2-24	9/16	.36	1.06	.190
66MLBH-4-4	1/4	1/4	1/2-24	11/16	.36	1.25	.190
66MLBH-6-6	3/8	3/8	3/4-16	7/8	.36	1.34	.312
66MLBH-8-6	1/2	3/8	7/8-14	1	.36	1.41	.440
66MLBH-8-8	1/2	1/2	7/8-14	1	.36	1.64	.440



B

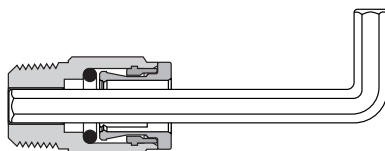
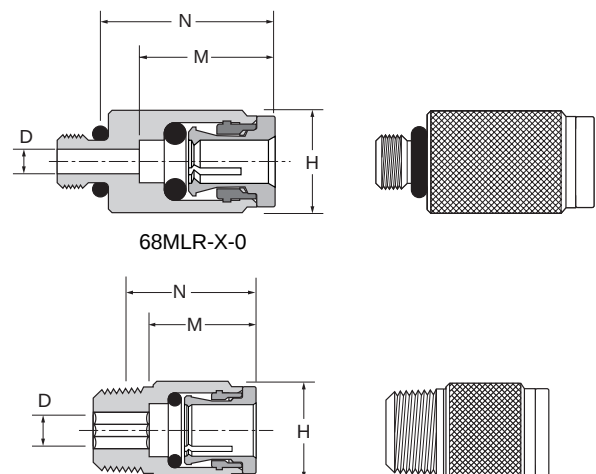
Microlok Male Connector W68ML

PART NO.	TUBE SIZE	PIPE THREAD	C HEX	ASSM. HT. N	M	FLOW DIA. D
W68ML-2-1	1/8	1/16	3/8	.50	.49	.094
W68ML-2-2	1/8	1/8	7/16	.48	.49	.094
W68ML-2-4	1/8	1/4	9/16	.39	.49	.094
68ML-2-0	1/8	10-32	3/8	.59	.49	.078
W68ML-5/32-1	5/32	1/16	7/16	.53	.49	.094
W68ML-5/32-2	5/32	1/8	7/16	.33	.49	.110
W68ML-5/32-4	5/32	1/4	5/8	.45	.49	.110
68ML-5/32-0	5/32	10-32	7/16	.60	.49	.078
W68ML-4-1	1/4	1/16	7/16	.68	.52	.141
W68ML-4-2	1/4	1/8	1/2	.57	.52	.156
W68ML-4-4	1/4	1/4	5/8	.46	.52	.156
W68ML-4-6	1/4	3/8	11/16	.52	.52	.200
68ML-4-0	1/4	10-32	7/16	.60	.52	.078
W68ML-6-2	3/8	1/8	5/8	.87	.80	.220
W68ML-6-4	3/8	1/4	5/8	.83	.80	.314
W68ML-6-6	3/8	3/8	11/16	.64	.80	.314
W68ML-6-8	3/8	1/2	7/8	.72	.80	.314
W68ML-8-4	1/2	1/4	3/4	1.07	.84	.314
W68ML-8-6	1/2	3/8	3/4	.84	.84	.440
W68ML-8-8	1/2	1/2	7/8	.75	.84	.440



Microlok Round Body Male Connector W68MLR

PART NO.	TUBE SIZE	PIPE THREAD	BODY DIA. H	INTERNAL HEX	ASSM. HT. N	M	FLOW DIA. D
68MLR-2-0	1/8	10-32	.34	-	.54	.49	.078
W68MLR-5/32-1	5/32	1/16	.38	1/8	.54	.49	.126
W68MLR-5/32-2	5/32	1/8	.43	1/8	.56	.49	.126
68MLR-5/32-0	5/32	10-32	.38	-	.63	.49	.078
W68MLR-4-1	1/4	1/16	.47	5/32	.68	.52	.156
W68MLR-4-2	1/4	1/8	.47	3/16	.59	.52	.188
W68MLR-4-4	1/4	1/4	.59	3/16	.51	.52	.188
68MLR-4-0	1/4	10-32	.47	-	.68	.52	.094
W68MLR-6-2	3/8	1/8	.63	3/16	.97	.80	.191
W68MLR-6-4	3/8	1/4	.63	1/4	.83	.80	.254
W68MLR-6-6	3/8	3/8	.69	1/4	.64	.80	.254
WMLR-8-4	1/2	1/4	.75	5/16	1.07	.84	.316
W68MLR-8-6	1/2	3/8	.75	3/8	.89	.84	.379
W68MLR-8-8	1/2	1/2	.88	3/8	.75	.84	.379

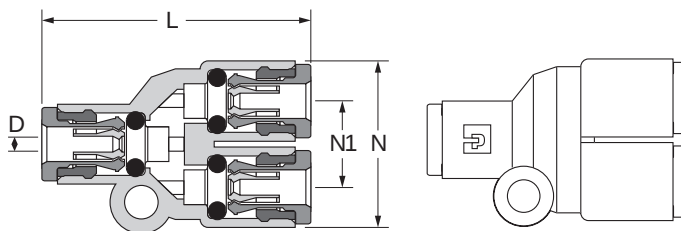


5/32" and larger straight Microlok round body Male Connectors with Pipe Threads have an internal hex for the use of an Allen Key to allow the fitting to be mounted in any position. This also permits close porting not possible with a standard wrench.

Union Y Connector 362ML

PART NO.	TUBE SIZE	MOUNTING HOLE DIA.	L	N	N1
362ML-2	1/8	.13	1.02	.64	.33
362ML-5/32	5/32	.13	1.08	.71	.38
362ML-4	1/4	.13	1.23	.90	.48
362ML-6*	3/8		2.22	1.37	.68

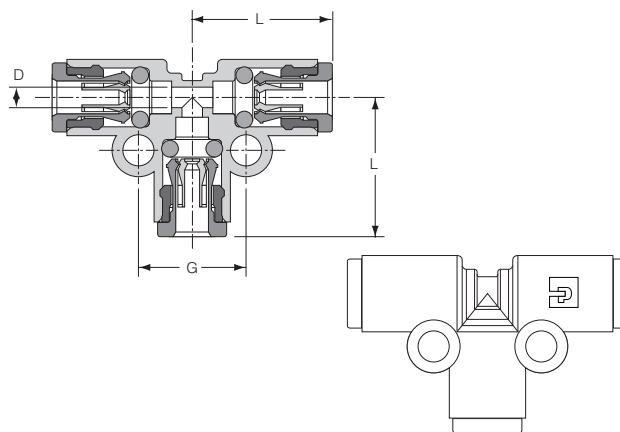
*3/8 has no mounting hole

**Union Tee 364ML**

Composite Body

PART NO.	TUBE SIZE	MOUNTING HOLE DIA.	L	G	FLOW DIA. D
364ML-2	1/8	.13	.56	.43	.081
364ML-5/32	5/32	.13	.58	.46	.110
364ML-4	1/4	.13	.67	.53	.190
364ML-6*	3/8		1.11		.250
364ML-8*	1/2		1.17		.376

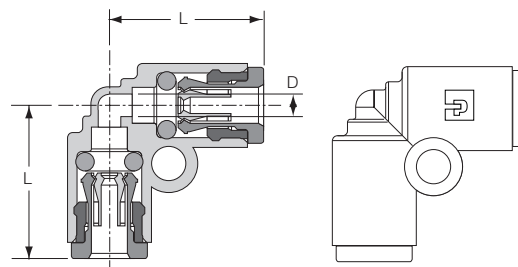
* 3/8 & 1/2 have no mounting hole

**Union Elbow 365ML**

Composite Body

PART NO.	TUBE SIZE	MOUNTING HOLE DIA.	L	FLOW DIA. D
365ML-2	1/8	.13	.56	.081
365ML-5/32	5/32	.13	.60	.106
365ML-4	1/4	.13	.67	.190
365ML-6*	3/8		1.11	.250
365ML-8*	1/2		1.15	.376

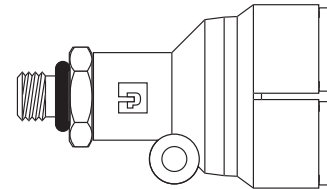
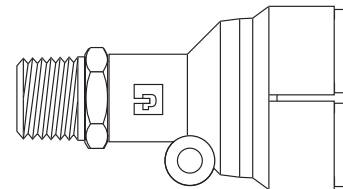
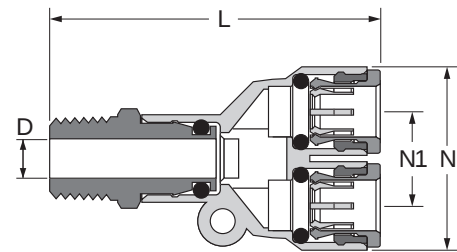
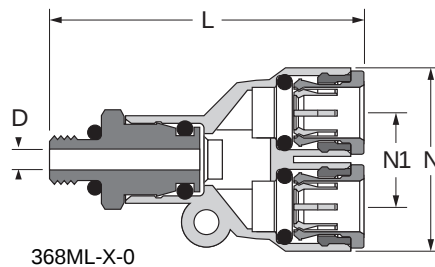
* 3/8 & 1/2 have no mounting hole



Union Y Male Connector 368ML

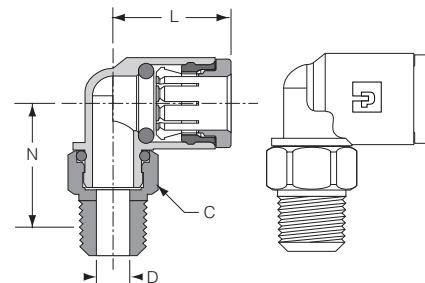
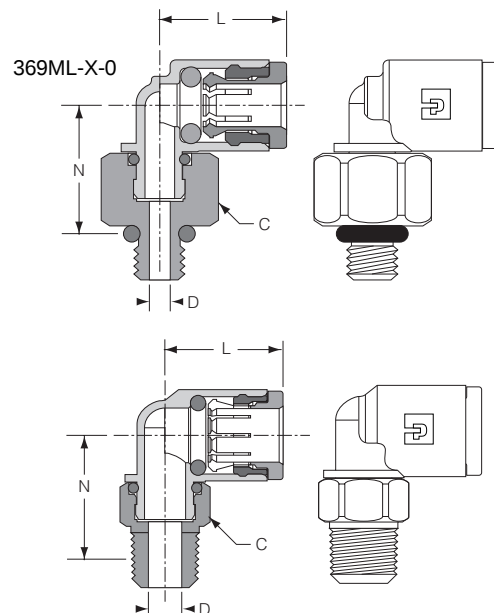
PART NO.	TUBE SIZE	PIPE SIZE	MOUNTING HOLE DIA.	L	N	N1	FLOW DIA. D
368ML-2-0	1/8	10-32	.13	1.28	.64	.33	.060
W368ML-2-1	1/8	1/16	.13	1.42	.64	.33	.060
W368ML-2-2	1/8	1/8	.13	1.42	.64	.33	.060
368ML-5/32-0	5/32	10-32	.13	1.35	.71	.38	.078
W368ML-5/32-1	5/32	1/16	.13	1.48	.71	.38	.080
W368ML-5/32-2	5/32	1/8	.13	1.48	.71	.38	.080
368ML-4-0	1/4	10-32	.13	1.48	.90	.48	.078
W368ML-4-1	1/4	1/16	.13	1.62	.90	.48	.130
W368ML-4-2	1/4	1/8	.13	1.62	.90	.48	.130
W368ML-4-4	1/4	1/4	.13	1.96	.90	.48	.130
W368ML-6-4*	3/8	1/4	.	2.68	1.37	.68	.265
W368ML-6-6*	3/8	3/8	.	2.68	1.37	.68	.265
W368ML-6-8*	3/8	1/2	.	2.87	1.37	.68	.265

*3/8 has no mounting hole

**Male Elbow Swivel 90° W369ML**

Composite Body

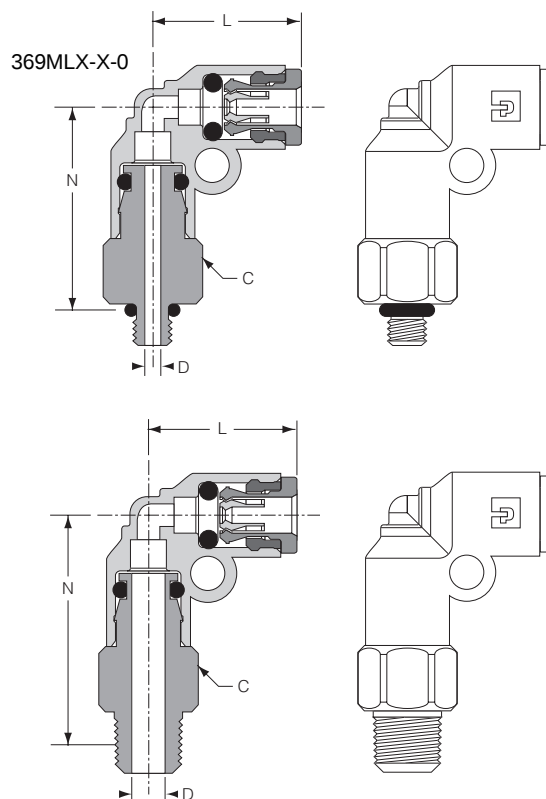
PART NO.	TUBE SIZE	PIPE THREAD	C HEX	L	ASSM. HT. N	FLOW DIA. D
369ML-2-0	1/8	10-32	3/8	.46	.45	.078
W369ML-2-1	1/8	1/16	3/8	.46	.48	.110
W369ML-2-2	1/8	1/8	7/16	.46	.40	.110
W369ML-2-4	1/8	1/4	9/16	.46	.49	.110
369ML-5/32-0	5/32	10-32	3/8	.46	.45	.078
W369ML-5/32-1	5/32	1/16	3/8	.46	.48	.110
W369ML-5/32-2	5/32	1/8	7/16	.46	.40	.110
W369ML-5/32-4	5/32	1/4	5/8	.46	.49	.110
369ML-4-0	1/4	10-32	3/8	.55	.54	.078
W369ML-4-1	1/4	1/16	3/8	.55	.57	.156
W369ML-4-2	1/4	1/8	7/16	.55	.49	.156
W369ML-4-4	1/4	1/4	9/16	.55	.57	.156
W369ML-4-6	1/4	3/8	11/16	.55	.66	.156
W369ML-6-2	3/8	1/8	3/4	1.11	.88	.220
W369ML-6-4	3/8	1/4	3/4	1.11	.95	.250
W369ML-6-6	3/8	3/8	3/4	1.11	.93	.250
W369ML-6-8	3/8	1/2	7/8	1.11	1.01	.250
W369ML-8-4	1/2	1/4	7/8	1.15	1.05	.313
W369ML-8-6	1/2	3/8	7/8	1.15	1.04	.375
W369ML-8-8	1/2	1/2	7/8	1.15	1.12	.328



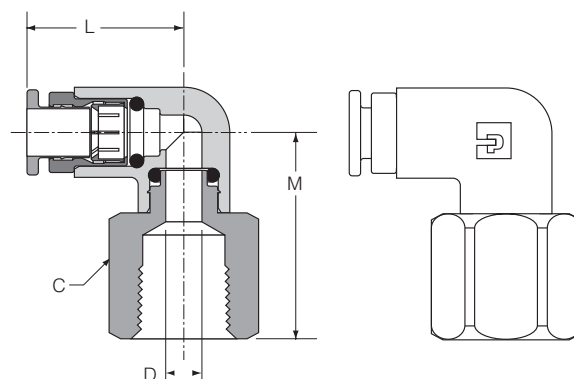
Extended Male Elbow Swivel 369MLX

PART NO.	TUBE SIZE	PIPE THREAD	MOUNTING HOLE DIA.	C HEX	L	ASSM HT. N	FLOW DIA D
369MLX-2-0	1/8	10-32	.13	3/8	.56	.84	.078
W369MLX-2-1	1/8	1/16	.13	3/8	.56	.85	.081
W369MLX-2-2	1/8	1/8	.13	7/16	.56	.77	.081
369MLX-5/32-0	5/32	10-32	.13	3/8	.58	.86	.078
W369MLX-5/32-1	5/32	1/16	.13	3/8	.58	.86	.106
W39MLX-5/32-2	5/32	1/8	.13	7/16	.58	.78	.106
W369MLX-5/32-4	5/32	1/4	.13	9/16	.58	.86	.106
369MLX-4-0	1/4	10-32	.13	3/8	.67	1.00	.078
W369MLX-4-1	1/4	1/16	.13	7/16	.67	1.05	.156
W369MLX-4-2	1/4	1/8	.13	7/16	.67	.93	.190
W369MLX-4-4	1/4	1/4	.13	9/16	.67	1.00	.190
W369MLX-6-4*	3/8	1/4		3/4	1.11	1.74	.250
W369MLX-6-6*	3/8	3/8		3/4	1.11	1.73	.250
W369MLX-6-8*	3/8	1/2		7/8	1.11	1.82	.250
W369MLX-8-4*	1/2	1/4		7/8	1.15	2.00	.313
W369MLX-8-6*	1/2	3/8		7/8	1.15	1.99	.328
W369MLX-8-8*	1/2	1/2		7/8	1.15	2.08	.328

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

**Female Micro Swivel Elbow 370ML**

PART NO.	TUBE SIZE	PIPE THREAD	C HEX	L	M	FLOW DIA D
370ML-2-2	1/8	1/8	9/16	.62	.68	.110
370ML-4-4	1/4	1/4	11/16	.83	1.11	.190

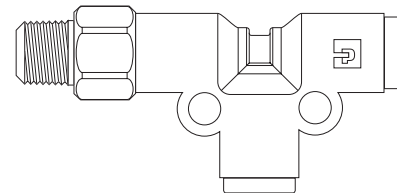
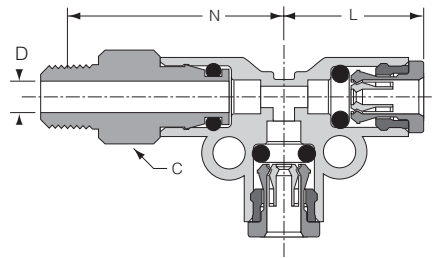
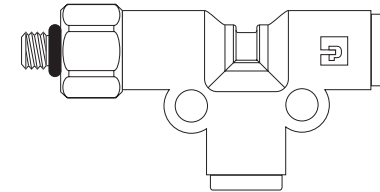
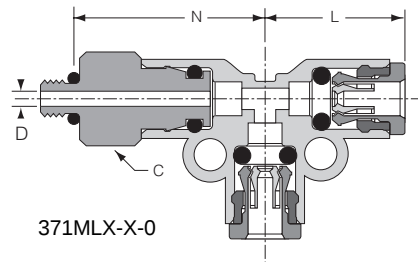


Male Run Tee Swivel W371ML

Composite Body

PART NO.	TUBE SIZE	PIPE THREAD	MOUNTING HOLE DIA.	C HEX	L	ASSM. HT. N	FLOW DIA. D
371ML-2-0	1/8	10-32	.13	3/8	.56	.85	.078
W371ML-2-1	1/8	1/16	.13	3/8	.56	.85	.081
W371ML-2-2	1/8	1/8	.13	7/16	.56	.77	.081
371ML-5/32-0	5/32	10-32	.13	3/8	.58	.85	.078
W371ML-5/32-1	5/32	1/16	.13	3/8	.58	.86	.106
W371ML-5/32-2	5/32	1/8	.13	7/16	.58	.78	.106
371ML-4-0*	1/4	10-32		3/8	.67	1.00	.078
W371ML-4-1*	1/4	1/16		3/8	.67	1.05	.156
W371ML-4-2*	1/4	1/8		7/16	.67	.93	.190
W371ML-4-4*	1/4	1/4		9/16	.67	1.00	.190
W371ML-6-2*	3/8	1/8		3/4	1.11	.88	.220
W371ML-6-4*	3/8	1/4		3/4	1.11	.97	.250
W371ML-6-6*	3/8	3/8		3/4	1.11	.94	.250
W371ML-6-8*	3/8	1/2		7/8	1.11	1.01	.250
W371ML-8-4*	1/2	1/4		7/8	1.15	1.07	.313
W371ML-8-6*	1/2	3/8		7/8	1.15	1.08	.328
W371ML-8-8*	1/2	1/2		7/8	1.15	1.15	.328

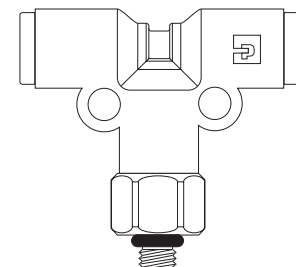
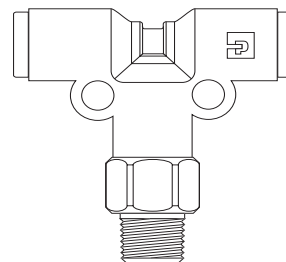
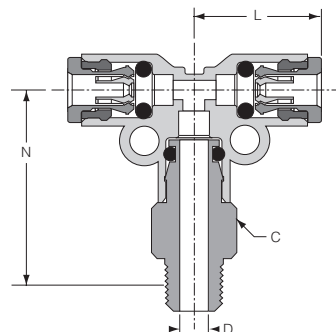
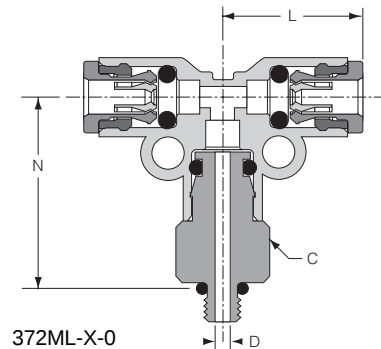
*1/4, 3/8 & 1/2 have no mounting hole

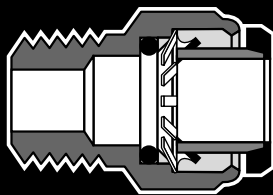
**Male Branch Tee Swivel W372ML**

Composite Body

PART NO.	TUBE SIZE	PIPE THREAD	MOUNTING HOLE DIA.	C HEX	L	ASSM. HT. N	FLOW DIA. D
372ML-2-0	1/8	10-32	.13	3/8	.56	.85	.078
W372ML-2-1	1/8	1/16	.13	3/8	.56	.85	.081
W372ML-2-2	1/8	1/8	.13	7/16	.56	.77	.081
372ML-5/32-0	5/32	10-32	.13	3/8	.58	.85	.078
W372ML-5/32-1	5/32	1/16	.13	3/8	.58	.86	.106
W372ML-5/32-2	5/32	1/8	.13	7/16	.58	.78	.106
372ML-4-0*	1/4	10-32		3/8	.67	1.00	.078
W372ML-4-1*	1/4	1/16		3/8	.67	1.05	.156
W372ML-4-2*	1/4	1/8		7/16	.67	.93	.190
W372ML-4-4*	1/4	1/4		9/16	.67	1.00	.190
W372ML-4-6	1/4	3/8	.17	11/16	.67	1.36	.190
W372ML-6-2*	3/8	1/8		3/4	1.11	.91	.220
W372ML-6-4*	3/8	1/4		3/4	1.11	.98	.250
W372ML-6-6*	3/8	3/8		3/4	1.11	.97	.250
W372ML-6-8*	3/8	1/2		7/8	1.11	1.05	.250
W372ML-8-4*	1/2	1/4		7/8	1.15	1.04	.313
W372ML-8-6*	1/2	3/8		7/8	1.15	1.05	.328
W372ML-8-8*	1/2	1/2		7/8	1.15	1.12	.328

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





Prestolok/Prestolok II Fittings

Advantages

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

Materials

Prestolok Bodies: CA377, CA360, CA345
 Prestolok II Bodies: Glass Filled Nylon
 O-Ring: Nitrile (other compounds available on request)
 Release Button: Polyacetal
 Grab Ring: Stainless Steel

Applications

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

Working pressure and temperature ranges

Prestolok: Zero to 200°F at up to 300 PSI depending on tubing being used.
 Prestolok II: Zero to 150°F at up to 150 PSI depending on tubing being used

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

Assembly Instructions

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

Order

By part number and name.

Nomenclature

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

Example:

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

Sizes

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

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.

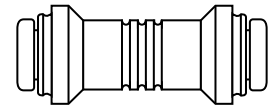
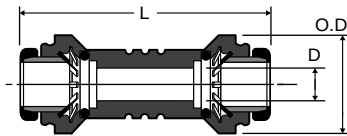
Pricing

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.

Equal Union 32PL

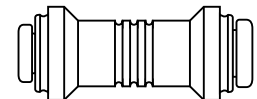
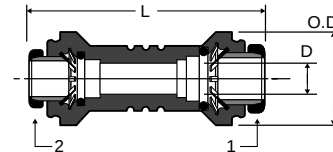
Composite Body

PART NO.	TUBE SIZE	O.D.	L	FLOW DIA. D
32PL-2	1/8	.51	1.32	.09
32PL-5/32	5/32	.51	1.32	.12
32PL-3	3/16	.59	1.37	.16
32PL-4	1/4	.59	1.37	.19
32PL-5	5/16	.67	1.49	.25
32PL-6	3/8	.82	1.76	.31

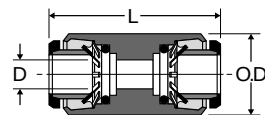
**B****Unequal Union 32PL**

Composite Body

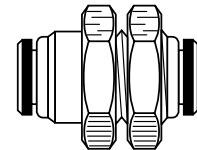
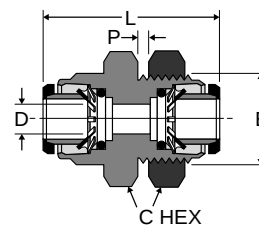
PART NO.	1 TUBE SIZE	2 TUBE SIZE	O.D.	L	FLOW DIA. D
32PL-5/32-2	5/32	1/8	.51	1.32	.09
32PL-4-2	1/4	1/8	.59	1.37	.09
32PL-5-4	5/16	1/4	.67	1.47	.19
32PL-6-4	3/8	1/4	.82	1.75	.19

**Union 62PL**

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

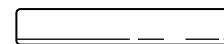
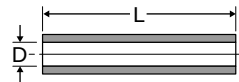
**Bulkhead Union 62PLBH**

PART NO.	TUBE SIZE	BULKHEAD HOLE DIA. B	C HEX	P MAX.	L	D
62PLBH-2	1/8	7/16	9/16	.39	1.44	.094
62PLBH-5/32	5/32	7/16	9/16	.39	1.44	.125
62PLBH-4	1/4	9/16	11/16	.29	1.51	.188
62PLBH-5	5/16	5/8	3/4	.60	1.68	.250
62PLBH-6	3/8	3/4	7/8	.54	1.68	.312
62PLBH-8	1/2	7/8	1	.66	2.07	.375

**Double Male Union 63PL**

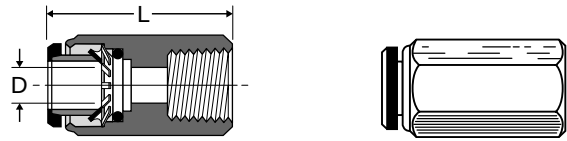
Plastic Body

PART NO.	TUBE SIZE	L	D
63PL-2	1/8	1.49	.078
63PL-5/32	5/32	1.49	.106
63PL-4	1/4	1.61	.188
63PL-5	5/16	1.61	.236
63PL-6	3/8	2.00	.295
63PL-8	1/2	2.12	.374

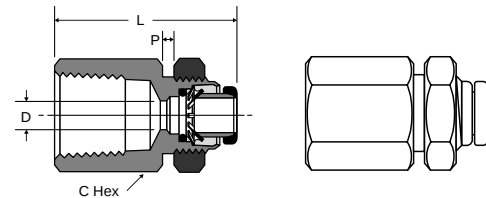


Female Connector 66PL

PART NO.	TUBE SIZE	PIPE THREAD (NPTF)	L	D
66PL-2-2	1/8	1/8	1.18	.094
66PL-3-2	3/16	1/8	1.16	.156
66PL-5/32-2	5/32	1/8	1.18	.125
66PL-5/32-4	5/32	1/4	1.39	.125
66PL-4-2	1/4	1/8	1.21	.188
66PL-4-4	1/4	1/4	1.42	.188
66PL-5-2	5/16	1/8	1.27	.250
66PL-5-4	5/16	1/4	1.47	.250
66PL-6-4	3/8	1/4	1.46	.312
66PL-6-6	3/8	3/8	1.51	.312

**Female Bulkhead 66PLBH**

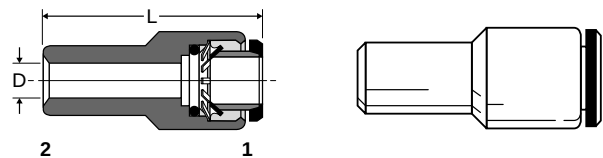
PART NO.	TUBE SIZE	PIPE THREAD (NPTF)	C HEX	P MAX.	L	FLOW DIA. D	BULKHEAD HOLE DIA.
66PLBH-5/32-4	5/32	1/4	11/16	.24	1.38	.13	1/2
66PLBH-4-4	1/4	1/4	11/16	.19	1.35	.18	9/16
66PLBH-6-6	3/8	3/8	1	.22	1.44	.31	7/8
66PLBH-8-6	1/2	3/8	1 1/4	.35	1.57	.34	1

**Tube End Reducer 67PPL**

Plastic Body

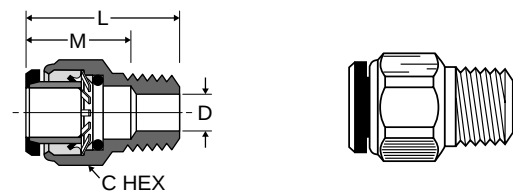
PART NO.	1 TUBE SIZE	2 TUBE SIZE	L	D
67PPL-2-5/32	1/8	5/32	1.48	.078
67PPL-2-4	1/8	1/4	1.48	.078
67PPL-5/32-4 *	5/32	1/4	1.48	.118
67PPL-5/32-5 *	5/32	5/16	1.41	.118
67PPL-5/32-6 *	5/32	3/8	1.63	.118
67PPL-4-5	1/4	5/16	1.52	.177
67PPL-4-6	1/4	3/8	1.64	.177
67PPL-4-8	1/4	1/2	1.72	.177
67PPL-5-6 *	5/16	3/8	1.79	.236
67PPL-6-8	3/8	1/2	1.92	.295

* Parts supplied with black bodies and black release buttons

**Male Connector W68PL**

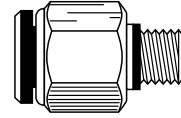
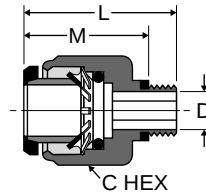
PART NO.	TUBE SIZE	PIPE THREAD (NPTF)	C HEX	L	M	D
W68PL-2-1	1/8	1/16	3/8	.85	.68	.094
W68PL-2-2	1/8	7/16	7/16	.85	.68	.094
W68PL-2-4	1/8	1/4	9/16	1.10	.68	.094
W68PL-3-2	3/16	1/8	7/16	.91	.63	.156
W68PL-3-4	3/16	1/4	9/16	1.10	.64	.156
W68PL-5/32-2	5/32	1/8	7/16	.85	.69	.125
W68PL-5/32-4	5/32	1/4	9/16	1.10	.69	.125
W68PL-4-1	1/4	1/16	1/2	1.15	.71	.140
W68PL-4-2	1/4	1/8	1/2	.97	.71	.188
W68PL-4-4	1/4	1/4	9/16	1.10	.71	.188
W68PL-4-6	1/4	3/8	3/4	1.14	.71	.188
W68PL-5-2	5/16	1/8	9/16	1.23	.78	.234
W68PL-5-4	5/16	1/4	9/16	1.11	.78	.250
W68PL-5-6	5/16	3/8	11/16	1.12	.79	.250
W68PL-6-2	3/8	1/8	5/8	1.26	.78	.234
W68PL-6-4	3/8	1/4	5/8	1.14	.78	.312
W68PL-6-6	3/8	3/8	11/16	1.09	.79	.312
W68PL-6-8	3/8	1/2	7/8	1.34	.78	.312
W68PL-8-4	1/2	1/4	13/16	1.52	.87	.344
W68PL-8-6	1/2	3/8	13/16	1.31	.87	.344
W68PL-8-8	1/2	1/2	7/8	1.43	.87	.375
68PL-5/32-4LT*	5/32	1/4-28	7/16	.88	.69	.093

* SAE-LT Threads

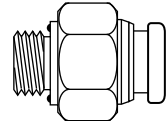
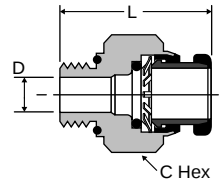


Male Connector 68PL-X-10X32

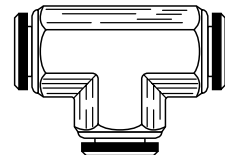
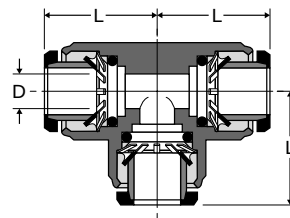
PART NO.	TUBE SIZE	THREAD [UNF]	C HEX	L	M	D	INTERNAL BROACH
68PL-2-10X32	1/8	10-32	3/8	.93	.68	.094	.094
68PL-5/32-10X32	5/32	10-32	13/32	.95	.69	.094	.094
68PL-4-10X32	1/4	10-32	1/2	1.00	.71	.094	.094

**B****Male Connector PLHBF4-B BSPP**

PART NO.	TUBE SIZE	PIPE THREAD BSPP	C HEX	L	D
3-1/8PLHBF4-B	3/16	1/8-28	11/16	.96	.156
3-1/4PLHBF4-B	3/16	1/4-19	3/4	.97	.156
4-1/8PLHBF4-B	1/4	1/8-28	11/16	1.13	.188
4-1/4PLHBF4-B	1/4	1/4-19	3/4	1.13	.188
4-3/8PLHBF4-B	1/4	3/8-19	7/8	1.13	.188
6-1/4PLHBF4-B	3/8	1/4-19	3/4	1.26	.256
6-3/8PLHBF4-B	3/8	3/8-19	7/8	1.26	.312
6-1/2PLHBF4-B	3/8	1/2-14	1-1/16	1.26	.312
8-3/8PLHBF4-B	1/2	3/8-19	7/8	1.41	.452
8-1/2PLHBF4-B	1/2	1/2-14	1-1/16	1.37	.452

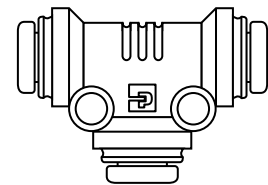
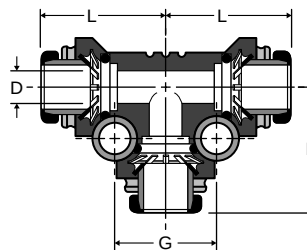
**Union Tee 164PL**

PART NO.	TUBE SIZE	L	D
164PL-2	1/8	.78	.094
164PL-3	3/16	.79	.156
164PL-5/32	5/32	.81	.125
164PL-4	1/4	.94	.188
164PL-5	5/16	.99	.250
164PL-6	3/8	1.04	.312
164PL-8	1/2	1.17	.375

**Union Tee 364PL**

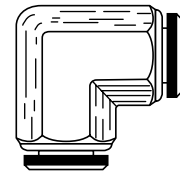
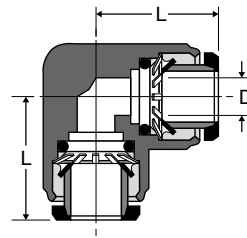
Composite Body

PART NO.	TUBE SIZE	MOUNTING HOLE DIA.	L	G	D
364PL-2	1/8	.13	.71	.52	.094
364PL-5/32	5/32	.13	.71	.52	.125
364PL-3	3/16	.17	.76	.64	.156
364PL-4	1/4	.17	.76	.64	.188
364PL-5	5/16	.17	.84	.71	.250
364PL-6	3/8	.17	1.04	.83	.312
364PL-8	1/2	.17	1.30	.99	.344



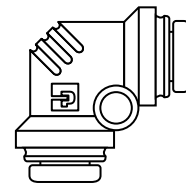
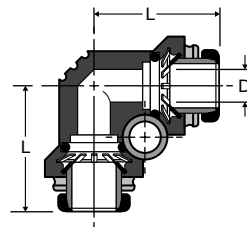
Union Elbow 165PL

PART NO.	TUBE SIZE	L	D
165PL-2	1/8	.77	.094
165PL-5/32	5/32	.79	.125
165PL-4	1/4	.86	.188
165PL-5	5/16	.97	.250
165PL-6	3/8	1.03	.312
165PL-8	1/2	1.17	.375

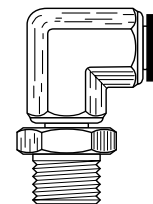
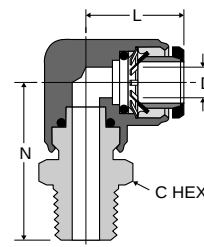
**Union Elbow 365PL**

Composite Body

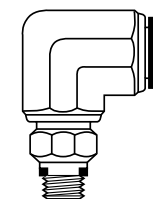
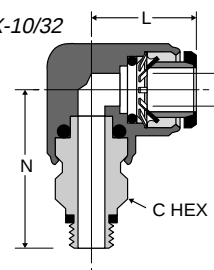
PART NO.	TUBE SIZE	MOUNTING HOLE DIA.	L	D
365PL-2	1/8	.13	.71	.094
365PL-3	3/16	.17	.76	.156
365PL-5/32	5/32	.13	.71	.125
365PL-4	1/4	.17	.76	.188
365PL-5	5/16	.17	.84	.250
365PL-6	3/8	.17	1.04	.312
365PL-8	1/2	.17	1.03	.344

**Male Elbow Swivel 90° W169PL**

PART NO.	TUBE SIZE	PIPE THREAD [NPTF]	C HEX	L	N	D
W169PL-2-2	1/8	1/8	7/16	.78	1.22	.094
169PL-2-10X32	1/8	10-32	3/8	.78	1.02	.094
W169PL-2-4	1/8	1/4	9/16	.78	1.40	.094
W169PL-3-2	3/16	1/8	7/16	.79	1.16	.156
W169PL-5/32-2	5/32	1/8	7/16	.80	1.24	.109
W169PL-5/32-4	5/32	1/4	9/16	.81	1.42	.109
169PL5/32-10X32	5/32	10-32	3/8	.81	1.04	.094
W169PL-4-2	1/4	1/8	7/16	.86	1.13	.172
W169PL-4-4	1/4	1/4	9/16	.86	1.31	.172
W169PL-4-6	1/4	3/8	11/16	.86	1.35	.172
169PL-4-10X32	1/4	10-32	7/16	.86	.94	.094
W169PL-5-2	5/16	1/8	1/2	.99	1.42	.234
W169PL-5-4	5/16	1/4	9/16	.99	1.60	.234
W169PL-6-2	3/8	1/8	9/16	1.04	1.49	.297
W169PL-6-4	3/8	1/4	9/16	1.04	1.66	.297
W169PL-6-6	3/8	3/8	11/16	1.04	1.70	.297
W169PL-6-8	3/8	1/2	7/8	1.04	1.89	.297
W169PL-8-4	1/2	1/4	11/16	1.17	1.74	.344
W169PL-8-6	1/2	3/8	3/4	1.17	1.77	.375
W169PL-8-8	1/2	1/2	7/8	1.16	1.97	.375



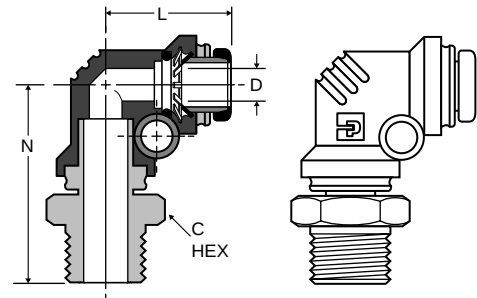
169PL-X-10/32



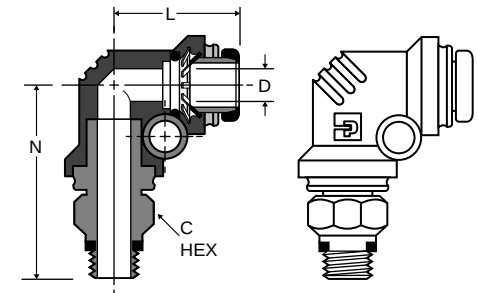
Male Elbow Swivel 90° W369PL

Composite Body

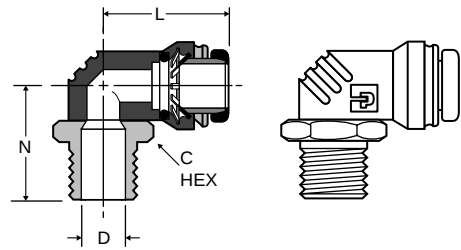
PART NO.	TUBE SIZE	PIPE THREAD (NPTF)	C HEX	MOUNTING HOLE DIA.	L	N	D
W369PL-2-1	1/8	1/16	3/8	.13	.71	1.08	.078
W369PL-2-2	1/8	1/8	7/16	.13	.71	1.14	.078
369PL-2-10X32	1/8	10-32	3/8	.13	.71	.94	.078
W369PL-2-4	1/8	1/4	9/16	.13	.71	1.32	.078
W369PL-3-2	3/16	1/8	7/16	.17	.76	1.20	.147
W369PL-3-4	3/16	1/4	9/16	.17	.76	1.44	.147
W369PL-5/32-2	5/32	1/8	7/16	.13	.74	1.14	.094
W369PL-5/32-4	5/32	1/4	9/16	.13	.74	1.32	.094
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	.77	1.38	.172
W369PL-4-6	1/4	3/8	11/16	.17	.77	1.42	.172
369PL-4-10X32	1/4	10-32	7/16	.17	.76	1.05	.094
W369PL-5-2	5/16	1/8	1/2	.17	.84	1.23	.234
W369PL-5-4	5/16	1/4	9/16	.17	.84	1.46	.234
W369PL-6-2	3/8	1/8	9/16	.17	1.04	1.48	.234
W369PL-6-4	3/8	1/4	5/8	.17	1.04	1.66	.234
W369PL-6-6	3/8	3/8	11/16	.17	1.04	1.66	.297
W369PL-6-8	3/8	1/2	7/8	.17	1.05	1.85	.297
W369PL-8-4	1/2	1/4	3/4	.17	1.03	1.80	.314
W369PL-8-6	1/2	3/8	3/4	.17	1.03	1.80	.375
W369PL-8-8	1/2	1/2	7/8	.17	1.03	1.99	.375



369PL-X-10/32

**Compact Elbow W369PLC**

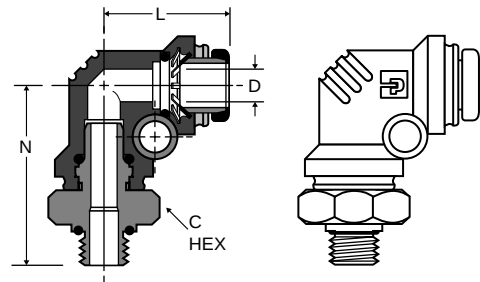
PART NO.	TUBE SIZE	PIPE THREAD (NPTF)	C HEX	L	N	FLOW DIA. D
W369PLC-2-2	1/8	1/8	7/16	.81	.71	.08
W369PLC-5/32-2	5/32	1/8	7/16	.83	.71	.08
W369PLC-5/32-4	5/32	1/4	9/16	.83	.89	.08
W369PLC-3-2	3/16	1/8	7/16	.86	.81	.08
W369PLC-4-2	1/4	1/8	7/16	.86	.81	.08
W369PLC-4-4	1/4	1/4	9/16	.86	.99	.08
W369PLC-5-4	5/16	1/4	9/16	.94	.97	.11
W369PLC-6-4	3/8	1/4	5/8	1.13	1.07	.20
W369PLC-6-6	3/8	3/8	3/4	1.13	1.15	.20



Male Elbow Swivel PLE2BF4-K BSPP

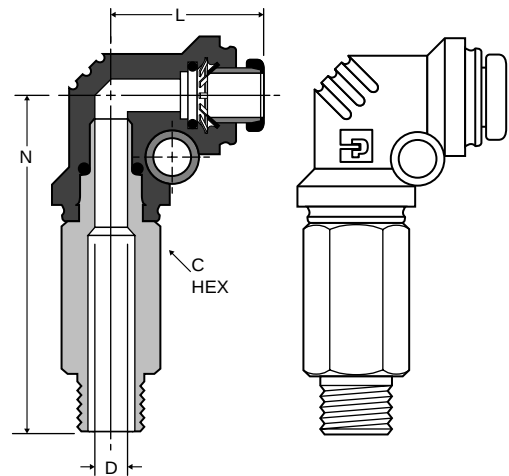
Composite Body

PART NO.	TUBE SIZE	PIPE THREAD BSPP	C HEX	MOUNTING HOLE DIA.	L	N	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	.180
4-1/4PLE2BF4-K	1/4	1/4-19	3/4	.17	.77	1.31	.172
4-3/8PLE2BF4-K	1/4	3/8-19	7/8	.17	.76	1.31	.182
6-1/4PLE2BF4-K	3/8	1/4-19	3/4	.17	1.04	1.57	.297
6-3/8PLE2BF4-K	3/8	3/8-19	7/8	.17	1.04	1.68	.297
6-1/2PLE2BF4-K	3/8	1/2-14	1-1/16	.17	1.04	1.83	.297
8-3/8PLE2BF4-K	1/2	3/8-19	7/8	.17	1.03	1.63	.406
8-1/2PLE2BF4-K	1/2	1/2-14	1-1/16	.17	1.03	1.78	.406

**Male Elbow Swivel 90° W369PLX**

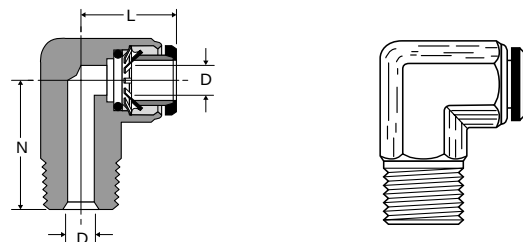
Composite Body

PART NO.	TUBE SIZE	PIPE THREAD [NPTF]	C HEX	MOUNTING HOLE DIA.	L	N	D
W369PLX-2-2	1/8	1/8	7/16	.13	.73	1.74	.080
W369PLX-2-4	1/8	1/4	9/16	.13	.73	1.74	.080
W369PLX-3-2	3/16	1/8	7/16	.17	.76	1.88	.150
W369PLX-3-4	3/16	1/4	9/16	.17	.76	1.88	.150
W369PLX-3-6	3/16	3/8	11/16	.17	.76	1.88	.150
W369PLX-4-2	1/4	1/8	7/16	.17	.76	1.88	.170
W369PLX-4-4	1/4	1/4	9/16	.17	.76	1.88	.170
W369PLX-4-6	1/4	3/8	11/16	.17	.76	1.88	.170
369PLX-5/32-0	5/32	10-32	3/8	.13	.73	1.54	.090
W369PLX-5/32-2	5/32	1/8	7/16	.13	.73	1.54	.090
W369PLX-5/32-4	5/32	1/4	9/16	.13	.73	1.54	.090
W369PLX-5-2	5/16	1/8	9/16	.17	.84	1.99	.223
W369PLX-5-4	5/16	1/4	9/16	.17	.84	1.99	.230
W369PLX-5-6	5/16	3/8	11/16	.17	.84	1.99	.230
W369PLX-6-4	3/8	1/4	5/8	.17	1.04	2.56	.223
W369PLX-6-6	3/8	3/8	11/16	.17	1.04	2.56	.300
W369PLX-6-8	3/8	1/2	7/8	.17	1.04	2.56	.300
W369PLX-8-4	1/2	1/4	3/4	.17	1.03	2.80	.310
W369PLX-8-6	1/2	3/8	3/4	.17	1.03	2.80	.340
W369PLX-8-8	1/2	1/2	7/8	.17	1.03	2.80	.340

**Male Elbow 90° W169PLNS**

PART NO.	TUBE SIZE	PIPE THREAD [NPTF]	L	N	D
W169PLNS-2-2	1/8	1/8	.78	.68	.094
W169PLNS-5/32-2	5/32	1/8	.81	.68	.125
W169PLNS-5/32-4	5/32	1/4	.81	.89	.125
W169PLNS-4-2	1/4	1/8	.86	.68	.188
W169PLNS-4-4	1/4	1/4	.96	.89	.188
W169PLNS-5-2	5/16	1/8	.98	.78	.234
W169PLNS-5-4	5/16	1/4	1.02	.97	.250
W169PLNS-6-4	3/8	1/4	1.04	.97	.312
W169PLNS-6-6	3/8	3/8	1.11	1.09	.312
W169PLNS-6-8	3/8	1/2	1.20	1.26	.312
W169PLNS-8-6	1/2	3/8	1.31	1.15	.375
W169PLNS-8-8	1/2	1/2	1.31	1.31	.375
169PLNS-5/32-4LT*	5/32	1/4-28	.60	.48	.090

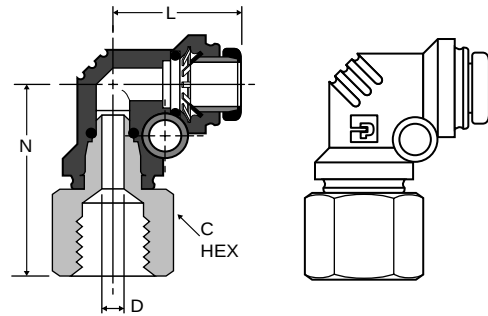
* SAE-LT Threads



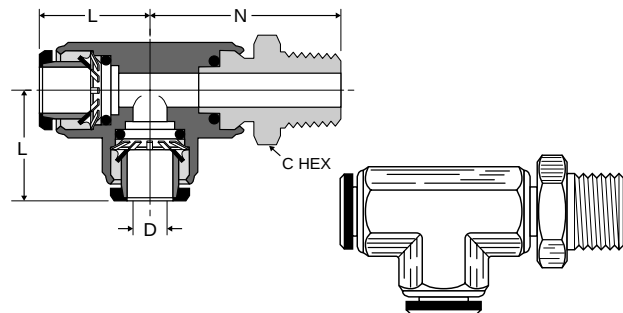
Female Elbow Swivel 370PL

Composite Body

PART NO.	TUBE SIZE	PIPE THREAD [NPTF]	C HEX	MOUNTING HOLE DIA.	L	N	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	.090
370PL-5/32-4	5/32	1/4	3/4	.13	.73	1.23	.090
370PL-4-10x32	1/4	10x32	7/16	.17	.76	1.02	.159
370PL-4-2	1/4	1/8	9/16	.17	.76	1.07	.170
370PL-4-4	1/4	1/4	3/4	.17	.76	1.29	.170
370PL-5-4	5/16	1/4	3/4	.17	.84	1.37	.230
370PL-6-4	3/8	1/4	3/4	.17	1.04	1.57	.297
370PL-8-6	1/2	3/8	7/8	.17	1.03	1.57	.340

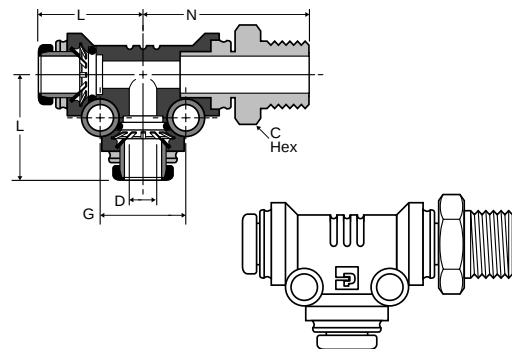
**B****Male Run Tee Swivel W171PL**

PART NO.	TUBE SIZE	PIPE THREAD [NPTF]	C HEX	L	N	D
W171PL-2-2	1/8	1/8	7/16	.78	1.22	.078
W171PL-5/32-2	5/32	1/8	7/16	.80	1.24	.109
W171PL-4-2	1/4	1/8	7/16	.96	1.29	.188
W171PL-4-4	1/4	1/4	9/16	.96	1.47	.188
W171PL-5-2	5/16	1/8	1/2	.99	1.42	.234
W171PL-5-4	5/16	1/4	9/16	.99	1.60	.234
W171PL-6-4	3/8	1/4	9/16	1.04	1.66	.297
W171PL-6-6	3/8	3/8	11/16	1.04	1.70	.297
W171PL-8-6	1/2	3/8	3/4	1.19	1.79	.375
W171PL-8-8	1/2	1/2	7/8	1.19	1.98	.375

**Male Run Tee Swivel W371PL**

Composite Body

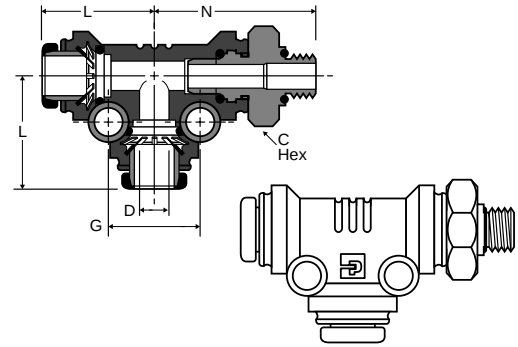
PART NO.	TUBE SIZE	PIPE THREAD [NPTF]	C HEX	MOUNTING HOLE DIA.	L	N	G	D
W371PL-2-1	1/8	1/16	3/8	.13	.71	1.08	.52	.078
W371PL-2-2	1/8	1/8	7/16	.13	.71	1.14	.52	.078
W371PL-2-4	1/8	1/4	9/16	.13	.71	1.32	.52	.080
371PL-2-10x32	1/8	10-32	3/8	.13	.71	.94	.52	.078
W371PL-3-2	3/16	1/8	7/16	.17	.76	1.20	.64	.150
W371PL-3-4	3/16	1/4	9/16	.17	.76	1.40	.64	.147
W371PL-5/32-2	5/32	1/8	7/16	.13	.71	1.32	.52	.094
W371PL-5/32-4	5/32	1/4	9/16	.13	.71	1.14	.52	.094
371PL5/32-10x32	5/32	10-32	3/8	.13	.71	.94	.52	.090
W371PL-4-1	1/4	1/16	7/16	.17	.76	1.20	.64	.094
W371PL-4-2	1/4	1/8	7/16	.17	.76	1.20	.64	.170
W371PL-4-4	1/4	1/4	9/16	.17	.76	1.38	.64	.170
371PL-4-10x32	1/4	10-32	7/16	.13	.76	1.05	.64	.094
W371PL-4-6	1/4	3/8	11/16	.17	.76	1.42	.64	.170
W371PL-5-2	5/16	1/8	9/16	.17	.84	1.28	.71	.220
W371PL-5-4	5/16	1/4	9/16	.17	.84	1.46	.71	.234
W371PL-6-2	3/8	1/8	9/16	.13	1.04	1.48	.83	.230
W371PL-6-4	3/8	1/4	5/8	.17	1.04	1.66	.83	.297
W371PL-6-6	3/8	3/8	11/16	.17	1.04	1.70	.83	.297
W371PL-6-8	3/8	1/2	7/8	.13	1.04	1.85	.83	.300
W371PL-8-4	1/2	1/4	3/4	.17	1.30	2.07	1.00	.310
W371PL-8-6	1/2	3/8	3/4	.17	1.30	1.68	1.00	.344
W371PL-8-8	1/2	1/2	7/8	.17	1.30	2.26	1.00	.344



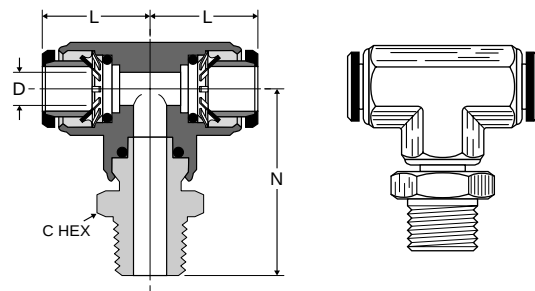
Male Run Tee Swivel PLR2BF4-K BSPP

Composite Body

PART NO.	TUBE SIZE	PIPE THREAD BSPP	C HEX	MOUNTING HOLE DIA.	L	N	G	D
3-1/4PLR2BF4-K	3/16	1/4-19	3/4	.17	.76	1.31	.64	.150
4-1/8PLR2BF4-K	1/4	1/8-28	11/16	.17	.76	1.06	.64	.170
4-1/4PLR2BF4-K	1/4	1/4-19	3/4	.17	.76	1.31	.64	.170
6-1/4PLR2BF4-K	3/8	1/4-19	3/4	.17	1.04	1.52	.83	.300
6-3/8PLR2BF4-K	3/8	3/8-19	7/8	.17	1.04	1.68	.83	.300
8-3/8PLR2BF4-K	1/2	3/8-19	7/8	.17	1.30	1.90	.99	.340
8-1/2PLR2BF4-K	1/2	1/2-19	1-1/16	.17	1.30	2.05	.99	.340

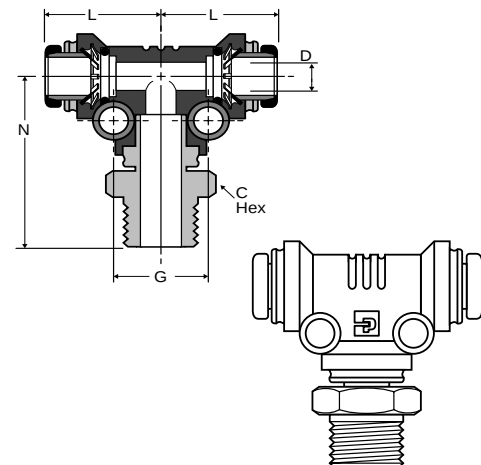
**Male Branch Tee Swivel W172PL**

PART NO.	TUBE SIZE	PIPE THREAD [NPTF]	C HEX	L	N	D
W172PL-2-2	1/8	1/8	7/16	.78	1.22	.078
W172PL-3-2	3/16	1/8	7/16	.78	1.17	.156
W172PL-5/32-2	5/32	1/8	7/16	.80	1.24	.109
W172PL-4-2	1/4	1/8	7/16	.96	1.26	.188
W172PL-4-4	1/4	1/4	9/16	.96	1.44	.188
W172PL-4-6	1/4	3/8	11/16	.96	1.51	.170
W172PL-5-2	5/16	1/8	1/2	.99	1.42	.234
W172PL-5-4	5/16	1/4	9/16	.99	1.60	.234
W172PL-6-4	3/8	1/4	9/16	1.04	1.66	.297
W172PL-6-6	3/8	3/8	11/16	1.04	1.70	.297
W172PL-8-4	1/2	1/4	11/16	1.17	1.74	.375
W172PL-8-6	1/2	3/8	3/4	1.19	1.79	.375
W172PL-8-8	1/2	1/2	7/8	1.19	1.98	.375

**Male Branch Tee Swivel W372PL**

Composite Body

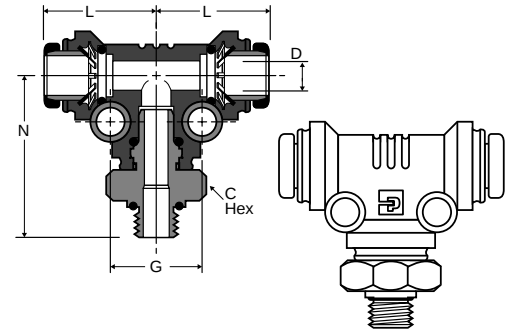
PART NO.	TUBE SIZE	PIPE THREAD [NPTF]	C HEX	MOUNTING HOLE DIA.	L	N	G	D
W372PL-2-1	1/8	1/16	3/8	.13	.71	1.08	.52	.078
W372PL-2-2	1/8	1/8	7/16	.13	.71	1.14	.52	.078
W372PL-2-4	1/8	1/4	9/16	.13	.70	1.32	.52	.080
372PL-2-10X32	1/8	10-32	3/8	.13	.70	.94	.52	.080
W372PL-3-2	3/16	1/8	7/16	.17	.76	1.20	.64	.147
W372PL-3-4	3/16	1/4	9/16	.17	.76	1.40	.64	.147
W372PL-5/32-2	5/32	1/8	7/16	.13	.71	1.14	.52	.094
W372PL-5/32-4	5/32	1/4	9/16	.13	.68	1.32	.52	.090
372PL5/32-10x32	5/32	10-32	3/8	.13	.70	.94	.52	.090
W372PL-4-1	1/4	1/16	7/16	.17	.76	1.20	.64	.094
W372PL-4-2	1/4	1/8	7/16	.17	.76	1.20	.64	.170
W372PL-4-4	1/4	1/4	9/16	.17	.76	1.38	.64	.170
372PL-4-10x32	1/4	10-32	7/16	.17	.76	1.05	.64	.090
W372PL-4-6	1/4	3/8	11/16	.17	.76	1.42	.64	.170
W372PL-5-2	5/16	1/8	9/16	.17	.84	1.28	.71	.234
W372PL-5-4	5/16	1/4	9/16	.17	.84	1.23	.71	.234
W372PL-6-2	3/8	1/8	9/16	.17	1.03	1.48	.83	.230
W372PL-6-4	3/8	1/4	5/8	.17	1.04	1.66	.83	.297
W372PL-6-6	3/8	3/8	11/16	.17	1.04	1.66	.83	.297
W372PL-6-8	3/8	1/2	7/8	.17	1.03	1.85	.83	.300
W372PL-8-4	1/2	1/4	3/4	.17	1.30	2.07	.99	.310
W372PL-8-6	1/2	3/8	3/4	.17	1.30	2.07	.99	.344
W372PL-8-8	1/2	1/2	7/8	.17	1.30	2.26	.99	.344



Male Branch Tee Swivel PLS2BF4-K BSPP

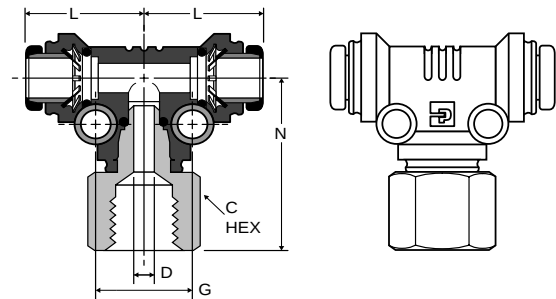
Composite Body

PART NO.	TUBE SIZE	PIPE THREAD BSPP	C HEX	MOUNTING HOLE DIA.	L	N	G	D
3-1/8PLS2BF4-K	3/16	1/8-28	11/16	.17	.76	1.05	.64	.150
3-1/4PLS2BF4-K	3/16	1/4-19	3/4	.17	.76	1.31	.64	.150
4-1/8PLS2BF4-K	1/4	1/8-28	11/16	.17	.76	1.06	.64	.180
4-1/4PLS2BF4-K	1/4	1/4-19	3/4	.17	.76	1.31	.64	.170
6-1/4PLS2BF4-K	3/8	1/4-19	3/4	.17	1.04	1.57	.83	.300
6-3/8PLS2BF4-K	3/8	3/8-19	7/8	.17	1.04	1.68	.83	.300
6-1/2PLS2BF4-K	3/8	1/2-14	1-1/16	.17	1.04	1.83	.83	.300
8-3/8PLS2BF4-K	1/2	3/8-19	7/8	.17	1.30	1.90	.99	.410

**B****Female Branch Tee Swivel 377PL**

Composite Body

PART NO.	TUBE SIZE	PIPE THREAD [NPTF]	C HEX	MOUNTING HOLE DIA.	L	N	G	D
377PL-2-2	1/8	1/8	9/16	.17	.70	1.01	.52	.080
377PL-5/32-2	5/32	1/8	9/16	.13	.70	1.01	.52	.090
377PL-5/32-4	5/32	1/4	3/4	.13	.70	1.23	.52	.090
377PL-4-2	1/4	1/8	9/16	.17	.76	1.07	.64	.170
377PL-4-4	1/4	1/4	3/4	.17	.76	1.29	.64	.170
377PL-5-4	5/16	1/4	3/4	.17	.84	1.37	.72	.230
377PL-6-4	3/8	1/4	3/4	.17	1.04	1.57	.83	.300
377PL-8-6	1/2	3/8	7/8	.17	1.30	1.84	.99	.410

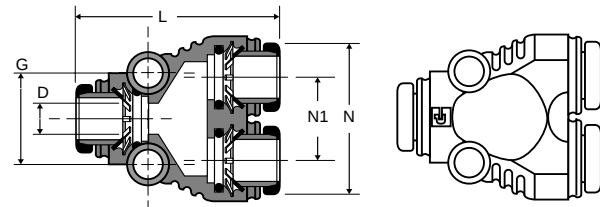
**Plug 639PL**

PART NO.	TUBE SIZE	L
639PL-2	1/8	1.30
639PL-5/32	5/32	1.34
639PL-4	1/4	1.34
639PL-5	5/16	1.28
639PL-6	3/8	1.50
639PL-8	1/2	1.69

**Union Y Connector 362PL**

Composite Body

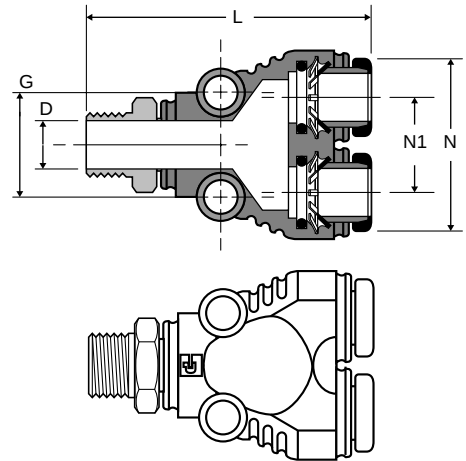
PART NO.	TUBE SIZE	MOUNTING HOLE DIA.	L	N	N1	G	D
362PL-2	1/8	.13	1.38	.92	.41	.57	.130
362PL-5/32	5/32	.13	1.36	.92	.41	.57	.160
362PL-3	3/16	.17	1.49	1.13	.54	.67	.200
362PL-4	1/4	.17	1.49	1.13	.53	.67	.260
362PL-5	5/16	.17	1.49	1.21	.54	.72	.320
362PL-6	3/8	.17	1.88	1.54	.71	.76	.380

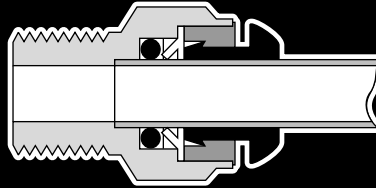


Union Y Male Connector W368PL

Composite Body

PART NO.	TUBE SIZE	PIPE SIZE	G	MOUNTING HOLE DIA.	L	N	N1	D
W368PL-2-2	1/8	1/8	.57	.13	1.81	.91	.41	.080
W368PL-2-4	1/8	1/4	.57	.13	1.98	.91	.41	.080
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
368PL-3-10x32	3/16	10-32	.67	.17	1.77	1.13	.54	.094
W368PL-3-2	3/16	1/8	.67	.17	1.92	1.13	.54	.150
W368PL-3-4	3/16	1/4	.67	.17	2.16	1.13	.54	.150
W368PL-3-6	3/16	3/8	.67	.17	2.16	1.13	.54	.147
368PL-4-10x32	1/4	10-32	.67	.17	1.78	1.13	.53	.090
W368PL-4-2	1/4	1/8	.67	.17	1.93	1.13	.53	.172
W368PL-4-4	1/4	1/4	.67	.17	2.11	1.13	.53	.170
W368PL-4-6	1/4	3/8	.67	.17	2.15	1.13	.53	.170
W368PL-5-2	5/16	1/8	.72	.17	1.87	1.20	.54	.230
W368PL-5-4	5/16	1/4	.72	.17	2.10	1.20	.54	.230
W368PL-5-6	5/16	3/8	.72	.17	2.04	1.20	.54	.234
W368PL-6-4	3/8	1/4	.76	.17	2.50	1.53	.71	.300
W368PL-6-6	3/8	3/8	.76	.17	2.50	1.53	.71	.300
W368PL-6-8	3/8	1/2	.76	.17	2.69	1.53	.71	.300





Parker Prestolok Metric Push-In Fittings

Principle

For more than 20 years, Parker Hannifin has designed and manufactured push-in fittings recognized worldwide for their quality and reliability. During this period Prestolok has benefited from continuous improvement and is now one of the most advanced push-in fittings on the market. Prestolok uses "elastic teeth" grab ring technology invented and perfected by Parker, who assures its excellent tube retention qualities. Prestolok can be used not only with most types of plastic tubing available on the market, but also with some metal tubing, making it suitable for a wider range of applications.

Advantages

Prestolok is an instant push-in brass fitting for plastic tubing specially designed for pneumatic installations (from primary vacuum to 300PSI). The fitting enables instant assembly and disassembly of the tube without the use of spanners. The flexible radial teeth of the Prestolok grab ring are always engaged in the tube and assure optimum grip.

- Compact fitting ready to use
- Instant assembly by a simple insertion of the tube

Positive hold by a flexible grab ring

- The grab ring's specially shaped radial teeth prevents longitudinal draw marks on the tube.
- The elasticity of the grab ring absorbs vibration and pulsating pressure.
- Twist-free assembly, the tube can rotate freely even under pressure.

Positive O-Ring Sealing

- The smooth unmarked tube is in direct contact with the O-ring, giving a positive seal.
- A unique back-up washer retains the O-ring in the optimum sealing position, protects it from the grab ring, and prevents extrusion under pressure.

Plastic Push Sleeve

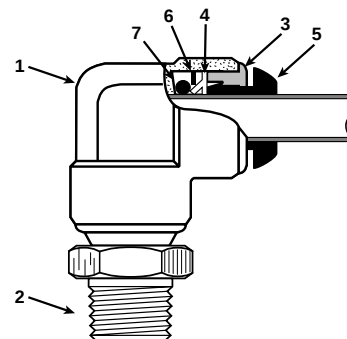
- A simple manual pressure on the user-friendly push sleeve allows instant disconnection of the tube.
- Tube sizes are marked on the sleeve for easy identification.

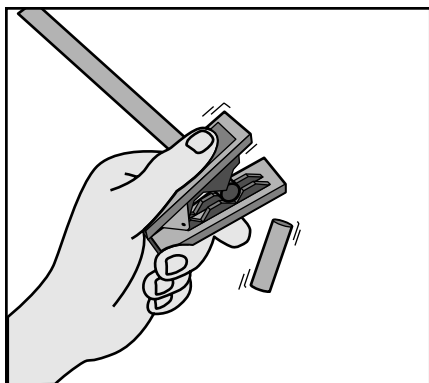
Working Pressure and Temperature Ranges

Zero to 150° F at up to 300PSI. Vacuum applications are dependent upon temperature and type of tubing being used.

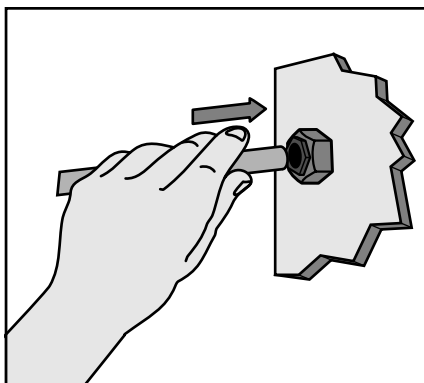
Technical Features

PART	MATERIAL
1) Body	Brass Nickel Plated
2) Threaded Parts	Brass Nickel Plated
3) Sleeve	Brass Nickel Plated
4) Grab Ring	Stainless Steel
5) Push Button	Polyacetal
6) Back-Up Washer	Brass
7) O-Ring	Nitrile

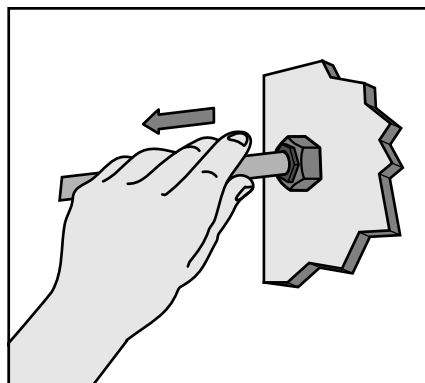


How to Use**B****Assembly**

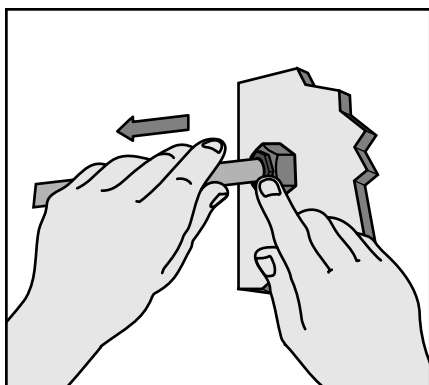
Cut the tube square. Debur copper tubing



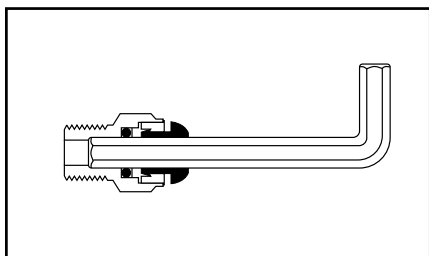
Insert the tube into the fitting until it bottoms.



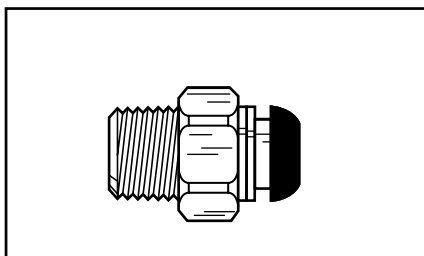
Pull the tube to check engagement of the grab ring.

**Disassembly**

To remove the tube, disengage the grab ring teeth by a simple manual pressure on the push sleeve and withdraw the tube from the fitting.

**Straight male connector with an internal hex**

- Straight male connectors have an internal Allen key socket for close porting in compact installations.

**Coated threads**

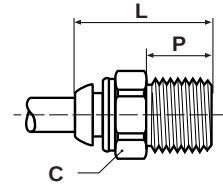
- Taper threaded fittings are treated with a special Parker PTFE Coating (PTC) for self sealing on assembly, reusable up to five times without additional sealing material.

Brass nickel-plated fitting

- Nickel plating gives better corrosion resistance and has a long-lasting bright appearance.

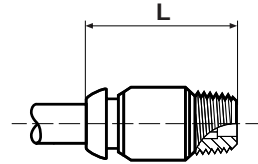
FPB Male Connector NPT

PART NO.	TUBE SIZE	NPT	C HEX	L	P	INT. HEX
W68PL-5/32-2	4	1/8-27	7/16"	21.7	9.7	-
W68PL-5/32-4	4	1/4-27	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

**B****F23PB Male Connector BSPT**

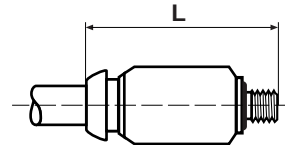
PART NO.	TUBE SIZE	BSPT	L
F23PB4-1/8	4	1/8	21
F23PB6-1/8	6	1/8	24
F23PB6-1/4	6	1/4	28
F23PB8-1/8	8	1/8	28
F23PB8-1/4	8	1/4	28

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

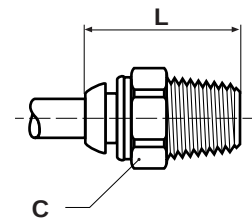
**F28PB Male Connector Metric Straight Thread**

PART NO.	TUBE SIZE	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.

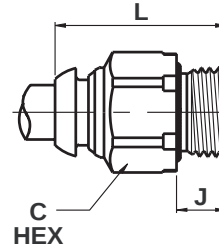
**F3PB Male Connector BSPT**

PART NO.	TUBE SIZE	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

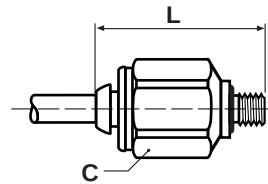


F4PB Compact Male Connector BSPP

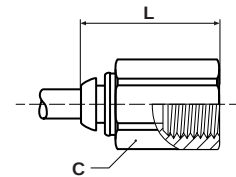
PART NO.	TUBE SIZE	BSPP	C HEX	J	L
F4PB4-1/8	4	1/8	13	6	21.7
F4PB4-1/4	4	1/4	16	9	23.2
F4PB6-1/8	6	1/8	13	6	25.3
F4PB6-1/4	6	1/4	16	9	26.0
F4PB8-1/4	8	1/4	16	9	27.4
F4PB8-1/8	8	1/8	14	6	27.4
F4PB8-3/8	8	3/8	20	9	28.0
F4PB10-1/4	10	1/4	17	9	35.4
F4PB10-3/8	10	3/8	20	9	31.4
F4PB10-1/2	10	1/2	24	12	30.3
F4PB12-1/4	12	1/4	20	9	36.0
F4PB12-3/8	12	3/8	20	9	35.7
F4PB12-1/2	12	1/2	24	12	34.1
F4PB14-3/8	14	3/8	22	9	38.3
F4PB14-1/2	14	1/2	24	12	37.4

**F8PB Male Connector Metric Straight Thread**

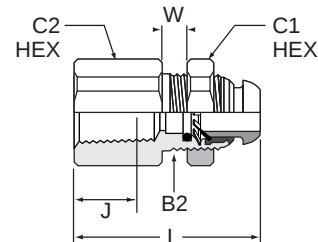
PART NO.	TUBE SIZE	MM THREAD	C HEX	L
F8PB4M5	4	M5x0.8	12	25.5
F8PB4M10	4	M10x1	14	24.0
F8PB6M5	6	M5x0.8	14	26.0
F8PB6M10	6	M10x1	14	28.0
F8PB6M12	6	M12x1.5	17	30.0
F8PB8M12	8	M12x1.5	17	30.0
F8PB8M16	8	M16x1.5	22	28.0
F8PB8M22	8	M22x1.5	27	30.0

**G4PB Female Connector BSPP**

PART NO.	TUBE SIZE	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

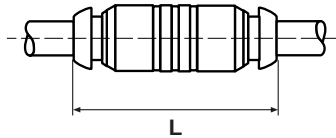
**WG4PB Bulkhead Union Female BSPP**

PART NUMBER	TUBE SIZE	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



HPB Equal Union

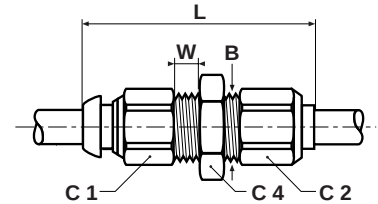
PART NO.	TUBE SIZE	L
HPB4	4	33.0
HPB5	5	34.5
HPB6	6	36.0
HPB8	8	38.0
HPB10	10	48.0
HPB12	12	48.0
HPB14	14	54.0



B

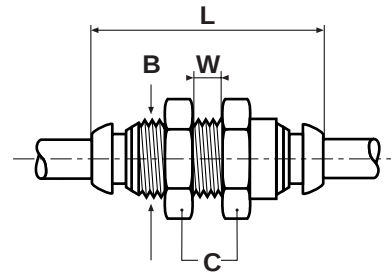
WBMPB Mixed Bulkhead Union

PART NO.	TUBE SIZE 1	TUBE SIZE 2	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



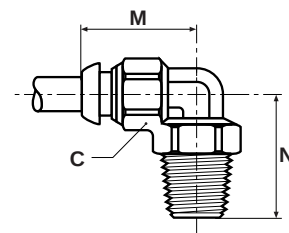
WPB Bulkhead Union

PART NO.	TUBE SIZE	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	M16x1.25	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



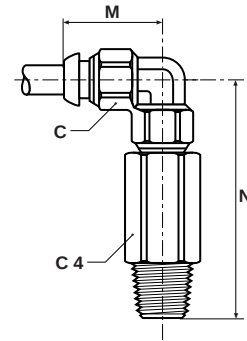
C3PB Compact Elbow BSPT

PART NO.	TUBE SIZE	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

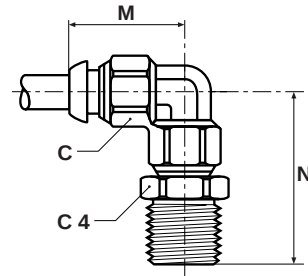


C63LPB Adjustable Extended Male Elbow BSPT

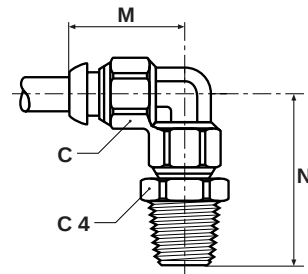
PART NO.	TUBE SIZE	BSPT	C HEX	C4 HEX	M	N
C63LPB4-1/8	4	1/8	10	10	18	42.0
C63LPB4-1/4	4	1/4	10	14	18	46.0
C63LPB6-1/8	6	1/8	12	11	20	45.5
C63LPB6-1/4	6	1/4	12	14	20	49.5
C63LPB8-1/8	8	1/8	14	14	22	50.0
C63LPB8-1/4	8	1/4	14	14	22	52.5

**C6PB Adjustable Male Elbow NPT**

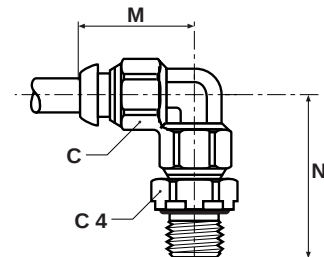
PART NO.	TUBE SIZE	NPT	C HEX	C4 HEX	M	N
C6PB6-1/4	6	1/4-18	12	14	20	36.0
C6PB6-3/8	6	3/8-18	12	19	20	36.5
C6PB10-1/4	10	1/4-18	17	16	28	41.5
C6PB10-3/8	10	3/8-18	17	19	28	41.5
C6PB12-3/8	12	3/8-18	17	19	30	44.0
C6PB12-1/2	12	1/2-14	22	22	30	47.5

**C63PB Adjustable Male Elbow BSPT**

PART NO.	TUBE SIZE	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

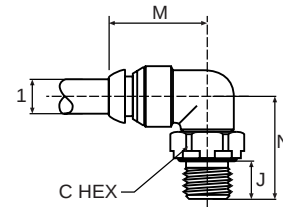
**C64PB Adjustable Male Elbow BSPP**

PART NO.	TUBE SIZE	BSPP	C HEX	C4 HEX	M	N
C64PB4-1/8	4	1/8	10	14	18	26.5
C64PB4-1/4	4	1/4	10	19	18	31.5
C64PB6-1/8	6	1/8	12	14	20	30.0
C64PB6-1/4	6	1/4	12	19	20	33.0
C64PB8-1/8	8	1/8	14	14	22	30.0
C64PB8-1/4	8	1/4	14	19	22	35.0
C64PB8-3/8	8	3/8	14	22	22	36.0
C64PB10-1/4	10	1/4	17	19	28	39.0
C64PB10-3/8	10	3/8	17	22	28	40.0
C64PB12-1/4	12	1/4	22	19	30	41.0
C64PB12-3/8	12	3/8	22	22	30	42.0
C64PB14-3/8	14	3/8	25	22	34	46.0
C64PB14-1/2	14	1/2	25	27	34	50.5

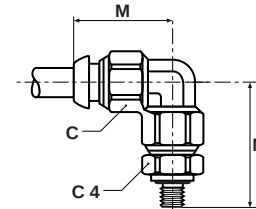


C64SPB Compact Adjustable Male Elbow BSPP

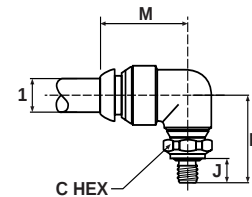
PART NUMBER	TUBE SIZE	BSPP	C HEX	J	M	N
C64SPB4-1/8	4	1/8	13	6	17	18.0
C64SPB6-1/8	6	1/8	13	6	22	18.0
C64SPB6-1/4	6	1/4	16	9	22	21.5
C64SPB8-1/8	8	1/8	13	6	25	18.0
C64SPB8-1/4	8	1/4	16	9	25	21.0
C64SPB8-3/8	8	3/8	19	9	25	21.0
C64SPB10-1/4	10	1/4	16	9	30	23.0
C64SPB10-3/8	10	3/8	19	9	30	23.0
C64SPB12-1/4	12	1/8	16	9	32	24.0
C64SPB12-3/8	12	3/8	19	9	32	24.0
C64SPB12-1/2	12	1/2	24	12	32	29.0

**C68PB Adjustable Male Elbow Metric Straight Thread**

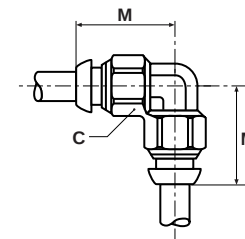
PART NO.	TUBE SIZE	BSPP	C HEX	C4 HEX	M	N
C68PB4M3	4	M3x0.5	10	10	18	23.0
C68PB4M5	4	M5x0.8	10	10	18	24.5
C68PB6M5	6	M5x0.8	12	11	20	25.5

**C68SPB Compact Adjustable Male Elbow Metric Straight Thread**

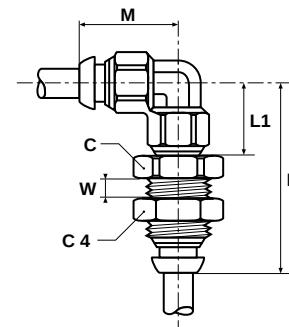
PART NUMBER	TUBE SIZE	MM THREAD	C HEX	J	M	N
C68SPB4M5	4	M5x0.8	12.5	5	17	18
C68SPB6M5	6	M5x0.8	12.5	5	17	18

**EPB 90° Union Elbow**

PART NO.	TUBE SIZE	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

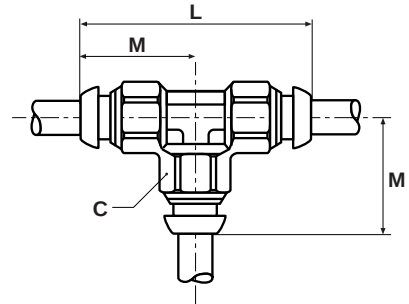
**WE6PB Adjustable Bulkhead Union Elbow**

PART NO.	TUBE SIZE	B - MM THREAD	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

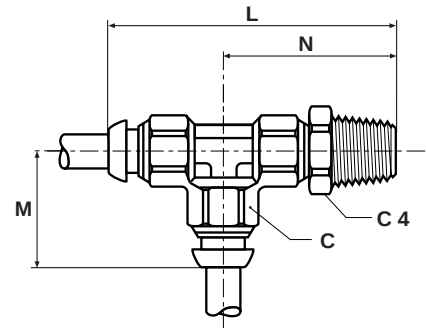


JPB Union Tee

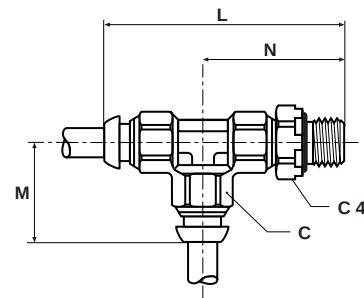
PART NO.	TUBE SIZE	C	L	M
JPB4	4	10	36	18
JPB5	5	12	41	21
JPB6	6	12	40	20
JPB8	8	14	44	22
JPB10	10	17	56	28
JPB12	12	22	60	30
JPB14	14	25	68	34

**R63PB Swivel Male Run Tee BSPT**

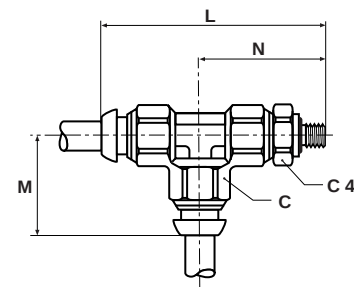
PART NO.	TUBE SIZE	BSPT	C HEX	C4 HEX	L	M	N
R63PB4-1/8	4	1/8	10	10	44.5	18	26.5
R63PB4-1/4	4	1/4	10	14	48.0	18	30.0
R63PB6-1/8	6	1/8	12	11	48.0	20	28.0
R63PB6-1/4	6	1/4	12	14	51.0	20	31.0
R63PB8-1/8	8	1/8	14	14	52.0	22	30.0
R63PB8-1/4	8	1/4	14	14	55.0	22	33.0
R63PB8-3/8	8	3/8	14	17	56.5	22	34.5
R63PB10-1/4	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

**R64PB Swivel Male Branch Run Tee BSPP**

PART NO.	TUBE SIZE	BSPP	C HEX	C4 HEX	L	M	N
R64PB4-1/8	4	1/8	10	14	6	44.5	18
R64PB4-1/4	4	1/4	10	19	9	49.5	18
R64PB6-1/8	6	1/8	12	14	6	50.0	20
R64PB6-1/4	6	1/4	12	19	9	53.0	20
R64PB8-1/8	8	1/8	14	14	6	52.0	22
R64PB8-1/4	8	1/4	14	19	9	57.0	22
R64PB8-3/8	8	3/8	14	22	9	58.0	22
R64PB10-1/4	10	1/4	17	19	9	67.0	28
R64PB10-3/8	10	3/8	17	22	9	68.0	28
R64PB12-1/4	12	1/4	22	19	9	71.0	30
R64PB12-3/8	12	3/8	22	22	9	72.0	30
R64PB14-3/8	14	3/8	25	22	9	80.0	34
R64PB14-1/2	14	1/2	25	27	12	84.5	34

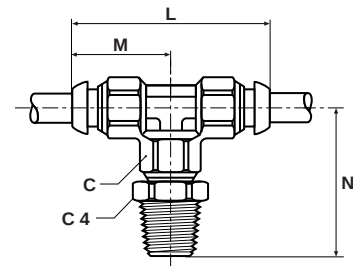
**R68PB Adjustable Male Run Tee Metric Straight Thread**

PART NO.	TUBE SIZE	MM THREAD	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

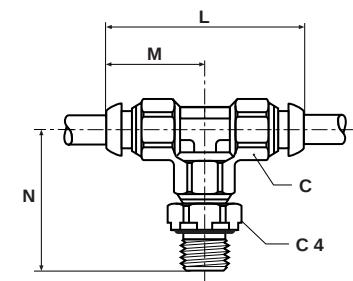


S63PB Swivel Male Branch Tee BSPT

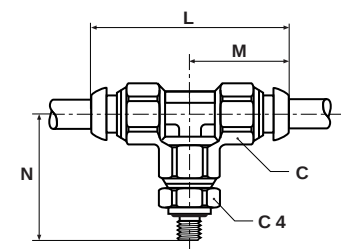
PART NO.	TUBE SIZE	BSPT	C HEX	C4 HEX	L	M	N
S63PB4-1/8	4	1/8	10	10	36	18	26.5
S63PB4-1/4	4	1/4	10	14	36	18	30.0
S63PB6-1/8	6	1/8	12	11	40	20	28.0
S63PB6-1/4	6	1/4	12	14	40	20	31.0
S63PB8-1/8	8	1/8	14	14	44	22	30.0
S63PB8-1/4	8	1/4	14	14	44	22	33.0
S63PB8-3/8	8	3/8	14	17	44	22	34.5
S63PB10-1/4	10	1/4	17	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

**B****S64PB Swivel Male Branch Tee BSPP**

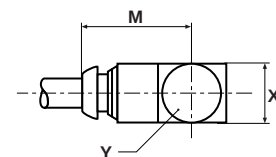
PART NO.	TUBE SIZE	BSPP	C HEX	C4 HEX	L	M	N
S64PB4-1/8	4	1/8	10	14	36	18	26.5
S64PB4-1/4	4	1/4	10	19	36	18	31.5
S64PB6-1/8	6	1/8	12	14	40	20	30.0
S64PB6-1/4	6	1/4	12	19	40	20	33.0
S64PB8-1/8	8	1/8	14	14	44	22	30.0
S64PB8-1/4	8	1/4	14	19	44	22	35.0
S64PB8-3/8	8	3/8	14	22	44	22	36.0
S64PB10-1/4	10	1/4	17	19	56	28	39.0
S64PB10-3/8	10	3/8	17	22	56	28	40.0
S64PB12-1/4	12	1/4	22	19	60	30	41.0
S64PB12-3/8	12	3/8	22	22	60	30	42.0
S64PB14-3/8	14	3/8	25	22	68	34	46.0
S64PB14-1/2	14	1/2	25	27	68	34	50.5

**S68PB Adjustable Male Branch Tee Metric Straight Thread**

PART NO.	TUBE SIZE	MM THREAD	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

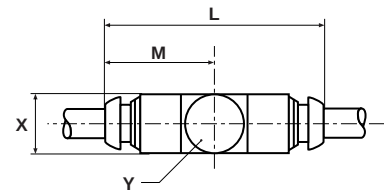
**CORPB Single Banjo Body Only**

PART NO.	TUBE SIZE	PART N° SINGLE BOLT	PART N° 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



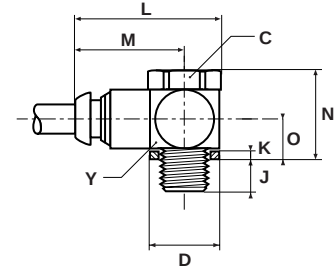
CORPBD Double Banjo Body Only

PART NO.	TUBE SIZE	PART N° SINGLE BOLT	PART N° 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**

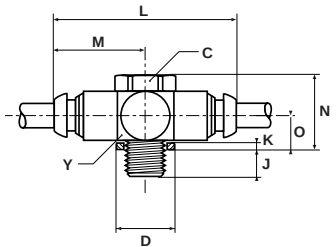
PART NO.	TUBE SIZE	BSPP	C HEX	D	J	K	L	M	N	O	Y
COR8PB4M5	4	M5x0.8	8	8.2	4.5	1.0	24.0	19.0	13.5	6.0	10
COR4PB4-1/8	4	1/8	14	14.4	6.0	1.5	29.5	22.5	19.5	8.5	14
COR4PB6-1/8	6	1/8	14	14.4	6.0	1.5	30.0	23.0	19.5	8.5	14
COR4PB6-1/4	6	1/4	17	18.4	9.0	2.0	33.0	24.5	21.0	9.0	17
COR4PB8-1/8	8	1/8	14	14.4	6.0	1.5	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.

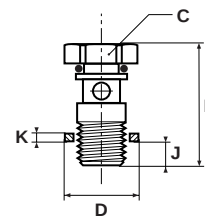
**COR8PBD/COR4PBD Double Banjo Assembled**

PART NO.	TUBE SIZE	BSPP	C HEX	D	J	K	L	M	N	O	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

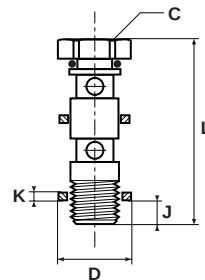
These parts are delivered complete with sealing washer.

**SC8U/SC4U Single Banjo Bolt with Seals BSPP**

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

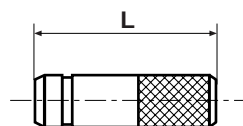
**SC8UD/SC4UD Stacking Banjo Bolt with Seals BSPP**

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

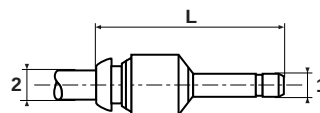


FNPB Plug

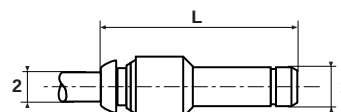
PART NO.	TUBE SIZE 1	L
FNPB4	4	27
FNPB6	6	27
FNPB8	8	30
FNPB10	10	30
FNPB12	12	35
FNPB14	14	36

**B****TEPB Tube End Expander**

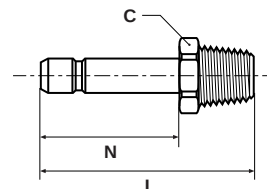
PART NO.	TUBE SIZE 1	TUBE SIZE 2	L
TEPB4-6	4	6	39

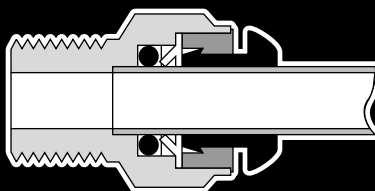
**TRPB Tube End Reducer**

PART NO.	TUBE SIZE 1	TUBE SIZE 2	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

**T23HFPB Tube End Male Adaptor BSPT**

PART NO.	TUBE SIZE	BSPT	C HEX	L	N
T23HFPB5-1/8	5	1/8	10	31.5	20
T23HFPB5-1/4	5	1/4	14	36.0	20





Parker Prestolok 2 Metric Push-In Fittings

Applications

Perfectly adapted for use with pneumatic systems in a large variety of industries. Prestolok 2 is also designed to handle many other fluids (water, "cutting oil", etc...) thus covering a wide range of applications. Examples include: Food industry, Automotive, Textile, Packaging, Robotics, Machine Tools

Advantages

- Compact fitting ready to use
- Wide product range covering many applications
- Full flow capability

Protective cap

The design of the Prestolok thermoplastic range permits the use of a protective cap for the following functions:

- Protection – prevents the ingress of dirt into the connection system
- Safety – eliminates the risk of accidental disconnection, as the push button is made inaccessible
- Identification – color coding allows identification of fluid line – tube sizes are marked on the protective cap

High resistant polyamide body

UV resistant reinforced polyamide provides:

- Weight saving
- Excellent mechanical performance
- Impact design

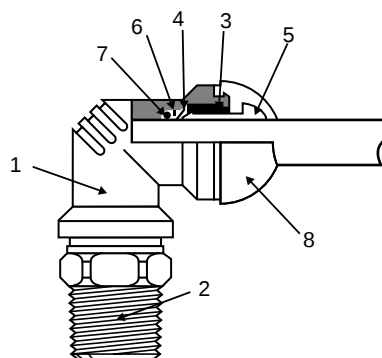
Three body grooves facilitate handling and positioning of elbows and tees. A long service life is ensured by corrosion free body materials.

Working Pressure and Temperature Ranges

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

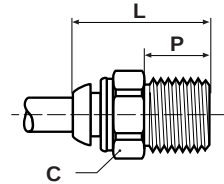
Technical Features

PART	MATERIAL
1) Body	Polyamide HR Food Grade
2) Threaded Parts/ Straight Connectors	Brass Nickel Plated
3) Sleeve	Brass Nickel Plated
4) Grab Ring	Stainless Steel
5) Push Button	Polyacetal
6) Back-Up Washer	Brass
7) O-Ring	Nitrile
8) Protective Cap	Polyacetal

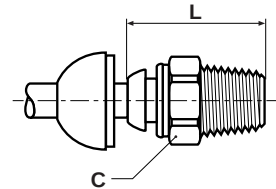


FPB Male Connector NPT

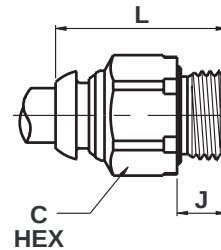
PART NO.	TUBE SIZE	NPT	C HEX	L	P	INT. HEX
W68PL-5/32-2	4	1/8-27	7/16"	21.7	9.7	-
W68PL-5/32-4	4	1/4-27	9/16"	28.1	14.2	-
FPB6-1/8	6	1/8-27	14	26.0	10.1	4
FPB6-1/4	6	1/4-18	14	28.5	14.6	4
FPB10-1/4	10	1/4-18	19	40.0	14.6	8
FPB10-3/8	10	3/8-18	19	34.0	14.6	8
FPB12-3/8	12	3/8-18	22	36.5	14.6	10

**B****F3PB Male Connector BSPT**

PART NO.	TUBE SIZE	BSPT	C HEX	L
F3PB4-1/8	4	1/8	12	20.5
F3PB4-1/4	4	1/4	14	23.0
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

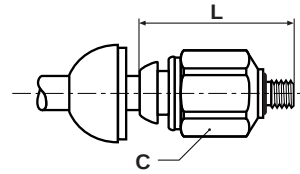
**F4PB Compact Male Connector BSPP**

PART NO.	TUBE SIZE	BSPP	C HEX	J	L
F4PB4-1/8	4	1/8	13	6	21.7
F4PB4-1/4	4	1/4	16	9	23.2
F4PB6-1/8	6	1/8	13	6	25.3
F4PB6-1/4	6	1/4	16	9	26.0
F4PB8-1/4	8	1/4	16	9	27.4
F4PB8-1/8	8	1/8	14	6	27.4
F4PB8-3/8	8	3/8	20	9	28.0
F4PB10-1/4	10	1/4	17	9	35.4
F4PB10-3/8	10	3/8	20	9	31.4
F4PB10-1/2	10	1/2	24	12	30.3
F4PB12-1/4	12	1/4	20	9	36.0
F4PB12-3/8	12	3/8	20	9	35.7
F4PB12-1/2	12	1/2	24	12	34.1
F4PB14-3/8	14	3/8	22	9	38.3
F4PB14-1/2	14	1/2	24	12	37.4

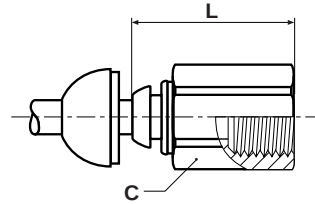


F8PB Male Connector Metric Straight Thread

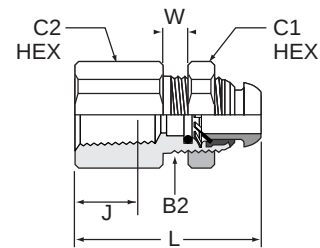
PART NO.	TUBE SIZE	MM THREAD	C HEX	L
F8PB4M5	4	M5X0.8	12	25.5
F8PB4M10	4	M10X1	14	24.0
F8PB6M5	6	M5X0.8	14	26.0
F8PB6M10	6	M10X1	14	28.0
F8PB6M12	6	M12X1.5	17	30.0
F8PB8M12	8	M12X1.5	17	30.0
F8PB8M16	8	M16X1.5	22	28.0
F8PB8M22	8	M22X1.5	27	30.0

**G4PB Female Connector BSPP**

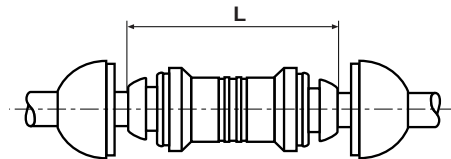
PART NO.	TUBE SIZE	BSPP THREAD	C HEX	L
G4PB4-1/8	4	1/8	14	26.0
G4PB6-1/8	6	1/8	14	27.5
G4PB6-1/4	4	1/4	17	33.0
G4PB8-1/8	8	1/8	17	29.0
G4PB8-1/4	8	1/4	17	33.0

**WG4PB Bulkhead Union Female BSPP**

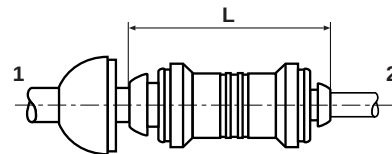
PART NUMBER	TUBE SIZE	BSPP	B2	C1 HEX	C2 HEX	J	L	W
WG4PB4-1/8	4	G1/8	M11x0.75	14	14	8	25.0	6
WG4PB6-1/8	6	G1/8	M13x1	17	17	8	25.0	6
WG4PB6-1/4	6	G1/4	M13x1	17	19	12	29.5	6
WG4PB8-1/8	8	G1/8	M15x1.25	19	17	8	25.0	6
WG4PB8-1/4	8	G1/4	M15x1.25	19	19	12	30.0	6
WG4PB10-3/8	10	G3/8	M18x1	22	22	12	34.0	8
WG4PB12-3/8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

**HPK Equal Union**

PART NO.	TUBE SIZE	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

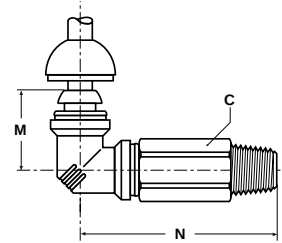
**HPK Unequal Union**

PART NO.	TUBE 1 SIZE	TUBE 2 SIZE	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

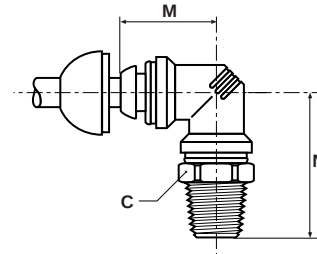


C63LPK Adjustable Male Elbow BSPT

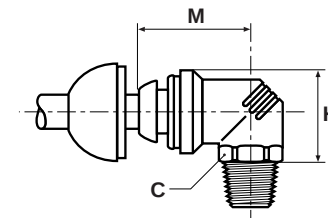
PART NO.	TUBE SIZE	BSPT	C HEX	M	N
C63LPK4-1/8	4	1/8	10	18.0	41.0
C63LPK4-1/4	4	1/4	14	18.0	45.0
C63LPK6-1/8	6	1/8	11	20.5	45.0
C63LPK6-1/4	6	1/4	14	20.5	49.0
C63LPK8-1/8	8	1/8	14	22.5	49.5
C63LPK8-1/4	8	1/4	14	22.5	52.0

**B****C63PK Adjustable Male Elbow BSPT**

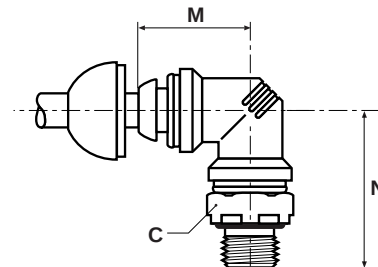
PART NO.	TUBE SIZE	BSPT	C HEX	M	N
C63PK4-1/8	4	1/8	10	18.0	25.5
C63PK4-1/4	4	1/4	14	18.0	29.0
C63PK6-1/8	6	1/8	11	20.5	27.0
C63PK6-1/4	6	1/4	14	20.5	30.5
C63PK8-1/8	8	1/8	14	22.5	29.5
C63PK8-1/4	8	1/4	14	22.5	32.5
C63PK8-3/8	8	3/8	17	28.5	40.0
C63PK10-1/4	10	1/4	17	28.5	40.0
C63PK10-3/8	10	3/8	17	28.5	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

**C63SPK Adjustable Male Elbow BSPT**

PART NO.	TUBE SIZE	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

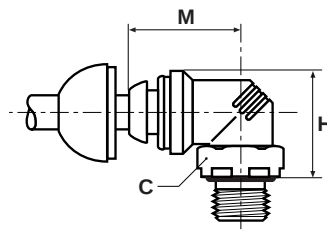
**C64PK Adjustable Male Elbow BSPP**

PART NO.	TUBE SIZE	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

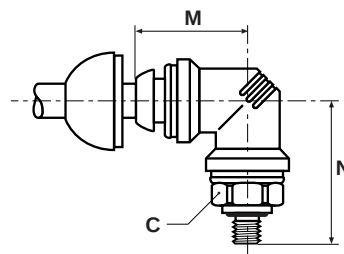


C64SPK Compact Adjustable Male Elbow BSPP

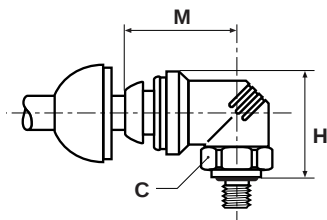
PART NO.	TUBE SIZE	BSPP THREAD	C HEX	H	M
C64SPK4-1/8	4	1/8	14	16.7	20.5
C64SPK4-1/4	4	1/4	19	17.4	20.5
C64SPK6-1/8	6	1/8	14	17.9	23.0
C64SPK6-1/4	6	1/4	19	19.4	23.0
C64SPK8-1/8	8	1/8	14	18.9	25.0
C64SPK8-1/4	8	1/4	19	20.4	25.0
C64SPK8-3/8	8	3/8	22	21.9	25.0

**C68PK Adjustable Male Elbow Metric Straight Thread**

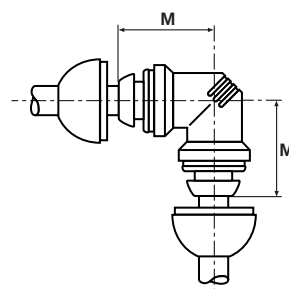
PART NO.	TUBE SIZE	MM THREAD	C HEX	M	N
C68PK4M3	4	M3x0.5	10	18.0	22.0
C68PK4M5	4	M5x0.8	10	18.0	23.5
C68PK6M5	6	M5x0.8	11	20.5	25.0
C68PK8M12	8	M12x1.5	17	22.5	35.0
C68PK8M16	8	M16x1.5	22	22.5	35.0
C68PK8M22	8	M22x1.5	27	22.5	39.0
C68PK10M12	10	M12x1.5	17	30.0	40.0

**C68SPK Compact Adjustable Male Elbow Metric Straight Thread**

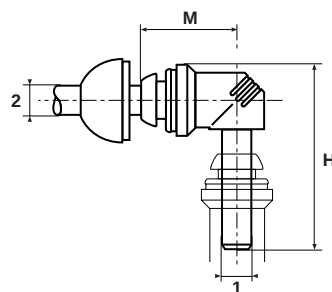
PART NO.	TUBE SIZE	MM THREAD	C HEX	H	M
C68SPK4M5	4	M5x0.8	10	15.5	20.5

**EPK Equal Elbow**

PART NO.	TUBE SIZE	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

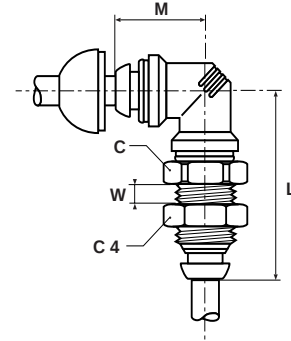
**T2ESPK Compact Plug-in Elbow**

PART NO.	TUBE SIZE 1	TUBE SIZE 2	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

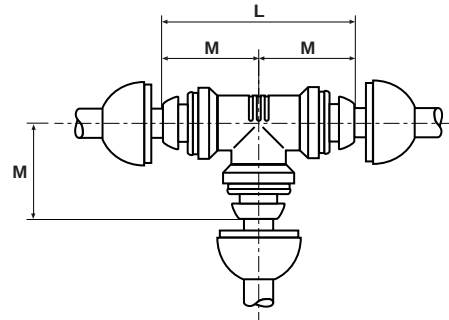


WE6PK 90° Adjustable Bulkhead Union Elbow

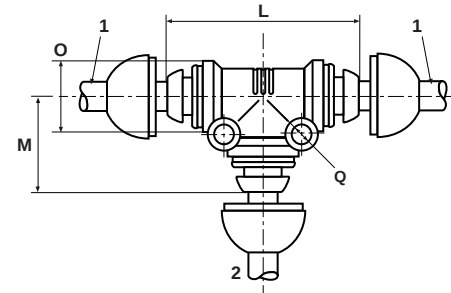
PART NO.	TUBE SIZE	MM THREAD	C	C4	M	L	W	BULKHEAD HOLE DIA.
WE6PK4	4	M11x0.75	14	16	18.0	37	6	11mm
WE6PK6	6	M13x1	17	17	20.5	39	6	13mm
WE6PK8	8	M15x1.25	19	19	22.5	43	6	15mm
WE6PK10	10	M18x1	22	22	28.5	54	8	18mm
WE6PK12	12	M23x1.5	27	27	30.0	59	10	23mm

**JPK Equal Tee**

PART NO.	TUBE SIZE	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

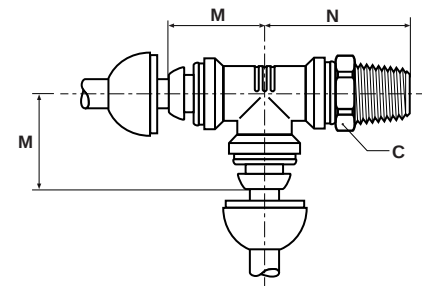
**JPK Unequal Tee**

PART NO.	1 TUBE SIZE	2 TUBE SIZE	Ø3	L	M	O	Q
JPK6-6-4	6	4	4.20	41	21.5	15	17.0
JPK8-8-6	8	6	4.20	45	22.5	17	19.0
JPK10-10-8	10	8	4.20	57	28.5	21	23.5
JPK12-12-10	12	10	4.20	60	30.0	23	25.5
JPK4-4-6	4	6	4.20	43	20.5	15	17.0
JPK6-6-8	6	8	4.20	45	22.5	17	19.0
JPK8-8-10	8	10	4.20	57	28.5	21	23.5
JPK10-10-12	10	12	4.20	61	30.5	23	25.5

**R63PK Adjustable Male Run Tee BSPT**

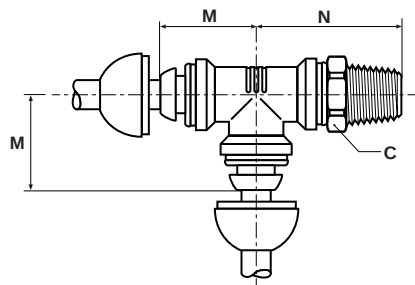
PART NO.	TUBE SIZE	BSPT	C HEX	M	N
R63PK4-1/8	4	1/8	10	18.0	25.5
R63PK4-1/4	4	1/4	14	18.0	29.0
R63PK6-1/8	6	1/8	11	20.5	27.0
R63PK6-1/4	6	1/4	14	20.5	30.5
R63PK8-1/8	8	1/8	14	22.5	29.5
R63PK8-1/4	8	1/4	14	22.5	32.5
R63PK8-3/8	8	3/8	17	22.5	34.0
R63PK10-1/4	10	1/4	17	28.5	40.0

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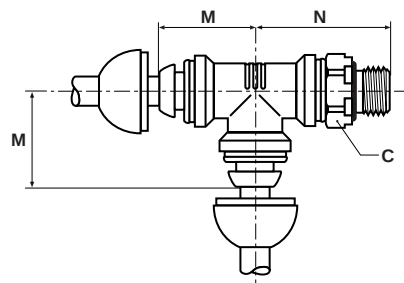


R63PK Adjustable Male Run Tee BSPT

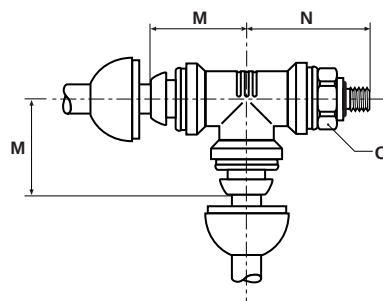
PART NO.	TUBE SIZE	BSPT	C HEX	M	N
R63PK10-3/8	10	3/8	17	28.5	39.0
R63PK12-1/4	12	1/4	19	30.0	41.5
R63PK12-3/8	12	3/8	19	30.0	41.0
R63PK12-1/2	12	1/2	22	30.0	44.5
R63PK14-3/8	14	3/8	22	33.5	45.5
R63PK14-1/2	14	1/2	22	33.5	48.0

**R64PK Adjustable Male Run Tee BSPP**

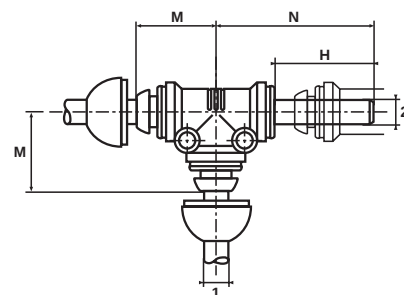
PART NO.	TUBE SIZE	BSPP	C HEX	M	N
R64PK4-1/8	4	1/8	14	18.0	25.5
R64PK4-1/4	4	1/4	19	18.0	30.5
R64PK6-1/8	6	1/8	14	20.5	27.0
R64PK6-1/4	6	1/4	19	20.5	32.0
R64PK8-1/8	8	1/8	14	22.5	29.0
R64PK8-1/4	8	1/4	19	22.5	34.0
R64PK8-3/8	8	3/8	22	22.5	35.0
R64PK10-1/4	10	1/4	19	28.5	39.0
R64PK10-3/8	10	3/8	22	28.5	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

**R68PK Adjustable Male Run Tee Metric Straight Thread**

PART NO.	TUBE SIZE	MM THREAD	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

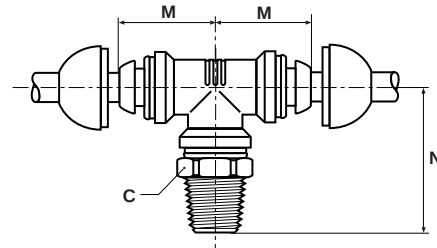
**T2JJPK Plug-in Run Tee**

PART NUMBER	TUBE 1 SIZE	TUBE 2 SIZE	MOUNTING HOLE DIA.	H	M	N
T2JJPK4	4	4	3.2	19.5	18.0	33.5
T2JJPK6	6	6	4.2	21.0	20.5	36.5
T2JJPK8	8	8	4.2	22.0	22.5	39.5

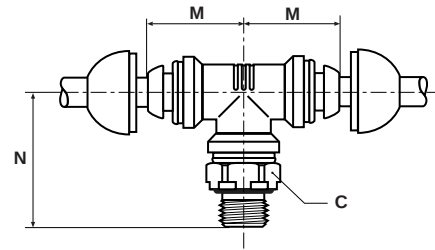


S63PK Adjustable Male Branch Tee BSPT

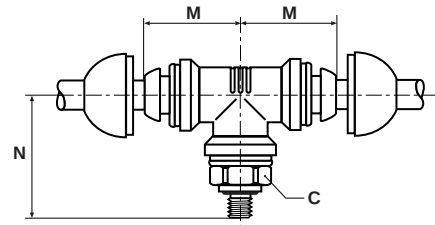
PART NO.	TUBE SIZE	BSPT	C HEX	M	N
S63PK4-1/8	4	1/8	10	18.0	25.5
S63PK4-1/4	4	1/4	14	18.0	29.0
S63PK6-1/8	6	1/8	11	18.0	29.0
S63PK6-1/4	6	1/4	14	20.5	30.5
S63PK8-1/8	8	1/8	14	22.5	29.5
S63PK8-1/4	8	1/4	14	22.5	32.5
S63PK8-3/8	8	3/8	17	22.5	34.0
S63PK10-1/4	10	1/4	17	28.5	40.0
S63PK10-3/8	10	3/8	17	28.5	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

**S64PK Adjustable Male Branch Tee BSPP**

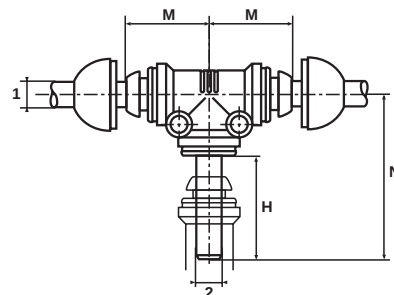
PART NO.	TUBE SIZE	BSPP	C HEX	M	N
S64PK4-1/8	4	1/8	14	18.0	25.5
S64PK4-1/4	4	1/4	19	18.0	30.5
S64PK6-1/8	6	1/8	14	20.5	27.0
S64PK6-1/4	6	1/4	19	20.5	32.0
S64PK8-1/8	8	1/8	14	22.5	29.0
S64PK8-1/4	8	1/4	19	22.5	34.0
S64PK8-3/8	8	3/8	22	22.5	35.0
S64PK10-1/4	10	1/4	19	28.5	39.0
S64PK10-3/8	10	3/8	22	28.5	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

**S68PK Adjustable Male Branch Tee Metric Straight Thread**

PART NO.	TUBE SIZE	MM THREAD	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

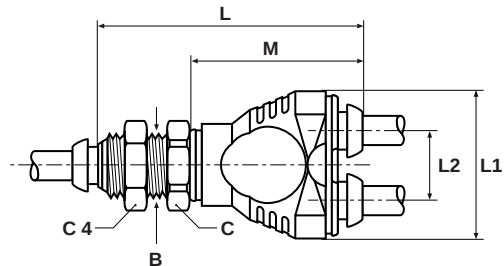
**T2JPK Plug-in Branch Tee**

PART NUMBER	TUBE 1 SIZE	TUBE 2 SIZE	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



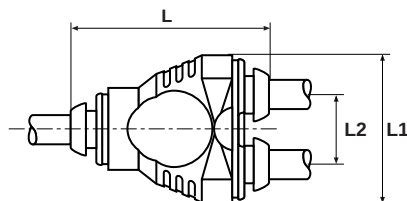
WYJ6PK Adjustable Male Bulkhead Y Connector

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

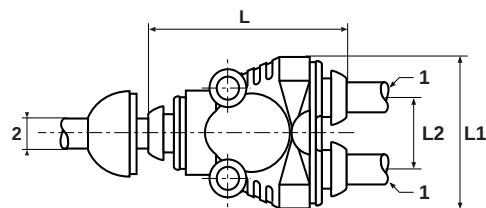
**YJPK Union Y Connector**

PART NO.	TUBE SIZE	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.

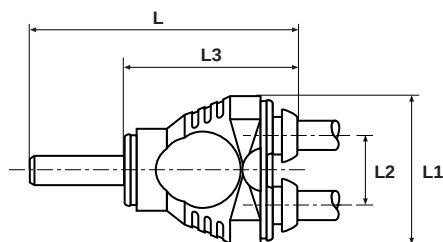
**YJPK Unequal Union Y Connector**

PART NO.	1 TUBE SIZE	2 TUBE SIZE	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

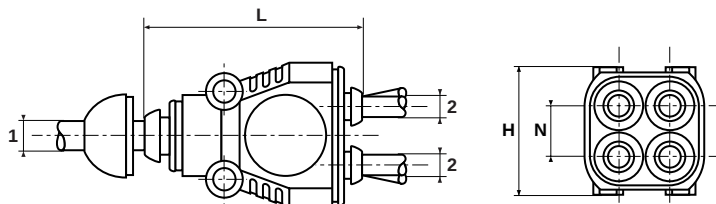
**YJ2PK Plug-In Y Connector**

PART NO.	TUBE SIZE	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.

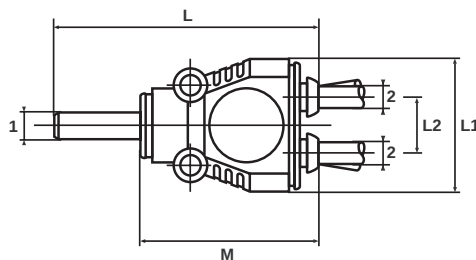
**YJ5PK Union Double Y Connector**

PART NO.	1	2	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

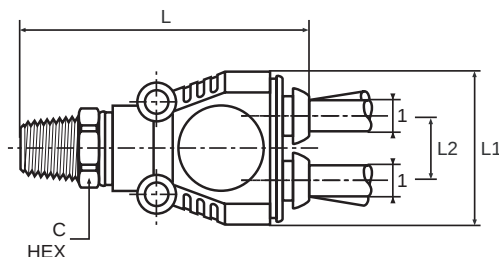


YJ52PK Plug-in Double Y Connector

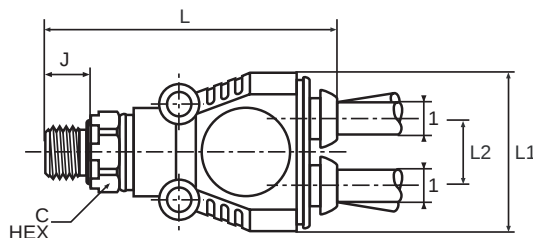
PART NUMBER	1	2	MOUNTING HOLE DIA	L	L1	L2	M
YJ52PK6-4	6	4	3.2	52	22.5	9.5	31

**B****YJ563PK Union Double Y Connector Adjustable Male BSPT**

PART NUMBER	1	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

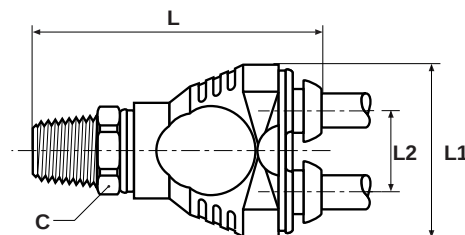
**YJ564PK Union Double Y Connector Adjustable Male BSPP**

PART NUMBER	1	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

**YJ63PK Adjustable Male Y Connector BSPT**

PART NO.	TUBE SIZE	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

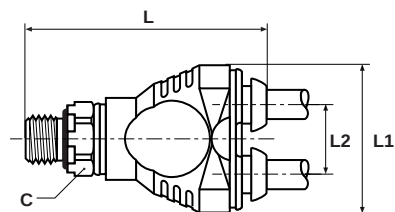
*Fittings not suitable for use with protective cap.



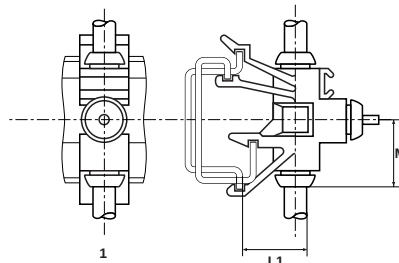
YJ64PK Adjustable Male Y Connector BSPP

PART NO.	TUBE SIZE	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

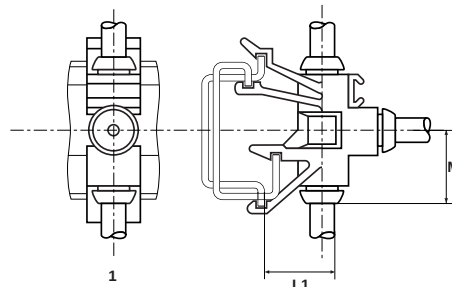
* Fittings not suitable for use with protective cap.

**HS3PK Manifold for 2 Tubes And Pressure Indicator**

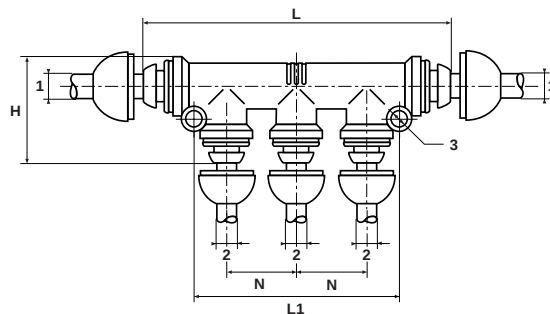
PART NO.	TUBE SIZE	L 1	M
HS3PK4	4	14	16
HS3PK6	6	15	18
HS3PK8	8	15	29

**J3PK Manifold for 3 Tubes**

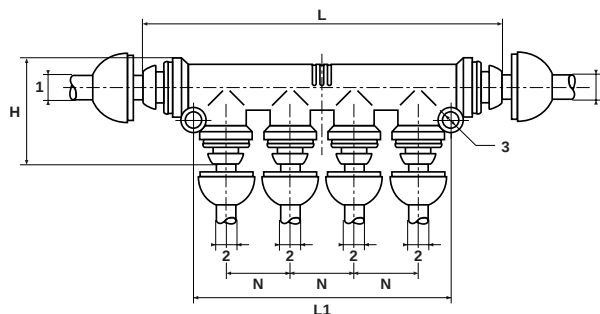
PART NO.	TUBE SIZE	L 1	M
J3PK4	4	14	16
J3PK6	6	15	18
J3PK8	8	15	29

**J5PK Multiple Tee**

PART NO.	1	2	3	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

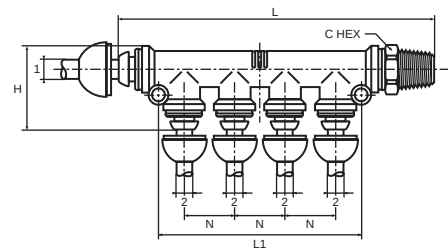
**J6PK Multiple tee**

PART NO.	1	2	3	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

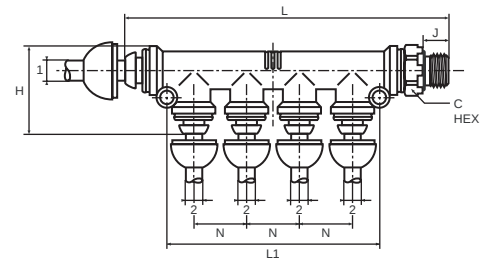


J663PK Adjustable Male Multiple Tee BSPT

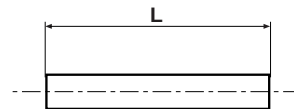
PART NUMBER	1	2	MOUNTING HOLE DIA	BSPT	C HEX	H	L	L1	N
J663PK6-4-1/8	6	4	4.4	1/8	10	27	103.0	70	18
J663PK6-4-1/4	6	4	4.4	1/4	14	27	106.5	70	18
J663PK8-4-1/8	8	4	4.4	1/8	10	28	103.0	70	18
J663PK8-4-1/4	8	4	4.4	1/4	14	28	106.5	70	18
J663PK8-4-3/8	8	4	4.4	3/8	17	28	108.0	70	18
J663PK8-6-1/8	8	6	4.4	1/8	10	30	103.0	70	18
J663PK8-6-1/4	8	6	4.4	1/4	14	30	106.5	70	18
J663PK8-6-3/8	8	6	4.4	3/8	17	30	108.0	70	18
J663PK10-6-1/4	10	6	4.4	1/4	14	33	116.4	70	18
J663PK10-6-3/8	10	6	4.4	3/8	17	33	117.9	70	18

**B****J664PK Adjustable Male Multiple Tee BSPP**

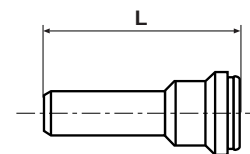
PART NUMBER	1	2	MOUNTING HOLE DIA	BSPP	C HEX	H	J	L	L1	N
J664PK6-4-1/8	6	4	4.4	1/8	14	27	7.5	103.0	70	18
J664PK6-4-1/4	6	4	4.4	1/4	19	27	11.0	108.0	70	18
J664PK8-4-1/8	8	4	4.4	1/8	14	28	7.5	103.0	70	18
J664PK8-4-1/4	8	4	4.4	1/4	19	28	11.0	108.0	70	18
J664PK8-4-3/8	8	4	4.4	3/8	22	28	11.5	109.0	70	18
J664PK8-6-1/8	8	6	4.4	1/8	14	30	7.5	103.0	70	18
J664PK8-6-1/4	8	6	4.4	1/4	19	30	11.0	108.0	70	18
J664PK8-6-3/8	8	6	4.4	3/8	14	30	11.5	109.0	70	18
J664PK10-6-1/4	10	6	4.4	1/4	19	33	11.0	117.9	70	18
J664PK10-6-3/8	10	6	4.4	3/8	22	33	11.5	118.9	70	18

**BPK Double Male Union**

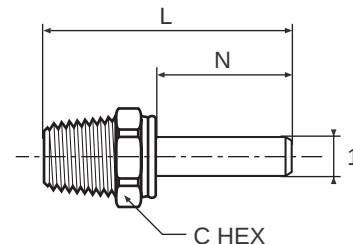
PART NO.	TUBE SIZE	L
BPK4	4	38
BPK6	6	41
BPK8	8	41
BPK10	10	51
BPK12	12	54
BPK14	14	55

**FNPK Plug**

PART NO.	TUBE SIZE	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

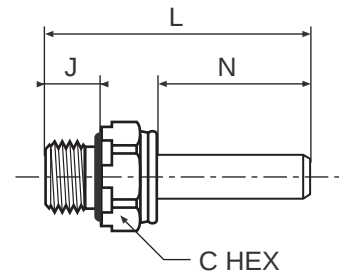
**T23FPK Tube End Male Adaptor BSPT**

PART NUMBER	TUBE SIZE	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
T23FPK10-1/4	10	1/4	19	57	27.0
T23FPK10-3/8	10	3/8	19	55	27.0
T23FPK10-1/2	10	1/2	22	52	27.0

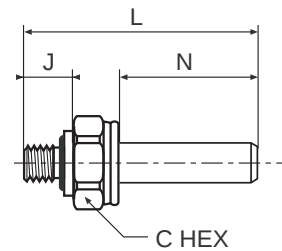


T24FPK Tube End Male Adaptor BSPP

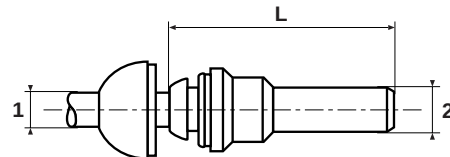
PART NUMBER	TUBE SIZE	BSPP	C HEX	J	L	N
T24FPK4-1/8	4	1/8	14	6	38	19.0
T24FPK4-1/4	4	1/4	16	9	38	19.5
T24FPK6-1/8	6	1/8	14	6	41	21.0
T24FPK6-1/4	6	1/4	16	9	41	20.5
T24FPK8-1/8	8	1/8	14	6	45	22.0
T24FPK8-1/4	8	1/4	16	9	45	22.0
T24FPK8-3/8	8	3/8	19	9	45	22.0
T24FPK10-1/4	10	1/4	19	9	57	27.0
T24FPK10-3/8	10	3/8	19	9	51	26.0
T24FPK10-1/2	10	1/2	27	12	50	27.0

**T28FPK Tube End Male Adaptor Metric Straight Thread**

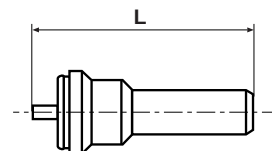
PART NUMBER	TUBE SIZE	MM THREAD	C HEX	J	L	N
T28FPK4M5	4	M5X0.8	12	5	43	19.5
T28FPK6M5	6	M5X0.8	14	5	43	21.0

**TR2PK Tube End Reducer**

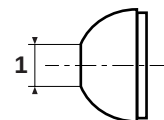
PART NO.	TUBE SIZE 2	TUBE SIZE 1	L
TR2PK6-4	6	4	38
TR2PK8-4	8	4	36
TR2PK8-6	8	6	39
TR2PK10-4	10	4	41
TR2PK10-6	10	6	43
TR2PK10-8	10	8	47
TR2PK12-6	12	6	36
TR2PK12-8	12	8	38
TR2PK12-10	12	10	48
TR2PK14-8	14	8	39
TR2PK14-10	14	10	42
TR2PK14-12	14	12	51

**TS2PK Pressure Indicator**

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

**Protective Cap**

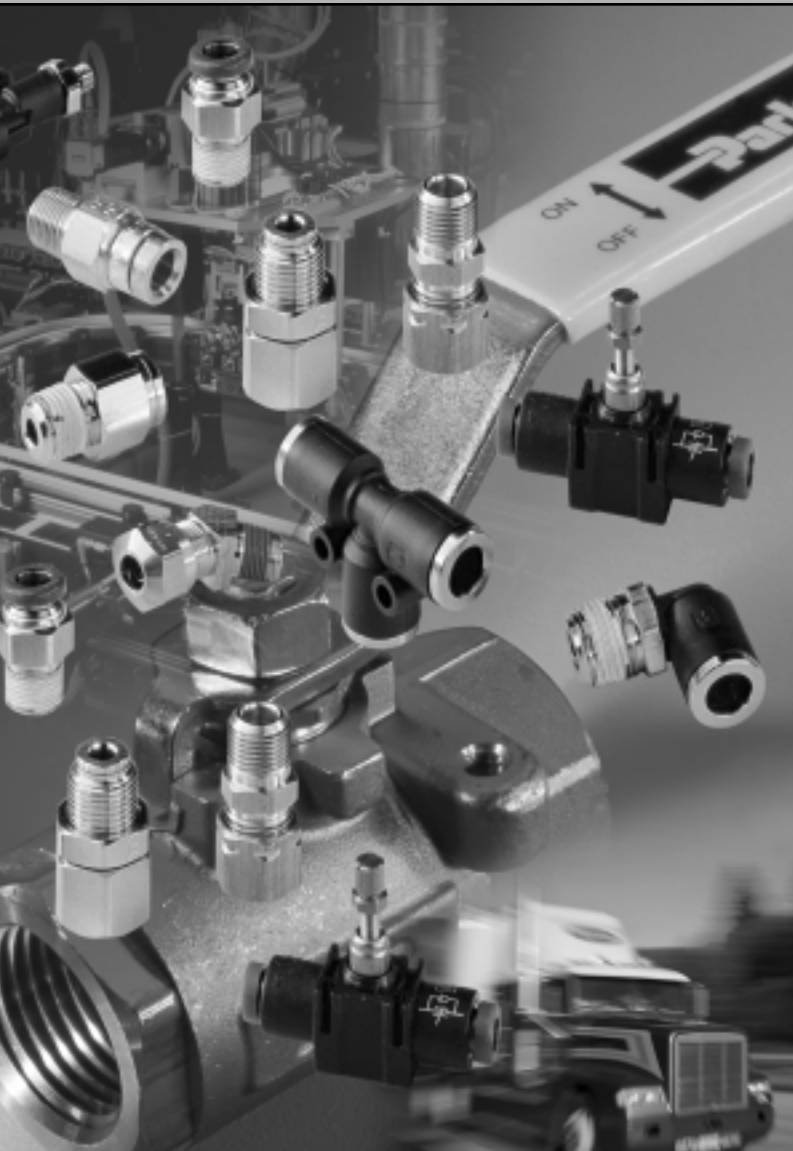
PART NO.	1
C4*	4
C6*	6
C8*	8
C10*	10
C12*	12
C14*	14



*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 Δ 4mm: C4R. In case of no color specification, we will deliver yellow cap (standard color).

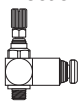
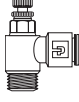
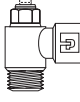
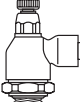
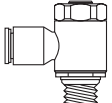
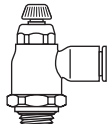
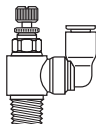
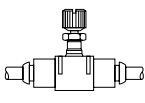
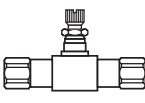
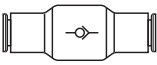
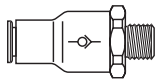
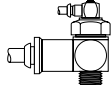
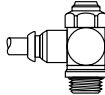
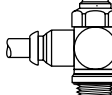
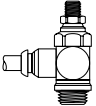
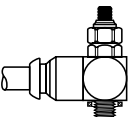
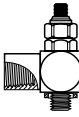
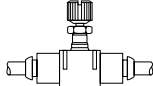
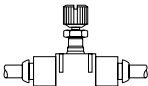
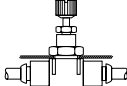
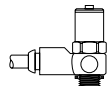
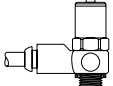
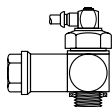
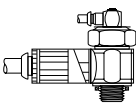
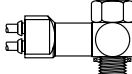
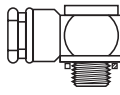


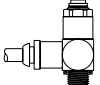
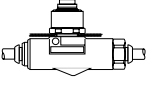
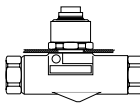
Integrated Fittings



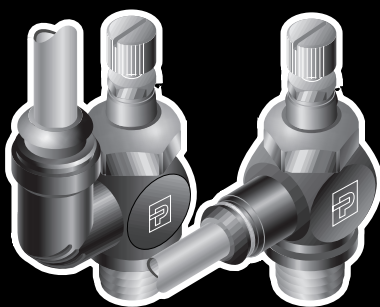
Right Angle Flow Control Valves	C4
Metric Right Angle Flow Control Valves	C8
Slow Start Flow Control Valves	C14
Metric Slow Start Flow Control Valves	C15
Flow Control Blocking Valves	C17
Metric Flow Control Blocking Valves	C19
In-Line Flow Control Valves	C21
Metric In-Line Flow Control Valves	C23
Metric Combination Valves	C25
Metric Pressure Sensor Valves	C26
Metric Pressure Reducing Valves	C28
Metric Silencer and Flow Control Valves	C30
Non-Return Valves	C31

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	PCV4PK Power Valve Version  Page C16	PCV4 Power Valve Version  Page C16	PIV4PK System Isolating  Page C16	PIV4 System Isolating  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 Sensor-Electrical  Page C27	PWS-B Banjo Socket  Page C27

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

C



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.

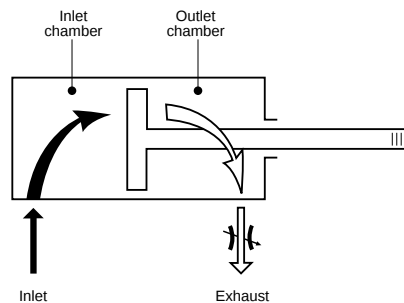
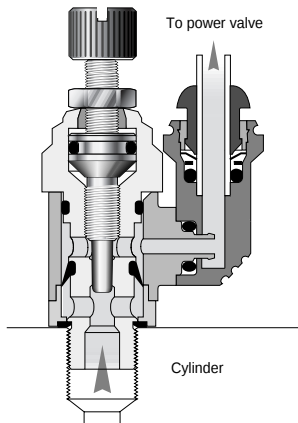
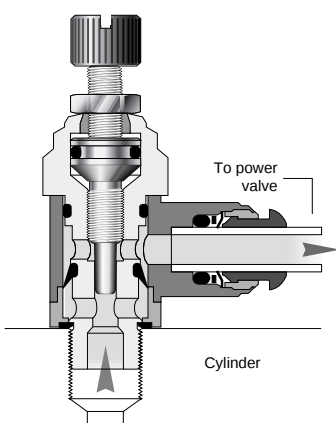
Advantages

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

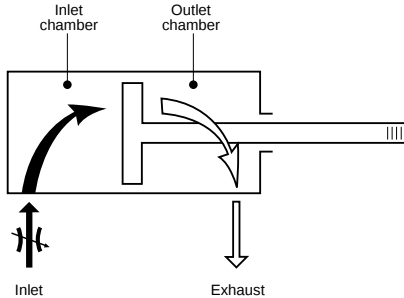
Valve Specifications

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

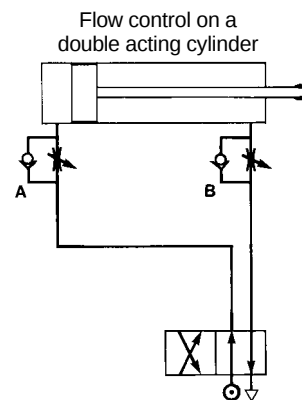
THREAD SIZE	MAXIMUM ASSEMBLY TORQUE FT.-LB
10-32 UNF	0.37
1/8 NPTF	9
1/4 NPTF	17
3/8 NPTF	26
1/2 NPTF	34



Flow regulation on the exhaust port

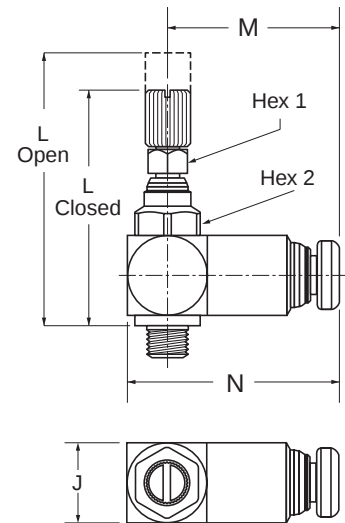


Flow regulation on the inlet port

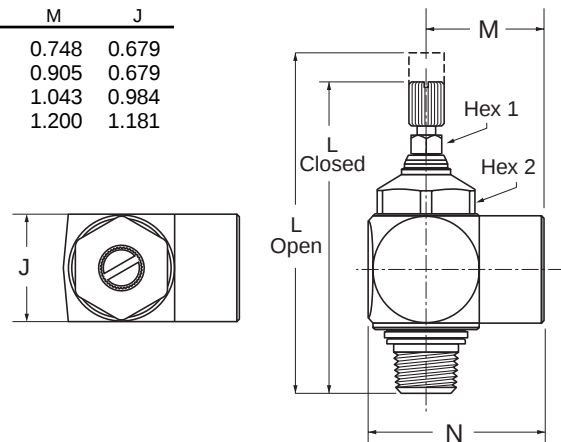


Flow Control with Push-in Connector FC701

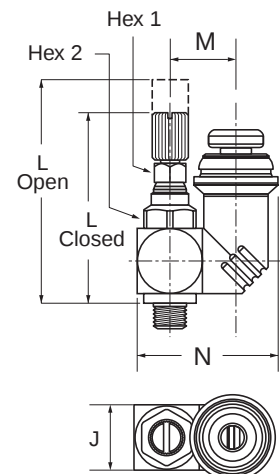
PART NO.	TUBE SIZE	THREAD SIZE	HEX 1	HEX 2	L OPEN	L CLOSED	N	M	J
FC701-2-0	1/8	10-32	1/16	5/16	1.363	1.167	1.040	0.870	0.393
FC701-2-2	1/8	1/8	5/16	5/8	2.181	2.000	1.330	0.961	0.679
FC701-5/32-0	5/32	10-32	1/16	5/16	1.363	1.167	1.067	0.870	0.393
FC701-5/32-2	5/32	1/8	5/16	5/8	2.181	2.000	1.370	1.000	0.679
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
FC701-8-8	1/2	1/2	9/16	1	3.858	3.287	2.024	1.433	1.181

**Flow Control with Threaded Connection 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

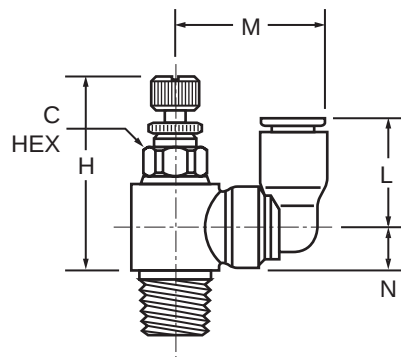
**Flow Control with Swivel Outlet FCS701**

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
FCS701-5/32-0	5/32	10-32	1/16	5/16	1.363	1.167	0.854	0.401	0.393
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
FCS701-4-4	1/4	1/4	5/16	5/8	2.566	2.318	1.318	0.657	0.679
FCS701-5-4	5/16	1/4	5/16	5/8	2.566	2.318	1.392	0.696	0.679
FCS701-6-4	3/8	1/4	5/16	5/8	2.566	2.319	1.535	0.755	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



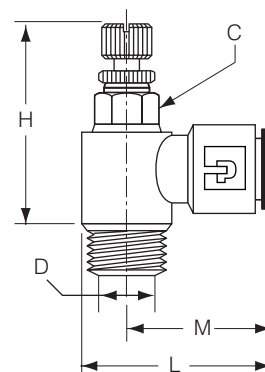
Miniature Swivel Outlet Flow Control FCS703

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**

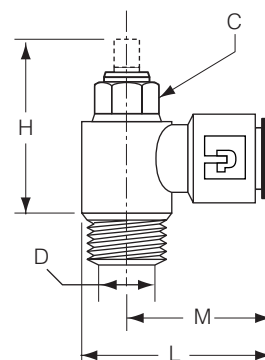
Composite Body

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**

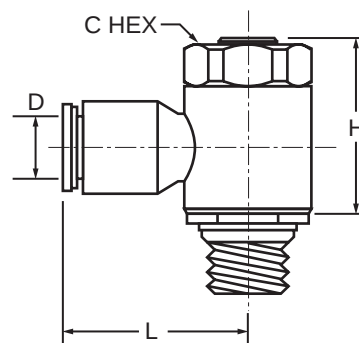
Composite Body

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

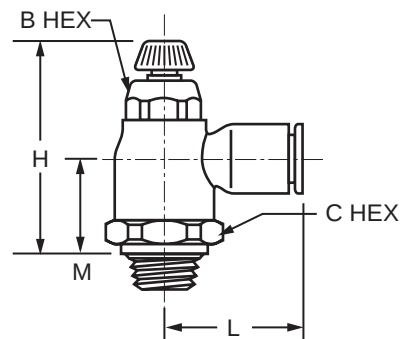


Knobless Compact Flow Control FCC701

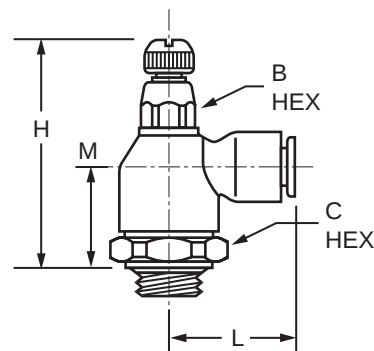
PART NO.	TUBE SIZE	THREAD SIZE	C HEX (MM)	H	L
FCC701-2-2	1/8	1/8	13	.79	.75
FCC701-5/32-2	5/32	1/8	13	.79	.75
FCC701-4-2	1/4	1/8	13	.79	.85
FCC701-4-4	1/4	1/4	17	1.04	.89
FCC701-5-2	5/16	1/8	13	.79	1.02
FCC701-5-4	5/16	1/4	17	1.04	1.06
FCC701-6-4	3/8	1/4	17	1.04	1.14
FCC701-6-6	3/8	3/8	20	1.14	1.36

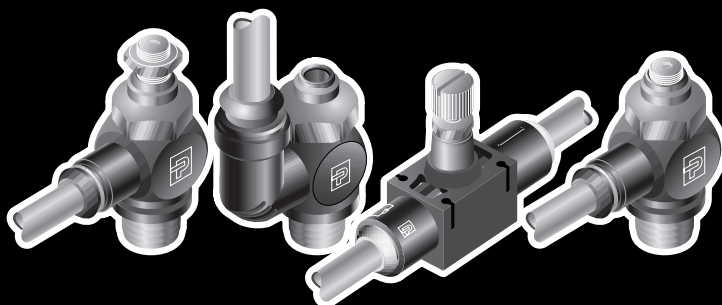
**C****Compact Exhaust Flow Control FCC703**

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





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.

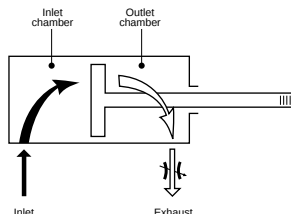
On single acting cylinders and some miniature (M5) double acting cylinders, the air flow can be controlled from the inlet port.

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

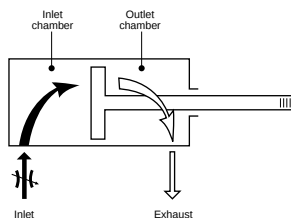
Operation

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

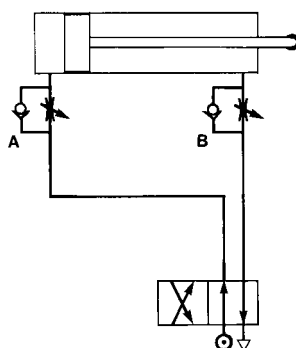
The sketch opposite shows a cylinder with inlet air at port A. Air passes freely through the flow control valve A, with the check valve in the open position. The exhaust is controlled by the flow control fitting B, where the check valve in the closed position forces the air to go through the adjustable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

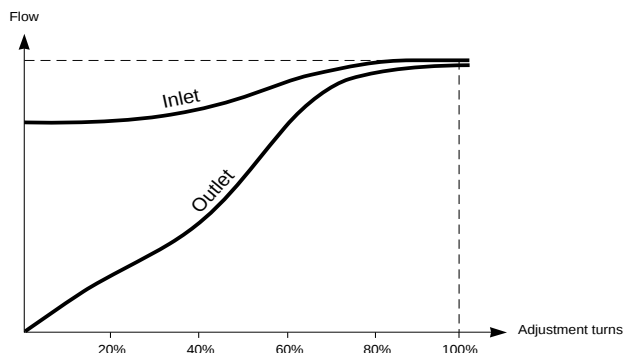
Flow characteristics

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



Prestoflow - Flow regulator - Compact series

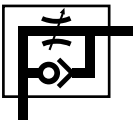
Principle

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.

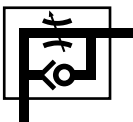
- A check valve blocks the full flow ports in the exhaust or inlet direction.
- The flow is controlled by a needle valve fitted in the regulator bolt.

Flow adjustment

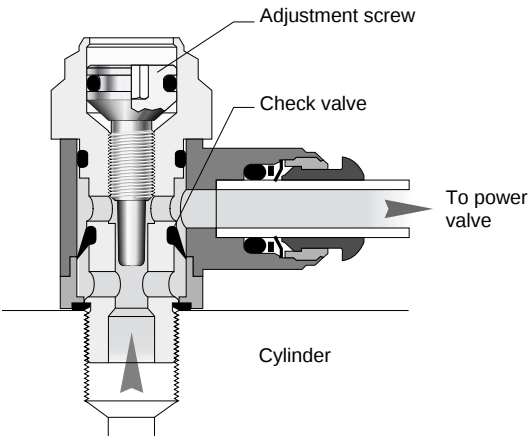
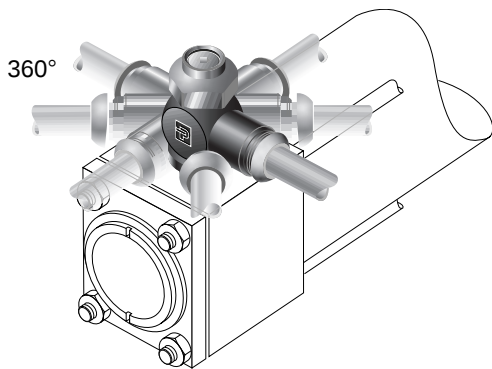
Flow control is adjusted with an Allen key. The large number of turns from fully closed to fully open allows for precise flow control.



Exhaust flow control



Inlet flow control



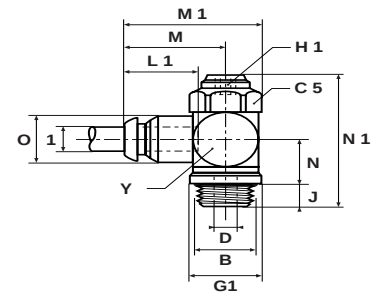
Technical

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

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.

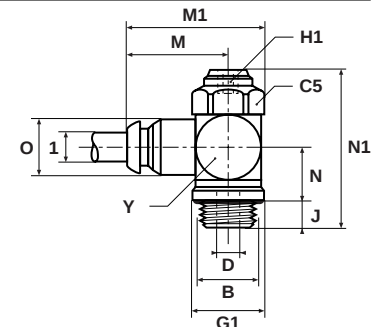


Exhaust Flow Control

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

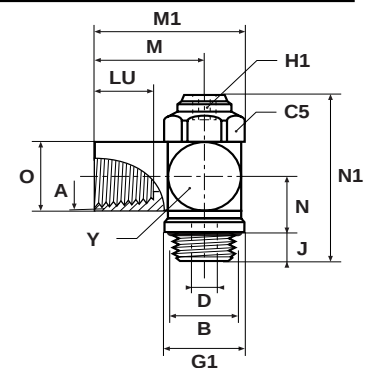
* These fittings are supplied with Nylon seal.



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.

Prestoflow - Flow regulator - Locknut series

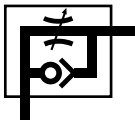
Principle

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.

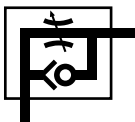
- A check valve blocks the full flow ports in the exhaust or inlet direction.
- The flow is controlled by a needle valve fitted in the regulator bolt.
- The adjustment screw can be locked in position to prevent tampering

Flow adjustment

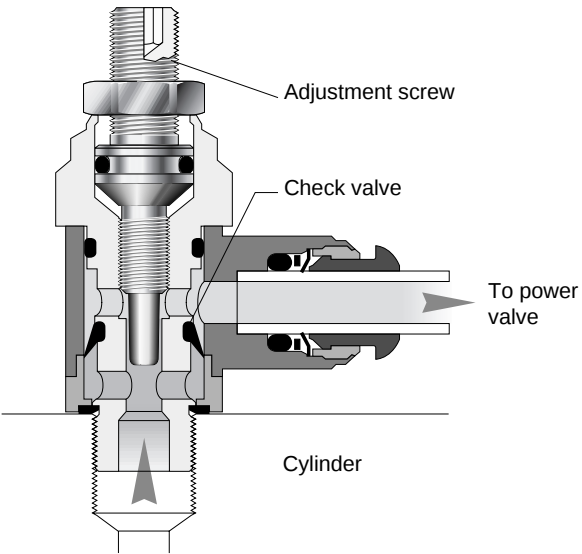
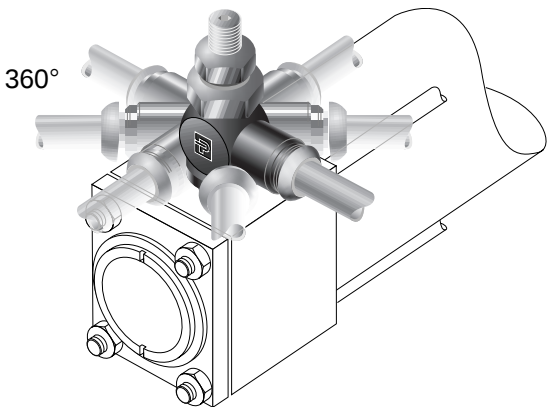
Flow control is adjusted with an Allen key. When the desired flow is set the adjusting screw can be locked using the locking nut. The large number of turns from fully closed to fully open allows for precise flow control.



Exhaust flow control



Inlet flow control



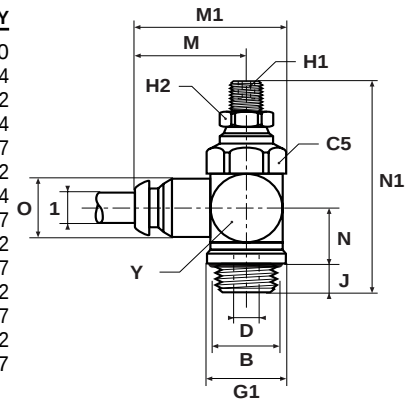
Technical features

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

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

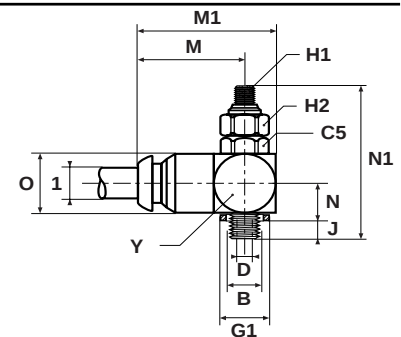
* These fittings are supplied with Nylon seal.



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

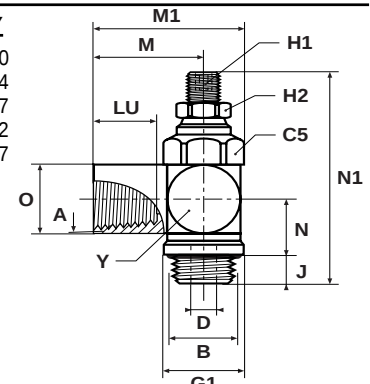


Inlet Flow Control

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

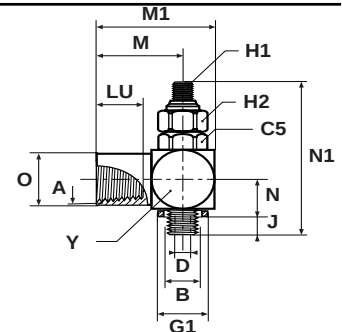
* These fittings are supplied with Nylon seal.



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.

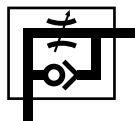
Prestoflow - Flow regulator - Swivel outlet**Principle**

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.

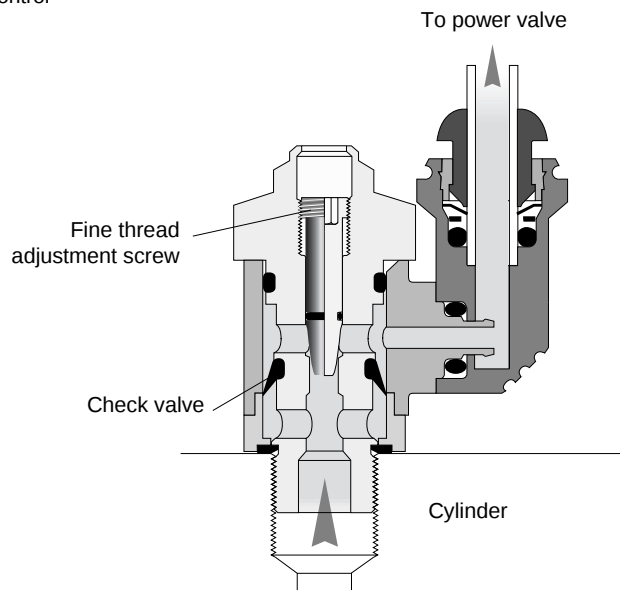
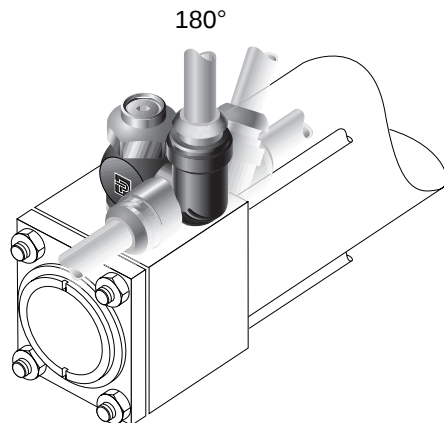
- A check valve blocks the full flow ports in the exhaust direction.
- The flow is controlled by a needle valve fitted in the regulator bolt.
- The swivel outlet can be positioned in the most suitable direction.

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

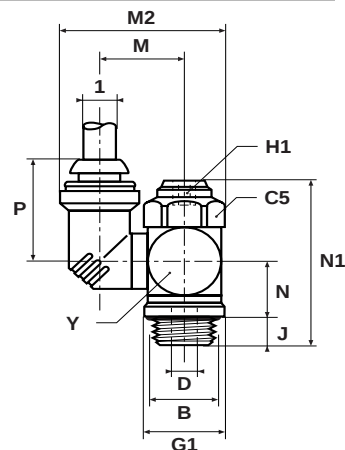
**Technical features**

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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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.

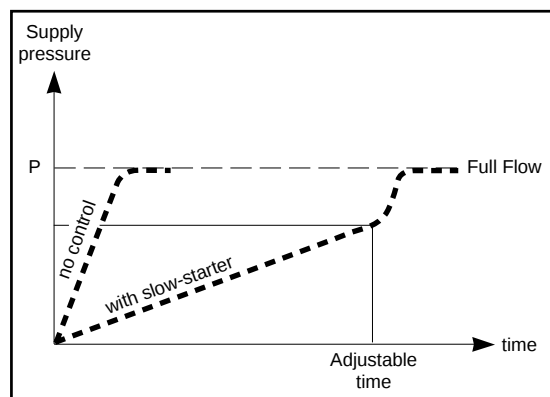
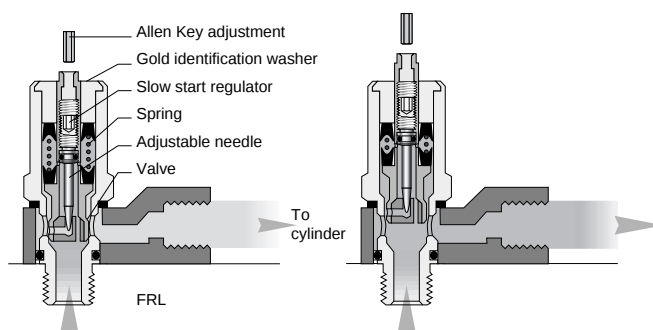
Advantages

- Simplified cabling
- Compact installation
- Reduces wear and damage

Valve Specifications

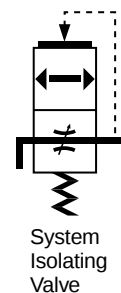
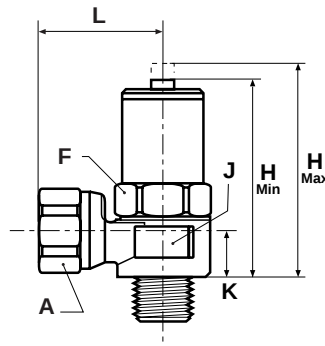
Maximum Working Pressure: 145 PSI
 Operating Temperature: +5° - +150° F
 Body Material: Brass nickel plated
 Bolt Material: Brass nickel plated

Soft start operation/Full flow



FC902 Slow Start with Threaded Connection

PART NO.	NPT TREADS	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



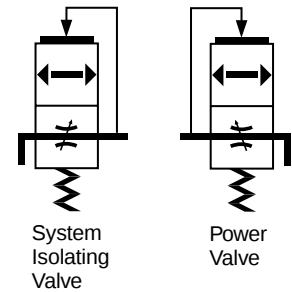
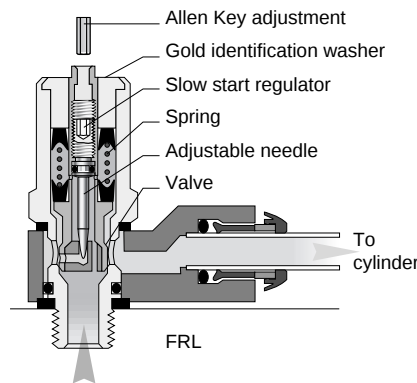
Prestostart Pneumatic slow start fittings

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.

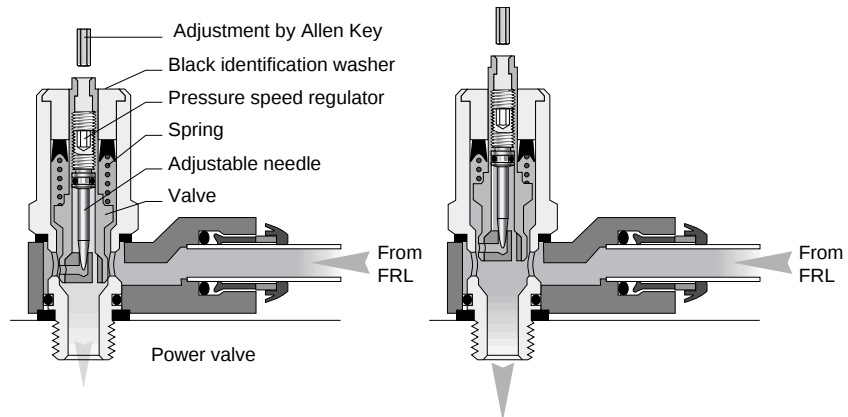
PIV Series

- 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.

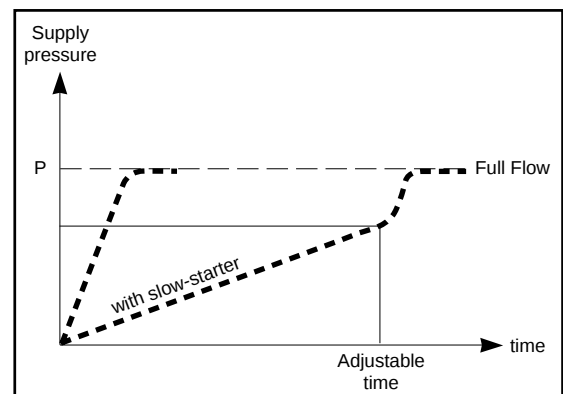
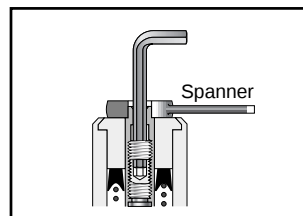


Pressurization speed

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.

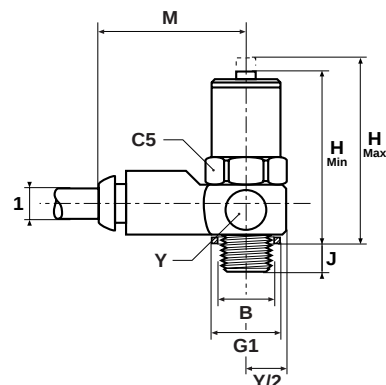


Technical features

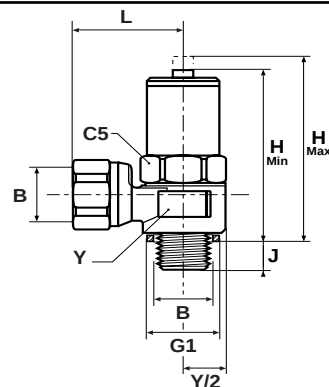
BODY MATERIAL		BOLT ASSEMBLY MATERIAL	BOLT THREAD	SEALING DEVICE	TERMINATORS		WORKING TEMP.	WORKING PRESSURE
PUSH-IN VERSION	THREAD VERSION							
High Resistance Polyamide	Brass Nickel Plated	Brass Nickel Plated	1/4 BSPP 3/8 BSPP 1/2 BSPP	Nylon Washer	8 to 12 mm Push-In	1/4 to 1/2 BSPP Female Thread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

PCV4PK Slow Start Fitting Power Valve Version with Push-In Connection

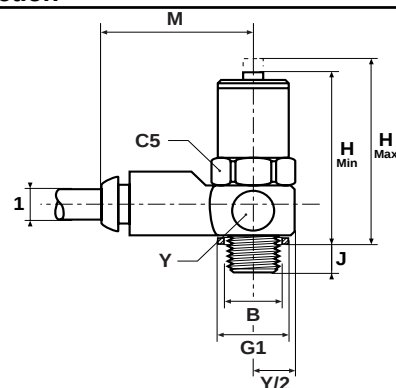
PART NO.	1	B	C5	G1	H MIN.	H MAX.	J	M	Y	TORQUE MDAN	AIR FLOW NL/MN AT 87 PSI	KV
PCV4PK8-1/4	8	1/4	17	17.5	54	61	9	35.0	20	1.3	1500	0.80
PCV4PK10-1/4†	10	1/4	22	19.5	55	62	9	41.5	25	1.3	2000	1.15
PCV4PK10-3/8†	10	3/8	22	21.0	55	62	10	41.5	25	1.5	2000	1.15

**PCV4 Slow Start Fitting Power Valve Version with Threaded Connection**

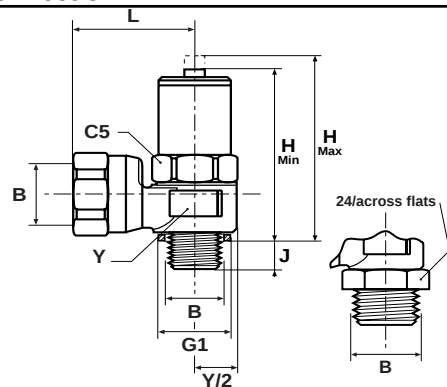
PART NO.	B	C5	G1	H MIN.	H MAX.	J	L	Y	TORQUE MDAN	AIR FLOW NL/MN AT 87 PSI	KV
PCV4-1/4†	1/4	22	19.5	55	62	9	31	24	1.3	2000	1.15
PCV4-3/8	3/8	22	21.0	55	62	10	31	24	1.5	2000	1.15

**PIV4PK Slow Start Fitting System Isolating Valve Version with Push-In Connection**

PART NO.	1	B	C5	G1	H MIN.	H MAX.	J	M	Y	TORQUE MDAN	AIR FLOW NL/MN AT 87 PSI	KV
PIV4PK8-1/4	8	1/4	17	17.5	54.0	61.0	9	27.5	20	1.3	1500	0.8
PIV4PK10-1/4†	10	1/4	22	19.5	55.0	62.0	9	41.5	25	1.3	2100	1.2
PIV4PK10-3/8†	10	3/8	22	21.0	55.0	62.0	10	41.5	25	1.5	2200	1.3
PIV4PK12-3/8†	12	3/8	22	21.0	55.0	62.0	10	46.5	25	1.5	3100	1.0
PIV4PK12-1/2†	12	1/2	22	25.5	63.5	70.5	10	46.5	25	1.8	3100	1.0

**PIV4 Slow Start Fitting System Isolating 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
PIV4-1/4†	1/4	22	19.5	54.0	62.0	9	31.0	24	1.3	2100	1.2
PIV4-3/8†	3/8	22	21.0	55.0	62.0	10	31.0	24	1.5	3100	1.0
PIV4-1/2	1/2	24	25.5	63.5	70.5	10	34.5	24	1.8	3100	1.0



Specific to 1/2 size

†Indicates non-standard part.

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Flow Control 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.

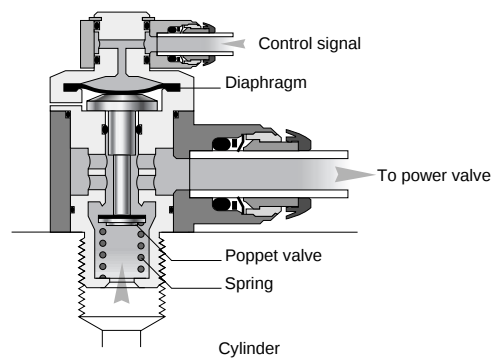
Advantages

- Compact
- Direct mounting
- Safety
- Independent control

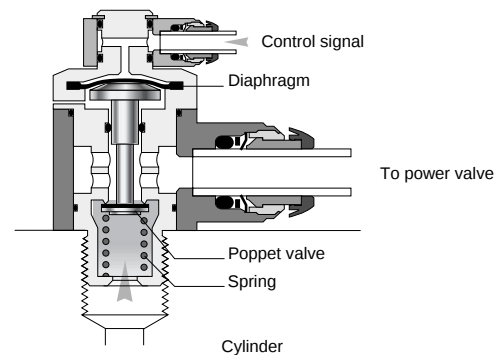
Valve Specifications

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

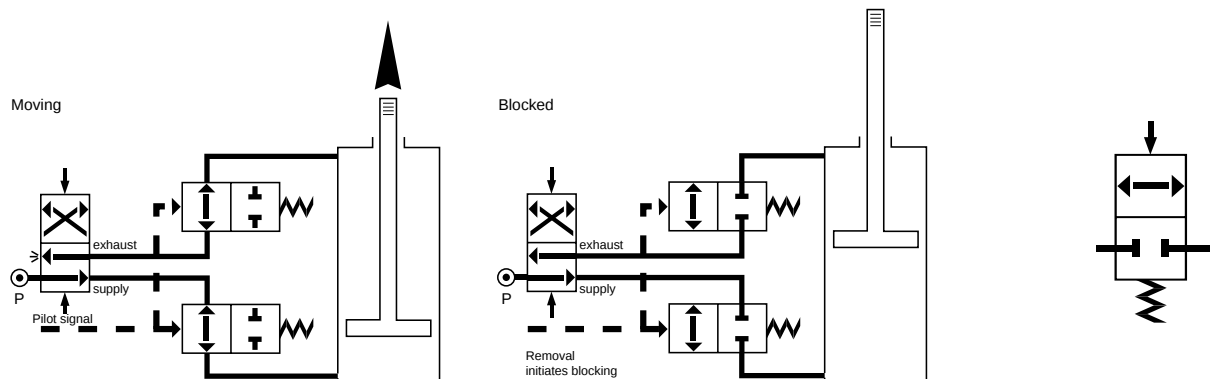
With control signal



Without control signal

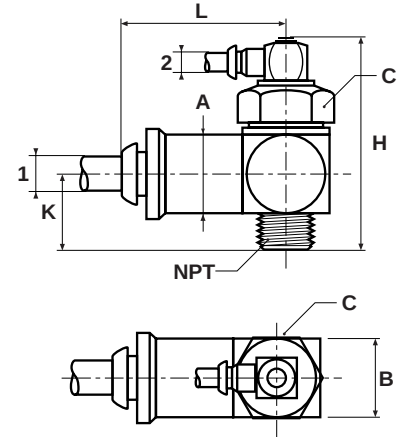


Blocking principle

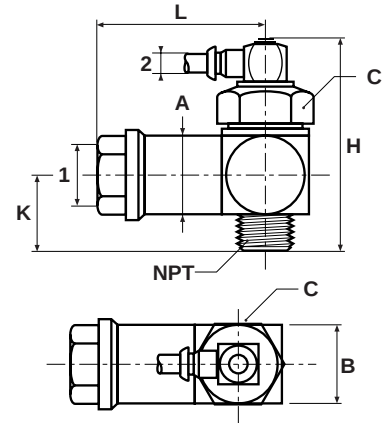


FC601 Blocker with Push-In Connection

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



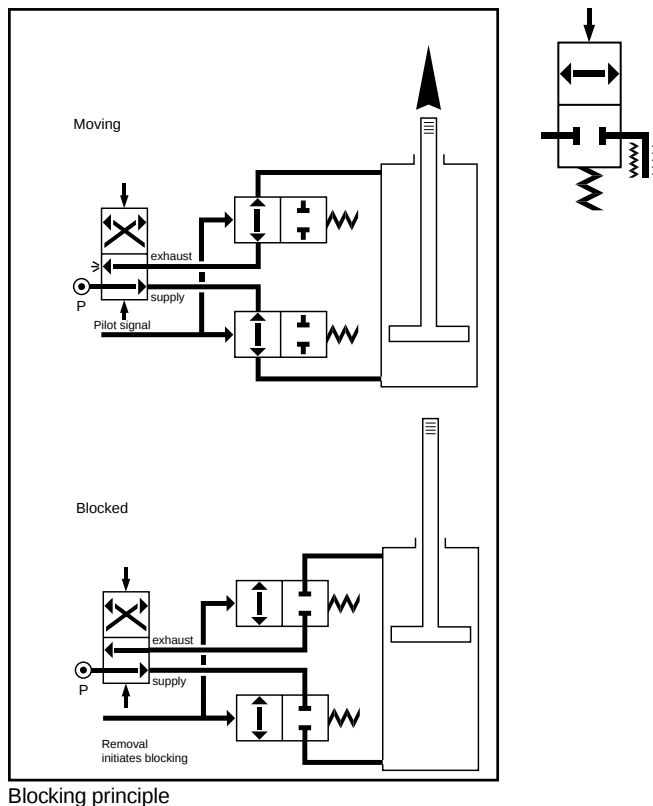
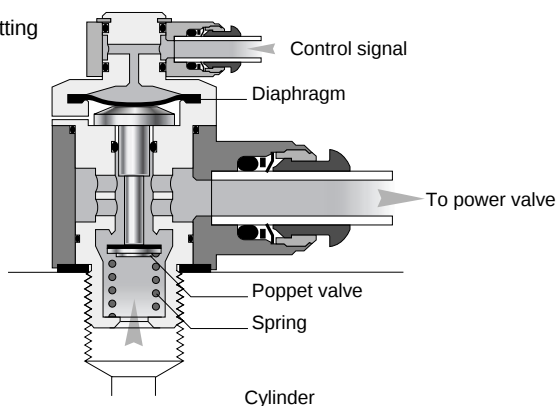
Prestobloc - Pilot-operated blocking fittings**Principle**

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.

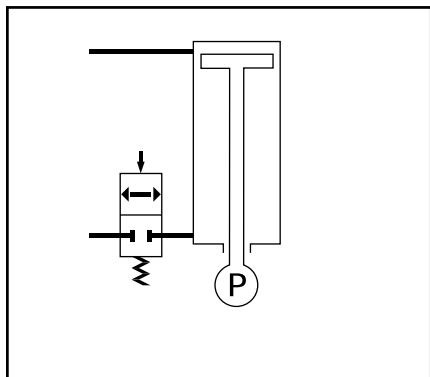
Operation

- 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.

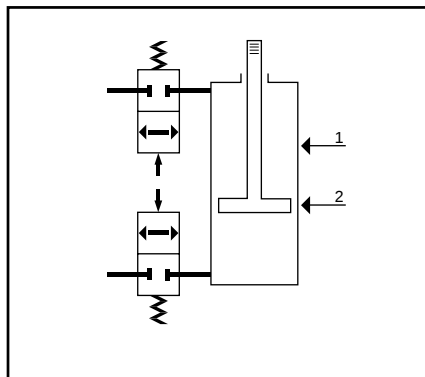
Prestobloc fitting

**Technical features**

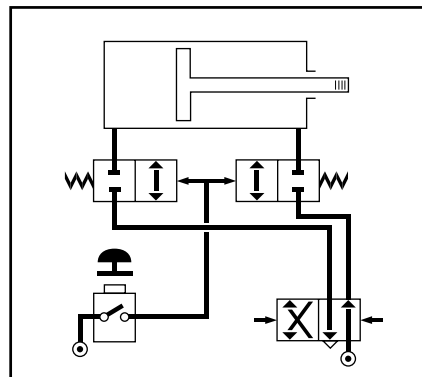
BODY MATERIAL	BOLT MATERIAL	BOLT THREAD	SEALING DEVICE	TERMINATIONS		PILOT TERMINATION	WORKING TEMPERATURE	WORKING PRESSURE
Zinc Alloy Epoxy Coated	Brass	1/8 BSPP 1/4 BSPP 3/8 BSPP 1/2 BSPP	Nylon Washer	6 mm - 12 mm Push-In	1/4 - 1/2 BSPP Female Thread	4 mm - 8 mm Push-In	From 0° to +150° F	140 PSI

Applications**Safety stop**

Prevents descent under load in the event of power failure

**Stroke control**

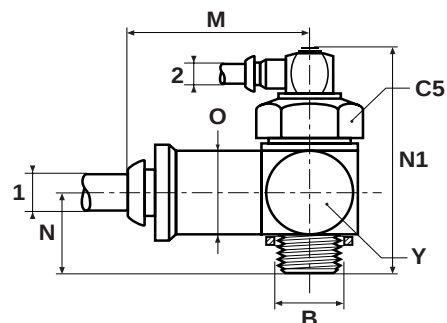
Stops the piston in various positions for conveying and handling applications.

**Safety locks**

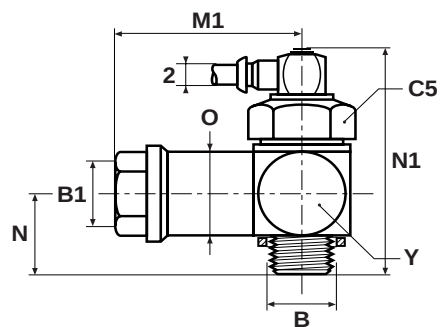
Safety guards for assembly and punch presses. Combination with an emergency switch: restarting the cylinder after resetting the emergency switch.

PWB-A- Blocker with Push-In Connection

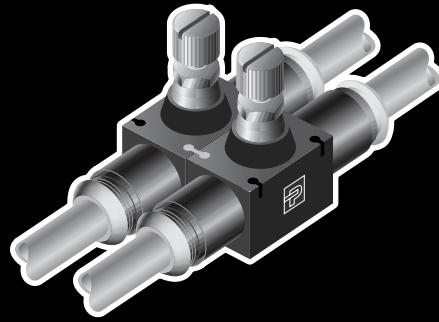
OLD PART NO.	NEW PART NO.	1	B	2	C5	M	N	N1	O	Y
PBV4PB6-1/8	PWB-A1468	6	1/8	4	24	39	20	59	20	22
PBV4PB6-1/4	PWB-A1469	6	1/4	4	24	39	22	61	22	24
PBV4PB8-1/4	PWB-A1489	8	1/4	4	24	39	22	61	22	24
PBV4PB8-3/8	PWB-A1483	8	3/8	4	27	50	25	64	27	24
PBV4PB10-3/8	PWB-A1493	10	3/8	4	27	50	25	64	27	24
PBV4PB12-1/2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



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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

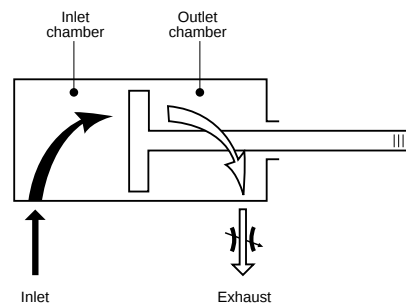
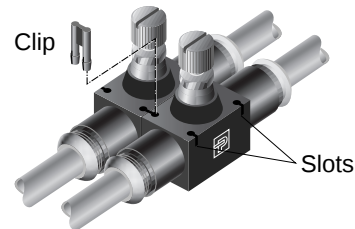
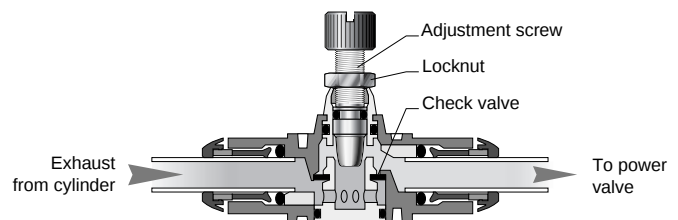
Intake capacity is always slightly greater than the full open exhaust capacity, enabling maximum variation of speeds between outward and return strokes.

Advantages

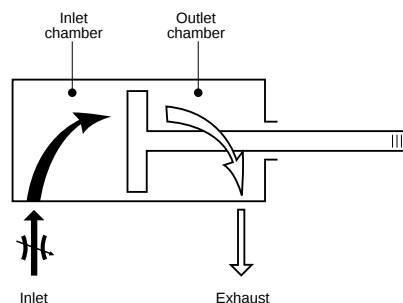
- Assembly in banks
- Panel mounting
- Allows other function fittings to be mounted on a cylinder
- Space saving
- Weight saving
- Flexibility

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

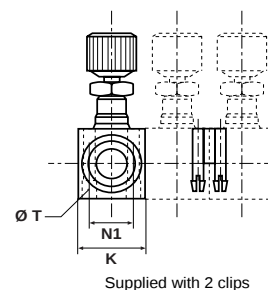
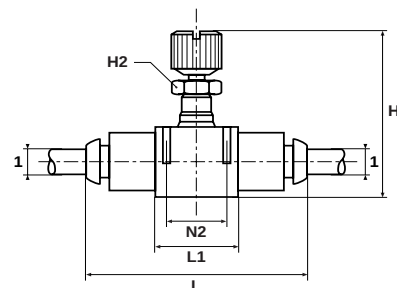


Flow regulation on the inlet port

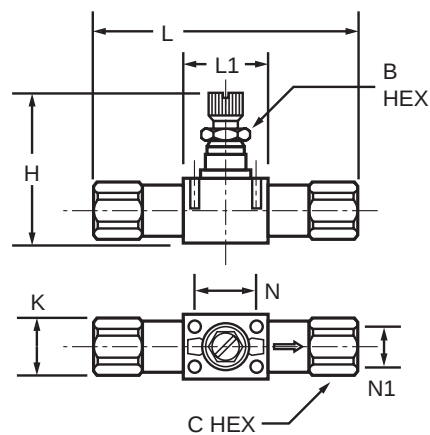


FC800 - In-Line Flow Control with Push-in Connection

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

**Threaded In-Line 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



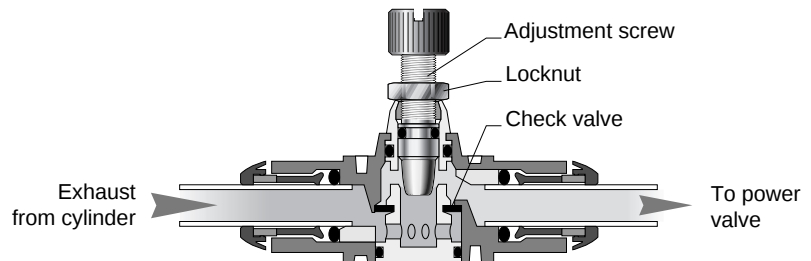
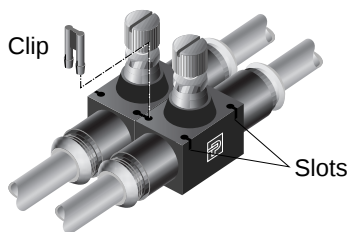
Prestoflow - Flow regulator - In-line series**Principle**

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

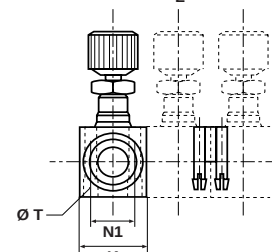
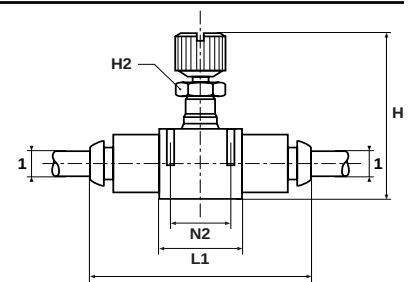
Flow control is adjusted with a screwdriver or manually with the knurled nut. When the desired flow is set the adjusting screw can be locked using the locking nut. The large number of turns from fully closed to fully open allows for precise flow control.

**Technical features**

BODY MATERIAL	CARTRIDGE 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

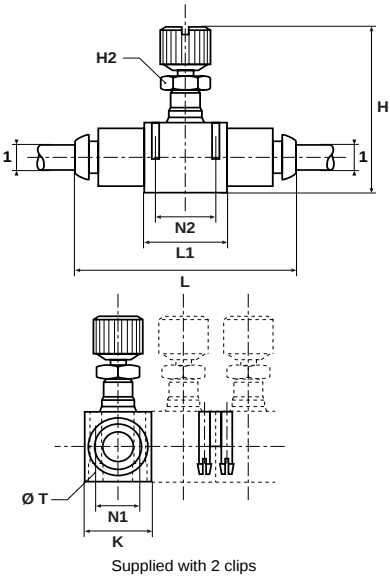


Supplied with 2 clips

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

PTFMIPK Flow regulator with Push-In Connection Ultrafine Adjustment

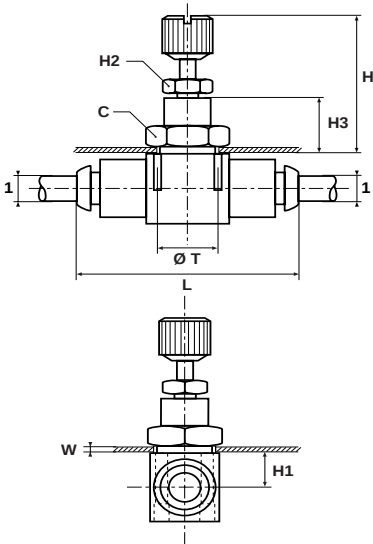
PART NO.	1	H MIN.	H MAX.	K	L	L1	N1	N2	T
PTFMIPK4	4	34	37.0	12	39	15	8	11	2.2
PTFMIPK6	6	42	45.5	17	54	23	11	17	3.2



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



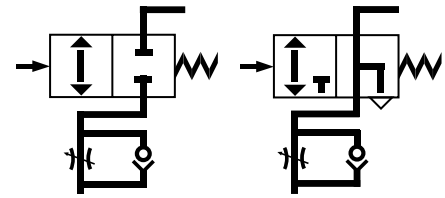
†Indicates non-standard part.
Only items priced in current price list are carried in stock. Dimensions shown may be changed at any time without prior notice.

Prestotwin - Combined flow - blocking - unloading valves**Principle**

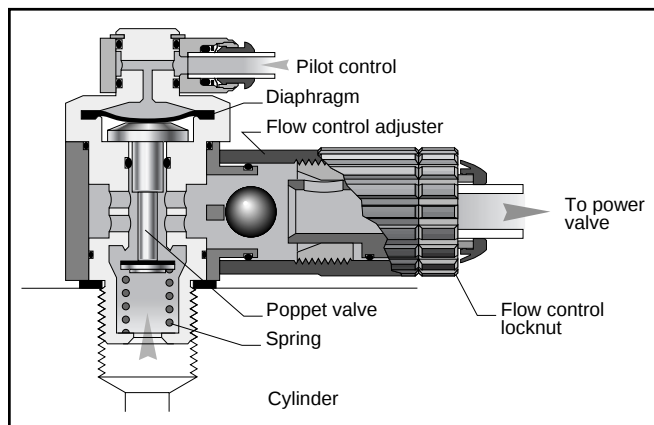
Prestotwin are multi-function fittings combining flow control and blocking or flow control and unloading. This avoids the requirement for two function fittings offering a compact solution with significant space saving. They meet the requirements for a safety fitting and incorporate the facility to accurately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

Operation**PBVF4PK Flow regulator + blocker**

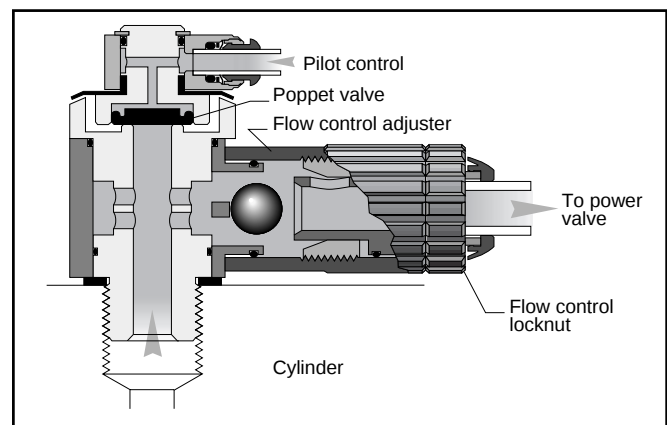
- The pilot signal acting on the diaphragm keeps the poppet valve open. When the pilot signal is removed the spring closes the poppet valve.
- Flow control is obtained by the adjustment of the rotating barrel against a ball bearing.
- The flow control locknut ensures the optimum setting is maintained.

Speed control
and blockerSpeed control
and unloader**PSPF4PK Flow regulator + unloader**

- The pilot signal operating on the poppet valve keeps it closed. When the pilot signal is removed the cylinder air exhausts through the vent.
- 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



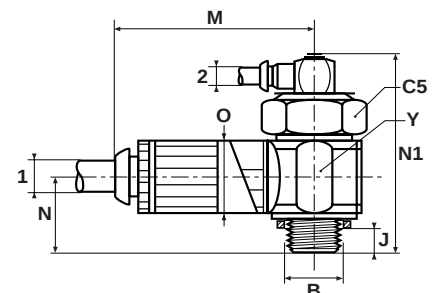
Combined flow control and unloader

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



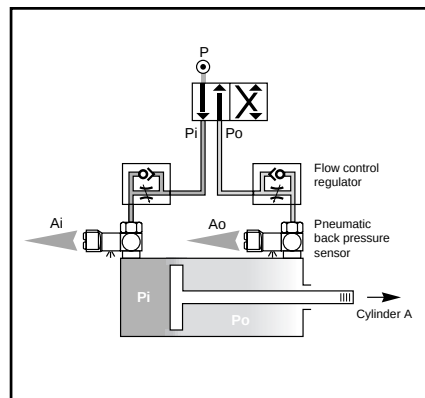
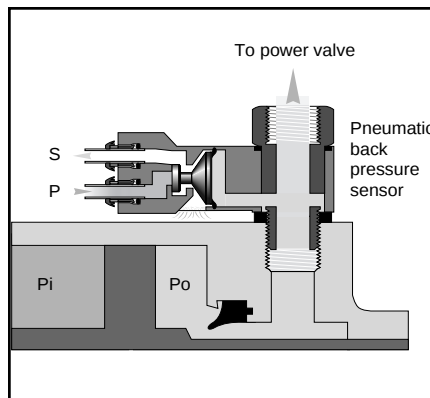
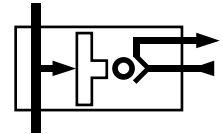
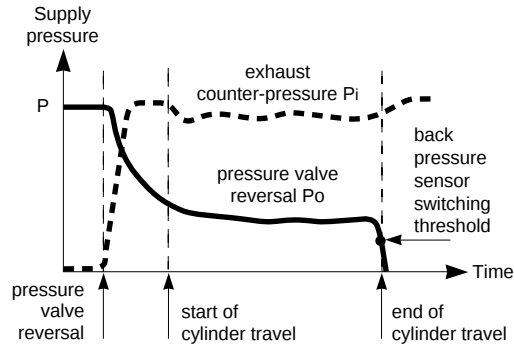
Prestosensor Pressure sensor fittings

Principle

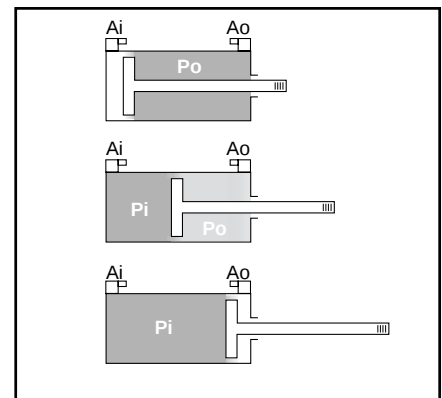
Prestosensor fittings are designed for direct mounting onto the cylinder. These sensors detect end of stroke travel by the variation in internal operating pressure. The sensing can be pneumatic, electric or electronic to suit the application. These fittings remove the need for mechanical position switches.

Operation

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



Mounting of pressure sensors



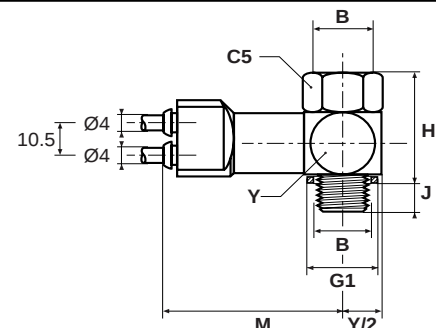
Signals from pressure sensors

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 mm ² 2 Meters Long	3 Core Cable 0.1 mm ² 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
PTP8PB4M5	M5	8	3.5	16	8.0	43.5	11.0
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

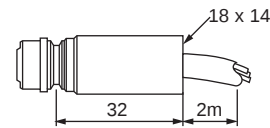


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PWS-M -Plug-in Sensor-Electrical Output

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

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

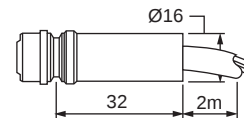


Level of Protection: IP40

PWS-E-Plug-in Sensor-Electronic Output

PART NO.	WEIGHT GRAMS	OUTPUT FUNCTION	OUTPUT CONNECTION	OUTPUT CHARACTERISTICS
PWS-E101	0.07	Type NF	Electronical	PNP
PWS-E111	0.07	Type NO		10/30 V CC 75 mA

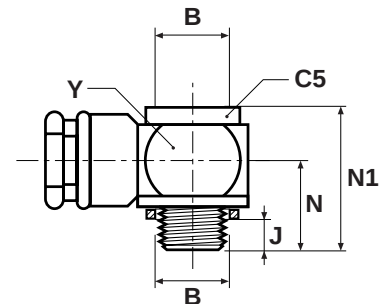
Technical specification of model PWS-E : Pilot release pressure = 0.5 bar



Level of Protection: IP67

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

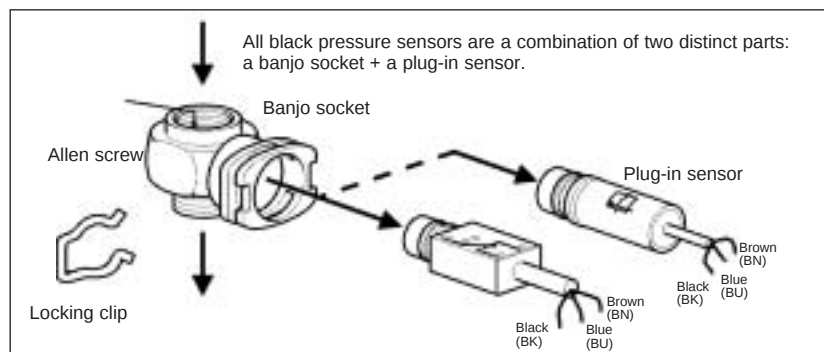
B	PART NO.	C5	J	N	N1	Y	WEIGHT GRAMS	TOOL REQUIRED
M5x0.8	PWS-B155	8	5	18	28	11	0.04	Flat spanner 8 mm
1/8	PWS-B188	6	8	18	28	16	0.04	Allen key 5 mm
1/4	PWS-B199	8	10	18	28	21	0.05	Allen key 8 mm
3/8	PWS-B133	10	11	22	32	28	0.07	Allen key 10 mm
1/2	PWS-B122	12	12	26	38	33	0.11	Allen key 12 mm

**NEW PART NO.**

PWS-M1012 + PWS-B155
PWS-M1012 + PWS-B188
PWS-M1012 + PWS-B199
PWS-M1012 + PWS-B133
PWS-M1012 + PWS-B122
PWS-E101 + PWS-B155
PWS-E101 + PWS-B188
PWS-E101 + PWS-B199
PWS-E101 + PWS-B133
PWS-E101 + PWS-B122
PWS-E111 + PWS-B155
PWS-E111 + PWS-B188
PWS-E111 + PWS-B199
PWS-E111 + PWS-B133
PWS-E111 + PWS-B122

OLD PART NO.

PTZ8M5
PTZ4-1/8
PTZ4-1/4
PTZ4-3/8
PTZ4-1/2
PTE8M5
PTE4-1/8
PTE4-1/4
PTE4-3/8
PTE4-1/2
PTE8M5C
PTE4-1/8C
PTE4-1/4C
PTE4-3/8C
PTE4-1/2C



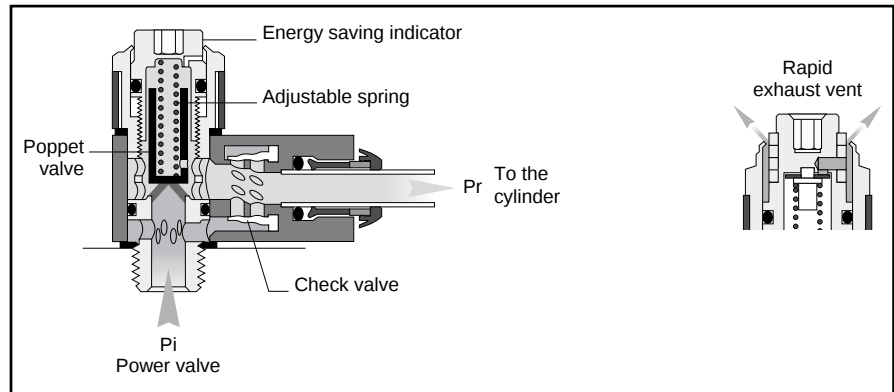
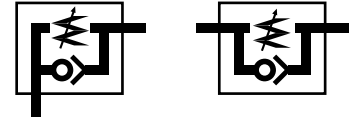
Only items priced in current price list are carried in stock. Dimensions shown may be changed at any time without prior notice.

Prestoreduce Pressure reduction fittings

Principle

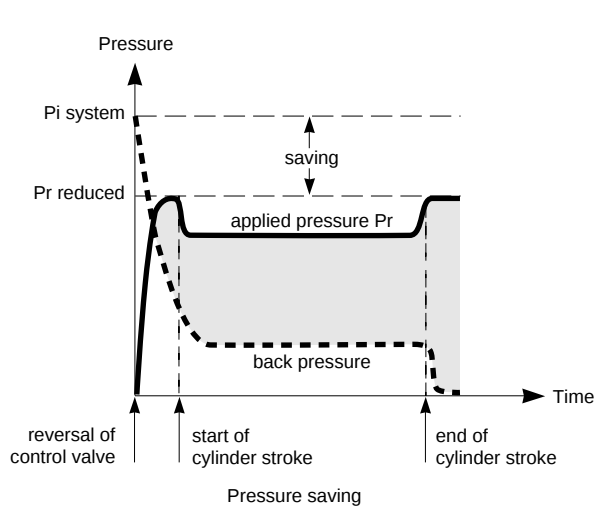
This function fitting is manually preset to provide the cylinder with optimum air pressure. This reduces the air consumption of the cylinder generating energy savings. This fitting is particularly suitable for cylinders used in cutting, pressing or gripping operations.

- System pressure (P_i) 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.

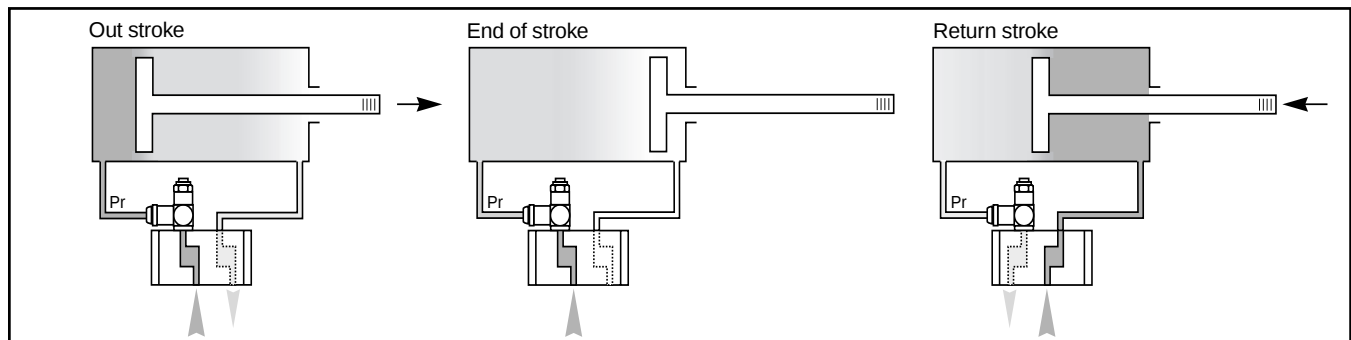
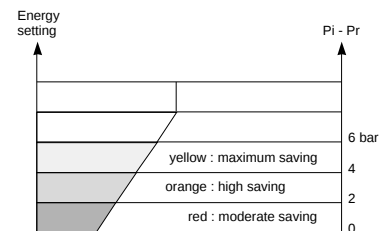
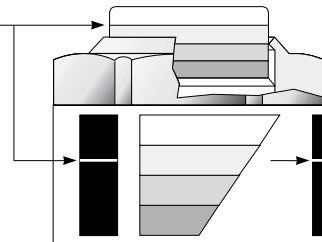


Technical features

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

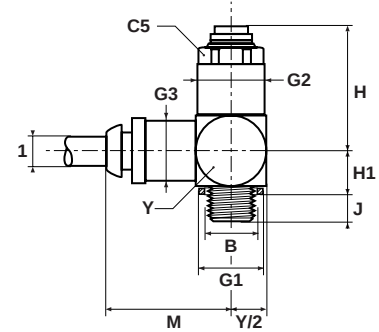


Alignment between the level of saving shown by the indicator and that shown by the marking

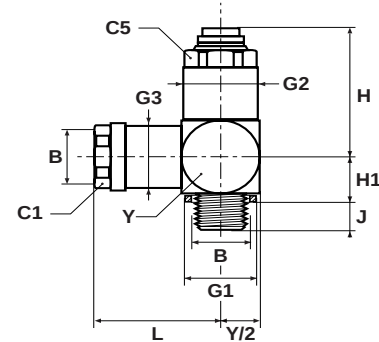


PRB4PB Pressure Reducer Banjo Version with Push-In Connection

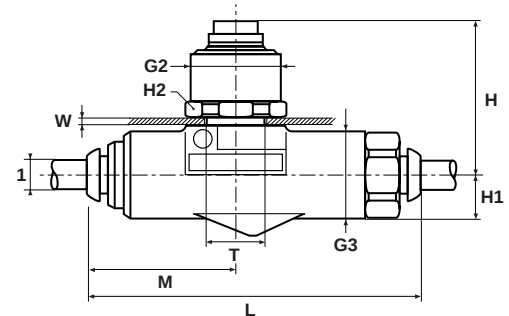
PART NO.	1	B	C5	G1	G2	G3	H MIN.	H MAX.	H1	J	M	Y
PRB4PB6-1/8	6	1/8	19	19.5	22	20	49	57	12	6	43	21
PRB4PB6-1/4	6	1/4	19	19.5	22	20	49	57	12	6	43	21
PRB4PB8-1/4	8	1/4	19	19.5	22	20	49	57	12	6	40	21
PRB4PB10-1/4†	10	1/4	27	26.0	28	26	55	64	15	6	50	28
PRB4PB10-3/8†	10	3/8	27	26.0	28	26	55	64	15	8	50	28

**PRB4 Pressure Reducer Banjo Version with Threaded Connection**

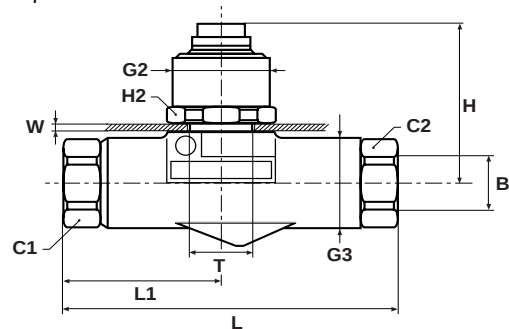
PART NO.	B	C1	C5	G1	G2	G3	H MIN.	H MAX.	H1	J	L	Y
PRB4-1/8†	1/8	19	19	19.5	22	20	49	57	12	6	45	21
PRB4-1/4	1/4	19	19	19.5	22	20	49	57	12	6	45	21
PRB4-3/8	3/8	24	27	26.0	28	26	55	64	15	6	56	28
PRB4-1/2†	1/2	30	30	30.0	32	31	75	86	23	8	63	33

**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



†Indicates non-standard part.

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Prestosil - Silencer and flow control valve**Principle**

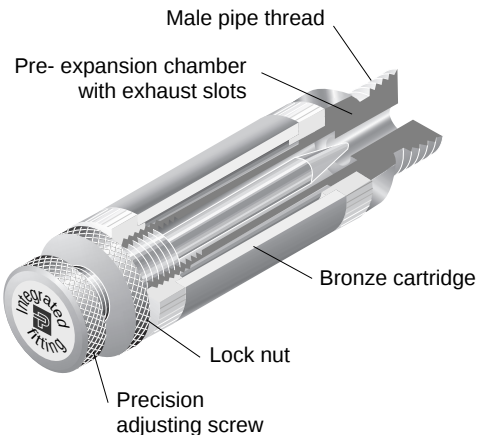
Prestosil silencers are designed for mounting into the exhaust valve of single acting cylinders or on the directional control valve.

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.

**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

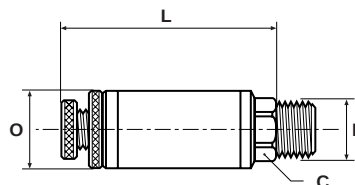
Noise reduction characteristics

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

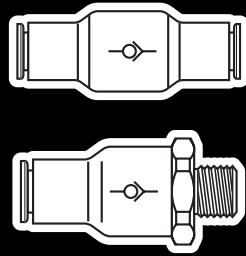
PART NO.	WORKING PRESSURE						
	15 PSI	30 PSI	45 PSI	60 PSI	75 PSI	90 PSI	105 PSI
PRS 4-1/8	6	15	20	21	22	24	24
PRS 4-1/4	11	22	27	29	32	32	32
PRS 4-3/8	19	27	33	35	37	39	40
PRS 4-1/2	19	27	33	35	37	39	40

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



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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

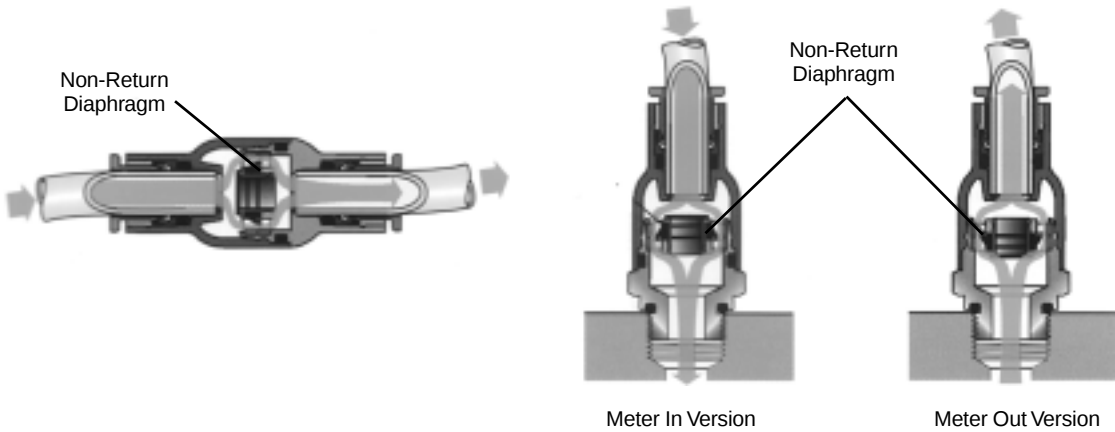
Maximum Working Pressure: 145 PSI

Operating Temperature: +30° to +160° F

Body Material: Nylon / Nickel-Plated Brass Body

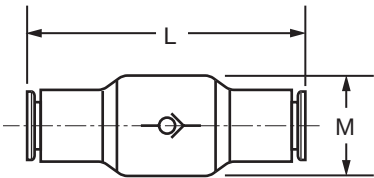
Non-Return Valves

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.



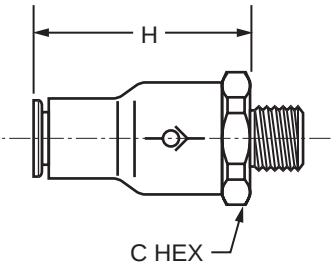
In-Line Non-Return Valve NRV800

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



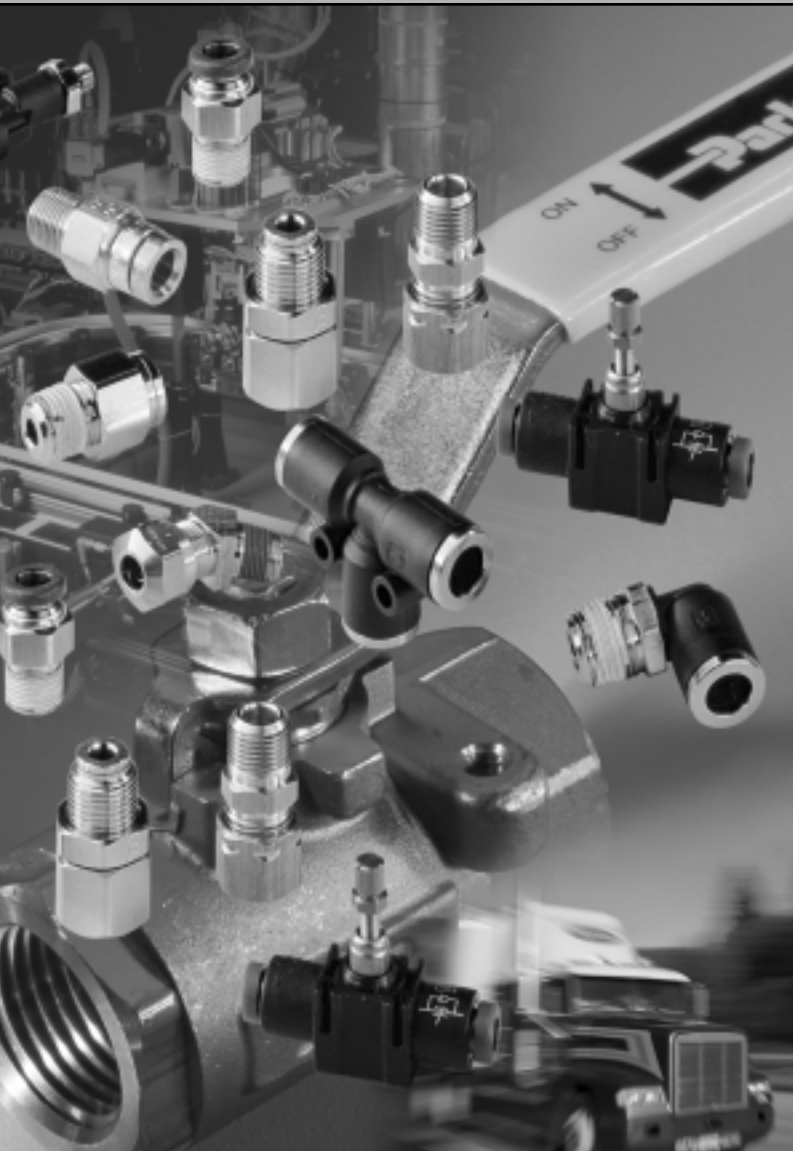
Male Thread Non-Return Valve NRV808

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





Flare Fittings

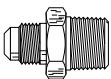
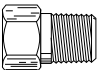
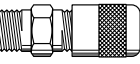
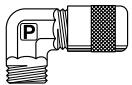
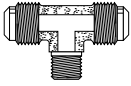
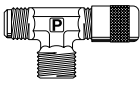
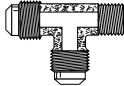
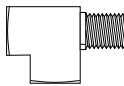
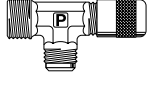
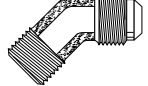
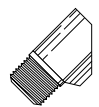
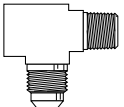
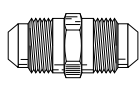
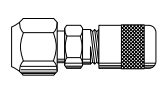
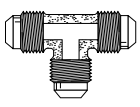
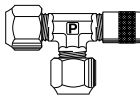
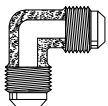
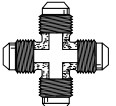
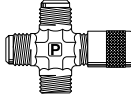
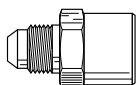
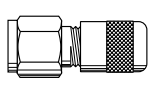
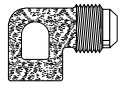
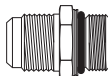
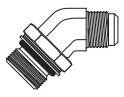
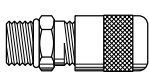
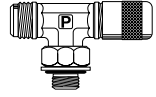
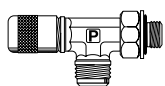
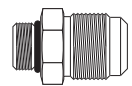
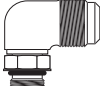
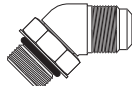
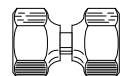
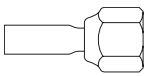
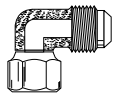
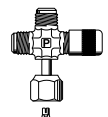
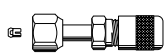
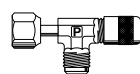
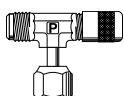


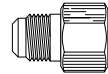
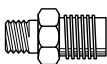
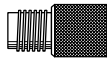
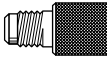
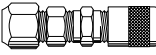
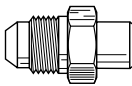
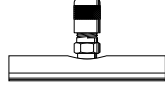
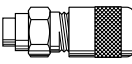
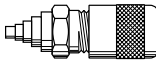
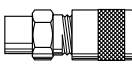
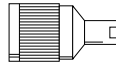
SAE 45° Flared Fittings D4

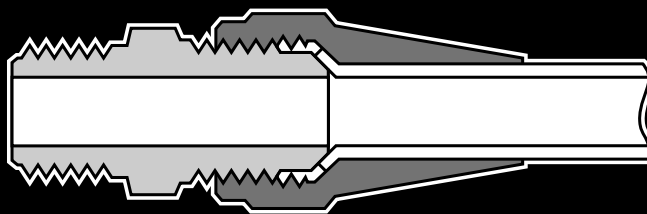
Inverted Flare Fittings D14

Access Valves D18

The World Standard

Flare to Male NPT	48F Male Connector  Page D8	481FHD Male Connector  Page D16	AVU1 Male Connector  Page D20	149F/249F Male Elbow  Page D10	2491FHD / 2491F Male Elbow  Page D16	AVE1 Male Elbow  Page D20
145F Branch Tee  Page D9	2451FHD Branch Tee  Page D16	AVT1 Branch Tee  Page D20	151F Run Tee  Page D11	2511FHD Run Tee  Page D17	AVT3 Run Tee  Page D20	159F/259F 45° Male Elbow  Page D12
2591FHD 45° Male Elbow  Page D17	256F Adapter Tee  Page D12	Flare to Flare	42F Union  Page D7	421FHD Union  Page D15	AVU2 Union  Page D19	144F Union Tee  Page D9
2441FHD Union Tee  Page D16	AVT2 Union Tee  Page D20	155F Union Elbow  Page D11	2521FHD Branch Tee  Page D17	2551FHD Union Elbow  Page D17	660FHD Flare Union  Page D13	147F Cross  Page D9
AVC1 Cross  Page D20	Flare to Female NPT	46F Female Connector  Page D8	461FHD Female Connector  Page D15	AVUR3 Female Connector  Page D21	150F Female Elbow  Page D11	2501FHD Female Elbow  Page D17
Flare to Metric Straight Thread	48F-MI Male Connector  Page D8	149F-MI Male Elbow  Page D10	159F-MI 45° Male Elbow  Page D12	Flare to Straight Thread	AVU1F1 Male Connector  Page D20	AVT1F1 Branch Tee  Page D22
AVT3F1 Run Tee  Page D23	485F Male Connector  Page D9	1495F Male Elbow  Page D10	1595F 45° Elbow  Page D12	Swivels	14FSV Swivel Nut Connector  Page D6	US5 Flare Adapter  Page D6
166FSV Swivel Elbow  Page D12	AVCS4D Cross  Page D21	AVUS4D Swivel Connector  Page D21	AVTS4 Swivel Run Tee  Page D21	AVTS6 Swivel Branch Tee  Page D22		

Adapters	1F Refrigerant Drum  Page D5	661FHD Reducer  Page D13	664FHD Female Flare to Pipe  Page D13	88AC Refrigerant Adapter  Page D23	880AC Refrigerant Adapter  Page D23	881AC Refrigerant Adapter  Page D23
	Bulkheads	AVU2BH Bulkhead Union  Page D19	AVUS3BH Solder Union  Page D19	Flare to Solder	43F Connector  Page D7	AVUSE Extended Copper Tube  Page D19
AVTSL Extended Solder Tee  Page D19		AVUS3-40 3 Way Solder  Page D21	AVUS3-49 9 Way Solder  Page D21		AVUS Solder Connector  Page D21	
Auxiliary	14FL Long Forged Nut  Page D5	14FSX Short Forged Nut  Page D5	14FS Forged Reducing Nut  Page D6	41FL Long Nut  Page D6	41FS/41FX Short Nut  Page D6	411F Inverted Flare Nut  Page D15
	411FS Inverted Flare Nut Steel  Page D15	411FF Inverted Flare Piloted Nut  Page D15	639F Seal Plug  Page D13	640F Cap Nut  Page D13	640QSF Seal Cap  Page D22	640QSFC Seal Cap w/Chain  Page D22
2GF Flare Gasket  Page D5	3GF Seal Bonnet  Page D5	CR Core Remover  Page D22	VC Valve Core  Page D22			



SAE 45° Flared Fittings

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, ASA and MS (Military Standards). 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 turn for a metal-to-metal seal.

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

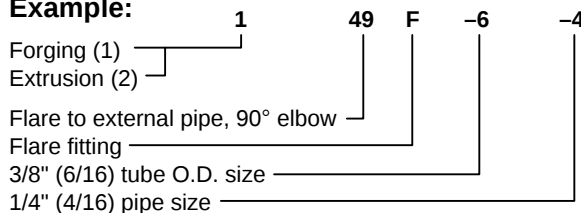
Order

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:



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

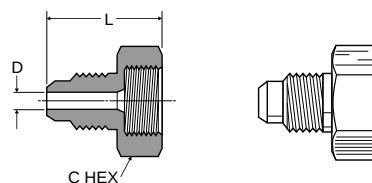
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

Refrigerant Drum a Aapter 1F

Ref. SAE 010165

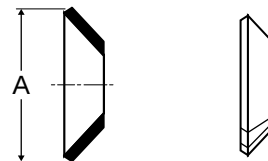
PART NO.	TUBE O.D.	PIPE THREAD	C HEX	L	FLOW DIA. D
1F-4-8	1/4	1/2	1-1/8	1.12	.187
1F-4-12	1/4	3/4	1-1/4	1.12	.187
1F-6-12	3/8	3/4	1-1/4	1.24	.282
1F-8-12	1/2	3/4	1-1/4	1.37	.407

Gasket Furnished with each 1F adapter

**Copper Flare Gasket 2GF**

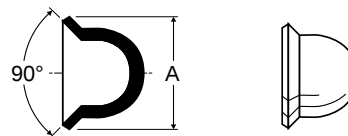
Ref. SAE 010113

PART NO.	TUBE SIZE	A
2GF-3	3/16	.32
2GF-4	1/4	.37
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**

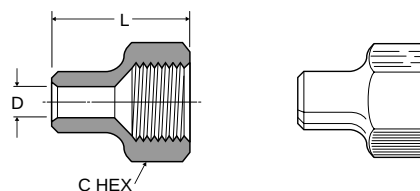
Ref. SAE 010114

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**

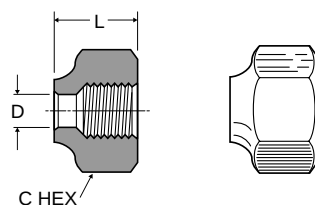
Ref. SAE 010167

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**

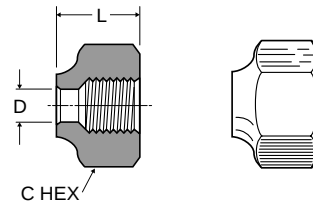
Ref. SAE 010166

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	.508	.86
14FSX-10	5/8	7/8-14	1-1/16	.632	.97
14FSX-12	3/4	1-1/16-14	1-5/16	.758	1.17



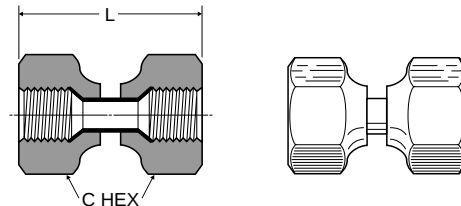
Short Forged Reducing Nuts 14FS

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

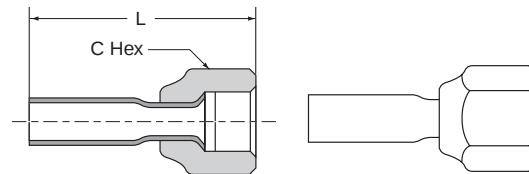
**Swivel Nut Valve Connector 14FSV**

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

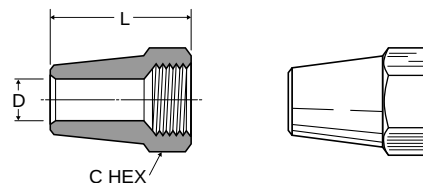
**Flare Adapter US5**

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**

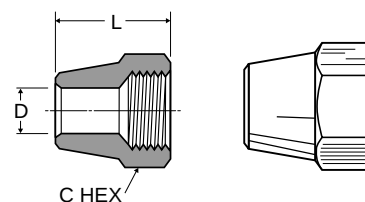
Ref. SAE 010111

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	.758	2.19

**Short Nut 41FS / Shorter Nut 41FX**

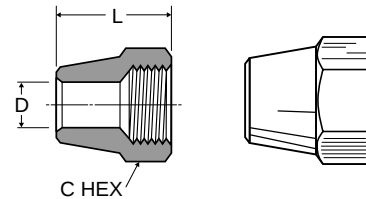
Ref. SAE 010110

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-7	7/16	11/16-16	13/16	.445	1.06
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
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



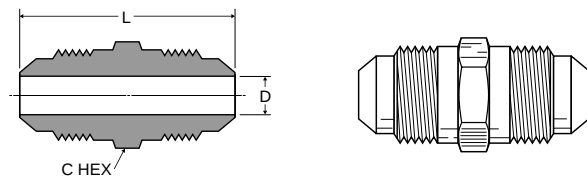
Reducing Nuts 41FS

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**

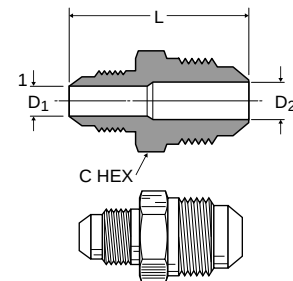
Ref. SAE 010101 *Thread Protectors

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	.188
42F-5	5/16	1/2-20	1/2	1.32	.219
42F-6	3/8	5/8-18	5/8	1.48	.281
42F-8	1/2	3/4-16	3/4	1.79	.408
42F-10	5/8	7/8-14	7/8	2.10	.502
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	.752

**Union Reducers 42F**

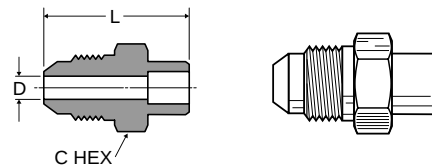
Ref. SAE 010101

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	.188	.281
42F-6-5	5/16	3/8	1/2-20	5/8-18	5/8	1.42	.219	.281
42F-8-4	1/4	1/2	7/16-20	3/4-16	3/4	1.54	.188	.408
42F-8-6	3/8	1/2	5/8-18	3/4-16	3/4	1.67	.281	.408
42F-10-6	3/8	5/8	5/8-18	7/8-14	7/8	1.86	.281	.502
42F-10-8	1/2	5/8	3/4-16	7/8-14	7/8	1.98	.408	.502

**Flare to Solder 43F**

Ref. SAE 010104

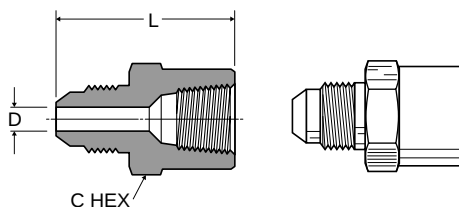
PART NO.	TUBE SIZE	SOLDER OD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
43F-4-4	1/4	1/4	7/16-20	7/16	.98	.189
43F-4-5	1/4	5/16	7/16-20	7/16	.98	.189
43F-4-6	1/4	3/8	7/16-20	1/2	.98	.189
43F-6-4	3/8	1/4	5/8-18	5/8	1.17	.189
43F-6-5	3/8	5/16	5/8-18	5/8	1.17	.252
43F-6-6	3/8	3/8	5/8-18	5/8	1.17	.283
43F-6-8	3/8	1/2	5/8-18	5/8	1.23	.283
43F-6-10	3/8	5/8	5/8-18	3/4	1.36	.283
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	.408
43F-8-10	1/2	5/8	3/4-16	3/4	1.54	.408
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	.502
43F-10-12	5/8	3/4	7/8-14	7/8	1.86	.502
43F-10-14	5/8	7/8	7/8-14	1	1.98	.502
43F-12-12	3/4	3/4	1-1/16-14	1-1/16	2.04	.627
43F-12-14	3/4	7/8	1-1/16-14	1-1/16	2.17	.627



Female Connector 46F

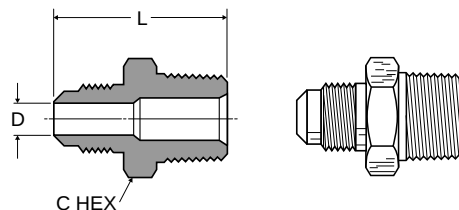
Ref. SAE 010103

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	.188
46F-4-4	1/4	1/4	7/16-20	11/16	1.23	.188
46F-4-6	1/4	3/8	7/16-20	13/16	1.26	.188
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	.408
46F-8-6	1/2	3/8	3/4-16	13/16	1.48	.408
46F-8-8	1/2	1/2	3/4-16	1	1.73	.408
46F-8-12	1/2	3/4	3/4-16	1-1/4	1.79	.408
46F-10-6	5/8	3/8	7/8-14	7/8	1.57	.502
46F-10-8	5/8	1/2	7/8-14	1	1.80	.502
46F-10-12	5/8	3/4	7/8-14	1-1/4	1.89	.502

**Male Connector 48F**

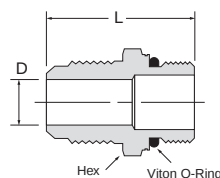
Ref. SAE 010102 *Thread Protectors

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	.408
48F-8-6	1/2	3/8	3/4-16	3/4	1.60	.408
48F-8-8	1/2	1/2	3/4-16	7/8	1.79	.408
48F-8-12	1/2	3/4	3/4-16	1-1/16	1.92	.408
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	.562
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	.752

**Flare to Metric Adaptor 48F-X-MIX**

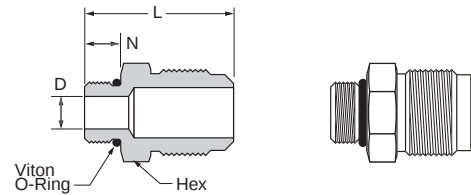
PART NUMBER	TUBE SIZE	METRIC THREAD	HEX	L	D
48F-8-MI16	1/2	M16 X 1.5	7/8	1.60	.35
48F-10-MI27	5/8	M27 x 2.0	1 1/4	1.87	.50
48F-12-MI27	3/4	M27 x 2.0	1 1/4	1.99	.63

Note: Viton o-ring is standard



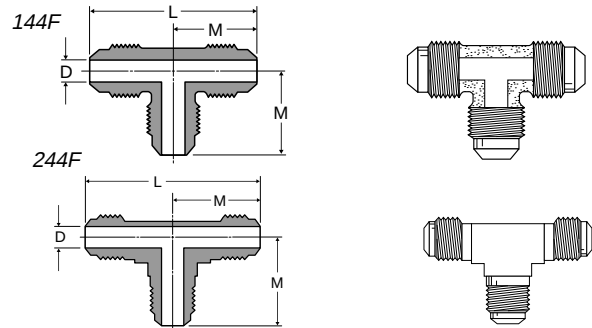
Flare to Straight Thread 485F

PART NO.	TUBE SIZE	STRAIGHT THREAD	HEX	L	N	FLOW DIA. D
485F-12-8	3/4	3/4-16	1 1/16	1.80	.44	.397
485F-12-12	3/4	1 1/16-12	1 1/4	2.03	.59	.615

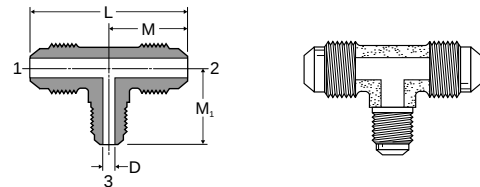
**Union Tee 144F-244F**

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	.283
144F-8	1/2	3/4-16	2.46	1.23	.408
144F-10	5/8	7/8-14	2.78	1.39	.503

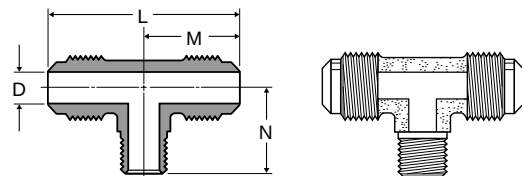
**Union Tee 144F-244F combination sizes**

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	.283

**Male Branch Tee 145F**

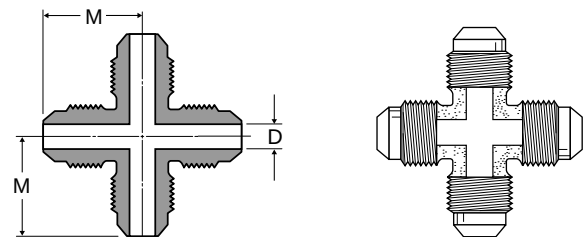
Ref. SAE 010425

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	.188
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	.281
145F-6-6	3/8	3/8	5/8-18	2.00	1.00	.98	.283
145F-6-8	3/8	1/2	5/8-18	2.28	1.14	1.26	.281
145F-8-6	1/2	3/8	3/4-16	2.40	1.20	1.10	.408
145F-8-8	1/2	1/2	3/4-16	2.46	1.23	1.36	.408
145F-10-8	5/8	1/2	7/8-14	2.78	1.39	1.36	.501

**Cross 147F**

Ref. SAE 010501

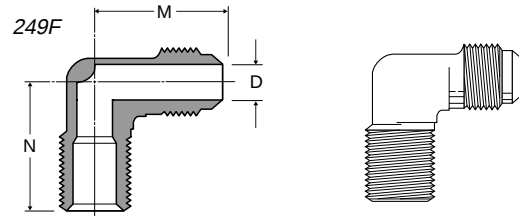
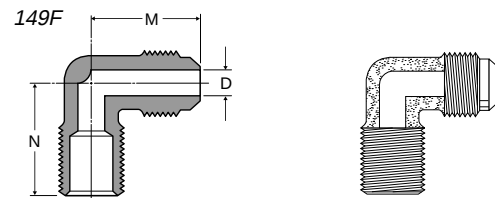
PART NO.	TUBE SIZE	STRAIGHT THREAD	M	FLOW DIA. D
147F-6	3/8	5/8-18	1.04	.283



Male Elbow 149F-249F

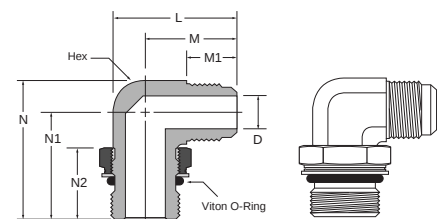
Ref. SAE 010202 *Thread Protectors

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D
149F-2-2	1/8	1/8	5/16-24	.63	.73	.079
149F-3-2	3/16	1/8	3/8-24	.75	.75	.126
249F-3-2	3/16	1/8	3/8-24	.73	.73	.126
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-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	.92	.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	.219
149F-6-2	3/8	1/8	5/8-18	1.01	.90	.220
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	.283
249F-6-4	3/8	1/4	5/8-18	.98	1.04	.283
149F-6-6	3/8	3/8	5/8-18	1.04	1.07	.281
249F-6-6	3/8	3/8	5/8-18	1.04	1.07	.283
149F-6-8	3/8	1/2	5/8-18	1.15	1.27	.281
249F-6-8	3/8	1/2	5/8-18	1.14	1.26	.283
149F-6-12	3/8	3/4	5/8-18	1.25	1.38	.283
149F-8-4	1/2	1/4	3/4-16	1.20	1.17	.312
149F-8-6	1/2	3/8	3/4-16	1.20	1.09	.408
249F-8-6	1/2	3/8	3/4-16	1.20	1.10	.408
149F-8-8	1/2	1/2	3/4-16	1.28	1.38	.408
249F-8-8	1/2	1/2	3/4-16	1.26	1.36	.408
149F-8-12	1/2	3/4	3/4-16	1.38	1.38	.408
149F-10-6	5/8	3/8	7/8-14	1.41	1.25	.408
149F-10-8	5/8	1/2	7/8-14	1.40	1.39	.502
249F-10-8	5/8	1/2	7/8-14	1.39	1.36	.502
149F-10-12	5/8	3/4	7/8-14	1.42	1.48	.502
149F-12-8*	3/4	1/2	1-1/16-14	1.60	1.48	.564
149F-12-12*	3/4	3/4	1-1/16-14	1.59	1.62	.625
149F-14-12	7/8	3/4	1-1/4-12	1.73	1.67	.751

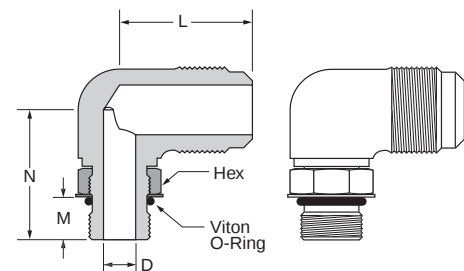
**Flare Elbow to Metric Adaptor 149F-X-MIX**

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: Viton o-ring is standard

**Flare Elbow to Straight Thread 1495F**

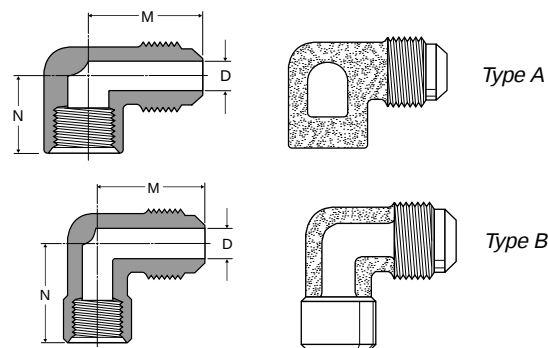
PART NO.	TUBE SIZE	STRAIGHT THREAD	HEX	L	N	M	FLOW DIA. D
1495F-12-8	3/4	3/4-16	7/8	1.60	1.60	.52	.398
1495F-12-12	3/4	3/4-16	1 1/4	1.59	2.12	.71	.616



Female Elbow 150F

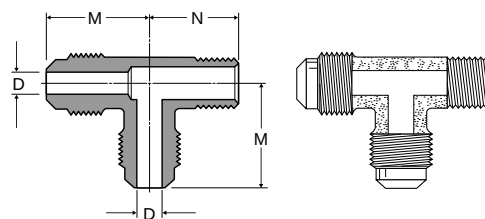
Ref. SAE 010203

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D	TYPE
150F-4-2	1/4	1/8	7/16-20	.86	.50	.189	A
150F-4-4	1/4	1/4	7/16-20	.95	.64	.189	A
150F-5-4	5/16	1/4	1/2-20	1.01	.64	.220	A
150F-6-2	3/8	1/8	5/8-18	1.08	.48	.283	B
150F-6-4	3/8	1/4	5/8-18	1.07	.67	.283	A
150F-6-6	3/8	3/8	5/8-18	1.14	.67	.283	A
150F-6-8	3/8	1/2	5/8-18	1.23	.86	.283	A
150F-8-6	1/2	3/8	3/4-16	1.25	.69	.408	A
150F-8-8	1/2	1/2	3/4-16	1.36	.94	.408	A
150F-8-12	1/2	3/4	3/4-16	1.41	.94	.408	A
150F-10-8	5/8	1/2	7/8-14	1.48	1.01	.502	A
150F-10-12	5/8	3/4	7/8-14	1.64	.98	.502	A

**Male Run Tee 151F**

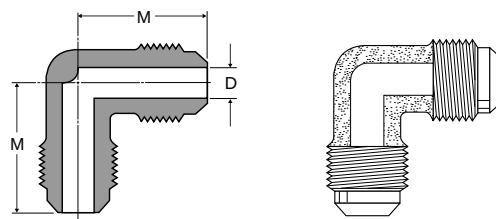
Ref. SAE 010424

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	.283
151F-6-6	3/8	3/8	5/8-18	.98	1.00	.283
151F-6-8	3/8	1/2	5/8-18	1.26	1.16	.283
151F-8-6	1/2	3/8	3/4-16	1.20	1.10	.406
151F-8-8	1/2	1/2	3/4-16	1.35	1.23	.408
151F-10-8	5/8	1/2	7/8-14	1.36	1.39	.500

**Union Elbow 155F**

Ref. SAE 010201 *Thread Protectors

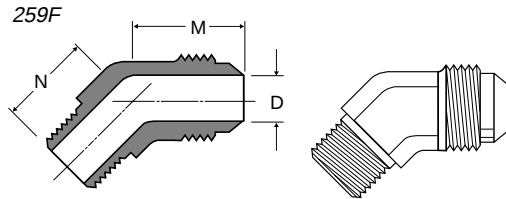
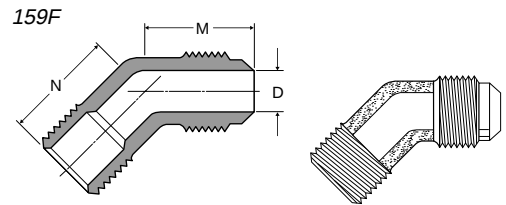
PART NO.	TUBE SIZE	STRAIGHT THREAD	M	FLOW DIA. D
155F-2	1/8	5/16-24	.64	.079
155F-3	3/16	3/8-24	.73	.126
155F-4	1/4	7/16-20	.86	.189
155F-5	5/16	1/2-20	.92	.220
155F-6	3/8	5/8-18	1.04	.283
155F-8	1/2	3/4-16	1.31	.408
155F-10	5/8	7/8-14	1.39	.502
155F-12*	3/4	1-1/16-14	1.63	.625



45° Elbow 159F-259F

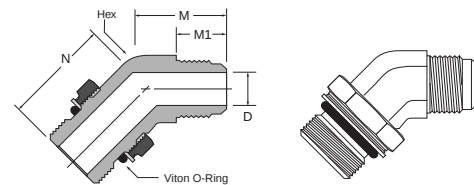
Ref. SAE 010302 *Thread Protectors

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	.188
259F-4-2	1/4	1/8	7/16-20	.65	.62	.188
159F-4-4	1/4	1/4	7/16-20	.75	.84	.188
259F-4-4	1/4	1/4	7/16-20	.73	.84	.188
159F-5-2	5/16	1/8	1/2-20	.75	.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	.220
159F-6-4	3/8	1/4	5/8-18	.89	.86	.283
259F-6-4	3/8	1/4	5/8-18	.91	.86	.283
159F-6-6	3/8	3/8	5/8-18	.91	.93	.283
259F-6-6	3/8	3/8	5/8-18	.91	.93	.283
159F-8-4	1/2	1/4	3/4-16	1.06	.95	.408
159F-8-6	1/2	3/8	3/4-16	1.06	.95	.408
259F-8-6	1/2	3/8	3/4-16	1.04	.93	.408
159F-8-8	1/2	1/2	3/4-16	1.00	.87	.406
259F-8-8	1/2	1/2	3/4-16	1.10	1.15	.408
159F-10-6	5/8	3/8	7/8-14	1.13	.95	.406
259F-10-6	5/8	3/8	7/8-14	1.20	1.15	.503
159F-10-8	5/8	1/2	7/8-14	1.21	1.16	.503
259F-10-8	5/8	1/2	7/8-14	1.21	.98	.503
159F-12-8*	3/4	1/2	1-1/16-14	1.28	1.16	.560

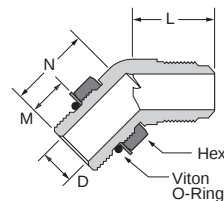
**45° Flare Elbow to Metric Adaptor 159F-X-MIX**

PART NUMBER	TUBE SIZE	METRIC THREAD	HEX	M	M1	N	D
159F-8-M16	1/2	M16 X 1.5	13/16	1.10	.75	1.16	.36
159F-10-M127	5/8	M27 x 2.0	1 1/8	1.21	.88	1.50	.50

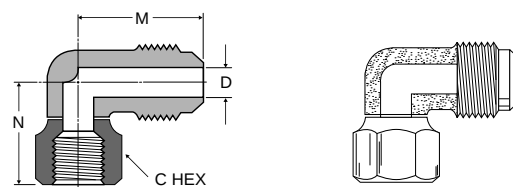
Note: Viton o-ring is standard

**45° Flare to Straight Thread 1595F**

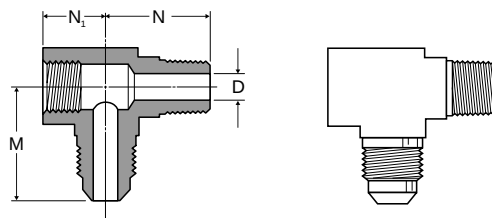
PART NO.	TUBE SIZE	STRAIGHT THREAD	HEX	L	N	M	FLOW DIA. D
1595F-8-8	1/2	3/4-16	7/8	1.00	1.16	.59	.400
1595F-12-8	3/4	3/4-16	7/8	1.41	1.30	.52	.398
1595F-12-12	3/4	1 1/16-12	1 1/4	1.41	1.45	.68	.616

**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	5/8	.86	.93	.189
166FSV-6-6	3/8	5/8-18	13/16	1.04	1.12	.282
166FSV-8-8	1/2	3/4-16	15/16	1.23	1.31	.408
166FSV-10-10	5/8	7/8-14	1-1/16	1.39	1.50	.502
166FSV-12-12	3/4	1-1/16-14	1-5/16	1.60	1.83	.627

**Adapter Tee 256F**

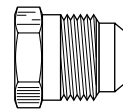
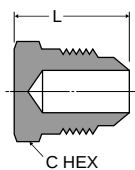
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	N1	FLOW DIA. D
256F-4-2	1/4	1/8	7/16-20	.86	.76	.47	.188



Flared Seal Plug 639F

Ref. SAE 010109

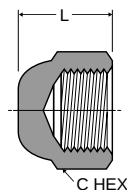
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L
639F-4	1/4	7/16-20	7/16	.69
639F-5	5/16	1/2-20	1/2	.78
639F-6	3/8	5/8-18	5/8	.88
639F-8	1/2	3/4-16	3/4	1.06
639F-10	5/8	7/8-14	7/8	1.19

**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

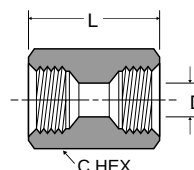
*Should be used with 2GF copper gasket.

**D****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	1.03	.250
660FHD-6*	3/8	5/8-18	13/16	1.26	.375
660FHD-8*	1/2	3/4-16	15/16	1.43	.500
660FHD-10*	5/8	7/8-14	1-1/16	1.69	.626

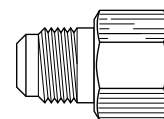
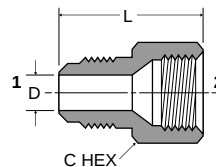
*Should be used with 2GF copper gasket.

**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	.283
661FHD-6-8*	3/8	1/2	5/8-18	3/4-16	15/16	1.42	.283
661FHD-8-6*	1/2	3/8	3/4-16	5/8-18	13/16	1.39	.377
661FHD-8-10*	1/2	5/8	3/4-16	7/8-14	1-1/16	1.67	.408
661FHD-10-8*	5/8	1/2	7/8-14	3/4-16	15/16	1.60	.502
661FHD-10-12*	5/8	3/4	7/8-14	1-1/16-14	1-5/16	1.95	.502
661FHD-12-10*	3/4	5/8	1-1/16-14	7/8-14	1-1/16	1.86	.626

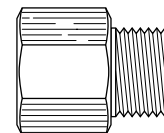
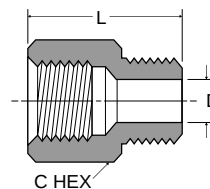
*Should be used with 2GF copper gasket.

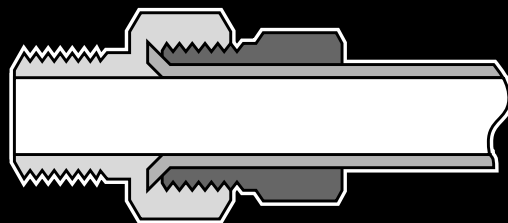
**Female Flare to Male Pipe Thread 664FHD**

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	.219
664FHD-4-4*	1/4	1/4	7/16-20	5/8	1.01	.250
664FHD-6-4*	3/8	1/4	5/8-18	13/16	1.28	.344
664FHD-8-6*	1/2	3/8	3/4-16	15/16	1.36	.406

*Should be used with 2GF copper flare gasket.





Inverted Flared Fittings

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, ASA and MS (Military Standards). 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

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.

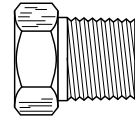
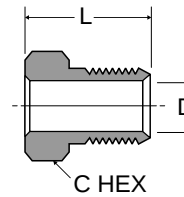
Pricing

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.

Nut 41IF

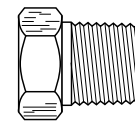
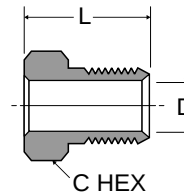
Ref. SAE 040110

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	.197
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**

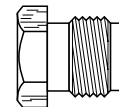
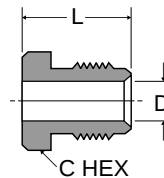
Ref. SAE 040110

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
41IFS-14	7/8	1-3/16-16	1-3/16	1.06	.890

**Piloted Nut 41IFF for Single Flared Tubing**

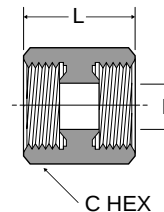
Ref. SAE 040110

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	.197
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**

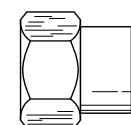
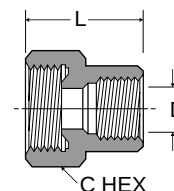
Ref. SAE 040101

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	.65	.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	.283
42IFHD-8	1/2	3/4-18	29/32	.92	.408

**Female Connector 46IFHD**

Ref. SAE 040103

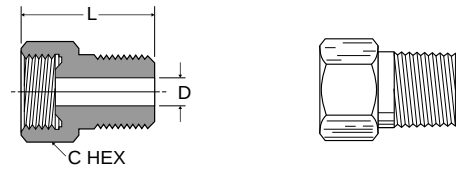
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
46IFHD-3-2	3/16	1/8	3/8-24	1/2	.76	.125
46IFHD-4-2	1/4	1/8	7/16-24	17/32	.76	.189
46IFHD-5-2	5/16	1/8	1/2-20	19/32	.79	.220
46IFHD-6-4	3/8	1/4	5/8-18	3/4	1.04	.283
46IFHD-8-6	1/2	3/8	3/4-18	29/32	1.10	.408



Male Connector 48IFHD

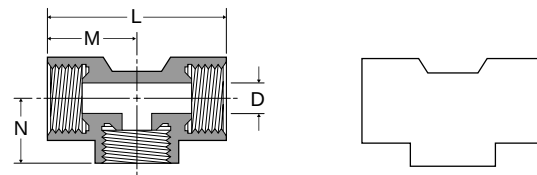
Ref. SAE 040102

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	.188
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	.219
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	.283
48IFHD-6-6	3/8	3/8	5/8-18	3/4	1.03	.283
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	.408
48IFHD-8-8	1/2	1/2	3/4-18	29/32	1.26	.408
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	.625
48IFHD-14-12	7/8	3/4	1-3/16-16	1 5/16	1.30	.750

**Union Tee 244IFHD**

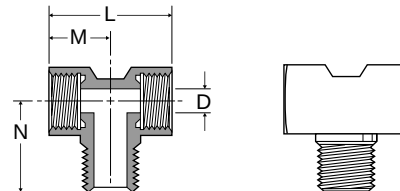
Ref. SAE 040401

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	.283
244IFHD-8	1/2	3/4-18	1.76	.88	.67	.408

**Male Branch Tee 245IFHD**

Ref. SAE 040425

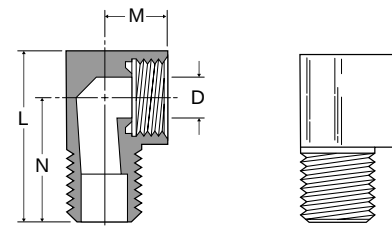
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
245IFHD-4-2	1/4	1/8	7/16-24	.85	.43	.64	.189
245IFHD-6-4	3/8	1/4	5/8-18	1.17	.58	.94	.283

**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	.27	.83	.189
249IFHD-5-2	5/16	1/8	1/2-20	.98	.47	.68	.219
249IFHD-5-4	5/16	1/4	1/2-20	1.16	.46	.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	.281
249IFHD-6-4	3/8	1/4	5/8-18	1.32	.53	.95	.283
249IFHD-6-6	3/8	3/8	5/8-18	1.32	.50	.94	.283
249IFHD-8-4	1/2	1/4	3/4-18	1.48	.59	1.02	.408
249IF-8-6+	1/2	3/8	3/4-18	1.42	.53	.99	.406
249IFHD-8-6	1/2	3/8	3/4-18	1.48	.59	1.02	.408
249IFHD-8-8	1/2	1/2	3/4-18	1.67	.66	1.22	.408
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
249IFHD-14-12	7/8	3/4	1-3/16-16	2.12	.91	1.44	.750

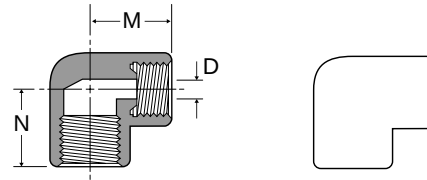
†Light Duty Series



Female Elbow 250IFHD

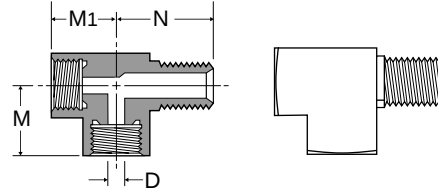
Ref. SAE 040203

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	.283

**Male Run Tee 251IFHD**

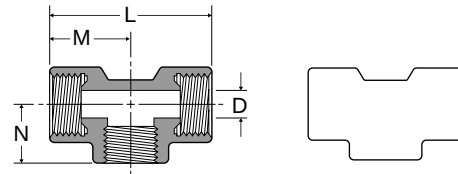
Ref. SAE 040424

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	.283

**Female Branch Tee 252IFHD**

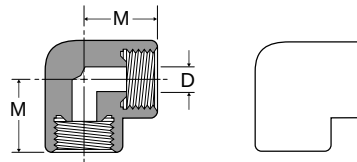
Ref. SAE 040427

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	.283

**Union Elbow 255IFHD**

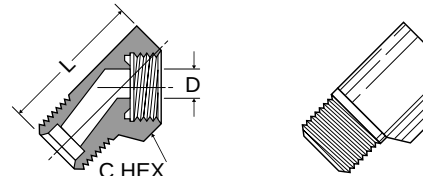
Ref. SAE 040201

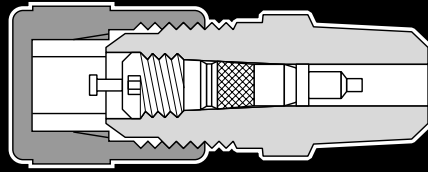
PART NO.	TUBE SIZE	STRAIGHT THREAD	M	FLOW DIA. D
255IFHD-4	1/4	7/16-24	.55	.189

**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	.187
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	25/32	1.34	.283
259IFHD-8-6	1/2	3/8	3/4-18	7/8	1.44	.375
259IFHD-10-8	5/8	1/2	7/8-18	1-1/16	1.75	.533





Access Valves

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 fluorocarbon 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

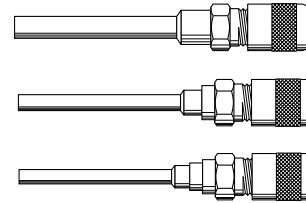
Fitting configurations and/or sizes other than those shown in the catalog can be furnished. It is suggested that a print or sketch be submitted with the inquiry.

Pricing

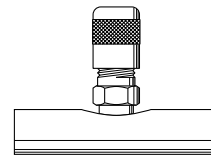
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

Extended Copper Tube AVUSE

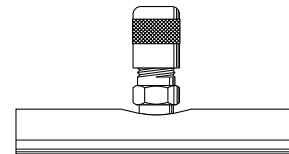
PART NO.	CONNECTION SIZE
AVUSE-2	1/8" O.D. Tube
AVUSE-3	3/16" O.D. Tube
AVUSE-4	1/4" O.D. Tube
AVUSE-5	5/16" O.D. Tube
AVUSE-6	3/8" O.D. Tube
AVUSE-8	1/2" O.D. Tube
AVUSE-9	1/8" O.D. Tube; Additional steps on body for 3/16", 1/4", 5/16", 3/8" O.D. Tube. 3/16", 1/4", or 5/16" Solder Fitting/Swaged Tube.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

**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

**Extended Solder Tee AVTSL**

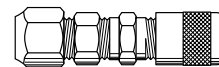
PART NO.	CONNECTION SIZE
AVTSL-4	1/4" O.D. Tube/Solder 3/16", 1/4" & 5/16" Tube
AVTSL-5	5/16" O.D. Tube/Solder 1/4", 5/16" & 3/8" Tube
AVTSL-6	3/8" O.D. Tube/Solder 5/16", 3/8" & 7/16" Tube

**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

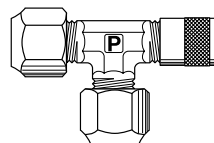
**Bulkhead Solder Union AVUS3BH**

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

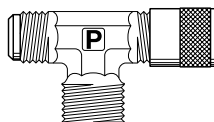
**D**

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

**Forged Branch Tee AVT1**

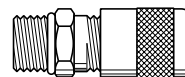
PART NO.	CONNECTION SIZE
AVT1-2	1/8" Male Pipe or 1/4" O.D. Solder on Branch x 1/4" Access Both Ends With One Core and Cap
AVT1-4	1/4" Male Pipe or 5/16" O.D. Solder on Branch x 1/4" Access Both Ends With One Core and Cap

**Male Connector AVU1**

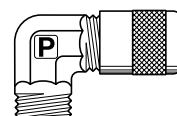
PART NO.	CONNECTION SIZE
AVU1-2	1/8" Male Pipe or 1/4" O.D. Solder
AVU1-4	1/4" Male Pipe or 5/16" O.D. Solder

**Access Valve Assembly AVUIFI**

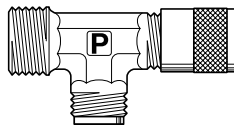
PART NO.	CONNECTION SIZE
AVUIFI-4	7/16-20 SAE Straight thread O-Ring Port Note: Standard o-ring is neoprene. Consult Brass Products Division for optional o-rings

**Forged Male Elbow AVE1**

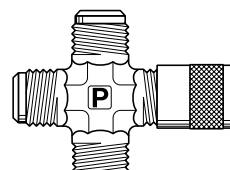
PART NO.	CONNECTION SIZE
AVE1-2	1/8" Male Pipe or 1/4" O.D. Solder

**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

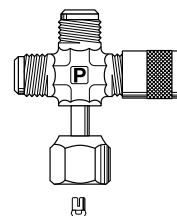
**Forged Male Cross AVC1**

PART NO.	CONNECTION SIZE
AVC1-2	1/8" Male Pipe or 1/4" O.D. Solder x 1/4" Access on all Flare Ends With One Core and Cap
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

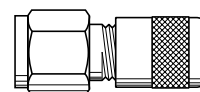


Swivel Cross AVCS4D-4

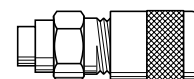
PART NO.	CONNECTION SIZE
AVCS4D-4	1/4" Forged Female Flare Swivel With Depressor x 1/4" Access on all Flare Ends with One Core and Cap

**Female Connector AVUR3**

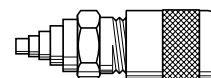
PART NO.	CONNECTION SIZE
AVUR3-4	1/4" Female Flare with Copper Gasket

**3 Way Solder Connector AVUS3**

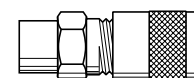
PART NO.	CONNECTION SIZE
AVUS3-40	For 3/16" O.D. Tube or 1/4" and 3/8" Solder Fitting/Swaged Tube

**9 Way Solder Connector AVUS3**

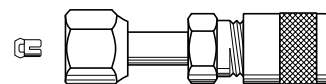
PART NO.	CONNECTION SIZE
AVUS3-49	For 3/16", 1/4", 5/16", 3/8" or 1/2" O.D. Tube. Also Fits 3/16", 1/4" and 5/16" Solder Fitting/Swaged Tube or 1/8" Hole May Be Punched in Larger Size Tube

**Straight Solder Connector AVUS**

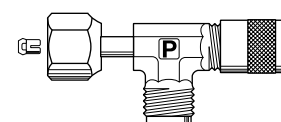
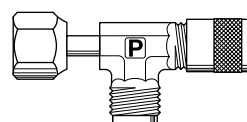
PART NO.	CONNECTION SIZE
AVUS-42	1/8" O.D. Tube or 1/4" Solder Fitting/Swaged Tube
AVUS-43	3/16" O.D. Tube or 1/4" Solder Fitting/Swaged Tube
AVUS-44	1/4" O.D. Tube or 3/8" Solder Fitting/Swaged Tube
AVUS-45	5/16" O.D. Tube or 1/2" Solder Fitting/Swaged Tube
AVUS-46	3/8" O.D. Tube or 1/2" Solder Fitting/Swaged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

**Swivel Connector AVUS4D**

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

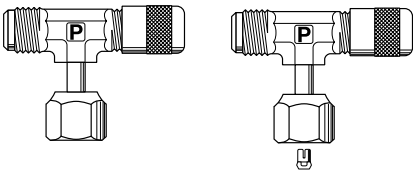
**Forged Female Run Swivel Tee AVTS4**

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



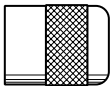
Forged Female Branch Tee AVTS6

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



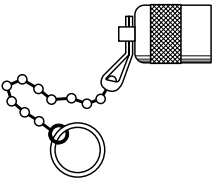
Quick Seal Caps 640QSF

PART NO.	CONNECTION SIZE
640QSF-4	1/4" SAE Seal Cap with Seal Gasket
640QSF-6	3/8" SAE Seal Cap with Seal Gasket



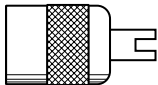
Quick Seal Caps 640QSFC

PART NO.	CONNECTION SIZE
640QSFC-4	1/4" SAE Seal Cap with Chain and Ring Assembly Seal Gasket



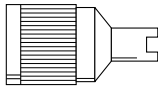
Quick Seal Cap with Core Remover 640QSFCR

PART NO.	CONNECTION SIZE
640QSFCR-4	1/4" SAE Seal Cap Core Remover with internal Seal Gasket



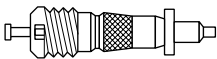
Core Remover CR

PART NO.	CONNECTION SIZE
CR-001	Standard Core Remover



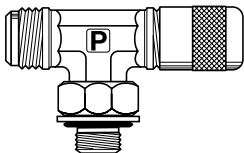
Valve Cores VC

PART NO.	CONNECTION SIZE
VC-001	Replacement Valve Cores For all 1/4" Access Valves



Forged Male Straight Thread O-Ring Port Male Branch Tee AVT1F1

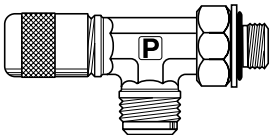
PART NO.	CONNECTION SIZE
AVT1F1-4	1/4" forged male straight thread o-ring port male branch tee



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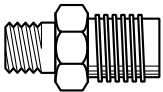
Forged Male Straight Thread O-Ring Port Male Run Tee AVT3F1

PART NO.	CONNECTION SIZE
AVT3FI-4	1/4" forged male straight thread o-ring port male run tee



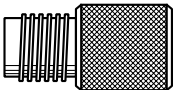
Refrigerant adapter 88AC

PART NO.	CONNECTION SIZE
88AC-8-2	1/8" male pipe to SAE J2197 Acme threaded male connector



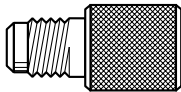
Refrigerant adapter 880AC

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



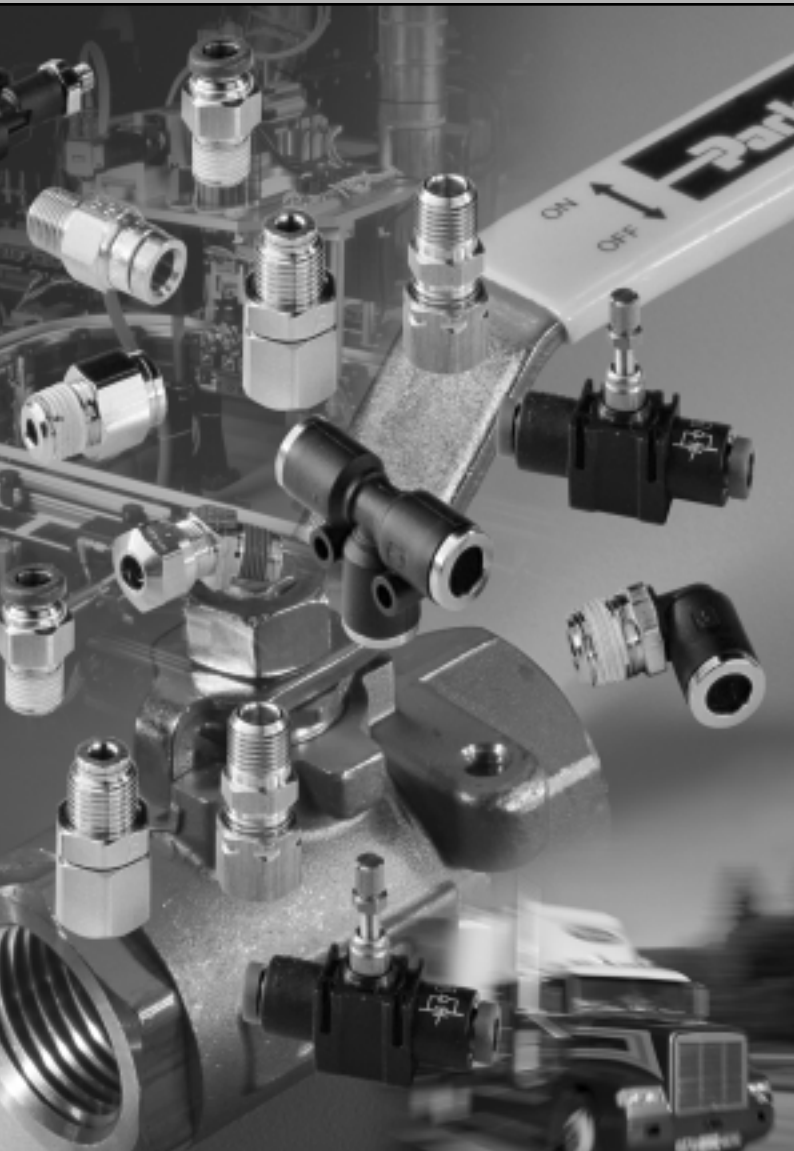
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Notes

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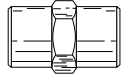
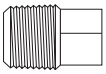
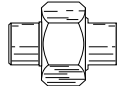
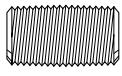
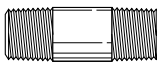
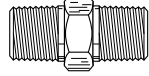
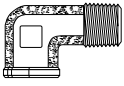
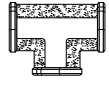
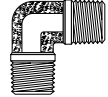
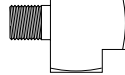
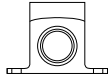
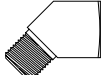
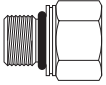
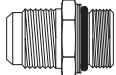
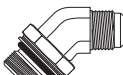
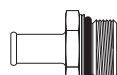
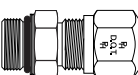
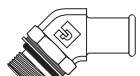
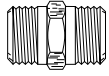
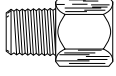
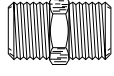
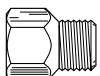
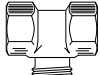
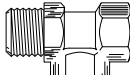


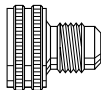
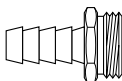
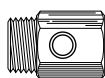
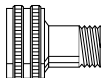
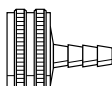
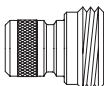
Adapters



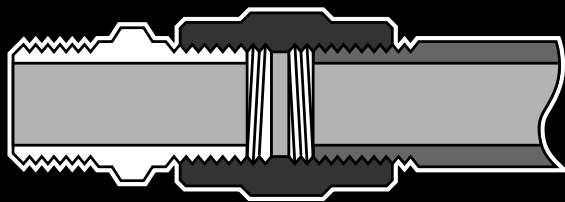
Pipe Fittings	E4
Parker Brass Metric Adapters	E12
ISO Port Adapters	E17
Garden Hose Fittings	E20

The World Standard

Industrial Pipe Fittings	207ACBH Anchor Coupling  Page E6	207P Pipe Coupling  Page E6	208P Reducer Coupling  Page E6	209P Pipe Bushing  Page E6	210P Lock Nut  Page E6	211P Square-head Plug  Page E7	
	212P Union  Page E7	213P Cap  Page E7	215PN Close Nipple  Page E7	215PNL Long Nipple  Page E7	216P Hex Nipple  Page E8	218P Hex-Head Plug  Page E8	219P Countersunk Plug  Page E8
	220P Slotted-Head Plug  Page E8	222P Adapter  Page E9	1200P-2200P Union Elbow  Page E9	1202P-2202P Street Elbow  Page E9	1203P-2203P Union Tee  Page E10	1204P Male Elbow  Page E10	2224P Male Branch Tee  Page E10
	2225P Street Tee  Page E10	2200PDE Drop-Ear Elbow  Page E11	2201P 45° Female Elbow  Page E11	2205P Cross  Page E11	2214P 45° Street Elbow  Page E11	Metric Straight Thread Adapters	222P-MI Adapter  Page E14 & E18
M16M22F8UHA8UB Union  Page E14 & E18	48F-MI Flare Adapter  Page E18	149F-MI Flare Adapter  Page E18	159F-MI Flare Adapter  Page E18	68HB-MI Hose Barb Adapter  Page E19	169HB-MI Hose Barb Adapter  Page E19		68NTA-MI NTA Adapter  Page E19
179HB-MI Hose Barb Adapter  Page E19	BSP Adapters	CD43 Street Elbow  Page E13	DD44 Elbow  Page E13	F3HF Hex Nipple NPTF-BSPT  Page E13	F3HG Adapter-Male BSPT  Page E13		FF33 BSPT Hex Nipple  Page E13
FF44 BSPP Hex Nipple  Page E14		FG43 Adapter-Male BSPT  Page E14	FHG4 Female-BSPP  Page E14	GG44 Coupling BSPP  Page E15	HHP3 BSPT Plug  Page E15	HP3 BSPT Plug  Page E15	KMMOO4 BSPP Cross  Page E15
MMO444 BSPP Tee  Page E15		MMS443 Branch Tee  Page E16	MRO434 Run Tee  Page E16	PTR34 Pipe Reducer  Page E16	WGG44 Bulkhead Union  Page 16		

Garden Hose Fittings	50GHSV Swivel Connector  Page E21	53GH,54GH, 55GH Hose Barb  Page E21	69GH,70GH, 71GH Male Pipe  Page E21	75GH Connector  Page E21	78GH,79GH, 80GH,81GH Female Pipe  Page E21	82GH,83GH Female Hose  Page E21	
	84GH Filter Adapter  Page E21	88GH Swivel Connector  Page E22	90GH Swivel Connector  Page E22	94GH Hose Nut  Page E22	95GH Hose Nut Reducer  Page E22	96GH Hose Cap  Page E22	98GH,99GH Hose to Pipe  Page E22
	98GHSV,99GHSV Swivel Connector  Page E23	101GHSV Swivel Nut Connector  Page E23	1163-60-BPD Coupler  Page E23	1163-61-BPD Nipple  Page E23	Auxiliary	112 Copper Ring  Page E16	901GH Rubber Washer  Page E23

E



Pipe Fittings

E

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, SAE J531 and ASA.

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.

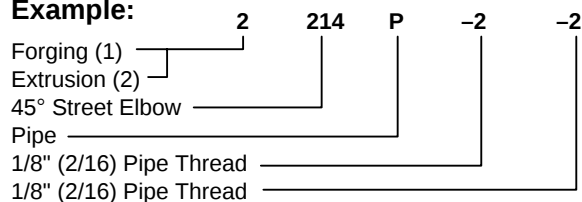
Order

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:



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

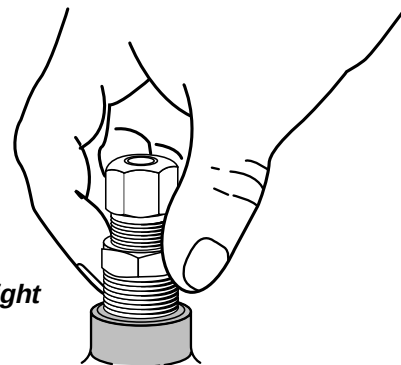
Only items prices in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

**Pipe thread assembly guide (turns method)
for Dryseal threads with pre-applied Vibra Seal**

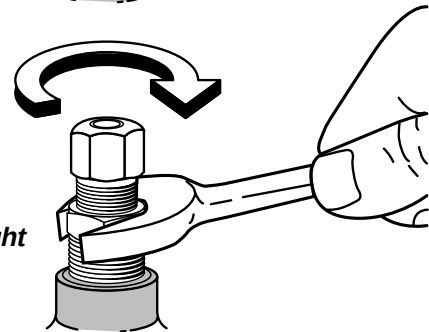
Straight Fittings

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.

Finger Tight



Wrench Tight

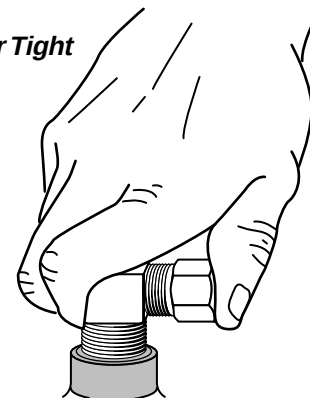


Elbow or Tee Fittings

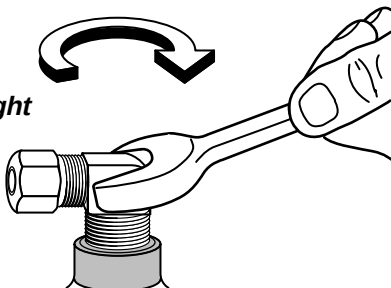
1. Tighten external thread into the internal thread.
2. Tighten an additional 1 to 1 1/2 revolutions with a wrench.
3. Tighten fitting, Clockwise, to Align with Tubing (never counter clockwise).

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.

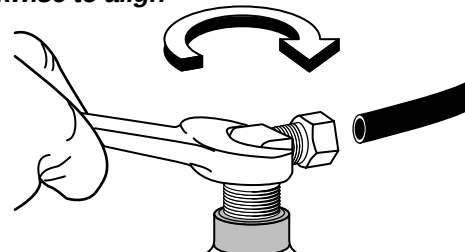
Finger Tight



Wrench Tight



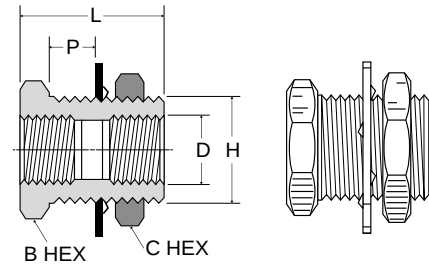
Clockwise to align



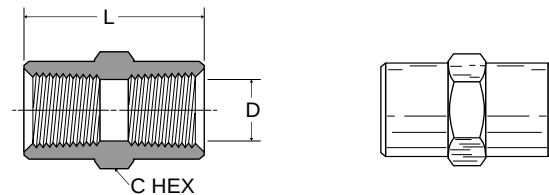
Anchor Coupling 207ACBH

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	.80	7/8	15/16	1.50	5/8	.328
207ACBH-2	1/8	5/8-18	.35	7/8	15/16	.96	5/8	.328
207ACBH-4	1/4	3/4-16	.75	1	1-1/8	1.50	3/4	.422
207ACBH-4	1/4	3/4-16	.19	1	1	.94	3/4	.422
207ACBH-6	3/8	1-14	.50	1-1/8	1-1/4	1.31	1	.562
207ACBH-8	1/2	1-1/8-14	.67	1-1/4	1-3/8	1.50	1-1/8	.688
207ACBH-12	3/4	1-5/16-12	.65	1-1/2	1-1/2	1.50	1-5/16	.890
207ACBH-16*	1	1-5/8-14	1.00	2	2	1.68	1-5/8	1.140

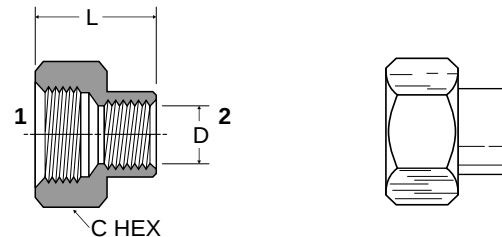
*Lock Washer not Available

**Coupling 207P**

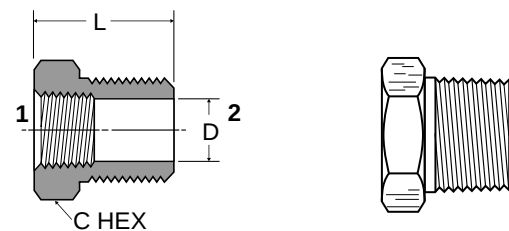
PART NO.	PIPE THREAD	C HEX	L	FLOW DIA. D
207P-2	1/8	9/16	.75	.328
207P-4	1/4	3/4	1.12	.422
207P-6	3/8	7/8	1.12	.562
207P-8	1/2	1-1/16	1.50	.688
207P-12	3/4	1-3/8	1.53	.900

**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	.328
208P-6-4	3/8	1/4	7/8	1.16	.422
208P-8-4	1/2	1/4	1-1/16	1.28	.422
208P-8-6	1/2	3/8	1-1/16	1.38	.562
208P-12-6	3/4	3/8	1-3/8	1.32	.562
208P-12-8	3/4	1/2	1-3/8	1.50	.688

**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	.328
209P-6-2	1/8	3/8	11/16	.75	.328
209P-6-4	1/4	3/8	3/4	.75	.422
209P-8-2	1/8	1/2	7/8	1.00	.328
209P-8-4	1/4	1/2	7/8	1.00	.422
209P-8-6	3/8	1/2	7/8	1.00	.562
209P-12-2	1/8	3/4	1-1/8	1.00	.328
209P-12-4	1/4	3/4	1-1/8	1.00	.422
209P-12-6	3/8	3/4	1-1/8	1.00	.562
209P-12-8	1/2	3/4	1-1/8	1.00	.688
209P-16-8	1/2	1	1-3/8	1.31	.688
209P-16-12	3/4	1	1-3/8	1.31	.880

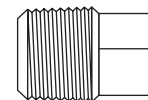
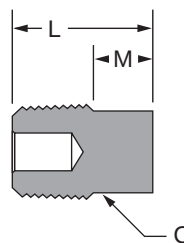
**Lock Nut 210P**

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



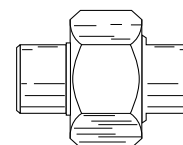
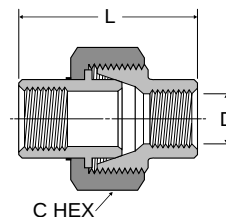
Square-Head Plug 211P

PART NO.	PIPE THREAD	C	L	M
211P-2	1/8	9/32	.59	.25
211P-4	1/4	3/8	.80	.30
211P-6	3/8	15/32	.80	.30
211P-8	1/2	9/16	1.07	.39
211P-12	3/4	5/8	1.14	.45



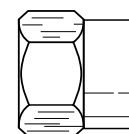
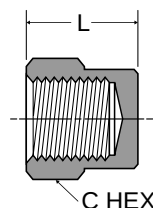
Union 212P

PART NO.	PIPE THREAD	C HEX	L	D
212P-4	1/4	1-3/16	1.53	.422
212P-6	3/8	1-1/4	1.79	.562



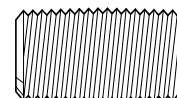
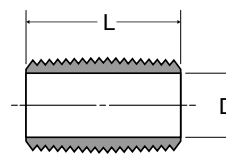
Cap 213P

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



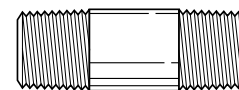
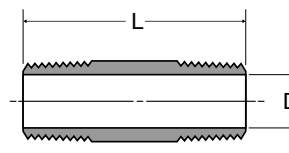
Close Nipple 215PN

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



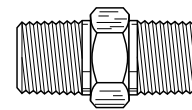
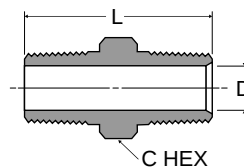
Long Nipple 215PNL

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

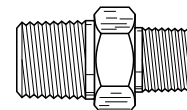
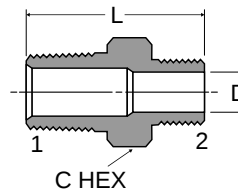


Hex Nipple 216P

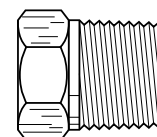
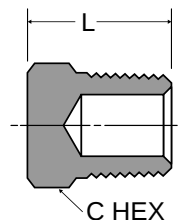
PART NO.	PIPE THREAD	C HEX	L	FLOW DIA. D
216P-2	1/8	7/16	.97	.220
216P-4	1/4	9/16	1.38	.314
216P-6	3/8	11/16	1.41	.440
216P-8	1/2	7/8	1.81	.564
216P-12	3/4	1-1/16	1.81	.752

**Hex Nipple Reducers 216P**

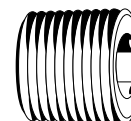
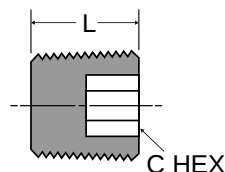
PART NO.	1 PIPE THREAD	2 PIPE THREAD	C HEX	L	FLOW DIA. D
216P-4-2	1/4	1/8	9/16	1.19	.220
216P-6-2	3/8	1/8	11/16	1.22	.220
216P-6-4	3/8	1/4	11/16	1.41	.314
216P-8-4	1/2	1/4	7/8	1.62	.314
216P-8-6	1/2	3/8	7/8	1.62	.440
216P-12-8	3/4	1/2	1-1/16	1.80	.564

**Hex-Head Plug 218P**

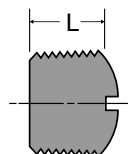
PART NO.	PIPE THREAD	C HEX	L
218P-2	1/8	7/16	.560
218P-4	1/4	9/16	.750
218P-6	3/8	11/16	.780
218P-8	1/2	7/8	.970
218P-12	3/4	1-1/16	1.063

**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	.47
219P-8	1/2	3/8	.61
219P-12	3/4	9/16	.62

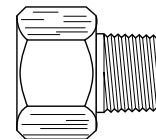
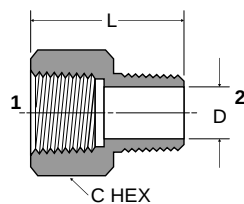
**Slotted-Head Plug 220P**

PART NO.	PIPE THREAD	L
220P-2	1/8	.31
220P-4	1/4	.42
220P-6	3/8	.43

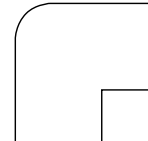
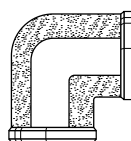
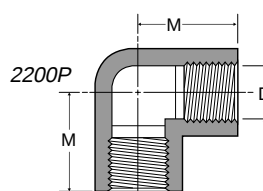
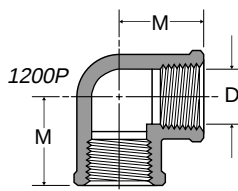


Adapter 222P

PART NO.	1 PIPE THREAD	2 PIPE THREAD	C HEX	L	FLOW DIA. D
222P-2-2	1/8	1/8	9/16	.88	.218
222P-4-2	1/4	1/8	3/4	1.06	.218
222P-4-4	1/4	1/4	3/4	1.25	.314
222P-6-2	3/8	1/8	7/8	1.10	.218
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	.312
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	.562
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	.562
222P-12-12	3/4	3/4	1-3/8	1.69	.751

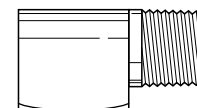
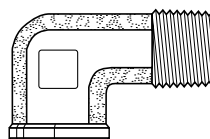
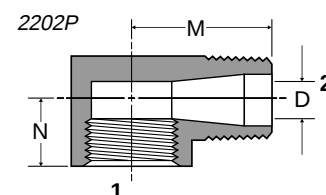
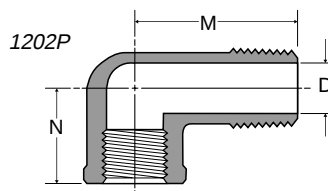
**90° Union Elbow 1200P-2200P**

PART NO.	PIPE THREAD	M	FLOW DIA. D
1200P-2-2	1/8	.56	.328
2200P-2-2	1/8	.55	.328
1200P-4-4	1/4	.81	.422
2200P-4-4	1/4	.78	.422
1200P-6-6	3/8	.84	.562
2200P-6-6	3/8	.84	.563
2200P-8-8	1/2	1.07	.687

**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	.42
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-8-8	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

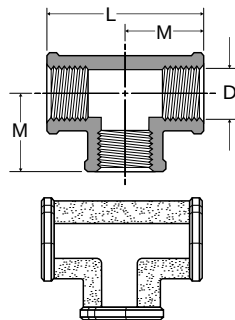
*Meets SAE Dimensions



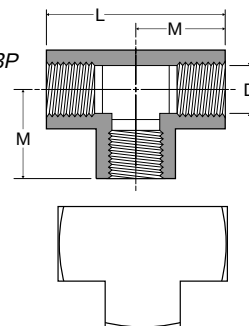
Union Tee 1203P-2203P

PART NO.	PIPE THREAD	L	M	FLOW DIA.D
1203P-2	1/8	1.12	.56	.328
2203P-2	1/8	1.06	.53	.328
1203P-4	1/4	1.38	.69	.422
2203P-4	1/4	1.52	.76	.422
2203P-6	3/8	1.68	.84	.562
1203P-8	1/2	2.14	1.07	.688
2203P-8	1/2	2.14	1.07	.688
2203P-12	3/4	2.28	1.14	.900

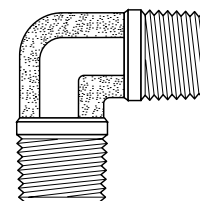
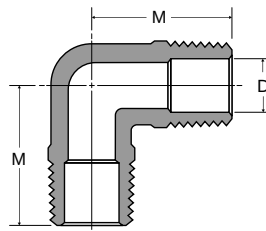
1203P



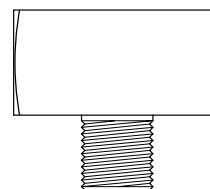
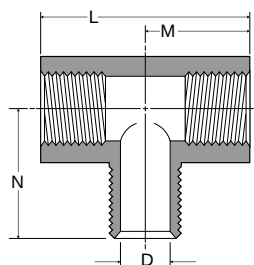
2203P

**Male Elbow 1204P**

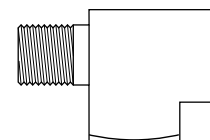
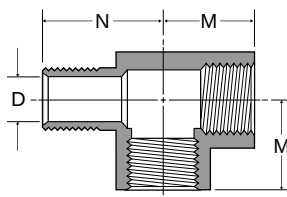
PART NO.	PIPE THREAD	M	FLOW DIA.D
1204P-2	1/8	.71	.220
1204P-4	1/4	1.09	.312
1204P-6	3/8	1.09	.406
1204P-8	1/2	1.41	.562

**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	.438
2224P-8	1/2	2.18	1.09	1.26	.592
2224P-12	3/4	2.32	1.16	1.38	.750

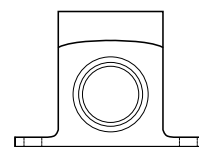
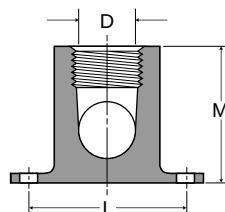
**Street Tee 2225P**

PART NO.	PIPE THREAD	M	N	FLOW DIA.D
2225P-2	1/8	.53	.66	.220
2225P-4	1/4	.76	.91	.312
2225P-6	3/8	.84	.98	.440
2225P-8	1/2	1.07	1.26	.564
2225P-12	3/4	1.14	1.38	.750

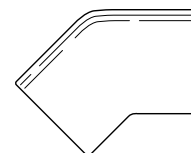
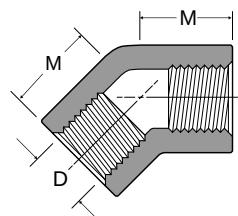


Drop-ear 90° Elbow 2200PDE

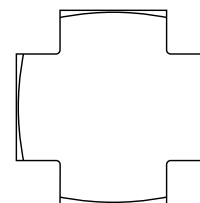
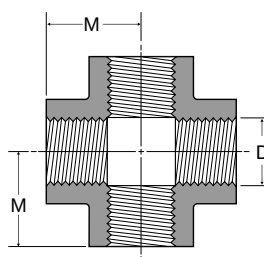
PART NO.	PIPE THREAD	L	M	FLOW DIA. D
2200PDE-2	1/8	1.38	1.00	.328

**45° Female Elbow 2201P**

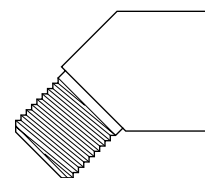
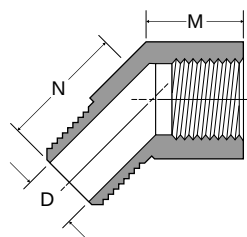
PART NO.	PIPE THREAD	M	FLOW DIA. D
2201P-2-2	1/8	.43	.328
2201P-8-8	1/2	.89	.860

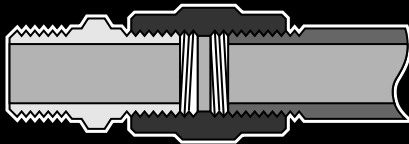
**Cross 2205P**

PART NO.	PIPE THREAD	M	FLOW DIA. D
2205P-2	1/8	.53	.328
2205P-4	1/4	.75	.421
2205P-6	3/8	.82	.562
2205P-8	1/2	1.07	.688
2205P-12	3/4	1.14	.900

**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	.54	.78	.440
2214P-8-8	1/2	.73	1.00	.562
2214P-12-12	3/4	.73	1.04	.750

**E**



Parker Brass Metric Adapters

E

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

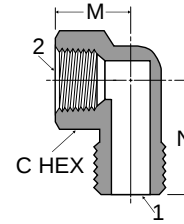
From -65° to +250° at 1000 psi.

Vibration

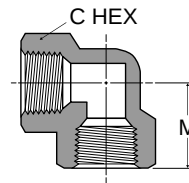
Fair resistance to vibration and pipe movement depending upon conditions.

CD43 90° Elbow Male-Female BSPT-BSPP

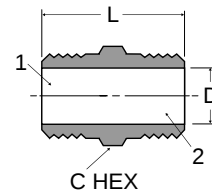
PART NO.	BSPT 1	BSPP 2	C HEX	M	N
1/8CD43B	1/8	1/8	14	14	20
1/4CD43B	1/4	1/4	17	18	25
3/8CD43B	3/8	3/8	22	19	29
1/2CD43B	1/2	1/2	27	24	37

**DD44 Pipe 90° Elbow BSPP**

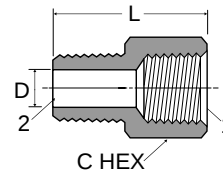
PART NO.	BSPP	C HEX	M
1/8DD44B	1/8	14	15
1/4DD44B	1/4	17	18
3/8DD44B	3/8	22	22
1/2DD44B	1/2	27	29

**F3HF Hex Nipple NPTF BSPT**

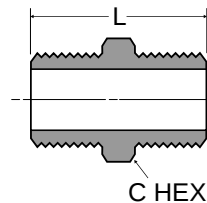
PART NO.	NPTF 1	BSPT 2	C HEX	L	FLOW D
1/8F3HF-B	1/8	1/8	7/16	1.07	.22
1/4F3HF-B	1/4	1/4	9/16	1.58	.31
3/8F3HF-B	3/8	3/8	11/16	1.16	.44
1/2F3HF-B	1/2	1/2	7/8	2.01	.56

**F3HG Adapter NPTF Male BSPT**

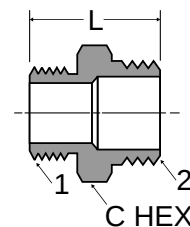
PART NO.	NPTF 1	BSPT 2	C HEX	L	FLOW D
1/8F3HG-B	1/8	1/8	9/16	0.93	.22
1/4F3HG-B	1/4	1/4	3/4	1.35	.31
3/8F3HG-B	3/8	3/8	7/8	1.35	.44
1/2F3HG-B	1/2	1/2	1-1/16	1.76	.56

**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

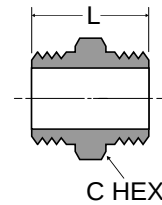
**FF33 Unequal Pipe Nipples BSPT**

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



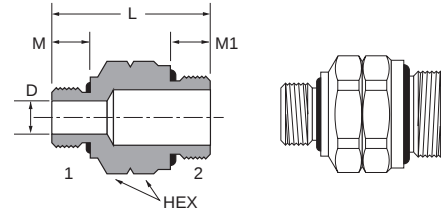
FF44 Pipe Nipples BSPP

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

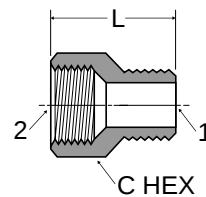
**Metric Straight Thread Union M16M22F8UHA8UB**

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

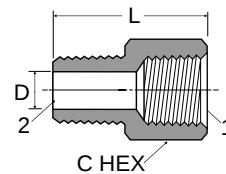
Note: Viton o-ring is standard

**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

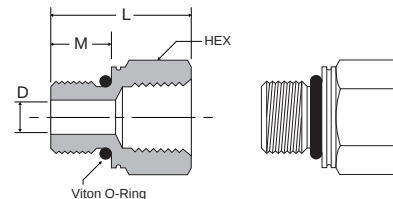
**FHG4 Adapter Male NPTF BSPP**

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**

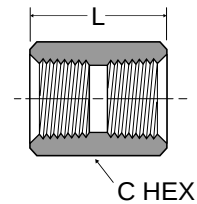
PART NUMBER	NPTF	METRIC THREAD	HEX	L	M	D
222P-2-MI10	1/8-27	M10 x 1.0	9/16	.75	.34	.18
222P-2-MI14	1/8-27	M14 x 1.5	3/4	.91	.43	.30
222P-4-MI12	1/4-18	M12 x 1.5	11/16	1.09	.43	.24
222P-6-MI16	3/8-18	M16 x 1.5	7/8	1.10	.45	.35
222P-6-MI22	3/8-18	M22 x 1.5	1 1/16	1.05	.37	.47
222P-8-MI27	1/2-14	M27 x 2.0	1 1/4	1.32	.63	.60

Note: Viton o-ring is standard

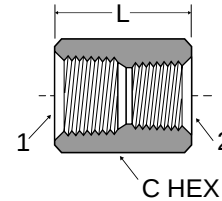


GG44 Pipe Connector BSPP

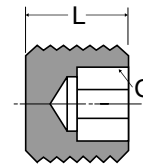
PART NO.	BSPP	C HEX	L
1/8GG44B	1/8	14	16
1/4GG44B	1/4	17	20
3/8GG44B	3/8	22	24
1/2GG44B	1/2	27	28
3/4GG44B	3/4	32	32
1GG44B	1	41	36

**GG44 Unequal Pipe Connector BSPP**

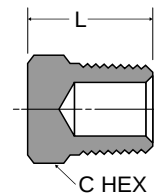
PART NO.	BSPP 1	BSPP 2	C HEX	L
1/8x1/4GG44B	1/8	1/4	17	18
1/8x3/8GG44B	1/8	3/8	22	20
1/8x1/2GG44B	1/8	1/2	27	22
1/4x3/8GG44B	1/4	3/8	22	22
1/4x1/2GG44B	1/4	1/2	27	24
3/8x1/2GG44B	3/8	1/2	17	26

**HHP3 Hollow Hex Head Plug BSPT**

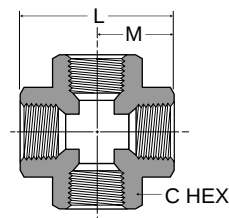
PART NO.	BSPT	C HEX	L
1/8HHP3B	1/8	5	8
1/4HHP3B	1/4	6	10
3/8HHP3B	3/8	8	11
1/2HHP3B	1/2	10	13

**HP3 Hex Plug BSPT**

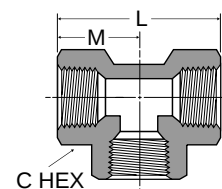
PART NO.	BSPT	C HEX	L
1/8HP3B	1/8	10	12
1/4HP3B	1/4	14	16
3/8HP3B	3/8	17	17
1/2HP3B	1/2	22	21
3/4HP3B	3/4	27	24
1HP3B	1	36	27

**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

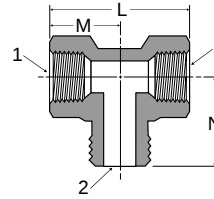
**MMO444 Pipe Tee BSPP**

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

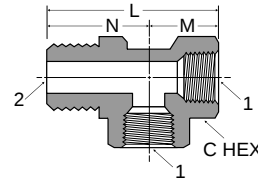


MMS443 Branch Tee Female-Male-Female BSPP-BSPT-BSPP

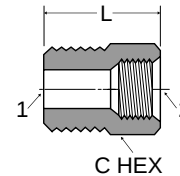
PART NO.	BSPP 1	BSPT 2	L	M	N
1/8MMS443B	1/8	1/8	29	14.5	17
1/4MMS443B	1/4	1/4	36	18.0	22
3/8MMS443B	3/8	3/8	48	24.0	25
1/2MMS443B	1/2	1/2	62	31.0	32

**MRO434 Run Tee Female-Female-Male BSPP-BSPP-BSPT**

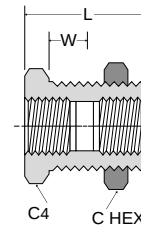
PART NO.	BSPP 1	BSPT 2	C HEX	L	M	N
1/8MRO434B	1/8	1/8	14	32	15	17
1/4MRO434B	1/4	1/4	17	40	18	22
3/8MRO434B	3/8	3/8	24	49	24	25
1/2MRO434B	1/2	1/2	30	63	31	32

**PTR34 Pipe Thread Reducer male-female BSPT-BSPP**

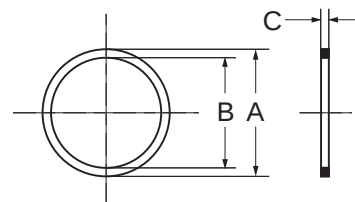
PART NO.	BSPT 1	BSPP 2	C HEX	L
1/4x1/8PTR34B	1/4	1/8	14	16
3/8x1/8PTR34B	3/8	1/8	17	17
3/8x1/4PTR34B	3/8	1/4	17	17
1/2x1/8PTR34B	1/2	1/8	22	22
1/2x1/4PTR34B	1/2	1/4	22	22
1/2x3/8PTR34B	1/2	3/8	22	22
3/4x3/8PTR34B	3/4	3/8	27	23
3/4x1/2PTR34B	3/4	1/2	27	23
1x1/2PTR34B	1	1/2	36	27
1x3/4PTR34B	1	3/4	36	27

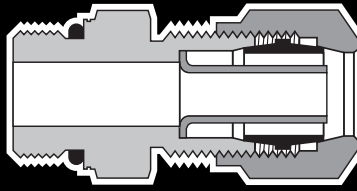
**WGG44 Bulkhead Female Union BSPP**

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. These adapters include NPTF, flare, hose barb and NTA end configurations. Viton 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.

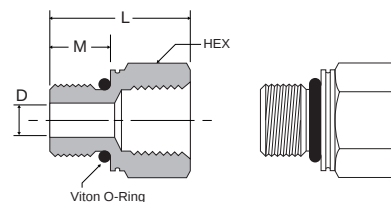
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Pipe to Metric Adaptor 222P-X-MIX

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	.37	.47
222P-8-MI27	1/2-14	M27 x 2.0	1 1/4	1.32	.63	.60

Note: Viton o-ring is standard

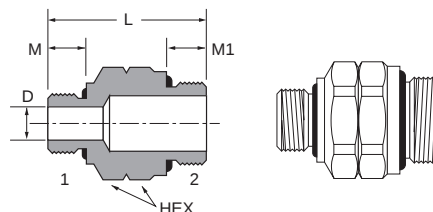
For working pressure and Temperature see Metric Adapters Section

**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: Viton o-ring is standard

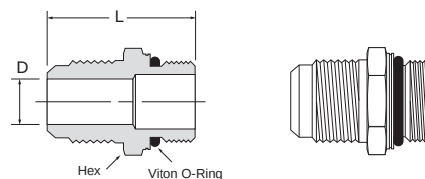
For working pressure and Temperature see Metric Adapters Section

**Flare to Metric Adaptor 48F-X-MIX**

PART NUMBER	TUBE SIZE	METRIC THREAD	HEX	L	D
48F-8-MI16	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: Viton o-ring is standard

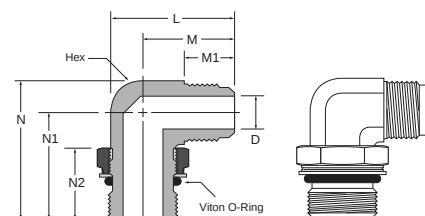
For working pressure and Temperature see SAE Flare Section

**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: Viton o-ring is standard

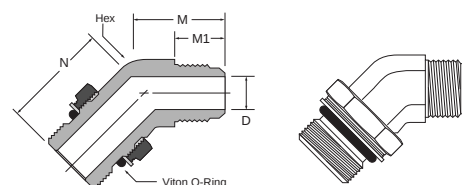
For working pressure and Temperature see SAE Flare Section

**45° Flare Elbow to Metric Adaptor 159F-X-MIX**

PART NUMBER	TUBE SIZE	METRIC THREAD	HEX	M	M1	N	D
159F-8-MI16	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: Viton o-ring is standard

For working pressure and Temperature see SAE Flare Section

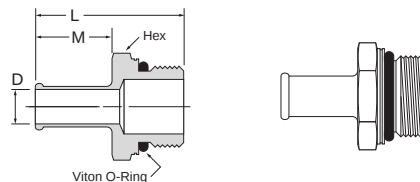


Hose Barb to Metric Adaptor 68HB-X-MIX

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-M14	3/8	M14 1.5	3/4	1.51	.78	.30
68HB-8-M12	1/2	M12 x 1.5	11/16	1.50	.78	.24
68HB-10-M127	5/8	M27 x 2.0	1 1/4	1.77	.78	.50

Note: Viton o-ring is standard

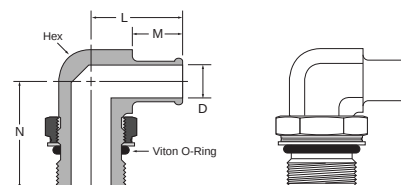
For working pressure and Temperature see Hose Barb Section

**Beaded Elbow to Metric Adaptor 169HB-X-MIX**

PART NUMBER	HOSE SIZE	METRIC THREAD	HEX	L	M	N	D
169HB-10-M127	5/8	M27 x 2.0	7/8	1.41	.78	1.63	.50
169HB-16-M127	1	M27 x 2.0	1	1.67	.97	1.68	.71

Note: Viton o-ring is standard

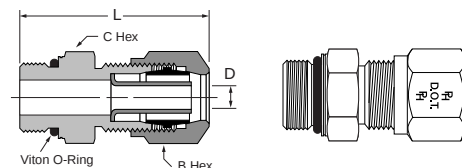
For working pressure and Temperature see Hose Barb Section

**NTA to Metric Adaptor 68NTA-X-MIX**

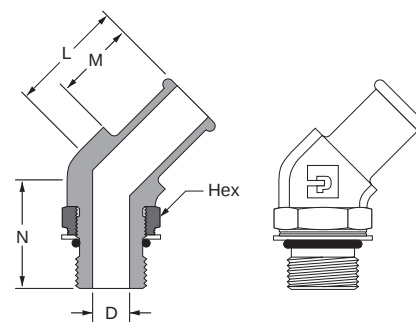
PART NUMBER	TUBE SIZE	METRIC THREAD	B HEX	C HEX	L	D
68NTA-4-M110	1/4	M10 x 1.0	9/16	9/16	1.33	.140

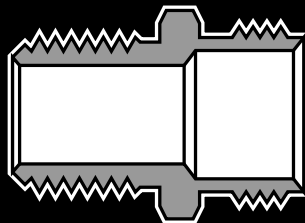
Note: Viton o-ring is standard

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-M118	3/4	M18 x 1.5	13/16	1.15	.78	1.16	.44
179HB-16-M127	1	M27 x 2.0	1 1/16	1.51	.97	1.71	.71

**E**



Garden Hose Fittings

E

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

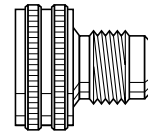
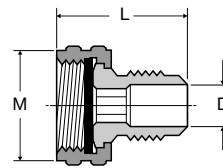
Pipe sizes are determined by the number of sixteenths of an inch in the pipe size.

Pricing

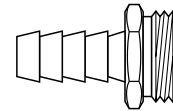
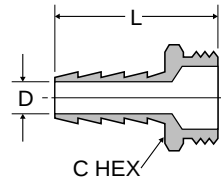
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

Swivel Connector SAE Flare to Female Hose Thread 50GHSV

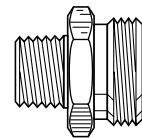
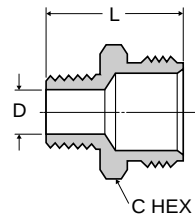
PART NO.	TUBE SIZE	HOSE THREAD	L	M	FLOW DIA.D
50GHSV-6-12	3/8	3/4	1.25	1.15	.297
50GHSV-8-12	1/2	3/4	1.34	1.15	.406

**Hose Barb to Male Hose Thread 53GH, 54GH & 55GH**

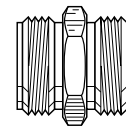
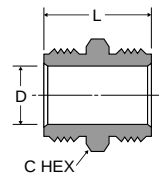
PART NO.	I.D. HOSE SIZE	HOSE THREAD	C HEX	L	FLOW DIA.D
53GH-8-12	1/2	3/4	1-1/16	1.88	.375
54GH-10-12	5/8	3/4	1-1/16	1.88	.500
55GH-12-12	3/4	3/4	1-1/16	1.88	.625

**Male Hose to Male Pipe 69GH, 70GH, 71GH**

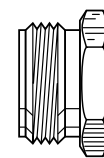
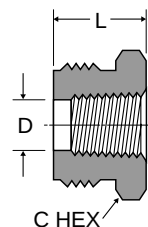
PART NO.	HOSE THREAD	PIPE THREAD	C HEX	L	FLOW DIA.D
69GH-12-6	3/4	3/8	1-1/16	1.25	.406
70GH-12-8	3/4	1/2	1-1/16	1.39	.531
71GH-12-12	3/4	3/4	1-1/16	1.41	.750

**Male Hose to Male Hose 75GH**

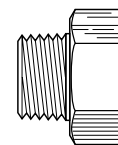
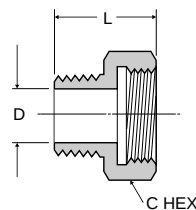
PART NO.	HOSE THREAD	C HEX	L	FLOW DIA.D
75GH-12	3/4	1-1/16	1.25	.750

**Male Hose to Female Pipe 78GH, 79GH, 80GH & 81GH**

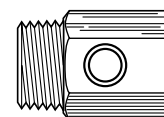
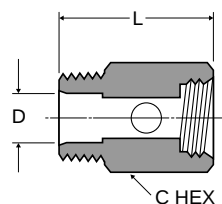
PART NO.	HOSE THREAD	PIPE THREAD	C HEX	L	FLOW DIA.D
78GH-12-4	3/4	1/4	1-1/16	.75	.422
79GH-12-6	3/4	3/8	1-1/16	.75	.562
80GH-12-8	3/4	1/2	1-1/16	.75	.687
81GH-12-12	3/4	3/4	1-3/16	1.28	.719

**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

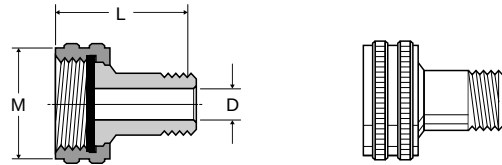
**Special Filter Adapter 84GH**

PART NO.	HOSE THREAD	PIPE THREAD	C HEX	L	FLOW DIA.D
84GH-8-8	1/2	1/2	15/16	1.53	.530

**E**

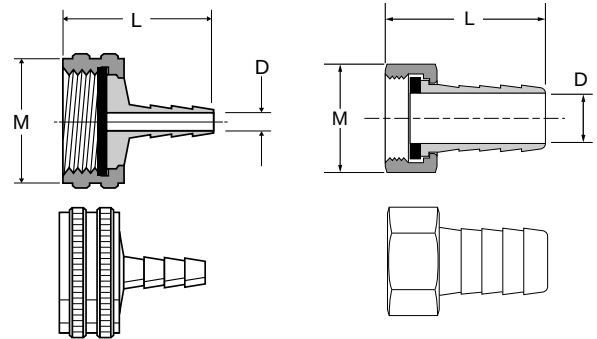
Swivel Connector Female Garden Hose to Male Pipe 88GH

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

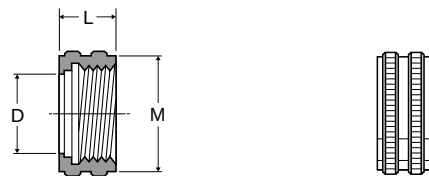
**Swivel Connector Female Garden Hose to Hose Barb 90GH**

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

**Knurled Hose Nut 94GH**

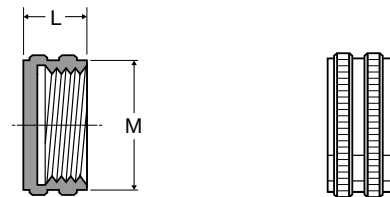
PART NO.	HOSE THREAD	L	M	FLOW DIA.D
94GH-12	3/4	.57	1.15	.808

**Hose Nut Reducer 95GH**

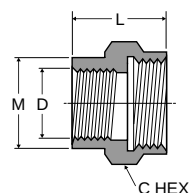
PART NO.	HOSE THREAD	PIPE THREAD	C HEX	L
95GH-12-2	3/4	1/8	1-1/8	.63

**Hose Cap Nut 96GH**

PART NO.	HOSE THREAD	L	M
96GH-12	3/4	.50	1.15

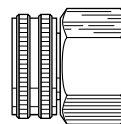
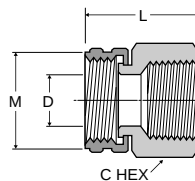
**Female Hose to Female Pipe 98GH & 99GH**

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

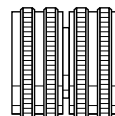
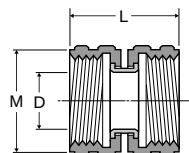


Swivel Connector Female Hose to Female Pipe 98GHSV & 99GHSV

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
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901GH-12 3/4
NOTE: All female connector ends should have this rubber washer installed prior to usage.

**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

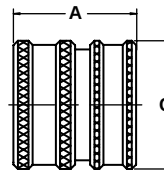
- Brass and stainless steel construction for heavy duty service.
- Durable 4-ball locking mechanism for secure connections.
- Quality, temperature-resistant nitrile seals for a leak-free service life.

Specifications

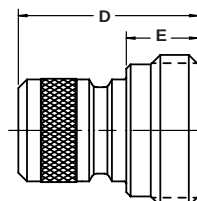
Body Size	3/4"
Rated Pressure (PSI)	200
Rated Flow (GPM)	28
Temperature Range (std seals)	-40°F to +250°F

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

Notes section with horizontal lines for writing.

E



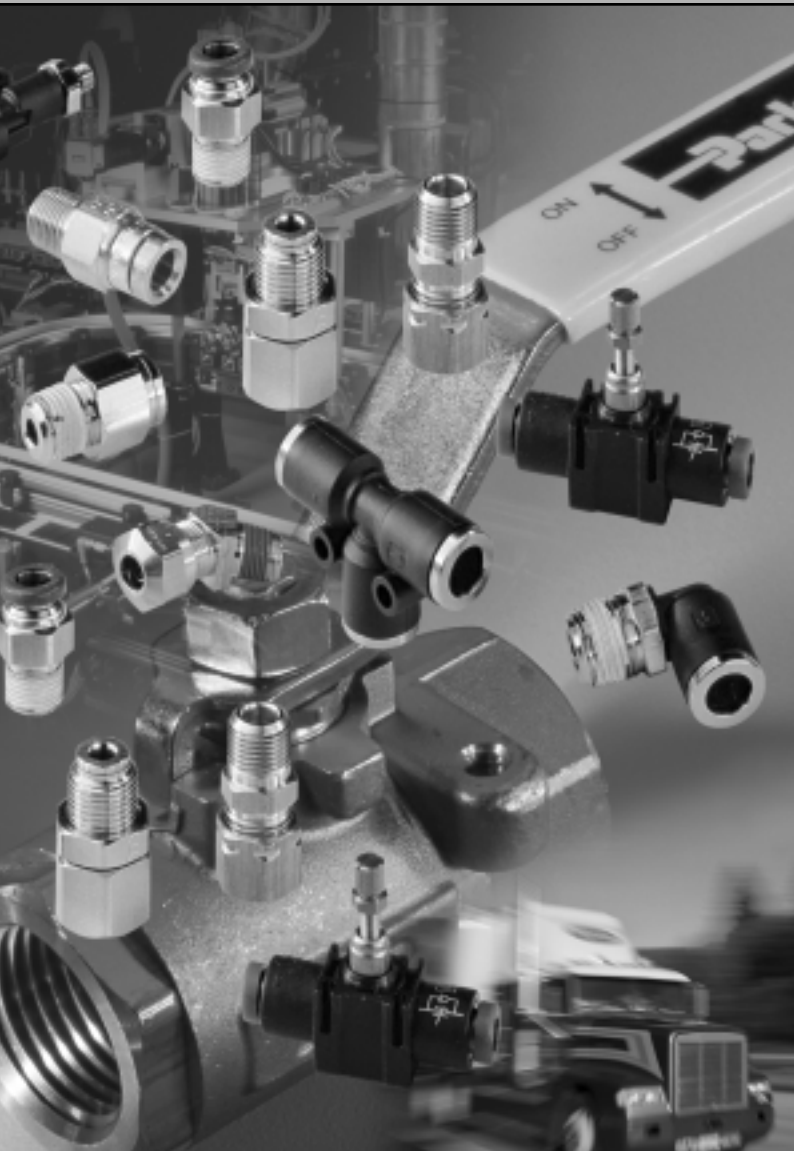
GOODYEAR
RUBBER PRODUCTS INC.

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**We Ship
World Wide**



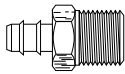
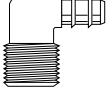
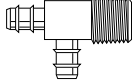
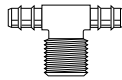
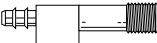
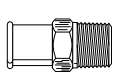
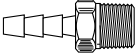
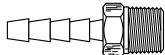
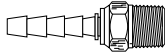
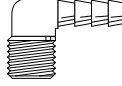
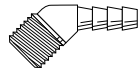
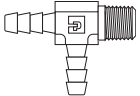
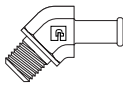
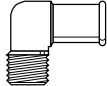
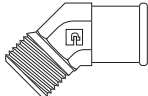
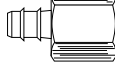
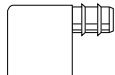
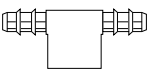
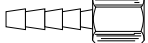
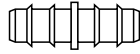
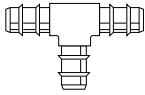
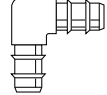
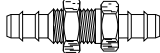
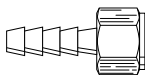
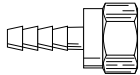
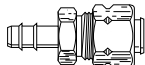
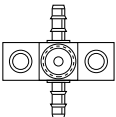
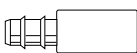
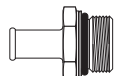
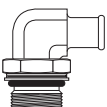
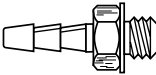
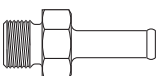
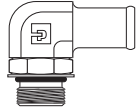
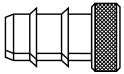
Barbed Fittings

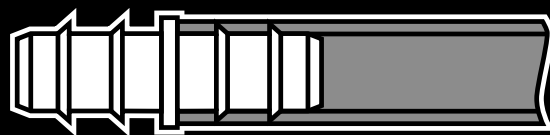


Dubl-Barb® Fittings F3

Hose Barb Fittings F9

The World Standard

F	Barb to Male NPT	28 Male Connector  Page F5	229 Male Elbow  Page F7	231 Run Tee  Page F7	232 Branch Tee  Page F8	228 Gauge Tee  Page F7	68HB Male Connector  Page F10
	125HB Male Connector  Page F11	125HBL Male Connector  Page F11	125HBLSV Swivel Connector  Page F11	127HB Ball-End Adapter  Page F12	129HB Male Elbow  Page F12	139HB 45° Male Elbow  Page F12	171HB Run Tee  Page F13
	179HB 45° Male Elbow  Page F13	269HB Male Elbow  Page F14	279HB 45° Male Elbow  Page F14	Barb to Female NPT	26 Female Connector  Page F5	230 Female Elbow  Page F7	237 Female Tee  Page F8
	126HBL Female Connector  Page F11	Barb to Barb	22 Union  Page F4	224 Union Tee  Page F6	225 Union Elbow  Page F6	122HBL Hose Mender  Page F10	
	Bulkheads	22BH Bulkhead Union  Page F4	22CABH Bulkhead Union  Page F5	Swivels	128HBLSV Female Ball-End  Page F12	146HBLFSV 45° Female Flare  Page F13	
	Adapters	22CA Mixed Union  Page F4	220 Adapter Tee  Page F6	233 Mixed Tee  Page F8	238 Solder Connector  Page F8	Barb to Metric Straight Thread	68HB-MI Male Connector  Page F10
	169HB-MI Male Elbow  Page F13	179HB-MI 45° Male Elbow  Page F14	Barb to Straight Thread	27 Male Connector  Page F5	685HB Male Connector  Page F10	1695HB Male Elbow  Page F13	1795HB 45° Elbow  Page F14
	Auxiliary	20 Plug  Page F4	20GT Tool  Page F8	97HC Clamp  Page F10			



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.

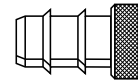
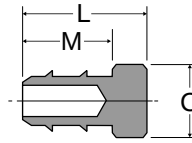
Pricing

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.

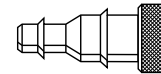
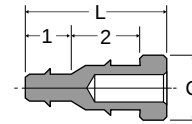
F

Plug 20

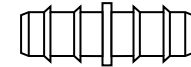
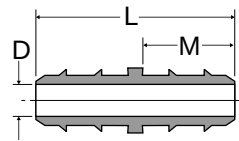
PART NO.	TUBE O.D.	TUBE I.D.	C DIA.	L	M
20-4	1/4	.170	.290	.56	.41
20-6	3/8	.250	.390	.68	.44
20-8	1/2	.377	.577	.81	.56

**Plug Adapter 20**

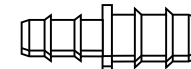
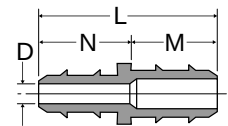
PART NO.	TUBE O.D. 1	TUBE I.D. 1	TUBE O.D. 2	TUBE I.D. 2	C DIA.	L
20-4-5/32	5/32	.096	1/4	.170	.290	.65

**Union 22**

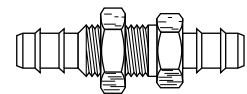
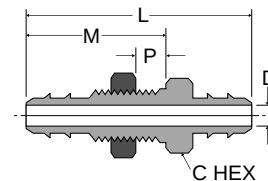
PART NO.	TUBE O.D.	TUBE I.D.	L	M	FLOW DIA. D
22-5/32	5/32x5/32	.096x.096	.59	.28	.062
22-4	1/4x1/4	.170x.170	.84	.41	.120
22-6	3/8x3/8	.250x.250	.94	.44	.187
22-8	1/2x1/2	.375x.375	1.19	.56	.312

**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

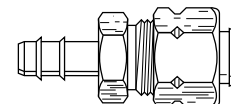
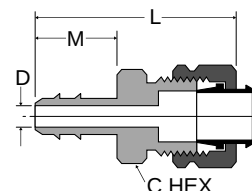
**Bulkhead Union 22BH**

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

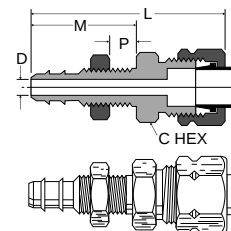
PART NO.	TUBE O.D.	TUBE I.D.	CA TUBE	C HEX	L	M	FLOW DIA. D
22CA-4-4	1/4	.170	1/4	7/16	1.15	.41	.120



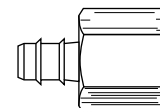
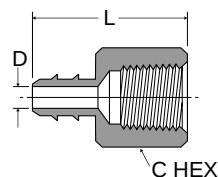
Bulkhead Union 22CABH

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

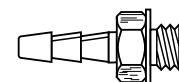
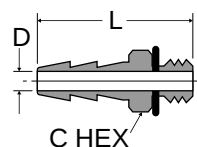
**Female Connector 26**

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

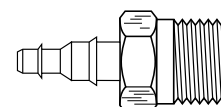
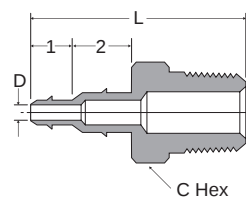
**Male Connector 27**

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.

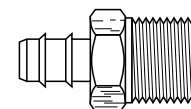
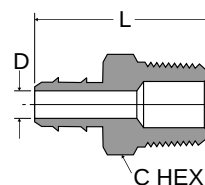
**Barb-to-Pipe Adapter 28**

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**

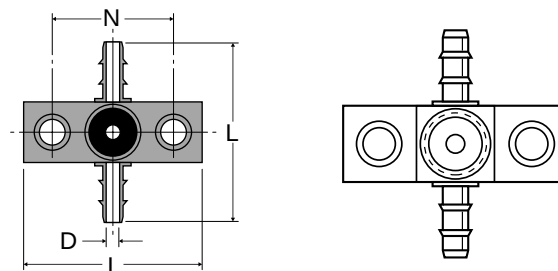
PART NO.	TUBE O.D.	TUBE I.D.	PIPE THREAD	C HEX	L	FLOW DIA. D
28-5/32-2	5/32	.096	1/8	7/16	.84	.062
28-4-1	1/4	.170	1/16	11/32	.93	.120
28-4-2	1/4	.170	1/8	7/16	.97	.120
28-4-4	1/4	.170	1/4	9/16	1.09	.120
28-4-10x32*	1/4	.170	10-32	1/4	.71	.093
28-6-2	3/8	.250	1/8	7/16	1.00	.187
28-6-4	3/8	.250	1/4	9/16	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

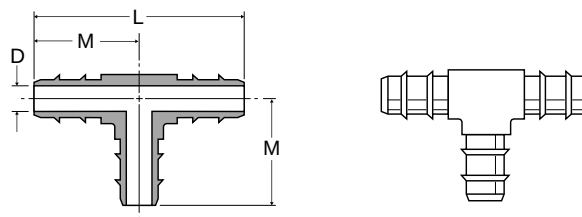


Adapter Tee 220

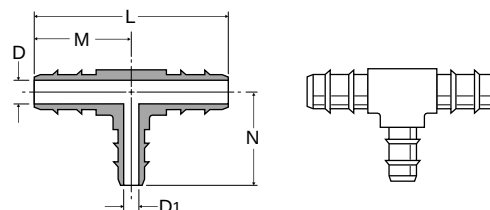
PART NO.	TUBE O.D.	TUBE I.D.	PIPE THREAD	L	N	FLOW DIA. D
220-4-2	1/4	.170	1/8	1.50	1.00	.120

**Union Tee 224**

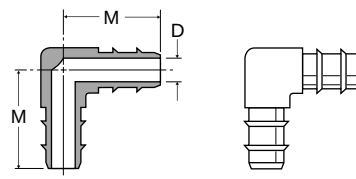
PART NO.	TUBE O.D.	TUBE I.D.	L	M	FLOW DIA. D
224-5/32	5/32	.096	1.00	.50	.062
224-4	1/4	.170	1.25	.63	.120
224-6	3/8	.250	1.38	.69	.187
224-8	1/2	.375	1.63	.81	.312

**Union Tee 224 Combination Sizes**

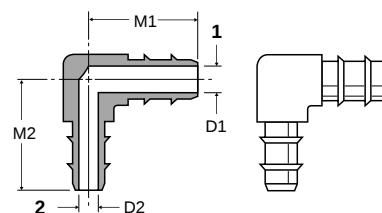
PART NO.	TUBE O.D.	TUBE I.D.	L	M	N	FLOW DIA. D	FLOW DIA. D1
224-4-4-5/32	1/4x5/32	.170x.096	1.25	.63	.50	.120	.062
224-6-6-5/32	3/8x5/32	.250x.096	1.38	.69	.50	.187	.062
224-6-6-4	3/8x1/4	.250x.170	1.38	.69	.62	.187	.120
224-8-8-4	1/2x1/4	.375x.170	1.62	.81	.65	.312	.120
224-8-8-6	1/2x3/8	.375x.250	1.62	.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

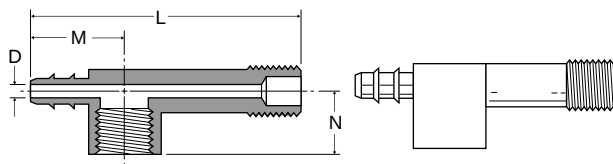
**Union Elbow 225 Combination Size**

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

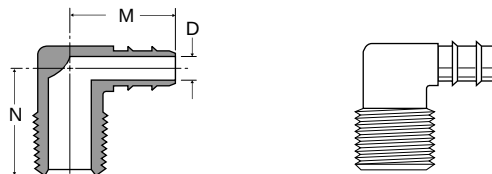


Gauge Tee 228

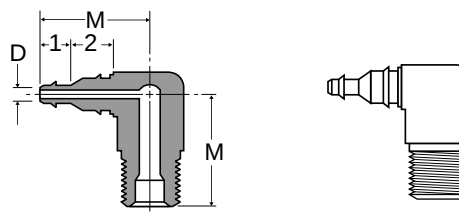
PART NO.	TUBE O.D.	TUBE I.D.	PIPE THREAD	L	M	N	FLOW DIA. D
228-4-2	1/4	.170	1/8	1.91	.66	.44	.120

**Male Elbow 229**

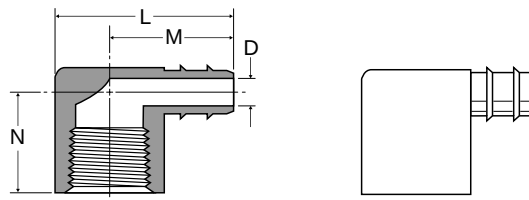
PART NO.	TUBE O.D.	TUBE I.D.	PIPE THREAD	M	N	FLOW DIA. D
229-5/32-2	5/32	.096	1/8	.56	.63	.062
229-4-1	1/4	.170	1/16	.62	.60	.120
229-4-2	1/4	.170	1/8	.69	.63	.120
229-4-4	1/4	.170	1/4	.72	.72	.120
229-6-2	3/8	.250	1/8	.69	.69	.187
229-6-4	3/8	.250	1/4	.75	.75	.187
229-8-4	1/2	.375	1/4	.94	.74	.312
229-8-6	1/2	.375	3/8	.94	.81	.312

**90° Elbow Barb Adapter 229**

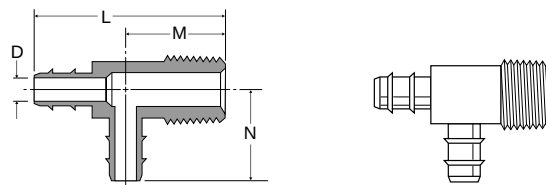
PART NO.	TUBE O.D. 1	TUBE I.D. 1	TUBE O.D. 2	TUBE I.D. 2	PIPE THREAD	M	FLOW DIA. D
229-4-5/32-2	5/32	.096	1/4	.170	1/8	.78	.062

**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

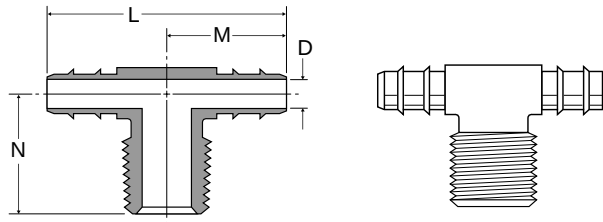
**Male Run Tee 231**

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

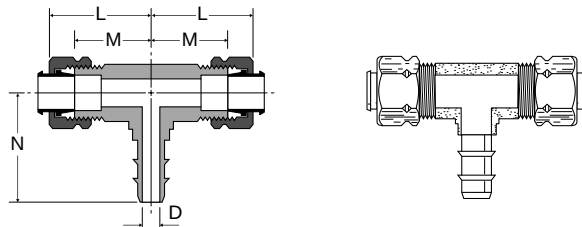
**F**

Male Branch Tee 232

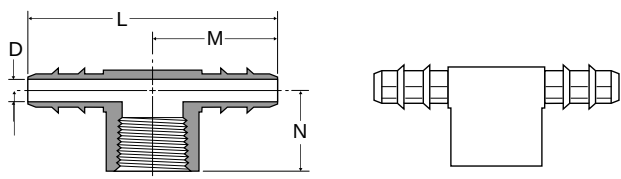
PART NO.	TUBE O.D.	TUBE I.D.	PIPE THREAD	L	M	N	FLOW DIA. D
232-4-1	1/4	.170	1/16	1.33	.66	.65	.120
232-4-2	1/4	.170	1/8	1.38	.69	.66	.120
232-6-2	3/8	.250	1/8	1.38	.69	.69	.187
232-6-4	3/8	.250	1/4	1.50	.75	.75	.187

**Tee 233**

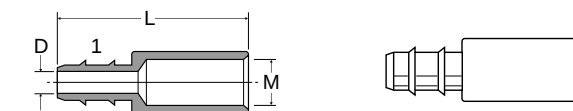
PART NO.	TUBE O.D.	TUBE I.D.	COMB. TUBE	L	M	N	FLOW DIA. D
233-4-4-4	1/4	.170	1/4	.73	.53	.74	.120
233-6-6-4	1/4	.170	3/8	.87	.59	.80	.120

**F****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**

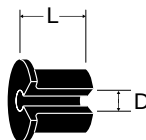
PART NO.	TUBE O.D. 1	TUBE I.D. 1	L	M	FLOW DIA. D
238-4-4	1/4	.170	.91	.25	.120

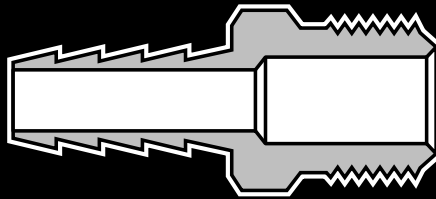
**Dubl-Barb Tool 20GT**

PART NO.	TUBE O.D.	L	THRU DIA. D
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20GT-4* 1/4 1.00 .245

*For ease in assembling polyethylene tubing onto Dubl-Barb Fittings.





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

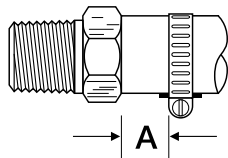
From -40° to +160°F. at 150 PSI maximum.

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
 Hose Barb to Male Pipe
 Hose Barb
 3/8" (6/16) Hose I.D.
 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.

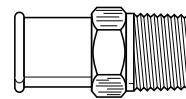
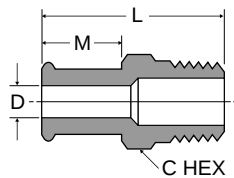
Pricing

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.

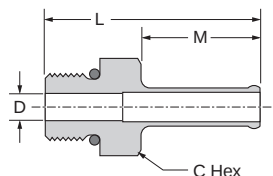
F

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-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

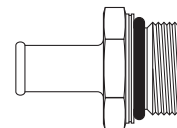
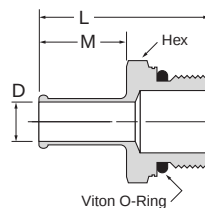
**Beaded Hose Barb to SAE Straight Thread 685HB**

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	.90	.18
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-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

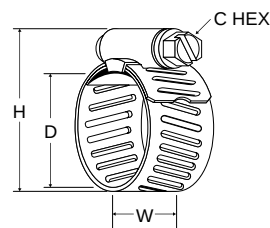
**Hose Barb to Metric Adaptor 68HB-X-MIX**

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
68HB-10-MI27	5/8	M27 x 2.0	1 1/4	1.77	.78	.50

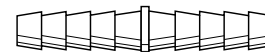
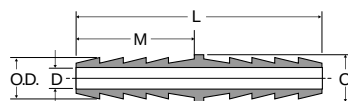
Note: Viton o-ring is standard

**Stainless Steel Worm Drive Clamp 97HC**

PART NO.	MAX. D	MIN. D	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

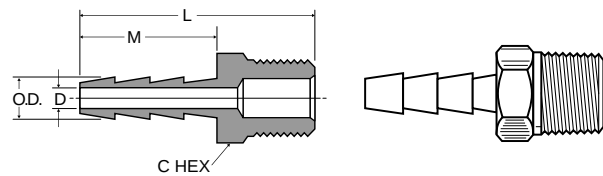


* 3 Barb design.

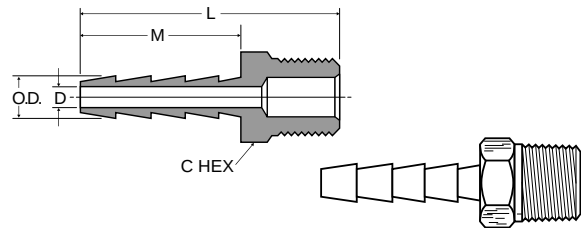
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Hose Barb to Male Pipe 125HB

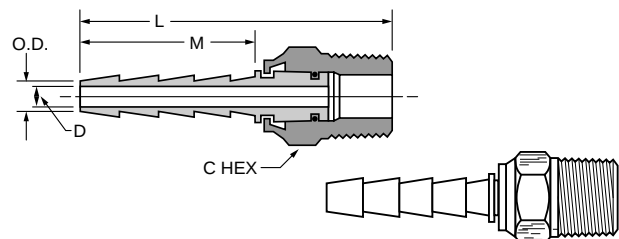
PART NO.	I.D. HOSE SIZE	PIPE THREAD	C HEX	L	M	O.D.	FLOW DIA. D
125HB-2-2	1/8	1/8	7/16	1.07	.50	.185	.093
125HB-3-2	3/16	1/8	7/16	1.25	.69	.227	.125
125HB-3-4	3/16	1/4	9/16	1.44	.69	.227	.125

**Hose Barb to Male Pipe 125HBL**

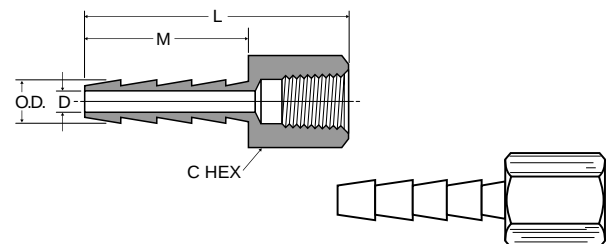
PART NO.	I.D. HOSE SIZE	PIPE THREAD	C HEX	L	M	O.D.	FLOW DIA. D
125HBL-4-2	1/4	1/8	7/16	1.54	.97	.290	.187
125HBL-4-4	1/4	1/4	9/16	1.72	.97	.290	.187
125HBL-4-6	1/4	3/8	11/16	1.77	.97	.290	.187
125HBL-5-2	5/16	1/8	7/16	1.54	.97	.353	.250
125HBL-5-4	5/16	1/4	9/16	1.72	.97	.353	.250
125HBL-5-6	5/16	3/8	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**

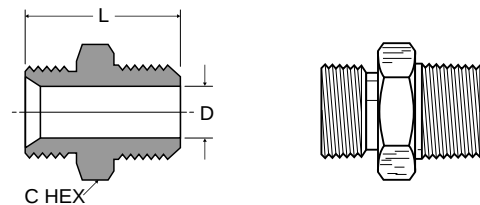
PART NO.	I.D. HOSE SIZE	PIPE THREAD	C HEX	L	M	O.D.	FLOW DIA. D
126HBL-4-2	1/4	1/8	1/2	1.47	.97	.290	.187
126HBL-4-4	1/4	1/4	11/16	1.58	.97	.290	.187
126HBL-5-4	5/16	1/4	11/16	1.58	.97	.353	.250
126HBL-6-2	3/8	1/8	1/2	1.47	.97	.415	.281
126HBL-6-4	3/8	1/4	11/16	1.58	.97	.415	.281
126HBL-6-6	3/8	3/8	13/16	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



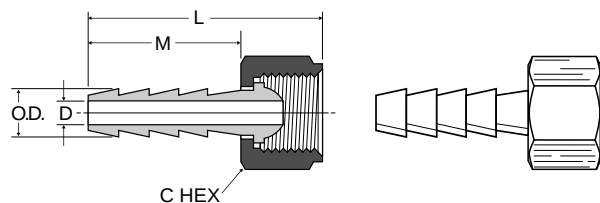
Ball-End Joint Adapter to Male Pipe 127HB

For use with 128HBLSV

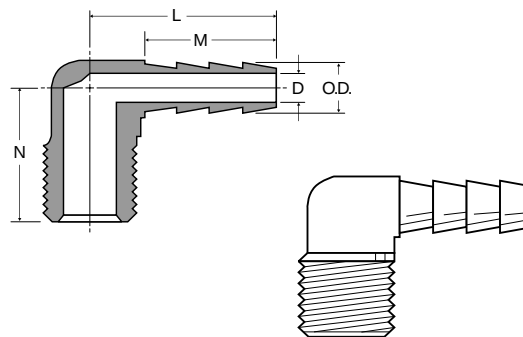
PART NO.	MALE N.P.S.M. THREAD	MALE N.P.T. THREAD	C HEX	L	FLOW DIA. D
127HB-4-2	1/4	1/8	9/16	.91	.219
127HB-4-4	1/4	1/4	9/16	1.10	.281
127HB-6-4	3/8	1/4	11/16	1.10	.312
127HB-6-6	3/8	3/8	11/16	1.15	.406
127HB-8-6	1/2	3/8	7/8	1.25	.406
127HB-8-8	1/2	1/2	7/8	1.50	.531

**Hose Barb to Swivel Female Ball-End 128HBLSV**

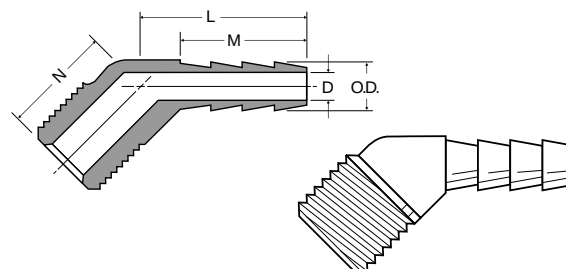
PART NO.	I.D. HOSE SIZE	FEMALE N.P.S.M. THREAD	C HEX	L	M	O.D.	FLOW DIA. D
128HBLSV-4-4	1/4	1/4	5/8	1.50	.97	.290	.187
128HBLSV-5-4	5/16	1/4	5/8	1.50	.97	.353	.250
128HBLSV-6-4	3/8	1/4	5/8	1.63	.97	.415	.250
128HBLSV-6-6	3/8	3/8	3/4	1.50	.97	.415	.281
128HBLSV-8-8	1/2	1/2	29/32	1.52	.97	.530	.375

**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	.89	.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

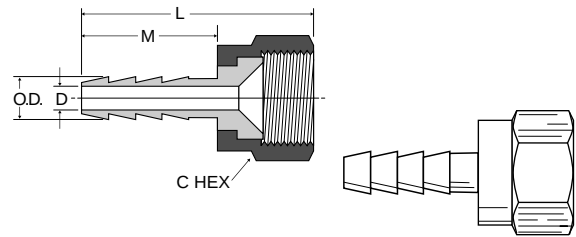
**Hose Barb 45° Elbow to Male Pipe 139HB**

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

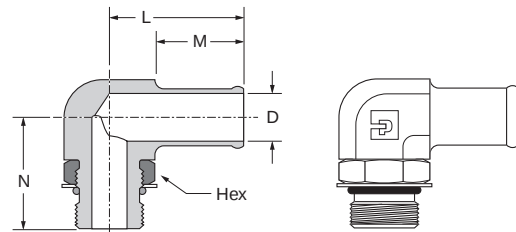


Hose Barb to Swivel 45° Female Flare 146HBLFSV

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

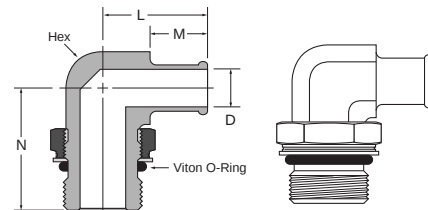
**Beaded Hose Barb Elbow to SAE Straight Thread 1695HB**

PART NUMBER	HOSE SIZE	STRAIGHT THREAD	HEX	L	M	N	D
1695HB-8-6	1/2	9/16-18	9/16	1.10	.78	1.11	.30
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-16-12	1	1 1/16-12	1 3/16	1.60	.97	1.75	.60

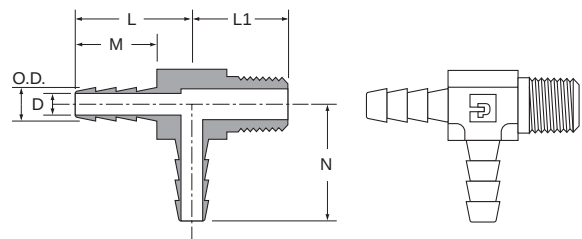
**Beaded Elbow to Metric Adaptor 169HB-X-MIX**

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

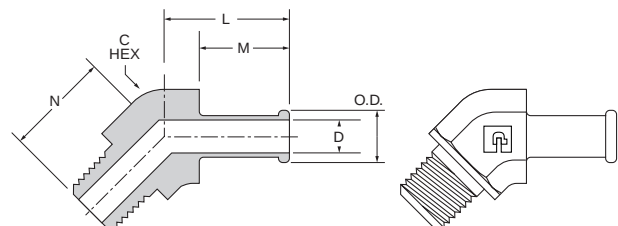
Note: Viton o-ring is standard

**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

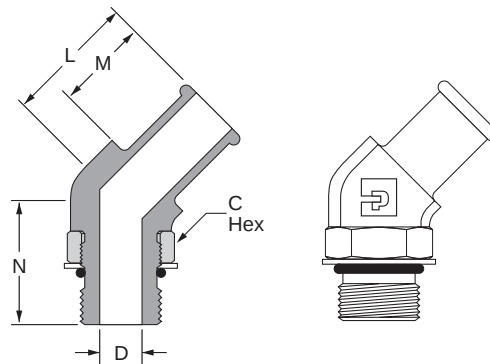
**Beaded Hose Barb 45° Elbow Tube to Male Pipe 179HB**

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

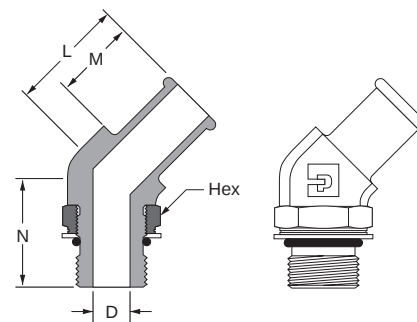


Beaded Hose Barb 45° Elbow Tube to Straight Thread 1795HB

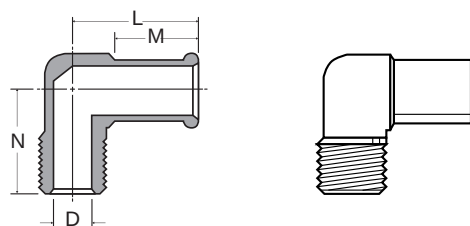
PART NO.	I.D. HOSE SIZE	STRAIGHT THREAD	C HEX	L	M	N	FLOW DIA. D
1795HB-10-8	5/8	3/4-16	7/8	1.22	.88	1.16	.398
1795HB-12-8	3/4	3/4-16	7/8	1.22	.88	1.16	.398
1795HB-16-12	1	1 1/16-12	1 1/4	1.38	0.97	1.47	0.62

**Beaded Hose Barb 45 Elbow to Metric Thread 179HB-X-MIX**

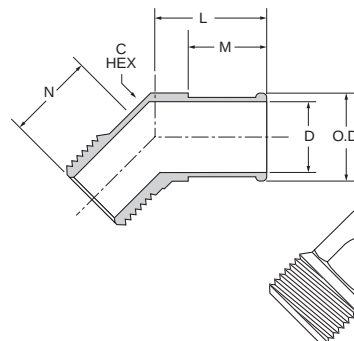
PART NUMBER	HOSE SIZE	METRIC THREAD	HEX	L	M	N	D
179HB-12-MI18	3/4	M18 x 1.5	13/16	1.15	.78	1.16	.44
179HB-16-MI27	1	M27 x 2.0	1 1/16	1.51	.97	1.71	.71

**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	1.26	.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	.625
269HB-12-12	3/4	3/4	1.33	.78	1.27	.625

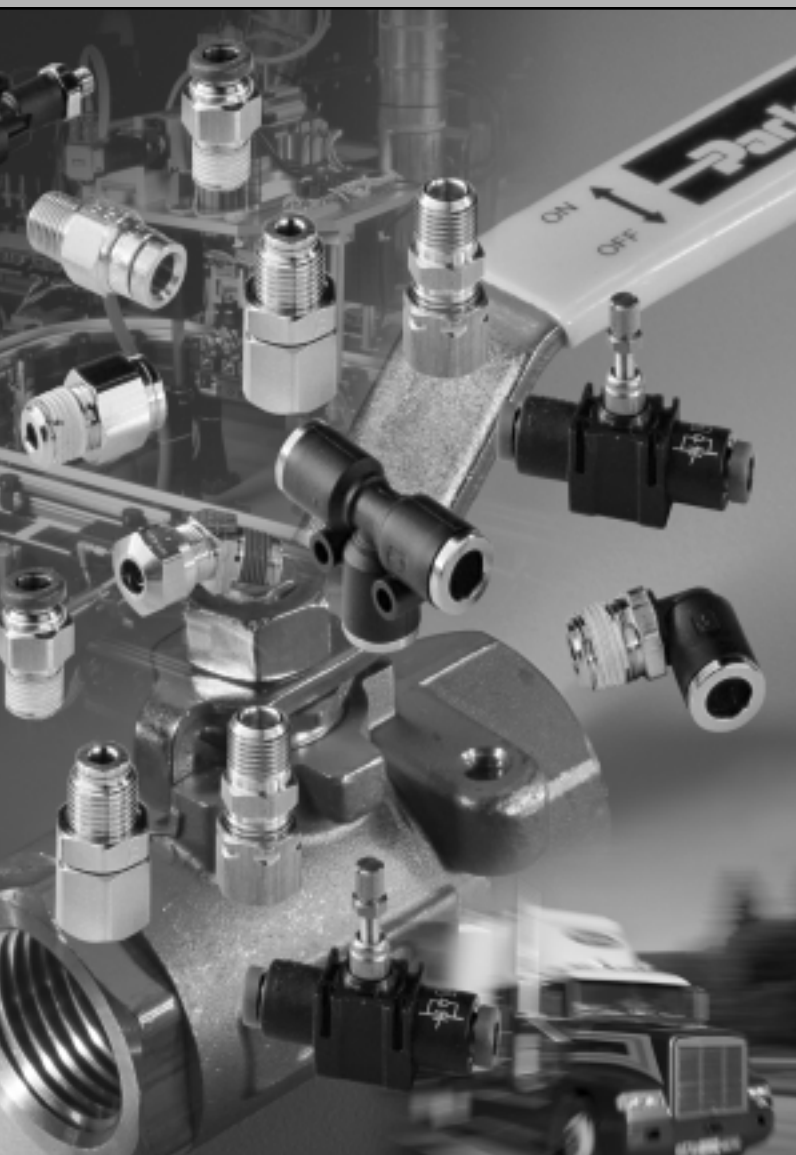
**Beaded Hose Barb 45° Elbow Tube to Male Pipe 279HB**

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





Compression Style Transportation



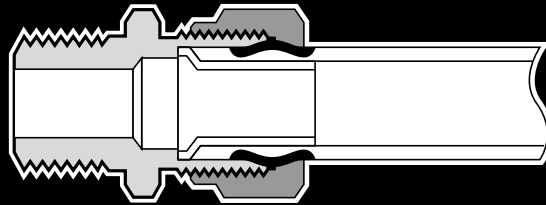
Air Brake-NTA® Fittings	G4
Transmission Fittings	G11
Air Brake-AB Fittings	G13
Air Brake Hose Ends	G18
Vibra-Lok Fittings	G22

The World Standard

G

61NTA Nut  Page G6	61TF Nut  Page G12	61RB Nut  Page G20	61RBSG Spring Guard Nut  Page G20	67RBSG Nut & Spring  Page G20	61VL Nut  Page G24	60AB Sleeve  Page G14
60NTA Sleeve  Page G6	60TF Sleeve  Page G12	60RB Sleeve  Page G20	60VL Sleeve  Page G24	60VLV Viton Sleeve  Page G24	56RBSG Spring  Page G20	63NTA Tube Support  Page G6

G



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.

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.

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

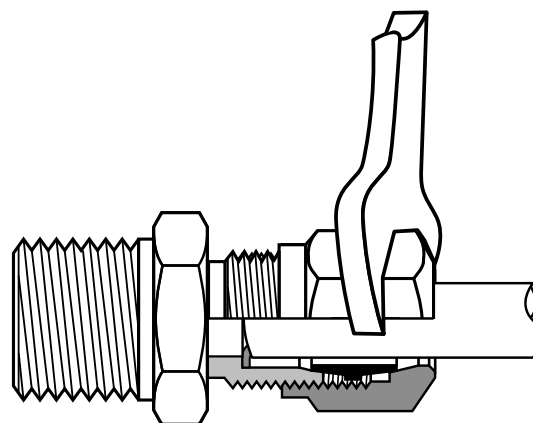
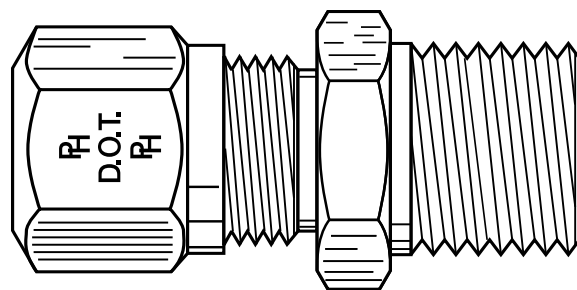
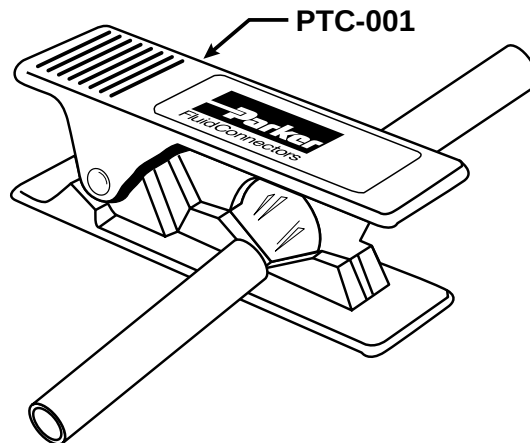
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

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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
1/4	3
3/8 & 1/2	4
5/8 & 3/4	3-1/2

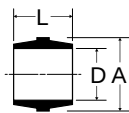
**G**

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

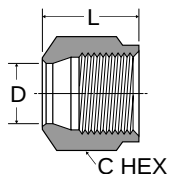
*Meets D.O.T. FMVSS 571.106 specification. No applicable SAE specification for this tube size.

**Nut 61NTA**

Ref. SAE 100110

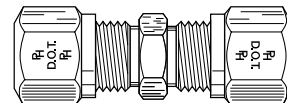
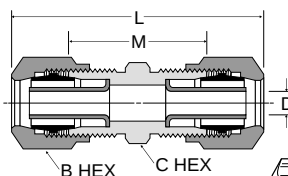
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
61NTA-3*	3/16	5/16-24	7/16	.194	.40
61NTA-4	1/4	7/16-24	9/16	.256	.45
61NTA-6	3/8	17/32-24	5/8	.384	.63
61NTA-8	1/2	11/16-20	13/16	.509	.72
61NTA-10	5/8	13/16-18	15/16	.634	.77
61NTA-12	3/4	1-18	1-1/8	.762	.81

*Meets D.O.T. FMVSS 571.106 specification. No applicable SAE specification for this tube size.

**Union 62NTA**

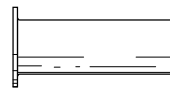
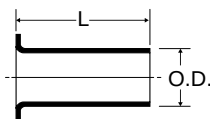
Ref. SAE 100101 BA

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	2.33	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**

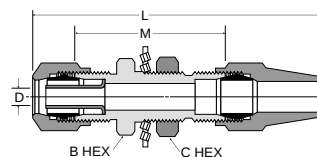
(For SAE J844 Tubing)

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

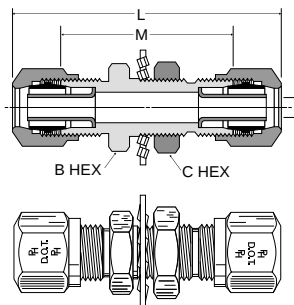


Bulkhead Union 62NBH

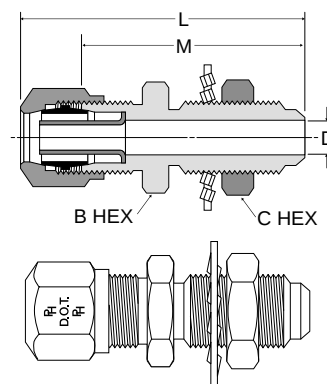
PART NO.	TUBE SIZE	STRAIGHT THREAD	B HEX	C HEX	L	M	FLOW DIA. D	BULKHEAD HOLE DIA.
62NBH-3*	3/16	5/16-24	7/16	7/16	1.80	1.21	.087	5/16
62NBH-4	1/4	7/16-24	9/16	9/16	2.04	1.38	.137	7/16
62NBH-6	3/8	17/32-24	11/16	3/4	2.54	1.62	.217	17/32
62NBH-8	1/2	11/16-20	13/16	1	2.92	1.88	.338	11/16
62NBH-10	5/8	13/16-18	15/16	1	3.04	2.02	.398	13/16

*Meets D.O.T. FMVSS 571.106 specifications.

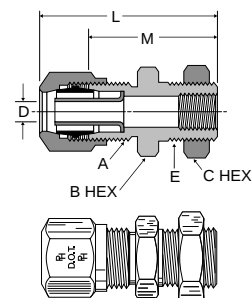
No applicable SAE specification for this tube size.

**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

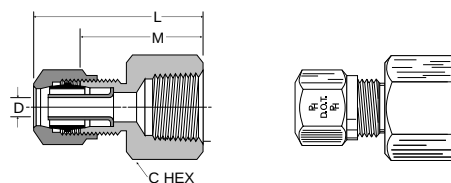
**Bulkhead Union 66NBH**

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

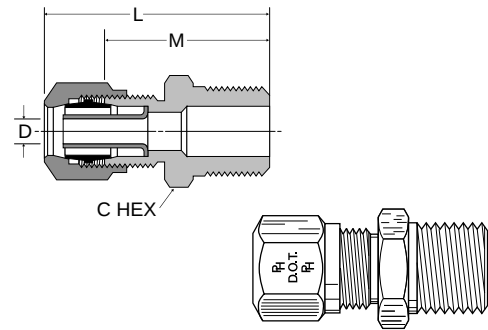


Male Connector VS68NTA

Ref. SAE 100102 BA

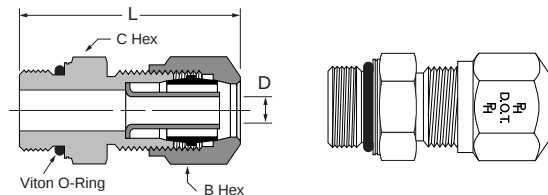
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
VS68NTA-3-1*	3/16	1/16	5/16-24	3/8	1.16	.87	.087
VS68NTA-3-2*	3/16	1/8	5/16-24	7/16	1.15	.86	.087
VS68NTA-3-4*	3/16	1/4	5/16-24	9/16	1.35	1.05	.087
VS68NTA-4-2	1/4	1/8	7/16-24	7/16	1.22	.89	.137
VS68NTA-4-4	1/4	1/4	7/16-24	9/16	1.43	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.

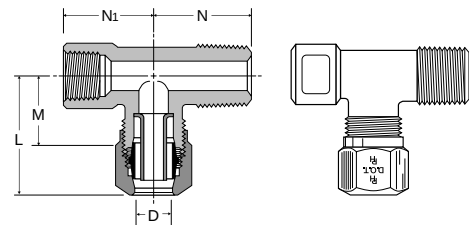
**NTA to Metric Adaptor 68NTA-X-MIX**

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: Viton o-ring is standard

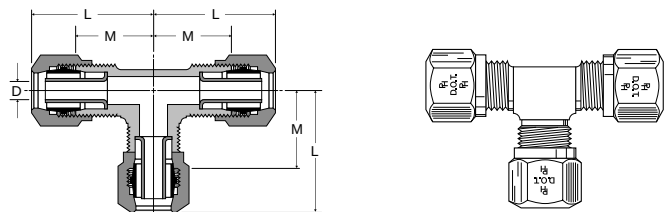
**Adapter Tee VS176NTA**

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

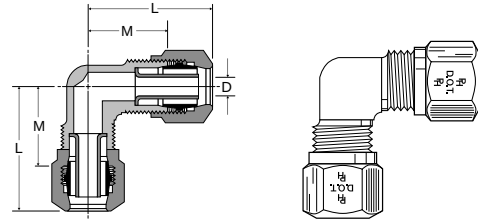
PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
264NTA-4	1/4	7/16-24	.95	.62	.137
264NTA-6	3/8	17/32-24	1.24	.78	.217
264NTA-8	1/2	11/16-20	1.45	.93	.338
264NTA-10	5/8	13/16-18	1.58	1.09	.398



Union Elbow 265NTA

Ref. SAE 100201 BA

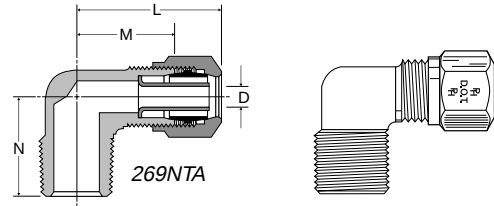
PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
265NTA-4	1/4	7/16-24	.95	.62	.137
265NTA-6	3/8	17/32-24	1.25	.79	.217
265NTA-8	1/2	11/16-20	1.45	.93	.338
265NTA-10	5/8	13/16-18	1.58	1.09	.398

**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

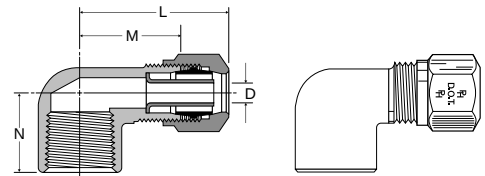
*Meets D.O.T. FMVSS 571.106 specifications. No applicable SAE specification for this tube size.

**Female Elbow 270NTA**

Ref. SAE 100203 BA

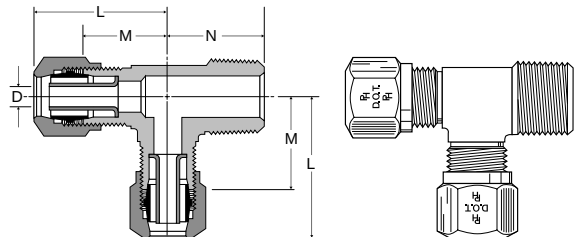
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
270NTA-3-2*	3/16	1/8	5/16-24	.96	.67	.52	.087
270NTA-4-2	1/4	1/8	7/16-24	1.02	.69	.52	.137
270NTA-4-4	1/4	1/4	7/16-24	1.11	.78	.71	.137
270NTA-6-2	3/8	1/8	17/32-24	1.29	.83	.59	.217
270NTA-6-4	3/8	1/4	17/32-24	1.35	.89	.77	.217
270NTA-6-6	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

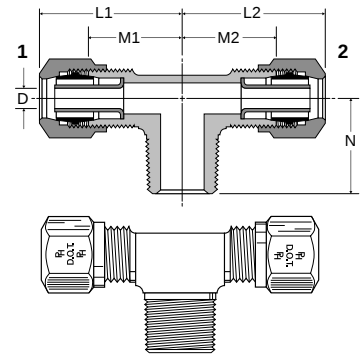


Male Branch Tee VS272NTA

Ref. SAE 100425 BA

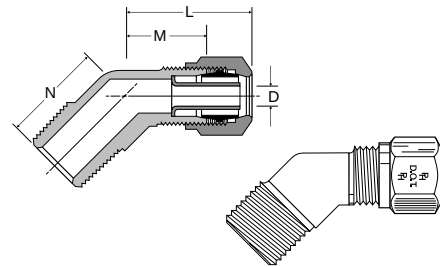
PART NO.	TUBE 1	TUBE 2	PIPE THREAD	STRAIGHT THREAD	L1	L2	M1	M2	N	FLOW DIA. D
VS272NTA-3-2*	3/16	3/16	1/8	7/16-24	.90	.90	.61	.61	.66	.087
VS272NTA-4-2	1/4	1/4	1/8	7/16-24	.95	.95	.62	.62	.66	.137
VS272NTA-4-4	1/4	1/4	1/4	7/16-24	1.00	1.00	.68	.68	.87	.137
VS272NTA-6-2	3/8	3/8	1/8	17/32-24	1.18	1.18	.72	.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

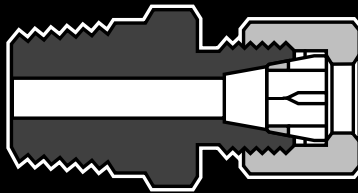
*Meets D.O.T. FMVSS 571.106 specifications. No applicable SAE specification for this tube size.

**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

**G**



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.

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.

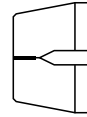
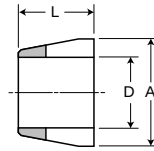
Pricing

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.

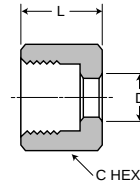
G

Sleeve 60TF

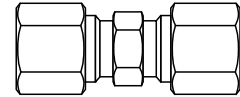
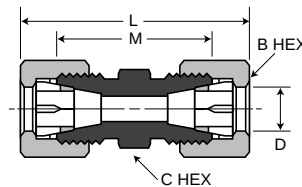
PART NO.	TUBE SIZE	A	D	L
60TF-2	1/8	.235	.130	0.17
60TF-5/32	5/32	.251	.165	0.18

**Nut 61TF**

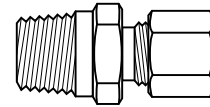
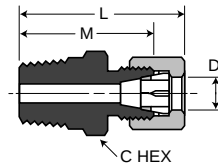
PART NO.	TUBE SIZE	D	L	STRT THD	C HEX
61TF-2	1/8	.133	.32	5/16-24	3/8
61TF-5/32	5/32	.163	.32	5/16-24	3/8

**Union 62TF**

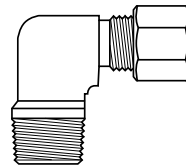
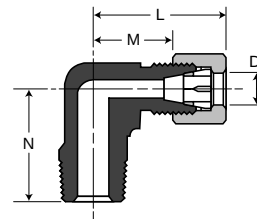
PART NO.	TUBE SIZE	D	L	STRT THD	M	C HEX	B HEX
62TF-2	1/8	0.109	1.04	5/16-24	.68	5/16	3/8
62TF-5/32	5/32	0.068	1.04	5/16-24	.68	5/16	3/8

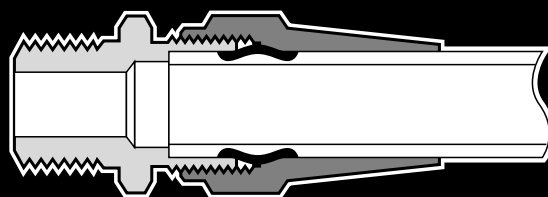
**Male Connector 68TF**

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

**G**



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) and SAE 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.

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:

VS 68 AB -10 -8
 Locite Vibra Seal® 516
 Male Connector
 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

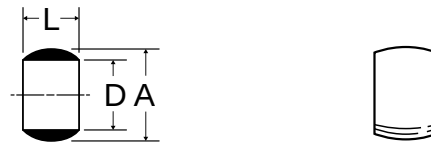
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

G

Sleeve 60AB

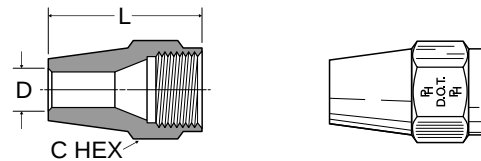
Ref. SAE 120115

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
60AB-16	1	1.152	1.008	.626

**Nut 61AB**

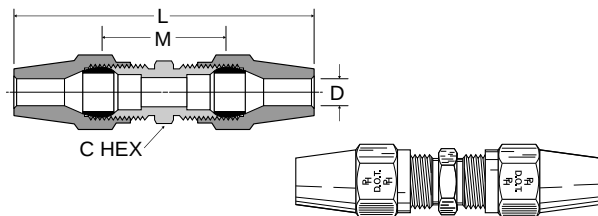
Ref. SAE 120111

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
61AB-16	1	1-1/4-16	1-3/8	1.010	1.69

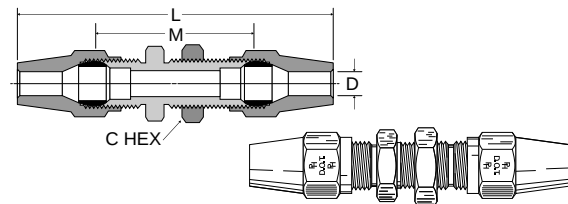
**Union 62AB**

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

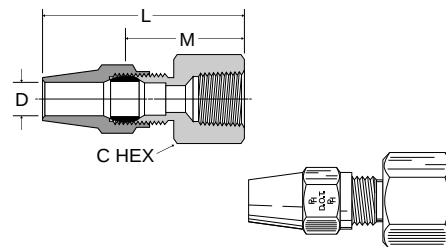
**Bulkhead Union 62ABH**

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

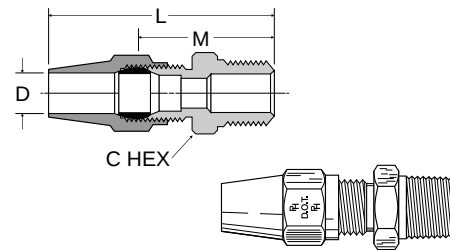
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
66AB-4-2	1/4	1/8	7/16-24	9/16	1.42	.84	.188
66AB-4-4	1/4	1/4	7/16-24	11/16	1.65	1.07	.188
66AB-6-2	3/8	1/8	17/32-24	9/16	1.89	1.00	.314
66AB-6-4	3/8	1/4	17/32-24	11/16	2.07	1.18	.314
66AB-6-6	3/8	3/8	17/32-24	7/8	2.07	1.18	.314
66AB-8-6	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



Male Connector VS68AB

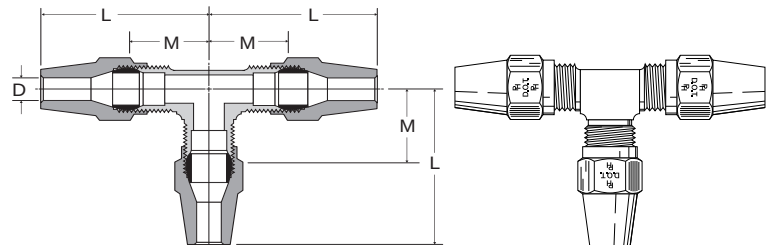
Ref. SAE 120102 BA

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
VS68AB-16-12	1	3/4	1-1/4-16	1-1/4	3.20	1.81	.750

**Union Tee 264AB**

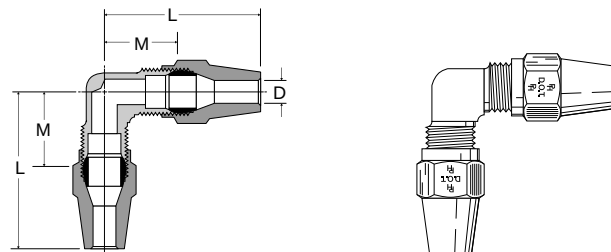
Ref. SAE 120401 BA

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**

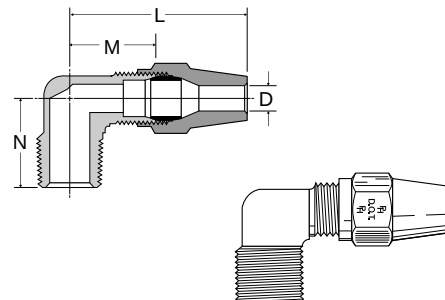
Ref. SAE 120201 BA

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

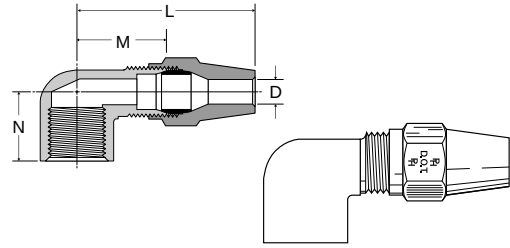
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
VS269AB-4-2	1/4	1/8	7/16-24	1.20	.62	.66	.189
VS269AB-4-4	1/4	1/4	7/16-24	1.26	.68	.87	.189
VS269AB-4-6	1/4	3/8	7/16-24	1.31	.73	.86	.189
VS269AB-6-2	3/8	1/8	17/32-24	1.62	.73	.75	.189
VS269AB-6-4	3/8	1/4	17/32-24	1.68	.79	.92	.314
VS269AB-6-6	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



Female Elbow 270AB

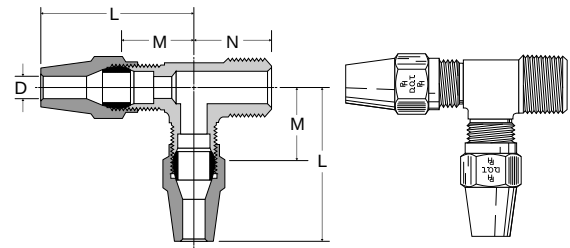
Ref. SAE 120203 BA

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**

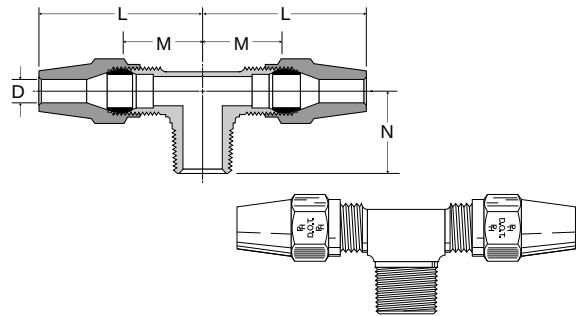
Ref. SAE 120424 BA

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**

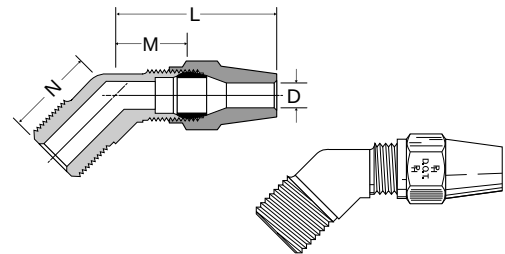
Ref. SAE 120425 BA

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

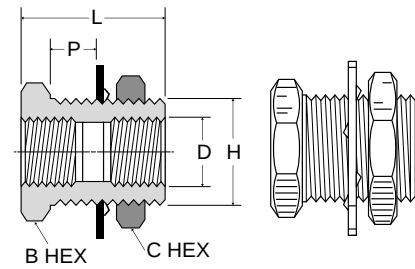
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
VS279AB-4-2	1/4	1/8	7/16-24	1.07	.49	.63	.189
VS279AB-4-4	1/4	1/4	7/16-24	1.18	.60	.85	.189
VS279AB-6-2	3/8	1/8	17/32-24	1.60	.71	.68	.189
VS279AB-6-4	3/8	1/4	17/32-24	1.64	.71	.85	.314
VS279AB-6-6	3/8	3/8	17/32-24	1.64	.75	.94	.314
VS279AB-6-8	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

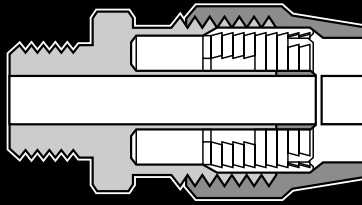


Anchor Coupling 207ACBH

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	.80	7/8	15/16	1.50	5/8	.328
207ACBHS-2	1/8	5/8-18	.35	7/8	15/16	.96	5/8	.328
207ACBH-4	1/4	3/4-16	.75	1	1-1/8	1.50	3/4	.422
207ACBHS-4	1/4	3/4-16	.19	1	1	.94	3/4	.422
207ACBH-6	3/8	1-14	.50	1-1/8	1-1/4	1.31	1	.562
207ACBH-8	1/2	1-1/8-14	.67	1-1/4	1-3/8	1.50	1-1/8	.688
207ACBH-12	3/4	1-5/16-12	.65	1-1/2	1-1/2	1.50	1-5/16	.890
207ACBH-16*	1	1-5/8-14	1.00	2	2	1.68	1-5/8	1.140

*Lock Washer not Available

**G**



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.

Working pressure ranges

Up to 125 PSI

Temperature ranges

-40°F to +120°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

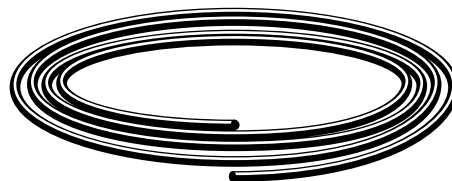
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

G

Parker 273

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.
273-6	-6	3/8	.750	900	225	1.75	.204
273-8	-8	1/2	.875	900	225	2.00	.252

**Construction**

Tube - Synthetic rubber. Reinforcement - One or more fabric braids or spirals. Cover - Abrasion, oil and age resistant synthetic rubber.

Identification

Stratoflex, part number, and appropriate SAE and DOT markings.

Application

Air brake systems.

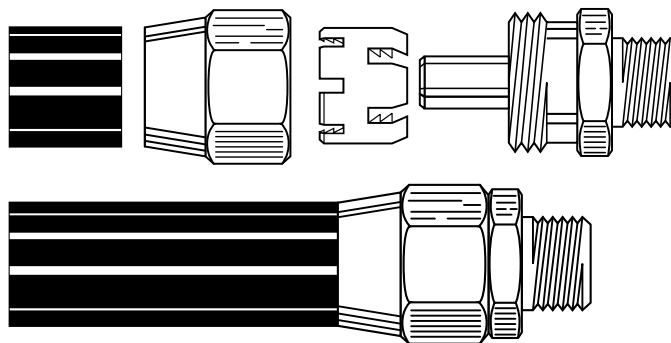
Temperature range

-40°F thru +200°F (-40°C thru +93°C)

Assembly instructions

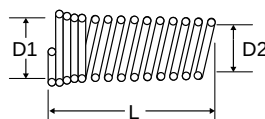
1. Slide nut onto hose.
2. Slide sleeve onto hose with tapered edge toward fitting body (see example).
3. Bottom hose into fitting.
4. Tighten nut until it contacts body hex.

Note: When reassembling fitting, body and nut should be inspected. Only reuse if parts are in proper condition. Sleeves should never be reused.

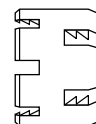
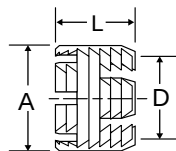
**G**

Spring 56RBSG

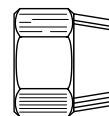
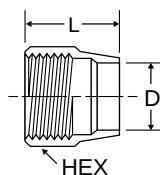
PART NO.	HOSE SIZE	L	D1	D2
56RBSG-6	3/8	2.75	.84	.78
56RBSG-8	1/2	3.00	1.03	.91

**Sleeve 60RB**

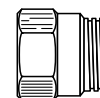
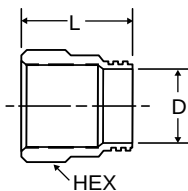
PART NO.	HOSE SIZE	L	A	D
60RB-6	3/8	.69	.90	.78
60RB-8	1/2	.69	1.03	.92

**Nut 61RB**

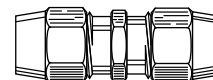
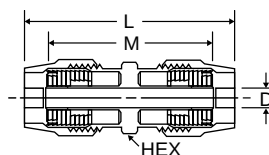
PART NO.	HOSE SIZE	STRAIGHT THREAD	HEX	L	D
61RB-6	3/8	31/32-20	1-1/16	1.12	.80
61RB-8	1/2	1-3/32-20	1-1/4	1.12	.93

**Spring Guard Nut 61RBSG**

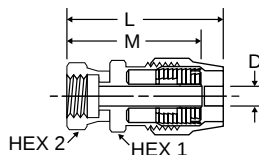
PART NO.	HOSE SIZE	STRAIGHT THREAD	HEX	L	D
61RBSG-6	3/8	31/32-20	1-1/16	1.22	.80
61RBSG-8	1/2	1-3/32-20	1-1/4	1.19	.92

**Union 62RB**

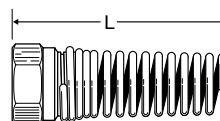
PART NO.	HOSE SIZE	STRAIGHT THREAD	HEX	L	M	D
62RB-6	3/8	31/32-20	31/32	2.98	2.56	.281
62RB-8	1/2	1-3/32-20	1-1/8	2.99	2.55	.390

**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**

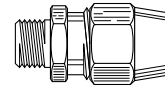
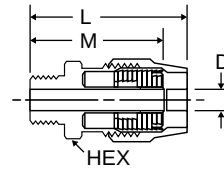
PART NO.	L
67RBSG-6	3.50
67RBSG-8	3.75



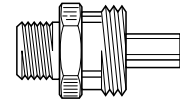
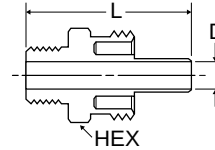
G

Male Connector 68RB

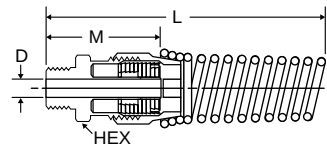
PART NO.	HOSE SIZE	STRAIGHT THREAD	PIPE THREAD	HEX	L	M	D
68RB-6-4	3/8	31/32-20	1/4	31/32	2.24	1.91	.281
68RB-6-6	3/8	31/32-20	3/8	31/32	2.24	1.91	.281
68RB-6-8	3/8	31/32-20	1/2	31/32	2.38	2.06	.281
68RB-8-6	1/2	1-3/32-20	3/8	1-1/8	2.24	1.91	.390
68RB-8-8	1/2	1-3/32-20	1/2	1-1/8	2.29	2.07	.390

**Male Connector Body Only 68RB**

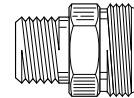
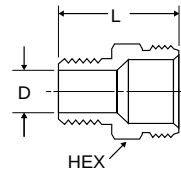
PART NO.	HOSE SIZE	STRAIGHT THREAD	PIPE THREAD	HEX	L	D
68RB-6-4B	3/8	31/32-20	1/4	31/32	1.91	.281
68RB-6-6B	3/8	31/32-20	3/8	31/32	1.91	.281
68RB-6-8B	3/8	31/32-20	1/2	31/32	2.06	.281
68RB-8-6B	1/2	1-3/32-20	3/8	1-1/8	1.91	.390
68RB-8-8B	1/2	1-3/32-20	1/2	1-1/8	2.07	.390

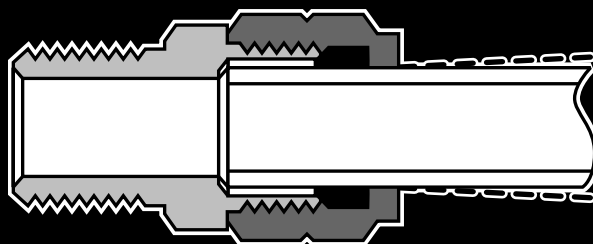
**Male Connector with Spring Guard 68RBSG**

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

**G****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	1.18	.44
76RB-7/8-8	1/2	7/8-20	7/8	1.37	.50





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.

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.

Viton® 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 Viton® 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.

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.

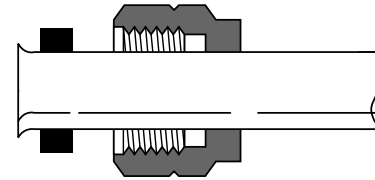
Assembly Instructions for Higher Pressure Applications

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.

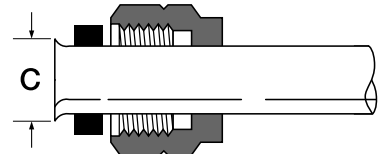
Pressure Chart

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

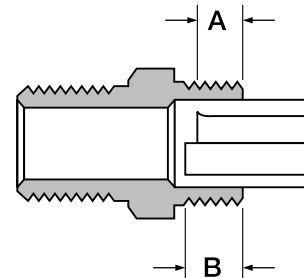
Sleeve Position**Recommended Size of Bell**

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**

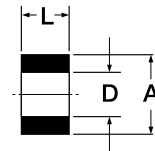
This table shows distance tube extends beyond face of Vibra-Lok fitting body on installation with bell on tubing and without bell on tubing.

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 should be belled
3/4"	3/16"	
7/8"	1/4"	

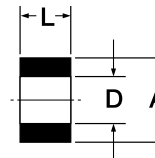
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Sleeve 60VL

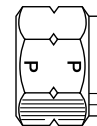
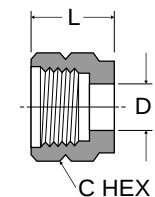
PART NO.	TUBE SIZE	A	D	L
60VL-2	1/8	.306	.100	.20
60VL-3	3/16	.359	.156	.20
60VL-4	1/4	.422	.219	.21
60VL-5	5/16	.484	.281	.24
60VL-6	3/8	.547	.344	.25
60VL-8	1/2	.688	.469	.36
60VL-10	5/8	.875	.594	.48
60VL-12	3/4	1.000	.720	.59

**Sleeve (Viton®) 60VLV**

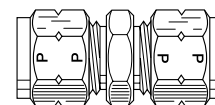
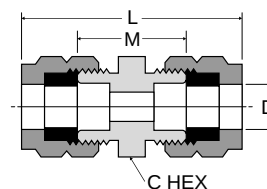
PART NO.	TUBE SIZE	A	D	L
60VLV-3	3/16	.359	.156	.20
60VLV-4	1/4	.422	.219	.21
60VLV-5	5/16	.484	.281	.24
60VLV-6	3/8	.547	.344	.25
60VLV-8	1/2	.688	.469	.36
60VLV-10	5/8	.875	.594	.48
60VLV-12	3/4	1.000	.720	.59

**Nut 61VL**

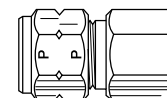
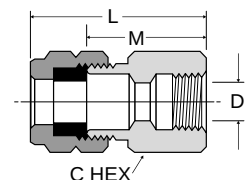
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
61VL-2	1/8	3/8-24	7/16	.156	.44
61VL-3	3/16	7/16-24	1/2	.218	.47
61VL-4	1/4	1/2-24	9/16	.281	.50
61VL-5	5/16	9/16-24	5/8	.344	.53
61VL-6	3/8	5/8-24	3/4	.406	.53
61VL-8	1/2	13/16-18	15/16	.531	.67
61VL-10	5/8	1-18	1-1/8	.656	.88
61VL-12	3/4	1-1/8-18	1-1/4	.781	.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

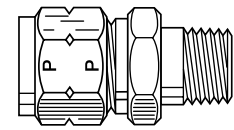
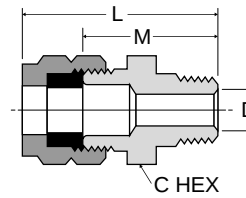
**Female Connector 66VL**

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

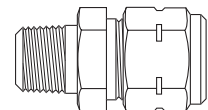
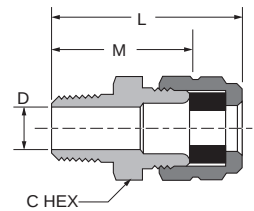


Male Connector 68VL

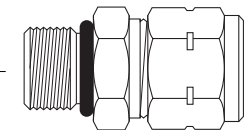
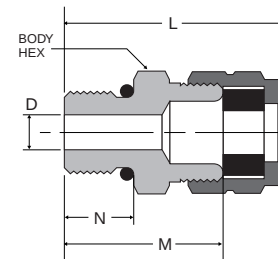
PART NO.	TUBE SIZE	PIPE THREAD	C HEX	L	M	FLOW DIA.D
68VL-2-2	1/8	1/8	7/16	1.12	.81	.093
68VL-3-2	3/16	1/8	1/2	1.10	.81	.125
68VL-4-2	1/4	1/8	9/16	1.15	.84	.188
68VL-4-4	1/4	1/4	9/16	1.34	1.03	.188
68VL-5-4	5/16	1/4	5/8	1.41	1.06	.250
68VL-6-2	3/8	1/8	11/16	1.22	.87	.235
68VL-6-4	3/8	1/4	11/16	1.41	1.06	.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**

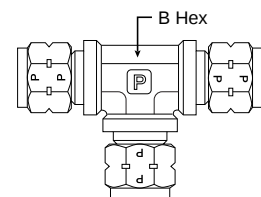
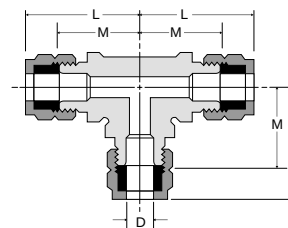
PART NO.	TUBE SIZE	PIPE THREAD	C HEX	L	M	FLOW DIA.D
682VL-4-2	1/4	1/8	9/16	1.15	.84	.265
682VL-4-4	1/4	1/4	9/16	1.34	1.03	.265
682VL-5-4	5/16	1/4	5/8	1.41	1.06	.328
682VL-6-6	3/8	3/8	11/16	1.41	1.06	.406

**Male Connector 685VLV**

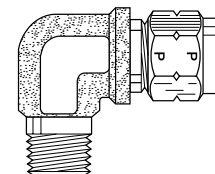
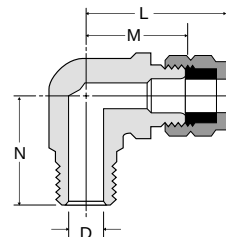
PART NO.	TUBE SIZE	STRAIGHT THREAD	BODY HEX	L	M	N	D
685VLV-4-4	1/4	7/16-20	9/16	1.14	.83	.36	.18
685VLV-5-4	5/16	7/16-20	5/8	1.18	.83	.36	.18
685VLV-6-4	3/8	7/16-20	11/16	1.18	.83	.36	.18
685VLV-6-6	3/8	9/16-18	11/16	1.25	.90	.39	.30
685VLV-8-8	1/2	3/4-16	7/8	1.52	1.04	.44	.39
685VLV-10-10	5/8	7/8-14	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

**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

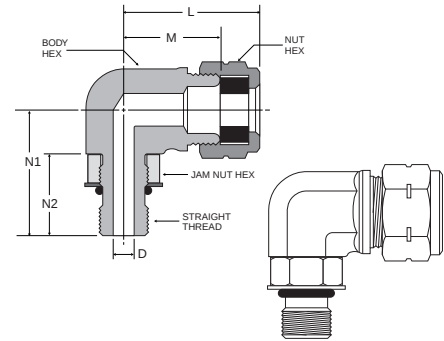
**Male Elbow 169VL**

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

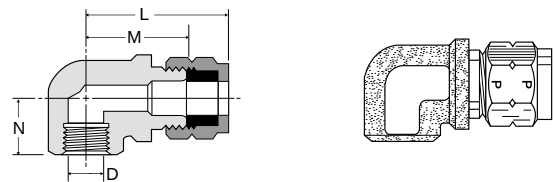


Male Elbow 1695VLV

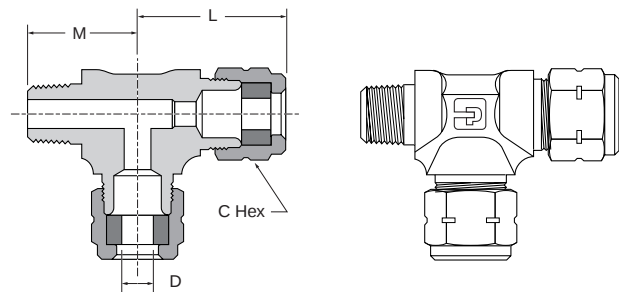
PART NO.	TUBE SIZE	STRAIGHT THREAD	NUT HEX	BODY HEX	JAM NUT HEX	L	M	N1	N2	D
1695VLV-4-4	1/4	7/16-20	9/16	9/16	9/16	1.15	.84	1.07	.71	.18
1695VLV-5-4	5/16	7/16-20	5/8	9/16	9/16	1.16	.81	1.07	.71	.18
1695VLV-6-4	3/8	7/16-20	3/4	5/8	9/16	1.19	.84	1.10	.71	.18
1695VLV-6-6	3/8	9/16-18	3/4	5/8	11/16	1.29	.94	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

**Female Elbow 170VL**

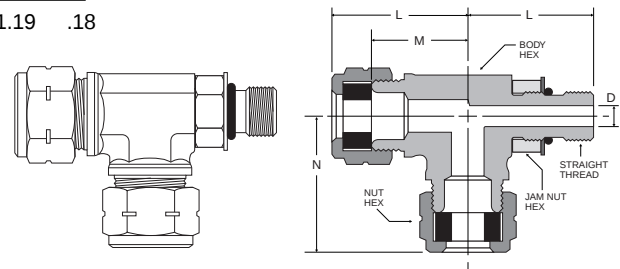
PART NO.	TUBE SIZE	PIPE THREAD	L	M	N	FLOW DIA.D
170VL-4-2	1/4	1/8	.96	.65	.50	.188
170VL-5-4	5/16	1/4	1.16	.81	.70	.250

**Male Run Tee 171VL**

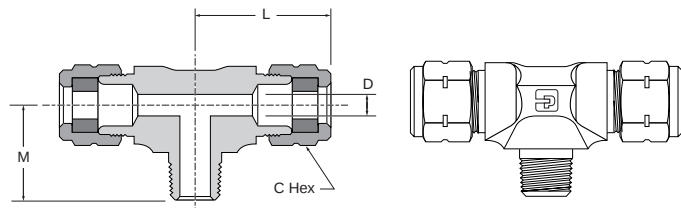
PART NO.	TUBE SIZE	PIPE THREAD	C HEX	L	M	FLOW DIA.D
171VL-4-2	1/4	1/8	9/16	1.03	.76	.188
171VL-4-4	1/4	1/4	9/16	1.12	1.03	.188

**Male Run Tee 1715VLV**

PART NO.	TUBE SIZE	STRAIGHT THREAD	NUT HEX	BODY HEX	JAM NUT HEX	L	M	N	D
1715VLV-4-4	1/4	7/16-20	9/16	1/2	9/16	2.30	.88	1.19	.18

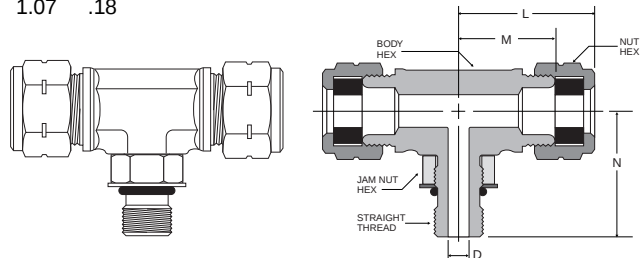
**Male Run Tee 172VL**

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

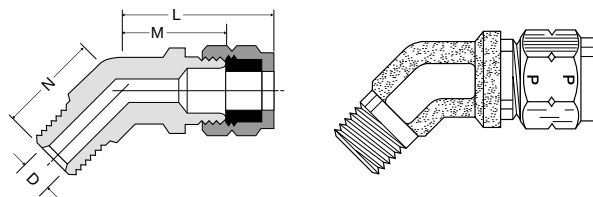


Male Branch Tee 1725VLV

PART NO.	TUBE SIZE	STRAIGHT THREAD	NUT HEX	BODY HEX	JAM NUT HEX	L	M	N	D
1725VLV-4-4	1/4	7/16-20	9/16	1/2	9/16	2.39	.88	1.07	.18

**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

**G**

Notes

Notes section with horizontal lines for writing.

G



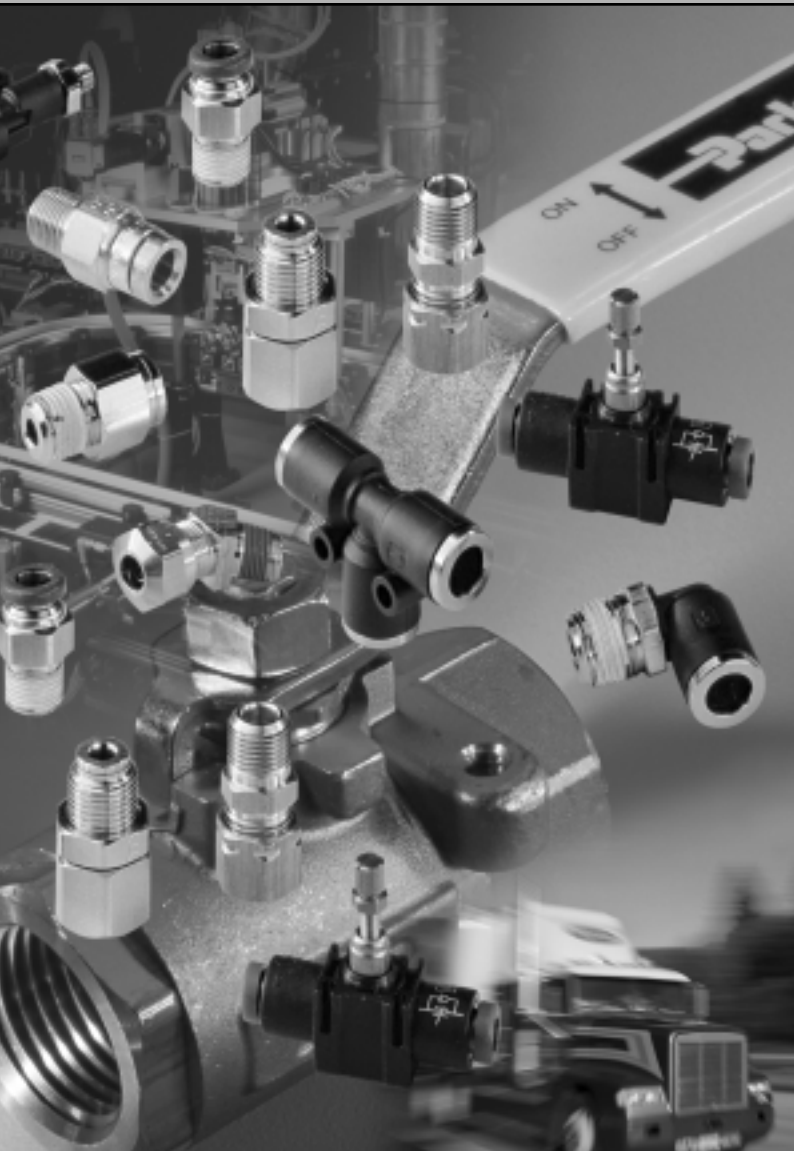
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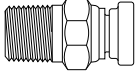
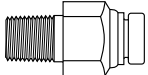
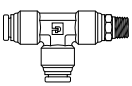
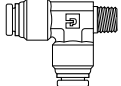
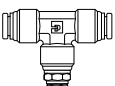
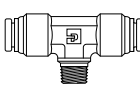
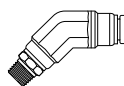
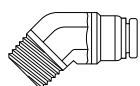
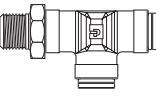
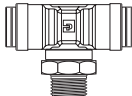
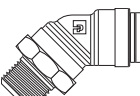
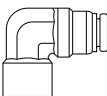
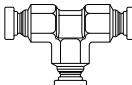
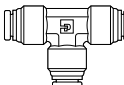
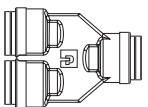
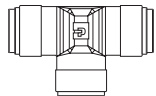
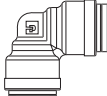
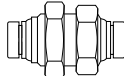
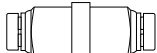
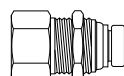
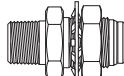
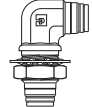
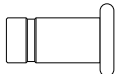


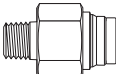
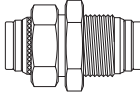
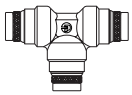
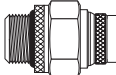
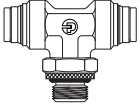
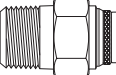
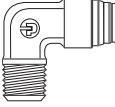
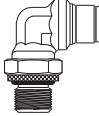
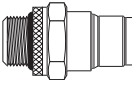
Push to Connect Transportation



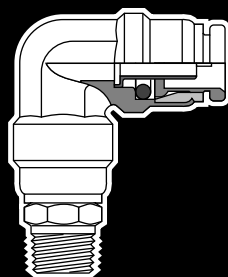
Prestomatic Air Brake Push-In Fittings	H4
PTC Composite Push-In Air Brake Fitting	H13
Metric Prestomatic	H17

The World Standard

H	Tube to Male NPT	68PM Male Connector  Page H7	68PMT Male Connector  Page H8	169PMNS Male Elbow  Page H9	169PMT Male Elbow Swivel  Page H9	169PMTL Male Elbow Long  Page H9	169PMTNS Male Elbow  Page H10
	171PMT Run Tee Swivel  Page H11	171PMTNS Male Run Tee  Page H11	172PMT Branch Tee Swivel  Page H11	172PMTNS Branch Tee  Page H12	179PMT 45° Elbow Swivel  Page H12	179PMTNS 45° Elbow  Page H12	189PMT Dual Port Elbow  Page H12
	369PTC Male Elbow Swivel 90°  Page H14	371PTC Male Run Tee Swivel  Page H15	372PTC Male Branch Tee Swivel  Page H16	379 PTC Male Elbow Swivel 45°  Page H16			
	Tube to Female NPT	66PMT Female Connector  Page H7	170PMT Female Elbow Swivel  Page H10	170PMTNS Female Elbow Swivel  Page H11	370PTC Female Elbow Swivel 90°  Page H14		
	Tube to Tube	62PM Union  Page H6	62PMT Union  Page H7	164PM Union Tee  Page H8	164PMT Union Tee  Page H8	165PMT Union Elbow  Page H9	32PTC Union  Page H14
	362PTC Union Y  Page H14	364PTC Union Tee  Page H15	365PTC Union Elbow  Page H15				
	Bulkhead Unions	62PMTBH Bulkhead Union  Page H7	62PMTBHR Bulkhead Union  Page H6	66PMTBH Bulkhead Female  Page H7	68PMTBH Bulkhead Male  Page H8	165PMTBH Bulkhead Elbow  Page H9	169PMTBH Bulkhead Male Elbow  Page H10
	Auxiliary	ERHD External Retainer  Page H6	ES External Seal  Page H6	639PM/639PMT Plug  Page H12			

Metric Tube to Male NPT	F2PMTB Male Connector  Page H18	C2PMTB Male Elbow  Page H19	Metric Tube to Metric Tube	HPMTB Metric Union  Page H18	WPMTB Bulkhead Union  Page H18	JPMTB Metric Union Tee  Page H19
Metric Tube to Metric Straight Thread	F8UPMTB Male Connector  Page H19	C8UPMTB Male Elbow  Page H20	S8UPMTB Branch Tee  Page H20	V8UPMTB 45° Male Elbow  Page H20		
Metric Tube to Male BSPT	F3PMTB Male Connector  Page H18	C3PMTB Male Elbow  Page H19				
Tube to Metric Thread	169PMTNS-X-M Male Elbow  Page H10	68PMTNS-X-M Male Connector  Page H8				

H



Prestomatic Air Brake Push-In Fittings

Advantages

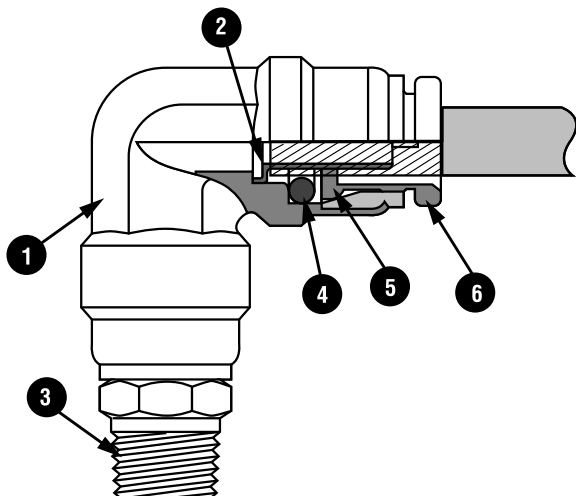
Patented design of sizes 5/32" and above meet SAE J2494 and D.O.T. FMVSS 571.106 air brake performance specifications. No special tools are needed to assemble. Just bottom the tubing in the fitting body for a positive seal. Stainless steel tube support in sizes 1/4" and above assures maximum flow and performance requirements of SAE J1131. 1/8" Prestomatic[†] 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 swivel or rigid dryseal pipe threads. Swivels are designed for alignment purposes only.
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 1/4" and above has a stainless steel tube support and is designated with a "PMT" suffix. The Prestomatic series in sizes 1/8", 5/32", and 3/16" does not have a tube support and is designated with a "PM" 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

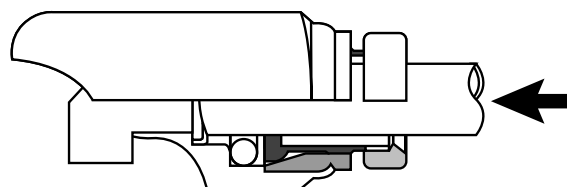
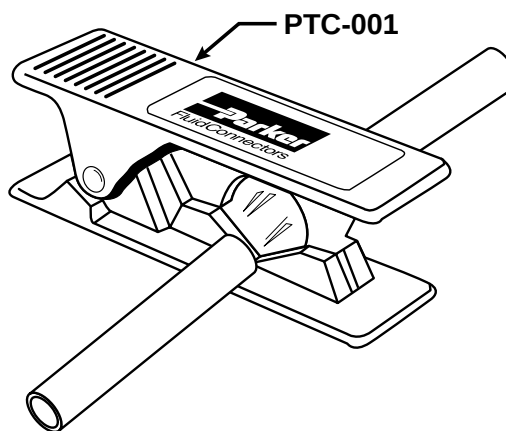
Only items priced in current supplementary price list PL3501 are carried in stock. Price and delivery for non-stock items furnished on request for specified quantity.

[†] U.S. Patent No. 5,683,120

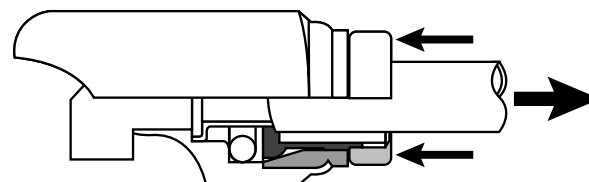
Assembly Instructions

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 J1131 a stainless steel 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

Tubing Nomenclature

*P F T - 4 A - G R N - 1 0 0 0

HOSE OR
TUBING SIZE
4A 6B 8B 10B

COLOR
GRN
BLU
BLK
YEL
ORG
RED
ETC.

LENGTH
(FEET)

*Order from Parker Parflex Division

[†] U.S. Patent No. 5,683,120

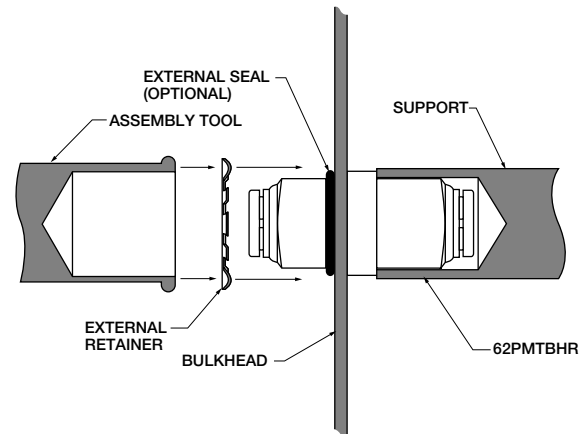
Prestomatic[†] Retaining Ring Bulkhead Unions

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.

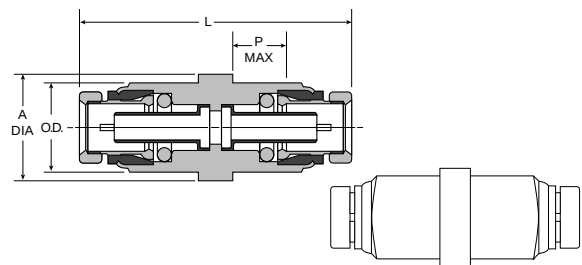
The retaining ring bulkhead unions feature a smaller envelope size than standard bulkhead union connectors and do not require a wrench to mount or assemble in cramped areas.

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.

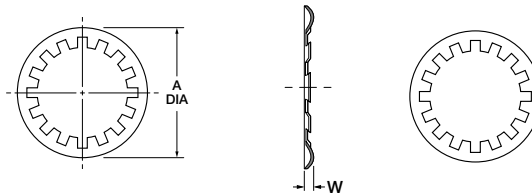
**Retaining Ring Bulkhead 62PMTBHR**

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***

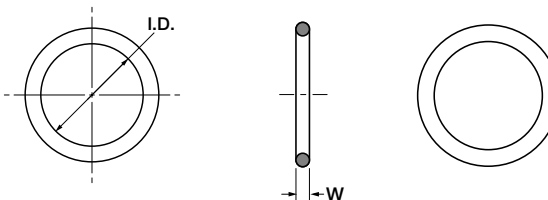
PART NUMBER	TUBE SIZE	BULKHEAD UNION O.D.	A DIA	W
ERHD-50	1/4	.500	.83	.05
ERHD-75	3/8	.750	1.08	.05
ERHD-87	1/2	.875	1.20	.05
ERHD-100	5/8	1.000	1.33	.05

*Material Carbon Spring Steel

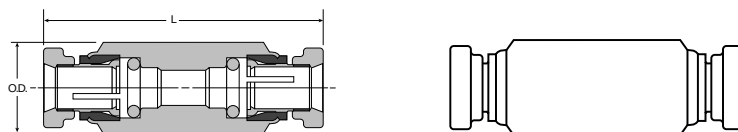
**External Seal ES***

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
ES-100	5/8	1.000	.989	.07

*Material is Nitrite (Buna N), 70 Durometer

**Union 62PM**

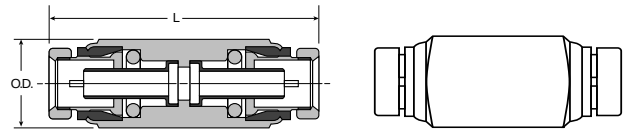
PART NO.	TUBE SIZE	L	O.D.
62PM-2	1/8	1.60	0.406
62PM-5/32	5/32	1.60	0.406
62PM-3	3/16	1.35	0.440



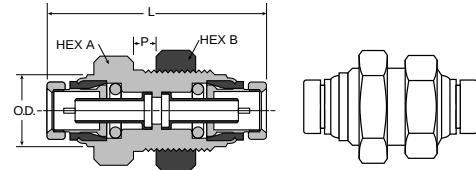
[†] U.S. Patent No. 5,683,120

Union 62PMT

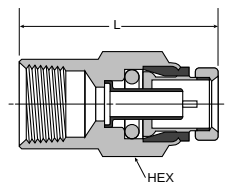
PART NO.	TUBE SIZE	L	O.D.
62PMT-4	1/4	1.48	.50
62PMT-4-2	1/4-1/8	1.48	.50
62PMT-6	3/8	1.87	.75
62PMT-6-4	3/8-1/4	1.68	.75
62PMT-8	1/2	2.03	.88
62PMT-10	5/8	2.42	1.00

**Bulkhead Union 62PMTBH**

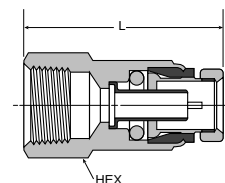
PART NO.	TUBE SIZE	O.D.	L	P MAX	HEX A	HEX B	BULKHEAD HOLE DIA.
62PMTBH-4	1/4	.56	1.69	.25	11/16	3/4	9/16
62PMTBH-6	3/8	.88	1.93	.44	1-1/16	1-1/16	7/8
62PMTBH-8	1/2	1.00	2.02	.58	1-1/4	1-1/4	1
62PMTBH-10	5/8	1.12	2.92	.81	1-1/4	1-3/8	1-1/8

**Female Connector 66PMT**

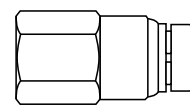
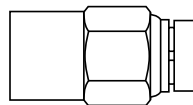
PART NO.	TUBE SIZE	PIPE THREAD	L	HEX
66PMT-4-2	1/4	1/8	1.22	9/16
66PMT-4-4	1/4	1/4	1.43	11/16
66PMT-6-2	3/8	1/8	1.37	3/4
66PMT-6-4	3/8	1/4	1.58	3/4
66PMT-6-6	3/8	3/8	1.62	13/16
66PMT-8-4	1/2	1/4	1.69	7/8
66PMT-8-6	1/2	3/8	1.68	7/8
66PMT-8-8	1/2	1/2	1.91	1



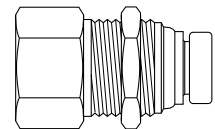
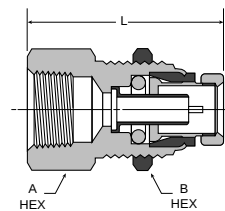
66PMT



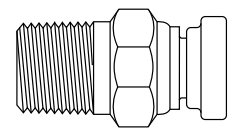
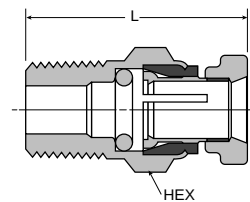
66-4-X PMT

**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

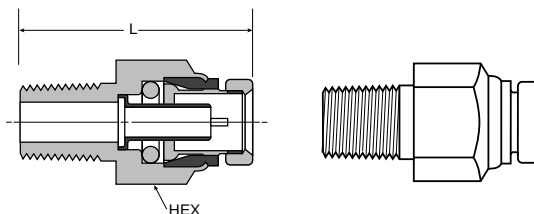
**Male Connector 68PM**

PART NO.	TUBE SIZE	PIPE THREAD	HEX	L
68PM-2-1	1/8	1/16	3/8	.93
68PM-2-2	1/8	1/8	7/16	.88
68PM-5/32-1	5/32	1/16	3/8	.95
68PM-5/32-2	5/32	1/8	7/16	.74
68PM-5/32-4	5/32	1/4	9/16	.99
68PM-3-1	3/16	1/16	7/16	.95
68PM-3-2	3/16	1/8	7/16	.92
68PM-3-4	3/16	1/4	9/16	1.10

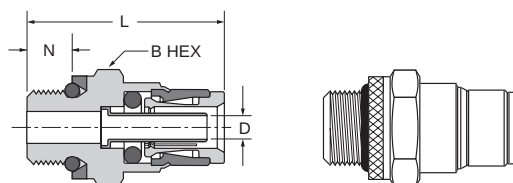
[†] U.S. Patent No. 5,683,120

Male Connector 68PMT

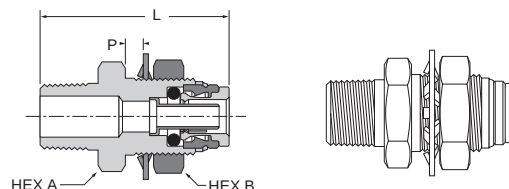
PART NO.	TUBE SIZE	PIPE THREAD	L	HEX
68PMT-4-2	1/4	1/8	1.06	1/2
68PMT-4-4	1/4	1/4	1.19	9/16
68PMT-4-6	1/4	3/8	1.27	3/4
68PMT-6-2	3/8	1/8	1.37	3/4
68PMT-6-4	3/8	1/4	1.43	3/4
68PMT-6-6	3/8	3/8	1.33	3/4
68PMT-6-8	3/8	1/2	1.38	7/8
68PMT-8-4	1/2	1/4	1.72	7/8
68PMT-8-6	1/2	3/8	1.52	7/8
68PMT-8-8	1/2	1/2	1.44	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

**Male Connector to Metric Adapter 68PMT-X-M**

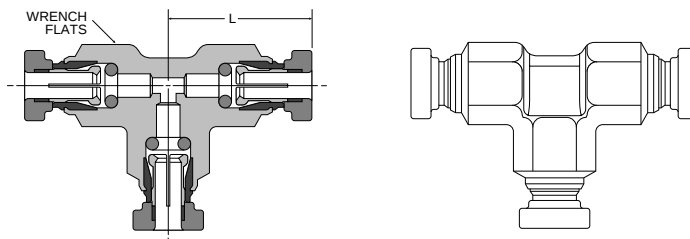
PART NO.	TUBE SIZE	METRIC THREAD	L	B HEX	N
68PMT-4-M12	1/4	M12X1.5	1.19	11/16	.29
68PMT-4-M16	1/4	M16X1.5	1.29	7/8	.39
68PMT-6-M12	3/8	M12X1.5	1.40	3/4	.29
68PMT-6-M16	3/8	M16X1.5	1.35	7/8	.39
68PMT-8-M12	1/2	M12X1.5	1.45	7/8	.29
68PMT-8-M16	1/2	M16X1.5	1.52	7/8	.39
68PMT-8-M22	1/2	M22X1.5	1.31	1 1/16	.37
68PMT-10-M16	5/8	M16X1.5	1.78	1	.39

**Bulkhead Male Connector 68PMTBH**

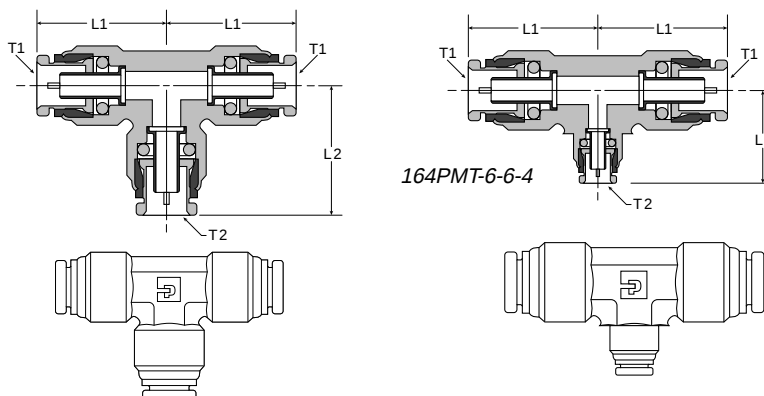
PART NO.	TUBE SIZE	PIPE THREAD	L	P MAX	HEX A	HEX B	BULKHEAD HOLE DIA.
68PMTBH-6-8	3/8	1/2	2.37	.33	1-1/4	1-1/4	1
68PMTBH-8-8	1/2	1/2	2.38	.33	1-1/4	1-1/4	1

**Union Tee 164PM**

PART NO.	TUBE SIZE	L	WRENCH FLATS
164PM-2	1/8	.81	.42
164PM-5/32	5/32	.71	.42

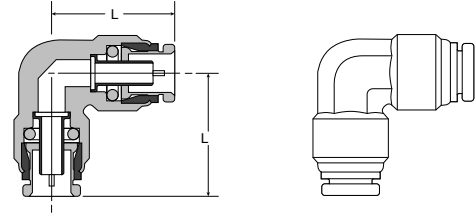
**Union Tee 164PMT**

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-6-6-5/32	3/8	5/32	1.22	.83
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

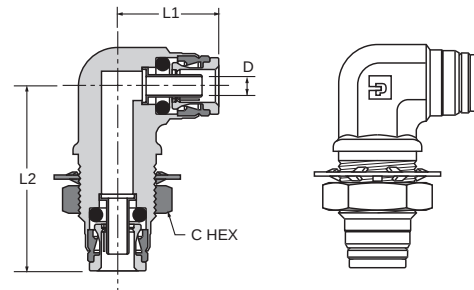
[†] U.S. Patent No. 5,683,120

Union Elbow 165PMT

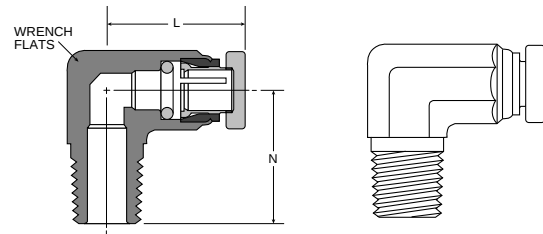
PART NO.	TUBE SIZE	L
165PMT-4	1/4	.85
165PMT-6	3/8	1.11
165PMT-8	1/2	1.24
165PMT-10	5/8	1.57

**Union Bulkhead Elbow 165PMTBH**

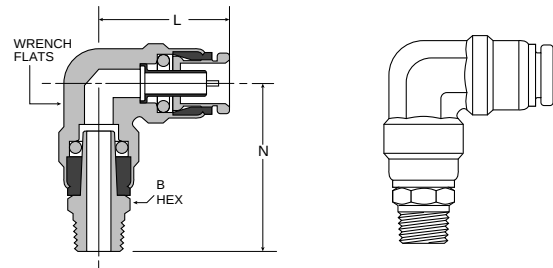
PART NO.	TUBE SIZE	L1	L2	C HEX	FLOW DIA. D	BULKHEAD HOLE DIA.
165PMTBH-8	1/2	1.29	2.45	1 1/4	.34	1

**Male Elbow Non-Swivel 169PMNS**

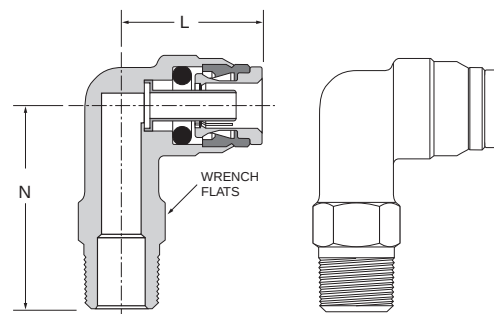
PART NO.	TUBE SIZE	PIPE THREAD	L	N	WRENCH FLATS
169PMNS-2-2	1/8	1/8	.86	.68	3/8
169PMNS-5/32-2	5/32	1/8	.88	.68	3/8
169PMNS-3-2	3/16	1/8	.75	.67	3/8
169PMNS-3-4	3/16	1/4	.74	.93	1/2

**Male Elbow Swivel 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

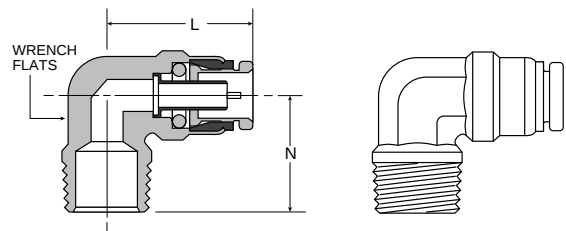
**Male Elbow Long Non-Swivel 90° 169PMTL**

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

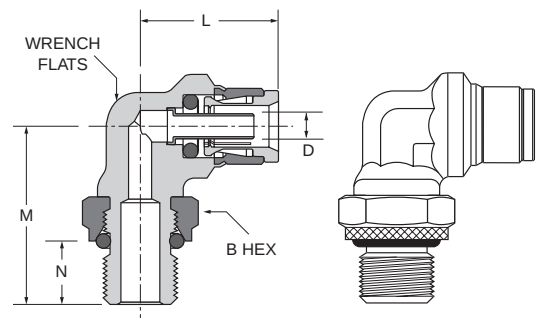
[†] U.S. Patent No. 5,683,120

Male Elbow Non-Swivel 90° 169PMTNS

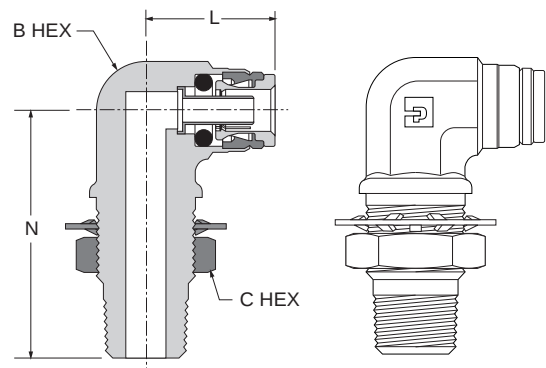
PART NO.	TUBE SIZE	PIPE THREAD	L	N	WRENCH FLATS
169PMTNS-4-2	1/4	1/8	.84	.72	1/2
169PMTNS-4-4	1/4	1/4	.84	.90	1/2
169PMTNS-4-6	1/4	3/8	.84	1.06	1/2
169PMTNS-6-2	3/8	1/8	1.05	.75	9/16
169PMTNS-6-4	3/8	1/4	1.05	.94	9/16
169PMTNS-6-6	3/8	3/8	1.05	.94	3/4
169PMTNS-6-8	3/8	1/2	1.12	1.26	11/16
169PMTNS-8-4	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 Non-Swivel to Metric Adapter 169PMTNS-X-M**

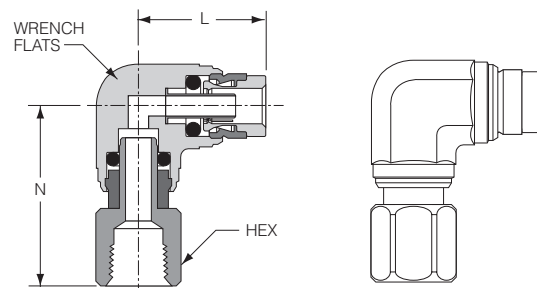
PART NO.	TUBE SIZE	METRIC THREAD	WRENCH FLATS (MM)	B HEX (MM)	L	M	N
169PMTNS-4-M12	1/4	M12X1.5	10	17	.84	1.11	.37
169PMTNS-4-M16	1/4	M16X1.5	11	24	.96	1.27	.41
169PMTNS-4-M22	1/4	M22X1.5	16	30	1.09	1.53	.41
169PMTNS-6-M16	3/8	M16X1.5	19	24	1.23	1.27	.41
169PMTNS-8-M12	1/2	M12X1.5	16	17	1.21	1.31	.37
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

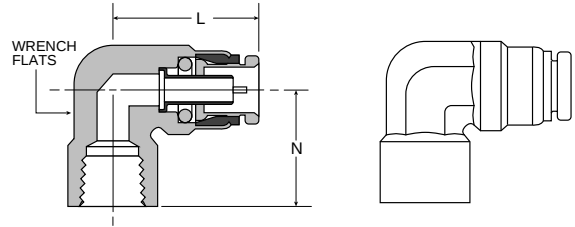
**Female Elbow Swivel 90° 170PMT**

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

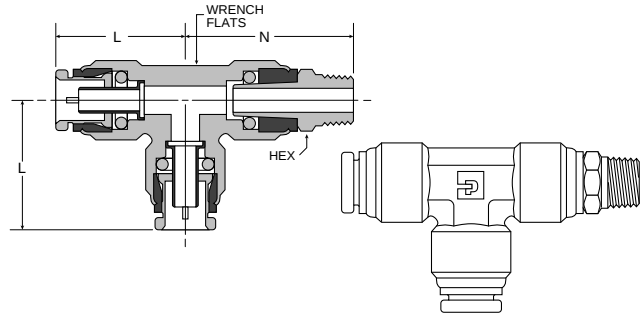
[†] U.S. Patent No. 5,683,120

Female Elbow Non-Swivel 90° 170PMTNS

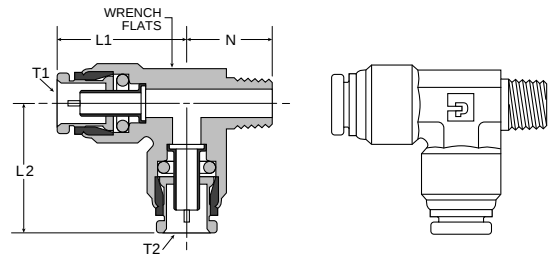
PART NO.	TUBE SIZE	PIPE THREAD	L	N	WRENCH FLATS
170PMTNS-4-2	1/4	1/8	.84	.56	11/16
170PMTNS-4-4	1/4	1/4	1.00	.67	11/16
170PMTNS-6-2	3/8	1/8	1.12	.64	9/16
170PMTNS-6-4	3/8	1/4	1.25	1.00	11/16
170PMTNS-6-6	3/8	3/8	1.25	1.00	13/16
170PMTNS-8-4	1/2	1/4	1.25	.75	11/16
170PMTNS-8-6	1/2	3/8	1.32	.88	11/16
170PMTNS-8-8	1/2	1/2	1.70	.98	1

**Male Run Tee Swivel 171PMT**

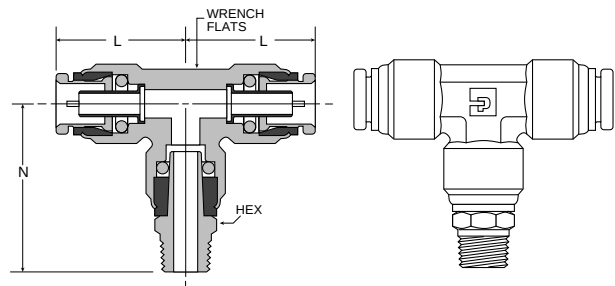
PART NO.	TUBE SIZE	PIPE THREAD	L	N	HEX	WRENCH FLATS
171PMT-4-2	1/4	1/8	.85	1.25	7/16	1/2
171PMT-4-4	1/4	1/4	.85	1.48	9/16	1/2
171PMT-4-6	1/4	3/8	.85	1.43	11/16	1/2
171PMT-6-4	3/8	1/4	1.21	1.83	9/16	5/8
171PMT-6-6	3/8	3/8	1.21	1.83	11/16	5/8
171PMT-8-4	1/2	1/4	1.27	1.74	5/8	7/8
171PMT-8-6	1/2	3/8	1.27	1.83	3/4	7/8
171PMT-8-8	1/2	1/2	1.27	1.99	7/8	7/8

**Male Run Tee Non-Swivel 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

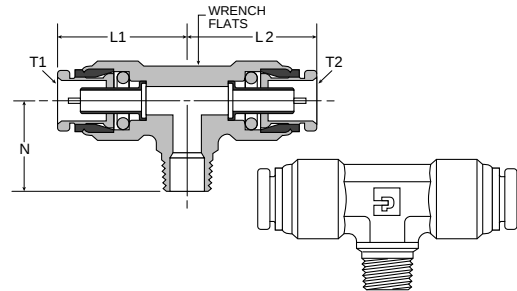
**Male Branch Tee Swivel 172PMT**

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

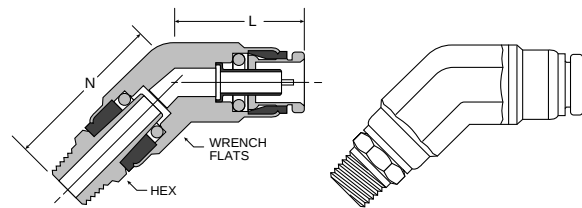
[†] U.S. Patent No. 5,683,120

Male Branch Tee Non-Swivel 172PMTNS

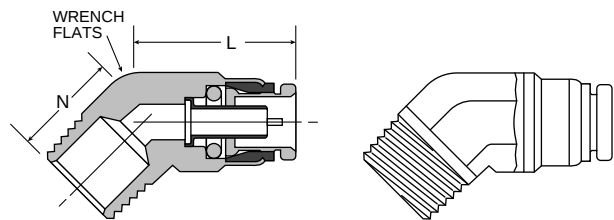
PART NO.	TUBE 1 SIZE	TUBE 2 SIZE	PIPE THREAD	L1	L2	N	WRENCH FLATS
172PMTNS-4-2	1/4	1/4	1/8	.91	.91	.78	1/2
172PMTNS-6-4	3/8	3/8	1/4	1.21	1.21	.97	5/8
172PMTNS-6-4-4	3/8	1/4	1/4	1.21	.93	.97	5/8
172PMTNS-6-6	3/8	3/8	3/8	1.21	1.21	.97	5/8
172PMTNS-6-8	3/8	3/8	1/2	1.17	1.17	1.26	7/8
172PMTNS-8-6	1/2	1/2	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**

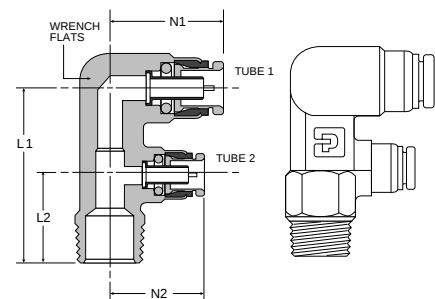
PART NO.	TUBE SIZE	PIPE THREAD	L	N	HEX	WRENCH FLATS
179PMT-4-2	1/4	1/8	.79	1.16	7/16	9/16
179PMT-4-4	1/4	1/4	.89	1.46	9/16	9/16
179PMT-6-2	3/8	1/8	.99	1.44	5/8	3/4
179PMT-6-4	3/8	1/4	.99	1.61	5/8	3/4
179PMT-6-6	3/8	3/8	.99	1.61	5/8	3/4
179PMT-8-4	1/2	1/4	1.20	1.70	5/8	7/8
179PMT-8-6	1/2	3/8	1.20	1.78	3/4	7/8
179PMT-8-8	1/2	1/2	1.20	1.93	7/8	7/8

**Male Elbow Non-Swivel 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	1 1/16
179PMTNS-10-8	5/8	1/2	1.22	1.00	1 1/16
179PMTNS-12-8	3/4	1/2	1.41	1.25	1 5/16

**Dual port 90° male elbow non-swivel 189PMT**

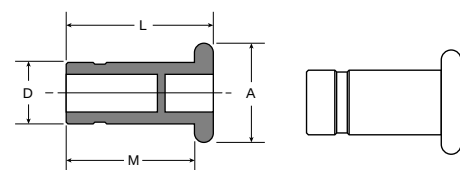
PART NO.	TUBE 1 SIZE	TUBE 2 SIZE	PIPE THREAD	L1	L2	N1	N2	WRENCH FLATS
189PMT4-4-4	1/4	1/4	1/4	1.91	.89	.95	.95	5/8
189PMT6-4-6	3/8	1/4	3/8	2.38	1.00	1.19	1.12	3/4
189PMT10-4-6	5/8	1/4	3/8	2.38	1.00	1.28	1.12	3/4
189PMT10-6-6	5/8	3/8	3/8	2.38	1.00	1.26	1.18	3/4

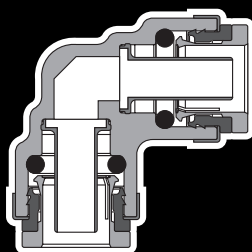
**Push-To-Connect Fitting Plug 639PM/639PMT**

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, SAE J1131 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. Staked-in Stainless Steel 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.

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

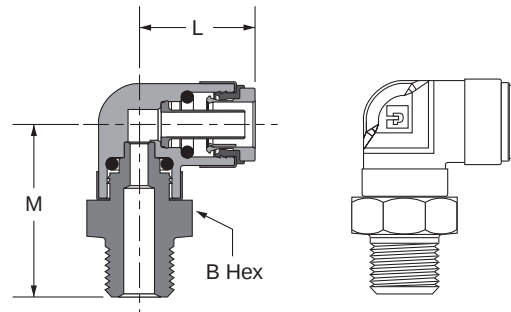
Special Fittings

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.

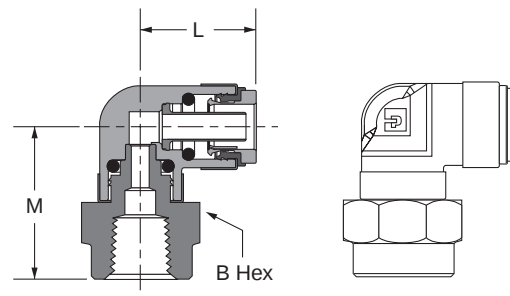
H

Male Elbow Swivel 90° 369PTC

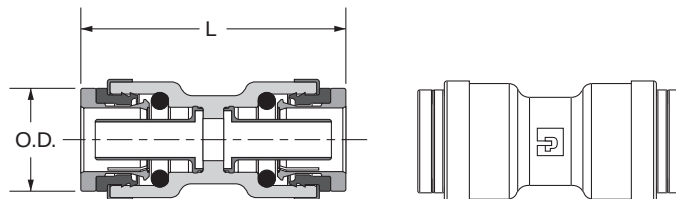
PART NO.	TUBE SIZE	PIPE THREAD	B HEX	L	M
369PTC-4-2	1/4	1/8	9/16	.69	1.05
369PTC-4-4	1/4	1/4	9/16	.69	1.20
369PTC-4-6	1/4	3/8	3/4	.69	1.20
369PTC-4-8	1/4	1/2	7/8	1.10	1.47
369PTC-6-2	3/8	1/8	3/4	.99	1.13
369PTC-6-4	3/8	1/4	3/4	.99	1.28
369PTC-6-6	3/8	3/8	3/4	.99	1.28
369PTC-6-8	3/8	1/2	7/8	.99	1.47
369PTC-8-4	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**

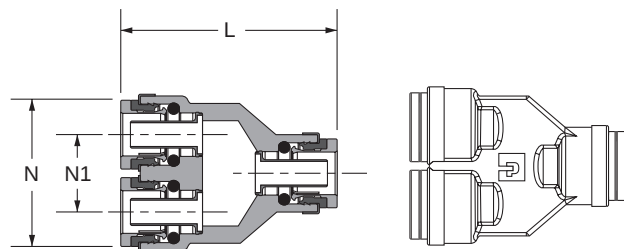
PART NO.	TUBE SIZE	PIPE THREAD	B HEX	L	M
370PTC-4-2	1/4	1/8	5/8	.69	.89
370PTC-4-4	1/4	1/4	3/4	.69	1.05
370PTC-6-2	3/8	1/8	3/4	.99	.90
370PTC-6-4	3/8	1/4	3/4	.99	1.13
370PTC-6-6	3/8	3/8	13/16	.99	1.19
370PTC-8-6	1/2	3/8	15/16	1.11	1.30
370PTC-8-8	1/2	1/2	1-1/16	1.11	1.49
370PTC-10-8	5/8	1/2	1-1/16	1.33	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

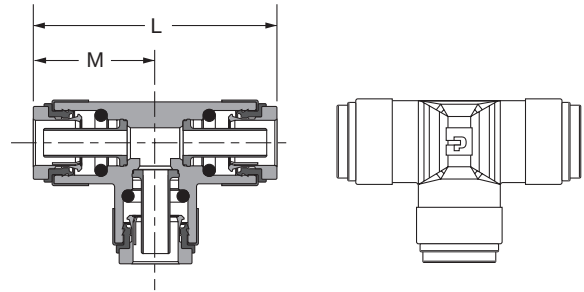
**Union Y 362PTC**

PART NO.	TUBE SIZE	L	N	N1
362PTC-6	3/8	1.99	1.41	.68

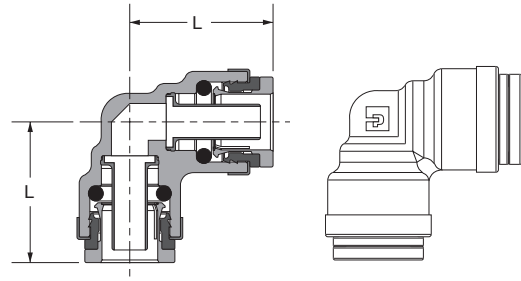


Union Tee 364PTC

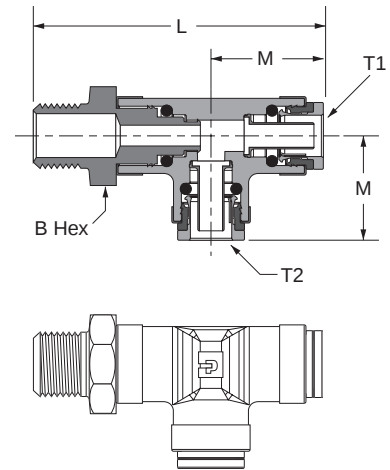
PART NO.	TUBE SIZE	L	M
364PTC-4	1/4	1.42	.71
364PTC-6	3/8	1.99	.99
364PTC-8	1/2	2.25	1.13
364PTC-10	5/8	2.82	1.41

**Union Elbow 365PTC**

PART NO.	TUBE SIZE	L
365PTC-6	3/8	.99
365PTC-8	1/2	1.11

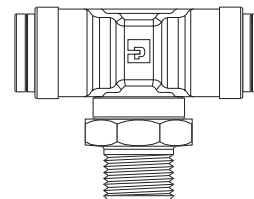
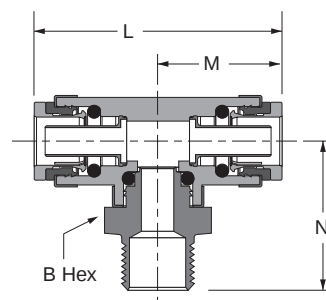
**Male Run Tee Swivel 371PTC**

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

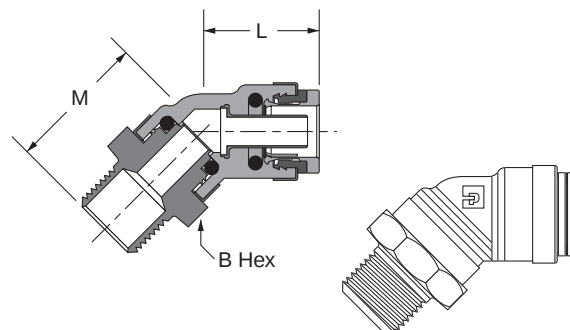
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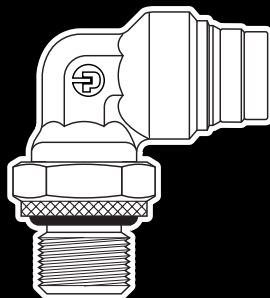
Male Branch Tee Swivel 372PTC

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
372PTC-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

**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

**H**



Metric Prestomatic Air Brake Push-In Fittings

Advantages

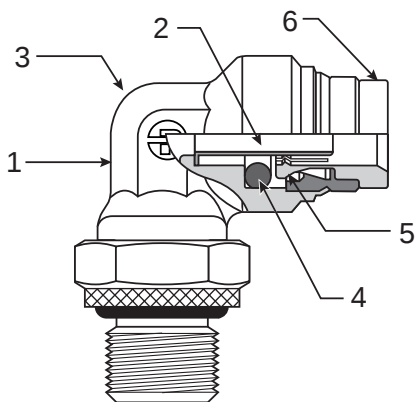
Patented design of sizes 6mm and above meet DIN 74324 and D.O.T. FMVSS 571.106 air brake performance specifications. No special tools are needed to assemble. Just bottom the tubing in the fitting body for a positive seal.

Application

Use with DIN 73378 virgin nylon or SAE J1394 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 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.
- **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
Straight Male Connector	_____	_____	_____	_____	_____	_____
Metric Parallel	_____	_____	_____	_____	_____	_____
Universal Stud	_____	_____	_____	_____	_____	_____
Air Brake Push-In Fitting—Brass Body	_____	_____	_____	_____	_____	_____
8mm Tube Size	_____	_____	_____	_____	_____	_____
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.

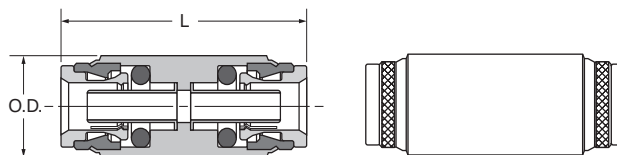
Pricing

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.

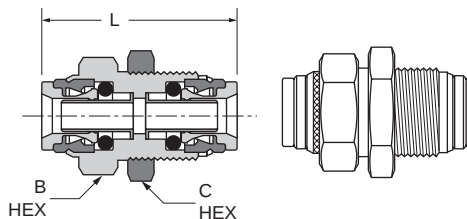
H

Union HPMTB

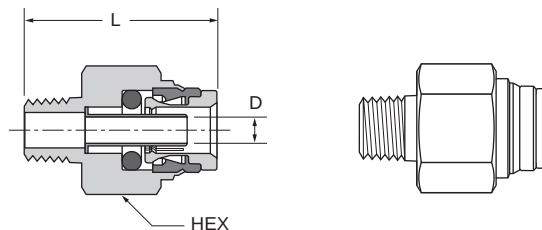
PART NO.	TUBE SIZE (mm)	L (mm)	O.D. (mm)
HPMTB6	6	45.2	15.9
HPMTB8	8	45.3	17.5
HPMTB10	10	51.7	22.2
HPMTB12	12	51.7	22.2

**Male Bulkhead Union WPMTB**

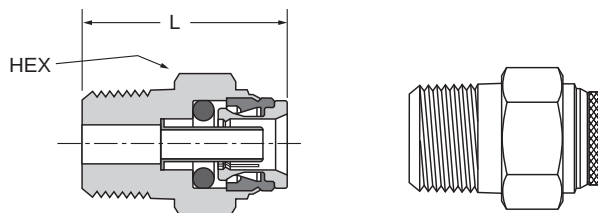
PART NO.	TUBE SIZE (MM)	METRIC THREAD	L (MM)	B HEX (MM)	C HEX (MM)	BULKHEAD HOLE DIA. (MM)
WPMTB6	6	M20X1.5	47.5	22	24	20
WPMTB8	8	M20X1.5	47.2	22	24	20
WPMTB10	10	M22X1.5	52.3	27	27	22
WPMTB12	12	M24X1.5	52.1	27	30	24

**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
F2PMTB10-1/8	10	1/8	36.83	20	5.60
F2PMTB10-1/4	10	1/4	36.83	20	6.35

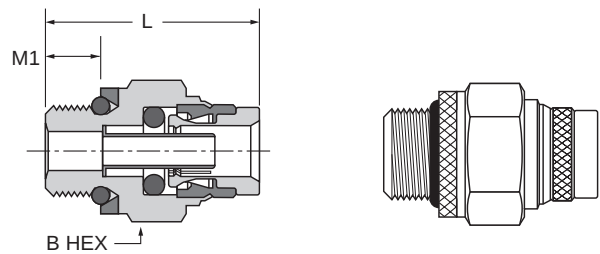
**Male Connector BSPT F3PMTB**

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

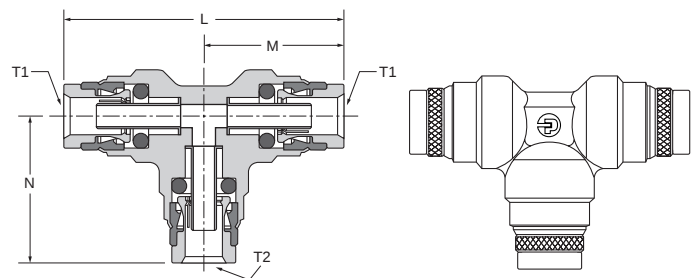
**H**

Male Connector Metric Straight Thread F8UPMTB

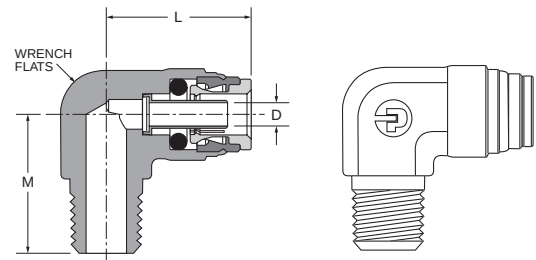
PART NO.	TUBE SIZE (mm)	METRIC THREAD	L (mm)	B HEX (mm)	M1 (mm)
F8UPMTB6-M10	6	M10x1	29.7	17	6.4
F8UPMTB6-M12	6	M12x1.5	29.1	17	7.5
F8UPMTB6-M14	6	M14x1.5	29.1	22	7.5
F8UPMTB6-M16	6	M16x1.5	31.6	22	10.0
F8UPMTB6-M22	6	M22x1.5	29.7	27	9.5
F8UPMTB8-M10	8	M10x1	31.4	22	6.4
F8UPMTB8-M12	8	M12x1.5	33.0	22	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**

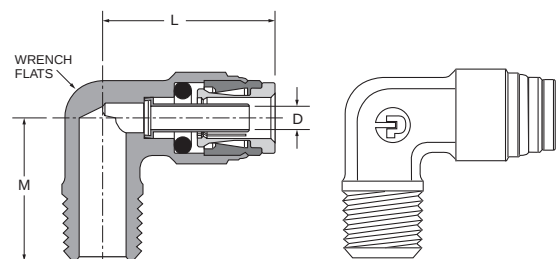
PART NO.	TUBE 1 (mm)	TUBE 2 (mm)	L (mm)	M (mm)	N (mm)
JPMTB6	6	6	51.3	25.6	26.7
JPMTB8	8	8	53.2	26.6	26.7
JPMTB10	10	10	60.4	30.2	31.4
JPMTB12	12	12	63.3	31.7	35.0
JPMTB12-12-6	12	6	63.3	31.7	28.1
JPMTB12-12-8	12	8	63.3	31.7	32.9

**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

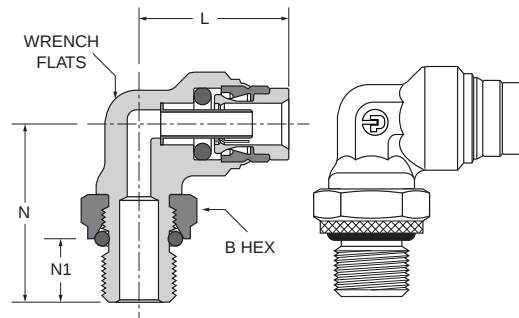
**Male Elbow Non-Swivel BSPT C3PMTB**

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
C3PMTB10-3/8	10	3/8	17	31.8	25.4
C3PMTB10-1/2	10	1/2	22	34.3	33.5
C3PMTB12-1/4	12	1/4	22	34.3	28.5
C3PMTB12-3/8	12	3/8	22	34.3	29.2
C3PMTB12-1/2	12	1/2	22	34.3	33.5

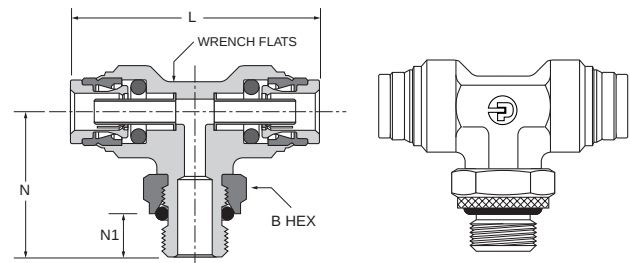


Male Elbow Metric Straight Thread C8UPMTB

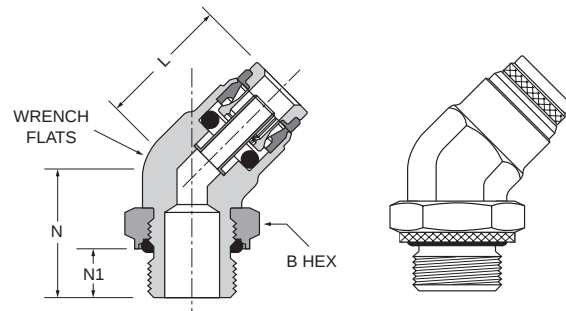
PART NO.	TUBE SIZE (mm)	METRIC THREAD	WRENCH FLATS (mm)	B HEX (mm)	L (mm)	N (mm)	N1 (mm)
C8UPMTB6-M10	6	M10x1	10	14	24.8	26.0	7.5
C8UPMTB6-M12	6	M12x1.5	10	17	24.8	28.2	9.5
C8UPMTB6-M16	6	M16x1.5	11	24	25.0	34.0	10.5
C8UPMTB6-M22	6	M22x1.5	16	30	28.1	41.4	10.5
C8UPMTB8-M12	8	M12x1.5	16	17	27.5	33.0	9.5
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)	B HEX (mm)	L (mm)	N (mm)	N1 (mm)
S8UPMTB8-M16	8	M16x1.5	14	24	52.4	29.5	10.5
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

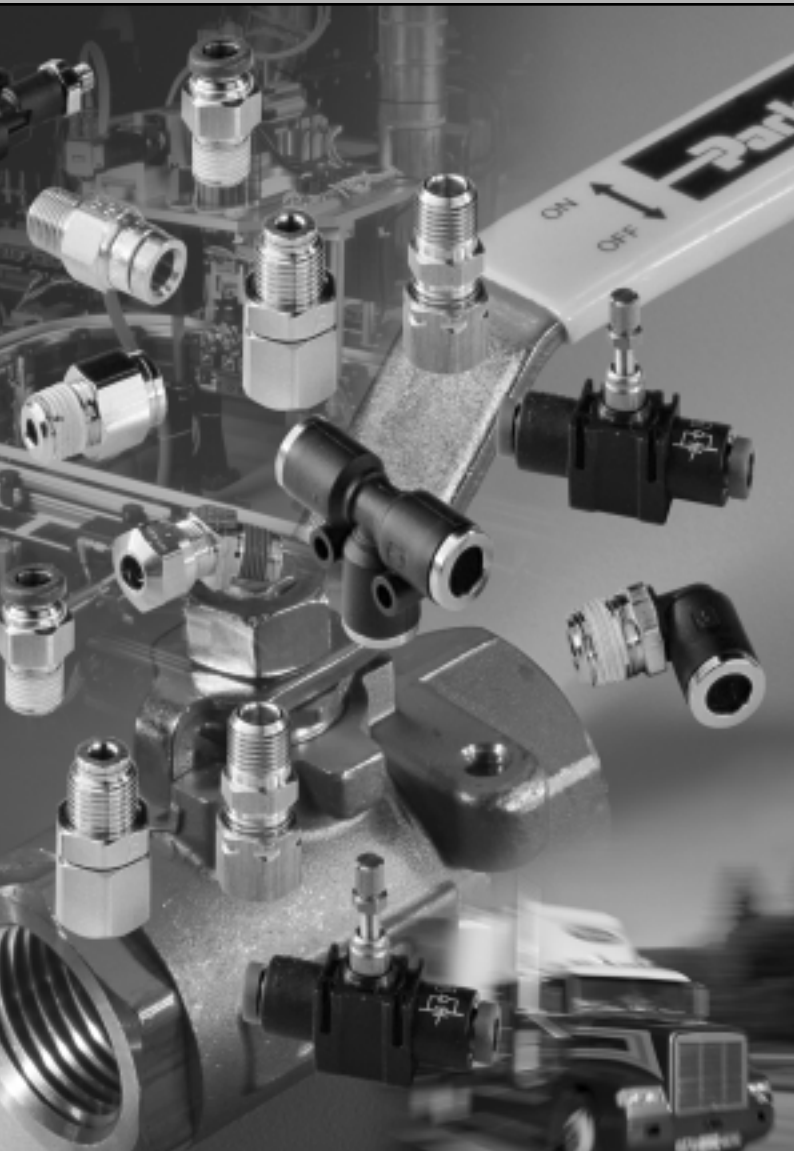
**Male Elbow 45° Metric Straight Thread V8UPMTB**

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

**H**

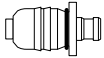
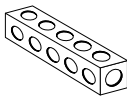
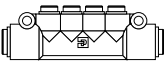


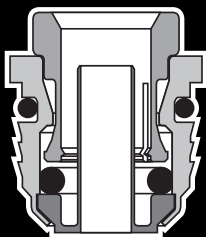
Cartridges & Manifolds



Prestomatic SAE Encapsulated Cartridges	I3
Presto Encapsulated Cartridges	I5
Prestomatic Removable Tank Cartridges	I9
Brass Manifold	I11
Presto Manifold	I12

The World Standard

Cartridges	PMCEN-ES Encapsulated Cartridge Replaceable Button  Page 17	PMTCE-ES Encapsulated Cartridge Removeable Collet & O-Ring  Page 17	PMTCE SAE Encapsulated  Page 14	TCPR Removable Tank Cartridge  Page 110		
Auxiliary	ES External Seal  Page 17	PMB Removable Button  Page 17				
Manifolds	255MP Brass Manifold  Page 111	24M Composite Manifold  Page 112				



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 SAE Cartridge is retained in the cavity by 3 barbs versus the normal 2 barbs for better performance over a wider diameter tolerance range. 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 the proposed SAE Standard J2494-4. The Prestomatic SAE Encapsulated Cartridge is thoroughly tested to meet or exceed the performance requirements of DOT FMVSS 571.106 and SAE J1131 and the proposed dimensional standards of SAE J2494-4 in 6061-T6 aluminum. 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 -40°F to +200°F (Note: See tubing manufacturer's recommendations for pressure and temperatures limitations.)

Features

- Easy assembly
- Patented third generation 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

**DOT only

[†] U.S. Patent No. 5,683,120

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:

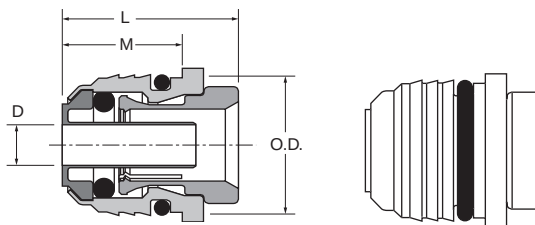
Prestomatic SAE Cartridge ——— PMTCE ——— -4
1/4" (4/16) Tube Size ———

Special Cartridges

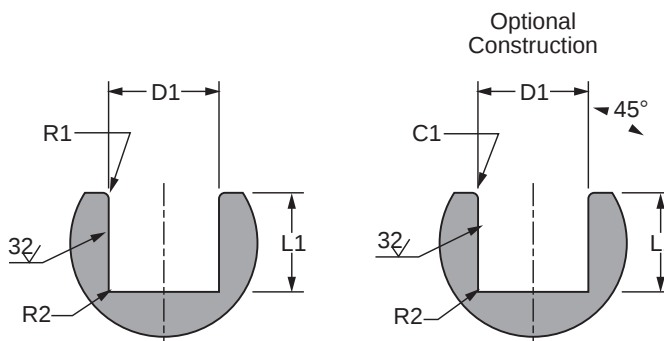
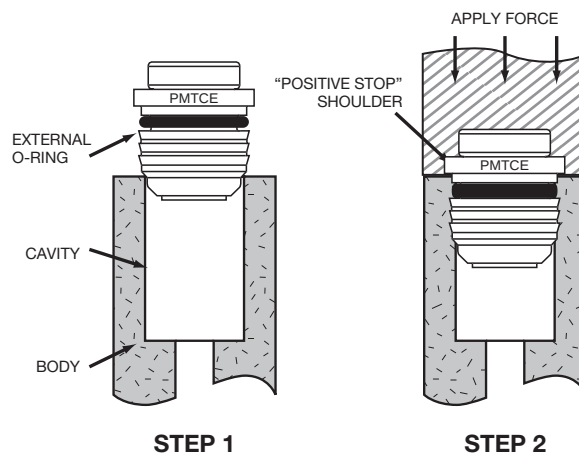
Encapsulated cartridge configurations and /or sizes other than those shown in the catalog can be furnished. Non-standard o-ring materials are available. It is suggested that a print or sketch be submitted with the inquiry. Price and delivery for non-stock items furnished on request for specified quantities.

Prestomac SAE Encapsulated Cartridge PMCE/PMTCE

PART NO.	TUBE SIZE	CAVITY SIZE $\pm .002$	L	M	O.D.	FLOW DIA. D
PMCE-5/32	5/32	.346	.57	.44	.44	.125
PMTCE-4	1/4	.504	.65	.44	.56	.138
PMTCE-4-8	1/4	.775	.65	.42	.86	.138
PMTCE-6	3/8	.650	.84	.64	.75	.215
PMTCE-6-8	3/8	.775	.84	.64	.86	.215
PMTCE-8	1/2	.775	.98	.78	.86	.375
PMTCE-10	5/8	.925	1.06	.86	1.00	.400
PMTCE-12	3/4	1.067	1.11	.91	1.25	.503

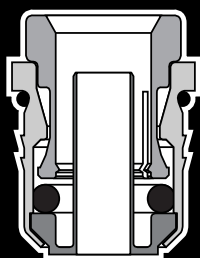
**Installation**

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.



Nominal Tube OD (in)	D1 (mm) $\pm .05$	D1 (in) $\pm .002$	L1 (mm) MIN	L1 (in) MIN	R1 (mm) $\pm .05$	R1 (in) $\pm .002$	R2 (mm) $\pm .05$	R2 (in) $\pm .002$	C1 (mm) $\pm .05$	C1 (in) $\pm .002$
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



Presto Encapsulated Cartridges

Advantages

Parker Presto 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 also improved. The Presto Cartridge design allows for faster and easier installation of components and assemblies. An external o-ring is included assembled to the Presto Cartridge to insure a leak free cavity. The PMTCER includes a built in tube support. Once the Presto Cartridge is installed in a single step cavity, no special tools are needed to assemble. Just bottom the tubing into the cartridge body for a positive seal. For color coding use the PMCEN cartridge. After installation into a cavity, simply snap on the color coded release button onto the PMCEN Cartridge. The PMTCER requires no additional button assembly.

Materials

Presto Encapsulated Cartridges are designed to be installed into a thermoplastic (Nylon/Glass Filled Nylon/Acetal) cavity. Consult factory for specific cavity or housing materials that would be suitable for a particular application.

Applications

Industrial (PMCEN, PMTCER)

Once the Presto Encapsulated Cartridge is installed into an approved cavity material, use with Parker Parflex series "E" polyethylene tubing, series "N" nylon tubing, series "U" polyurethane tubing or soft metal tubing in pneumatic instrumentation circuits and various industrial applications.

Air Brake (PMCEN)

For Air Brake applications, use with Parker Parflex SAE J844 Type A and B nylon tubing. Sizes 5/32" and above meet D.O.T. FMVSS 571.106 air brake performance specifications. The addition of a stainless steel tube support (63 NTA) in sizes 1/4" and above assures that the cartridge assembly will meet the performance requirements of SAE J1131 and D.O.T. FMVSS 571.106. Consult factory for specific cavity or housing material to insure cartridge to cavity assembly will meet SAE J1131 requirements. 1/8" Presto Encapsulated Cartridges are designed for use in pressure protected air accessory lines that are isolated from the air brake system.

Air Brake (PMT CER)

For Air Brake applications use with Parker Parflex SAE J844 Type A&B nylon tubing. PMTCER cartridges with a built in tube support meet performance requirements of D.O.T. FMVSS 571.106 and SAE J1131.

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. Check working temperature of manifold material)
- Buna N (nitrile) O-Rings

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 the tubing with light oil or petroleum jelly.

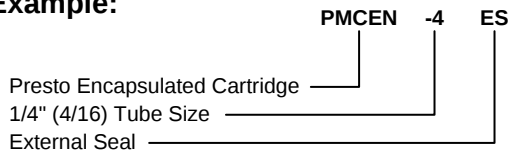
Order

By part number and name.

Nomenclature

Part numbers are constructed from symbols that identify the style and size of the cartridge. Presto Encapsulated Cartridge buttons for the PMCEN are to be ordered separately from the cartridge and specified by color.

Example:



Special Cartridges

Encapsulated cartridge configurations and/or sizes other than those shown in the catalog can be furnished. Non-standard o-ring materials 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.

PMCEN Features

No tube support required to pass performance requirements of D.O.T. FMVSS 571.106 (PMCEN-532 & larger)

Low profile tube connections are the same height for all sizes, simplifying multiple tube size installations.

External seal

External barb design improves sealing capability.

Positive tube stop. Tube insertion depth is consistent with Prestomatic fittings.

Increased flow diameter due to elimination of tube support.

Housing

Inside Cavity

Optional color coded release buttons can be removed to prevent accidental release of tubing

Collet designed to prevent side load leakage

"Positive stop" shoulder insures that cartridges are installed to the proper depth

Encapsulated o-ring eliminates concerns for out-of-round cavity and damage during shipment

Self-aligning design allows for consistent installation.

Single diameter cavity

Chamfer required for external seal

- Working pressure: Vacuum to 250 psi (See tubing manufacturer's recommendations for pressure and temperature limitations.)
- Temperature Range: -40°F to 200°F
- Optional o-ring materials are available
- Fewer components to inventory
- Encapsulated design eliminates the accidental omission of components during cartridge installation.
- Color coding available
- No threads to leak resulting from improper assembly.
- No thread sealants to contaminate air system

PMT CER Features

Passes performance requirements of D.O.T. FMVSS 571.106 SAE J1131 in size 1/4" and above

Low profile tube connections are the same height for all sizes, simplifying multiple tube size installations.

External seal

External barb design improves sealing capability.

Positive tube stop. Same insertion depth as fitting

Plastic cavity

No special surface finished required.

Integrated button cannot be separated from cartridge.

Collet designed to eliminate side load leakage and is removable for o-ring replacement.

"Positive stop" shoulder insures that cartridges are installed to the proper depth

Tube support is machined concentric to cartridge. Cannot interfere with tube insertion nor can it be dislodged or removed.

Encapsulated replaceable o-ring eliminates concerns for out-of-round cavity and leaks due to damaged o-rings.

Self-aligning design allows for consistent installation.

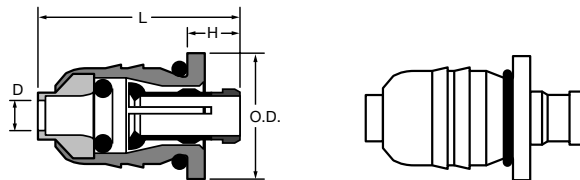
Single diameter cavity

Chamfer required for external seal

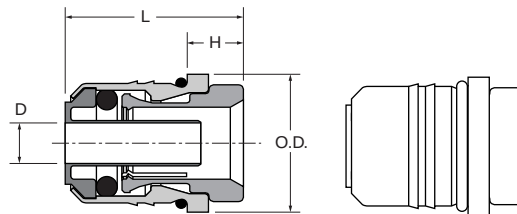
- Working pressure: Vacuum to 250 psi (See tubing manufacturer's recommendations for pressure and temperature limitations.)
- Temperature Range: -40°F to 200°F
- Optional o-ring materials are available
- Fewer components to inventory
- Encapsulated design eliminates the accidental omission of components during cartridge installation.
- One piece button collet
- No threads to leak resulting from improper assembly.
- No thread sealants to contaminate air system

Encapsulated Cartridge PMCEN-Replaceable Button (PMB listed below)

PART NO.	TUBE SIZE	L	H	O.D.	FLOW DIA. D
PMCEN-2ES	1/8	.59	.18	.406	.094
PMCEN-5/32ES	5/32	.59	.18	.406	.125
PMCEN-3ES	3/16	.59	.18	.437	.156
PMCEN-4ES	1/4	.62	.18	.500	.188
PMCEN-6ES	3/8	.81	.18	.750	.312
PMCEN-8ES	1/2	.94	.18	.875	.375

**Encapsulated Cartridge PMTCER-Removeable Collet and O-ring**

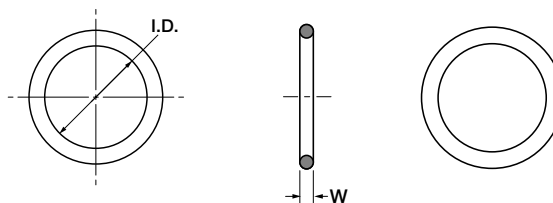
PART NO.	TUBE SIZE	L	H	O.D.	FLOW DIA. D
PMT CER-4ES	1/4	.65	.21	.500	.138
PMT CER-6ES	3/8	.84	.21	.750	.215
PMT CER-8ES	1/2	.97	.21	.875	.336
PMT CER-10ES	5/8	1.18	.21	.860	.400
PMT CER-12ES	3/4	1.16	.19	.860	.125

**External Seal ES***

PART NUMBER	TUBE SIZE	I.D.	W
ES-2†	1/8	.283	.040
ES-3	3/16	.314	.040
ES-4	1/4	.390	.040
ES-6	3/8	.585	.060
ES-8	1/2	.706	.060

*Material is Nitrite (Buna N), 70 Durometer

† Note: ES2 is to be used with PMCEN-2 and PMCEN-5/32

**Removable Cartridge Button PMB**

PART NUMBER	TUBE SIZE	O.D.	L
2PMB-X	1/8	.335	.109
5/32PMB-X	5/32	.335	.109
3PMB-X	3/16	.397	.109
4PMB-X	1/4	.460	.109
6PMB-X	3/8	.710	.109
8PMB-X	1/2	.835	.109

Specify Color When Ordering,

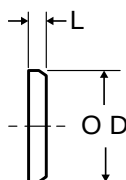
Example: 2PMB-BU

Colors Available:

BU-Blue G-Green O-Orange

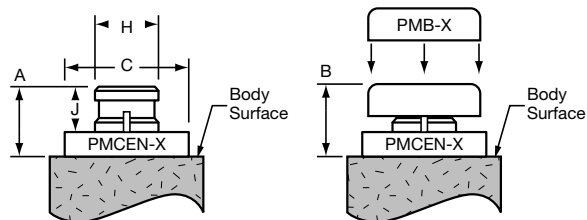
P-Purple R-Red Y-Yellow

W-White BL-Black GY-Gray

For PMCEN Cartridges only

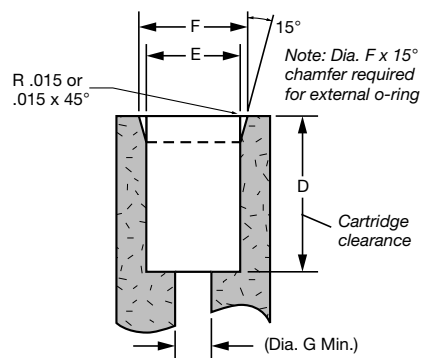
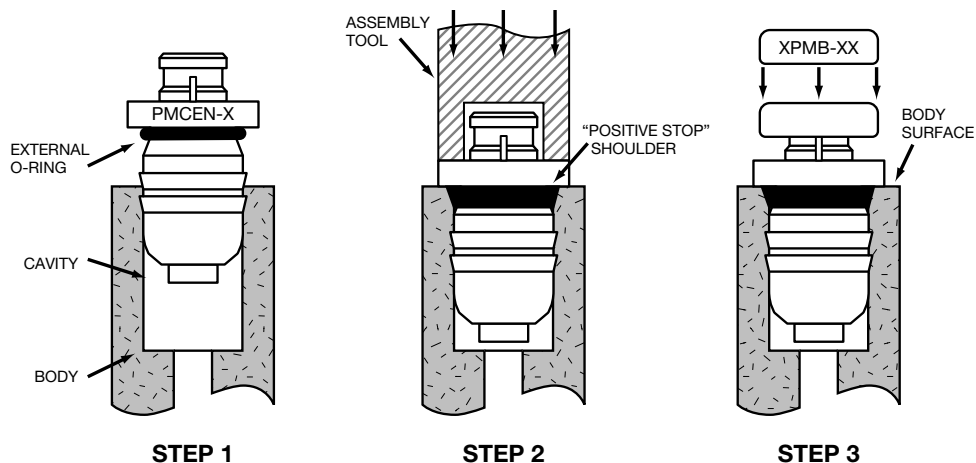
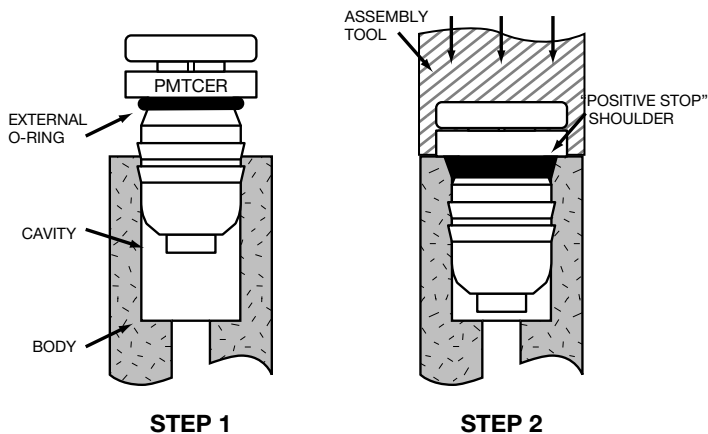
Cartridge Dimensions

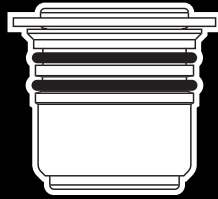
TUBE SIZE	A	B	C DIA.	H DIA.	J
1/8	.18	.21	.406	.18	.10
5/32	.18	.21	.406	.21	.10
3/16	.18	.21	.437	.24	.10
1/4	.18	.21	.500	.31	.10
3/8	.18	.21	.750	.43	.10
1/2	.18	.21	.875	.56	.10

**Cavity Dimensions**

for use with glass filled nylon and acetal

TUBE SIZE	E DIA. ± .002	F DIA. ± .002	G DIA. MIN.	D MIN.
1/8	.326	.358	.094	.43
5/32	.326	.358	.125	.43
3/16	.357	.389	.156	.43
1/4	.433	.465	.188	.46
3/8	.648	.696	.312	.65
1/2	.769	.817	.375	.78
5/8	.898	.946	.500	1.00
3/4	1.103	1.151	.625	1.00

**PMCEN Cartridge Installation Instructions****PMT CER Cartridge Installation Instructions**



Prestomatic Removable Tank Cartridges

Advantages

Leakage and assembly problems encountered with the use of pipe threaded fittings in out-of-round internal threads that are commonly found in air tank spuds prompted the development of the Prestomatic[®] Removal Tank Cartridge. This threadless cartridge is retained in the spud by a standard retaining ring, and the double Buna-N (Nitrile) o-ring seal virtually guarantees leak free performance.

Specifications

The Prestomatic removable tank cartridge has been thoroughly tested and meets or exceeds the requirements of DOT FMVSS 571.106 and SAE J1131.

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 temperatures limitations.)

Features

- Easy assembly
- Patented third generation 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 sizes 1/4", 3/8", 1/2", 5/8" and 3/4"
- Available in straight and elbow configurations

Tube Assembly Instructions

1. Cut Parker Parflex thermoplastic squarely using Parker tube cutter PTC-001.
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

Order

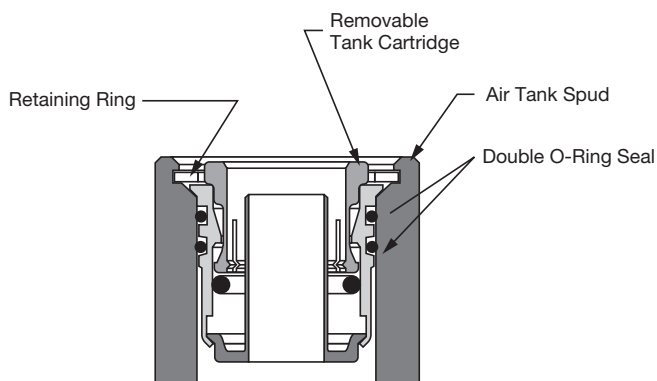
By part number and name

Nomenclature

Part numbers are constructed from symbols that identify the style and size of the cartridge.

Example:

Optional, Forged Elbow 90° — 169
Removable Tank Cartridge — TCPR
1/4" (4/16) Tube Size — -4

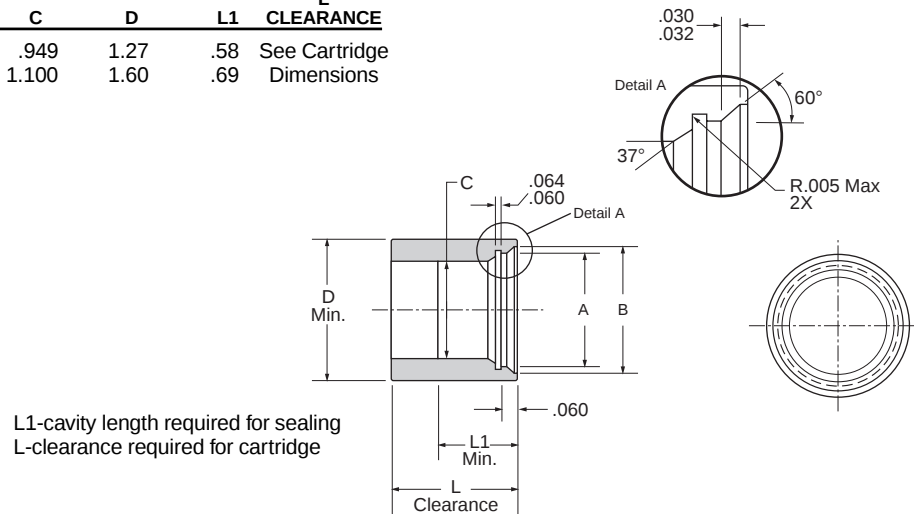


Special Cartridges

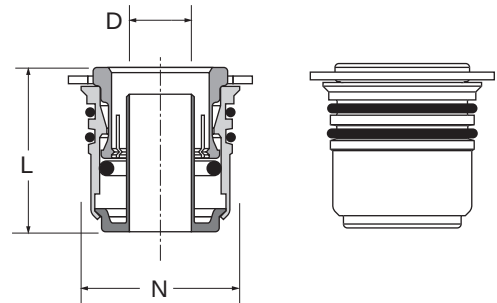
Configurations and /or sizes other than those shown in the catalog can be furnished. Non-standard o-ring materials are available. It is suggested that a print or sketch be submitted with the inquiry. Price and delivery for non-stock items furnished on request for specified quantities.

Spud Port Requirements for the Removable Tank Cartridge

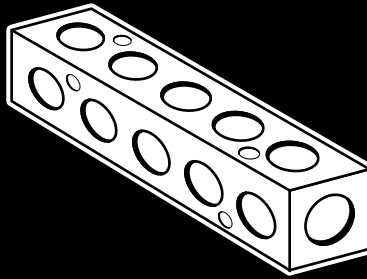
TUBE SIZE	A	B	C	D	L1	L CLEARANCE
1/4", 3/8", 1/2"	1.062	1.130	.949	1.27	.58	See Cartridge Dimensions
5/8", 3/4"	1.314	1.396	1.100	1.60	.69	

**Prestomatic Removable Tank Cartridge TCPR**

PART NO.	TUBE SIZE	RR*	L	N	FLOW DIA. D	L CLEARANCE
TCPR-4	1/4	HOI-106	.73	.93	.140	.58
TCPR-6	3/8	HOI-106	.83	.93	.217	.62
TCPR-8	1/2	HOI-106	.97	.93	.338	.65
TCPR-10	5/8	HOI-131	1.05	1.08	.398	.75
TCPR-12	3/4	HOI-131	1.15	1.19	.500	.90



*Retaining ring required for assembly. Retaining ring is not supplied with cartridge. Retaining ring manufactured by Rotor Clip Company, Inc.



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.

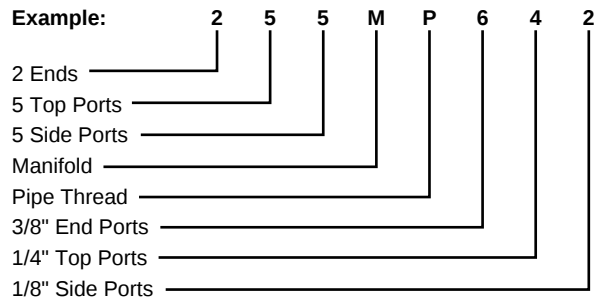
Temperature and Working Pressure Ranges

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.

Example:



Special Manifolds

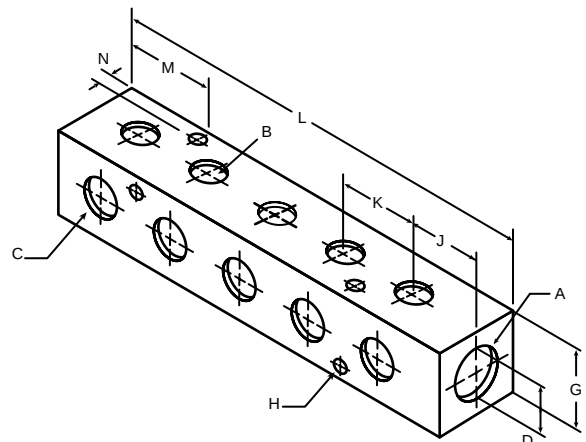
Manifold configurations and /or sizes other than our cataloged manifold can be furnished. It is suggested that a print or sketch be submitted with the inquiry.

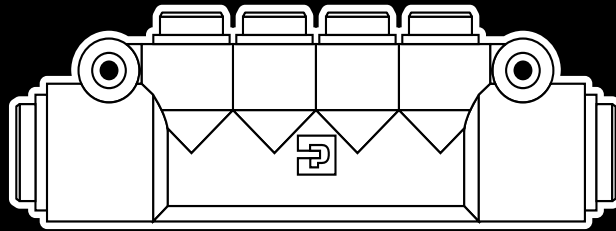
Pricing

Price and delivery for non-stock items furnished on request for specified quantity.

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





Presto Manifold

Advantages

Presto manifolds provide a convenient junction to connect multiple tubing lines for industrial and transportation applications. With their patented* tube retention design these manifolds meet all of the air brake performance specifications of D.O.T. FMVSS 571.106. 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

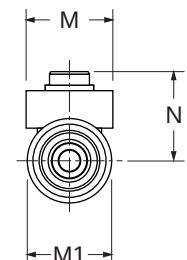
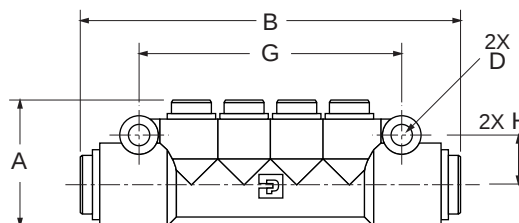
Part numbers are constructed from symbols that identify the size and type of manifold. The first series of letters and numbers identify the style and type of manifold. The second series of numbers describe the tube O.D.

Example:

Presto Manifold 24M 6 4
 Inlet Tube O.D. (6/16)
 Outlet Tube O.D. (4/16)

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



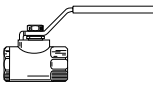
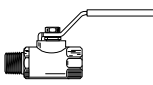
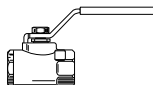
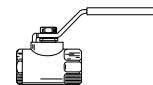
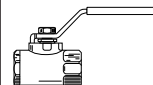
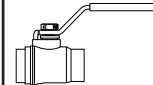
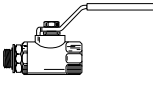
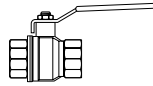
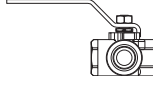
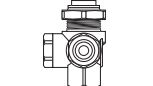
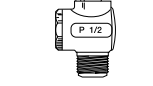
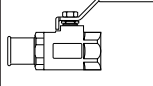
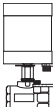
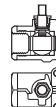
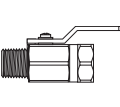
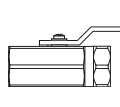
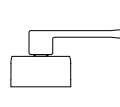
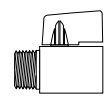
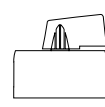
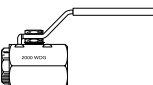
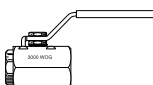
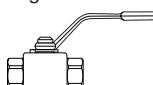
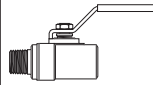
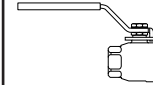
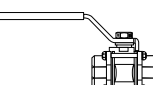
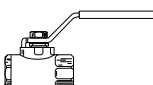
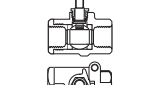
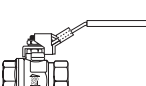
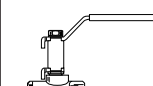
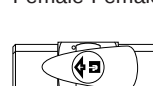
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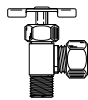
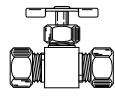
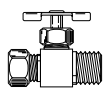
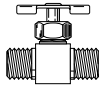
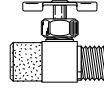
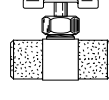
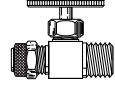
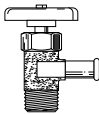
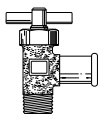
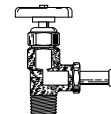
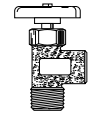
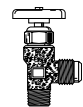
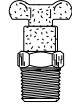
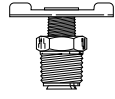
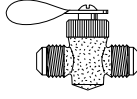
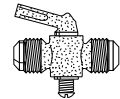
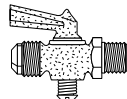
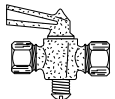
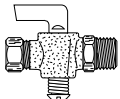
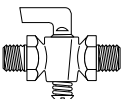
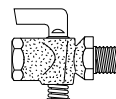
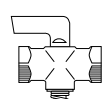
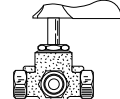
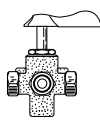
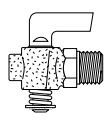


Valves

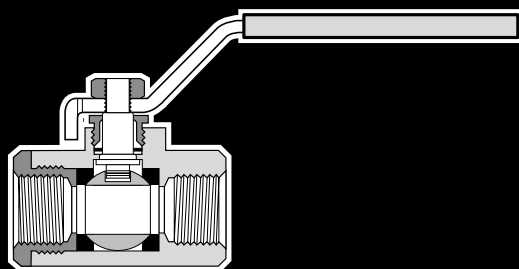
Brass Ball Valves Series 500	J4	Stainless Steel Ball Valves	
Male/Female Ball Valves Series 501	J8	Series 502SS	J45
Brass Panel Mount Ball Valves Series 502	J11	Stainless Steel Swing-Out	
UL Ball Valves Series 500/501 PUL	J14	Ball Valves Series 504SS	J48
Female/Female Straight Thread		Female/Female Straight Thread	
Brass Ball Valve Series 506	J17	Stainless Steel Ball Valves	
Solder End Ball Valves Series 509	J19	Series 506SS	J50
Male/Female Straight Thread		Rotary Actuator Ball Valves Series ACT ...	J52
Ball Valves Series 510	J21	Parker Metric Ball Valves Series BVGC	J57
Brass Ball Valves Series 520	J24	Parker Metric Ball Valves Series BVGL	J59
Series 533	J26	Parker Metric Ball Valves	
Brass Ball Valves		Series BVGPLOCK	J61
Series 533 3-Way Diversion		Parker Metric Ball Valves Series MBVG	J64
Series 540 4-Way Diversion	J26	Micro Ball Valve Series 708 / 709	J66
90° Ball Valves Series 590/591	J28	Replacement Componentry	J68
Brass Hose Barb Ball Valves		Series STX	J69
Series 500HB	J30	Mini Ball Valves Series 200/608/609	J71
Brass Ball Valves Series 600		Plug Valves Series PV	J73
Six Port Diversion	J31	Needle Valves, Truck Valves,	
Carbon Steel Ball Valves		Lanyard Valve	J75
Series 500CS/502CS	J33	Drain Cocks/Ground Plug Shutoff	J81
Carbon Steel Ball Valves Series 506CS	J37		
High Pressure Carbon Steel Ball Valves			
Series 500HP/506HP/507HP	J39		
Stainless Steel Ball Valves			
Series 501SS	J43		

The World Standard

Brass Ball Valves	XV500P Female-Female  Page J5	XV501P Male-Female  Page J9	XV502P Panel Mount  Page J12	XV500/501PUL UL Ball Valve  Page J15	XV506P Straight Thread  Page J18	XV509P Solder End  Page J20
	XV510P Straight Thread  Page J22	XV520P Economy Series  Page J25	XV533P 3-Way Diversion  Page J27	XV540P 4-Way Diversion  Page J27	XV590/591P 90° Ball Valve  Page J29	XV500HB Hose Barb  Page J30
XV502P-ACT Actuator  Page J54	XV502P-SUB Sub Assembly  Page J55	MV708 Micro Valve  Page J67	MV709 Micro Valve  Page J67	MV200 Mini Valve  Page J72	MV608 Mini Valve  Page J72	MV609 Mini Valve  Page J72
Carbon Steel Valves	XV500/502CS Female-Female  Page J34	XV506CS Straight Thread  Page J38	XV500HP/ 506HP/507HP High Pressure  Page J40	Stainless Steel Valves	XV501SS Male-Female  Page J44	XV502SS Female-Female  Page J46
	XV504SS Swing-Out  Page J49	XV506SS Straight Thread  Page J51	XV502SS-ACT Actuator  Page J54		XV502SS-SUB Sub Assembly  Page J55	Metric Ball Valves
BVGPLOCK Padlocking  Page J62	MBVG Compact  Page J65	Auxiliary	ACT-P-KIT Brass Actuator Kit  Page J56	ACT-SS-Kit Stainless Actuator Kit  Page J56	STX-P-1-125 Stem Extension  Page J69	
STXSS-X-X Stem Extension  Page J70	Plug Valves		PV607 Male-Male  Page J74	PV608 Male-Female  Page J74	PV609 Female-Female  Page J74	PVMB Mounting Bracket  Page J74
Needle Valves		NV101F Flare-Male Pipe  Page J76	NV102F Flare-Flare  Page J76	NV103F Flare-Male Pipe  Page J76	HV104C Humidifier Valve  Page J76	HV104C-Kit Humidifier Kit  Page J76

NV104C/ NV104CA Comp-Pipe  Page J77	NV105C/ NV105CA Comp-Comp  Page J77	NV106C/ NV106CA Comp-Pipe  Page J78	NV107P Pipe-Pipe  Page J78	NV108P Female-Male  Page J78	NV109P Female-Female  Page J78	NV311P Poly-Tite/Pipe  Page J78
NV312P Poly-Tite/Pipe  Page J79	Truck Valves	V404P Hose-Pipe  Page J79	V404PH Hose-Pipe  Page J79	SV404P Hose-Pipe  Page J79	V405P Female-Male  Page J79	V408NTA Tube-Pipe  Page J80
V409F Flare - Pipe  Page J80	V410NTA Tube-Pipe  Page J80	V412F Tube-Pipe  Page J80	LV91 Lanyard Valve  Page J80	Drain Cocks	DCR601 Internal Seal  Page J84	DC602 Internal Seal  Page J84
DC603 Internal Seal  Page J84	DC604 External Seal  Page J84	DC606 External Seal  Page J84	DC607 Bib Drain  Page J84	Shutoff Valves	V201F Flare-Flare  Page J82	V203F Flare-Flare  Page J82
V204F Flare-Pipe  Page J82	V303C/V303CA Comp-Comp  Page J82	V304C/V304CA Comp-Pipe  Page J82	V401P Pipe-Pipe  Page J82	V402P Female-Male  Page J83	V403P Female-Female  Page J83	V406P 3-Way  Page J83
V407P 4-Way  Page J83	DC601 Pipe  Page J83					

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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.

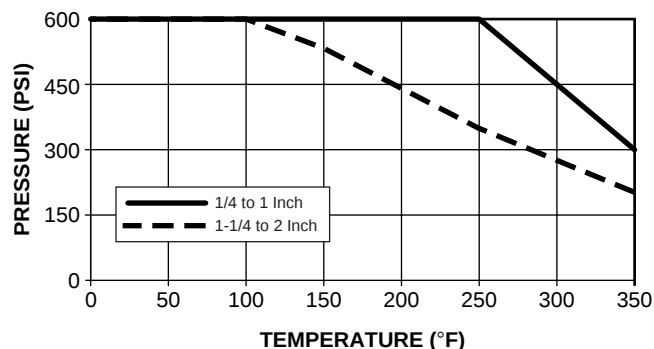
Applications

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"		

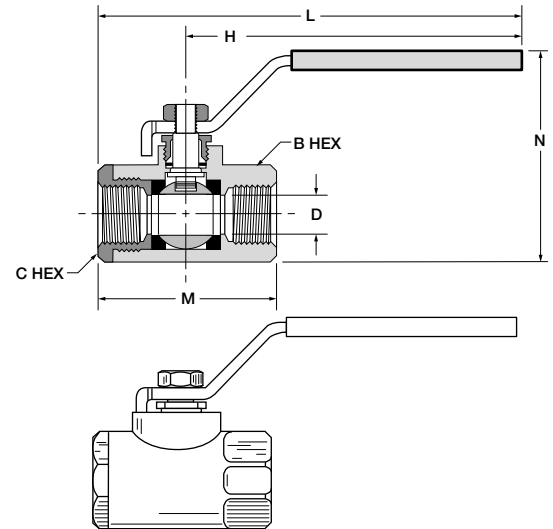
Flow Data

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

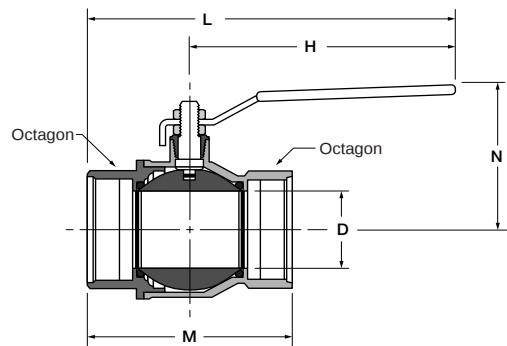
Female-Female Pipe Ends XV500P

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

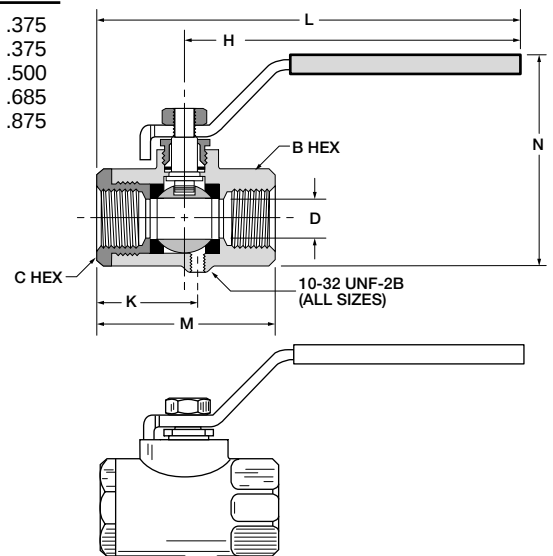
† Available in Full Flow Panel Mount see XV508P Series

**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**

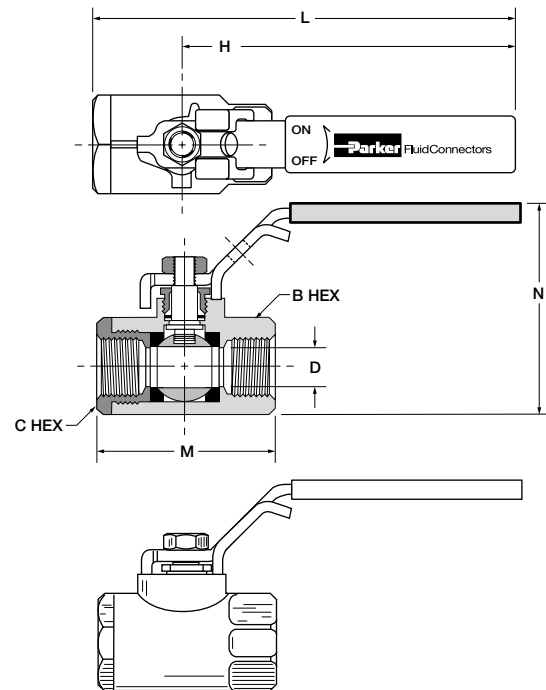
PART NO.	PIPE THREAD	B HEX	C HEX	K	H	L	M	N	D FLOW Ø
XVV500P-4	1/4	15/16	15/16	1.11	3.96	4.90	2.03	2.47	.375
XVV500P-6	3/8	15/16	15/16	1.11	3.96	4.90	2.03	2.47	.375
XVV500P-8	1/2*	1-1/16	1-1/16	1.23	3.96	5.00	2.20	2.58	.500
XVV500P-12	3/4**	1-1/4	1-5/16	1.45	3.96	5.25	2.42	2.81	.685
XVV500P-16	1**	1-1/2	1-9/16	1.58	3.96	5.34	2.75	3.08	.875



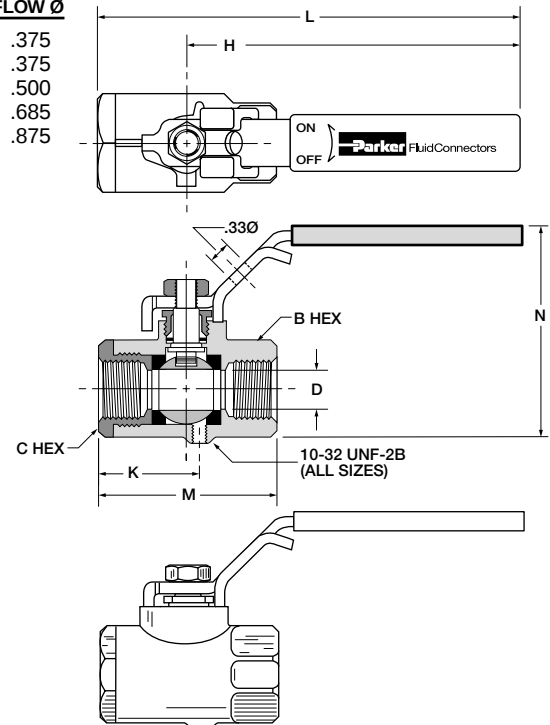
*PTF special short. **PTF special extra short

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**

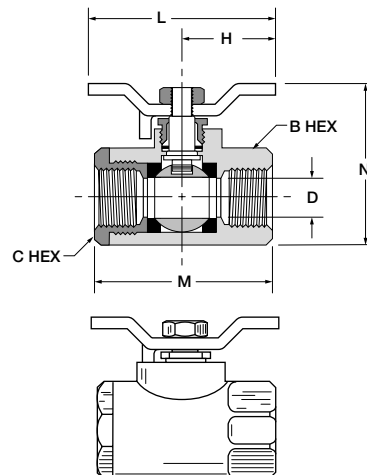
PART NO.	PIPE THREAD	B HEX	C HEX	K	H	L	M	N	D FLOW Ø
XVVP500P-4	1/4	15/16	15/16	1.11	3.96	4.90	2.03	2.47	.375
XVVP500P-6	3/8	15/16	15/16	1.11	3.96	4.90	2.03	2.47	.375
XVVP500P-8	1/2*	1-1/16	1-1/16	1.23	3.96	5.00	2.20	2.58	.500
XVVP500P-12	3/4**	1-1/4	1-5/16	1.45	3.96	5.25	2.42	2.81	.685
XVVP500P-16	1**	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									



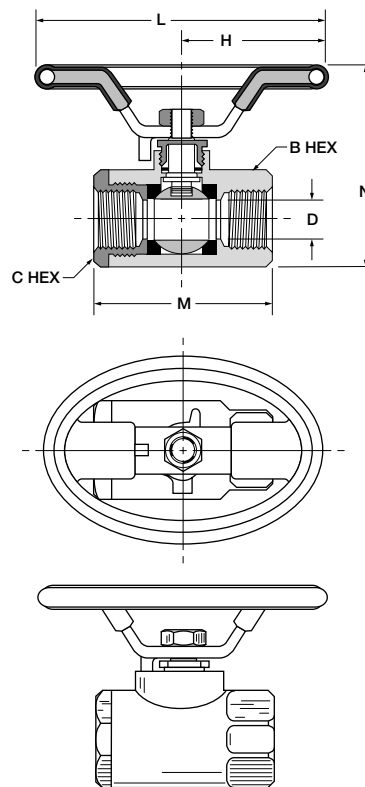
*PTF special short. **PTF special extra short

Tee Handle, Female Pipe Ends XV500P-X-04

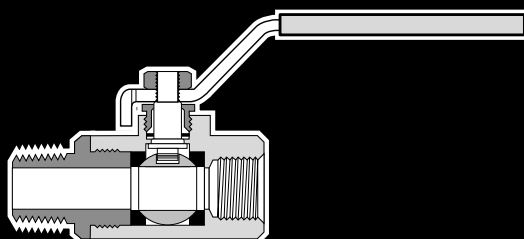
PART NO.	PIPE THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV500P-4-04	1/4	15/16	15/16	1.25	2.50	2.03	1.87	.375
XV500P-6-04	3/8	15/16	15/16	1.25	2.50	2.03	1.87	.375
XV500P-8-04	1/2*	1-1/16	1-1/16	1.25	2.50	2.20	1.98	.500
XV500P-12-04	3/4**	1-1/4	1-5/16	1.25	2.50	2.42	2.20	.685
XV500P-16-04	1**	1-1/2	1-9/16	1.25	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



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.

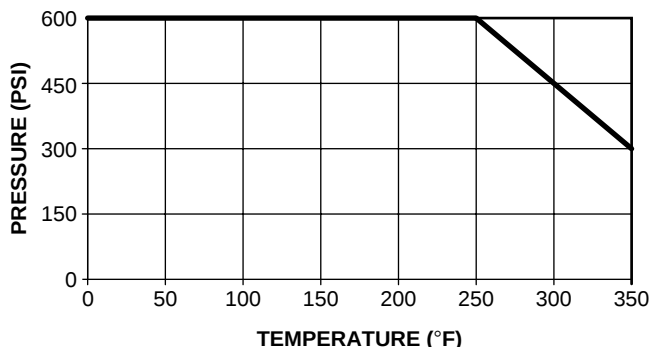
Applications

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.

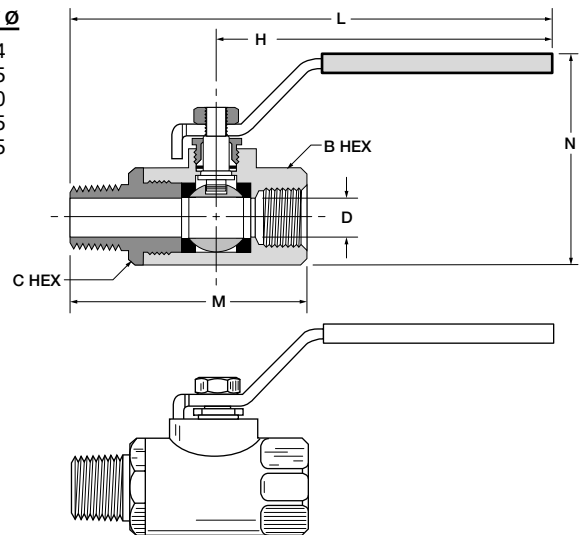
Style	Type	Material	Size	Options
V	501	P	-4	-00
Style	V-Valve VP-Valve, Padlocking Handle VV-Valve, Vented VVP-Valve, Vented, Padlocking Handle			
Type	501-Male/Female PTF Ports			
Material	P- Brass PN-Nickel Plated			
Size	4-1/4" 6-3/8" 8-1/2" 12-3/4" 16-1"			
Options	01-Stainless Steel Ball & Stem 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

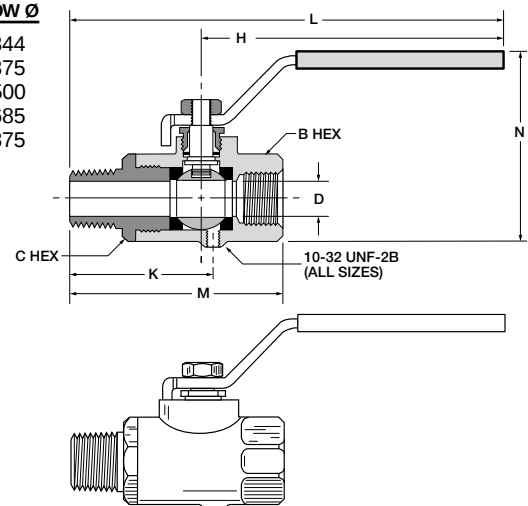
VALVE SIZE	CV
1/4	6.3
3/8	5.7
1/2	10.0
3/4	25.0
1	35.0

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

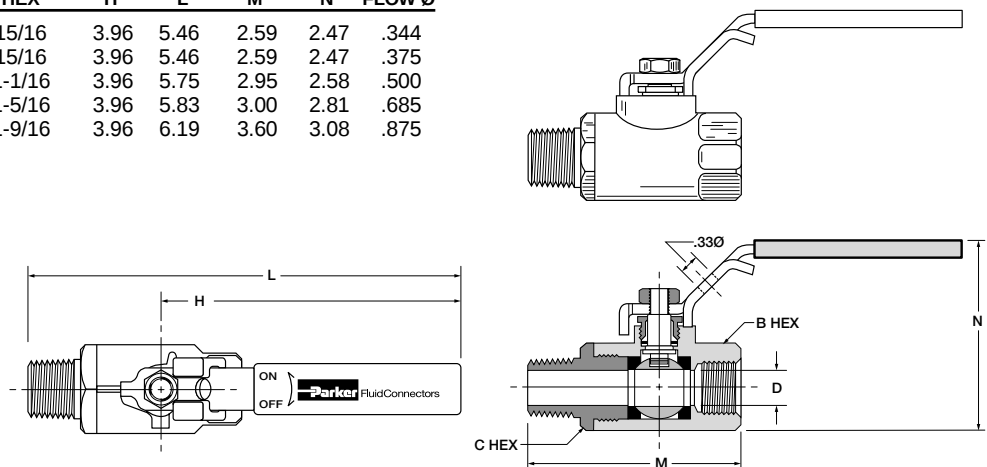
**Vented, Male-Female Pipe Ends XVV501P**

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

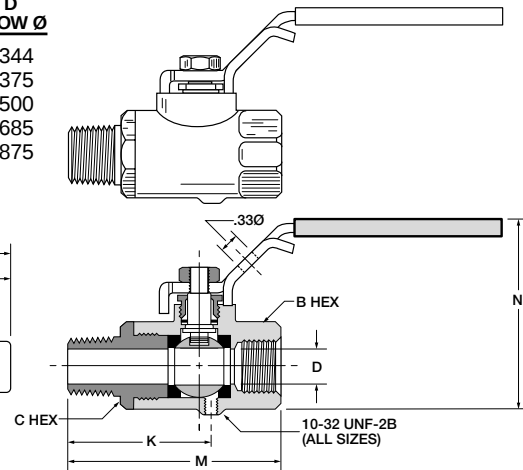
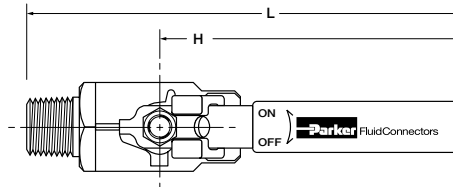


*PTF special short. **PTF special extra short

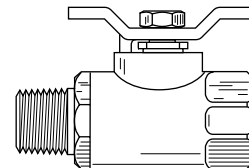
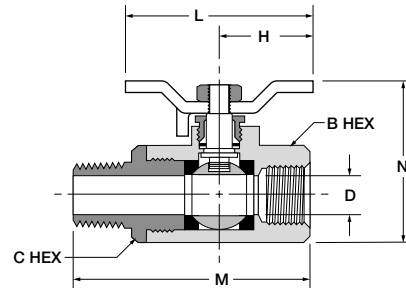
**OSHA 29 CFR Part 1910
Vented, Locking Handle, Male-Female Pipe Ends XVVP501P**

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

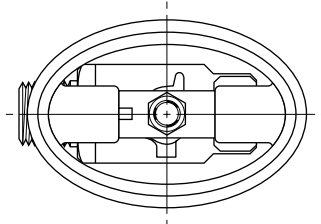
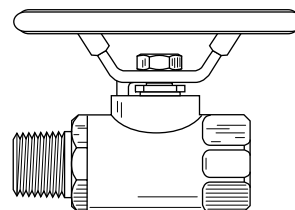
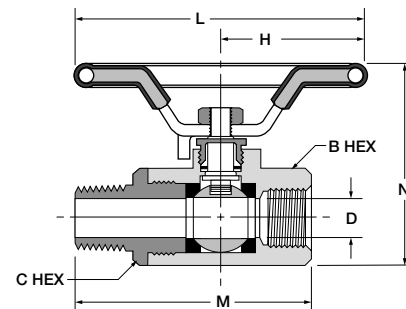
For use with 5/16" Ø shank lock

**Tee Handle, Male-Female Pipe Ends XV501P-X-04**

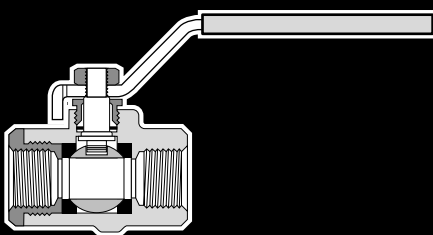
PART NO.	PIPE THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV501P-4-04	1/4	15/16	15/16	1.25	2.50	2.59	1.87	.344
XV501P-6-04	3/8	15/16	15/16	1.25	2.50	2.59	1.87	.375
XV501P-8-04	1/2*	1-1/16	1-1/16	1.25	2.50	2.95	1.98	.500
XV501P-12-04	3/4**	1-1/4	1-5/16	1.25	2.50	3.00	2.20	.685
XV501P-16-04	1**	1-1/2	1-9/16	1.25	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



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.

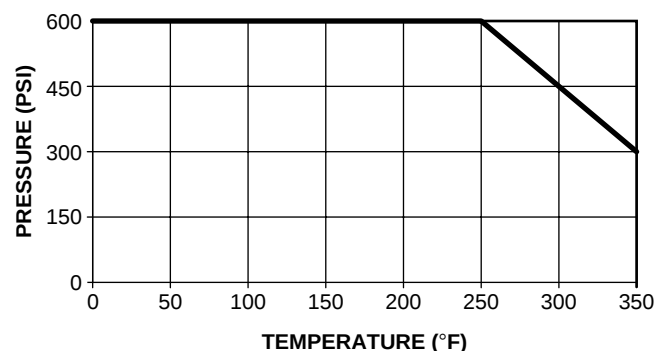
Applications

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.)

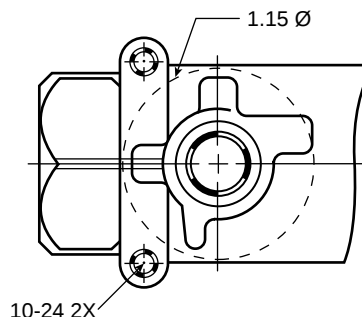
NOTE: PERIODICALLY CHECK THE ADJUSTABLE PACKING NUT AND TIGHTEN AS REQUIRED.

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

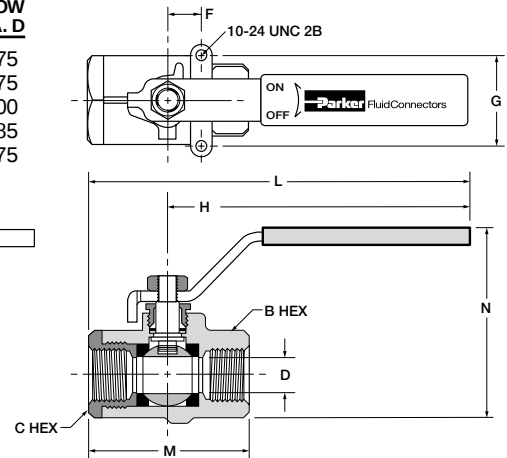
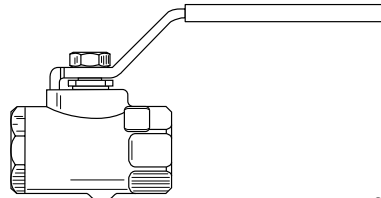
Mounting detail for all sizes



Female-Female Pipe Ends, Panel Mount XV502P

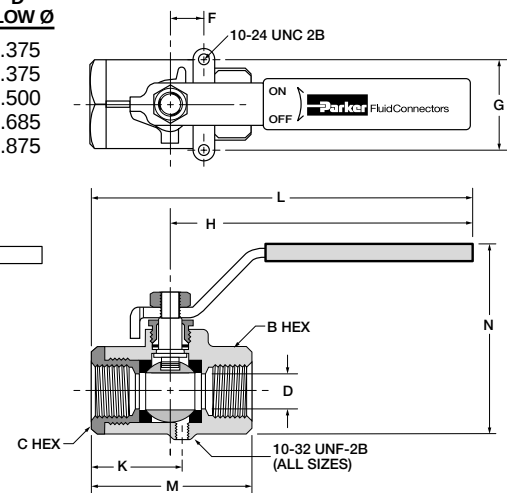
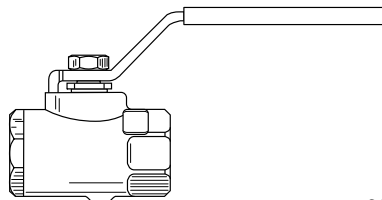
PART NO.	PIPE THD.	B HEX	C HEX	F	G	H	L	M	N	FLOW DIA. D
XV502P-4	1/4	15/16	15/16	.50	1.12	3.96	4.90	2.03	2.47	.375
XV502P-6	3/8	15/16	15/16	.50	1.12	3.96	4.90	2.03	2.47	.375
XV502P-8	1/2*	1-1/16	1-1/16	.50	1.12	3.96	5.00	2.20	2.58	.500
XV502P-12†	3/4**	1-1/4	1-5/16	.87	1.37	3.96	5.25	2.42	2.81	.685
XV502P-16†	1**	1-1/2	1-9/16	.87	1.37	3.96	5.34	2.75	3.08	.875

† Available in Full Flow see XV508P Series



Vented, Female-Female Pipe Ends, Panel Mount XVV502P

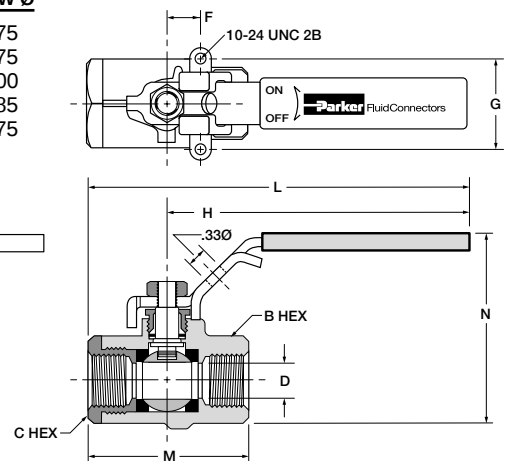
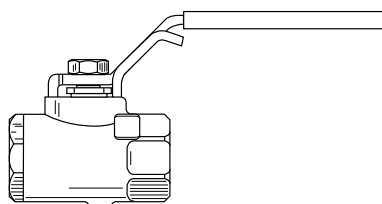
PART NO.	PIPE THD.	B HEX	C HEX	F	G	K	H	L	M	N	D FLOW Ø
XVV502P-4	1/4	15/16	15/16	.50	1.12	1.11	3.96	4.90	2.03	2.47	.375
XVV502P-6	3/8	15/16	15/16	.50	1.12	1.11	3.96	4.90	2.03	2.47	.375
XVV502P-8	1/2*	1-1/16	1-1/16	.50	1.12	1.23	3.96	5.00	2.20	2.58	.500
XVV502P-12	3/4**	1-1/4	1-5/16	.87	1.37	1.45	3.96	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



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



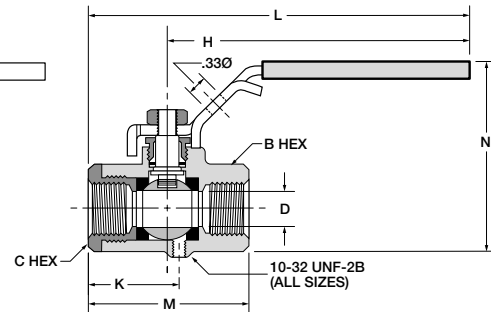
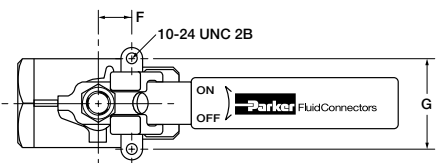
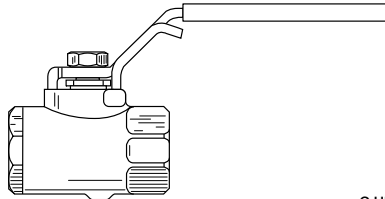
*PTF special short. **PTF special extra short

OSHA 29 CFR Part 1910

Vented, Locking Handle, Female Pipe Ends, Panel Mount XVVP502P

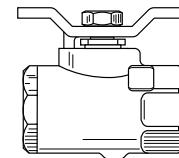
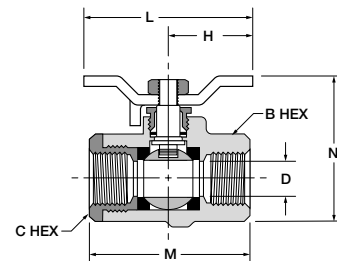
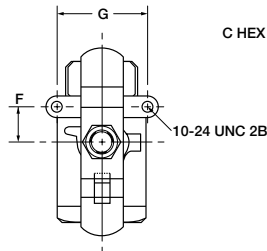
PART NO.	PIPE THD.	B HEX	C HEX	F	G	K	H	L	M	N	D FLOW Ø
XVVP502P-4	1/4	15/16	15/16	.50	1.12	1.11	3.96	4.90	2.03	2.47	.375
XVVP502P-6	3/8	15/16	15/16	.50	1.12	1.11	3.96	4.90	2.03	2.47	.375
XVVP502P-8	1/2*	1-1/16	1-1/16	.50	1.12	1.23	3.96	5.00	2.20	2.58	.500
XVVP502P-12	3/4**	1-1/4	1-5/16	.87	1.37	1.45	3.96	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



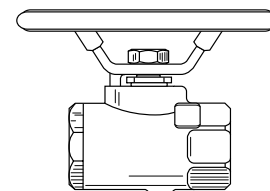
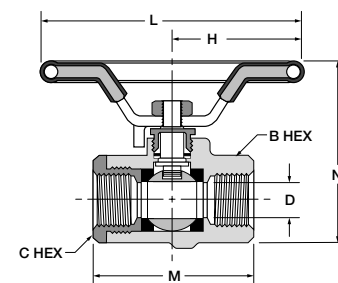
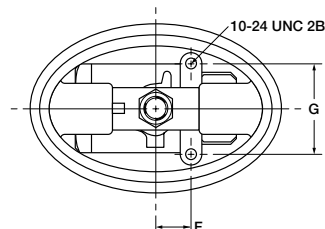
Tee Handle, Female Pipe Ends, Panel Mount XV502P-X-04

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

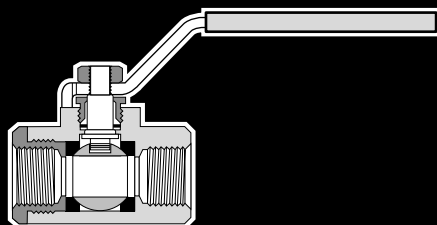


Oval Handle, Female Pipe Ends, Panel Mount XV502P-X-21

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



UL Ball Valves Series 500/501 PUL

U.L. Listed #842 Test SPEC

Advantages/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.

The hand operated 500/501 PUL Series Ball Valves are, intended for use as a gas line service valve suitable for flammable liquids (YRBX), LP Gas (YSDT), and Compressed Gas (YQNZ). This economical ball valve is available in 1/4", 3/8", 1/2", 3/4" and 1" female pipe sizes. Parker's ball valve bodies are machined from high quality CA 377 forgings. Consult division for U.L. listings on ball valve options.

Working Pressure and Temperature

The maximum working pressure is not to exceed 250 PSIG, operating temperature 0°-250°F.

Markings

Tag is marked UL and 250 PSIG

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	PUL	-4	-00
Style	V-Valve			
Type	500-Female/Female PTF Ports 501-Male/Female PTF Ports			
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			

Flow Data-XV500PUL Female/Female

VALVE SIZE	CV
1/4	4.0
3/8	5.8
1/2	12.0
3/4	25.0
1	35.0

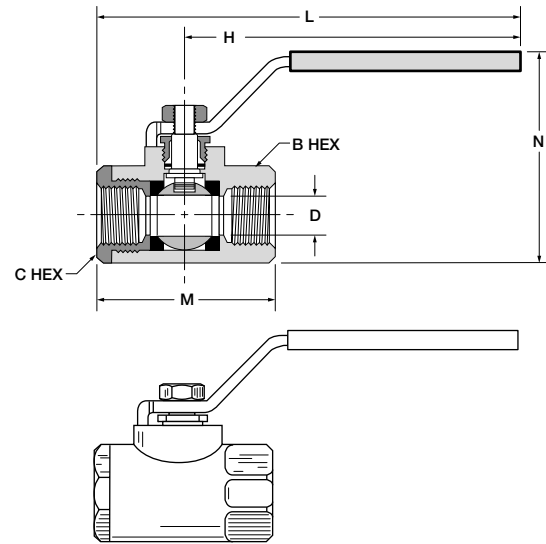
Flow Data-XV501PUL Male/Female

VALVE SIZE	CV
1/4	6.3
3/8	5.7
1/2	10.0
3/4	25.0
1	35.0

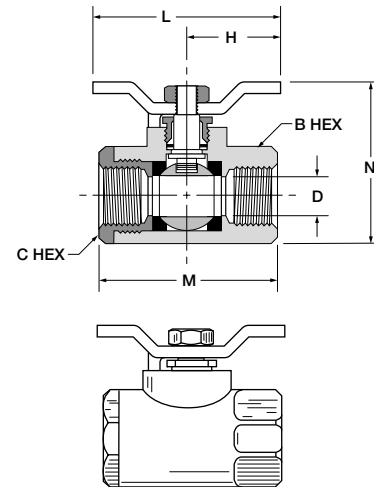
J

UL Listed, Female Pipe Ends XV500PUL

PART NO.	PIPE THREAD [PTF]	B HEX	C HEX	H	L	M	N	FLOW DIA.D
XV500PUL-4	1/4	15/16	15/16	3.96	4.90	2.03	2.47	.375
XV500PUL-6	3/8	15/16	15/16	3.96	4.90	2.03	2.47	.375
XV500PUL-8	1/2*	1-1/16	1-1/16	3.96	5.00	2.20	2.58	.500
XV500PUL-12	3/4**	1-1/4	1-5/16	3.96	5.25	2.42	2.81	.685
XV500PUL-16	1**	1-1/2	1-9/16	3.96	5.34	2.75	3.08	.875

**UL Listed, Tee Handle, Female Pipe Ends XV500PUL-X-04**

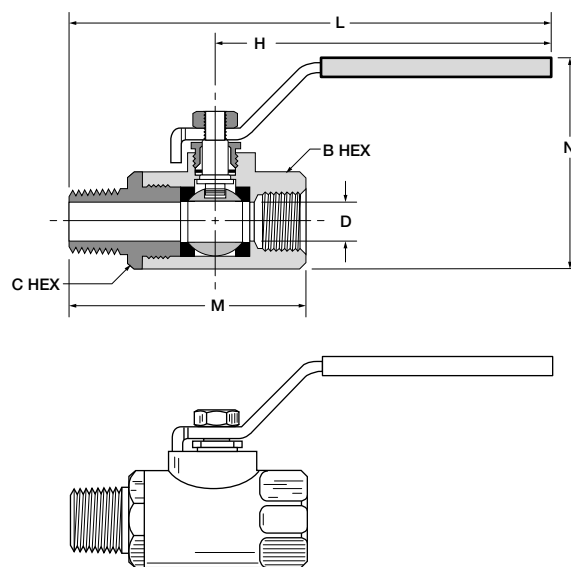
PART NO.	PIPE THREAD [PTF]	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV500PUL-4-04	1/4	15/16	15/16	1.25	2.50	2.03	1.87	.375
XV500PUL-6-04	3/8	15/16	15/16	1.25	2.50	2.03	1.87	.375
XV500PUL-8-04	1/2*	1-1/16	1-1/16	1.25	2.50	2.20	1.98	.500
XV500PUL-12-04	3/4**	1-1/4	1-5/16	1.25	2.50	2.42	2.20	.685
XV500PUL-16-04	1**	1-1/2	1-9/16	1.25	2.50	2.75	2.48	.875



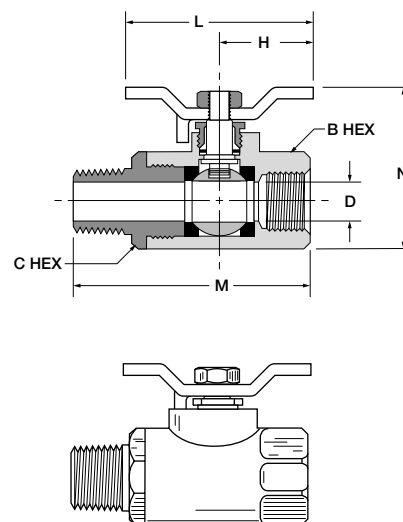
*PTF special short. **PTF special extra short

UL Listed, Male-Female Pipe Ends XV501PUL

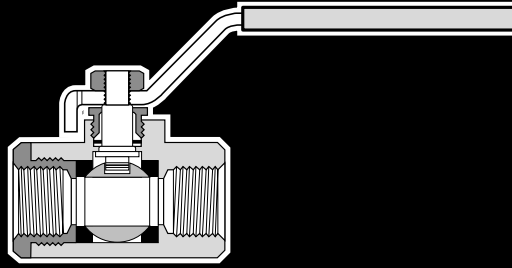
PART NO.	PIPE THREAD [PTF]	B HEX	C HEX	H	L	M	N	FLOW DIA.D
XV501PUL-4	1/4	15/16	15/16	3.96	5.46	2.59	2.47	.344
XV501PUL-6	3/8	15/16	15/16	3.96	5.46	2.59	2.47	.375
XV501PUL-8	1/2*	1 1/16	1 1/16	3.96	5.75	2.94	2.58	.500
XV501PUL-12	3/4**	1 1/4	1 5/16	3.96	5.83	3.00	2.81	.685
XV501PUL-16	1**	1 1/2	1 9/16	3.96	6.19	3.60	3.08	.875

**UL Listed, Tee Handle, Male-Female Pipe Ends XV501PUL-X-04**

PART NO.	PIPE THREAD [PTF]	B HEX	C HEX	H	L	M	N	FLOW DIA.D
XV501PUL-4-04	1/4	15/16	15/16	1.25	2.50	2.59	1.87	.344
XV501PUL-6-04	3/8	15/16	15/16	1.25	2.50	2.59	1.87	.375
XV501PUL-8-04	1/2*	1 1/16	1 1/16	1.25	2.50	2.94	1.98	.500
XV501PUL-12-04	3/4**	1 1/4	1 5/16	1.25	2.50	3.00	2.20	.685
XV501PUL-16-04	1**	1 1/2	1 9/16	1.25	2.50	3.60	2.48	.875

**J**

*PTF special short. **PTF special extra short



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.

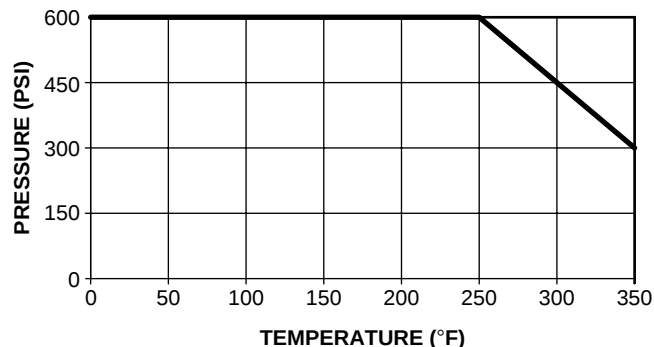
Applications

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

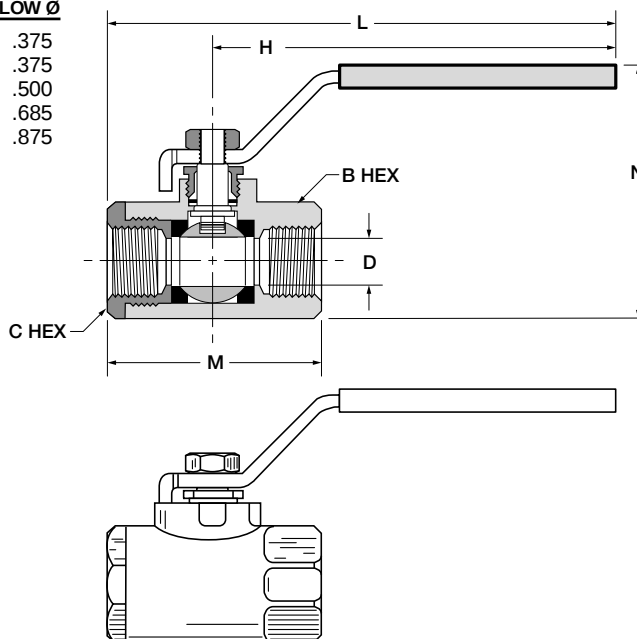
Style	Type	Material	Size
V	506	P	-20
Style	V-Valve		
Type	506 Female/Female		
Material	P- Brass		
Size	20 - 1 1/4" 24 - 1 1/2" 32 - 2"		

Flow Data

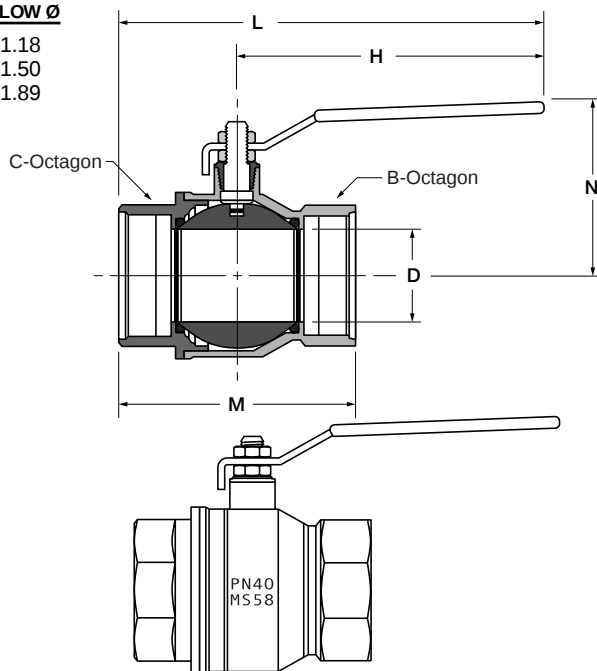
VALVE SIZE	CV
1-1/4	57.0
1-1/2	92.0
2	224.0

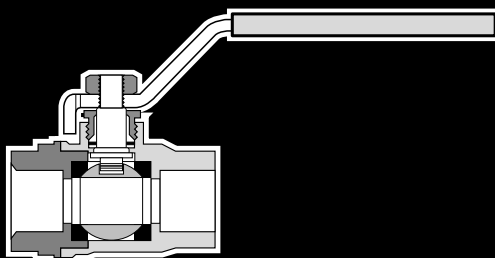
Female/Female, Straight Thread O-Ring Port XV506P

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

**J**



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.

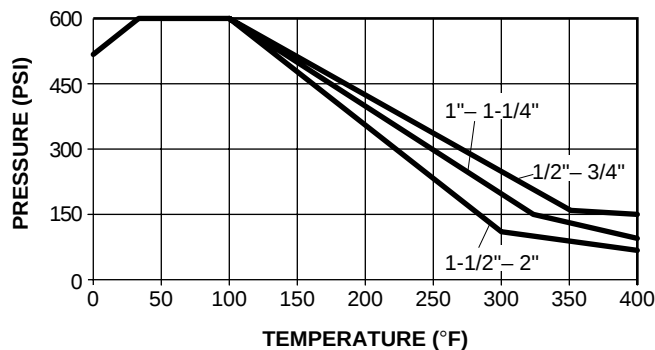
Applications

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 470°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.

Joining Material	Melting Range	Working Temp.	Maximum Working Pressure (PSI)	
	Degrees F	Degrees F	Size 1/2"-1"	Size 1-1/4"-2"
50-50 Tin-Lead Solder	361-421	100	200	175
		150	150	125
		200	100	90
		250	85	75
95-5 Tin Antimony Solder	450-464	100	400	400
		150	400	350
		200	300	250
		250	200	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"		

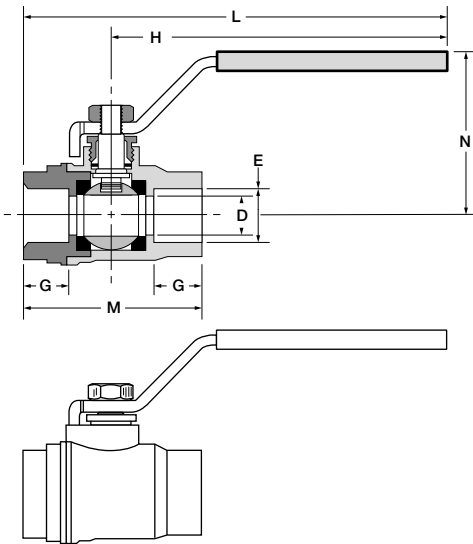
Flow Data

VALVE SIZE	CV
3/4	13.0
1	25.0
1-1/4	36.0
1-1/2	61.0
2	87.0

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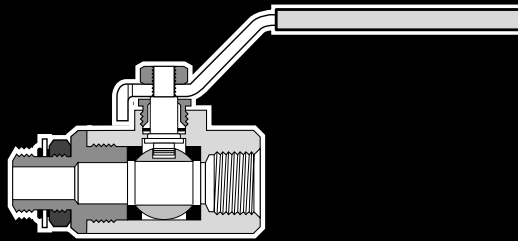
Solder Cup Ends XV509P

PART NO.	TUBE SIZE	E	G	H	L	M	N	FLOW DIA. D
XV509P-8	1/2	0.629	0.49	3.94	5.06	2.07	1.65	0.39
XV509P-12	3/4	0.880	0.75	3.94	5.25	2.64	1.73	0.59
XV509P-16	1	1.130	0.91	4.72	6.35	3.27	2.09	0.79
XV509P-20	1-1/4	1.380	0.96	4.72	6.59	3.74	2.24	0.98
XV509P-24	1-1/2	1.630	1.10	6.22	8.43	4.41	3.03	1.26
XV509P-32	2	2.130	1.34	6.22	8.90	5.37	3.29	1.57



J





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.

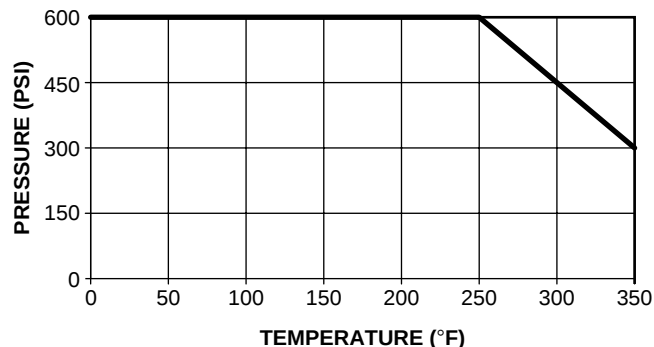
Applications

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 VV-Valve, Vented VVP-Valve, Vented, 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 03-Stainless Steel Ball, Stem, Handle & Nut 04-Tee Handle 08-Unmarked Yellow Vinyl Handle Cover 21-Oval Handle			

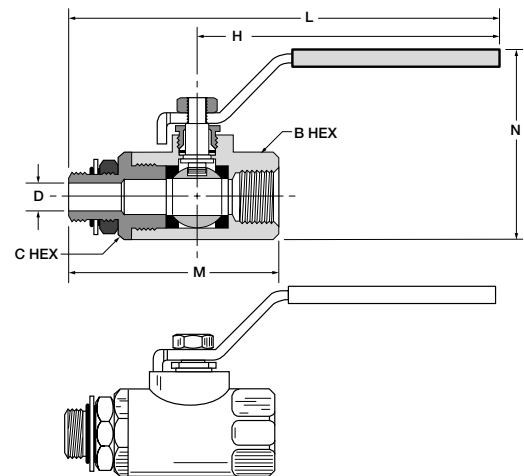
Flow Data

VALVE SIZE	CV
1/4	0.8
3/8	2.1
1/2	5.3
5/8	7.6
3/4	13.0
1	33.0

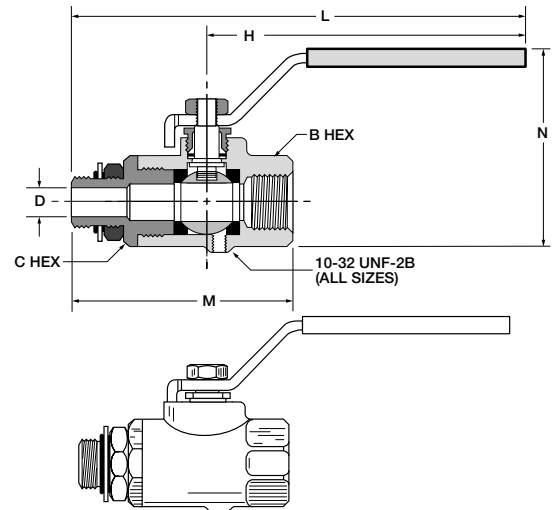
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Male-Female, Straight Thread O-Ring Port XV510P

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

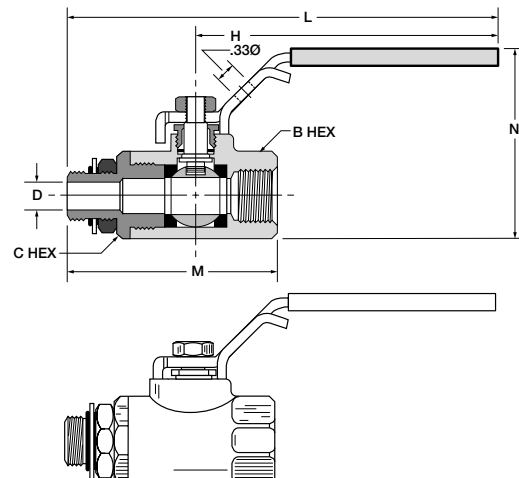
**Vented, Straight Thread O-Ring Port XVV510P**

PART NO.	STRT. THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XVV510P-4	7/16-20	15/16	15/16	3.96	5.61	2.85	2.47	.188
XVV510P-6	9/16-18	15/16	15/16	3.96	5.68	2.92	2.47	.281
XVV510P-8	3/4-16	1-1/16	1-1/16	3.96	5.88	3.17	2.58	.422
XVV510P-10	7/8-14	1-1/4	1-5/16	3.96	6.31	3.90	2.81	.500
XVV510P-12	1-1/16-12	1-1/4	1-5/16	3.96	6.44	4.03	2.81	.656

**J****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

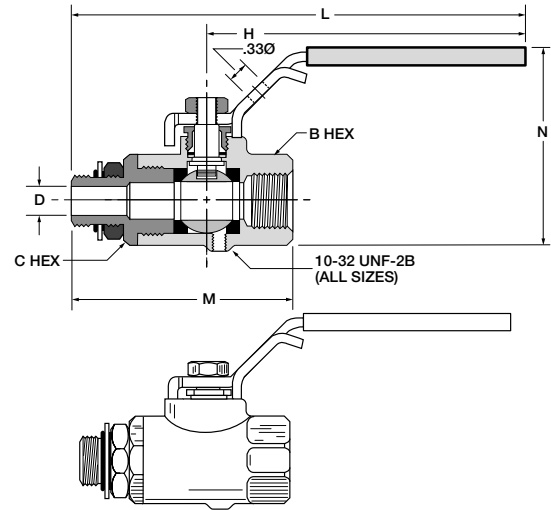
For use with 5/16" Ø shank lock



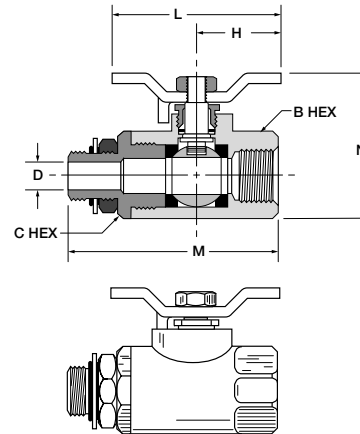
OSHA 29 CFR Part 1910 Vented, Locking Handle, Male-Female, Straight Thread O-Ring Port XVVP510P

PART NO.	STRT. THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XVVP510P-4	7/16-20	15/16	15/16	3.96	5.61	2.85	2.47	.188
XVVP510P-6	9/16-18	15/16	15/16	3.96	5.68	2.92	2.47	.281
XVVP510P-8	3/4-16	1-1/16	1-1/16	3.96	5.88	3.17	2.58	.422
XVVP510P-10	7/8-14	1-1/4	1-5/16	3.96	6.31	3.90	2.81	.500
XVVP510P-12	1-1/16-12	1-1/4	1-5/16	3.96	6.44	4.03	2.81	.656

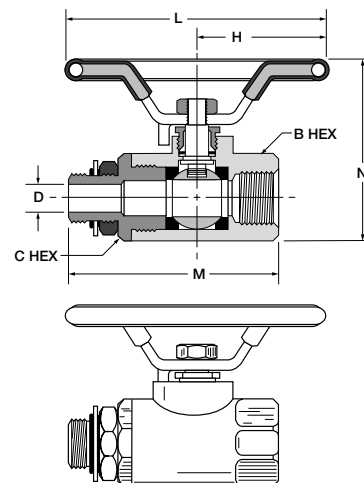
For use with 5/16" Ø shank lock

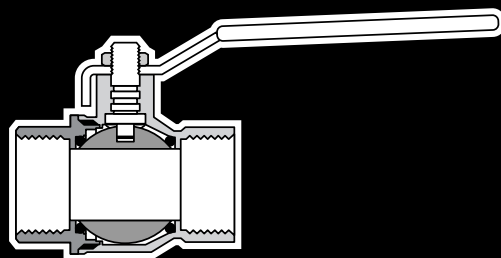
**Tee Handle, Straight Thread O-Ring Port XV510P-X-04**

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

**J**



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 Viton o-rings at the stem provide maximum safety with no maintenance. 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

600 PSI 0° F to +350° F

Saturated steam service up to 150 PSI and 350° F

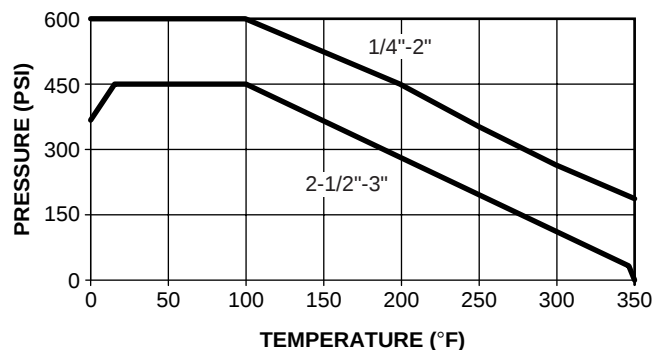
Vacuum, 29 Inches of Mercury

Style	Type	Material	Size
V	520	P	-4
Style	V-Valve		
Type	520-Female/Female NPT Ports		
Material	P- Brass		
Size	4-1/4" 20-1 1/4" 6-3/8" 24-1 1/2" 8-1/2" 32-2" 12-3/4" 16-1"		

Operating Instructions

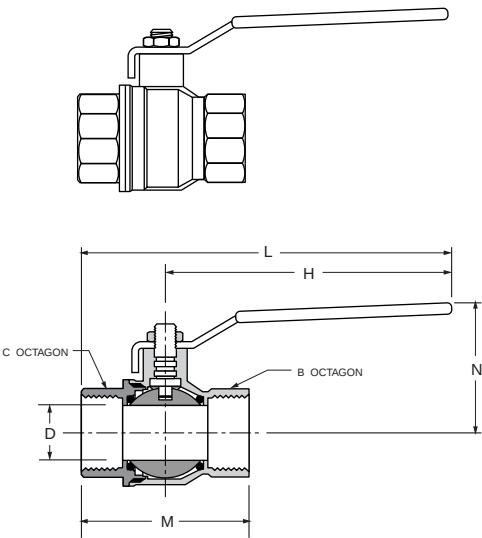
Quarter turn is "ON" or "OFF".

(Provides positive stop action for full shutoff.)



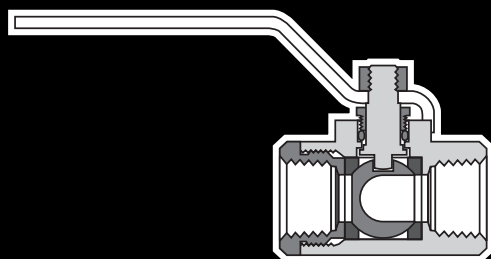
Brass Ball Valve XV520P

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 Diversion

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.

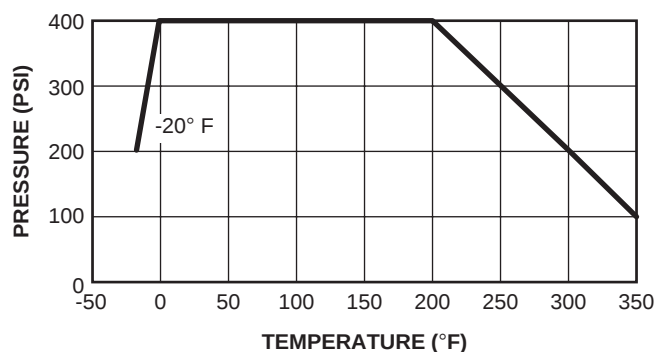
For use on construction equipment, chemical processing, pumps and specialized industrial machinery.

NOTE: Diversion valves do not have off positions, therefore, the center port can not be used for shut-off purposes.

Working Pressure and Temperature

400 PSI and 250° F

Vacuum to 29 inches Hg

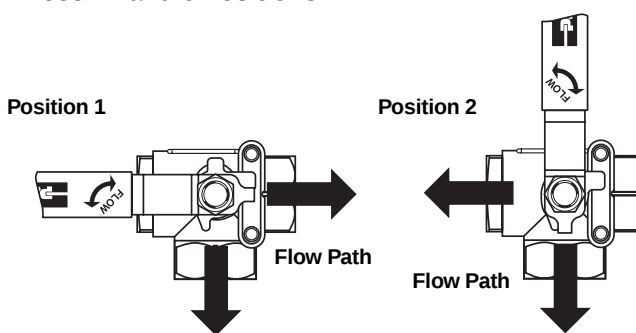


Operating Instructions

Quarter turn diverts flow from center port to either left or right port.

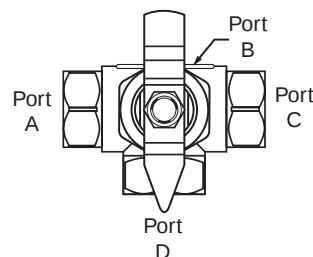
Style	Type	Material	Size	Options
V	533	P	-4	-00
Style	V-Valve			
Type	533 3-Way Diversion, 540 4-Way Diversion			
Material	P-Brass			
Size	4-1/4" 6-3/8" 8-1/2" 12-3/4" 16-1"			
Options	02-Stainless Steel Handle & Nut 08-Unmarked Yellow Vinyl Handle Cover			

XV533P Handle Positions



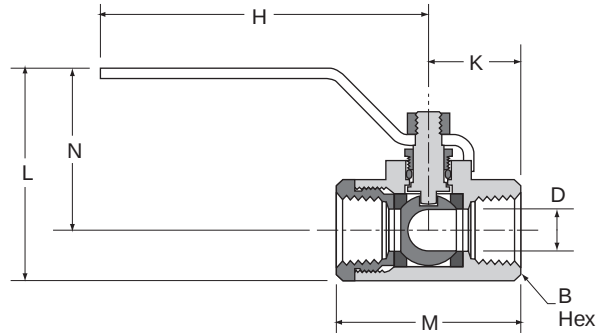
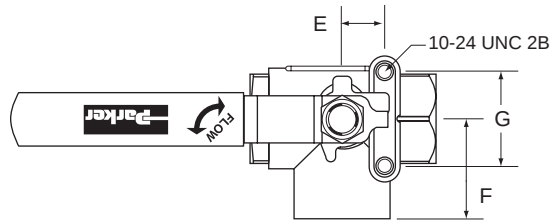
XV540P Handle Positions

Pointer Over	Flow Path
A	A to E
B	Closed
C	C to E
D	D to E

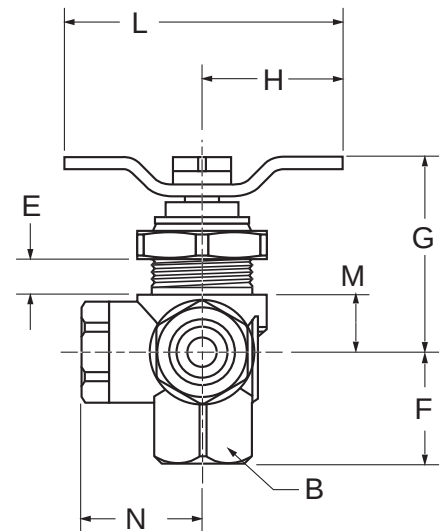
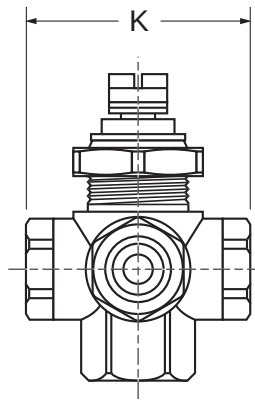
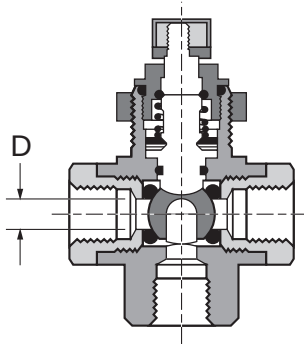


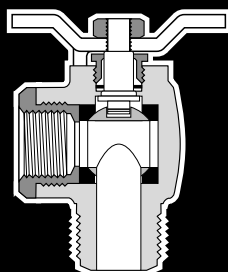
Female-Female-Female Pipe Ends XV533P

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

**J**



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.

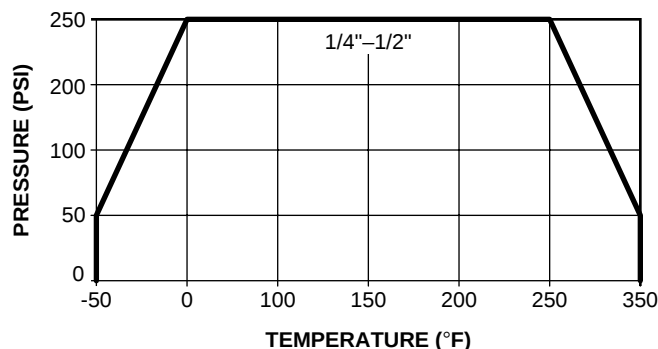
For use as fuel line shutoffs for gasoline and diesel powered over the highway, off highway and construction equipment vehicles. Water and air service lines on capital equipment and plant design plumbing that require total shut-off capability.

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.

Working Pressure and Temperature

Saturated steam service up to 150 PSI and 400° F
Vacuum, 29 Inches of Mercury



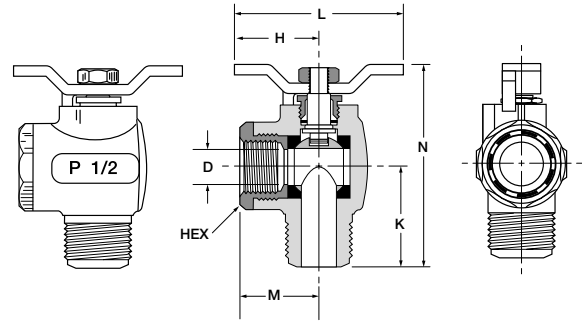
Operating Instructions

Quarter turn is "on" or "off".
(Provides positive stop action for full shut-off.)

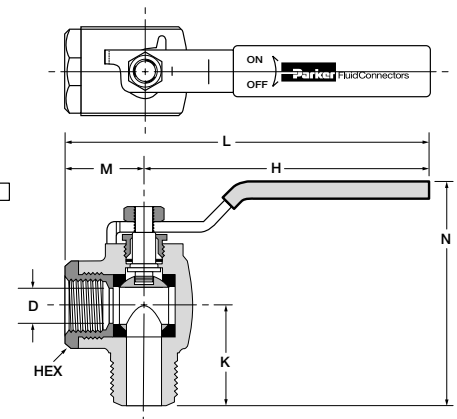
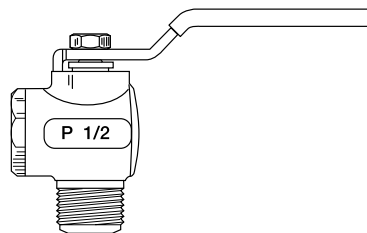
NOTE: PERIODICALLY CHECK THE ADJUSTABLE PACKING NUT AND TIGHTEN AS REQUIRED.

90° Flow, Male-Female Pipe Ends XV590P

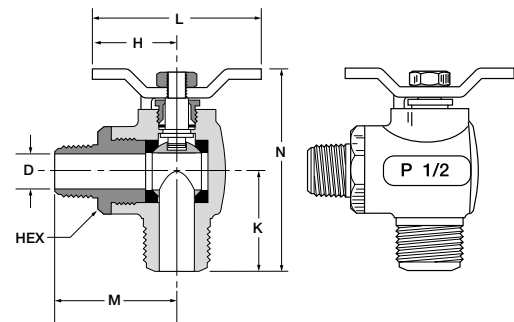
PART NO.	PIPE THREAD	PTF	HEX	H	K	L	M	N	D FLOW Ø
XV590P-4	1/4	15/16	1.25	1.08	2.50	1.00	2.42	.375	
XV590P-6	3/8	15/16	1.25	1.09	2.50	1.00	2.43	.375	
XV590P-8	1/2*	1-1/16	1.25	1.30	2.50	1.08	2.67	.500	

**Lever Handle, 90° Flow, Male-Female Pipe Ends XV590P-X-04**

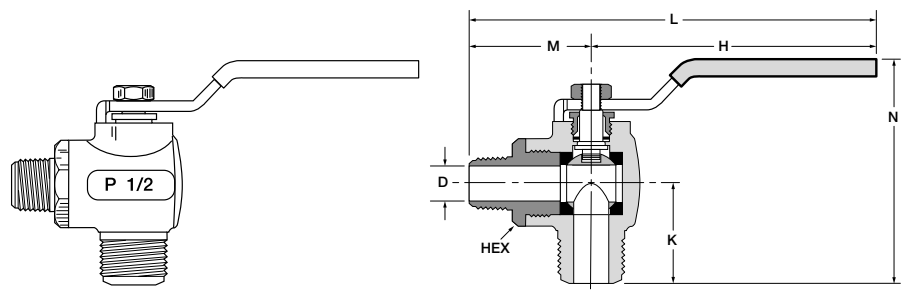
PART NO.	PIPE THREAD	PTF	HEX	H	K	L	M	N	D FLOW Ø
XV590P-4-04	1/4	15/16	3.96	1.08	4.96	1.00	3.02	.375	
XV590P-6-04	3/8	15/16	3.96	1.09	4.96	1.00	3.03	.375	
XV590P-8-04	1/2*	1-1/16	3.80	1.30	4.88	1.08	2.95	.500	

**90° Flow, Male-Male Pipe Ends XV591P**

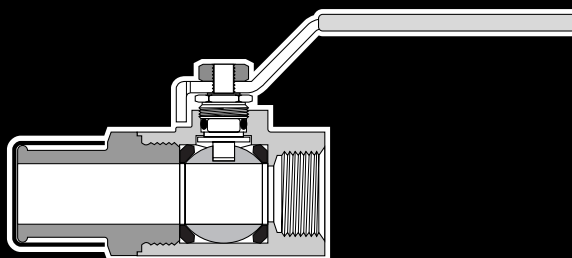
PART NO.	PIPE THREAD	HEX	H	K	L	M	N	D FLOW Ø
XV591P-4	1/4	15/16	1.25	1.08	2.50	1.56	2.42	.375
XV591P-6	3/8	15/16	1.25	1.09	2.50	1.56	2.43	.375
XV591P-8	1/2	1-1/16	1.25	1.30	2.50	1.84	2.67	.500

**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



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.

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.

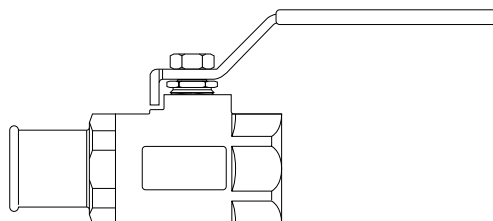
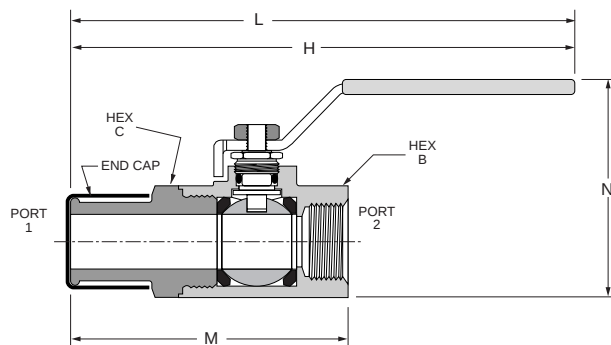
Applications

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.

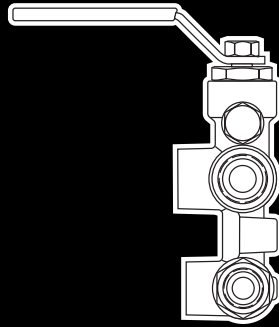
Brass Hose Barb Ball Valve XV500P-HB

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

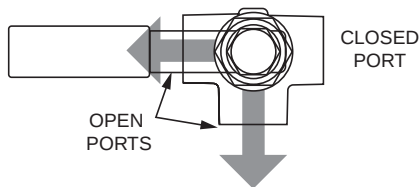
Vacuum, 29 Inches of Mercury

Operating Instructions

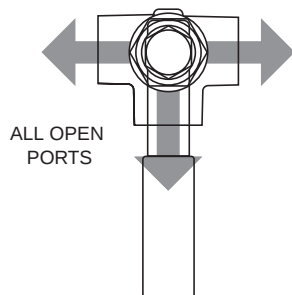
Position handle in quarter-turn increments to desired flow configuration. Detent mechanism assists in accurately positioning handle.

Series 600 Handle Positions

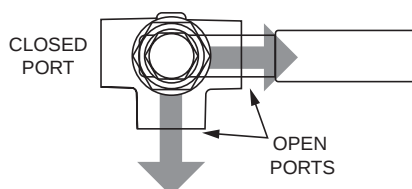
Position 1



Position 2

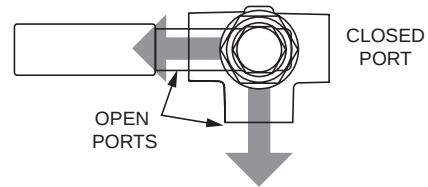


Position 3

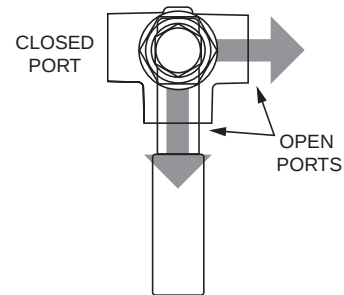


Series 633 Handle Positions

Position 1



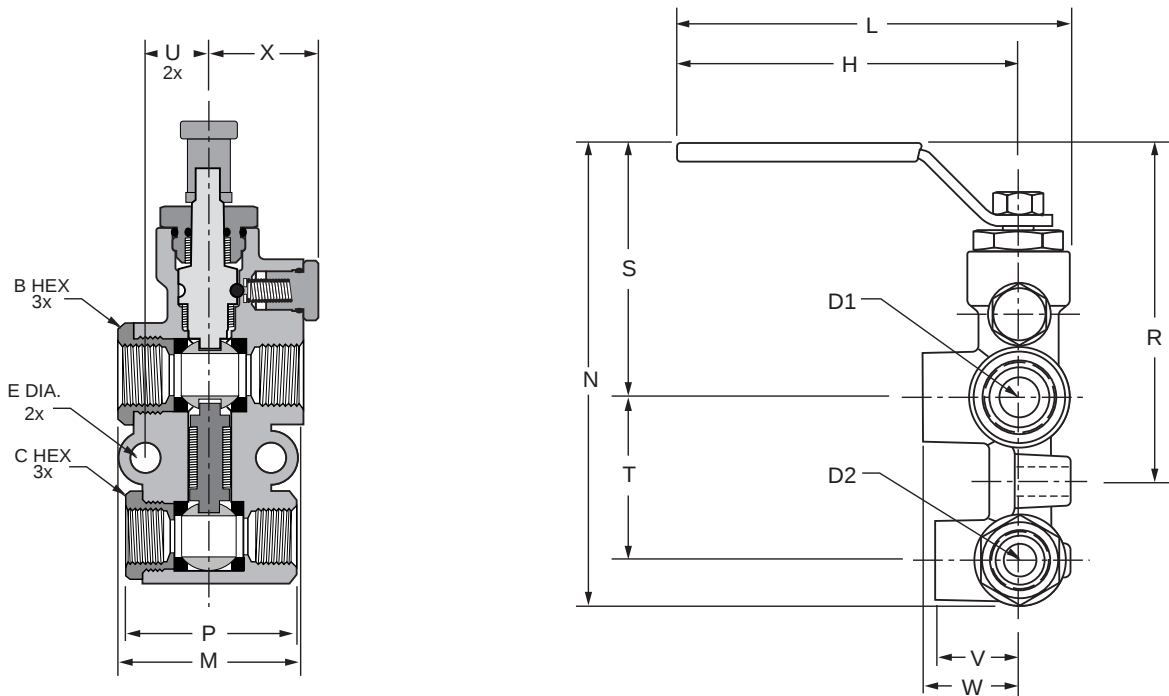
Position 2



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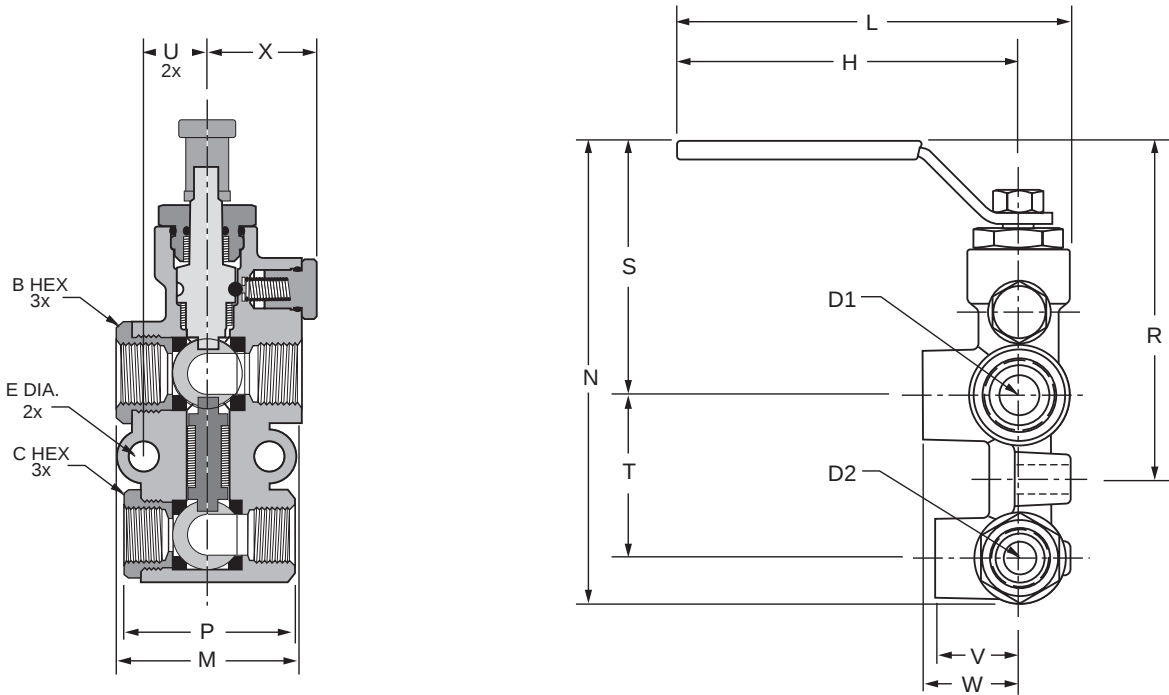
Six Port Diversion Brass Valve XV600P

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

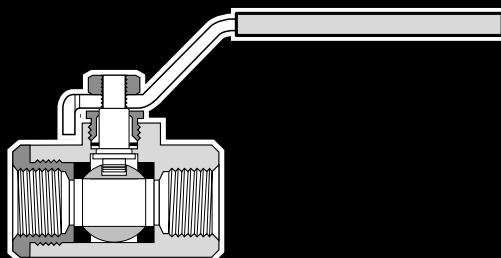


Six Port Diversion Brass Valve XV633P

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.

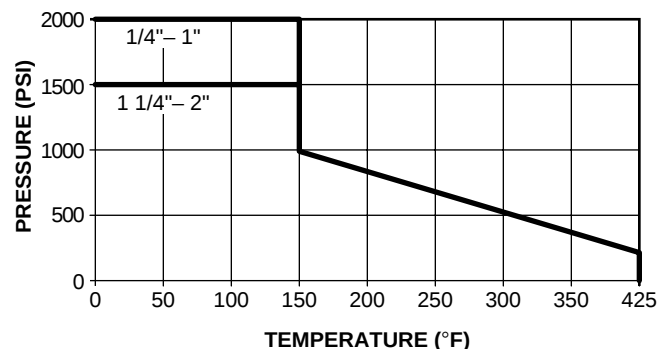
Applications

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			

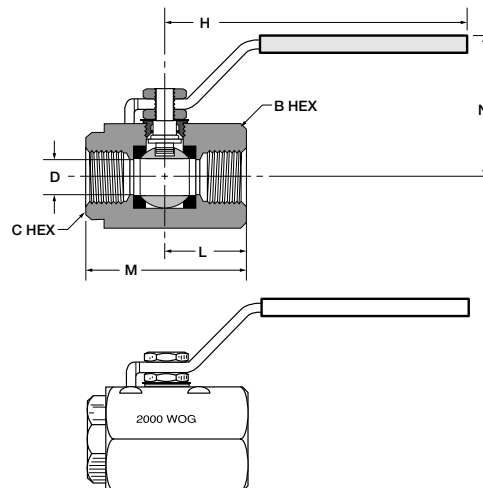
Style	Type	Material	Size	Options
V	502	CS	-20	-00
Style	V-Valve VP-Valve, Padlocking Handle			
Type	502-Female/Female PTF Ports			
Material	CS- Carbon Steel			
Size	20-1 1/4" 24-1 1/2" 32-2"			
Options	04-Tee Handle 21-Oval Handle			

Flow data

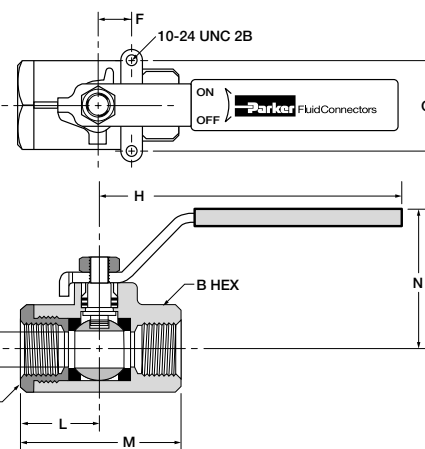
VALVE SIZE	CV
1/4	6.0
3/8	12.0
1/2	15.0
3/4	23.0
1	36.0
1 1/4	44.0
1 1/2	64.0
2	114.0

Female-Female Pipe Ends XV500CS

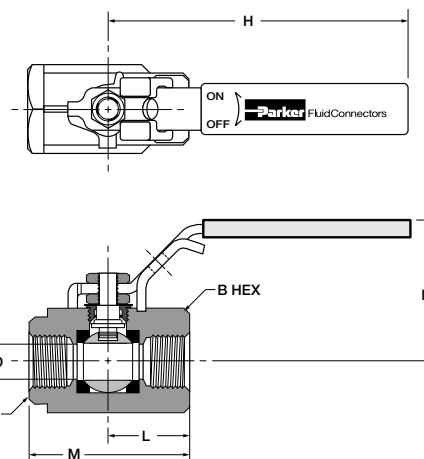
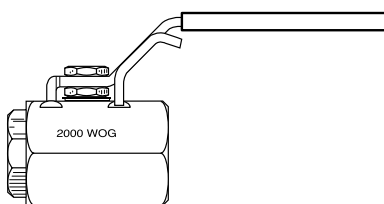
PART NO.	PIPE THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV500CS-4	1/4	1-1/16	15/16	3.78	1.00	2.00	1.63	.400
XV500CS-6	3/8	1-1/16	15/16	3.78	1.00	2.00	1.63	.400
XV500CS-8	1/2	1-1/4	1-1/16	3.78	1.25	2.37	1.73	.540
XV500CS-12	3/4	1-5/8	1-3/8	5.10	1.50	2.90	2.08	.680
XV500CS-16	1	2	1-5/8	5.10	1.76	3.41	2.30	.880

**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

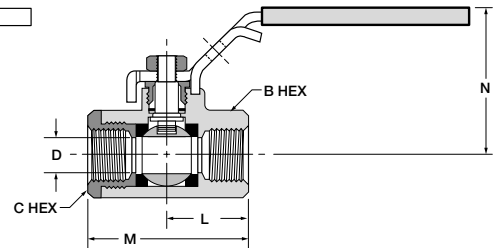
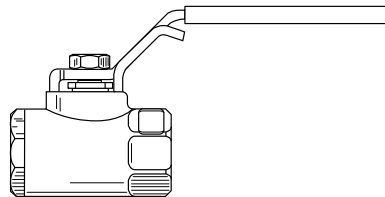
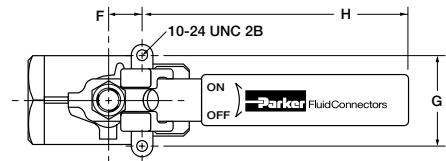
**Locking Handle, Female Pipe Ends XVP500CS**

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

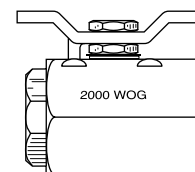
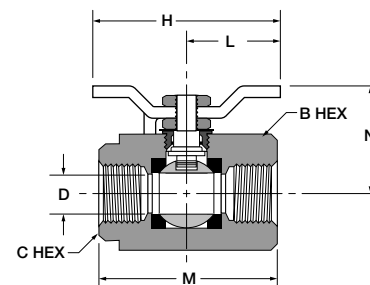
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Locking Handle, Female Pipe Ends, Panel Mount XVP502CS

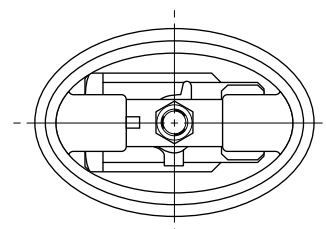
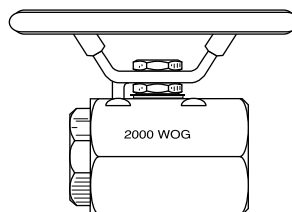
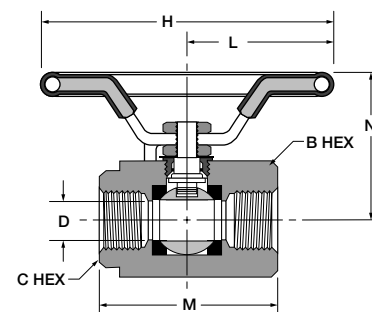
PART NO.	PIPE THREAD	B HEX	C HEX	F	G	H	L	M	N	FLOW DIA. D
XVP502CS-20	1-1/4	2	2-1/4	.94	1.50	7.50	1.87	3.80	3.15	1.000
XVP502CS-24	1-1/2	2-5/16	2-1/2	.94	1.50	7.50	2.27	4.55	3.37	1.250
XVP502CS-32	2	2-3/4	3	1.03	2.00	8.75	2.42	4.83	3.46	1.50

**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

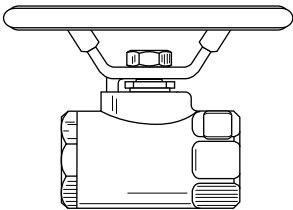
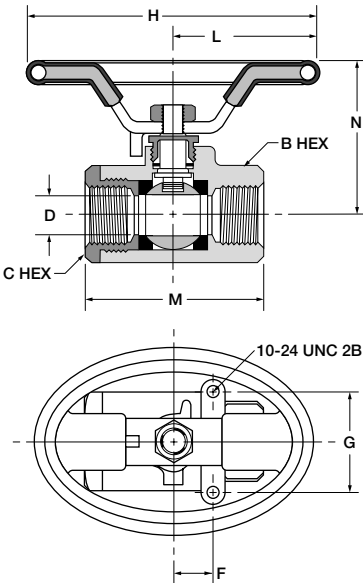
**Oval Handle, Female Pipe Ends XV500CS-X-21**

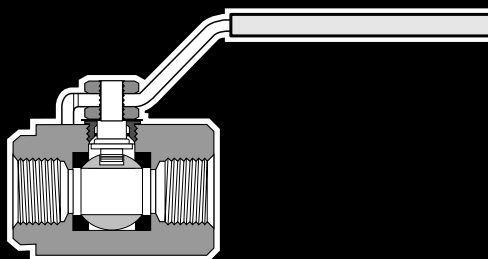
PART NO.	PIPE THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV500CS-4-21	1/4	1-1/16	15/16	3.50	1.00	2.00	1.66	.400
XV500CS-6-21	3/8	1-1/16	15/16	3.50	1.00	2.00	1.66	.400
XV500CS-8-21	1/2	1-1/4	1-1/16	3.50	1.13	2.37	1.76	.540
XV500CS-12-21	3/4	1-5/8	1-3/8	5.00	1.46	2.90	2.13	.680
XV500CS-16-21	1	2	1-5/8	5.00	1.58	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





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

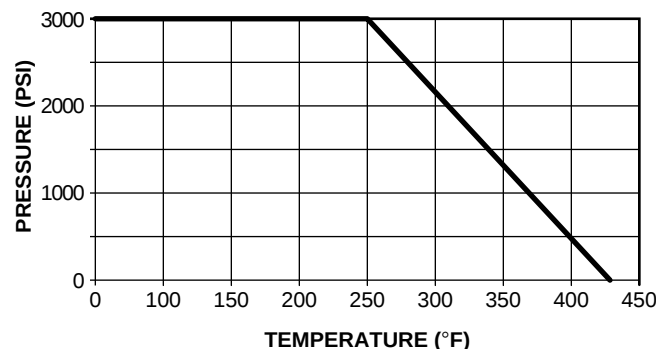
Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the 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"		

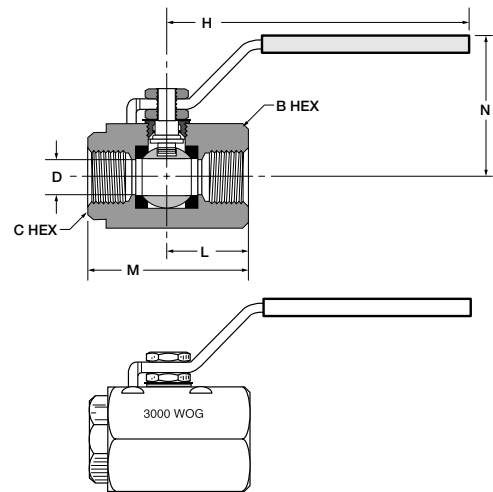
Flow data

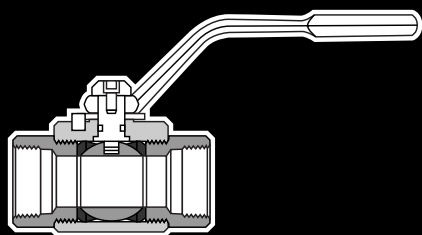
VALVE SIZE	CV
1/4	6.0
3/8	12.0
1/2	15.0
3/4	34.0
1	54.0

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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





High Pressure Carbon Steel Ball Valves Series 500HP/506HP/507HP

Advantages

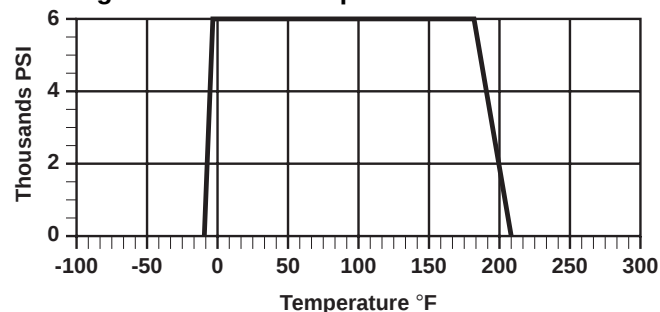
Parker's high pressure carbon steel ball valves feature a round or square body with hex shaped ports for easy installation. Delrin™ seats with Molybdenum disulphide (MoS₂) results in lower actuation torque and will increase high duty life cycle expectancy. The stem seals are Nitrile O-Rings. All sizes 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

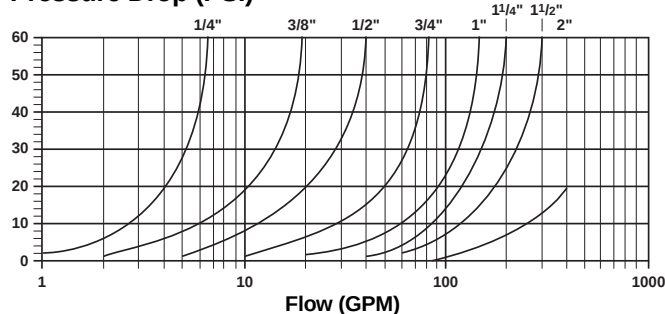
Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the 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.

Working Pressure and Temperature



Pressure Drop (PSI)



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" 16-1" 6-3/8" 20-1 1/4" 8-1/2" 24-1 1/2" 12-3/4" 32-2"		

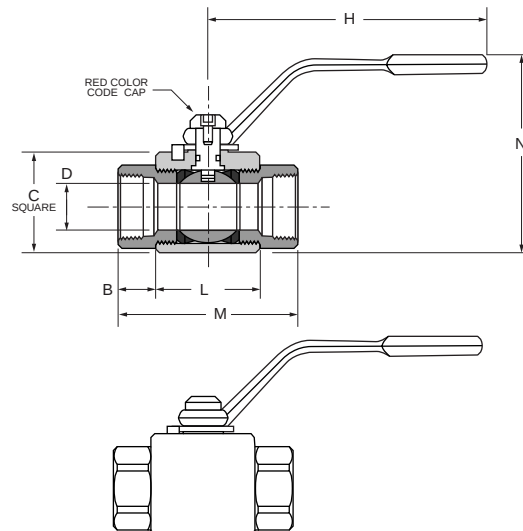
Style	Type	Material	Size
V	506	HP	-20
Style	V-Valve VP-Valve, Padlocking Handle		
Type	506-Female/Female SAE Straight Thread Ports		
Material	HP-High Pressure Carbon Steel		
Size	4-1/4" 16-1" 6-3/8" 20-1 1/4" 8-1/2" 24-1 1/2" 12-3/4" 32-2"		

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		

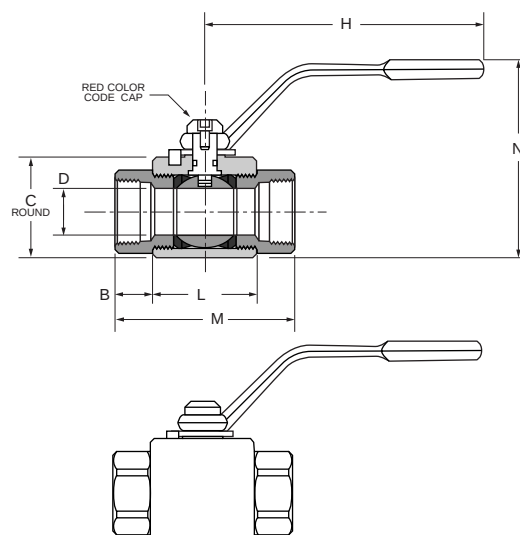
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6000 PSI Female-Female Pipe Ends XV500HP-X

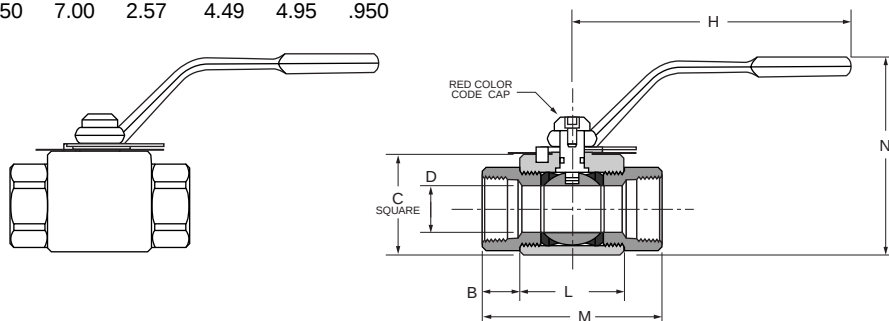
PART NO.	PIPE THREAD [NPT]	B	C	H	L	M	N	FLOW DIA. D
XV500HP-4	1/4-18	.67	1.38	4.50	1.39	2.74	2.98	.240
XV500HP-6	3/8-18	.60	1.50	4.50	1.65	2.87	3.11	.390
XV500HP-8	1/2-14	.75	1.63	4.50	1.85	3.35	3.23	.510
XV500HP-12	3/4-14	.70	2.25	7.00	2.40	3.80	4.70	.790
XV500HP-16	1-11.5	.96	2.50	7.00	2.57	4.49	4.95	.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

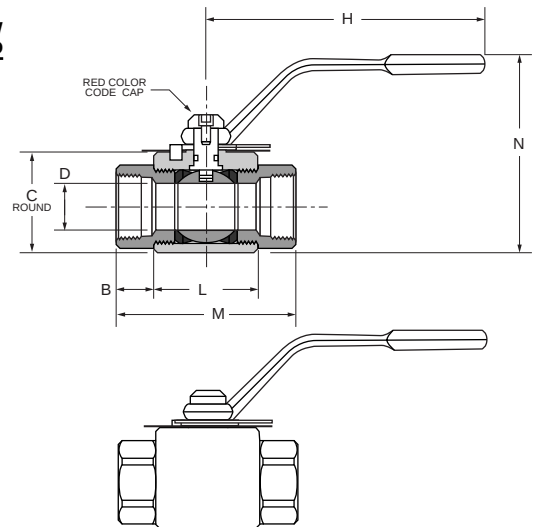
**6000 PSI Locking-Female-Female Pipe Ends XVP500HP-X**

PART NO.	PIPE THREAD [NPT]	B	C	H	L	M	N	FLOW DIA. D
XVP500HP-4	1/4-18	.67	1.38	4.50	1.39	2.74	2.98	.240
XVP500HP-6	3/8-18	.60	1.50	4.50	1.65	2.87	3.11	.390
XVP500HP-8	1/2-14	.75	1.63	4.50	1.85	3.35	3.23	.510
XVP500HP-12	3/4-14	.70	2.25	7.00	2.40	3.80	4.70	.790
XVP500HP-16	1-11.5	.96	2.50	7.00	2.57	4.49	4.95	.950

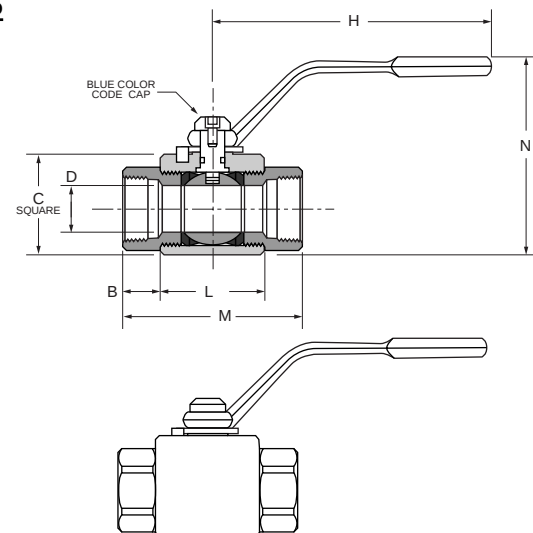


6000 PSI Locking-Female-Female Pipe Ends XVP500HP-X (LARGE)

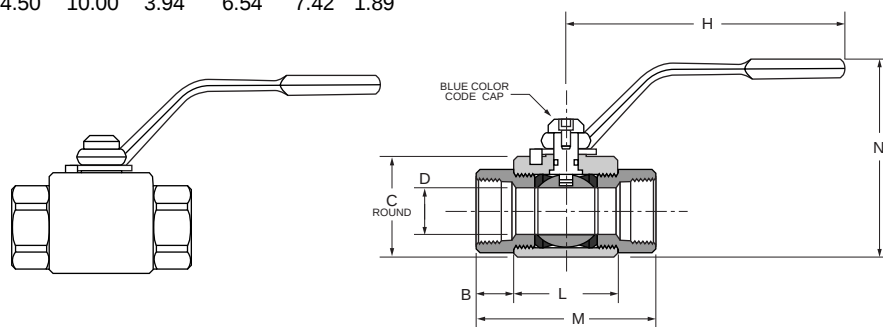
PART NO.	PIPE THREAD [NPT]	B	C	H	L	M	N	FLOW DIA. D
XVP500HP-20	1 1/4-11.5	.85	3.25	10.00	3.15	4.84	6.31	1.26
XVP500HP-24	1 1/2-11.5	.99	3.75	10.00	3.35	5.33	6.76	1.50
XVP500HP-32	2-11.5	1.30	4.50	10.00	3.94	6.54	7.42	1.89

**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	.67	1.38	4.50	1.39	2.74	2.98	.240
XV506HP-6	9/16-18 UNF	.60	1.50	4.50	1.65	2.87	3.11	.390
XV506HP-8	3/4-16 UNF	.75	1.63	4.50	1.85	3.35	3.23	.510
XV506HP-12	1 1/16-12 UNF	.70	2.25	7.00	2.40	3.80	4.70	.790
XV506HP-16	1 5/16-12 UNF	.96	2.50	7.00	2.57	4.49	4.95	.950

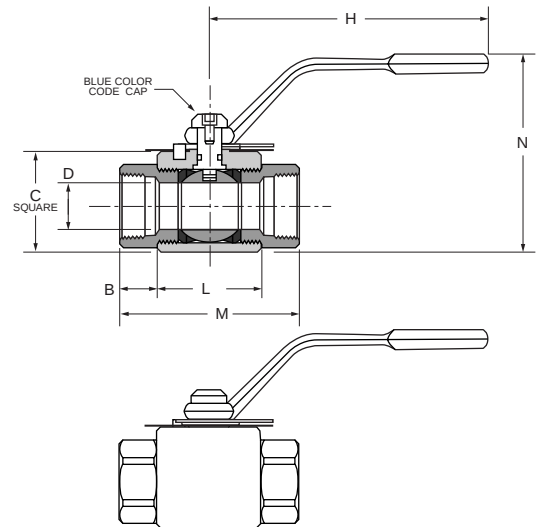
**6000 PSI Female-Female Straight Thread Ends XV506HP-X (LARGE)**

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

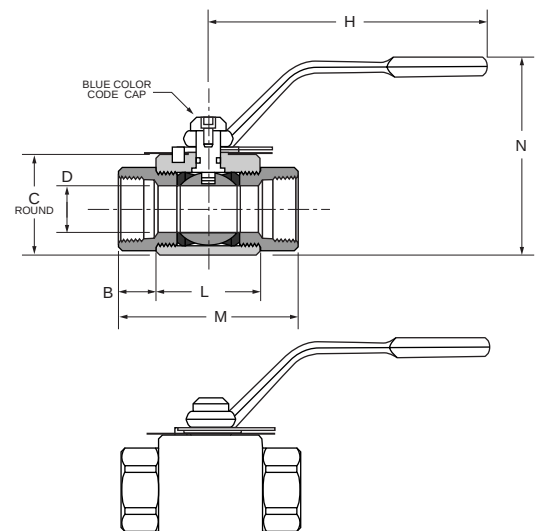
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6000 PSI Locking-Female-Female Straight Thread Ends XVP506HP-X

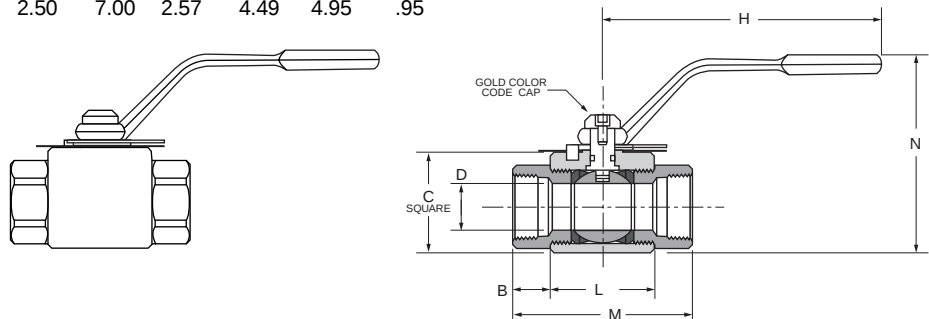
PART NO.	SAE J1926-1 THREAD	B	C	H	L	M	N	FLOW DIA. D
XVP506HP-4	7/16-20 UNF	.67	1.38	4.50	1.39	2.74	2.98	.240
XVP506HP-6	9/16-18 UNF	.60	1.50	4.50	1.65	2.87	3.11	.390
XVP506HP-8	3/4-16 UNF	.75	1.63	4.50	1.85	3.35	3.23	.510
XVP506HP-12	1 1/16-12 UNF	.70	2.25	7.00	2.40	3.80	4.70	.790
XVP506HP-16	1 5/16-12 UNF	.96	2.50	7.00	2.57	4.49	4.95	.950

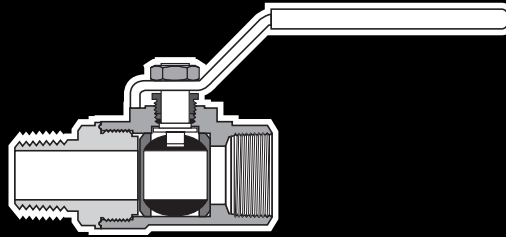
**6000 PSI Locking-Female-Female Straight Thread Ends XVP506HP-X (LARGE)**

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

**6000 PSI Female / Female ISO 6149 Ports XV507HP-X**

PART NO.	ISO 6149 PORT	B	C	H	L	M	N	FLOW DIA. D
XV507HP-M16	M16X1.5	.60	1.50	4.50	1.65	2.87	3.11	.39
XV507HP-M18	M18X1.5	.75	1.63	4.50	1.85	3.35	3.23	.51
XV507HP-M27	M27X2	.70	2.25	7.00	2.40	3.80	4.70	.79
XV507HP-M33	M33X2	.96	2.50	7.00	2.57	4.49	4.95	.95





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.

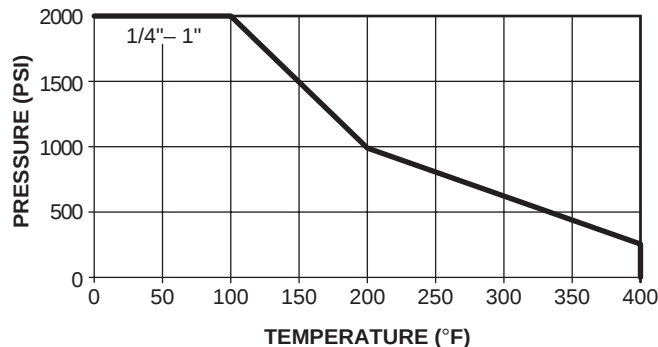
Applications/Approvals

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"			

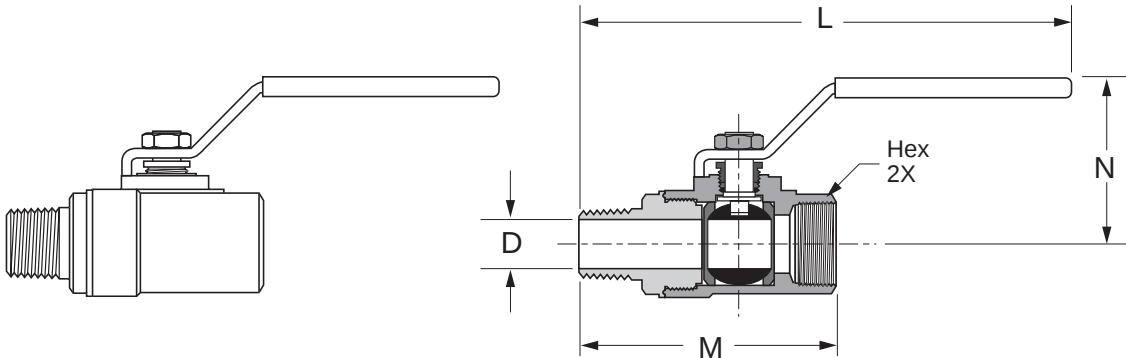
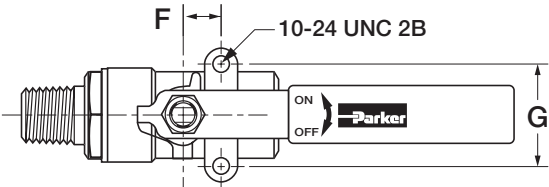
Flow data

VALVE SIZE	CV
1/4	4.0
3/8	6.0
1/2	14.0
3/4	35.0
1	54.0

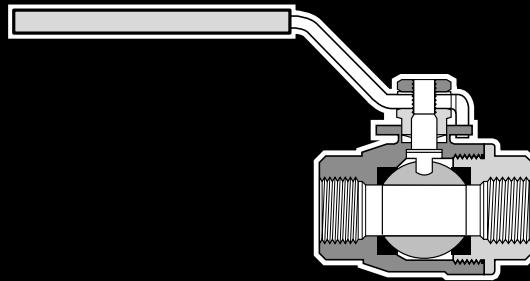
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Male-Female Pipe Ends XV501SS

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

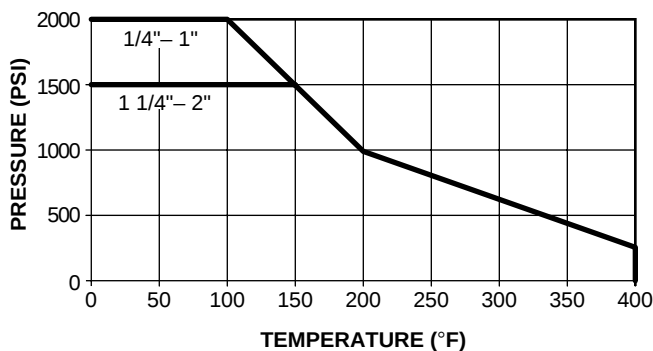
Parker's Cast Body is manufactured from CF-8M Stainless Steel, the cast equivalent of 316 Stainless Steel. They are ideal for corrosive environments such as chemical plants and refineries. The full flow design assures maximum operating efficiency. The reinforced PTFE seats and seals, coupled with the 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.)

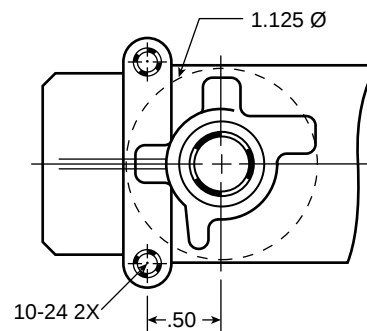
NOTE: PERIODICALLY CHECK THE ADJUSTABLE PACKING NUT AND TIGHTEN AS REQUIRED.

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

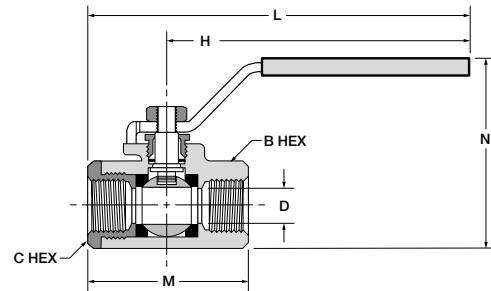
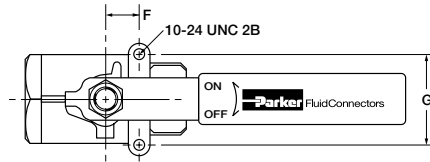
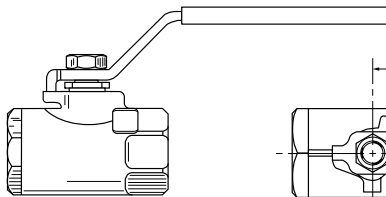
VALVE SIZE	CV
1/4	4.0
3/8	6.0
1/2	14.0
3/4	35.0
1	54.0
1 1/4	74.0
1 1/2	120.0
2	226.0

502SS Mounting detail

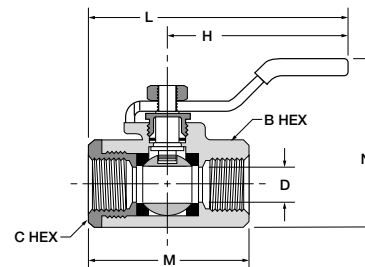
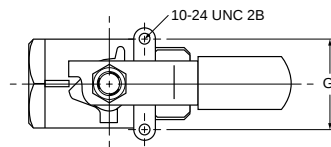
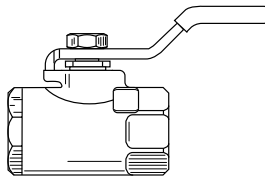


Female Pipe Ends, Panel Mount XV502SS

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

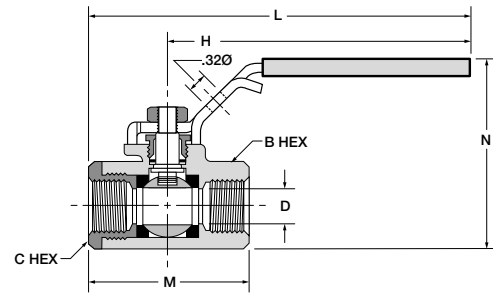
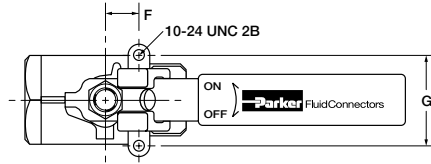
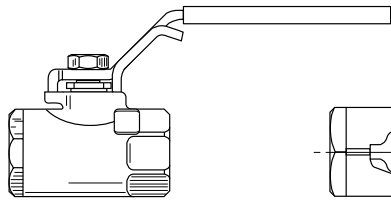
**Short Handle, Female Pipe Ends, Panel Mount XV502SS-X-20**

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

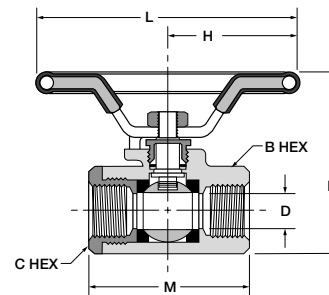
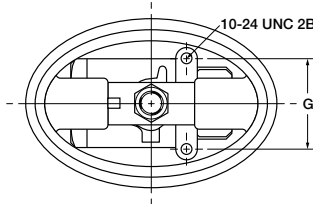
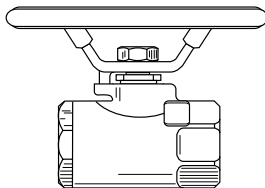
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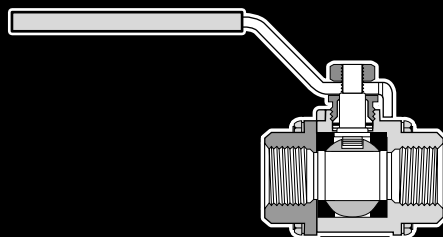
Locking Handle, Female Pipe Ends, Panel Mount XVP502SS

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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Stainless Steel Swing-Out Ball Valves Series 504SS

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"-2" female pipe thread sizes. Direct access for cleaning or maintenance is performed by removing one bolt, loosening the other three bolts, and swinging out the center section. Seats and seals can then be replaced without disturbing pipe alignment.

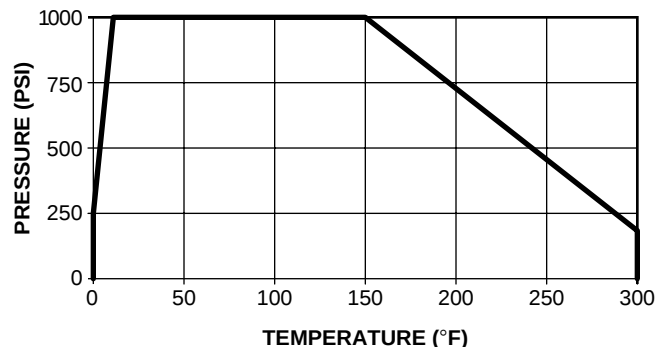
Applications/Approvals

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.

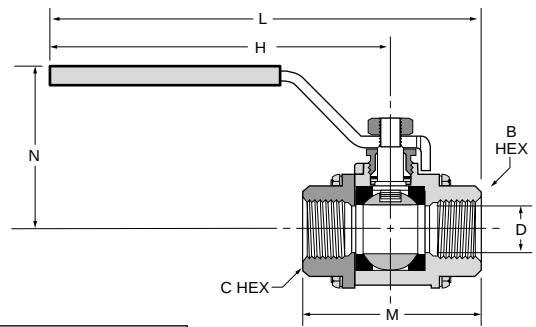
Style	Type	Material	Size
V	504	SS	-4
Style	V-Valve VP-Valve, Padlocking Handle		
Type	504-Female/Female NPT Ports		
Material	SS- Stainless Steel		
Size	4-1/4" 6-3/8" 8-1/2" 12-3/4" 16-1" 20- 1 1/4" 24- 1 1/2" 32- 2"		
Options	21-Oval Handle		

Repair Service Kits SK504SS-X-TFE

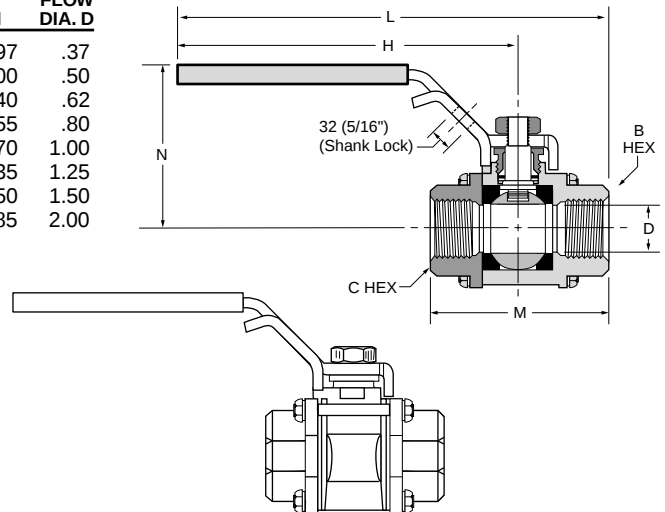
PART NO.	VALVE SIZE
SK504SS-4-TFE	1/4
SK504SS-6-TFE	3/8
SK504SS-8-TFE	1/2
SK504SS-12-TFE	3/4
SK504SS-16-TFE	1
SK504SS-20-TFE	1 1/4
SK504SS-24-TFE	1 1/2
SK504SS-32-TFE	2

Female-Female Pipe Ends XV504SS

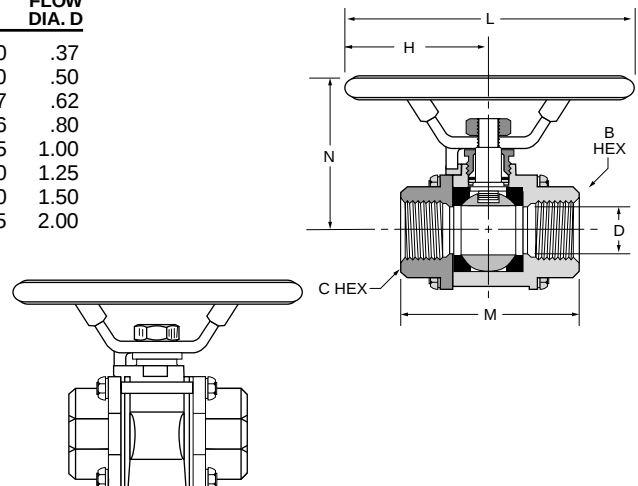
PART NO.	PIPE THREAD [NPT]	B HEX	C HEX	H	L	M	N	FLOW DIA. D
XV504SS-4	1/4	3/4	3/4	4.0	5.28	2.56	1.97	.37
XV504SS-6	3/8	15/16	15/16	4.0	5.28	2.56	2.00	.50
XV504SS-8	1/2	1-1/16	1-1/16	5.5	6.91	2.82	2.40	.62
XV504SS-12	3/4	1-3/8	1-3/8	5.5	7.17	3.35	2.55	.80
XV504SS-16	1	1-5/8	1-5/8	5.5	7.37	3.74	2.70	1.00
XV504SS-20	1-1/4	2	2	7.0	9.16	4.33	3.35	1.25
XV504SS-24	1-1/2	2-9/32	2-9/32	7.0	9.43	4.86	3.50	1.50
XV504SS-32	2	2-27/32	2-27/32	7.0	9.75	5.51	3.85	2.00

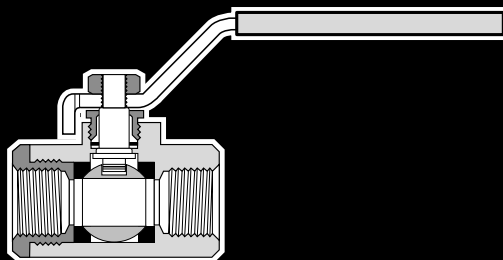
**Locking Handle, Female-Female Pipe Ends XVP504SS**

PART NO.	PIPE THREAD [NPT]	B HEX	C HEX	H	L	M	N	FLOW DIA. D
XVP504SS-4	1/4	3/4	3/4	4.0	5.28	2.56	1.97	.37
XVP504SS-6	3/8	15/16	15/16	4.0	5.28	2.56	2.00	.50
XVP504SS-8	1/2	1-1/16	1-1/16	5.5	6.91	2.82	2.40	.62
XVP504SS-12	3/4	1-3/8	1-3/8	5.5	7.17	3.35	2.55	.80
XVP504SS-16	1	1-5/8	1-5/8	5.5	7.37	3.74	2.70	1.00
XVP504SS-20	1 1/4	2	2	7.0	9.16	4.33	3.35	1.25
XVP504SS-24	1 1/2	2-9/32	2-9/32	7.0	9.43	4.86	3.50	1.50
XVP504SS-32	2	2-27/32	2-27/32	7.0	9.75	5.51	3.85	2.00

**Oval Handle, Female-Female Pipe Ends XV504SS-X-21**

PART NO.	PIPE THREAD [NPT]	B HEX	C HEX	H	L	M	N	FLOW DIA. D
XV504SS-4-21	1/4	3/4	3/4	1.74	3.49	2.56	1.80	.37
XV504SS-6-21	3/8	15/16	15/16	1.74	3.49	2.56	1.80	.50
XV504SS-8-21	1/2	1-1/16	1-1/16	2.68	5.35	2.81	2.47	.62
XV504SS-12-21	3/4	1-3/8	1-3/8	2.68	5.35	3.35	1.56	.80
XV504SS-16-21	1	1-5/8	1-5/8	2.68	5.35	3.74	2.65	1.00
XV504SS-20-21	1-1/4	2	2	3.27	6.54	4.33	3.30	1.25
XV504SS-24-21	1-1/2	2-9/32	2-9/32	3.27	6.54	4.86	3.50	1.50
XV504SS-32-21	2	2-27/32	2-27/32	3.27	6.54	5.51	3.85	2.00

**J**



Female/Female Straight Thread Stainless Steel Ball Valves Series 506SS

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, 3/4", 1", 1-1/4", 1-1/2" and 2" female straight thread sizes.

Applications/Approvals

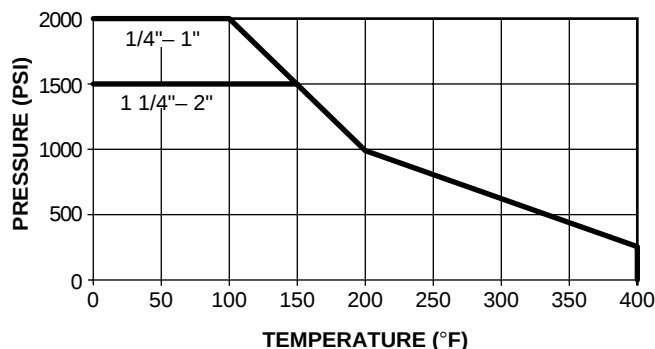
Parker's industrial ball valve product line is intended for general purpose use. Please be aware that ball valves are intended for use in the fully open or closed positions. Depending on application conditions, throttling of the valve may result in premature seal failure and/or inability to turn the valve handle.

Applications include chemical plants, refineries, steel mills, industrial fuel lines and agricultural equipment. Meets material requirements of NACE MR-01-75.

Style	Type	Material	Size
V	506	SS	-4
Style	V-Valve		
Type	506-Female/Female Straight Thread		
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"		

Flow data 506SS

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



Working Pressure/Temperature

Saturated steam service rating up to 150 PSI and 400° F.

Operating Instructions

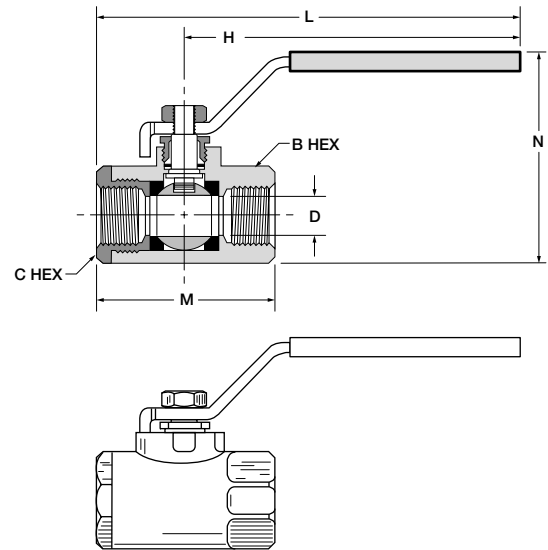
Quarter turn is "ON" or "OFF".

(Provides positive stop action for full shutoff.)

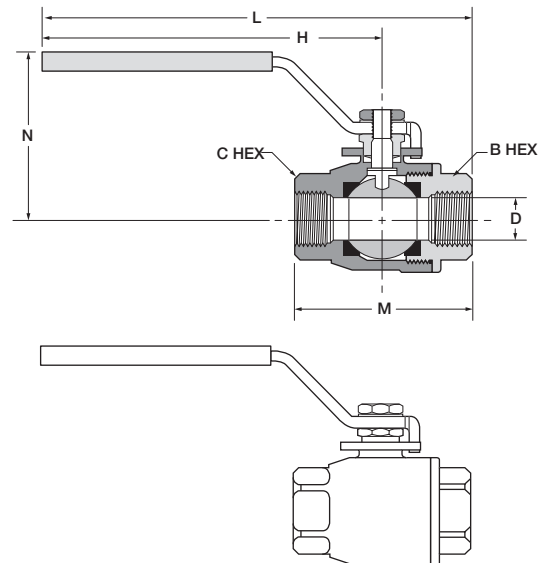
NOTE: PERIODICALLY CHECK THE ADJUSTABLE PACKING NUT AND TIGHTEN AS REQUIRED.

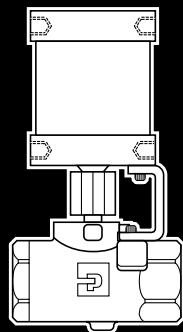
Female/Female, Straight Thread O-Ring Port XV506SS

PART NO.	STRT. THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV506SS-4	7/16-20	15/16	15/16	4.00	5.10	2.17	2.52	.375
XV506SS-6	9/16-18	15/16	15/16	4.00	5.10	2.17	2.52	.375
XV506SS-8	3/4-16	1-1/16	1-1/16	4.00	5.25	2.47	2.70	.500
XV506SS-12	1-1/16-12	1-1/4	1-5/16	5.00	6.67	3.35	3.42	.787
XV506SS-16	1-5/16-12	1-1/2	1-9/16	5.00	6.77	3.54	3.81	1.000

**Female/Female, Straight Thread O-Ring Port XV506SS-20, XV506SS-24, XV506SS-32**

PART NO.	STRT. THREAD	B HEX	C HEX	H	L	M	N	D FLOW Ø
XV506SS-20	1 5/8-12	1.93	1.93	7.00	9.000	4.000	3.27	1.25
XV506SS-24	1 7/8-12	2.13	2.13	7.00	9.185	4.375	3.45	1.50
XV506SS-32	2 1/2-12	2.85	2.85	7.00	9.750	5.500	3.81	2.00

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Rotary Actuator Ball Valves Series ACT

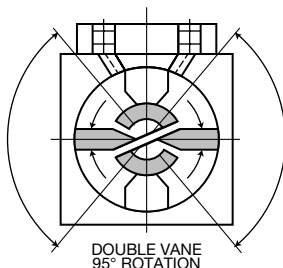
Parker... Leading the Industry

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.



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.

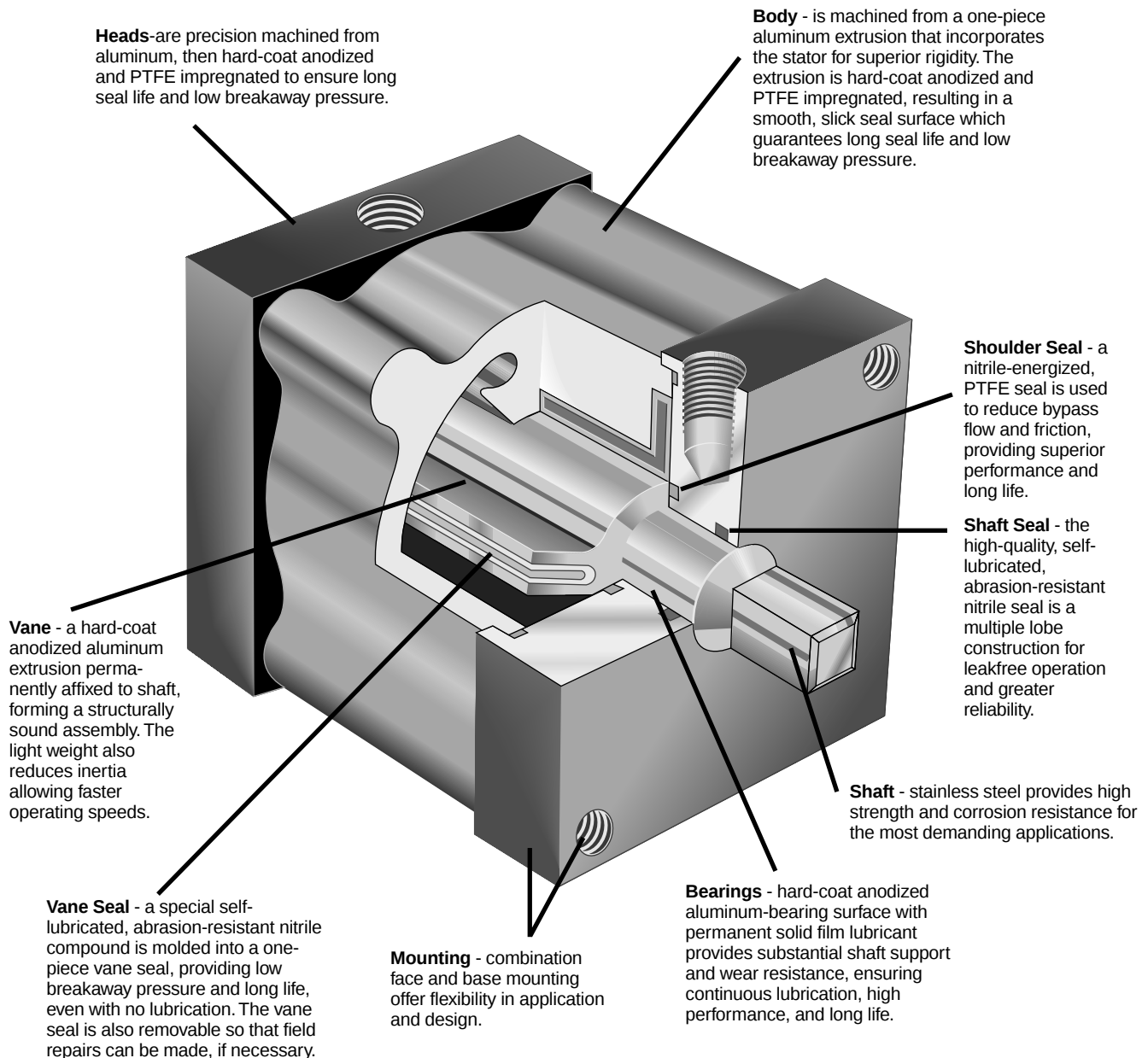
Where Can Parker Rotary Actuator Ball Valves Be Used?

- 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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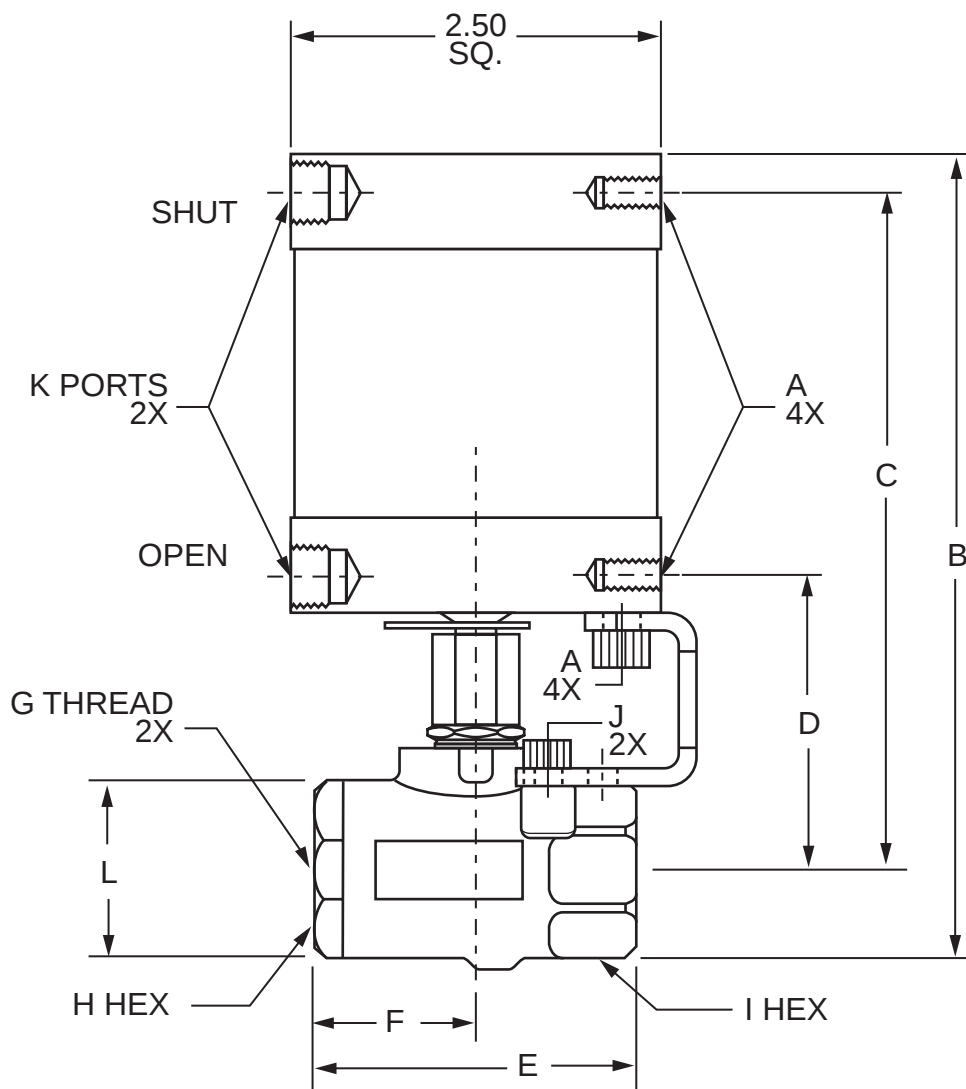
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Rotary Actuator, Female Pipe Ends XV502P-X-ACT

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



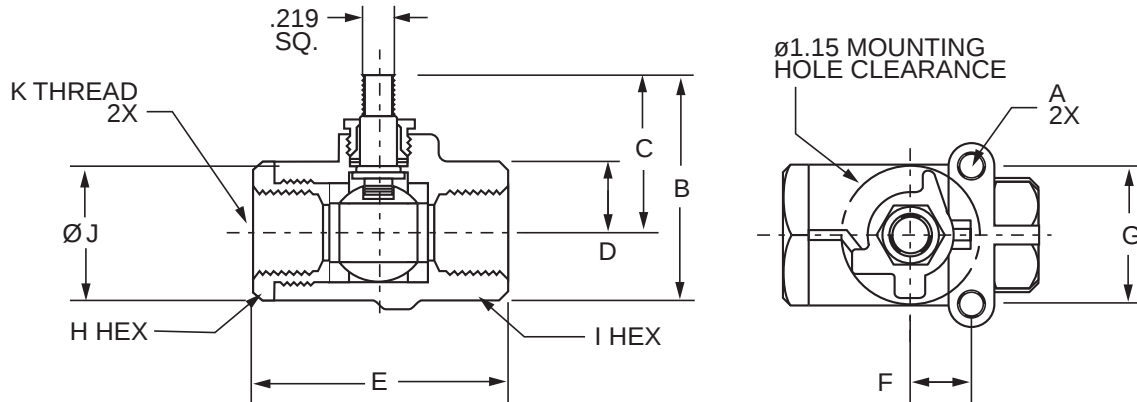
*PTF special short. **PTF special extra short

Actuator Sub-Assembly XV502P-X-SUB

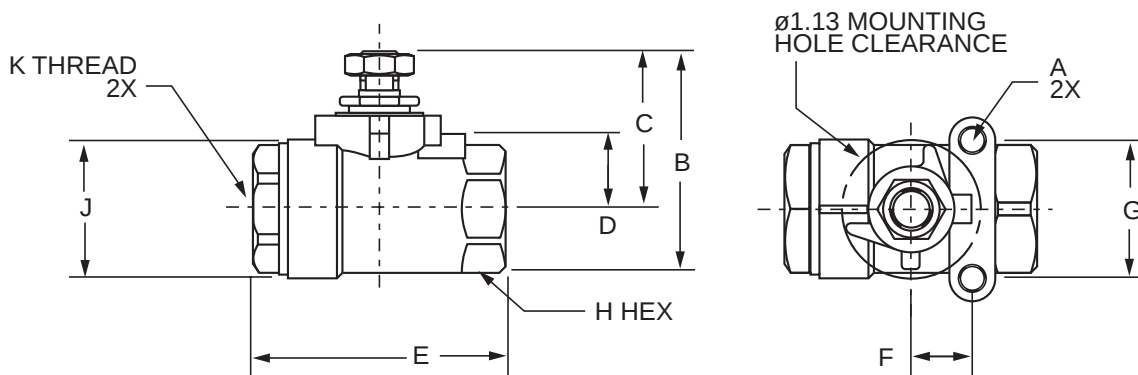
PART . NO	SIZE	A UNC	B	C	D	E	F	G	H HEX	I HEX	J	K
XV502P-4-SUB	1/4	10-24	1.68	1.15	.495	2.03	.50	1.12	15/16	15/16	1.06	1/4-18 PTF
XV502P-6-SUB	3/8	10-24	1.68	1.15	.495	2.03	.50	1.12	15/16	15/16	1.06	3/8-18 PTF
XV502P-8-SUB	1/2	10-24	1.78	1.19	.565	2.20	.50	1.12	1-1/16	1-1/16	1.19	1/2-14 PTF*
XV502P-12-SUB	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

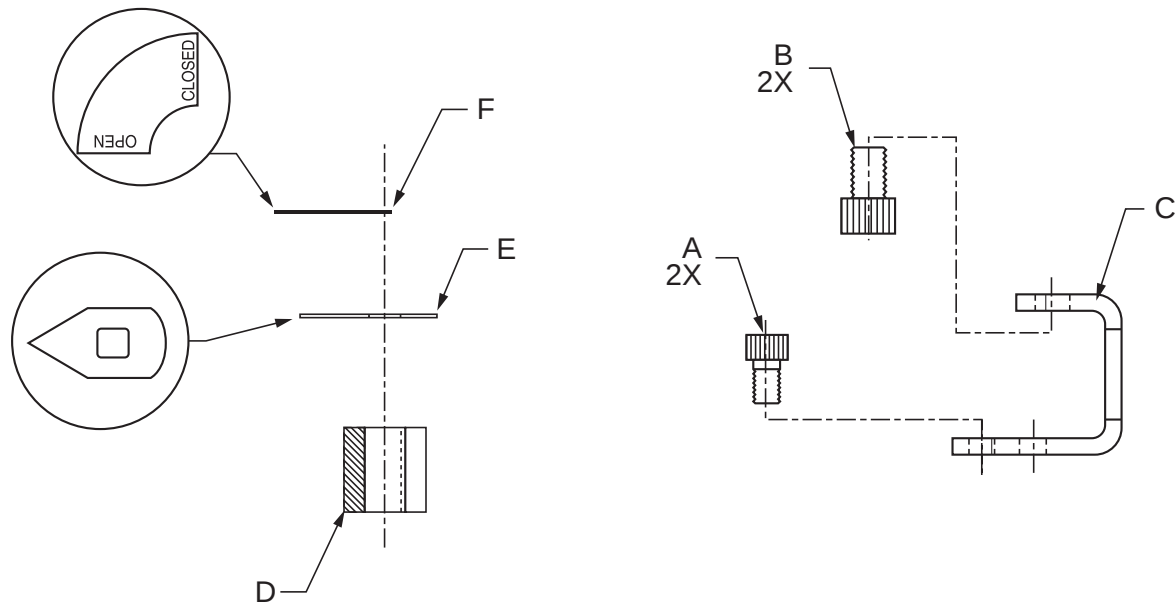
**Actuator Sub-Assembly XV502SS-X-SUB**

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

**J**

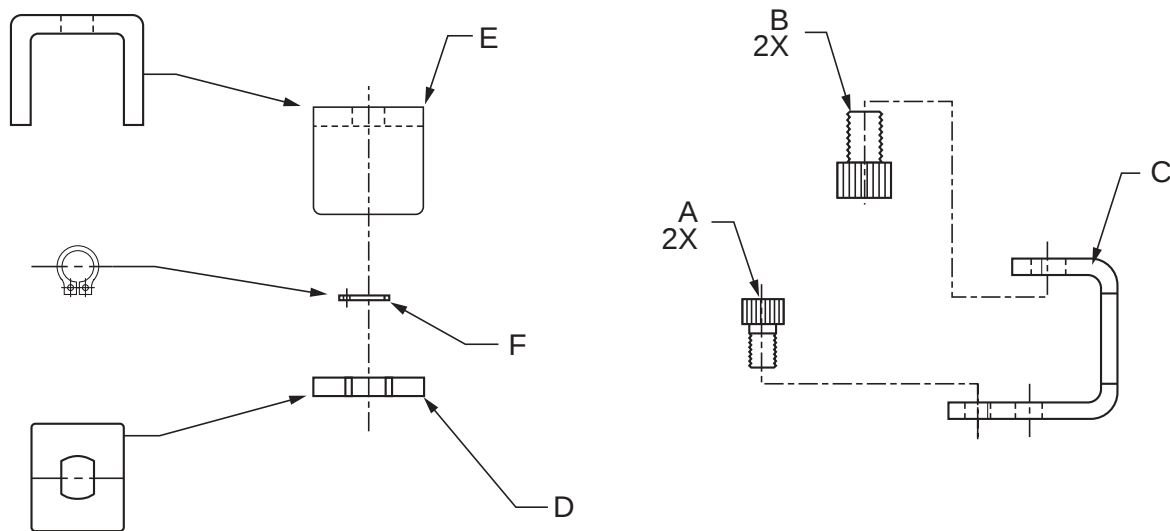
ACT-P-X-KIT

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

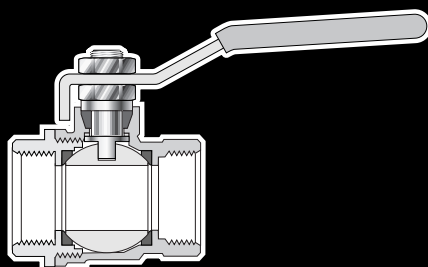


ACT-SS-X-KIT

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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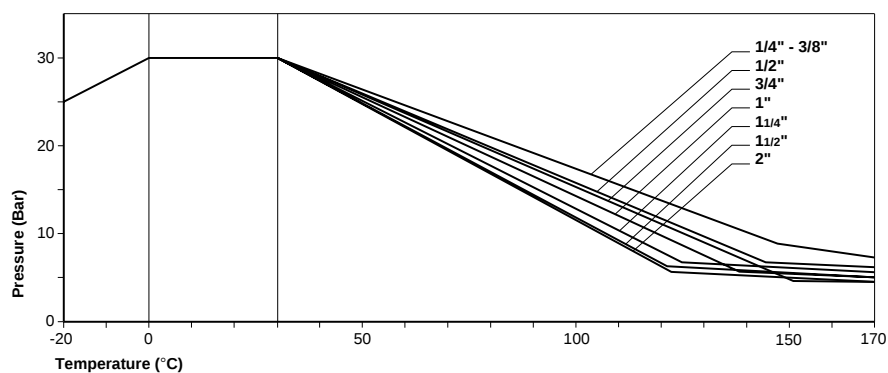


Parker Metric Ball Valves Series BVGC

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

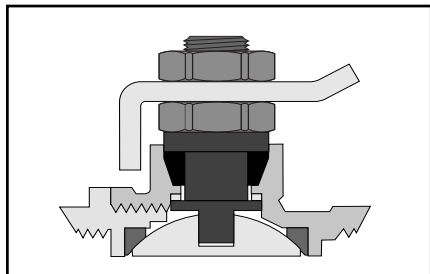


N.B. This chart gives general information. Only testing under operating conditions will finally determine which valve should be selected.

Technical Features

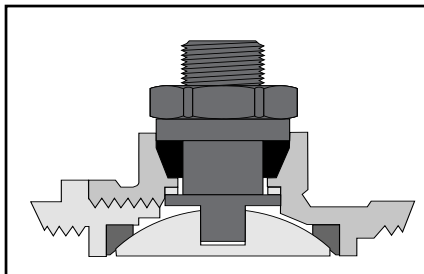
BODY	LEVER HANDLE	COMPACT HANDLE	ANTI EXTRUSION STEM	STEM PACKAGING GLAND	BALL	ANTI FRICTION RING	FORCING NUT	THREADS
Brass Nickel Plated to DIN 17660 and UNI 5705 Spec.	Carbon Steel with Yellow PVC Coating	Aluminum with Yellow Epoxy Coating	Brass Nickel Plated	PTFE	Brass Chrome Plated	PTFE	Brass Nickel Plated	1/4" to 2" BSPP to ISO 228/ DIN 259

Advantages



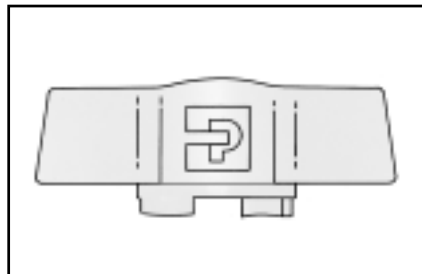
Adjustable packing

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.

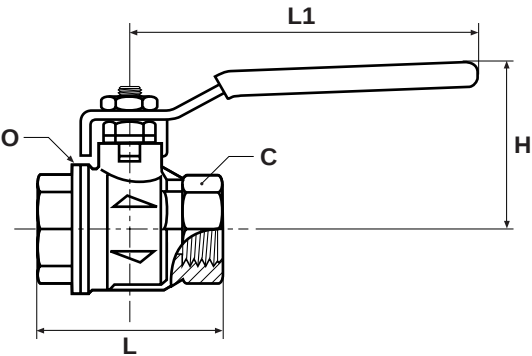


Compact handle

For applications where space is at a premium, the BVGC series valve is available with a compact handle in sizes up to 1".

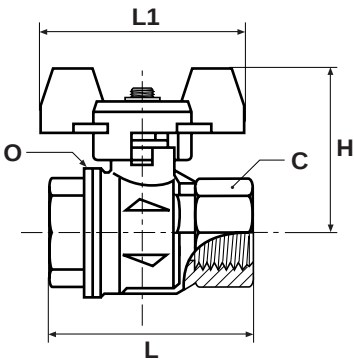
BVGC BSPP Female/Female Valve With Lever Handle

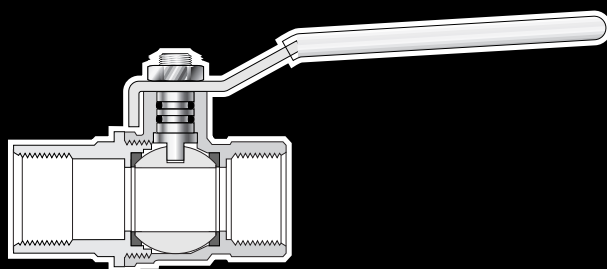
PART NO.	DN MM	THREAD BSPP	C	H	L	L1	O
BVG4-1/4C	8	1/4	20	39.5	39	82	25.0
BVG4-3/8C	10	3/8	20	39.5	39	82	25.0
BVG4-1/2C	15	1/2	25	44.0	50	100	32.5
BVG4-3/4C	20	3/4	31	50.0	54	120	39.0
BVG4-1C	25	1	38	54.0	67	120	47.5
BVG4-1.1/4C	32	1.1/4	48	76.5	77	158	59.0
BVG4-1.1/2C	40	1.1/2	54	82.5	90	158	71.5
BVG4-2C	50	2	66	89.5	106	158	86.0



BVGT4 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



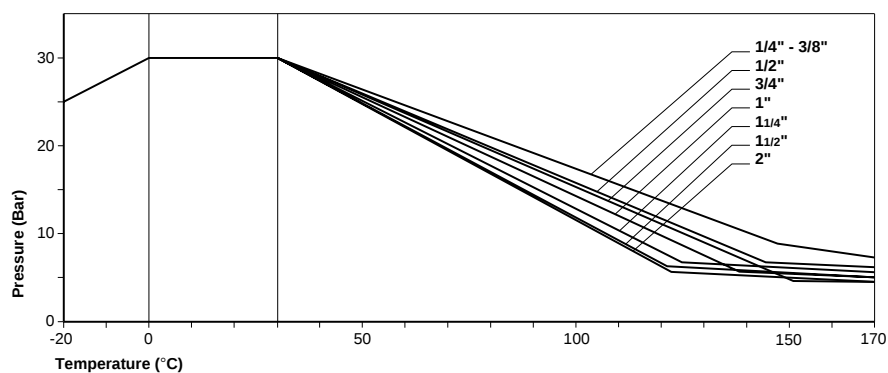


Parker Metric Ball Valves Series BVGL

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 interchangeability 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 Viton 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

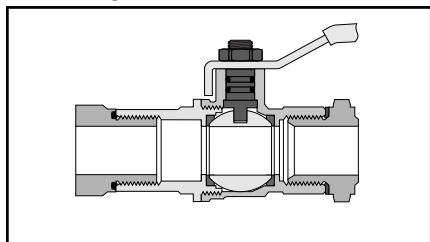


N.B. This chart gives general information. Only testing under operating conditions will finally determine which valve should be selected.

Technical Features

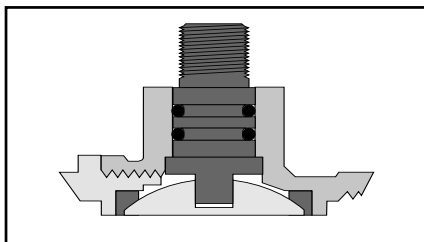
BODY	LEVER HANDLE	COMPACT HANDLE	ANTI EXTRUSION STEM	STEM SEAL	BALL	ANTI FRICTION RING	FORCING NUT	VALVE DIMENSIONS
Brass Nickel Plated to DIN 17660 and UNI 5705 Spec.	Carbon Steel with Yellow PVC Coating	Aluminum with Yellow Epoxy Coating	Brass Nickel Plated	Two Viton* O-Rings	Brass Chrome Plated	PTFE	Brass Nickel Plated	In Accordance with DIN 3357

Advantages



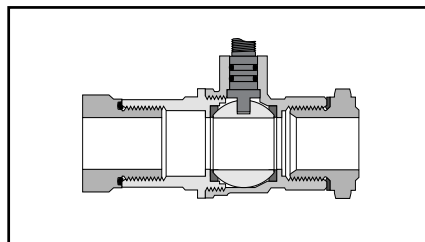
Long female threads

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 Viton O-rings for maximum safety and performance.

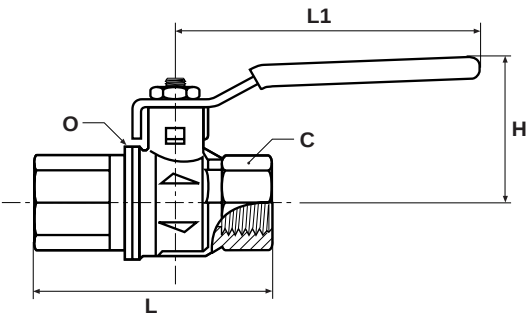


Full flow

All BVGL series valves are full-flow. This limits the turbulence created by the passage of fluid across the valve, minimizing pressure drop.

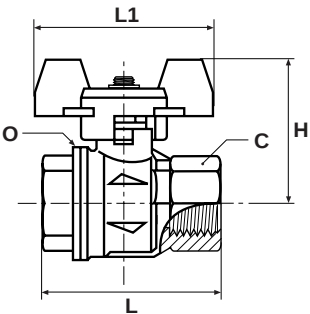
BVGL BSPP Female/ Female Valve With Lever Handle

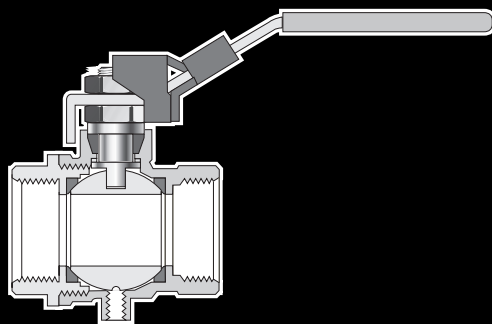
PART NO.	DN MM	THREAD BSPP	C	H	L	L1	O
BVG4-1/4L	8	1/4	20	38	50	82	25.0
BVG4-3/8L	10	3/8	20	38	60	82	25.0
BVG4-1/2L	15	1/2	25	43	75	100	32.5
BVG4-3/4L	20	3/4	32	50	80	120	39.0
BVG4-1L	25	1	41	54	90	120	47.5
BVG4-1.1/4L	32	1 1/4	50	73	110	158	59.0
BVG4-1.1/2L	40	1 1/2	55	79	120	158	71.5
BVG4-2L	50	2	70	86	140	158	86.0



BVGT4 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





Parker Metric Ball Valves Series BVGPLOCK

Principle

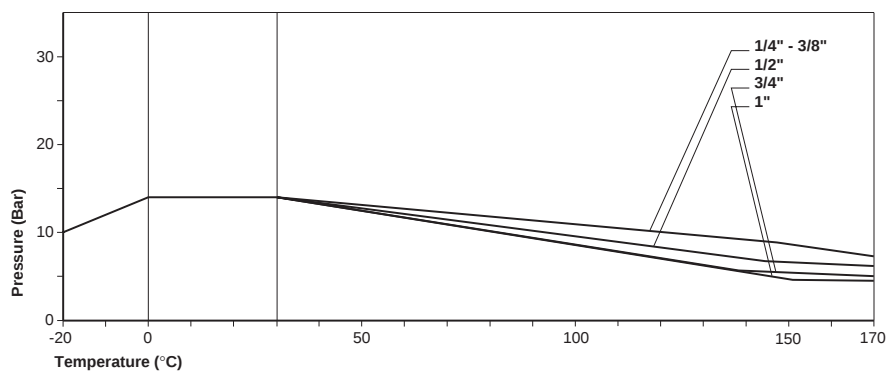
Parker BVGPLOCK series of ball valves has been developed to meet the requirements of European Directive DI 89/392/CEE relating to the isolation of power supply and to meet the health and safety requirements for machines and materials in paragraphs L233-5 of the code du Travail.

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



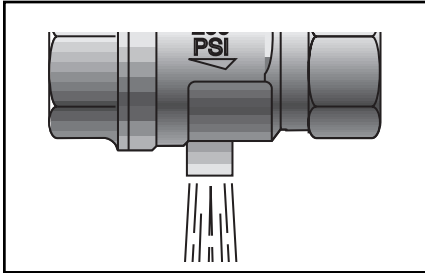
N.B. This chart gives general information. Only testing under operating conditions will finally determine which valve should be selected.

Technical Features

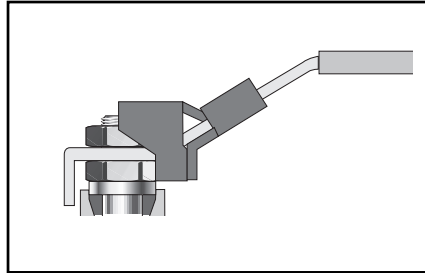
BODY	LEVER HANDLE	ANTI EXTRUSION STEM	STEM PACKING GLAND	BALL	ANTI FRICTION RING	FORCING NUT	VALVE DIMENSIONS	PRESSURE
Brass nickel plated to DIN17660 and UNI5705 spec.	Carbon steel with yellow PVC coating	Brass nickel plated	Tow Vitron** O-rings	Brass chrome plated	PTFE	Brass nickel plated	In accordance with DIN3357	See chart below

*Vitron® is a registered trademark of DuPont de Nemours.

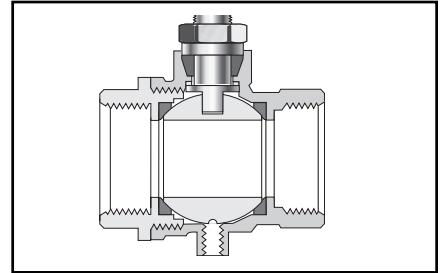
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Advantages**Threaded Exhaust**

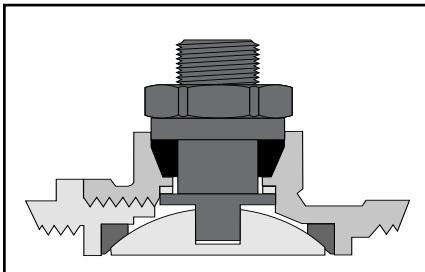
BVGPLOCK series ball valves are manufactured with an M5 threaded exhaust port, this safety feature enables the downstream air pressure to be vented when the valve is closed.

**Lockable Handle**

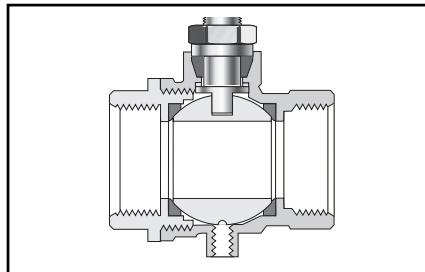
The BVGPLOCK series ball valves are fitted with a handle that can be locked in the closed position with a padlock. This safety feature ensures the valve cannot be accidentally opened, and only authorized personnel can operate the valve.

**DIN 2999 / ISO 228 Female Threads**

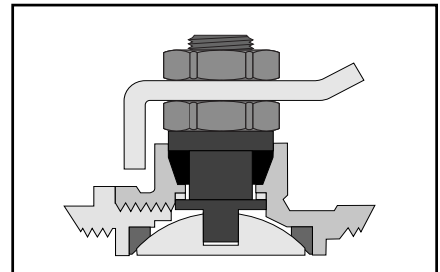
BVGPLOCK series valves are manufactured with long female threads in accordance to DIN2999/ISO228. This enables the valves to be used with Prestolok, Metrulok and brass adaptors but also Parker's range of steel hydraulic fittings and EO-fittings form "A" or "C" to DIN 3852.

**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**

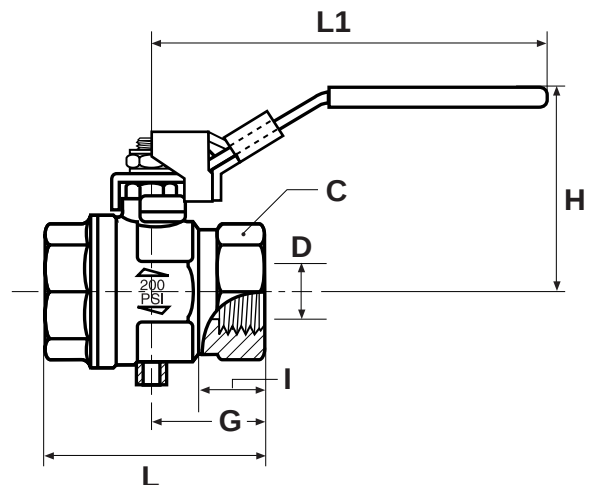
All BVGPLOCK series valves are full-flow. This limits the turbulence created by the passage of fluid across the valve, minimizing pressure drop.

**Adjustable Packing**

The PTFE packing gland and adjustable washer are designed to give longer service life and lower operating torques.

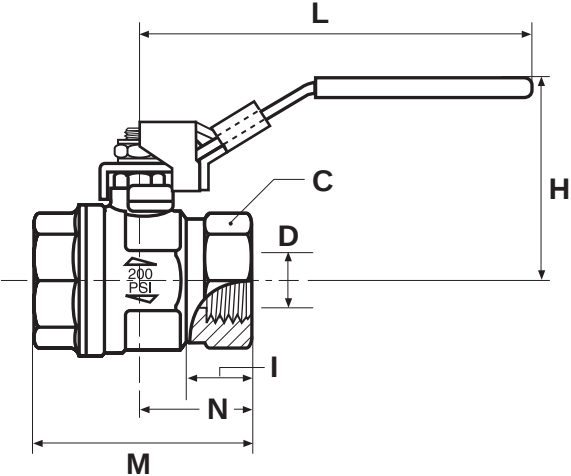
BVG4PLOCK BSPP Female/Female, Vented, Locking Handle

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 1/4 LOCK	32.0	1-1/4	49	46.5	76.5	23.0	93	158
BVG4P-1 1/2 LOCK	40.0	1-1/2	54	51.0	82.5	23.0	102	158
BVG4P-2 LOCK	50.0	2	69	60.5	89.5	26.5	121	158

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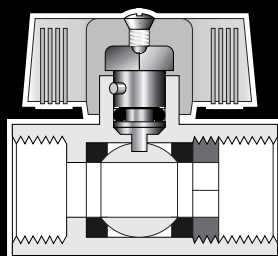
BVG4-LOCK BSPP Female/Female, Locking Handle

PART NO.	D FLOW Ø	THREAD BSPP	C OCTAGON	H	L	M	N
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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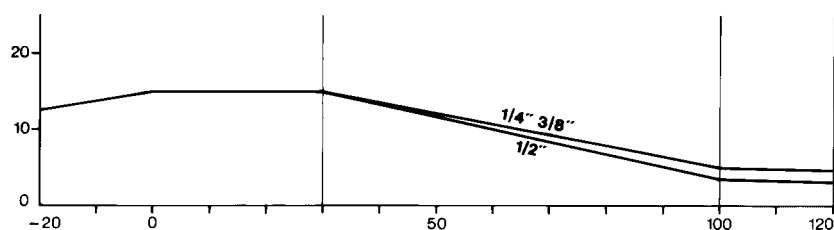


Parker Metric Ball Valves Series MBVG

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



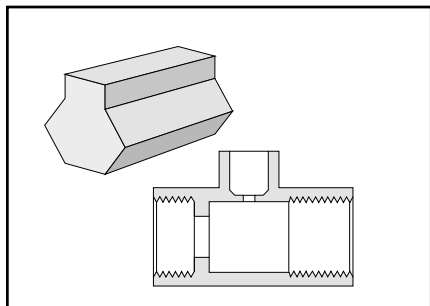
N.B. This chart gives general information. Only testing under operating conditions will finally determine which valve should be selected.

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

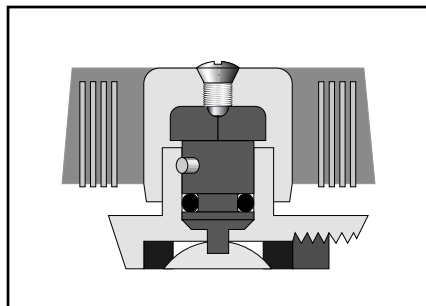
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Advantages



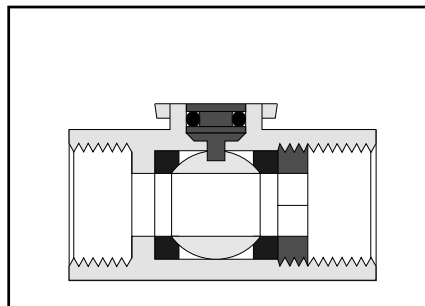
Design of the body

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 Viton O-Ring assembled under compression automatically compensates for minute friction wear. Thus a high standard of seal is attained.

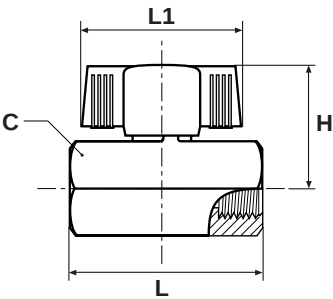


Tightness of the seals

The perfect tightness of the seals on the casing is obtained by the preset force of the nut, adjusted during assembly.

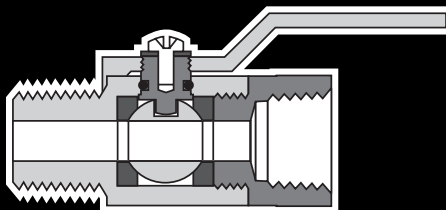
MBVG BSPP Female/Female Valve

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.

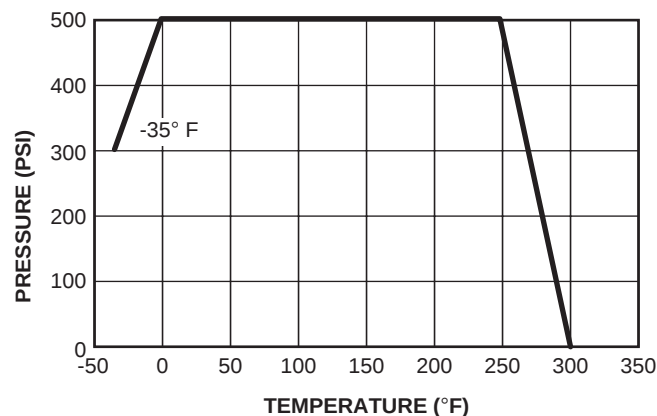
Applications

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.)

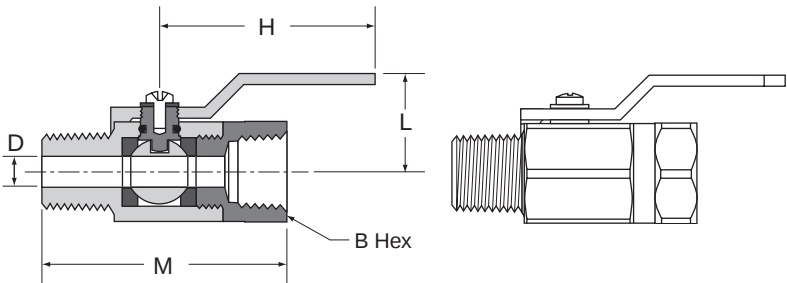
Style	Type	Size
MV	708 709	-4
Style	MV-Mini Valve	
Type	708 - Male / Female 709 - Female / Female	
Size	4-1/4"	

Flow data

VALVE SIZE	MV708 CV	MV709 CV
1/4	.95	.95

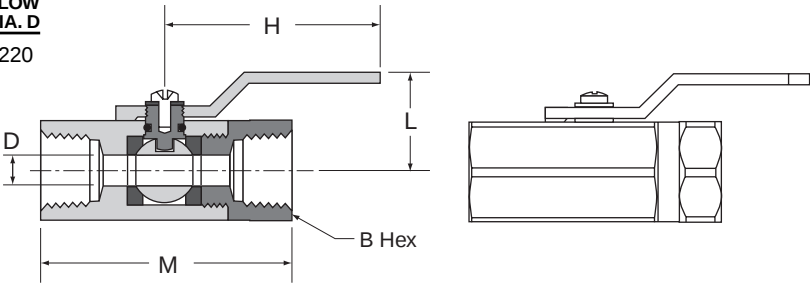
Male-Female Pipe Ends, Mini Ball Valve MV708

PART NO.	PIPE THREAD	B HEX	H	L	FLOW M	DIA. D
MV708-4	1/4	11/16	1.50	.68	1.70	.220



Female Pipe Ends, Mini Ball Valve MV709

PART NO.	PIPE THREAD	B HEX	H	L	M	FLOW DIA. D
MV709-4	1/4	11/16	1.50	.68	1.75	.220



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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
-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
XV504SS & XV506SS								
-4			2566-00132		2566-00108			2566-00138
-6			2566-00132		2566-00108			2566-00138
XV506SS-8			256600132		2566-00108			2566-00138
XV504SS-8			256600133		2566-00109			2566-00184
-12			256600133		2566-00109			2566-00184
-16			256600133		2566-00109			2566-00184
-20			2566-00187		2566-00110			2566-00185
-24			2566-00187		2566-00110			2566-00185
-32			2566-00187		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

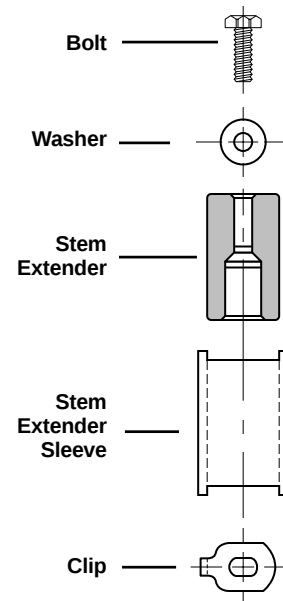
Replacement Handle Covers

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

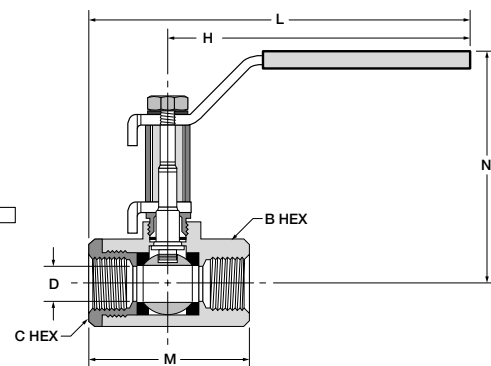
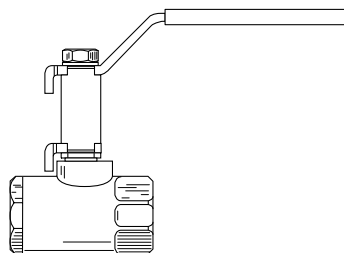
All stem extension kit componentry is made from high quality, corrosion resistant stainless steel



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

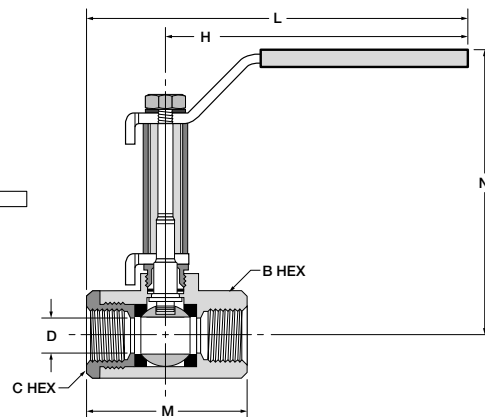
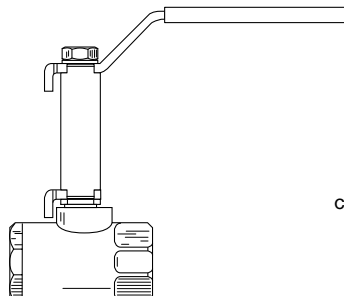
Note: Drawing shows STX-P assembled to XV500P series-not included



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

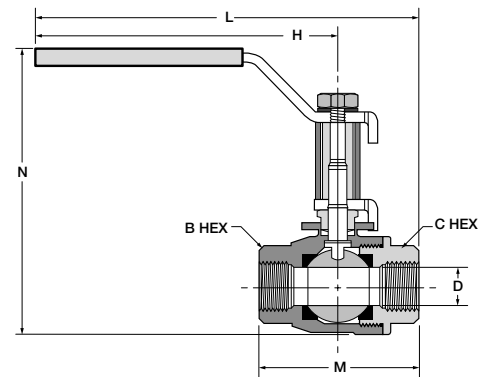
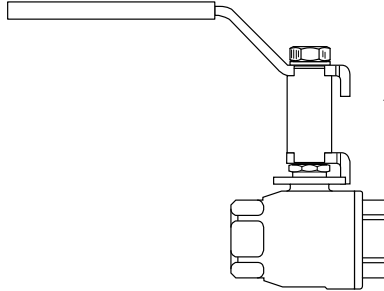


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Stainless Steel Valve Extension Dimensions STX-SS-1-X

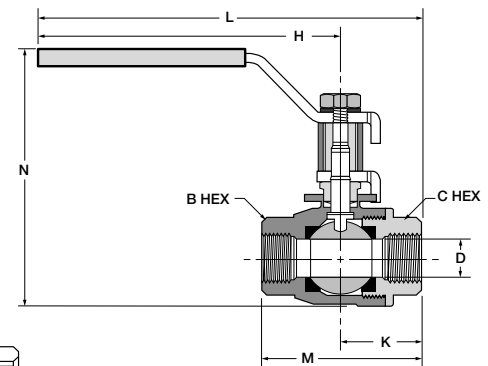
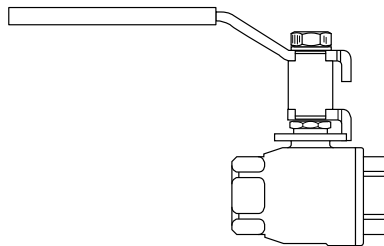
PART NO.	VALVE SIZE	B HEX	C HEX	H	L	M	N	D FLOW Ø
STX-SS-1-125	1/4	15/16	15/16	4.00	5.04	2.07	3.78	.375
STX-SS-1-125	3/8	15/16	15/16	4.00	5.04	2.07	3.78	.375
STX-SS-1-125	1/2	1-1/16	1-1/16	4.00	5.17	2.27	3.90	.500
STX-SS-1-225	1/4	15/16	15/16	4.00	5.04	2.07	4.78	.375
STX-SS-1-225	3/8	15/16	15/16	4.00	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

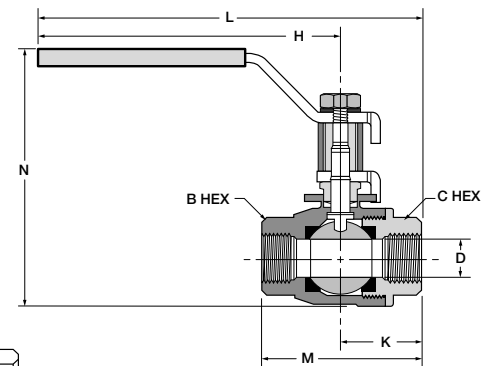
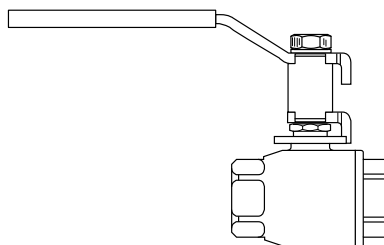
Note: Drawing shows STX-SS assembled to XV500SS series-not included

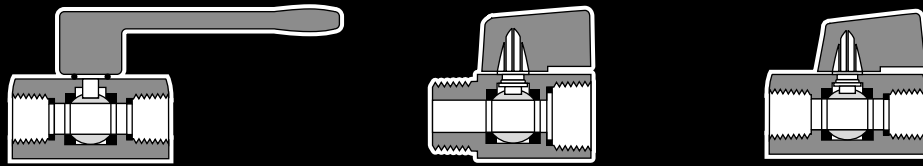
**Stainless Steel Valve Extension Dimensions STX-SS-3-X**

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

**J**



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.

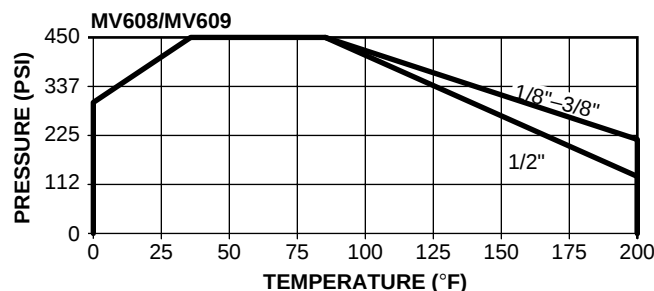
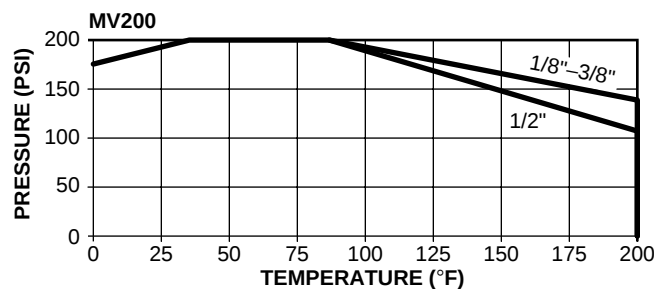
Applications

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"	

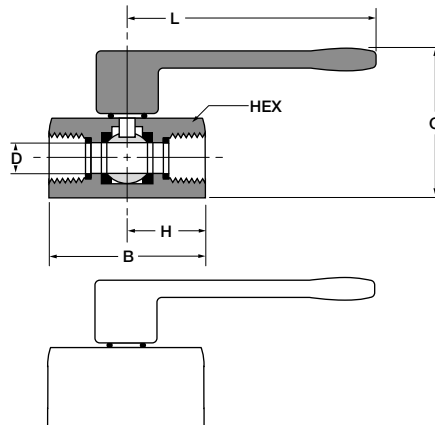
Flow data

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

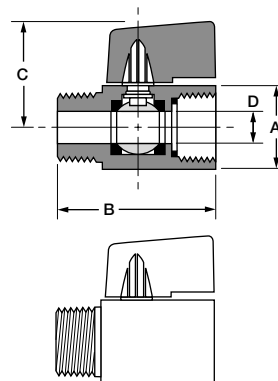
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Female Pipe Ends, Lever Handle, Mini Ball Valve MV200

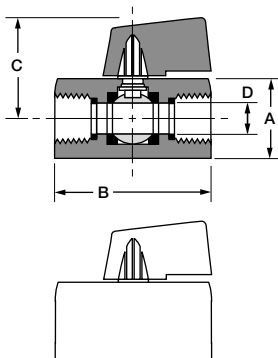
PART NO.	PIPE THREAD	HEX	B	C	H	L	FLOW DIA.D
MV200-2	1/8	.83	1.71	1.20	.91	2.83	.31
MV200-4	1/4	.83	1.71	1.20	.91	2.83	.31
MV200-6	3/8	.83	1.71	1.20	.91	2.83	.31
MV200-8	1/2	.98	2.11	1.28	1.10	2.83	.39

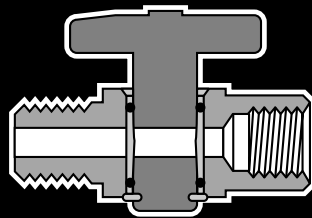
**Male-Female Pipe Ends, Compact Handle, Mini Ball Valve MV608**

PART NO.	PIPE THREAD	A HEX	B	C	FLOW DIA.D
MV608-2	1/8	.83	1.72	1.12	.240
MV608-4	1/4	.83	1.72	1.12	.300
MV608-6	3/8	.83	1.72	1.12	.300
MV608-8	1/2	.98	2.11	1.20	.380

**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	1.72	1.12	.240
MV609-4	1/4	.83	1.72	1.12	.300
MV609-6	3/8	.83	1.72	1.12	.300
MV609-8	1/2	.98	2.11	1.20	.380
MV609-6-4	3/8x1/4	.83	1.72	1.12	.300

**J**



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.

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.

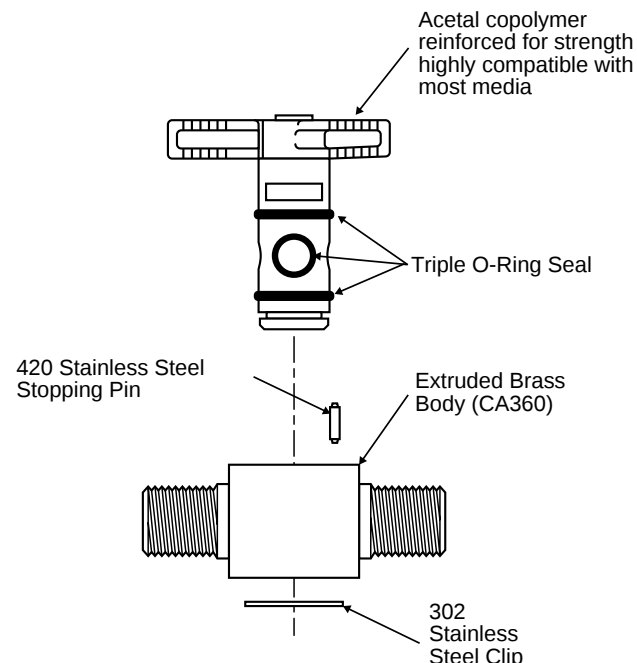
Example:

	PV	607	-2	-OPTIONS
Plug Valve	_____	_____	_____	_____
Male to Male	_____	_____	_____	_____
1/8" (2/16) Male	_____	_____	_____	_____
N-Neoprene(brown)	_____	_____	_____	_____
V-Viton® (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.

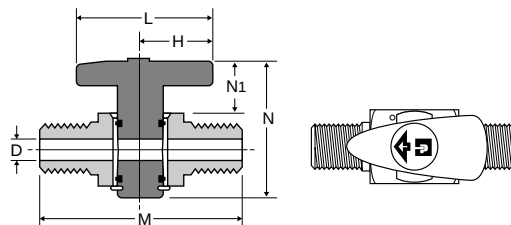
Features



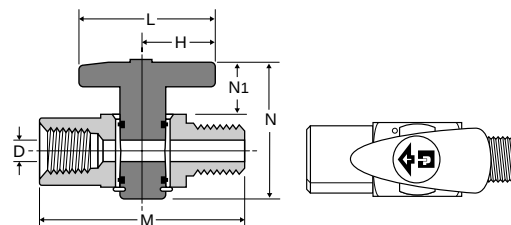
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Male Pipe to Male Pipe Plug Valve PV607

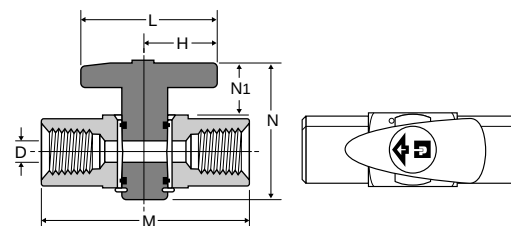
PART NO.	PIPE THREAD	H	L	M	N	N1	FLOW DIA. D
PV607-2	1/8	.67	1.34	1.66	1.38	.51	.200
PV607-4	1/4	.67	1.34	2.02	1.38	.51	.200

**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

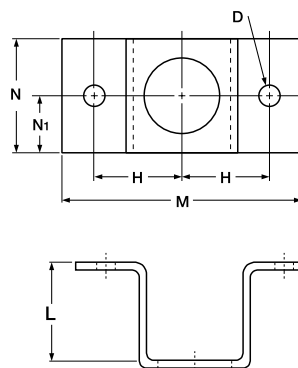
**Female Pipe to Female Pipe Plug Valve PV609**

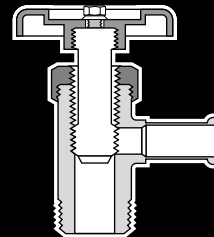
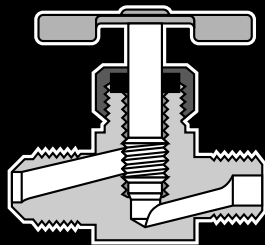
PART NO.	PIPE THREAD	H	L	M	N	N1	FLOW DIA. D
PV609-2	1/8	.67	1.34	1.68	1.38	.51	.200
PV609-4	1/4	.67	1.34	2.10	1.38	.51	.200

**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





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 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.

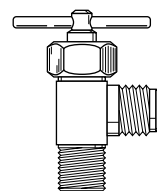
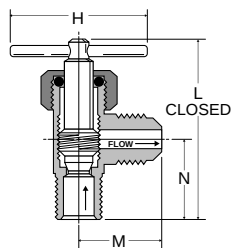
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Angle Needle Valve NV101F

Flare to Male Pipe

Temperature Range: -45° to +250° F

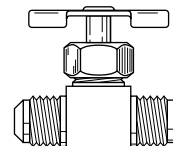
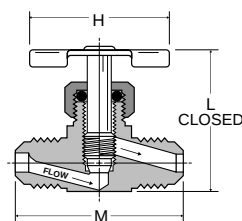
PART NO.	TUBE SIZE	PIPE THREAD	H	L	M	N
NV101F-4-2	1/4	1/8	1.50	1.58	.75	.66
NV101F-6-4	3/8	1/4	1.38	1.86	.95	.90

**Needle Valve NV102F**

Flare to Flare *Provided with Pin Handle

Temperature Range: -45° to +250° F

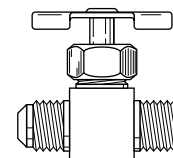
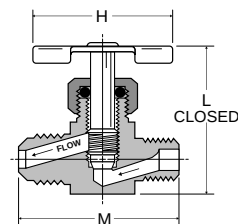
PART NO.	TUBE SIZE	H	L	M
NV102F-4*	1/4	1.50	1.34	1.50
NV102F-6	3/8	1.38	1.55	1.86

**Needle Valve NV103F**

Flare to Male Pipe *Provided with Pin Handle

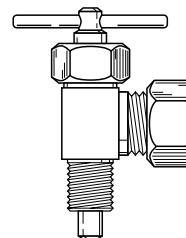
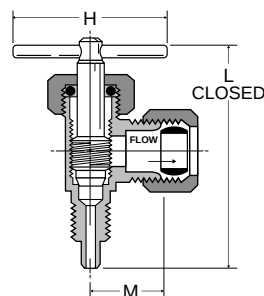
Temperature Range: -45° to +250° F

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

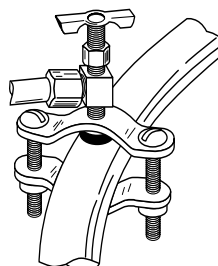
PART NO.	TUBE SIZE	PIPE THREAD	H	L	M
HV104C-4-2	1/4	1/8	1.50	1.89	.53

**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

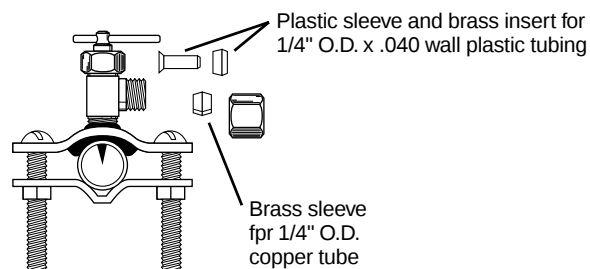
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Self-Piercing Humidifier Valve clamp kit SPV104C-kit

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:

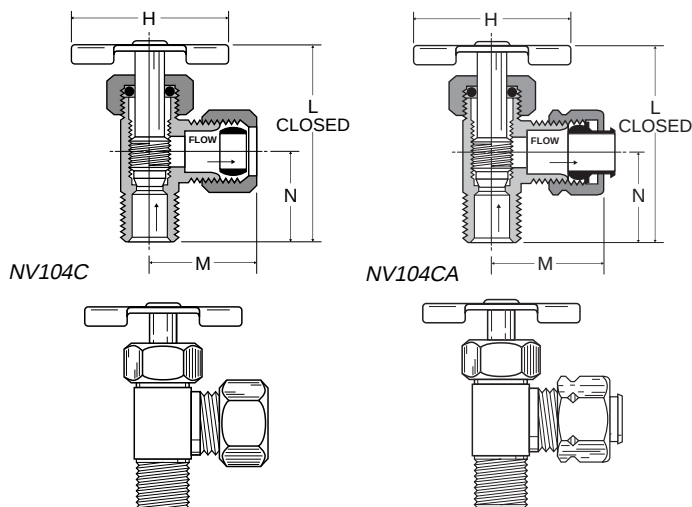
PART NO.	TUBE SIZE	PIPE THREAD
SPV104C KIT	1/4	1/8

**Angle Needle Valve NV104C-NV104CA**

Compression to Male Pipe *Provided with Pin Handle

Temperature Range: -45° to +250° F

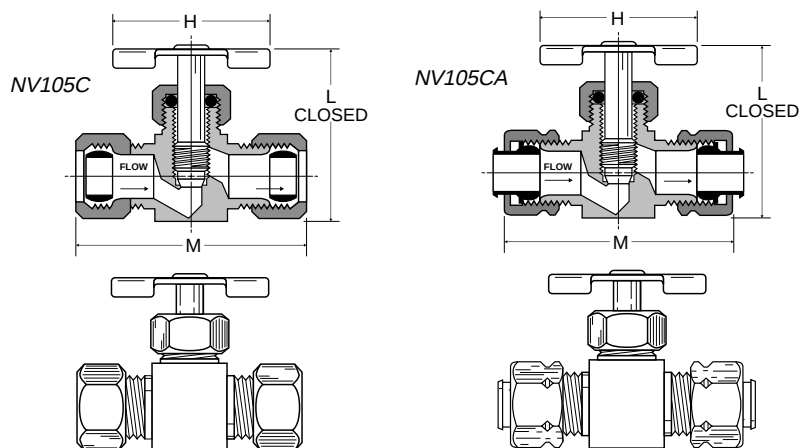
PART NO.	TUBE SIZE	PIPE THREAD	H	L	M	N
NV104C-4-2*	1/4	1/8	1.50	1.54	.88	.67
NV104CA-4-2*	1/4	1/8	1.50	1.49	.77	.66
NV104C-4-4	1/4	1/4	1.38	1.80	.93	.75
NV104C-5-2*	5/16	1/8	1.50	1.63	.88	.68
NV104C-6-4	3/8	1/4	1.38	1.76	.94	.81

**Needle Valve NV105C-NV105CA**

Compression to Compression *Provided with Pin Handle

Temperature Range: -45° to +250° F

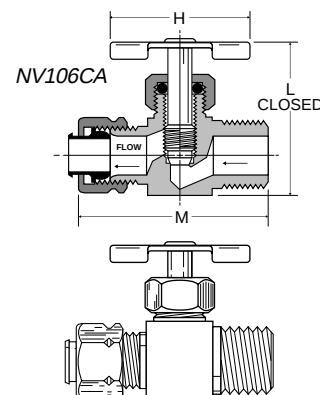
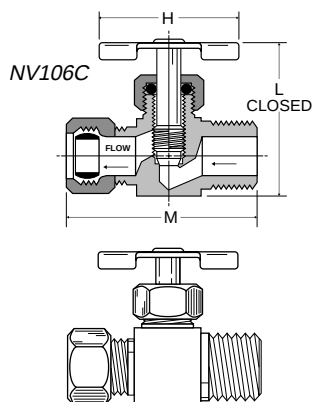
PART NO.	TUBE SIZE	H	L	M
NV105C-4*	1/4	1.50	1.41	1.75
NV105C-5*	5/16	1.50	1.35	1.73
NV105C-6	3/8	1.38	1.55	1.93
NV105CA-4*	1/4	1.50	1.41	1.64
NV105CA-6	3/8	1.38	1.55	1.78

**J**

Needle Valve NV106C-NV106CA

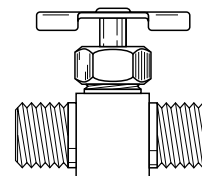
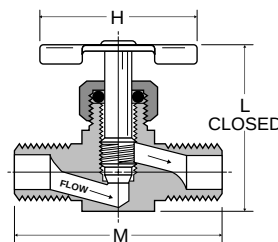
Compression to Male Pipe *Provided with Pin Handle
 Temperature Range: -45° to +250° F

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**

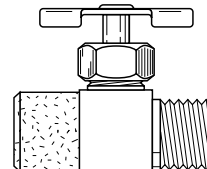
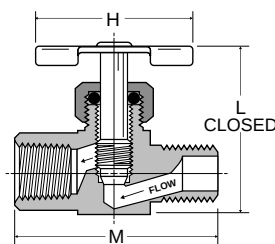
Male Pipe to Male Pipe *Provided with Pin Handle
 Temperature Range: -45° to +250° F

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**

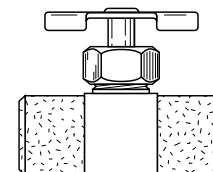
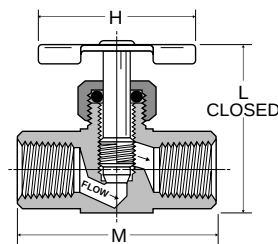
Female Pipe to Male Pipe *Provided with Pin Handle
 Temperature Range: -45° to +250° F

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**

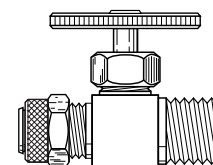
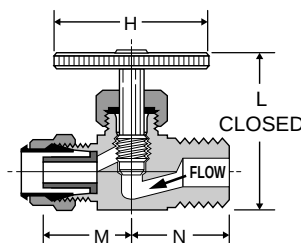
Female Pipe to Female Pipe *Provided with Pin Handle
 Temperature Range: -45° to +250° F

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	1.62

**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

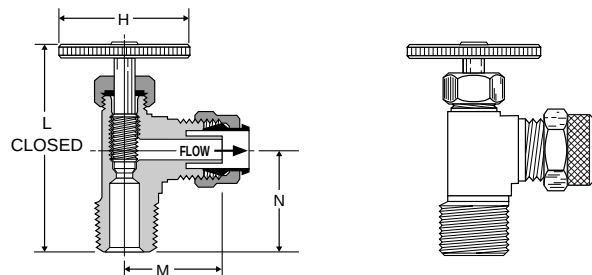


Angle Needle Valve NV312P

Ploy-Tite to Male Pipe

Temperature Range: 0° to +150° F

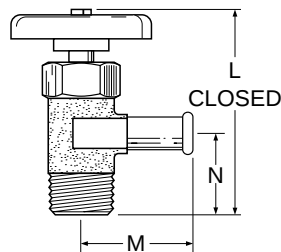
PART NO.	TUBE SIZE	PIPE THREAD	H	L	M	N
NV312P-4-2	1/4	1/8	1.07	1.53	.48	.68
NV312P-4-4	1/4	1/4	1.07	1.72	.56	.86
NV312P-6-4	3/8	1/4	1.07	1.68	.64	.86

**Truck Valve V404P**

Hose to Male Pipe

Temperature Range: -30° to +250° F

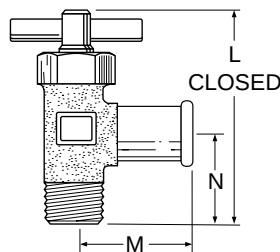
PART NO.	HOSE I.D.	PIPE THREAD	FLOW	L	M	N
V404P-6-6	3/8	3/8	.281	2.35	1.36	.94
V404P-10-6	5/8	3/8	.406	2.75	1.31	1.15

**Truck Valve V404PH**

Hose to Male Pipe with Pin Handle

Temperature Range: -30° to +250° F

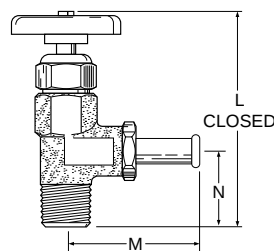
PART NO.	HOSE I.D.	PIPE THREAD	FLOW	L	M	N
V404PH-10-6	5/8	3/8	.406	2.47	1.31	1.09

**Truck Valve SV404P**

Hose to Male Pipe

Temperature Range: -30° to +250° F

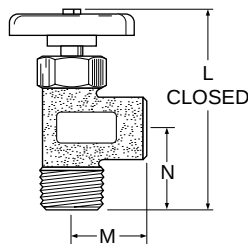
PART NO.	HOSE I.D.	PIPE THREAD	FLOW	L	M	N
SV404P-10-8	5/8	1/2	.468	3.71	2.31	1.34
SV404P-12-6	3/4	3/8	.438	3.73	2.31	1.34
SV404P-12-8	3/4	1/2	.562	3.73	2.31	1.34

**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

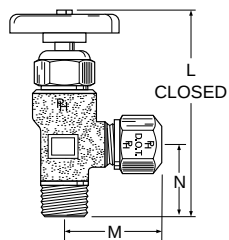
**J**

Truck Valve V408NTA

Tube to Male Pipe

Temperature Range: -30° to +250° F

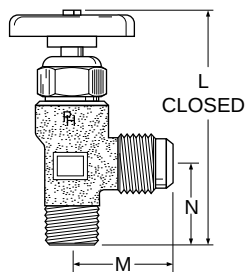
PART NO.	TUBE SIZE	PIPE THREAD	FLOW	L	M	N
V408NTA-8-8	1/2	1/2	.328	3.28	1.15	1.19

**Truck Valve V409F**

Flare to Male Pipe

Temperature Range: -30° to +250° F

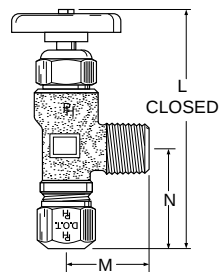
PART NO.	TUBE SIZE	PIPE THREAD	FLOW	L	M	N
V409F-8-6	1/2	3/8	.406	3.07	1.31	1.00
V409F-8-8	1/2	1/2	.406	3.28	1.31	1.19
V409F-10-8	5/8	1/2	.500	3.47	1.50	1.25
V409F-12-8	3/4	1/2	.562	3.70	2.31	1.34

**Truck Valve V410NTA**

Tube to Male Pipe

Temperature Range: -30° to +250° F

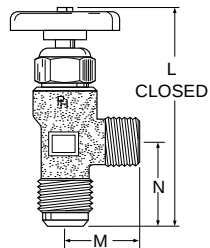
PART NO.	TUBE SIZE	PIPE THREAD	FLOW	L	M	N
V410NTA-8-8	1/2	1/2	.328	3.58	1.38	1.31

**Truck Valve V412F**

Tube to Male Pipe

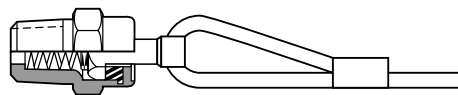
Temperature Range: -30° to +250° F

PART NO.	TUBE SIZE	PIPE THREAD	FLOW	L	M	N
V412F-10-8	5/8	1/2	.500	3.60	1.38	1.31

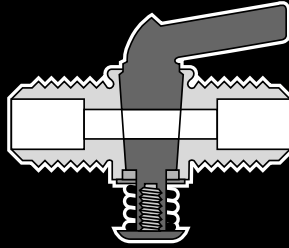
**Lanyard Valve LV91**

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



J



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.

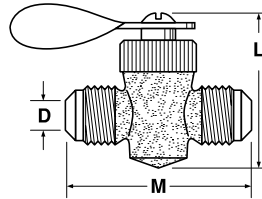
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Brass Shutoff V201F

Flare to Flare

Temperature Range: -40° to +250° F

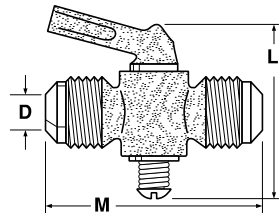
PART NO.	TUBE SIZE	L	M	FLOW DIA. D
V201F-6-6	3/8	1.88	2.13	.250
V201F-8-8	1/2	1.98	2.30	.203

**Ground Plug Shutoff V203F**

Flare to Flare

Temperature Range: +32° to +125° F

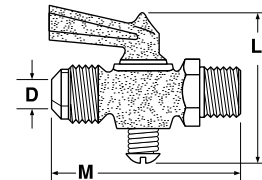
PART NO.	TUBE SIZE	L	M	FLOW DIA. D
V203F-6-6	3/8	2.26	2.14	.220
V203F-8-8	1/2	2.26	2.42	.281

**Ground Plug Shutoff V204F**

Flare to Male Pipe

Temperature Range: +32° to +125° F

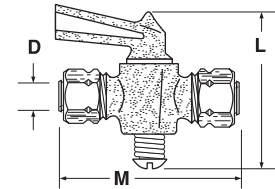
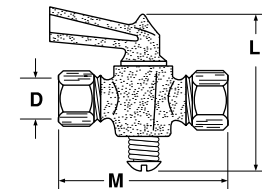
PART NO.	TUBE SIZE	PIPE THREAD	L	M	FLOW DIA. D
V204F-4-2	1/4	1/8	1.88	2.08	.180
V204F-6-4	3/8	1/4	2.27	2.05	.218

**Ground Plug Shutoff V303C / V303CA**

Compression to Compression

Temperature Range: +32° to +125° F

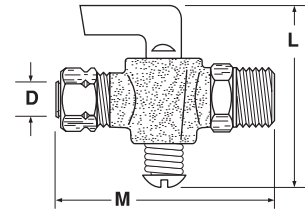
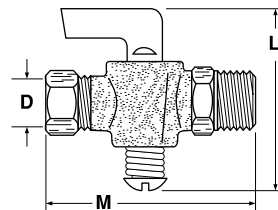
PART NO.	TUBE SIZE	L	M	FLOW DIA. D
V303C-4-4	1/4	1.88	2.33	.188
V303CA-4-4	1/4	1.90	1.75	.188
V303C-6-6	3/8	2.26	2.45	.218
V303CA-6-6	3/8	1.76	1.60	.218

**Ground Plug Shutoff V304C / V304CA**

Compression to Male Pipe

Temperature Range: +32° to +125° F

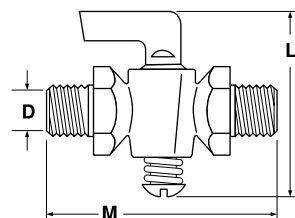
PART NO.	TUBE SIZE	PIPE THREAD	L	M	FLOW DIA. D
V304C-4-2	1/4	1/8	1.90	2.29	.188
V304CA-4-2	1/4	1/8	1.88	2.00	.188
V304C-4-4	1/4	1/4	1.90	2.15	.188
V304CA-4-4	1/4	1/4	1.86	2.08	.188
V304C-6-4	3/8	1/4	1.83	2.24	.218
V304CA-6-4	3/8	1/4	1.83	2.11	.218

**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

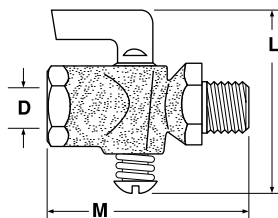


Ground Plug Shutoff V402P

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	1.89	1.73	.218
V402P-4-4	1/4	1/4	1.89	1.85	.218
V402P-6-6	3/8	3/8	2.34	2.21	.245

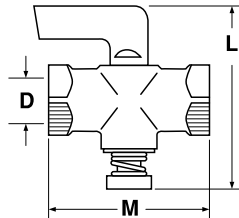
**Ground Plug Shutoff V403P**

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	.188
V403P-4-4	1/4	1.90	1.65	.188
V403P-6-6*	3/8	2.25	2.00	.250

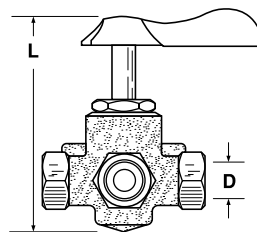
*Made from extruded bar stock

**Three-way valve V406P**

Female Pipe three ends

Temperature Range: -40° to +180° F

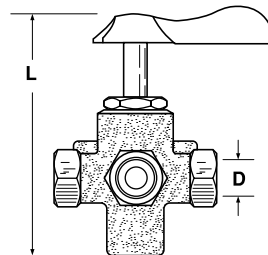
PART NO.	PIPE THREAD	L	FLOW DIA. D
V406P-4	1/4	3.10	.281

**Four-way valve V407P**

Female Pipe four ends

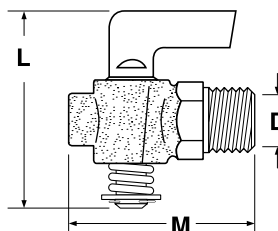
Temperature Range: -40° to +180° F

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

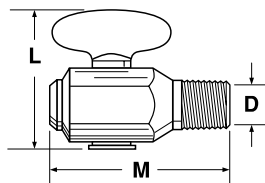
PART NO.	PIPE THREAD	L	M	FLOW DIA. D
DC601-2	1/8	1.90	1.40	.170
DC601-4	1/4	1.90	1.52	.170
DC601-6	3/8	2.26	1.74	.281
DC601-8	1/2	2.29	1.82	.281



Drain Cock DCR601

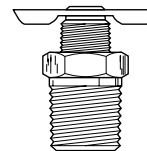
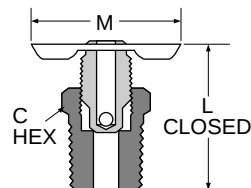
Temperature Range: -30° to +250° F

PART NO.	PIPE THREAD	L	M	FLOW DIA. D
DCR601-4	1/4	1.41	1.73	.188

**Internal Seal Drain Cock DC602**

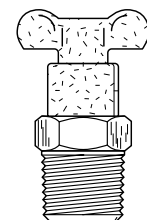
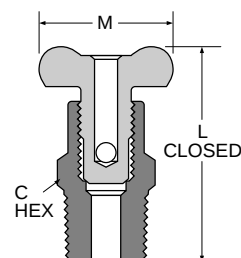
Temperature Range: -65° to +250° F

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**

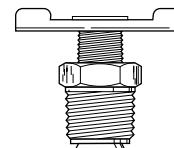
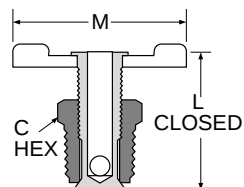
Temperature Range: -65° to +250° F

PART NO.	PIPE THREAD	C HEX	L	M
DC603-2	1/8	1/2	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**

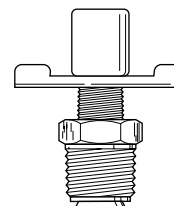
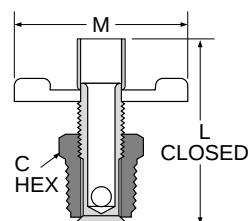
Temperature Range: -25° to +250° F

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

**External Seal Drain Cock DC606**

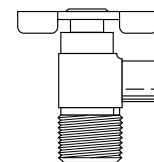
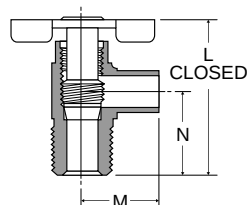
Temperature Range: -65° to +250° F

PART NO.	PIPE THREAD	C HEX	L	M
DC606-4	1/4-18	9/16	1.50	1.38

**Bib Drain Valve DC607**

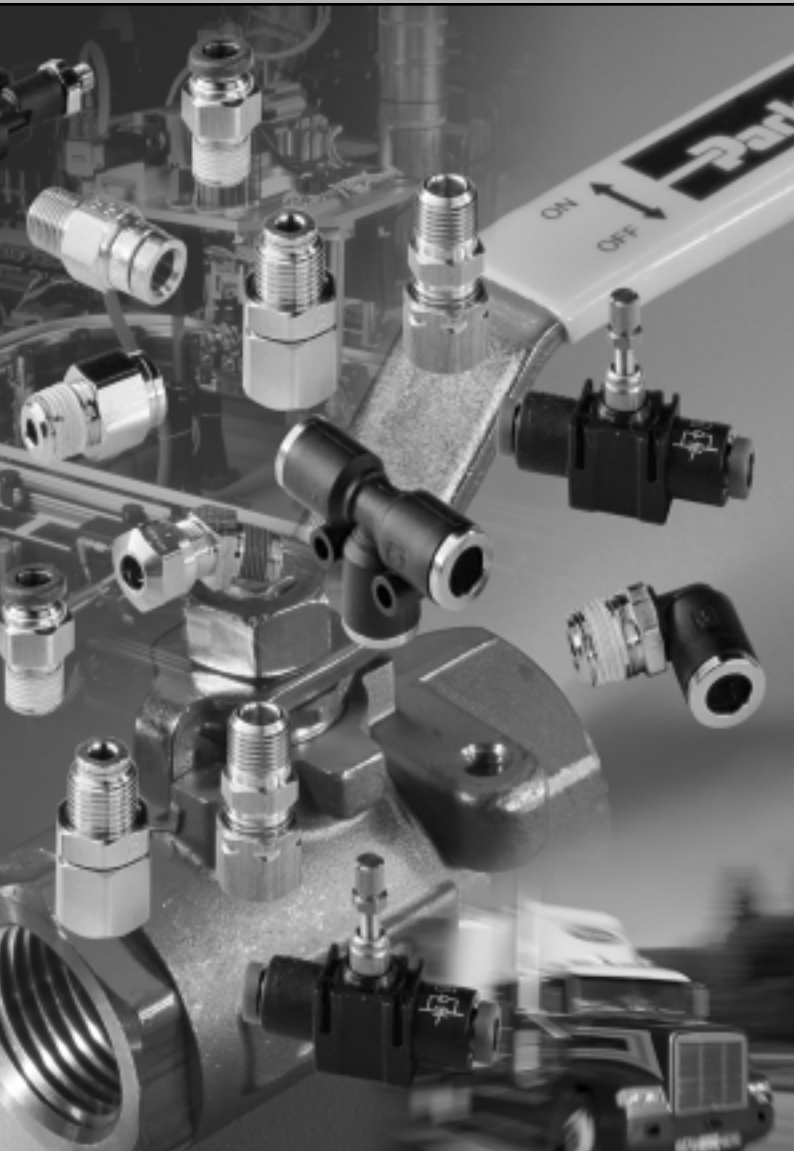
Temperature Range: -65° to +250° F

PART NO.	HOSE SIZE	PIPE THREAD	FLOW	L	M	N
DC607-4	3/8	1/4	.31	1.32	.67	.71



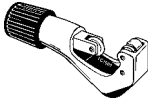
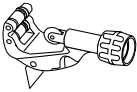
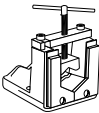
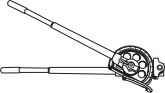
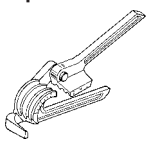
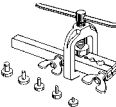
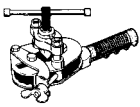
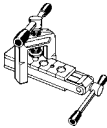
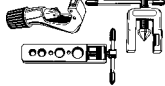
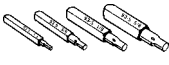
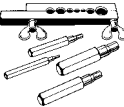
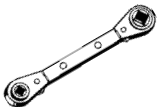


Tube Fabricating Equipment

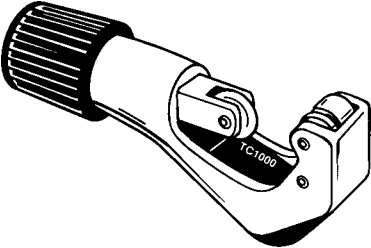
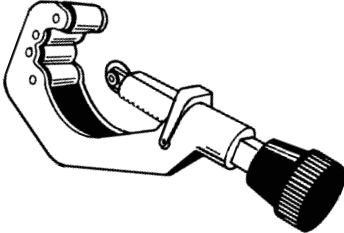
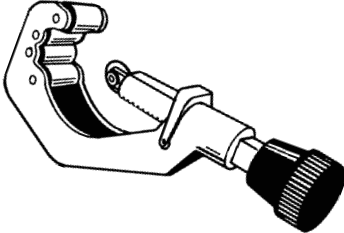
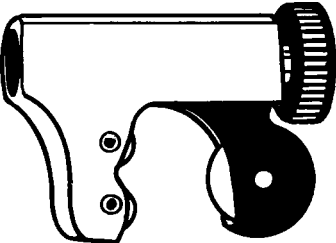
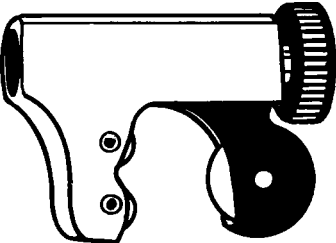


Tube Cutters	K3
Benders	K5
Flaring Tools	K7
Tubing Tool Kits	K10
Swagging Tools	K11
Wrenches	K12
Testing and Service Tools.....	K12
Deburring Tools	K14
Brazing Equipment	K14

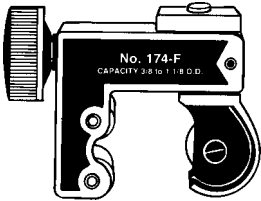
The World Standard

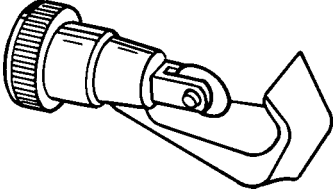
Tube Cutters	Sizes 2 to 64  Page K3	Kloskut Cutters Sizes 2 to 32  Page K4	Plastic Tube Cutter PTC-001  Page K4	Sawing Vise  Page K14	Benders	Hand Benders  Page K5
Ratchet Benders  Page K5	Triple Headed  Page K6	Spring Type  Page K6	Flaring Tools	Combination Tools  Page K7	Rolo-Flair  Page K8	Metric Flaring  Page K9
Tubing Tool Kits	Combination Kits  Page K10	Swaging Tools	Punch-Type  Page K11	Swaging Kits  Page K11	Wrenches	Ratchet Wrenches  Page K12
Par-Lock Wrenches  Page K13	Testing and Service Tools	Pinch Off Tool  Page K12	Deburring Tools	In-Ex Deburring Tool  Page K14	Brazing Equipment	Multi-Flame Torch  Page K14
Braze Flux  Page K15	Post Braze Cleaner  Page K15					

K

	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

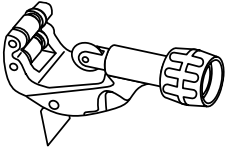
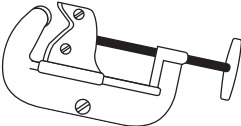
	227-FA-BPD	For 1/8" to 3/4" (4 to 19 mm) O.D. tubing, (1/8" to 5/8" nom.). Enclosed feed mechanism. Length: 3 1/2" Weight: 5 oz. Replacement Parts:
	S32633-BPD	Cutting wheel

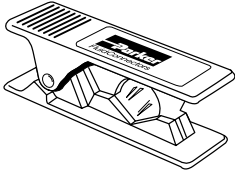
Kloskut® Tube Cutters

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	218B-BPD	Medium Kloskut For tubing sizes -2 (1/8" O.D.) to -18(1 1/8" O.D.) Weigh: 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
 1232-BPD		

	PTC-001	Plastic Tube Cutter May be used with polyethylene, Polypropylene, nylon and other thermoplastic tubing. For tube O.D. sizes 1/8" to 1/2"
	PTC-001RB	Replacement blades



Hand Tube Benders

Sturdy, easy-to-use hand tools for fast accurate bending without kinks or visible 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.

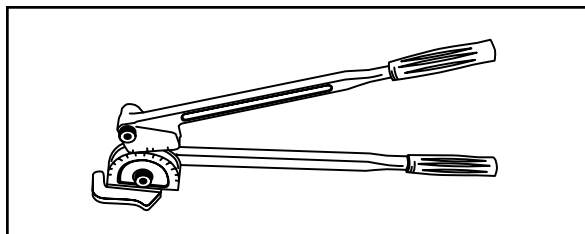
Individual benders for six tube sizes 1/8, 3/16, 1/4, 5/16, 3/8, and 1/2 inch. Will bend copper, aluminum, annealed steel and stainless steel. Can be used in hands or mounted in a bench vise for heavier wall thickness tube. Simply align marks on slide block and radius block then bend tube to desired 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.

Ratchet Hand Tube Benders

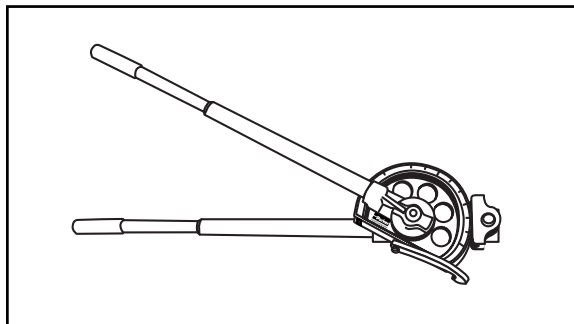
Individual benders for three tubing sizes 5/8, 3/4, and 7/8 inches in copper, aluminum, annealed steel and stainless steel. Can be used in hands or mounted in a bench vise for heavier wall thickness tube. Position tube in bender, close latch and pull ratchet handle away from radius block handle until desired angle (up to 180°) is formed. Angles are indicated on radius block. (Detailed instructions are included with each bender.)

1" Hand Tube Bender

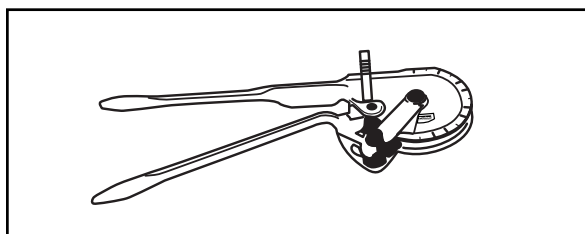
For tubing size 1" O.D. in soft copper and aluminum. Can be used in hands, but suggest mounting on bench vise - especially for heavier wall thickness tube. Align marks and bend tube to desired angle (up to 180°) by pulling steadily on operating handle. Handle may be repositioned for maximum leverage. Angles are indicated on radius block. (Detailed instructions are included with bender.)



Medium Hand Tube Bender



Ratchet Hand Tube 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 THICKNESS	
						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
14-2829-BPD	RATCHET	14	7/8	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

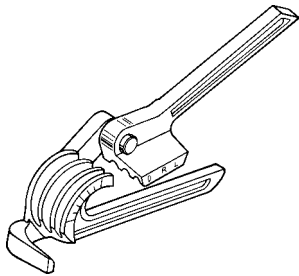
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PART NO.

DESCRIPTION

Tube Benders, Lever Type

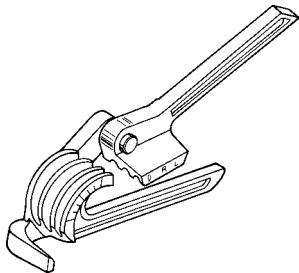
For soft copper, aluminum, brass, steel and other metal tubing

**367-FH-BPD****368-FH-BPD****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.

For 1/8", 3/16" and 1/4" (3, 4, and 6 mm) O.D. tubing, 9/16" radius to center of tube.

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**367-FH-BPD****368-FH-BPD****Triple Header Benders**

For annealed copper, aluminum, steel, stainless steel and hard copper tubing of bending temper.

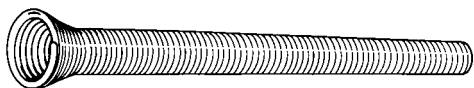
Lever type, multiple size benders. Calibrated markings for making accurate left-hand, right-hand, and offset bends. Ninety degree start requires less effort; makes bending fast and easy.

BENDING RANGE

Tube O.D. (Inches)	Tube O.D. (mm)	Radius to Center of Tube	
		(Inches)	(mm)
1/8, 3/16, 1/4	3, 4, 6	9/16	14.2
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 3/4" 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.)
1/4	10	3
5/16	10	3
3/8	10	4
7/16	12	6 1/4
1/2	12	6 1/2
5/8	12	8
3/4	12	10

102-F-04-BPD**102-F-05-BPD****102-F-06-BPD****102-F-07-BPD****102-F-08-BPD****102-F-10-BPD****102-F-12-BPD****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.

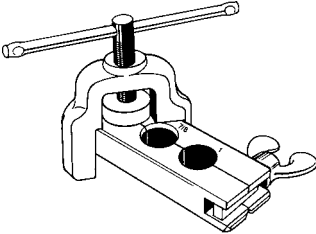
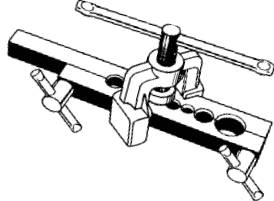
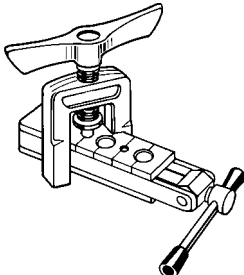
112-F-BPD

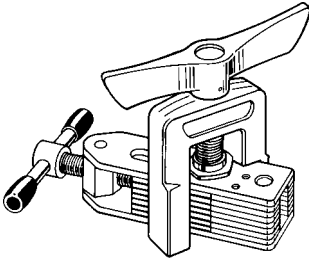
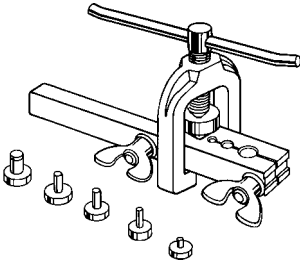
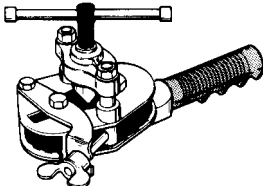
Set of 3 benders for 1/4", 5/16" and 3/8" O.D. tubing.

163-F-BPD

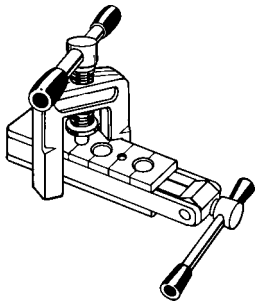
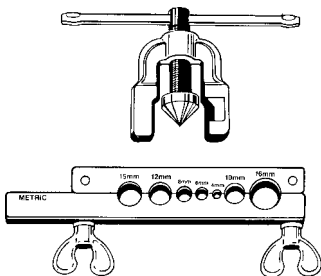
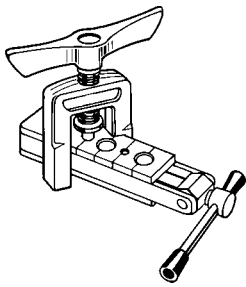
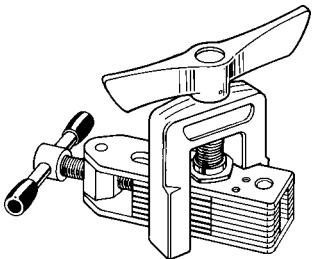
Set of 4 benders for 1/4", 3/8", 1/2" and 5/8" O.D. tubing.

K

	PART NO.	DESCRIPTION
45° Flaring Tools For soft copper, aluminum and brass tubing		
	103-FS-BPD	Tools for flaring larger tubesizes. Quick slip-on yoke. Positive clamping action of flaring bar eliminates tube movement. Weight: 3 3/4 lbs.
	203-FA-BPD	For 3/4", 7/8" and 1" O.D. tubing, (5/8" and 3/4" nom.). 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 cone. Automatically burnished flare face. Slip-on yoke permits use in tight quarters. Heat treated dies grip tubing without scoring. Weight: 1 1/2 lbs.

	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 cone 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 rolled 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.

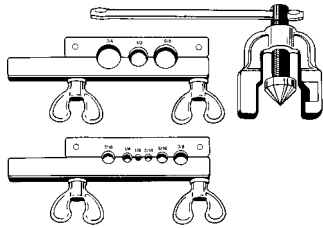
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PART NO.

DESCRIPTION

Tubing Tool Kits

For soft copper, aluminum and brass tubing

**375-FS-BPD****45° Flaring Kits**

Compact kits contain two flaring bars and one yoke. Self-centering forged steel yoke has slip-on feature. Swivel-type flaring cone reduces effort required. Positive clamping action of flaring bars eliminates tube movement. In plastic case.

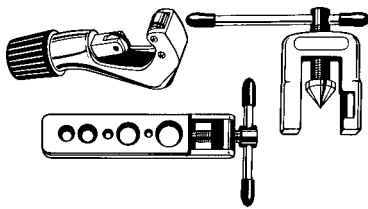
For 1/8" 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8", and 3/4" O.D. tubing, (1/8", 1/4", 3/8", 1/2" and 5/8" nom.).

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.).

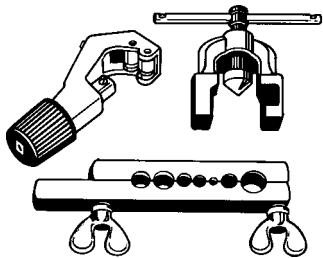
Weight: 2 lbs.

**123-FA-BPD****45° Flaring and Cutting Kit**

Contains TC 1000 tube cutter; 300-FB flaring tool 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.).

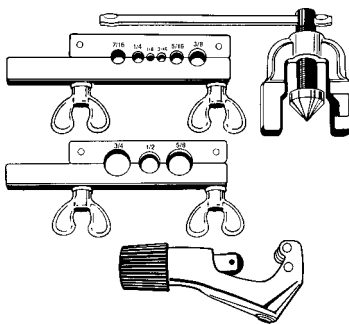
124-FA-BPD

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**

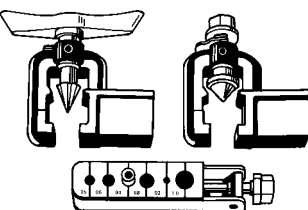
Contains TC 1000 cutting tool and 375-FS multiple-size flaring tool for 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8" and 3/4" O.D. tubing, (1/8", 1/4", 3/8", 1/2" and 5/8" nom.). In plastic carrying case.

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.

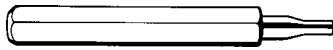
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PART NO.

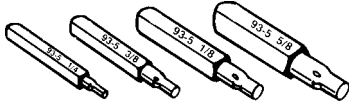
DESCRIPTION

Swaging Tools

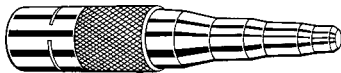
For soft copper, aluminum and brass tubing



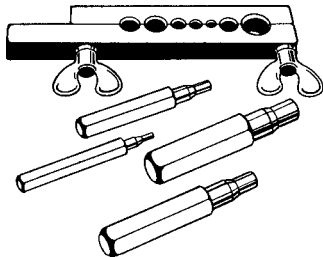
93-S-BPD



193-S-BPD



94-S-BPD



195-SA-BPD

93-S-03-BPD
93-S-04-BPD
93-S-05-BPD
93-S-06-BPD
93-S-08-BPD
93-S-10-BPD
93-S-12-BPD
93-S-14-BPD
94-S-BPD

193-S-BPD

195-SA-BPD

75531-BPD

Punch-Type Swaging Tools

Use these tools for making tubing connections without fittings. Enlarge end of tube, insert another tube, solder like a sweat fitting.

	O.D. SIZE (INCHES)	NOM. SIZE (INCHES)	WEIGHT
Swaging punch.	3/16		3 oz.
Swaging punch.	1/4	1/8	3 oz.
Swaging punch.	5/16		1/4 lb.
Swaging punch.	3/8	1/4	1/4 lb.
Swaging punch.	1/2	3/8	1/2 lb.
Swaging punch.	5/8	1/2	1/2 lb.
Swaging punch.	3/4	5/8	3/4 lb.
Swaging punch.	7/8	3/4	1 lb.
Swaging punch.	1/2	3/8	1 lb.
		5/8	1/2
		7/8	3/4

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.

Swaging Punch Kit

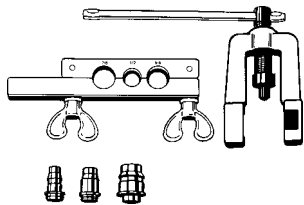
Contains flaring bar and four swaging punches - 1/4", 3/8", 1/2" and 5/8" O.D., (1/8", 1/4", 3/8" and 1/2" nom.). In steel kit.

Weight: 2 lbs.

Flaring bar only.

Weight: 1 lb.

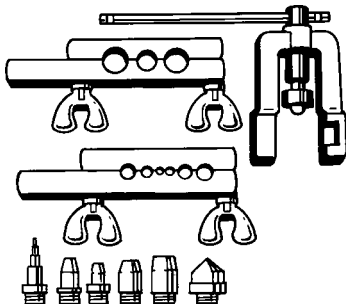
194-S-BPD



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.).

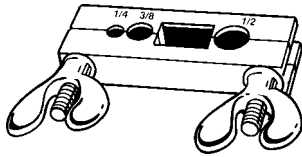
Flares or swages. Converts quickly. Screw-type-feed. Ideal close quarters tool. Swivel-type swaging adapters and spreader cone are hard chrome-finished for easy operation. Self-centering, slip-on forged steel yoke. In plastic kit.

Weight: 3 1/2 lbs.

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PART NO.	DESCRIPTION
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Testing and Service Tools



105-FF-BPD

Pinch Off Tool

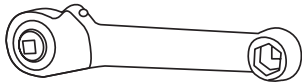
1/4", 3/8" and 1/2" O.D.

Temporarily closes soft copper, aluminum or steel tubing so no liquid or gas passes sealed part. Opens tubing and rounds it back to shape.

Weight: 3/4 lb.

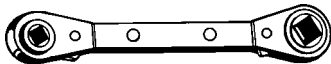
Ratchet Wrenches

For refrigeration/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

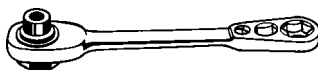
Combination wrench with the four sizes most needed for servicing automotive air conditioning:

* 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

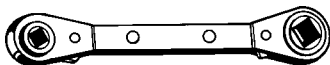
* 3/16" square for valve on old style refrigerant charging tanks.



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.

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Par-Lok® Wrench

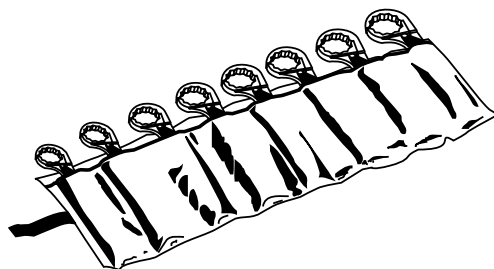
360° Snap-action ratchet wrench for hex sizes from 3/8" to 2 1/4" across the flats and metric from 10mm to 22mm. Inch sizes meet government specifications and are listed as NSN-5120-00-474-7227.

Install Tube Fittings Faster

Easy across ratchet wrench speeds fittings installation in tight locations. Rugged, snap-action jaws can be opened over tube 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.

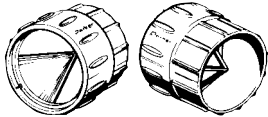
Specifications

Par-Lok wrenches are available individually or in 3 different kit combinations. Par-Lok jaws are constructed from drop-forged, high carbon steel material with a black conversion coat finish. Par-Lok handles are made from heavy gauge 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 strength.

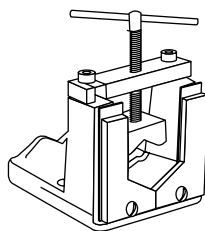


INCH SIZES				METRIC SIZES	
PART NO.	HEX SIZE	PART NO.	HEX SIZE	PART NO.	HEX SIZE
860062-6-BPD	3/8	860062-18-BPD	1 1/8	860063-10-BPD	10 mm
860062-7-BPD	7/16	860062-20-BPD	1 1/4	860063-11-BPD	11 mm
860062-8-BPD	1/2	860062-22-BPD	1 3/8	860063-12-BPD	12 mm
860062-9-BPD	9/16	860062-24-BPD	1 1/2	860063-13-BPD	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- 8 Wrenches		860063-21-BPD	21 mm
860062-15-BPD	15/16			860063-22-BPD	22 mm
860062-16-BPD	1			860063-KIT-BPD	Full Kit- 10 Sizes
860062-KIT-BPD	Full Kit- 11 Sizes				

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	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 guide will accommodate tube, pipe and hose from sizes 3 (3/16" O.D.) to 32 (2" O.D.). Assures square cut-offs within $\pm 1^\circ$. 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.
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Multi-Flame Torch

Each torch is designed to direct jets of flame against the entire circumferenced of the tube and fitting. This allows the maximum amount of heat to be equally distributed in a minimum amount of time.

The small torch is recommended for use on TL and LHB3 fittings sizes 16 and below. The large torch is best suited for sizes 20 and 24. The large torch can reduce brazing heavy wall tubing in sizes 12 and 16. Threads is 3/8-24 LH hose connections.



PART NO.	DESCRIPTION
870035-BPD	Small Multi-Flame Torch, (6 jets)
880009-BPD	Large Multi-Flame Torch, (8 jets, heat shield)
Torches are recommended for use with acetylene gas only.	

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PART NO.	DESCRIPTION
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Braze Flux

Black braze flux can be used for brazing either steel or stainless steel components. When applied liberally this flux helps the flow of the silver braze alloy and prevents oxidation.



FLUX-1-BPD	Black Flux 1 lb.
FLUX-1/2-BPD	Black Flux 1/2 lb.

Post Braze Cleaner

Used to clean the assembly after brazing. Once the silver braze alloy has solidified, immediately immerse into the braze cleaner solution. The cleaner combined with the sudden change in temperature removes the flux from the assembly. Braze cleaner does not provide corrosion protection.

Available in sizes 2 1/2 lb. and 5 lb. jars. When ordering simply denote quantity after Braze Cleaner.



BRAZE-2.5-BPD	Braze Cleaner 2 1/2 lb.
BRAZE-5-BPD	Braze Cleaner 5 lb.

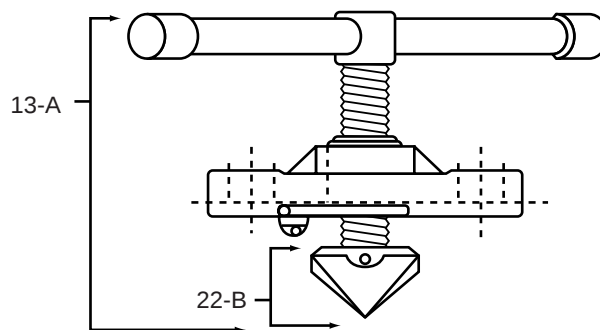
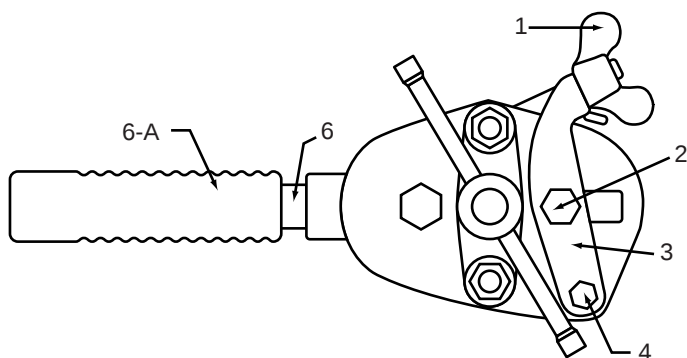
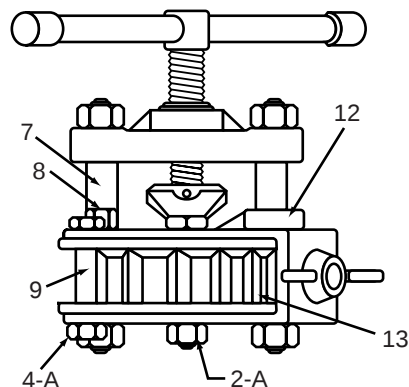


Rolo-Flair® Repair Parts

We do not repair the flaring tool-however, we do offer repair parts-stock available in Otsego, Michigan, only.

Rolo-Flair® for 45° Flare 945TH-BPD

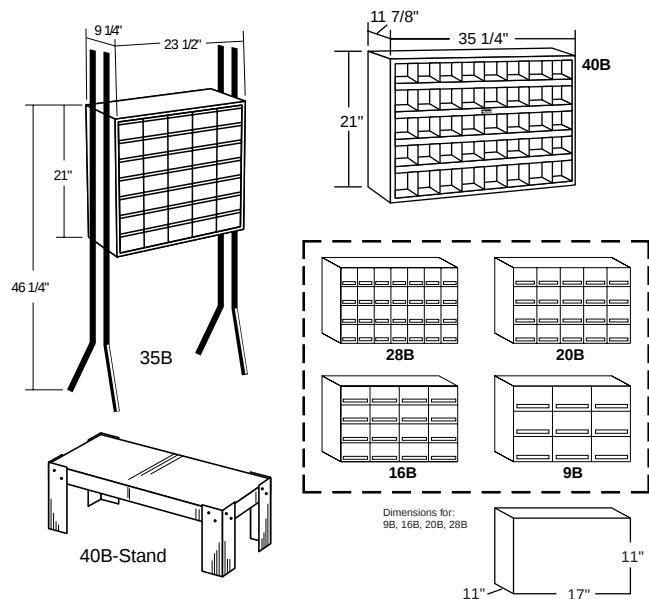
DRAWING ITEM NUMBER	PARKER PART NUMBER	PART DESCRIPTION	NUMBER PIECES REQUIRED
1	642685	Wing Nut	1
2	642694	Hex Bolt	1
2-A	642696	Jam Nut	1
3	642759	Clamping Yoke	1
4	642693	Hex Head Bolt (1/4-28-7/16 Head)	1
4-A	642698	Jam Nut	1
6	642764	Handle	1
6-A	642716	Handle Grip	1
7	642689	Spacer	2
8	642681	Hex Stud	2
9	2603-00006	Spacer	1
12	2600-03001	Top Plate	1
13	2600-03004	Flaring Die Sub-Assy.	1
13-A	2600-03002A	Cross Yoke Sub-Assy.	1
22-B	642680	Burnishing Cone	1



Bins/Cabinets

Compact, expandable, point-of-purchase display with drawers, Part No. 35B is suitable for production or maintenance inventory.

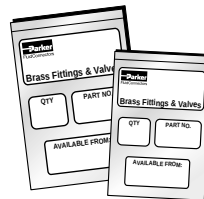
PART NO.	DESCRIPTION
9B	9 drawer cabinet
16B	16 drawer cabinet
20B	20 drawer cabinet
28B	28 drawer cabinet
35B	35 drawer cabinet
35BCL	Legs for 35B cabinet
35BCD-KIT	10 replacement drawers with 20 dividers
35BCD-DIVIDERS	Dividers only
40B	Cabinet stock bin
40B-Stand	Parker Brass Products Base Stand for 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

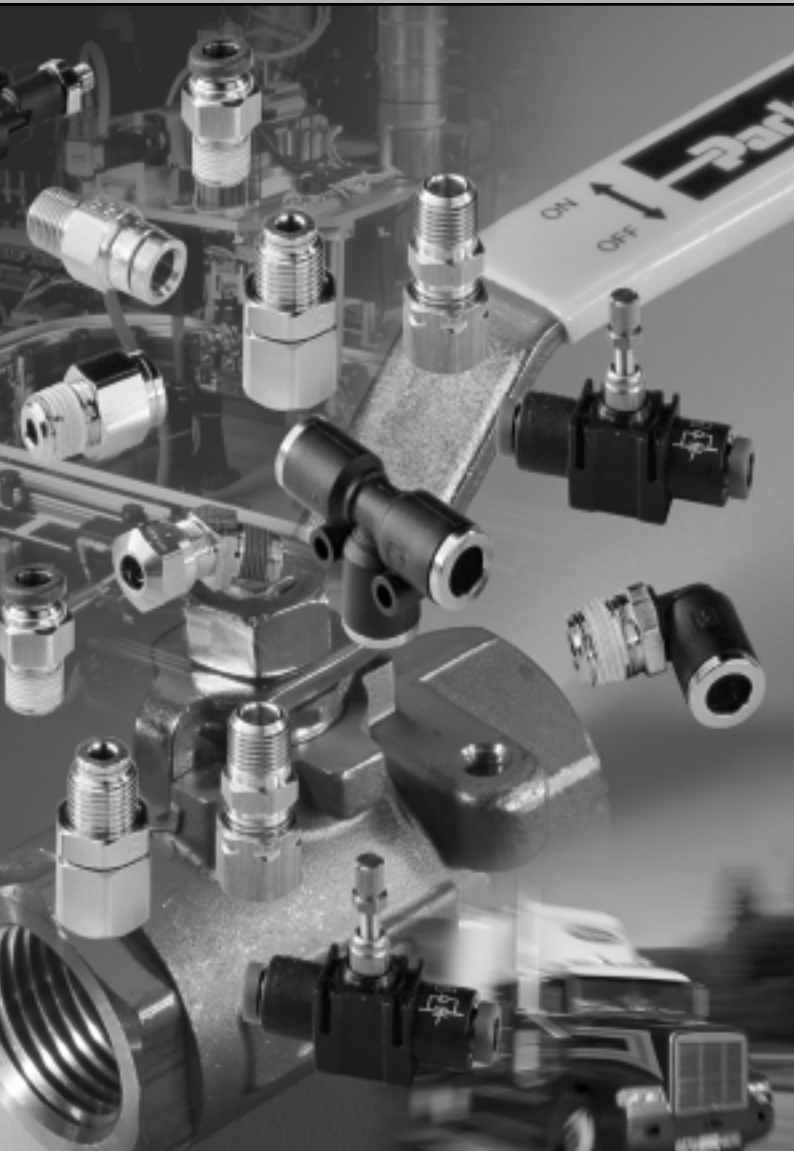
Copper tubing meets A.S.T.M. specification B-280 (copper tube for refrigeration field service)

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





General Technical



Manufacturing Techniques	M2
Tubing Compatibility Chart	M3
Tube Line Fabrication Guide for Leak Free Systems	M3
Thread Specifications	M5
Flaring Instructions	M6
Thread Designations and Standards for Threads Used in Fluid Connectors	M7
Straight Thread Size Comparison Chart	M8
S.A.E. Part Index	M9
SAE Standards	M9
U.L. Listed Fittings	M10
Flow Curves	M11
Metric Fitting Nomenclature	M14
Flare and Thread Profiles	M15
Pressure Conversions	M16
English/Metric Conversions	M17
Fluid Compatibility Guide	M18

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)

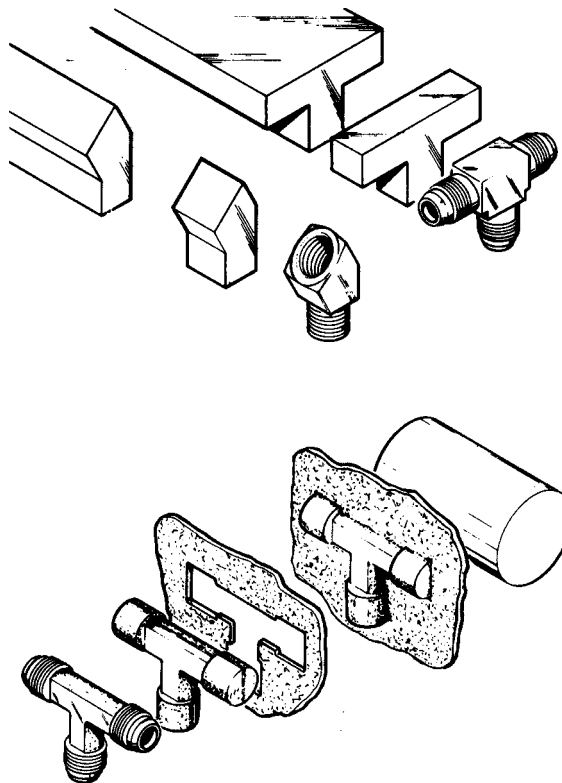
Straight bodies:	barstock CA 360 or CA 345
Shape bodies:	extruded barstock CA 360
Shape bodies:	forged CA 377
Nuts:	barstock CA 360
Nuts:	forged CA 377

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.



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	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				×		×							×	×					
Diesel Fuel				×		×							×	×					
Cartridges				×		×							×	×					
Air Brake-AB	×																		
Air Brake-NTA®						×	×						×	×					
Transmission						×							×						
Ari Brake Hose Ends															×				
Vibra-Lok	×	×	×																
DAT						×	×						×	×					
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.)

M

- **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.)

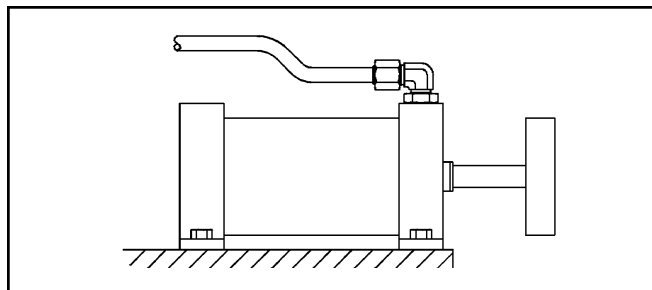


Fig. A23 — Bent Tube Allowing for Motion Under Load

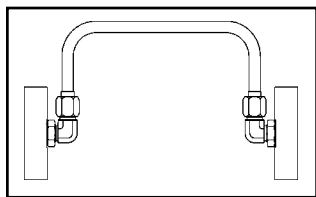


Fig. A14 — Correct Routing

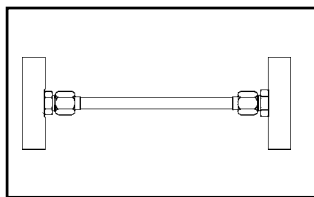


Fig. A15 — Incorrect Routing

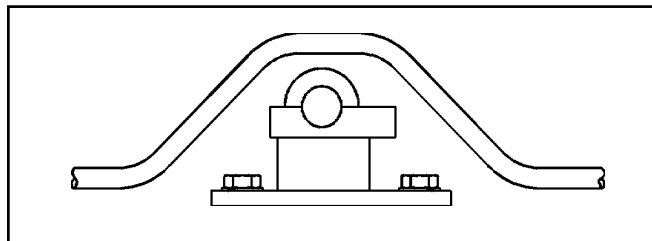


Fig. 24 — Correct

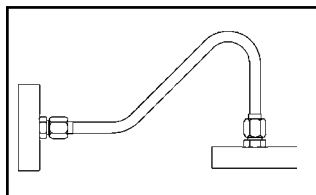


Fig. A16 — Correct Routing

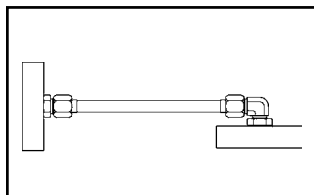


Fig. A17 — Incorrect Routing

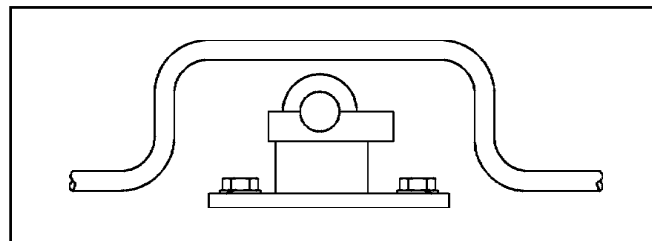


Fig. A25 — Incorrect

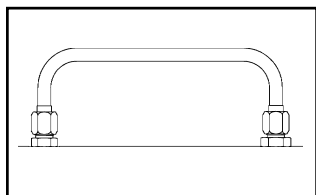


Fig. A18 — Correct Routing

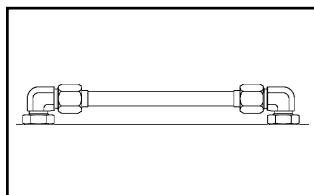


Fig. A19 — Incorrect Routing

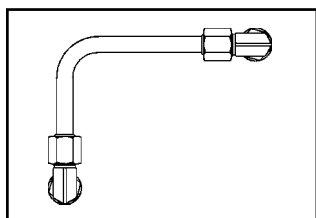


Fig. A20 — Correct Routing

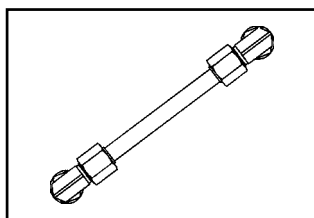


Fig. A21 — Incorrect Routing

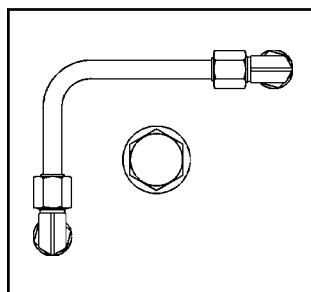


Fig. A26 — Correct

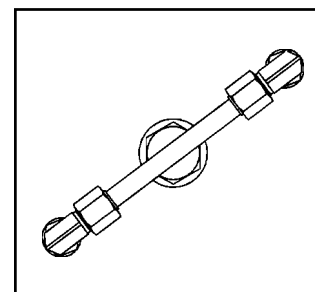


Fig. A27 — Incorrect

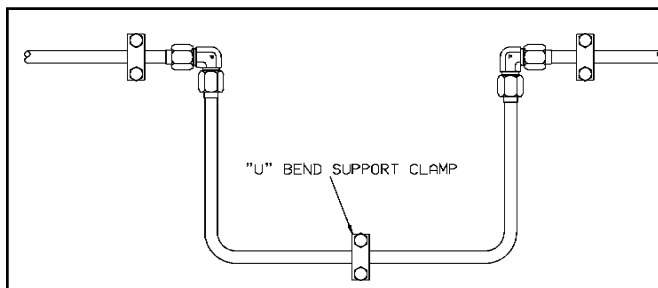


Fig. A22 — U-Bend Allowing Expansion and Contraction

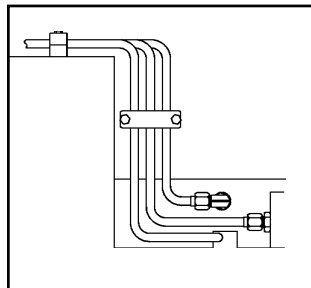


Fig. A28 — Correct

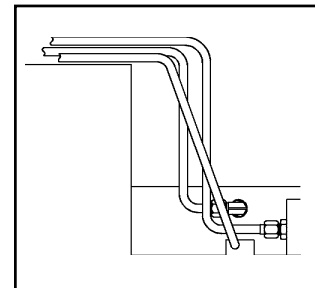


Fig. A29 — Incorrect

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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.

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.

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:

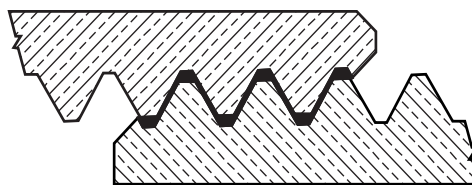
- Rp: Internal parallel
- Rc: Internal taper
- Rs: Special external parallel
- R: External taper

Use of a thread sealant is recommended with the R series thread. An elastomeric peripheral seal should be used with the Rs thread.

Non-Pressure Tight

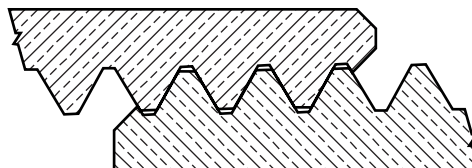
All British Standard parallel pipe threads manufactured in this catalog according to BS2779 and ISO 228-1 are intended for use where pressure tight joints are not made on the threads. An elastomeric peripheral seal should be used. These threads are designated as follows:

- G: Internal Thread
- GA, External thread, tight tolerance classification
- GB, External thread, general purpose and assumed if no classification designation is given



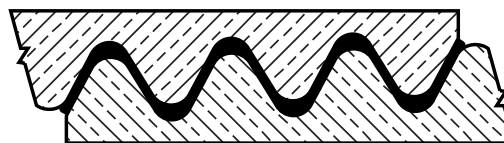
Dryseal Pipe Thread

Metal to metal contact. Crests of thread are crushed by the roots when wrench-tightened to form seal.



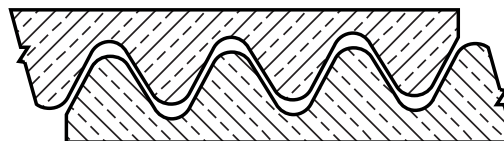
Non-Dryseal Pipe Thread

Flanks are in contact with possible clearance between the roots and crests. Will not prevent spiral leakage



BS21 British Standard Pipe Thread for Pressure Tight Joints

Metal to metal contact provides seal as tapered thread is wrench-tightened.



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

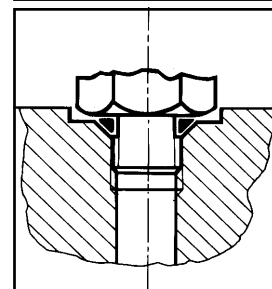
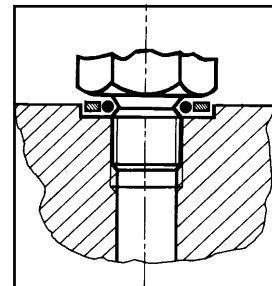
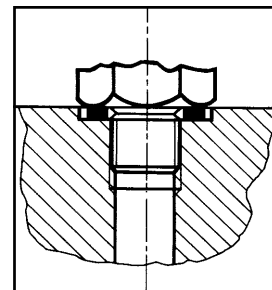
Flat seals

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.

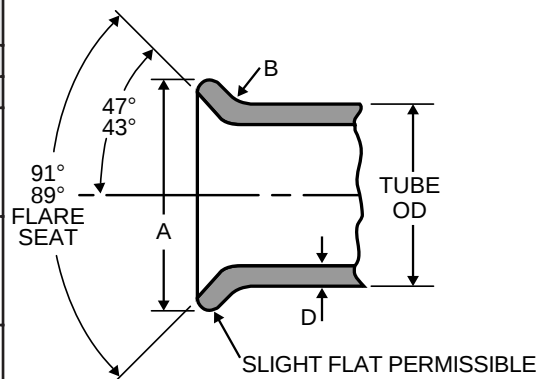
3) FLARE TUBING:

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 in	A Single Flare Diameter		B Single Flare Radius	D Single Flare Wall Thickness
	Max.	Min.	±0.01	Max.
1/8	0.0181	0.171	0.02	0.035
3/16	0.0249	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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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)	SAE J476 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 O7 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	Unified 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.

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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

S.A.E. Part Index

PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE
SAE 010101	D7	SAE 010203	D11	SAE 060102 BA	A8	SAE 100401 BA	G8
SAE 010102	D8	SAE 010302	D12	SAE 060103 BA	A8	SAE 100424 BA	G9
SAE 010103	D8	SAE 010401	D9	SAE 060110	A6	SAE 100425 BA	G10
SAE 010104	D7	SAE 010424	D11	SAE 060111	A6	SAE 120101 BA	G14
SAE 010105	D13	SAE 010425	D9	SAE 060115	A6	SAE 120102 BA	G15
SAE 010106	D13	SAE 010501	D9	SAE 060201 BA	A9	SAE 120103 BA	G14
SAE 010107	D13	SAE 040101	D15	SAE 060202 BA	A10	SAE 120111	G14
SAE 010108	D6	SAE 040102	D16	SAE 060203 BA	A10	SAE 120115	G14
SAE 010109	D13	SAE 040103	D15	SAE 060401 BA	A9	SAE 120201 BA	G15
SAE 010110	D6	SAE 040110	D15	SAE 060425 BA	A11	SAE 120202 BA	G15
SAE 010111	D6	SAE 040201	D17	SAE 100101 BA	G6	SAE 120203 BA	G16
SAE 010112	D13	SAE 040202	D16	SAE 100102 BA	G8	SAE 120302 BA	G16
SAE 010113	D5	SAE 040203	D17	SAE 100103 BA	G7	SAE 120401 BA	G15
SAE 010114	D5	SAE 040302	D17	SAE 100110	G6	SAE 120424 BA	G16
SAE 010165	D5	SAE 040401	D16	SAE 100115	G6	SAE 120425 BA	G16
SAE 010166	D5	SAE 040424	D17	SAE 100201 BA	G9		
SAE 010167	D5	SAE 040425	D16	SAE 100202 BA	G9		
SAE 010201	D11	SAE 040427	D17	SAE 100203 BA	G9		
SAE 010202	D10	SAE 060101 BA	A7	SAE 100302 BA	G10		

SAE Standards

- 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
- J1231:** Beaded Tube Hose Connectors
Fittings: Beaded Hose Barbs
- J1615:** Thread Sealants
- J2494:** Brass Body Push-to-Connect Fittings
Tubing: J844 Nylon
Fittings: Prestomatic

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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	255IFHD	664FHD
46IFHD	147F	171CA	256IF	
48F	149F	172C	259IFHD	
48IFHD	150F	172CA	264C	
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				
V500PUL-4	V501PUL-4			
V500PUL-6	V501PUL-6			
V500PUL-8	V501PUL-8			
V500PUL-12	V501PUL-12			
V500PUL-16	V501PUL-16			

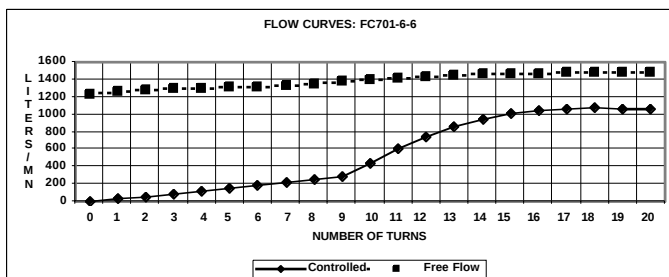
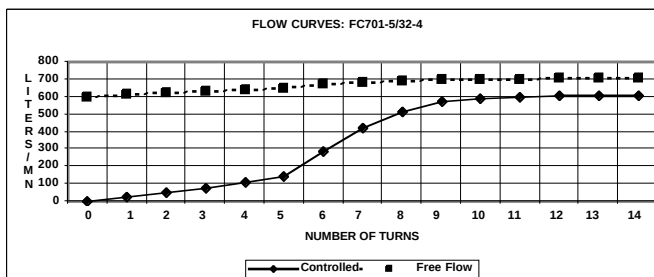
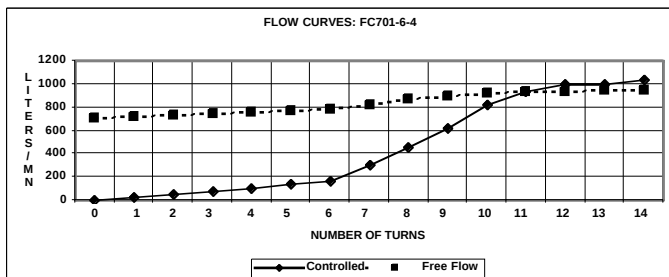
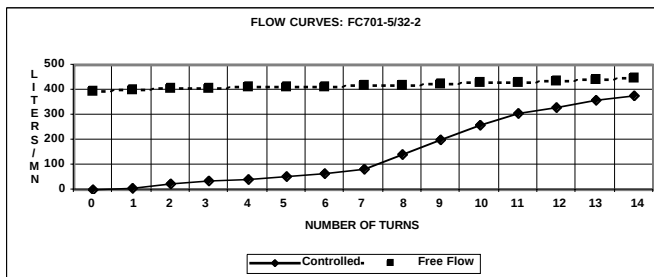
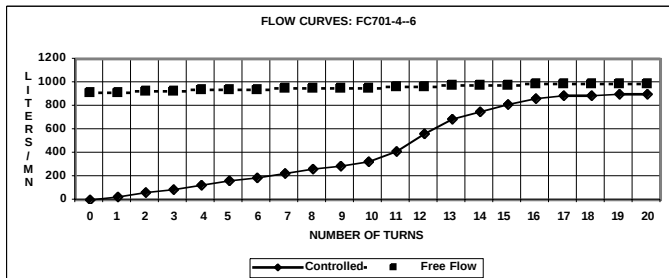
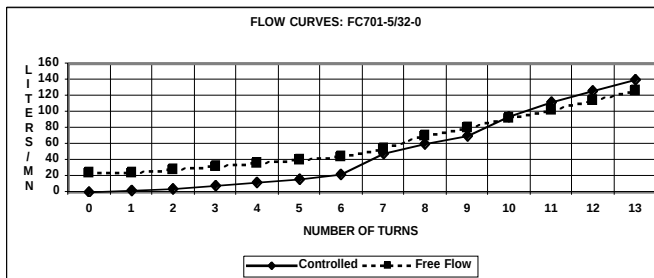
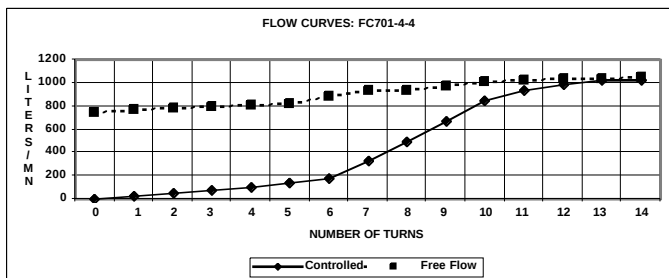
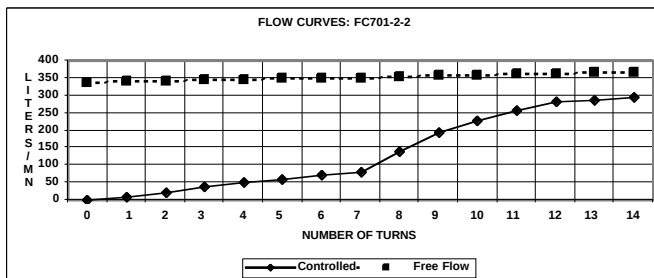
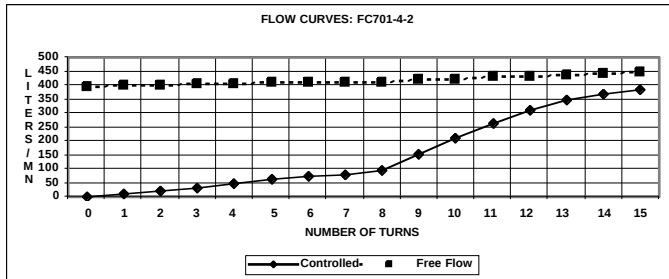
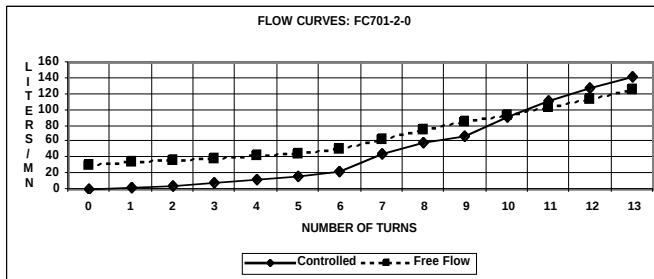
G Marking Required

FITTINGS, REFRIGERATION		
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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
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42IFHD	244F	661FHD
46F	244IFHD	664FHD
46IFHD	245IFHD	

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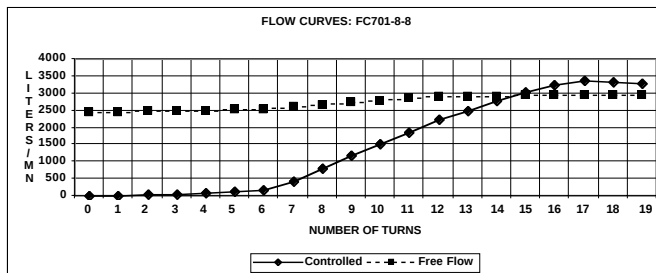
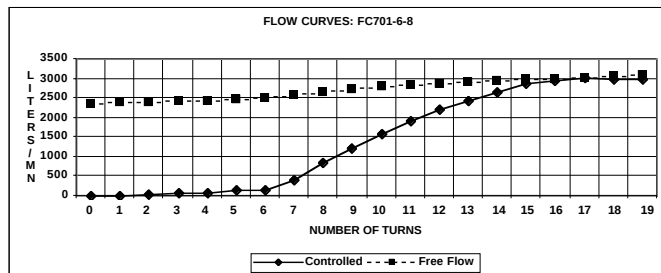
Flow Curves

FC701 Flow Curves

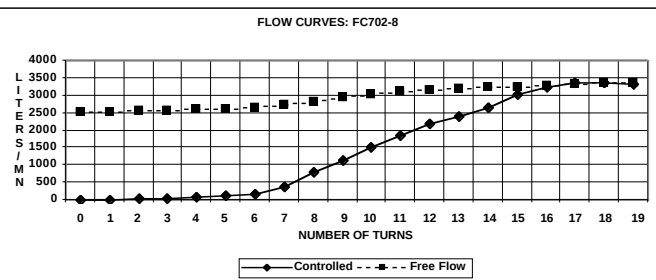
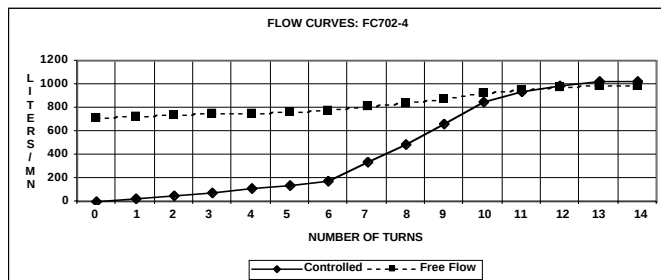
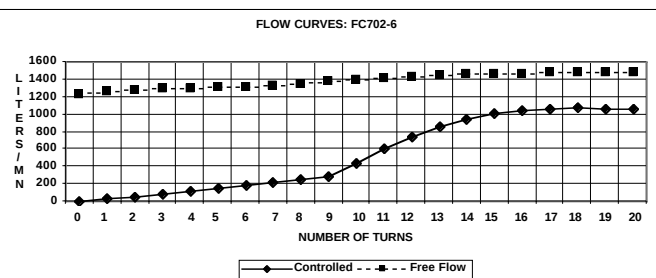
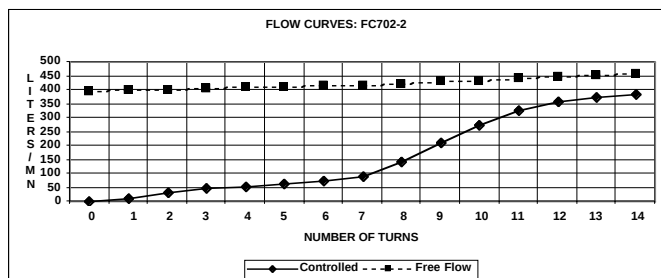


Note: All tests were conducted at 90PSI

FC701 Flow Curves

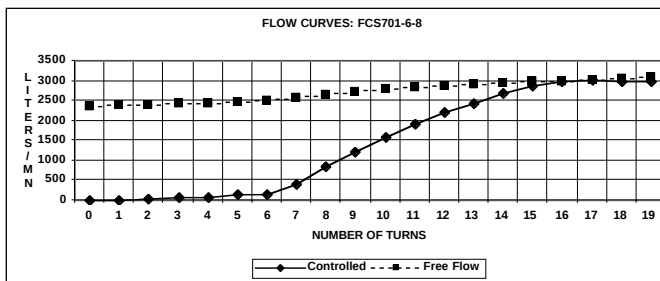
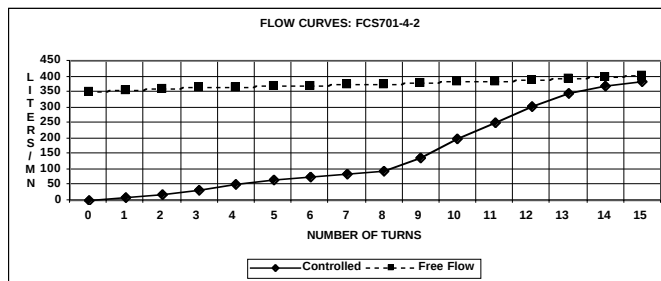
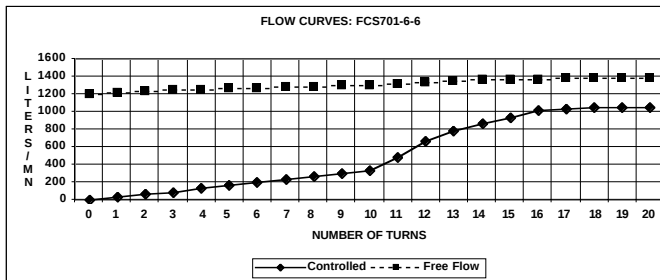
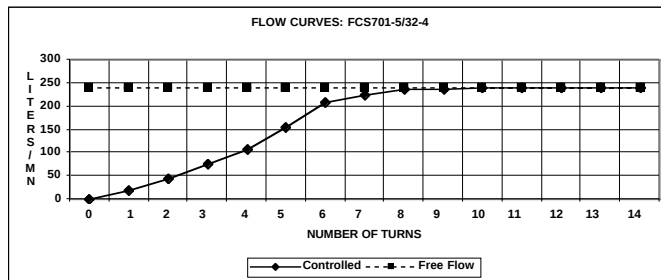
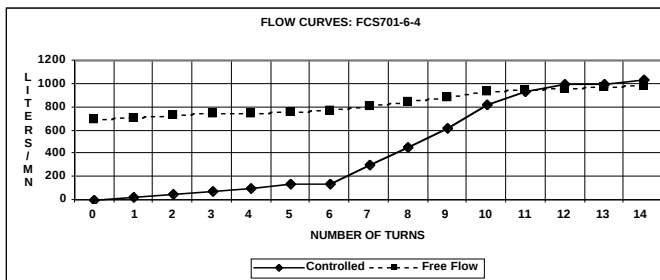
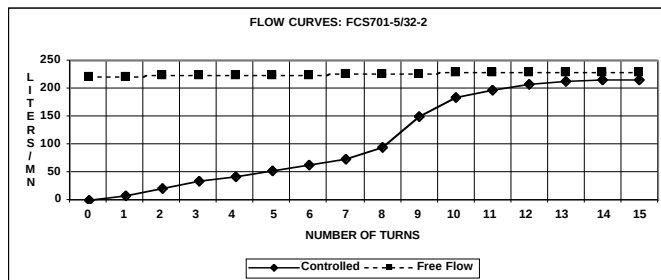
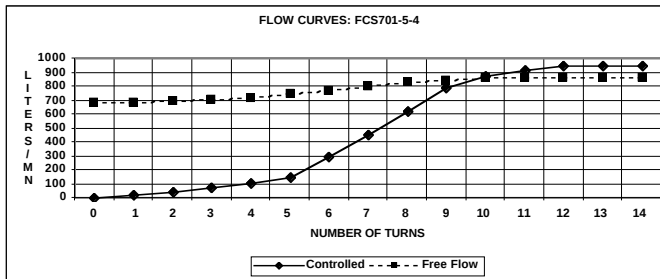
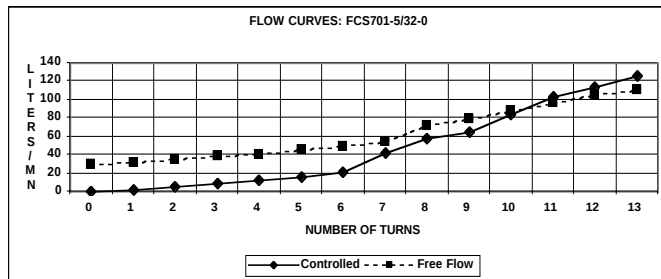
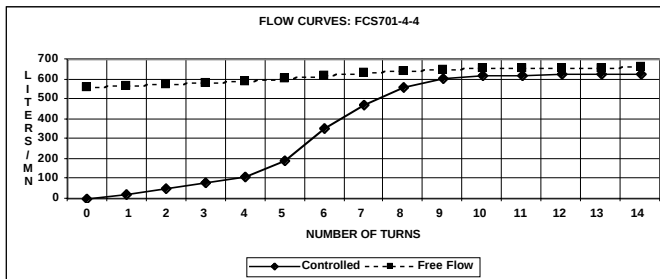
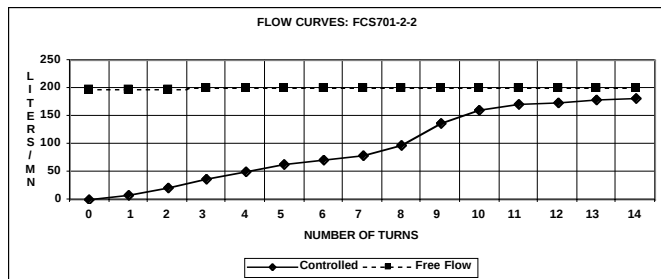


FC702 Flow Curves



Note: All tests were conducted at 90PSI

FCS701 Flow Curves

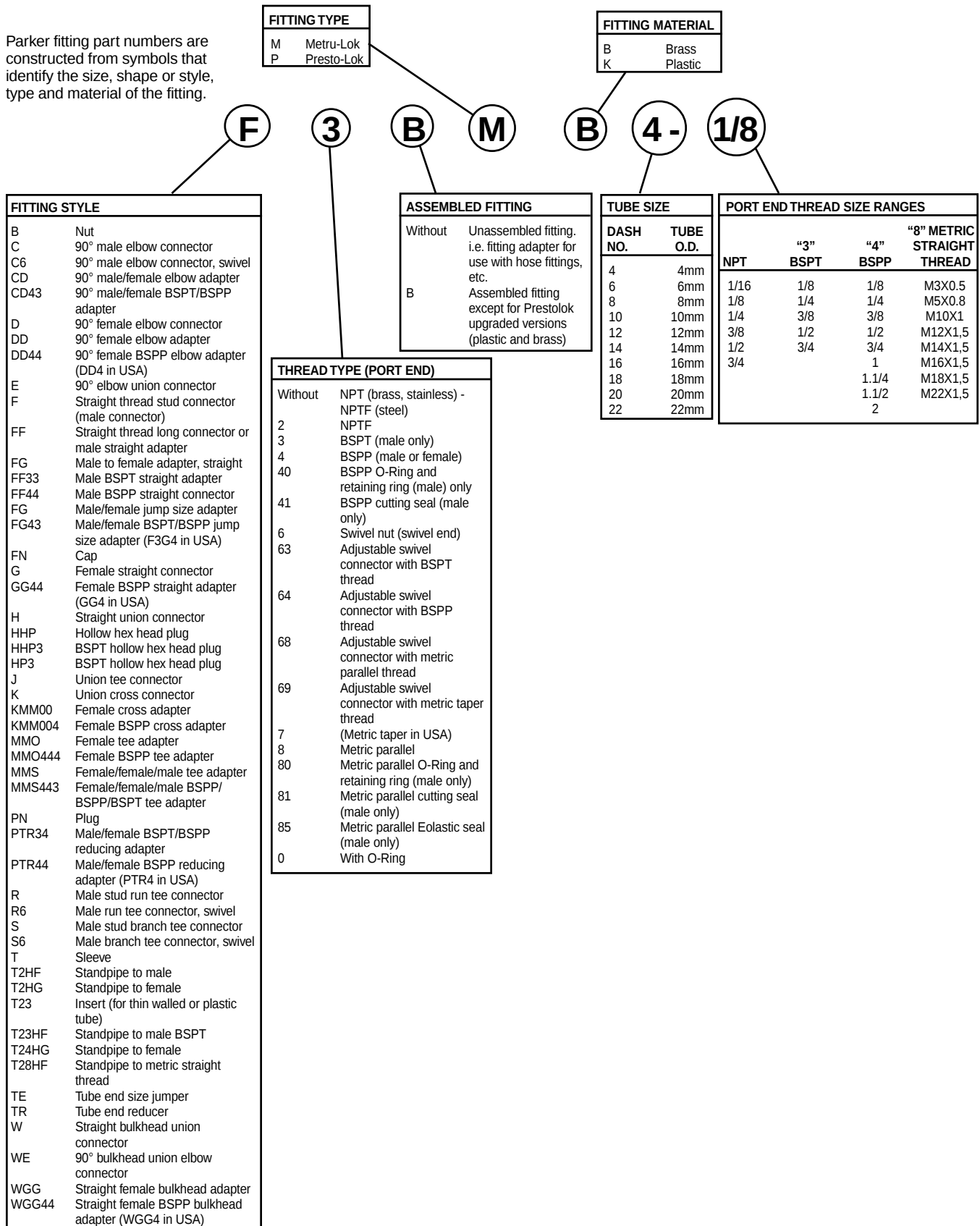


Note: All tests were conducted at 90PSI



Metric Fitting Nomenclature

Parker fitting part numbers are constructed from symbols that identify the size, shape or style, type and material of the fitting.

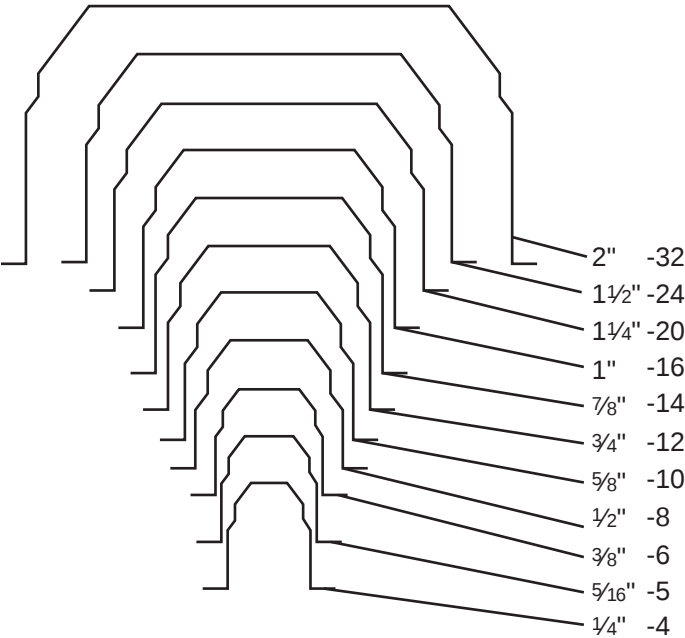


M

Flare and Thread Profiles

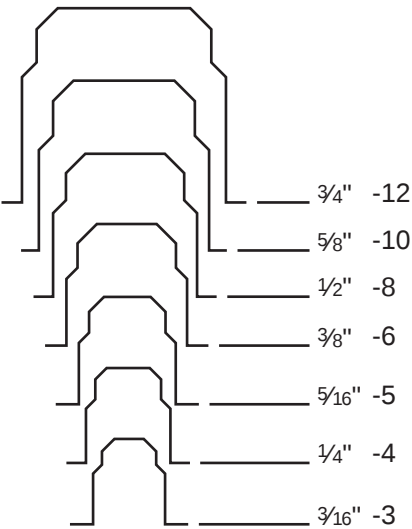
SAE (JIC) 37° Flare Nose Sizes

Actual Size

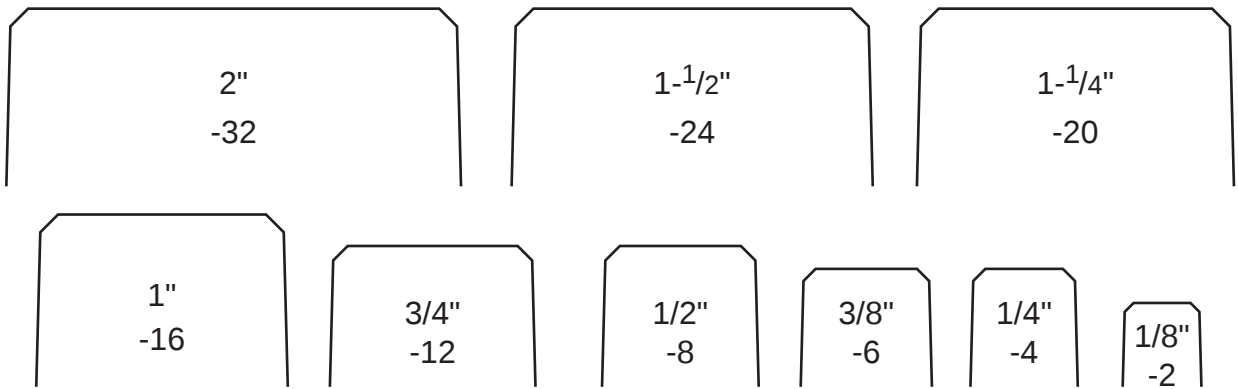


SAE 45° Flare Nose Sizes

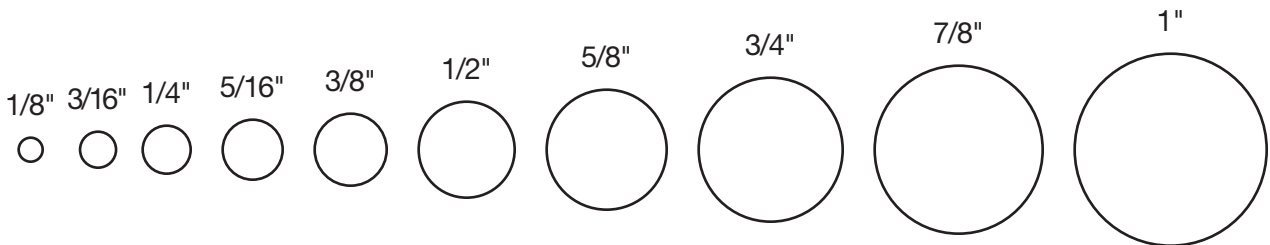
Actual Size



Male Pipe Thread Sizes



Actual Outside Diameters of Tubing



M

Pressure Conversions

Kilopascals (KPa)	Megapascals (MPa)	Bar (bar)	Kilograms Per Square Centimeter (Kgf/cm ²)	Pounds Per Square Inch(psi)	Pounds Per Square Inch(psi)	Kilopascals (KPa)	Megapascals (MPa)	Bar (bar)	Kilograms Per Square Centimeter (Kgf/cm ²)
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

M

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

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 (NITRILE)	NEOPRENE	EPR	VITON	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	E	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		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		
AMMONIUM BICARBONATE	G	P	G	G	E	E	E	E	E	
AMMONIA, ALUM				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

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NITRILE)	NEOPRENE	EPR	VITON	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	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	E	
AMMONIUM PHOSPHATE TRI-BASIC	P	U	G	E	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 NAPHTHALENE				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
AROCOLOR 1248	G	U	U	U	U	G	E			
AROCOLOR 1254	G	U	U	U	U	G	E			
AROCOLOR 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 NITRATE			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			
BENZYL 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			
BERYLLIUM	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	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

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NITRILE)	NEOPRENE	EPR	VITON	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	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		P	G	E		E	E	E	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		
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

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NITRILE)	NEOPRENE	EPR	VITON	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		
CRISYLIC 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	G	E		
DIMETHYL 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	

E-EXCELLENT

G-GOOD

P-POOR

U-UNSATISFACTORY

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NITRILE)	NEOPRENE	EPR	VITON	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	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			U				E	E		
FERROUS CHLORIDE	G	U	G	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	
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	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	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	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

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NITRILE)	NEOPRENE	EPR	VITON	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		
IODIFORM	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	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

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NITRILE)	NEOPRENE	EPR	VITON	PTFE	ACETAL	NYLON
METHYL ETHER		E	E	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			
NAPHTHA	G	G	G	G	P	U	E	E	E	
NAPHTHALENE	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	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		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	E	
OLEUM SPIRITS	U		G	P	U	U	E	E	U	
OLIVE OIL	P	G	E	E	G	G	E	E	E	
ORTHO-DICHLOROBENZENE	G	G	G	U	U	U	E	E	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

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NITRILE)	NEOPRENE	EPR	VITON	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	
PARA-FORMALDEHYDE	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				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 HYDROXIDE DILUTE 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 PHOSPHATE	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	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

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NITRILE)	NEOPRENE	EPR	VITON	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		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	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	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

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NITRILE)	NEOPRENE	EPR	VITON	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	E	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					
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		
TRICHLOROETHYLENE	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			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	E	

E-EXCELLENT

G-GOOD

P-POOR

U-UNSATISFACTORY

U-UNSATISFACTORY

101GHSV	E23	164CA	A16	1725VLV	G27	218B-BPD	K4
102-F-XX-BPD	K6	164HD	A43	172C	A11	218P	E8
103-FS-BPD	K7	164P	A38, A39	172CA	A18	219P	E8
105-FF-BPD	K12	164PL	B15	172HD	A45	22	F4
112-F-BPD	K6	164PM	H8	172P	A40	220	F6
1163-60-BPD	E23	164PMT	H8	172PMT	H11	2200P	E9
1163-61-BPD	E23	164VL	G25	172PMTNS	H12	2200PDE	E11
120-F-BPD	K10	165C	A9	172VL	G26	2201P	E11
1200P	E9	165CA	A17	174-F-BPD	K4	2202P	E9
1202P	E9	165HD	A43	176C	A11	2203P	E10
1203P	E10	165PL	B16	176CA	A18	2205P	E11
1204P	E10	165PMT	H9	177C	A11	220P	E8
121-F-BPD	K10	165PMTBH	H9	177CA	A18	2214P	E11
1226-FA-BPD	K10	166FSV	D12	177HD	A46	2224P	E10
122HBL	F10	168C	A9	177P	A40	2225P	E10
123-C-BPD	K12	168CA	A17	1795HB	F14	222P	E9
123-FA-BPD	K10	1695HB	F13	179C	A11	222P-X-MI	E18, E14
1232 WHEEL-BPD	K4	1695VLV	G26	179CA	A19	224	F6
1232-BPD	K4	169C	A10	179HB	F13	225	F6
124-C-BPD	K12	169CA	A17	179HB-X-MI	E19, F14	226-BPD	K14
124-FA-BPD	K10	169HB-X-MI	E19, F13	179HD	A45	226RB-BPD	K14
125-C-BPD	K12	169HD	A44	179PMT	H12	227-FA-BPD	K4
125HB	F11	169LP	A39	179PMTNS	H12	228	F7
125HBL	F11	169P	A39	179VL	G27	229	F7
125HBLSV	F11	169PL	B16	189PMT	H12	22BH	F4
126HBL	F11	169PMNS	H9	193-S-BPD	K11	22CA	F4
127-C-BPD	K12	169PMT	H9	194-S-BPD	K11	22CABH	F5
127HB	F12	169PMTBH	H10	195-FB-BPD	K8	230	F7
128HBLSV	F12	169PMTL	H9	195-FC-BPD	K7	231	F7
129HB	F12	169PMTNS	H10	195-SA-BPD	K11	232	F8
139HB	F12	169PMTNS-X-M	H10	1F	D5	233	F8
144F	D9	169PS	A39	20	F4	237	F8
145F	D9	169VL	G25	201-F-BPD	K6	238	F8
146HBLFSV	F13	16B	L1	203-FA-BPD	K7	244F	D9
147F	D9	170C	A10	206-FB-BPD	K3	244IFHD	D16
1495F	D10	170CA	A18	207ACBH	E6, G17	245IFHD	D16
149F	D10	170HD	A45	207P	E6	2491FHD	D16
149F-X-MI	E18, D10	170P	A40	208-FSS-BPD	K14	249F	D10
14FL	D5	170PMT	H10	208P	E6	249IF	D16
14FS	D6	170PMTNS	H11	209P	E6	24M	I12
14FSV	D6	170VL	G26	20B	L1	250IFHD	D17
14FSX	D5	1715VLV	G26	20GT	F8	251IFHD	D17
150F	D11	171C	A10	210P	E6	252IFHD	D17
151F	D11	171CA	A18	211P	E7	255IFHD	D17
155F	D11	171HB	F13	212P	E7	255M	I11
1595F	D12	171HD	A45	213P	E7	256F	D12
159F	D12	171P	A40	215PN	E7	259F	D12
159F-X-MI	E18, D12	171PMT	H11	215PNL	E7	259IFHD	D17
163-F-BPD	K6	171PMTNS	H11	216P	E8	26	F5
164C	A9	171VL	G26	218B WHEEL-BPD	K4	264AB	G15

264C A9	369MLX B10	48F D8	62NBH G7
264CA A16	369PL B17	48F-X-MI E18, D8	62NFBH G7
264NTA G8	369PLX B18	48IFHD D16	62NTA G6
265AB G15	369PTC H14	500-FC-BPD K7	62P A32
265C A9	370ML B10	500-FCM-BPD K9	62PBH A32
265CA A17	370PL B19	50GHSV E21	62PCA A15, A32
265NTA G9	370PTC H14	525-F-BPD K8, K9	62PCABH A15, A33
269C A10	371ML B11	53GH E21	62PL B13
269CA A17	371PL B19	54GH E21	62PLBH B13
269HB F14	371PTC H15	55GH E21	62PM H6
269P A39	372ML B11	56PSG A31	62PMT H7
269TF G12	372PL B20	56RBSG G20	62PMTBH H7
27 F5	372PTC H16	59CA A14	62PMTBHR H6
270AB G16	375-FS-BPD K10	59HD A46	62PTBH A33
270C A10	376-FS-BPD K10	59P A31	62RB G20
270CA A18	377PL B21	60AB G14	62TF G12
270NTA G9	379PTC H16	60C A6	62VL G24
273 G19	391P A34	60NTA G6	639C A12
275-FS-BPD K11	391PSS A34	60P A31	639CA A19
279HB F14	392P A35	60PB A31	639F D13
28 F5	392PSS A35	60PT A6	639PL B21
2829-XXMM-BPD K5	393P A35	60RB G20	639PM H12
28B L1	393PD A35	60TF G12	639PMT H12
293-F-BPD K9	393PDSS A36	60VL G24	63NTA G6
296-FC-BPD K7	393PSS A35	60VLV G24	63PL B13
2GF D5	394P A36	61AB G14	63PT A7, A15, A33
300-FB-BPD K7	394PD A36	61C A6	640F D13
312-FC-BPD K3	394PDSS A37	61CA A14	640QSF D22
32PL B13	394PSS A36	61CL A6	640QSFC D22
32PTC H14	395-FAM-BPD K9	61HD A43	640QSFCR D22
3501-B1 L1	398P A37	61NTA G6	660FHD D13
3550-B L1	398PD A38	61P A31	661FHD D13
35B L1	398PDSS A38	61PB A31	664FHD D13
35BCD-DIVIDERS L1	398PSS A37	61PN A31	66AB G14
35BCD-KIT L1	3GF D5	61PSGN A32	66C A8
35BCL L1	402-FA-BPD K10	61RB G20	66CA A15
362ML B8	406-FA-BPD K3	61RBSG G20	66HD A44
362PL B21	40B L1	61TF G12	66ML B6
362PTC H14	411FF D15	61VL G24	66MLBH B7
364ML B8	411FS D15	62AB G14	66NBH G7
364PL B15	41FL D6	62ABH G14	66NTA G7
364PTC H15	41FS D6, D7	62ANBH G6	66P A33
365ML B8	41FX D6	62C A7	66PL B14
365PL B16	41IF D15	62CA A14	66PLBH B14
365PTC H15	42F D7	62CABH A14	66PMT H7
367-FH-BPD K6	42IFHD D15	62CBH A7	66PMTBH H7
368-FH-BPD K6	43F D7	62HD A43, A44	66RBSV G20
368ML B9	46F D8	62HDBH A43	66VL G24
368PL B22	46IFHD D15	62ML B6	67PPL B14
369ML B9	485F D9	62MLBH B6	67RBSG G20

682C A12	95GH E22	C63PB B28	F8UPMTB H19
682CA A19	96GH E22	C63PK B37	FBMB A21
682VL G25	97HC F10	C63SPK B37	FC601 C18
685HB F10	97P A34	C64PB B28	FC602 C18
685VLV G25	98GH E22	C64PK B37	FC701 C5
68C A8	98GHSV E23	C64SPB B29	FC702 C5
68CA A16	99GH E22	C64SPK B38	FC705 C7
68HB F10	99GHSV E23	C68PB B29	FC800 C22
68HB-X-MI E19, F10	9B L1	C68PK B38	FC806 C22
68HD A44	ACT-P-X-KIT J56	C68SPB B29	FC902 C14
68NTA-X-MI E19, G8	ACT-SS-X-KIT J56	C68SPK B38	FCC701 C7
68P A34	AVC1 D20	C6PB B28	FCC703 C7
68PL B14	AVCS4D-4 D21	C8BMB A23	FCM701 C6
68PM H7	AVE1 D20	C8UPMTB H20	FCM703 C6
68PMT H8	AVT1 D20	CBMB A23	FCS701 C5
68PMT-X-M H8	AVT1F1 D22	CD43 E13	FCS703 C6
68PMTBH H8	AVT2 D20	COPPER RINGS BSPP E16	FF33 E13
68RB G21	AVT3 D20	COR4BMB A25	FF44 E14
68RBSG G21	AVT3F1 D23	COR4PB B32	FG43 E14
68TF G12	AVTS D19	COR4PBD B32	FHG4 E14
68VL G25	AVTS4 D21	COR8PB B32	FLUX-1-BPD K15
69GH E21	AVTS6 D22	COR8PBD B32	FLUX-1/2-BPD K15
70GH E21	AVTSL D19	CORPB B31	FNMB A28
710439-BPD K14	AVU1 D20	CORPBD B32	FNPB B33
71GH E21	AVU2 D19	CR D22	FNPK B45
75531-BPD K11	AVU2BH D19	DC601 J83	FPB B25, B35
75GH E21	AVUIFI D20	DC602 J84	G4BMB A22
76RB G21	AVUR3 D21	DC603 J84	G4PB B26, B36
78GH E21	AVUS D21	DC604 J84	GBMB A22
79GH E21	AVUS3 D21	DC606 J84	GG44 E15
80GH E21	AVUS3BH D19	DC607 J84	HBMB A22
81GH E21	AVUS4D D21	DCR601 J84	HHP3 E15
82GH E21	AVUSE D19	DD44 E13	HP3 E15
83GH E21	BMB A27	EBMB A24	HPB B27
84GH E21	BPK B45	EPB B29	HPK B36
860062-XX-BPD K13	BRAZE-2.5-BPD K15	EPK B38	HPMTB H18
860063-XX-BPD K13	BRAZE-5-BPD K15	ERHD H6	HS3PK B44
870035-BPD K14	BTMB A28	ES H6, I7	HV104C J76
880009-BPD K14	BVG4-LOCK J63	F23PB B25	HV104C-KIT J76
880AC D23	BVG4PLOCK J62	F28PB B25	J3PK B44
881AC D23	BVGC J58	F2PMTB H18	J5PK B44
88AC D23	BVGL J60	F3BMB A21	J663PK B45
88GH E22	BVGTC J58	F3HF E13	J664PK B45
901GH E23	BVGTL J60	F3HG E13	J6PK B44
90GH E22	C2PMTB H19	F3PB B25, B35	JBMB A24
93-FB-BPD K8	C3BMB A23	F3PMTB H18	JPB B30
93-S-XX-BPD K11	C3PB B27	F4BMB A21	JPB B39
94-S-BPD K11	C3PMTB H19	F4PB B26, B35	JPMTB H19
945TH-BPD K8	C63LPB B28	F8BMB A21	KBMB A25
94GH E22	C63LPK B37	F8PB B26, B36	KMMOO4 E15

LV91	J80	PTC-001RB	K4	SAE 010107	D13	SAE 100302 BA	G10
M16M22F8UHA8UB ..	E18, E14	PTF4	C10	SAE 010108	D6	SAE 100401 BA	G8
MBVG	J65	PTF4/8E6PB	C13	SAE 010109	D13	SAE 100424 BA	G9
MMO444	E15	PTF4/8PB	C10	SAE 010110	D6	SAE 100425 BA	G10
MMS443	E16	PTFA4/8PB	C10	SAE 010111	D6	SAE 120101 BA	G14
MRO434	E16	PTFAL8	C12	SAE 010112	D13	SAE 120102 BA	G15
MV200	J72	PTFAL8PB	C12	SAE 010113	D5	SAE 120103 BA	G14
MV608	J72	PTFIPK	C23	SAE 010114	D5	SAE 120111	G14
MV609	J72	PTFIWPK	C24	SAE 010165	D5	SAE 120115	G14
MV708	J67	PTFL4/8	C12	SAE 010166	D5	SAE 120201 BA	G15
MV709	J67	PTFL4/8PB	C12	SAE 010167	D5	SAE 120202 BA	G15
NRV800	C32	PTFMIPK	C24	SAE 010201	D11	SAE 120203 BA	G16
NRV808	C32	PTP4/8PB	C26	SAE 010202	D10	SAE 120302 BA	G16
NV101F	J76	PTR34	E16	SAE 010203	D11	SAE 120401 BA	G15
NV102F	J76	PV607	J74	SAE 010302	D12	SAE 120424 BA	G16
NV103F	J76	PV608	J74	SAE 010401	D9	SAE 120425 BA	G16
NV104C	J77	PV609	J74	SAE 010424	D11	SBMB	A25
NV104CA	J77	PVMB-001	J74	SAE 010425	D9	SC4U	B32
NV105C	J77	PWB-A	C20	SAE 010501	D9	SC4UD	B32
NV105CA	J77	PWR-HB	C25	SAE 040101	D15	SC8U	B32
NV106C	J78	PWS-B	C27	SAE 040102	D16	SC8UD	B32
NV106CA	J78	PWS-E	C27	SAE 040103	D15	SK504SS	J48
NV107P	J78	PWS-M	C27	SAE 040110	D15	SPV104C-KIT	J77
NV108P	J78	R3BMB	A24	SAE 040201	D17	STX-P-1-125	J69
NV109P	J78	R63PB	B30	SAE 040202	D16	STX-P-1-225	J69
NV311P	A41, J78	R63PK	B39, B40	SAE 040203	D17	STX-SS-1-X	J70
NV312P	A41, J79	R64PB	B30	SAE 040302	D17	STX-SS-2-X	J70
PBV4	C20	R64PK	B40	SAE 040401	D16	STX-SS-3-X	J70
PBV4PB	C20	R68PB	B30	SAE 040424	D17	SV404P	J79
PCV4	C16	R68PK	B40	SAE 040425	D16	T23FPK	B45
PCV4PK	C16	RBMB	A24	SAE 040427	D17	T23HFB	A26
PIV4	C16	S32633-BPD	K3, K4	SAE 060101 BA	A7	T23HFPB	B33
PIV4PK	C16	S3BMB	A25	SAE 060102 BA	A8	T23UB	A29
PLE2BF4-K	B18	S63PB	B31	SAE 060103 BA	A8	T24FPK	B46
PLHBF4-B	B15	S63PK	B41	SAE 060110	A6	T24HGB	A27
PLR2BF4-K	B20	S64PB	B31	SAE 060111	A6	T28FPK	B46
PLS2BF4-K	B21	S64PK	B41	SAE 060115	A6	T28HFB	A26
PMB	I7	S68PB	B31	SAE 060201 BA	A9	T2ESPK	B38
PMCE	I4	S68PK	B41	SAE 060202 BA	A10	T2HFB	A26
PMCEN-ES	I7	S74761-BPD	K3	SAE 060203 BA	A10	T2HGB	A27
PMTCE	I4	S74762-BPD	K3	SAE 060401 BA	A9	T2JJPB	B40
PMTCER-ES	I7	S75015-BPD	K3, K4	SAE 060425 BA	A11	T2JPK	B41
PNMB	A28	S75046-BPD	K3, K4	SAE 100101 BA	G6	TC-1000-BPD	K3
PRB4	C29	S8UPMTB	H20	SAE 100102 BA	G8	TC-1020-BPD	K3
PRB4PB	C29	SAE 010101	D7	SAE 100103 BA	G7	TC-1050-BPD	K3
PRI4	C29	SAE 010102	D8	SAE 100110	G6	TC-2050-BPD	K3
PRIPB	C29	SAE 010103	D8	SAE 100115	G6	TCPR	I10
PRS	C30	SAE 010104	D7	SAE 100201 BA	G9	TEPB	B33
PSB	L1	SAE 010105	D13	SAE 100202 BA	G9	TMB	A28
PTC-001	K4	SAE 010106	D13	SAE 100203 BA	G9	TR2PK	B46

N

TRBMB	A29	W372PL	B20	XV510P-X-04	J23
TRPB	B33	W68ML	B7	XV510P-X-21	J23
TS2PK	B46	W68MLR	B7	XV520P	J25
US5	D6	W68PL	B14, B25, B35	XV533P	J27
V201F	J82	WBMB	A22	XV540P	J27
V203F	J82	WBMPB	A23, B27	XV590P	J29
V204F	J82	WE6PB	B29	XV590P-X-04	J29
V303C	J82	WE6PK	B39	XV591P	J29
V303CA	J82	WG4PB	B26, B36	XV591P-X-04	J29
V304C	J82	WGG44	E16	XV600P	J32
V304CA	J82	WPB	B27	XV633P	J32
V401P	J82	WPMTB	H18	XVP500CS	J34
V402P	J83	WYJ6PK	B42	XVP500HP	J40
V403P	J83	XV500CS	J34	XVP500P	J6
V404P	J79	XV500CS-X-04	J35	XVP501P	J9
V404PH	J79	XV500CS-X-21	J35	XVP502CS	J35
V405P	J79	XV500HP	J40	XVP502P	J12
V406P	J83	XV500P	J5	XVP502SS	J47
V407P	J83	XV500P-HB	J30	XVP504SS	J49
V408NTA	J80	XV500P-X-04	J7	XVP506HP	J42
V409F	J80	XV500P-X-21	J7	XVP510P	J22
V410NTA	J80	XV500PUL	J15	XVV500P	J5
V412F	J80	XV500PUL-X-04	J15	XVV501P	J9
V8UPMTB	H20	XV501P	J9	XVV502P	J12
VC	D22	XV501P-X-04	J10	XVV510P	J22
VS176NTA	G8	XV501P-X-21	J10	XVVP500P	J6
VS269AB	G15	XV501PUL	J16	XVVP501P	J10
VS269NTA	G9	XV501PUL-X-04	J16	XVVP502P	J13
VS271AB	G16	XV501SS	J44	XVVP510P	J23
VS271NTA	G9	XV502CS	J34	XX-2829S-BPD	K5
VS272AB	G16	XV502CS-X-21	J36	YJ2PK	B42
VS272NTA	G10	XV502P	J12	YJ52PK	B43
VS279AB	G16	XV502P-X-04	J13	YJ563PK	B43
VS279NTA	G10	XV502P-X-21	J13	YJ564PK	B43
VS68AB	G15	XV502P-X-ACT	J54	YJ5PK	B42
VS68NTA	G8	XV502P-X-SUB	J55	YJ63PK	B43
W169PL	B16	XV502SS	J46	YJ64PK	B44
W169PLNS	B18	XV502SS-X-20	J46	YJPK	B42
W171PL	B19	XV502SS-X-21	J47		
W172PL	B20	XV502SS-X-ACT	J54		
W368ML	B9	XV502SS-X-SUB	J55		
W368PL	B22	XV504SS	J49		
W369ML	B9	XV504SS-X-21	J49		
W369MLX	B10	XV506CS	J38		
W369PL	B17	XV506HP	J41		
W369PLC	B17	XV506P	J18		
W369PLX	B18	XV506SS	J51		
W371ML	B11	XV507HP	J42		
W371PL	B19	XV509P	J20		
W372ML	B11	XV510P	J22		



Parker Safety Guide for Selecting and Using Hose, Tubing, Fittings and Related Accessories

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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 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 manufactures 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 manufactures 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 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 than 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 accidental 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 manufacturer's Hose or a Parker Hose on another manufacturer's 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 manufacturer's Fitting with a Parker crimp or swage die unless authorized in writing by the engineering manager or 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.

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.

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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 be paid by Seller or 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

About Parker Hannifin Corporation

Parker Hannifin is a leading global motion-control company dedicated to delivering premier customer service. A Fortune 500 corporation listed on the New York Stock Exchange (PH), our components and systems comprise over 1,400 product lines that control motion in some 1,000 industrial and aerospace markets. Parker is the only manufacturer to offer its customers a choice of hydraulic, pneumatic, and electro-mechanical motion-control solutions. Our Company has the largest distribution network in its field, with over 7,500 distributors serving nearly 400,000 customers worldwide.

Parker's Charter

To be a leading worldwide manufacturer of components and systems for the builders and users of durable goods. More specifically, we will design, market and manufacture products controlling motion, flow and pressure. We will achieve profitable growth through premier customer service.

Product Information

North American customers seeking product information, the location of a nearby distributor, or repair services will receive prompt attention.

The Aerospace Group

is a leader in the development, design, manufacture and servicing of control systems and components for aerospace and related high-technology markets, while achieving growth through premier customer service.



The Climate & Industrial Controls Group

designs, manufactures and markets system-control and fluid-handling components and systems to refrigeration, air-conditioning and industrial customers worldwide.



The Fluid Connectors Group

designs, manufactures and markets rigid and flexible connectors, and associated products used in pneumatic and fluid systems.



The Seal Group designs, manufactures and distributes industrial and commercial sealing devices and related products by providing superior quality and total customer satisfaction.



The Hydraulics Group

designs, produces and markets a full spectrum of hydraulic components and systems to builders and users of industrial and mobile machinery and equipment.



The Filtration Group

designs, manufactures and markets quality filtration and clarification products, providing customers with the best value, quality, technical support, and global availability.



The Automation Group

is a leading supplier of pneumatic and electromechanical components and systems to automation customers worldwide.



The Instrumentation Group

is a global leader in the design, manufacture and distribution of high-quality critical flow components for worldwide process instrumentation, ultra-high-purity, medical and analytical applications.



Parker Fluid Connectors Regional Sales Offices & Service Centers

Your complete source for quality tube fittings, hose & hose fittings, brass fittings & valves, quick-disconnect couplings, and assembly tools, locally-available from a worldwide network of authorized distributors.

Fittings & Couplings: Available in inch and metric sizes covering SAE, BSP, DIN, GAZ, JIS and ISO thread configurations, manufactured from steel, stainless steel, brass, aluminum, nylon and thermoplastic.

Hose, Tubing and Bundles: Available in a wide variety of sizes and materials including rubber, wire-reinforced, thermoplastic, hybrid and custom compounds.

Worldwide Availability: Parker operates Fluid Connector manufacturing locations and sales offices throughout North America, South America, Europe, and Asia-Pacific.



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