



仪表设备

INSTRUMENTATION

(1) TUBE FITTINGS 管子配件

(2) PIPE FITTINGS 管接头

(3) BALL VALVES 球阀





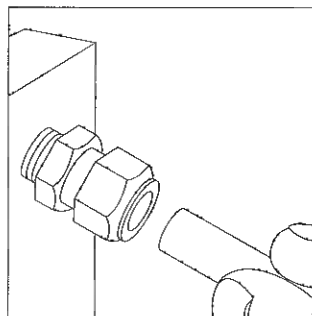
A-lok Tube Fittings

The World Standard

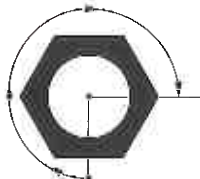


Engineering Report

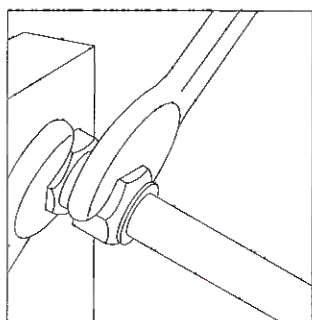
Assembly and Remake Instructions



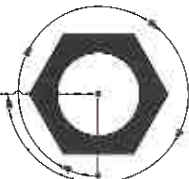
SIZE 1 thru 3
(1/16" - 3/16")



Only 3/4 Turn from Finger Tight is necessary to seal and will result in additional remakes of the fitting



SIZE 4 thru 16
(1/4" - 1")



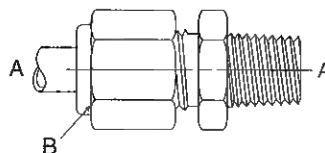
1-1/4 Turns from Finger Tight

1. Parker instrument tube fittings are sold completely assembled and ready for immediate use. Simply insert the tube as illustrated until it bottoms in the fitting body. (If the fitting is disassembled, note that the small tapered end of the ferrule(s) go into the fitting body.)

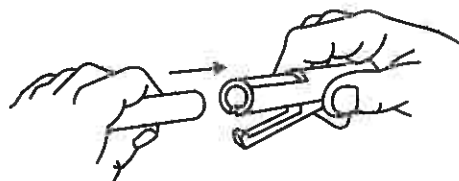
2. Tighten nut finger tight. Then tighten nut with wrench an additional 1-1/4 turns indicated below. Hold fitting body with a second wrench to prevent body from turning. It is helpful to mark the nut to facilitate counting the number of turns.

For maximum number of remakes, mark the fitting and nut before disassembly. Before retightening, make sure the assembly has been inserted into the fitting until the ferrule(s) seats in the fitting. Retighten the nut by hand. Rotate the nut with a wrench to the original position as indicated by the previous marks lining up. (A noticeable increase in mechanical resistance will be felt indicating the ferrule(s) are being re-sprung into sealing position.)

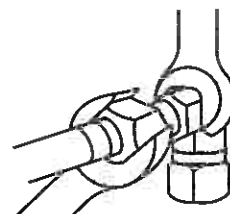
Then snug the nut 1/12 turn (1/2 hex flat) as shown from A to B, past the original position.



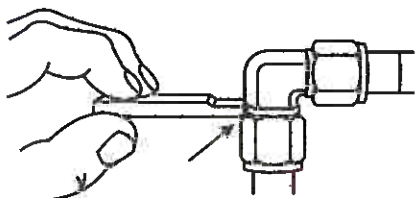
Gaugeability Instructions



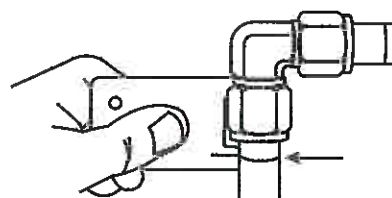
1. Put tube marker completely onto tube.



2. From "finger tight" position, wrench 1-1/4 turns for 1/4" to 1" size fittings (1/16", 1/8" and 3/16" size tube fittings only wrench 3/4 turn from finger tight position). Hold fitting body hex with second wrench to prevent body from turning as you tighten. It is a good idea to mark the nut (scribe or ink) to help you count the turns.



3. Now select the proper size inspection gauge and try to place it, as shown, between the nut and the body hex. If gauge DOES NOT FIT AT ANY POINT between them, you have correctly tightened the nut. If you can slip the gauge into the space, the fitting is not properly made up, and you must repeat the assembly procedure.



4. Then place the proper size inspection gauge against the fitting, as shown, pressing it against the hex face. Burnish mark on tube should line up with gauge band. If it does, you know the tube is correctly inserted. If the burnish mark does not line up with the band, either the tubing has been incorrectly marked, or incorrectly inserted and you must repeat the marking and assembly procedure.

For additional information please contact your local authorized Parker Instrumentation distributor or call Parker Instrumentation Connectors Division and ask for Bulletin 4230-B15.2.

The World Standard

Parker
FluidConnectors

A-lok Fittings

Table 1 - Typical Raw Material Specifications and Tube End Dimensional Data

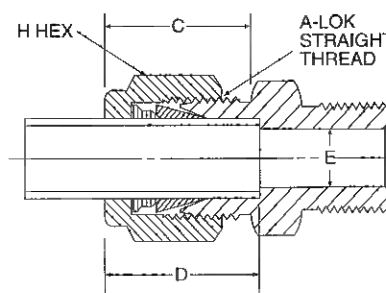
BASIC FITTING MATERIAL	BAR STOCK	FORGING	COMMON TUBING SPECIFICATION
BRASS	CA-360 QQ-B 626 Alloy 360 ASTM-B16 Alloy 360 CA-345 ASTM-B-453 Alloy 345	CA-377 QQ-B 626 Alloy 377 ASTM-B-124 Alloy 377	ASTM-B75 ASME-SB75 (TEMPER "O")
STAINLESS STEEL (Type 316) ¹	ASME-SA-479 Type 316-SS	ASME-SA-182 F316	ASME-SA-213 ASTM-A-213 ASTM-A-249 ASTM-A-269 ² MIL T-8504 MIL T-8506
STEEL	ASTM-A-108 QQ-S-637	ASTM-A-576	SAE J524b SAE J525b ASTM-A-179
ALUMINUM	2017-T4 or 2024-T4 ASTM-B211 QQ-A-225/5 or 6	2014T (as fabricated) ASTM-B-211 QQ-A-225/4	303, 6061T6 ASTM-B-210
NICKEL-COPPER	ASTM-B-164 QQ-N-281	ASTM-B-164 QQ-N-281	ASTM-B-165
HASTELLOY C-276 ²	ASTM-B-574	ASTM-B-574 ASTM-B-575	ASTM-B-622 ASTM-B-626
ALLOY 600	ASTM B-166 ASME-SB-166	ASTM-B-564	ASTM-B-163
CARPENTER 20 ²	ASTM-B-473	ASTM-B-462 ASTM-B-472	ASTM-B-468

(1) If more specific information, including heat code traceability, is required, your Parker Hannifin A-lok distributor will provide details.

(2) Stainless steel A-lok fittings work reliably on both seamless and welded-redrawn, fully annealed type 304 and 316 tubing.

Size No.	Tube O.D.	A-lok Straight Thread	Inches			
			1C	H Hex	E Dia.	TD Tube Ins. Depth
1	1/16	10-32	.43	5/16	.052	.34
2	1/8	5/16-20	.60	7/16	.093	.51
3	3/16	3/8-20	.64	1/2	.125	.54
4	1/4	7/16-20	.70	9/16	.187	.60
5	5/16	1/2-20	.73	5/8	.250	.64
6	3/8	9/16-20	.76	11/16	.281	.67
8	1/2	3/4-20	.87	7/8	.406	.90
10	5/8	7/8-20	.87	1	.500	.96
12	3/4	1-20	.87	1-1/8	.625	.96
14	7/8	1-1/8-20	.87	1-1/4	.750	1.03
16	1	1-5/16-20	1.05	1-1/2	.875	1.24

NOTE: Dimensions C and D are shown in the finger tight position.

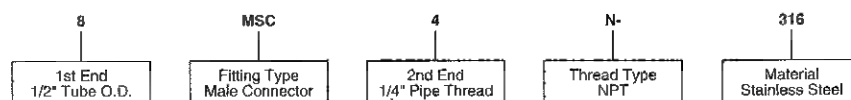


Nomenclature

Parker A-lok fittings part numbers are constructed from symbols that identify the size and style of the fitting and material used.

Example: The part number shown below is for a Parker A-lok stainless steel male connector for 1/2" O.D. tube (-8) and 1/4" male pipe thread (-4).

How To Order



Parker A-lok Tube Fittings are ordered by part number as listed in this catalog.

Size: Tube and pipe thread sizes are designed by the number of sixteenths of an inch (3/8" tube = 6/16" = 6). (1/4" pipe thread = 4/16" = 4).

Straights & Elbows: Call out largest A-lok tube end size first followed by the smaller A-lok tube end or pipe thread size.

Tees & Crosses: For tees - first size the run (1 to 2) and then branch (3). Example - the size designator for a male run tee for 3/8" O.D. tube and 1/4" male pipe thread would be 6-4-6. For crosses - first size the run (1 to 2) and then the branch (3 to 4).

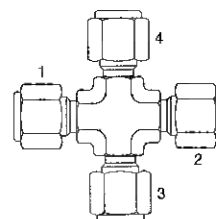
Type: A letter or combination of letters and numbers are used to designate the type of fitting. (i.e. MBT - male branch tee, FA = female adapter, etc.) See the visual index for other type fittings.

Material: Basic material type (B = brass, SS = stainless steel, type 316; S = steel; A = aluminum; M = nickel copper; HC = Hastelloy C-276²; IN = Alloy 600; SS20 = Carpenter 20²). Parker A-lok Tube fittings, for special applications, can be furnished in almost any material suitable for machining.

Special Fittings: If there is any question as to the fitting desired, particularly for special fitting configurations, it is suggested that a customer print be submitted with the fitting request for quote.

Availability: Only items priced in current price list 4233 are carried in stock. Price and delivery for non-standard items quoted on request for quantity specified.

Note: Hastelloy C-276 is a registered trademark of Cabot Corporation. Carpenter 20 is a registered trademark of Carpenter Technology Corporation.



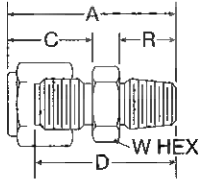
The World Standard

Parker
FluidConnectors

Tube to Male Pipe

male connector MSC

includes body, nut and ferrules



PARKER PART NO.	INTER- CHANGES WITH	INCHES						
		TUBE O.D.	NPT PIPE THREAD	W HEX	†A	†C	D	R
1MSC1N	100-1-1	1/16	1/16	5/16	.93	.43	.78	.38
1MSC2N	100-1-2	1/16	1/8	7/16	1.03	.43	.88	.38
1MSC4N		1/16	1/4	9/16	1.23	.43	1.08	.56
2MSC1N	200-1-1	1/8	1/16	3/8	1.17	.60	.91	.38
2MSC2N	200-1-2	1/8	1/8	7/16	1.20	.60	.94	.38
2MSC4N	200-1-4	1/8	1/4	9/16	1.40	.60	1.14	.56
2MSC6N	200-1-6	1/8	3/8	11/16	1.42	.60	1.16	.56
2MSC8N		1/8	1/2	7/8	1.67	.60	1.41	.75
3MSC1N		3/16	1/16	7/16	1.23	.64	.97	.38
3MSC2N	300-1-2	3/16	1/8	7/16	1.23	.64	.97	.38
3MSC4N	300-1-4	3/16	1/4	9/16	1.43	.64	1.17	.56
4MSC1N	400-1-1	1/4	1/16	1/2	1.29	.70	1.00	.38
4MSC2N	400-1-2	1/4	1/8	1/2	1.29	.70	1.00	.38
4MSC4N	400-1-4	1/4	1/4	9/16	1.49	.70	1.20	.56
4MSC6N	400-1-6	1/4	3/8	11/16	1.51	.70	1.22	.56
4MSC8N	400-1-8	1/4	1/2	7/8	1.76	.70	1.47	.75
4MSC12N		1/4	3/4	1-1/16	1.82	.70	1.53	.75
5MSC2N	500-1-2	5/16	1/8	9/16	1.34	.73	1.05	.38
5MSC4N	500-1-4	5/16	1/4	9/16	1.52	.73	1.23	.56
5MSC6N		5/16	3/8	11/16	1.55	.73	1.25	.56
6MSC2N	600-1-2	3/8	1/8	5/8	1.38	.76	1.09	.38
6MSC4N	600-1-4	3/8	1/4	5/8	1.57	.76	1.28	.56
6MSC6N	600-1-6	3/8	3/8	11/16	1.57	.76	1.28	.56
6MSC8N	600-1-8	3/8	1/2	7/8	1.82	.76	1.53	.75
6MSC12N		3/8	3/4	1-1/16	1.88	.76	1.59	.75
8MSC2N	810-1-2	1/2	1/8	13/16	1.53	.87	1.13	.38
8MSC4N	810-1-4	1/2	1/4	13/16	1.71	.87	1.31	.56
8MSC6N	810-1-6	1/2	3/8	13/16	1.71	.87	1.31	.56
8MSC8N	810-1-8	1/2	1/2	7/8	1.93	.87	1.53	.75
8MSC12N	810-1-12	1/2	3/4	1-1/16	1.99	.87	1.59	.75
8MSC16N	810-1-16	1/2	1	1-3/8	2.28	.87	1.88	.94
10MSC6N	1010-1-6	5/8	3/8	15/16	1.74	.87	1.34	.56
10MSC8N	1010-1-8	5/8	1/2	15/16	1.93	.87	1.53	.75
10MSC12N		5/8	3/4	1-1/16	1.99	.87	1.59	.75
12MSC8N	1210-1-8	3/4	1/2	1-1/16	1.99	.87	1.59	.75
12MSC12N	1210-1-12	3/4	3/4	1-1/16	1.99	.87	1.59	.75
12MSC16N		3/4	1	1-3/8	2.28	.87	1.88	.94
14MSC12N	1410-1-12	7/8	3/4	1-3/16	1.99	.87	1.59	.75
14MSC16N		7/8	1	1-3/8	2.28	.87	1.88	.94
16MSC8N	1610-1-8	1	1/2	1-3/8	2.27	1.05	1.78	.75
16MSC12N	1610-1-12	1	3/4	1-3/8	2.27	1.05	1.78	.75
16MSC16N	1610-1-16	1	1	1-3/8	2.46	1.05	1.97	.94

†Average Value

Dimensions for Reference Only, Subject to Change

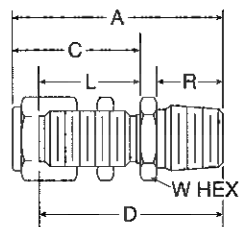
The World Standard

Parker
FluidConnectors

Tube to Male Pipe

male bulkhead connector MBC

includes body, nut, ferrules and locknut



PARKER PART NO.	INTER- CHANGES WITH	INCHES							
		TUBE O.D.	NPT PIPE THREAD	W HEX	†A	†C	D	L	R
1MBC1N	200-11-2	1/16	1/16	5/16	1.18	.68	1.03	.53	.38
1MBC2N		1/16	1/8	7/16	1.24	.68	1.09	.53	.38
2MBC2N		1/8	1/8	1/2	1.82	1.23	1.56	.97	.38
3MBC2N		3/16	1/8	9/16	1.85	1.26	1.59	1.00	.38
4MBC2N	400-11-2	1/4	1/8	5/8	1.95	1.31	1.66	1.02	.38
4MBC4N	400-11-4	1/4	1/4	5/8	2.17	1.31	1.88	1.02	.56
4MBC6N		1/4	3/8	11/16	2.18	1.31	1.89	1.02	.56
4MBC8N		1/4	1/2	7/8	2.48	1.31	2.19	1.02	.75
5MBC2N		5/16	1/8	11/16	2.07	1.42	1.77	1.12	.38
5MBC4N		5/16	1/4	11/16	2.27	1.42	1.97	1.12	.56
6MBC2N	600-11-4	3/8	1/8	3/4	2.10	1.44	1.81	1.15	.38
6MBC4N		3/8	1/4	3/4	2.29	1.44	2.00	1.15	.56
6MBC6N		3/8	3/8	3/4	2.31	1.44	2.02	1.15	.56
6MBC8N		3/8	1/2	7/8	2.60	1.44	2.31	1.15	.75
8MBC4N		1/2	1/4	15/16	2.54	1.65	2.14	1.25	.56
8MBC6N	810-11-8	1/2	3/8	15/16	2.54	1.65	2.14	1.25	.56
8MBC8N		1/2	1/2	15/16	2.82	1.65	2.42	1.25	.75
8MBC12N		1/2	3/4	1-1/8	2.82	1.65	2.42	1.25	.75
10MBC6N		5/8	3/8	1-1/16	2.62	1.68	2.22	1.28	.56
10MBC8N		5/8	1/2	1-1/16	2.78	1.68	2.38	1.28	.75
12MBC8N		3/4	1/2	1-3/16	3.03	1.87	2.63	1.47	.75
12MBC12N		3/4	3/4	1-3/16	3.04	1.87	2.64	1.47	.75
14MBC12N		7/8	3/4	1-3/8	3.24	2.09	2.84	1.69	.75
16MBC12N		1	3/4	1-9/16	3.54	2.27	3.05	1.78	.75
16MBC16N		1	1	1-9/16	3.72	2.27	3.23	1.78	.94

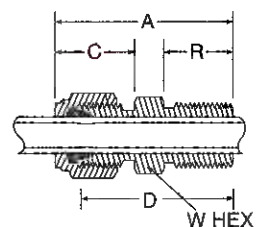
†Average Value

Dimensions for Reference Only, Subject to Change

NOTE: For bulkhead hole drill size and maximum bulkhead thickness, see Page 12, Part BC.

thermocouple connector MTC

includes body, nut and ferrules



PARKER PART NO.	INTER- CHANGES WITH	INCHES						
		TUBE O.D.	NPT PIPE THREAD	W HEX	↑A	↑C	D	R
1MTC1N	100-1BT	1/16	1/16	5/16	.93	.43	.78	.38
1MTC2N	100-1-2BT	1/16	1/8	7/16	1.03	.43	.88	.38
1MTC4N		1/16	1/4	9/16	1.23	.43	1.08	.56
2MTC1N	200-1-1BT	1/8	1/16	3/8	1.17	.60	.91	.38
2MTC2N	200-1-2BT	1/8	1/8	7/16	1.20	.60	.94	.38
2MTC4N	200-1-4BT	1/8	1/4	9/16	1.40	.60	1.14	.56
3MTC2N	300-1-2BT	3/16	1/8	7/16	1.23	.64	.97	.38
3MTC4N	300-1-4BT	3/16	1/4	9/16	1.43	.64	1.17	.56
4MTC2N	400-1-2BT	1/4	1/8	1/2	1.29	.70	1.00	.38
4MTC4N	400-1-4BT	1/4	1/4	9/16	1.49	.70	1.20	.56
4MTC6N		1/4	3/8	11/16	1.60	.70	1.22	.56
4MTC8N		1/4	1/2	7/8	1.87	.70	1.47	.75
5MTC4N	500-1-4BT	5/16	1/4	9/16	1.52	.73	1.22	.56
6MTC4N	600-1-4BT	3/8	1/4	5/8	1.57	.76	1.28	.56
6MTC6N	600-1-6BT	3/8	3/8	11/16	1.57	.76	1.28	.56
6MTC8N	600-1-8BT	3/8	1/2	7/8	1.82	.76	1.53	.75
6MTC12N	810-1-8BT	3/8	3/4	1-1/16	1.88	.76	1.59	.75
8MTC8N		1/2	1/2	7/8	1.93	.87	1.53	.76
8MTC12N		1/2	3/4	1-1/16	1.99	.87	1.59	.75
10MTC12N	1010-1-12BT	5/8	3/4	1-1/16	1.99	.87	1.59	.75
12MTC12N	1210-1-12BT	3/4	3/4	1-1/16	1.99	.87	1.59	.75
16MTC16N	1610-1-16BT	1	1	1-3/8	2.46	1.05	1.97	.94

†Average Value

Dimensions for Reference Only, Subject to Change

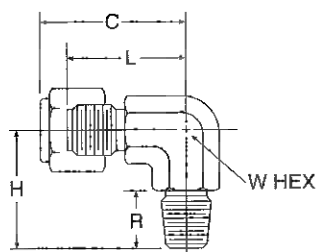
The World Standard

Parker
FluidConnectors

Tube to Male Pipe

male elbow MSEL

includes body, nut and ferrules



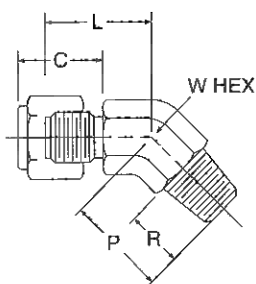
PARKER PART NO.	INTER- CHANGES WITH	INCHES						
		TUBE O.D.	NPT PIPE THREAD	W HEX	†C	H	L	R
1MSEL1N	100-2-2	1/16	1/16	5/16	.71	.72	.56	.38
1MSEL2N		1/16	1/8	5/16	.71	.72	.56	.38
2MSEL1N		1/8	1/16	5/16	.92	.72	.66	.38
2MSEL2N	200-2-2	1/8	1/8	5/16	.92	.72	.66	.38
2MSEL4N		1/8	1/4	9/16	.98	1.00	.72	.56
3MSEL2N		3/16	1/8	7/16	.95	.75	.69	.38
3MSEL4N	400-2-2	3/16	1/4	9/16	1.01	.94	.75	.56
4MSEL1N		1/4	1/16	7/16	1.01	.78	.72	.38
4MSEL2N		1/4	1/8	7/16	1.01	.78	.72	.38
4MSEL4N		1/4	1/4	9/16	1.07	1.00	.78	.56
4MSEL6N		1/4	3/8	3/4	1.17	1.13	.88	.56
4MSEL8N		1/4	1/2	7/8	1.26	1.31	.97	.75
5MSEL2N		5/16	1/8	9/16	1.14	.81	.84	.38
5MSEL4N	500-2-4	5/16	1/4	9/16	1.14	1.00	.84	.56
6MSEL2N		3/8	1/8	9/16	1.13	.81	.84	.38
6MSEL4N		3/8	1/4	9/16	1.13	1.00	.84	.56
6MSEL6N		3/8	3/8	3/4	1.26	1.13	.97	.56
6MSEL8N	600-2-8	3/8	1/2	7/8	1.32	1.31	1.03	.75
6MSEL12N		3/8	3/4	1-1/16	1.45	1.50	1.16	.75
8MSEL4N	810-2-4	1/2	1/4	13/16	1.37	1.13	.97	.56
8MSEL6N		1/2	3/8	13/16	1.37	1.13	.97	.56
8MSEL8N		1/2	1/2	7/8	1.43	1.31	1.03	.75
8MSEL12N		1/2	3/4	1-1/16	1.53	1.50	1.13	.75
10MSEL6N	1010-2-6	5/8	3/8	7/8	1.43	1.25	1.03	.56
10MSEL8N		5/8	1/2	7/8	1.43	1.31	1.03	.75
10MSEL12N	1010-2-8	5/8	3/4	1-1/16	1.56	1.50	1.16	.75
12MSEL8N		3/4	1/2	1-1/16	1.56	1.50	1.16	.75
12MSEL12N	1210-2-12	3/4	3/4	1-1/16	1.56	1.50	1.16	.75
14MSEL12N		7/8	3/4	1-5/16	1.76	1.50	1.36	.75
16MSEL12N	1610-2-12	1	3/4	1-5/16	1.94	1.66	1.45	.75
16MSEL16N		1	1	1-5/16	1.94	1.84	1.45	.94

†Average Value

Dimensions for Reference Only, Subject to Change

male 45° elbow MVEL

includes body, nut and ferrules



PARKER PART NO.	INTER- CHANGES WITH	INCHES						
		TUBE O.D.	NPT PIPE THREAD	W HEX	†C	L	P	R
1MVEL1N	400-5-2	1/16	1/16	3/8	.43	.44	.56	.38
2MVEL2N		1/8	1/8	7/16	.60	.59	.66	.38
3MVEL2N		3/16	1/8	7/16	.64	.56	.58	.38
4MVEL2N		1/4	1/8	9/16	.70	.63	.66	.38
4MVEL4N	400-5-4	1/4	1/4	9/16	.70	.66	.86	.56
5MVEL2N		5/16	1/8	9/16	.73	.66	.66	.38
6MVEL2N		3/8	1/8	9/16	.76	.72	.67	.38
6MVEL4N		3/8	1/4	9/16	.76	.72	.86	.56
6MVEL6N	600-5-4	3/8	3/8	3/4	.76	.75	.95	.56
8MVEL6N		1/2	3/8	3/4	.87	.75	.95	.56
10MVEL8N	810-5-6	5/8	1/2	7/8	.87	.81	1.17	.75
12MVEL12N		3/4	3/4	1-1/16	.87	.84	1.20	.75
14MVEL12N		7/8	3/4	1-5/16	.87	1.36	1.27	.75
16MVEL16N		1	1	1-5/16	1.05	1.19	1.48	.94

†Average Value

Dimensions for Reference Only, Subject to Change

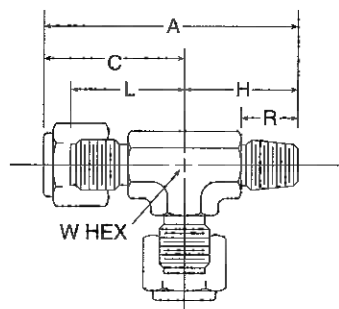
The World Standard

Parker
FluidConnectors

Tube to Male Pipe

male run tee MRT

includes body, nut and ferrules



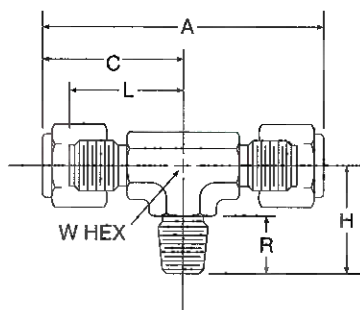
PARKER PART NO.	INTER- CHANGES WITH	INCHES							
		TUBE O.D.	NPT PIPE THREAD	W HEX	†A	†C	H	L	R
2MRT2N	200-3TMT	1/8	1/8	5/16	1.67	.92	.75	.66	.38
3MRT2N		3/16	1/8	7/16	1.70	.95	.75	.69	.38
4MRT2N		1/4	1/8	7/16	1.79	1.01	.78	.72	.38
4MRT4N		1/4	1/4	9/16	2.07	1.07	1.00	.78	.56
5MRT2N	500-3TMT	5/16	1/8	9/16	1.95	1.14	.81	.84	.38
6MRT4N	600-3-TMT	3/8	1/4	9/16	2.13	1.13	1.00	.84	.56
6MRT6N		3/8	3/8	13/16	2.43	1.31	1.12	1.02	.56
8MRT6N		1/2	3/8	13/16	2.82	1.42	1.12	1.02	.56
8MRT8N		1/2	1/2	7/8	2.74	1.43	1.31	1.03	.75
10MRT8N		5/8	1/2	7/8	2.81	1.43	1.38	1.03	.75
12MRT12N		3/4	3/4	1-1/16	3.06	1.56	1.50	1.16	.75
14MRT12N		7/8	3/4	1-5/16	3.26	1.76	1.50	1.36	.75
16MRT12N		1	3/4	1-5/16	3.60	1.94	1.66	1.45	.75
16MRT16N		1	1	1-5/16	3.78	1.94	1.84	1.45	.94

†Average Value

Dimensions for Reference Only, Subject to Change

male branch tee MBT

includes body, nut and ferrules



PARKER PART NO.	INTER- CHANGES WITH	INCHES							
		TUBE O.D.	NPT PIPE THREAD	W HEX	†A	†C	H	L	R
2MBT2N	200-3TTM	1/8	1/8	5/16	1.84	.92	.75	.66	.38
3MBT2N		3/16	1/8	7/16	1.90	.95	.75	.69	.38
4MBT2N		1/4	1/8	7/16	2.02	1.01	.78	.72	.38
4MBT4N		1/4	1/4	9/16	2.14	1.07	1.00	.78	.56
5MBT2N	500-3TTM	5/16	1/8	9/16	2.28	1.14	.81	.84	.38
6MBT4N	600-3-TTM	3/8	1/4	9/16	2.26	1.13	1.00	.84	.56
6MBT6N		3/8	3/8	13/16	2.62	1.31	1.12	1.02	.56
8MBT6N		1/2	3/8	13/16	2.84	1.42	1.12	1.02	.56
8MBT8N		1/2	1/2	7/8	2.86	1.43	1.31	1.03	.75
10MBT8N		5/8	1/2	7/8	2.86	1.43	1.31	1.03	.75
12MBT12N		3/4	3/4	1-1/16	3.12	1.56	1.50	1.16	.75
14MBT12N		7/8	3/4	1-5/16	3.52	1.76	1.50	1.36	.75
16MBT12N		1	3/4	1-5/16	3.88	1.94	1.66	1.45	.75
16MBT16N		1	1	1-5/16	3.88	1.94	1.84	1.45	.94

†Average Value

Dimensions for Reference Only, Subject to Change

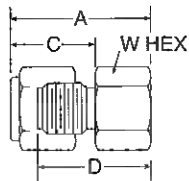
The World Standard

Parker
FluidConnectors

Tube to Female Pipe

female connector FSC

includes body, nut and ferrules



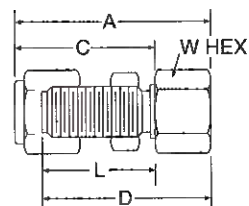
PARKER PART NO.	INTER- CHANGES WITH	INCHES					
		TUBE O.D.	NPT PIPE THREAD	W HEX	†A	†C	D
1FSC1N	200-7-2	1/16	1/16	7/16	.93	.43	.78
1FSC2N		1/16	1/8	9/16	.95	.43	.81
2FSC2N		1/8	1/8	9/16	1.14	.60	.88
2FSC4N		200-7-4	1/8	3/4	1.32	.60	1.06
3FSC2N	300-7-2	3/16	1/8	9/16	1.17	.64	.91
3FSC4N	400-7-2	3/16	1/4	3/4	1.35	.64	1.09
4FSC2N		1/4	1/8	9/16	1.23	.70	.94
4FSC4N		400-7-4	1/4	3/4	1.42	.70	1.13
4FSC6N		1/4	3/8	7/8	1.48	.70	1.19
4FSC8N	400-7-8	1/4	1/2	1-1/16	1.67	.70	1.38
5FSC2N	500-7-2	5/16	1/8	9/16	1.27	.73	.97
5FSC4N	500-7-4	5/16	1/4	3/4	1.46	.73	1.16
6FSC2N	600-7-2	3/8	1/8	5/8	1.29	.76	1.00
6FSC4N	600-7-4	3/8	1/4	3/4	1.48	.76	1.19
6FSC6N	600-7-6	3/8	3/8	7/8	1.54	.76	1.25
6FSC8N	600-7-8	3/8	1/2	1-1/16	1.73	.76	1.44
6FSC12N	810-7-4	3/8	3/4	1-1/4	1.85	.76	1.56
8FSC4N		1/2	1/4	13/16	1.59	.87	1.19
8FSC6N		810-7-6	1/2	3/8	1.65	.87	1.25
8FSC8N		810-7-8	1/2	1-1/16	1.84	.87	1.44
8FSC12N	1010-7-6	1/2	3/4	1-1/4	1.96	.87	1.56
10FSC6N		5/8	3/8	15/16	1.65	.87	1.25
10FSC8N		5/8	1/2	1-1/16	1.84	.87	1.44
10FSC12N		5/8	3/4	1-1/4	1.96	.87	1.56
12FSC8N	1210-7-8	3/4	1/2	1-1/16	1.84	.87	1.44
12FSC12N	1210-7-12	3/4	3/4	1-1/4	1.96	.87	1.56
14FSC12N	1410-7-12	7/8	3/4	1-3/8	1.96	.87	1.56
16FSC12N	1610-7-12	1	3/4	1-3/8	2.15	1.05	1.66
16FSC16N	1610-7-16	1	1	1-5/8	2.46	1.05	1.97

†Average Value

Dimensions for Reference Only, Subject to Change

female bulkhead connector FBC

includes body, nut, ferrules and locknut



PARKER PART NO.	INTER- CHANGES WITH	INCHES						
		TUBE O.D.	NPT PIPE THREAD	W HEX	†A	†C	D	L
2FBC2N	200-71-2	1/8	1/8	9/16	1.76	1.23	1.50	.97
3FBC2N	400-71-2	3/16	1/8	9/16	1.79	1.26	1.53	1.00
4FBC2N		1/4	1/8	5/8	1.85	1.31	1.56	1.02
4FBC4N		1/4	1/4	3/4	2.04	1.31	1.75	1.02
5FBC2N		5/16	1/8	11/16	1.96	1.42	1.66	1.12
6FBC4N	600-71-4	3/8	1/4	3/4	2.17	1.44	1.88	1.15
8FBC6N	810-71-6	1/2	3/8	15/16	2.43	1.65	2.03	1.25
8FBC8N	810-71-8	1/2	1/2	1-1/16	2.65	1.65	2.25	1.25
10FBC8N		5/8	1/2	1-1/16	2.65	1.68	2.25	1.28
12FBC12N		3/4	3/4	1-3/8	2.90	1.87	2.50	1.47
14FBC12N		7/8	3/4	1-3/8	3.18	2.09	2.78	1.69
16FBC16N		1	1	1-5/8	3.68	2.27	3.19	1.78

†Average Value

Dimensions for Reference Only, Subject to Change

NOTE: For bulkhead hole drill size and maximum bulkhead thickness, see Page 12, Part BC.

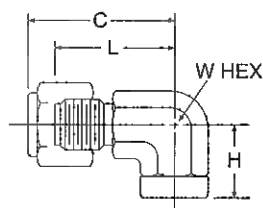
The World Standard



Tube to Female Pipe

female elbow FEL

includes body, nut and ferrules



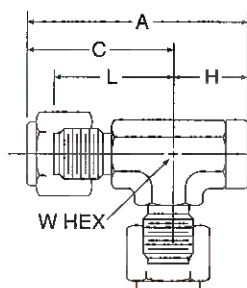
PARKER PART NO.	INTER- CHANGES WITH	INCHES					
		TUBE O.D.	NPT PIPE THREAD	W HEX	†C	H	L
1FEL1N	200-8-2	1/16	1/16	7/16	.71	.56	.56
1FEL2N		1/16	1/8	9/16	.81	.75	.66
2FEL2N		1/8	1/8	9/16	.98	.75	.72
2FEL4N		1/8	1/4	3/4	1.10	.88	.84
3FEL2N	300-8-2	3/16	1/8	9/16	1.01	.75	.75
4FEL2N	400-8-2	1/4	1/8	9/16	1.07	.75	.78
4FEL4N	400-8-4	1/4	1/4	3/4	1.20	.88	.91
4FEL6N	400-8-6	1/4	3/8	7/8	1.26	.88	.97
4FEL8N	500-8-2	1/4	1/2	1-1/16	1.35	1.13	1.06
5FEL2N		5/16	1/8	9/16	1.11	.75	.81
5FEL4N	500-8-4	5/16	1/4	3/4	1.24	.84	.94
6FEL2N	600-8-2	3/8	1/8	9/16	1.13	.75	.84
6FEL4N	600-8-4	3/8	1/4	3/4	1.26	.88	.97
6FEL6N	600-8-6	3/8	3/8	7/8	1.32	.88	1.03
6FEL8N	810-8-4	3/8	1/2	1-1/16	1.42	1.13	1.13
8FEL4N		1/2	1/4	13/16	1.42	.88	1.02
8FEL6N		1/2	3/8	7/8	1.43	.88	1.03
8FEL8N		1/2	1/2	1-1/16	1.53	1.13	1.13
10FLE6N	1010-8-6	5/8	3/8	7/8	1.43	.88	1.03
10FEL8N	1010-8-8	5/8	1/2	1-1/16	1.53	1.13	1.13
12FEL8N	1210-8-8	3/4	1/2	1-1/16	1.56	1.13	1.16
12FEL12N	1210-8-12	3/4	3/4	1-5/16	1.65	1.25	1.25
14FEL12N	1410-8-12	7/8	3/4	1-5/16	1.76	1.25	1.36
16FEL12N		1	3/4	1-5/16	1.94	1.25	1.45
16FEL16N		1	1	1-5/8	2.02	1.50	1.53

†Average Value

Dimensions for Reference Only, Subject to Change

female run tee FRT

includes body, nut and ferrules



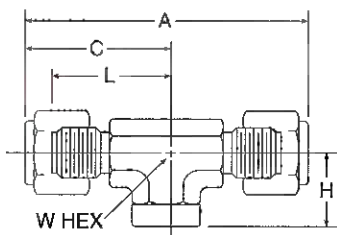
PARKER PART NO.	INTER- CHANGES WITH	INCHES						
		TUBE O.D.	NPT PIPE THREAD	W HEX	†A	†C	H	L
2FRT2N	200-3TFT	1/8	1/8	9/16	1.76	1.01	.75	.75
3FRT2N		3/16	1/8	9/16	1.76	1.01	.75	.75
4FRT2N		1/4	1/8	9/16	1.82	1.07	.75	.78
4FRT4N		1/4	1/4	3/4	2.08	1.20	.88	.91
5FRT2N	400-3-4TFT	5/16	1/8	9/16	1.89	1.14	.75	.84
6FRT4N	600-3TFT	3/8	1/4	3/4	2.14	1.26	.88	.97
8FRT4N	810-3TFT	1/2	1/2	1-5/8	2.56	1.43	1.13	1.13
8FRT6N		1/2	3/8	7/8	2.34	1.43	.91	1.03
8FRT8N		1/2	1/2	1-1/16	2.66	1.53	1.13	1.13
10FRT8N		5/8	1/2	1-1/16	2.66	1.53	1.13	1.13
12FRT12N		3/4	3/4	1-5/16	2.90	1.65	1.25	1.25
14FRT12N		7/8	3/4	1-5/16	3.01	1.76	1.25	1.36
16FRT12N		1	3/4	1-5/16	3.19	1.94	1.25	1.45
16FRT16N		1	1	1-5/8	3.52	2.02	1.50	1.53

†Average Value

Dimensions for Reference Only, Subject to Change

female branch tee FBT

includes body, nut and ferrules



PARKER PART NO.	INTER- CHANGES WITH	INCHES						
		TUBE O.D.	NPT PIPE THREAD	W HEX	†A	†C	H	L
2FBT2N	200-3TTF	1/8	1/8	9/16	2.02	1.01	.75	.75
3FBT2N		3/16	1/8	9/16	2.02	1.01	.75	.75
4FBT2N		1/4	1/8	9/16	2.14	1.07	.75	.78
4FBT4N		1/4	1/4	3/4	2.40	1.20	.88	.91
5FBT2N	400-3-4TTF	5/16	1/8	9/16	2.28	1.14	.75	.84
6FBT4N	600-3TTT	3/8	1/4	3/4	2.52	1.26	.88	.97
8FBT6N	810-3TTT	1/2	3/8	7/8	2.86	1.43	.91	1.03
8FBT8N		1/2	1/2	1-1/16	3.06	1.53	1.13	1.13
10FBT8N		5/8	1/2	1-1/16	3.06	1.53	1.13	1.13
12FBT12N		3/4	3/4	1-5/16	3.30	1.65	1.25	1.25
14FBT12N		7/8	3/4	1-5/16	3.52	1.76	1.25	1.36
16FBT12N		1	3/4	1-5/16	3.88	1.94	1.25	1.45
16FBT16N		1	1	1-5/8	4.04	2.02	1.50	1.53

†Average Value

Dimensions for Reference Only, Subject to Change

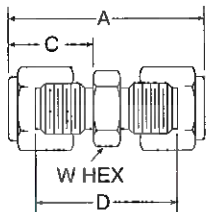
The World Standard

Parker
FluidConnectors

Tube to Tube Unions

union SC

includes body, nut and ferrules



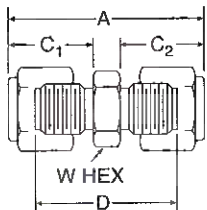
PARKER PART NO.	INTER- CHANGES WITH	INCHES				
		TUBE O.D.	W HEX	†A	†C	D
1SC1	100-6	1/16	5/16	.99	.43	.69
2SC2	200-6	1/8	7/16	1.39	.60	.88
3SC3	300-6	3/16	7/16	1.48	.64	.95
4SC4	400-6	1/4	1/2	1.62	.70	1.03
5SC5	500-6	5/16	9/16	1.70	.73	1.11
6SC6	600-6	3/8	5/8	1.77	.76	1.19
8SC8	810-6	1/2	13/16	2.02	.87	1.22
10SC10	1010-6	5/8	15/16	2.05	.87	1.25
12SC12	1210-6	3/4	1-1/16	2.11	.87	1.31
14SC14	1410-6	7/8	1-3/16	2.18	.87	1.38
16SC16	1610-6	1	1-3/8	2.57	1.05	1.59

†Average Value

Dimensions for Reference Only, Subject to Change

reducing union RU

includes body, nut and ferrules



PARKER PART NO.	INTER- CHANGES WITH	INCHES					
		TUBE O.D.	W HEX	†A	D	†C ₁	†C ₂
2RU1	200-6-1	1-8-1/16	7/16	1.21	.81	.60	.43
3RU1	300-6-2	3/16-1/16	7/16	1.27	.86	.64	.43
3RU2	300-6-2	3/16-1/8	7/16	1.44	.92	.64	.60
4RU1	400-6-1	1/4-1/16	1/2	1.38	.91	.70	.43
4RU2	400-6-2	1/4-1/8	1/2	1.52	.97	.70	.60
4RU3	400-6-3	1/4-3/16	1/2	1.55	1.00	.70	.64
5RU4	500-6-4	5/16-1/4	9/16	1.67	1.08	.73	.70
6RU1	600-6-2	3/8-1/16	5/8	1.44	1.00	.76	.43
6RU2	600-6-2	3/8-1/8	5/8	1.61	1.06	.76	.60
6RU4	600-6-4	3/8-1/4	5/8	1.71	1.13	.76	.70
6RU5	600-6-5	3/8-5/16	5/8	1.75	1.16	.76	.73
8RU2	810-6-4	1/2-1/8	13/16	1.75	1.09	.87	.60
8RU4	810-6-4	1/2-1/4	13/16	1.85	1.16	.87	.70
8RU6	810-6-6	1/2-3/8	13/16	1.91	1.22	.87	.76
10RU6	1010-6-6	5/8-3/8	15/16	1.94	1.25	.87	.76
10RU8	1010-6-8	5/8-1/2	15/16	2.05	1.25	.87	.87
12RU8	1210-6-8	3/4-3/8	1-1/16	2.00	1.31	.87	.76
12RU8	1210-6-8	3/4-1/2	1-1/16	2.11	1.31	.87	.87
12RU10	1210-6-10	3/4-5/8	1-1/16	2.11	1.31	.87	.87
16RU8	1610-6-12	1-1/2	1-3/8	2.39	1.50	1.05	.87
16RU12	1610-6-12	1-3/4	1-3/8	2.39	1.50	1.05	.87

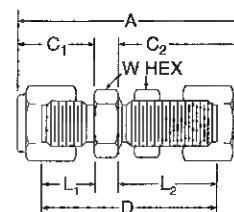
†Average Value

Dimensions for Reference Only, Subject to Change

Tube to Tube Unions

bulkhead union BC

includes body, nut, ferrules, and locknut



PARKER PART NO.	INTER- CHANGES WITH	INCHES									
		TUBE O.D.	W HEX	BULKHEAD HOLE DRILL SIZE	MAXIMUM BULKHEAD THICKNESS	†A	†C ₁	D	†C ₂	L ₁	L ₂
1BC1	100-61	1/16	5/16	13/64	1/8	1.23	.43	.94	.68	.28	.53
2BC2	200-61	1/8	1/2	21/64	1/2	2.02	.60	1.50	1.23	.34	.97
3BC3	300-61	3/16	9/16	25/64	1/2	2.11	.64	1.59	1.26	.38	1.00
4BC2		1/4	5/8	21/64	1/2	2.17	.70	1.03	1.23	.41	.97
4BC4	400-61	1/4	5/8	29/64	17/32	2.27	.70	1.69	1.31	.41	1.02
5BC5	500-61	5/16	11/16	33/64	9/16	2.40	.73	1.81	1.42	.44	1.12
6BC6	600-61	3/8	3/4	37/64	9/16	2.46	.76	1.88	1.44	.47	1.15
8BC8	810-61	1/2	15/16	49/64	19/32	2.80	.87	2.00	1.65	.47	1.25
10BC10	1010-61	5/8	1-1/16	57/64	19/32	2.86	.87	2.06	1.68	.47	1.28
12BC12	1210-61	3/4	1-3/16	1-1/64	25/32	3.11	.87	2.31	1.87	.47	1.47
14BC14		7/8	1-3/8	1-9/64	15/16	3.33	.87	2.63	2.09	.47	1.69
16BC16	1610-61	1	1-9/16	1-21/64	15/16	3.78	1.05	2.81	2.27	.56	1.78

†Average Value

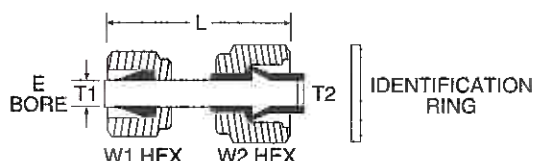
Dimensions for Reference Only, Subject to Change

NOTE: For reducer sizes call out short end first. For replacement bulkhead nuts, see Page 30, Part WLZ.

dielectric union assembly DELTA

includes nuts, machined tube with
molded ferrule, preset ferrules, and
dielectric identification ring

PARKER PART NO.	INCHES					
	TUBE END T1	TUBE END T2	W1 HEX	W2 HEX	L	E BORE
6-8 DELTA-316	3/8	1/2	11/16	7/8	2.08	.30



Note: Makeup instructions included with parts in box.

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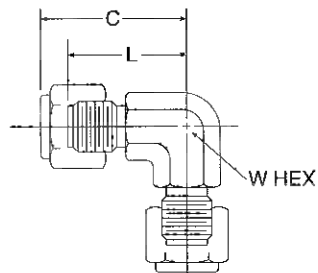
Parker
FluidConnectors

Tube to Tube Unions

union elbow

EE

includes body, nut and ferrules



PARKER PART NO.	INTER- CHANGES WITH	INCHES			
		TUBE O.D.	W HEX	†C	L
1EE1	200-9	1/16	5/16	.71	.56
2EE2		1/8	5/16	.92	.66
3EE3		3/16	7/16	.95	.69
4EE4		1/4	7/16	1.01	.72
5EE5		5/16	9/16	1.14	.84
6EE6	600-9	3/8	9/16	1.13	.84
8EE8		1/2	13/16	1.42	1.02
10EE10		5/8	7/8	1.43	1.03
12EE12		3/4	1-1/16	1.56	1.16
14EE14		7/8	1-5/16	1.76	1.36
16EE16	1610-9	1	1-5/16	1.94	1.45

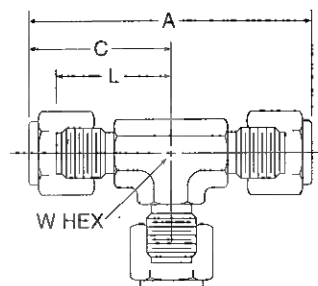
†Average Value

Dimensions for Reference Only, Subject to Change

union tee

ET

includes body, nut and ferrules



PARKER PART NO.	INTER- CHANGES WITH	INCHES				
		TUBE O.D.	W HEX	†A	†C	L
1ET1	100-3	1/16	5/16	1.42	.71	.56
2ET2		1/8	5/16	1.84	.92	.66
3ET3		3/16	7/16	1.90	.95	.69
4ET4		1/4	7/16	2.02	1.01	.72
5ET5		5/16	9/16	2.28	1.14	.84
6ET6	600-3	3/8	9/16	2.26	1.13	.84
8ET8		1/2	13/16	2.84	1.42	1.02
10ET10		5/8	7/8	2.86	1.43	1.03
12ET12		3/4	1-1/16	3.12	1.56	1.16
14ET14		7/8	1-5/16	3.52	1.76	1.36
16ET16	1610-3	1	1-5/16	3.88	1.94	1.45

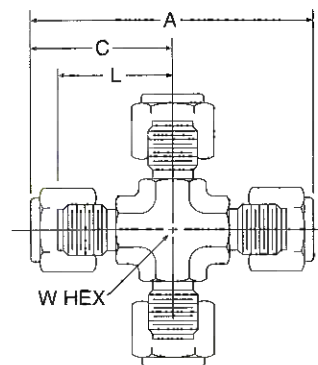
†Average Value

Dimensions for Reference Only, Subject to Change

union cross

ECR

includes body, nut and ferrules



PARKER PART NO.	INTER- CHANGES WITH	INCHES				
		TUBE O.D.	W HEX	†A	†C	L
2ECR2	200-4	1/8	7/16	1.84	.92	.66
3ECR3		3/16	7/16	1.90	.95	.67
4ECR4		1/4	7/16	2.02	1.01	.72
5ECR5		5/16	9/16	2.28	1.14	.84
6ECR6		3/8	9/16	2.26	1.13	.84
8ECR8	810-4	1/2	3/4	2.74	1.37	.97
10ECR10		5/8	7/8	2.86	1.43	1.03
12ECR12		3/4	1-1/16	3.12	1.56	1.16
14ECR14		7/8	1-5/16	3.52	1.76	1.36
16ECR16		1	1-5/16	3.86	1.93	1.44

†Average Value

Dimensions for Reference Only, Subject to Change

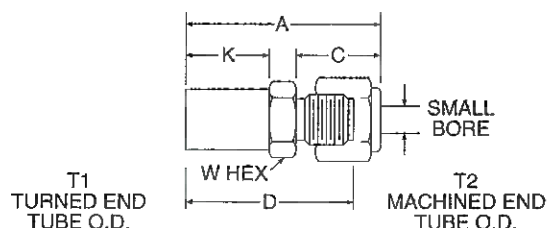
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Parker
FluidConnectors

Port Connectors

tube end reducer TUR

includes body, nut and ferrules



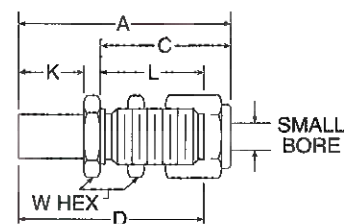
PARKER PART NO.	INTER- CHANGES WITH	INCHES							
		T1 TURNED END TUBE O.D.	T2 MACHINE END TUBE O.D.	W HEX	SMALL BORE	†A	†C	D	K
2TUR1	100-R-2	1/8	1/16	5/16	.052	1.17	.43	1.02	.53
4TUR1	100-R-4	1/4	1/16	7/16	.052	1.34	.43	1.19	.63
3TUR2	200-R-3	3/16	1/8	7/16	.093	1.38	.60	1.12	.56
4TUR2	200-R-4	1/4	1/8	7/16	.093	1.51	.60	1.25	.63
6TUR2	200-R-6	3/8	1/8	7/16	.093	1.57	.60	1.31	.69
4TUR3	300-R-4	1/4	3/16	7/16	.125	1.57	.64	1.30	.63
2TUR4	400-R-2	1/8	1/4	1/2	.093	1.45	.70	1.13	.53
4TUR4	100-R-4	1/4	1/4	1/2	.187	1.63	.70	1.34	.63
5TUR4	400-R-5	5/16	1/4	1/2	.187	1.61	.70	1.32	.66
6TUR4	400-R-6	3/8	1/4	1/2	.187	1.70	.70	1.41	.69
8TUR4	400-R-10	1/2	1/4	9/16	.187	1.95	.70	1.66	.91
10TUR4	400-R-10	5/8	1/4	11/16	.187	1.95	.70	1.66	.97
6TUR5	500-R-6	3/8	5/16	9/16	.250	1.74	.73	1.45	.69
8TUR5	500-R-8	1/2	5/16	9/16	.250	1.98	.73	1.69	.91
4TUR6	600-R-4	1/4	3/8	5/8	.187	1.73	.76	1.44	.63
8TUR6	600-R-8	1/2	3/8	5/8	.281	2.04	.76	1.75	.91
10TUR6	600-R-10	5/8	3/8	11/16	.281	2.04	.76	1.75	.97
12TUR6	600-R-12	3/4	3/8	13/16	.281	2.15	.76	1.75	.97
10TUR8	810-R-10	5/8	1/2	13/16	.406	2.18	.87	1.78	.97
12TUR8	810-R-12	3/4	1/2	13/16	.406	2.18	.87	1.78	.97
16TUR8	810-R-16	1	1/2	1-1/16	.406	2.45	.87	2.05	1.22
16TUR12	1210-R-16	1	3/4	1-1/16	.625	2.54	.87	2.14	1.22

†Average Value

Dimensions for Reference Only, Subject to Change

tube end bulkhead adapter TUBC

includes body, nut, ferrules, and locknut



PARKER PART NO.	INTER- CHANGES WITH	INCHES							
		TUBE O.D.	W HEX	†A	†C	SMALL BORE	L	K	D
2TUBC2	200-R1-2	1/8	1/2	1.95	1.23	.093	.97	.53	1.69
4TUBC4	400-R1-4	1/4	5/8	2.20	1.31	.187	1.02	.62	1.91
6TUBC6	600-R1-6	3/8	3/4	2.42	1.44	.281	1.15	.69	2.13
8TUBC8	810-R1-8	1/2	15/16	2.84	1.65	.406	1.25	.91	2.44

†Average Value

Dimensions for Reference Only, Subject to Change

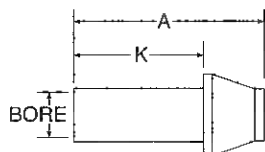
NOTE: For bulkhead hole drill size and maximum bulkhead thickness, see Page 12, Part BC.

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FluidConnectors

Port Connectors

port connector PC

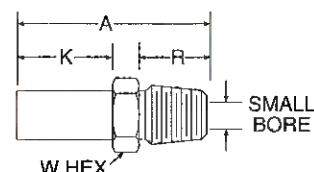


NOTE: The Machined Ferrule End requires only 1/4 turn from finger tight to assemble

PARKER PART NO.	INTER- CHANGES WITH	INCHES			
		TUBE O.D.	A	K	BORE
1PC1	101-PC	1/16	.63	.44	.031
2PC2	201-PC	1/8	.95	.63	.078
2PC4	401-PC-2	1/8-1/4	1.05	.54	.078
4PC4	401-PC	1/4	1.07	.76	.156
4PC6	601-PC-4	1/4-3/8	1.16	.64	.156
4PC8	601-PC	1/4-1/2	1.16	.64	.156
6PC6	811-PC-6	3/8	1.17	.84	.281
6PC8	811-PC	3/8-1/2	1.40	.72	.281
8PC8	811-PC	1/2	1.59	1.11	.375
12PC12	1211-PC	3/4	1.65	1.16	.594

Dimensions for Reference Only, Subject to Change

tube end male adapter MA



PARKER PART NO.	INTER- CHANGES WITH	INCHES						
		TUBE O.D.	NPT PIPE THREAD	W HEX	A	R	SMALL BORE	K
1MA2N		1/16	1/8	7/16	.91	.38	.031	.34
2MA2N	2-TA-1-2	1/8	1/8	7/16	1.16	.38	.093	.53
2MA4N	2-TA-1-4	1/8	1/4	9/16	1.38	.56	.093	.53
3MA2N	3-TA-1-2	3/16	1/8	7/16	1.19	.38	.125	.56
3MA4N	3-TA-1-4	3/16	1/4	9/16	1.40	.56	.125	.56
4MA2N	4-TA-1-2	1/4	1/8	7/16	1.25	.38	.188	.63
4MA4N	4-TA-1-4	1/4	1/4	9/16	1.41	.56	.188	.63
4MA6N	4-TA-1-6	1/4	3/8	11/16	1.49	.56	.188	.63
4MA8N	4-TA-1-8	1/4	1/2	7/8	1.71	.75	.188	.63
5MA2N	5-TA-1-2	5/16	1/8	7/16	1.29	.38	.250	.66
5MA4N	5-TA-1-4	5/16	1/4	9/16	1.50	.56	.250	.66
6MA2N	6-TA-1-2	3/8	1/8	7/16	1.31	.38	.188	.69
6MA4N	6-TA-1-4	3/8	1/4	9/16	1.53	.56	.281	.69
6MA6N	6-TA-1-6	3/8	3/8	11/16	1.56	.56	.281	.69
6MA8N	6-TA-1-8	3/8	1/2	7/8	1.78	.75	.281	.69
8MA4N	8-TA-1-4	1/2	1/4	9/16	1.75	.56	.281	.91
8MA6N	8-TA-1-6	1/2	3/8	11/16	1.78	.56	.390	.91
8MA8N	8-TA-1-8	1/2	1/2	7/8	2.00	.75	.390	.91
10MA8N	10-TA-1-8	5/8	1/2	7/8	2.06	.75	.500	.97
12MA8N	12-TA-1-8	3/4	1/2	7/8	2.06	.75	.500	.97
12MA12N	12-TA-1-12	3/4	3/4	1-1/16	2.06	.75	.593	.97
16MA12N	16-TA-1-12	1	3/4	1-1/16	2.31	.75	.625	1.22
16MA16N	16-TA-1-16	1	1	1-3/8	2.56	.94	.797	1.22

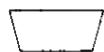
Dimensions for Reference Only, Subject to Change

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Components

front ferrule FF



PARKER PART NO.	INTER- CHANGES WITH	INCHES TUBE O.D.
1FF1	103-1	1/16
2FF2	203-1	1/8
3FF3	303-1	3/16
4FF4	403-1	1/4
5FF5	503-1	5/16
6FF6	603-1	3/8
8FF8	813-1	1/2
10FF10	1013-1	5/8
12FF12	1213-1	3/4
14FF14	1413-1	7/8
16FF16	1613-1	1

Dimensions for Reference Only, Subject to Change

back ferrule BF



PARKER PART NO.	INTER- CHANGES WITH	INCHES TUBE O.D.
1BF1	104-1	1/16
2BF2	204-1	1/8
3BF3	304-1	3/16
4BF4	404-1	1/4
5BF5	504-1	5/16
6BF6	604-1	3/8
8BF8	814-1	1/2
10BF10	1014-1	5/8
12BF12	1214-1	3/4
14BF14	1414-1	7/8
16BF16	1614-1	1

Dimensions for Reference Only, Subject to Change

plug BLP

For plugging
open ended
A-lok fitting
branches



W HEX

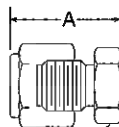
PARKER PART NO.	INTER- CHANGES WITH	INCHES		
		TUBE O.D.	A	W HEX
1BLP1	100-P	1/16	.31	5/16
2BLP2	200-P	1/8	.47	7/16
3BLP3	300-P	3/16	.47	1/2
4BLP4	400-P	1/4	.50	9/16
5BLP5	500-P	5/16	.53	5/8
6BLP6	600-P	3/8	.56	11/16
8BLP8	810-P	1/2	.69	7/8
10BLP10	1010-P	5/8	.69	1
12BLP12	1210-P	3/4	.69	1-1/8
14BLP14	1410-P	7/8	.69	1-1/4
16BLP16	1610-P	1	.81	1-1/2

HOW TO ASSEMBLE

Wrench tighten only 1/4 turn from finger tight position
Assembly includes machined ferrule with lock ring

cap BLEN

For capping
open ended
tubing
Includes body,
nut and ferrules



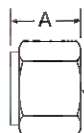
W HEX

PARKER PART NO.	INTER- CHANGES WITH	INCHES		
		TUBE O.D.	W HEX	A
1BLEN1	100-C	1/16	5/16	.56
2BLEN2	200-C	1/8	7/16	.79
3BLEN3	300-C	3/16	7/16	.84
4BLEN4	400-C	1/4	1/2	.92
5BLEN5	500-C	5/16	9/16	.96
6BLEN6	600-C	3/8	5/8	1.01
8BLEN8	810-C	1/2	13/16	1.15
10BLEN10	1010-C	5/8	15/16	1.18
12BLEN12	1210-C	3/4	1-1/16	1.25
14BLEN14	1410-C	7/8	1-3/16	1.31
16BLEN16	1610-C	1	1-3/8	1.52

Dimensions for Reference Only, Subject to Change

Note: For body only specify PNZ

tube nut NU



W HEX

PARKER PART NO.	INTER- CHANGES WITH	INCHES		
		TUBE O.D.	A	W HEX
1 NU1	102-1	1/16	.31	5/16
2 NU2	202-1	1/8	.47	7/16
3 NU3	302-1	3/16	.47	1/2
4 NU4	402-1	1/4	.50	9/16
5 NU5	502-1	5/16	.53	5/8
6 NU6	602-1	3/8	.56	11/16
8 NU8	812-1	1/2	.69	7/8
10 NU10	1012-1	5/8	.69	1
12 NU12	1212-1	3/4	.69	1-1/8
14 NU14	1412-1	7/8	.69	1-1/4
16 NU16	1612-1	1	.81	1-1/2

Dimensions for Reference Only, Subject to Change

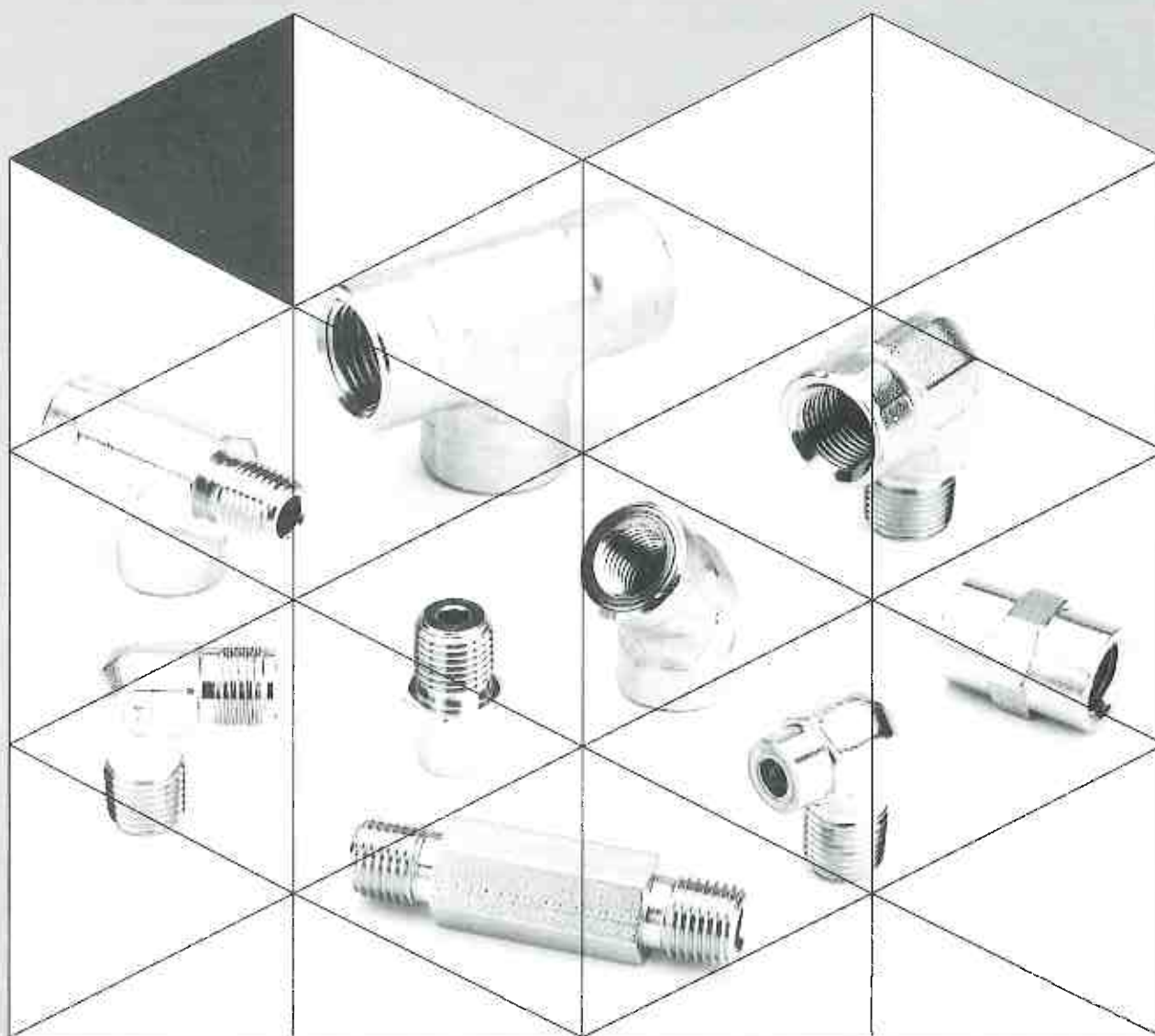
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Instrument Pipe Fittings

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Instrument Pipe Fittings

Features and Technical Data

Parker Instrument Pipe Fittings are precision machined from forgings for elbows, tees and crosses and from bar stock for straight connectors. They are designed to be used for process control and instrumentation connections between pipe sizes and tube sizes.

Features

- Quality engineered for instrumentation applications
- Packaged in sealed, clear plastic shrink wrapped boxes for cleanliness
- Working pressures calculated in accordance with Power Piping Code ANSI B31.1 and Refiner Piping Code ANSI B31.3.
- All pipe threads are National Pipe Taper (NPT) and exceed the requirements of ANSI B1.20.1 (1968).
- Rolled male threads for extra strength
- Straight bodies machined from applicable ASTM bar stock specifications

- Shapes machined from close grain forgings
- Size ranges from 1/16" through 2" NPT
- Materials – 316 Stainless Steel, Brass and Steel. (Other materials by special order)
- All exposed threads protected to prevent damage

ISO Conversion Pipe Fittings

Parker Instrument Pipe Fittings are also available in Metric/ISO conversion sizes. For a complete listing of sizes and configurations see bulletin number 4260/C.

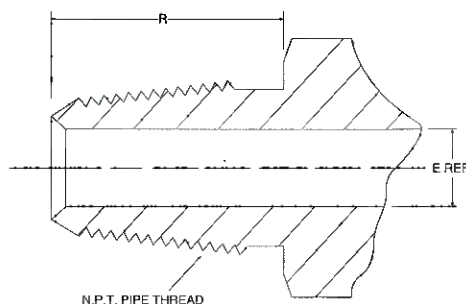
Nomenclature

Parker Instrument Pipe Fittings part numbers are constructed from symbols that identify the size and style of the fitting and material used.

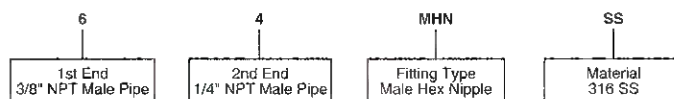
Example: The part number shown below is for a male hex nipple for 3/8" NPT male pipe and 1/4" NPT male pipe in 316 stainless steel.

Pipe Dimensions

Pipe Size	N.P.T. Pipe Thread	R	E Ref.
1/16	1/16 – 27	.38	.11
1/8	1/8 – 27	.38	.19
1/4	1/4 – 18	.56	.28
3/8	3/8 – 18	.56	.41
1/2	1/2 – 14	.75	.50
3/4	3/4 – 14	.75	.62
1	1 – 11-1/2	.94	.94
1-1/4	1-1/4 – 11-1/2	.97	1.25
1-1/2	1-1/2 – 11-1/2	1.00	1.50
2	2 – 11-1/2	1.03	1.94



How To Order



Parker Instrument Pipe Fittings are ordered by part number as listed in this catalog.

Size: Pipe thread sizes are designated by the number of sixteenths of an inch. (3/8 NPT pipe=6/16=6)

Thread Type: All pipe threads are National Pipe Taper (NPT) unless otherwise designated.

Straights and Elbows: Call out the largest pipe end first followed by the smaller pipe size. See MHN example on page 5.

Tees and Crosses: For tees that are the same pipe sizes on all ends the size designation is as follows: 6-6-6 FT-B would be a 3/8" NPT Female Tee in brass.

A 1/4" NPT Female Cross in 316 SS would be a 4FX-SS.

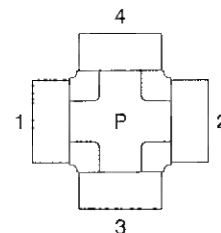
If a reducing tee or cross were specified, each size must be in sequence. First size the largest run (1 to 2) and then the branch (3 to 4).

Example: 6-6-6-4 FX-SS

Material: Basic Material Type (B=Brass, SS=316 Stainless Steel, S=Steel)

Special Fittings: If there is any question as to the fitting desired, particularly for special fitting configurations, it is suggested that a customer print be submitted with the fitting request for quote.

Availability: Items priced in current price list 4230 are carried in stock. Price and delivery for non-standard items quoted on request through the quick response department.

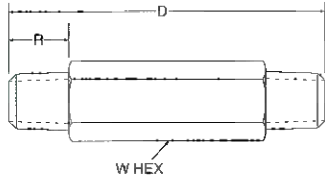


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Instrument Pipe Fittings

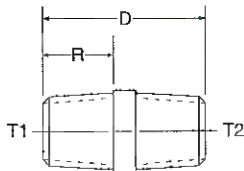
male hex long nipple MHLN



Parker Part No.	NPT Thread Male		W Hex	D		R		Working Pressures (PSIG)		
	T ₁	T ₂		In.	mm	In.	mm	Brass	Stainless Steel	Steel
1-1 MHLN-(*)	1/16	1/16	7/16	*		.38	9.7	6000	9800	10500
2-2 MHLN-(*)	1/8	1/8	7/16	*		.38	9.7	5600	9100	9700
2-2 MHLN-1½	1/8	1/8	7/16	1.50	38.10	.38	9.7	5600	9100	9700
2-2 MHLN-2	1/8	1/8	7/16	2.00	50.80	.38	9.7	5600	9100	9700
2-2 MHLN-2½	1/8	1/8	7/16	2.50	63.50	.38	9.7	5600	9100	9700
4-4 MHLN-(*)	1/4	1/4	5/8	*		.56	14.2	4100	7500	8000
4-4 MHLN-2	1/4	1/4	5/8	2.00	50.80	.56	14.2	4100	7500	8000
4-4 MHLN-2½	1/4	1/4	5/8	2.50	63.50	.56	14.2	4100	7500	8000
4-4 MHLN-3	1/4	1/4	5/8	3.00	76.20	.56	14.2	4100	7500	8000
4-4 MHLN-4	1/4	1/4	5/8	4.00	101.60	.56	14.2	4100	7500	8000
6-6 MHLN-(*)	3/8	3/8	3/4	*		.56	14.2	4100	7200	7600
8-8 MHLN-(*)	1/2	1/2	7/8	*		.75	19.1	3900	6600	7000
8-8 MHLN-2	1/2	1/2	7/8	2.00	50.80	.75	19.1	3900	6600	7000
8-8 MHLN-3	1/2	1/2	7/8	3.00	76.20	.75	19.1	3900	6600	7000

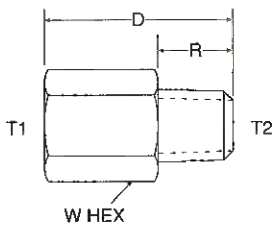
*Specify Length

male close nipple MCN



Parker Part No.	NPT Thread Male	D		R		Working Pressures (PSIG)		
		In.	mm	In.	mm	Brass	Stainless Steel	Steel
1-1 MCN	1/16	.75	19.1	.33	8.4	6000	9800	10500
2-2 MCN	1/8	.75	19.1	.33	8.4	5600	9100	9700
4-4 MCN	1/4	1.13	28.7	.48	12.2	4100	7500	8000
6-6 MCN	3/8	1.13	28.7	.48	12.2	4000	7200	7600
8-8 MCN	1/2	1.50	38.1	.66	16.8	3900	6600	7000
12-12 MCN	3/4	1.50	38.1	.66	16.8	3800	6400	6800
16-16 MCN	1	1.88	47.8	.83	21.1	2700	4600	4900

adapter RA



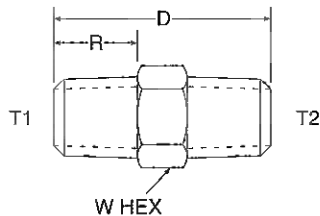
Parker Part No.	NPT Thread		W Hex	D		R		Working Pressures (PSIG)		
	Female T ₁	Male T ₂		In.	mm	In.	mm	Brass	Stainless Steel	Steel
2-1 RA	1/8	1/16	5/8	1.03	26.20	.38	9.7	4000	6400	6800
2-2 RA	1/8	1/8	5/8	1.03	26.20	.38	9.7	4000	6400	6800
4-1 RA	1/4	1/16	3/4	1.20	30.50	.38	9.7	4300	6300	6800
4-2 RA	1/4	1/8	3/4	1.20	30.50	.38	9.7	4300	6600	7000
4-4 RA	1/4	1/4	3/4	1.39	35.30	.56	14.2	4300	6600	7000
6-1 RA	3/8	1/16	7/8	1.25	35.30	.38	14.2	3500	5000	5400
6-2 RA	3/8	1/8	7/8	1.25	31.80	.38	9.7	3500	5300	5600
6-4 RA	3/8	1/4	7/8	1.44	36.60	.56	14.2	3500	5300	5600
6-6 RA	3/8	3/8	7/8	1.44	36.60	.56	14.2	3500	5300	5600
8-2 RA	1/2	1/8	1-1/8	1.50	38.10	.38	9.7	3600	5200	5500
8-4 RA	1/2	1/4	1-1/8	1.69	42.90	.56	14.2	3600	5200	5500
8-6 RA	1/2	3/8	1-1/8	1.69	42.90	.56	14.2	3600	5200	5500
8-8 RA	1/2	1/2	1-1/8	1.88	47.80	.75	19.1	3600	5200	5500
12-2 RA	3/4	1/8	1-3/8	1.56	39.60	.38	9.7	3000	4300	4600
12-4 RA	3/4	1/4	1-3/8	1.75	44.50	.56	14.2	3000	4300	4600
12-6 RA	3/4	3/8	1-3/8	1.75	44.50	.56	14.2	3000	4300	4600
12-8 RA	3/4	1/2	1-3/8	1.94	49.30	.75	19.1	3000	4300	4600
16-2 RA	1	1/8	1-5/8	1.81	46.00	.38	9.7	3100	4500	4800
16-4 RA	1	1/4	1-5/8	2.00	50.80	.56	14.2	3100	4500	4800
16-6 RA	1	3/8	1-5/8	2.00	50.80	.56	14.2	3100	4500	4800
16-8 RA	1	1/2	1-5/8	2.19	55.60	.75	19.1	3100	4500	4800
16-12 RA	1	3/4	1-5/8	2.19	55.60	.75	19.1	3100	4500	4800
20-16 RA	1-1/4	1	2	2.47	62.70	.94	23.9	2300	3500	3700

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Parker
FluidConnectors

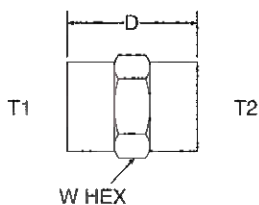
Instrument Pipe Fittings

male hex nipple MHN



Parker Part No.	NPT Thread Male		W Hex	D		R		Working Pressures (PSIG)		
	T ₁	T ₂		in.	mm	in.	mm	Brass	Stainless Steel	Steel
1-1 MHN	1/16	1/16	7/16	1.06	27.00	.38	9.7	6000	10000	10700
2-1 MHN	1/8	1/16	7/16	1.06	27.00	.38	9.7	5600	9100	9700
2-2 MHN	1/8	1/8	7/16	1.06	27.00	.38	9.7	5600	9100	9700
4-1 MHN	1/4	1/16	5/8	1.25	31.80	.56/.38	14.2/9.7	4100	7500	8000
4-2 MHN	1/4	1/8	5/8	1.25	31.80	.56/.38	14.2/9.7	4100	7500	8000
4-4 MHN	1/4	1/4	5/8	1.45	36.83	.56	14.2	4100	7500	8000
6-1 MHN	3/8	1/16	3/4	1.27	32.30	.56/.38	14.2/9.7	4000	7200	7600
6-2 MHN	3/8	1/8	3/4	1.27	32.30	.56/.38	14.2/9.7	4000	7200	7600
6-4 MHN	3/8	1/4	3/4	1.45	36.83	.56	14.2	4000	7200	7600
6-6 MHN	3/8	3/8	3/4	1.45	36.83	.56	14.2	4000	7200	7600
8-2 MHN	1/2	1/8	7/8	1.52	38.61	.75/.38	19.1/9.7	3900	6600	7000
8-4 MHN	1/2	1/4	7/8	1.70	43.20	.75/.38	19.1/14.2	3900	6600	7000
8-6 MHN	1/2	3/8	7/8	1.70	43.20	.75/.56	19.1/14.2	3900	6600	7000
8-8 MHN	1/2	1/2	7/8	1.89	48.00	.75	19.1	3900	6600	7000
12-2 MHN	3/4	1/8	1-1/8	1.50	40.39	.75/.38	19.1/9.7	3800	6400	6800
12-4 MHN	3/4	1/4	1-1/8	1.78	45.21	.75/.56	19.1/14.2	3800	6400	6800
12-6 MHN	3/4	3/8	1-1/8	1.78	45.21	.75/.56	19.1/14.2	3800	6400	6800
12-8 MHN	3/4	1/2	1-1/8	1.97	50.03	.75	19.1	3800	6400	6800
12-12 MHN	3/4	3/4	1-1/8	1.97	50.03	.75	19.1	3800	6400	6800
16-2 MHN	1	1/8	1-3/8	1.78	45.21	.94/.38	23.90/9.7	2700	4600	4900
16-4 MHN	1	1/4	1-3/8	1.97	50.03	.94/.56	23.90/9.7	2700	4600	4900
16-6 MHN	1	3/8	1-3/8	1.97	50.03	.94/.56	23.90/14.2	2700	4600	4900
16-8 MHN	1	1/2	1-3/8	2.16	54.90	.94/.75	23.90/19.1	2700	4600	4900
16-12 MHN	1	3/4	1-3/8	2.16	54.90	.94/.75	23.90/19.1	2700	4600	4900
16-16 MHN	1	1	1-3/8	2.34	59.43	.94	23.90	2700	4600	4900
20-16 MHN	1-1/4	1	1-3/4	2.56	62.23	.97/.94	24.6/23.9	2000	3500	3700
20-20 MHN	1-1/4	1-1/4	1-3/4	2.28	63.00	.97	24.6	2000	3500	3700
24-24 MHN	1-1/2	1-1/2	2	2.61	66.30	1.00	25.4	1800	2900	3100

female hex coupling FHC



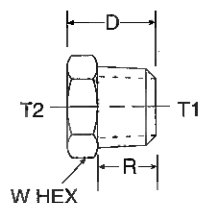
Parker Part No.	NPT Thread Female		W Hex	D		Working Pressures (PSIG)		
	T ₁	T ₂		in.	mm	Brass	Stainless Steel	Steel
1-1 FHC	1/16	1/16	1/2	.75	19.10	4500	7500	8000
2-1 FHC	1/8	1/16	5/8	.75	19.10	4000	6000	6300
2-2 FHC	1/8	1/8	5/8	.75	19.10	4000	6400	6800
4-1 FHC	1/4	1/16	3/4	.92	23.40	4300	6300	6800
4-2 FHC	1/4	1/8	3/4	.94	23.90	4300	6600	7000
4-4 FHC	1/4	1/4	3/4	1.13	28.70	4300	6600	7000
6-1 FHC	3/8	1/16	7/8	.95	24.20	3500	5000	5400
6-2 FHC	3/8	1/8	7/8	1.03	26.20	3500	5000	5400
6-4 FHC	3/8	1/4	7/8	1.13	28.70	3500	5300	5600
6-6 FHC	3/8	3/8	7/8	1.13	28.70	3500	5300	5600
8-2 FHC	1/2	1/8	1-1/8	1.22	31.00	3600	5200	5500
8-4 FHC	1/2	1/4	1-1/8	1.38	35.10	3600	5200	5500
8-6 FHC	1/2	3/8	1-1/8	1.50	38.10	3600	5200	5500
8-8 FHC	1/2	1/2	1-1/8	1.50	38.10	3600	5200	5500
12-2 FHC	3/4	1/8	1-3/8	1.39	35.30	3000	4300	4600
12-4 FHC	3/4	1/4	1-3/8	1.55	39.40	3000	4300	4600
12-6 FHC	3/4	3/8	1-3/8	1.69	42.90	3000	4300	4600
12-8 FHC	3/4	1/2	1-3/8	1.88	47.80	3000	4300	4600
12-12 FHC	3/4	3/4	1-3/8	1.53	38.90	3000	4300	4600
16-2 FHC	1	1/8	1-5/8	1.44	36.60	3100	4500	4800
16-4 FHC	1	1/4	1-5/8	1.63	41.40	3100	4500	4800
16-6 FHC	1	3/8	1-5/8	1.63	41.40	3100	4500	4800
16-8 FHC	1	1/2	1-5/8	1.77	45.00	3100	4500	4800
16-12 FHC	1	3/4	1-5/8	1.72	45.00	3100	4500	4800
16-16 FHC	1	1	1-5/8	1.89	48.00	3100	4500	4800
20-16 FHC	1-1/4	1	2	1.94	49.30	2300	3500	3700
20-20 FHC	1-1/4	1-1/4	2	1.94	49.30	2300	3500	3700
24-24 FHC	1-1/2	1-1/2	2-3/8	1.94	49.30	2100	3200	3400

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Parker
FluidConnectors

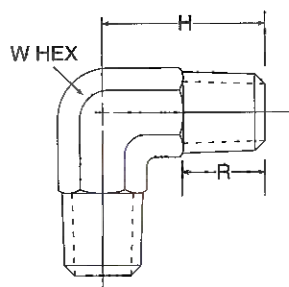
Instrument Pipe Fittings

reducing bushing RB



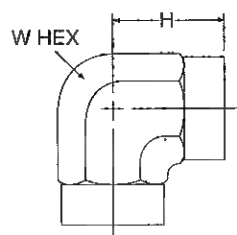
Parker Part No.	NPT Thread		W Hex	D		R		Working Pressures (PSIG)		
	Male T ₁	Female T ₂		in.	mm	in.	mm	Brass	Stainless Steel	Steel
2-1 RB	1/8	1/16	7/16	.63	16.00	.38	9.7	2900	6400	6800
4-1 RB	1/4	1/16	5/8	.86	21.84	.56	14.7	4100	7500	8000
4-2 RB	1/4	1/8	5/8	.86	21.84	.56	14.7	3600	6000	6400
6-1 RB	3/8	1/16	3/4	.86	21.84	.56	14.7	4000	7200	7600
6-2 RB	3/8	1/8	3/4	.86	21.84	.56	14.7	4000	6400	6800
6-4 RB	3/8	1/4	3/4	.86	21.84	.56	14.7	3000	5300	5600
8-2 RB	1/2	1/8	7/8	1.11	28.19	.75	19.1	3900	6600	6800
8-4 RB	1/2	1/4	7/8	1.11	28.19	.75	19.1	3900	6400	7000
8-6 RB	1/2	3/8	7/8	1.11	28.19	.75	19.1	2800	4600	4900
12-2 RB	3/4	1/8	1-1/8	1.17	29.71	.75	19.1	3800	6400	6800
12-4 RB	3/4	1/4	1-1/8	1.17	29.71	.75	19.1	3800	6400	6800
12-6 RB	3/4	3/8	1-1/8	1.17	29.71	.75	19.1	3500	5300	5600
12-8 RB	3/4	1/2	1-1/8	1.17	29.71	.75	19.1	2800	4900	5200
16-2 RB	1	1/8	1-3/8	1.36	35.54	.94	23.9	2700	4600	4900
16-4 RB	1	1/4	1-3/8	1.36	35.54	.94	23.9	2700	4600	4900
16-6 RB	1	3/8	1-3/8	1.36	35.54	.94	23.9	2700	4600	4900
16-8 RB	1	1/2	1-3/8	1.36	35.54	.94	23.9	2700	4600	4900
16-12 RB	1	3/4	1-3/8	1.36	35.54	.94	23.9	2500	4200	4500
20-12 RB	1-1/4	3/4	1-3/4	1.47	37.34	.97	24.6	2000	3500	3700
20-16 RB	1-1/4	1	1-3/4	1.47	37.34	.97	24.6	2000	3500	3700
24-16 RB	1-1/2	1	2	1.58	40.13	1.00	25.4	1800	2900	3100
24-20 RB	1-1/2	1-1/4	2	1.58	40.13	1.00	25.4	1700	2700	2800

male elbow ME



Parker Part No.	NPT Thread Male	W Hex	H		R		Working Pressures (PSIG)		
			in.	mm	in.	mm	Brass	Stainless Steel	Steel
1-1 ME	1/16	5/16	.72	18.30	.38	9.7	5500	9500	10100
2-2 ME	1/8	7/16	.78	19.81	.38	9.7	5000	9100	9700
4-4 ME	1/4	9/16	1.09	27.70	.56	14.2	4100	7500	8000
6-6 ME	3/8	3/4	1.22	31.00	.56	14.2	4000	7200	7600
8-8 ME	1/2	7/8	1.47	37.33	.75	19.1	3100	5800	6200
12-12 ME	3/4	1-1/16	1.59	40.40	.75	19.1	3400	6400	6800
16-16 ME	1	1-5/16	1.97	50.03	.94	23.9	2700	4600	4900

female elbow FE



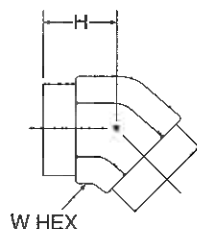
Parker Part No.	NPT Thread Female	W Hex	H		Working Pressures (PSIG)		
			in.	mm	Brass	Stainless Steel	Steel
1-1 FE	1/16	7/16	.50	12.70	3800	7000	7500
2-2 FE	1/8	9/16	.66	16.80	2900	5500	5900
4-4 FE	1/4	3/4	.88	22.40	3000	5600	6000
6-6 FE	3/8	7/8	1.02	26.00	2700	5000	5300
8-8 FE	1/2	1-1/16	1.23	31.24	2500	4500	4800
12-12 FE	3/4	1-5/16	1.36	34.54	2000	3500	3700
16-16 FE	1	1-5/8	1.63	41.40	2300	3900	4200
20-20 FE	1-1/4	1-7/8	1.70	43.20	1900	3100	3300
24-24 FE	1-1/2	2-1/2	2.08	52.83	1700	2500	2600

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Parker
FluidConnectors

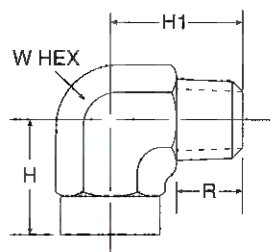
Instrument Pipe Fittings

female elbow 45° FVE



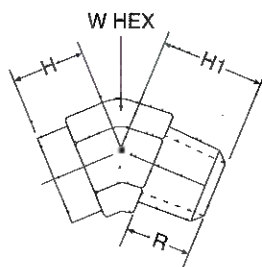
Parker Part No.	NPT Thread Female	W Hex	H		Working Pressures (PSIG)		
			in.	mm	Brass	Stainless Steel	Steel
1-1 FVE	1/16	7/16	.47	11.90	3800	7000	7500
2-2 FVE	1/8	9/16	.47	11.90	2900	5500	5900
4-4 FVE	1/4	3/4	.69	17.52	3000	5600	6000
6-6 FVE	3/8	7/8	.75	19.10	2700	5000	5300
8-8 FVE	1/2	1-1/16	.94	23.90	2500	4500	4800
12-12 FVE	3/4	1-5/16	1.00	25.40	2000	3500	3700
16-16 FVE	1	1-5/8	1.19	30.22	2300	3900	4200

street elbow SE



Parker Part No.	NPT Thread		W Hex	H		H ₁		R		Working Pressures (PSIG)		
	Male	Female		in.	mm	in.	mm	in.	mm	Brass	Stainless Steel	Steel
1-1 SE	1/16	1/16	9/16	.66	16.76	.78	19.81	.38	9.7	3800	7000	7500
2-1 SE	1/8	1/16	9/16	.66	16.76	.78	19.81	.38	9.7	2900	5500	5900
2-2 SE	1/8	1/8	9/16	.66	16.76	.78	19.81	.38	9.7	2900	5500	5900
4-1 SE	1/4	1/16	9/16	.66	16.76	1.09	27.70	.56	14.2	3000	5600	6000
4-2 SE	1/4	1/8	9/16	.66	16.76	1.09	27.70	.56	14.2	3000	5600	6000
4-4 SE	1/4	1/4	3/4	.88	22.40	1.09	27.70	.56	14.2	3000	5600	6000
6-1 SE	3/8	1/16	3/4	.88	22.40	1.09	27.70	.56	14.2	2700	5000	5300
6-2 SE	3/8	1/8	3/4	.88	22.40	1.22	31.00	.58	14.2	2700	5000	5300
6-4 SE	3/8	1/4	3/4	.88	22.40	1.22	31.00	.56	14.2	2700	5000	5300
6-6 SE	3/8	3/8	7/8	1.02	25.91	1.22	31.00	.56	14.2	2700	5000	5300
8-2 SE	1/2	1/8	7/8	.95	24.13	1.47	37.34	.75	19.1	2500	4500	4800
8-4 SE	1/2	1/4	7/8	.95	24.13	1.47	37.34	.75	19.1	2500	4500	4800
8-6 SE	1/2	3/8	7/8	1.23	31.24	1.47	37.34	.75	19.1	2500	4500	4800
8-8 SE	1/2	1/2	1-1/16	1.23	31.24	1.47	37.34	.75	19.1	2500	4500	4800
12-2 SE	3/4	1/8	1-1/16	1.00	25.40	1.59	40.40	.75	19.1	2000	3500	3700
12-4 SE	3/4	1/4	1-1/16	1.00	25.40	1.59	40.40	.75	19.1	2000	3500	3700
12-6 SE	3/4	3/8	1-1/16	1.23	31.24	1.59	40.40	.75	19.1	2000	3500	3700
12-8 SE	3/4	1/2	1-1/16	1.23	31.24	1.59	40.40	.75	19.1	2000	3500	3700
12-12 SE	3/4	3/4	1-5/16	1.36	34.54	1.59	40.40	.75	19.1	2000	3500	3700
16-2 SE	1	1/8	1-5/16	1.63	41.40	1.97	50.00	.94	23.9	2300	3900	4200
16-4 SE	1	1/4	1-5/16	1.63	41.40	1.97	50.00	.94	23.9	2300	3900	4200
16-6 SE	1	3/8	1-5/16	1.50	38.10	1.97	50.00	.94	23.9	2300	3900	4200
16-8 SE	1	1/2	1-5/16	1.63	41.40	1.97	50.00	.94	23.9	2300	3900	4200
16-12 SE	1	3/4	1-5/16	1.36	34.54	1.97	50.00	.94	23.9	2300	3900	4200
16-16 SE	1	1	1-5/8	1.63	41.40	1.97	50.00	.94	23.9	2300	3900	4200
20-20 SE	1-1/4	1-1/4	1-7/8	1.70	43.20	2.38	60.45	.97	24.6	1900	3100	3300

street elbow 45° SVE



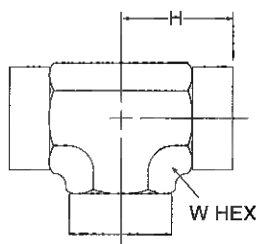
Parker Part No.	NPT Thread		W Hex	H		H ₁		R		Working Pressures (PSIG)		
	Male	Female		in.	mm	in.	mm	in.	mm	Brass	Stainless Steel	Steel
1-1 SVE	1/16	1/16	7/16	.47	11.90	.66	16.76	.38	9.7	3800	7000	7500
2-2 SVE	1/8	1/8	9/16	.47	11.90	.72	18.30	.38	9.7	2900	5500	5900
4-4 SVE	1/4	1/4	3/4	.63	16.00	1.05	26.70	.56	14.2	3000	5600	6000
6-6 SVE	3/8	3/8	7/8	.72	18.30	1.06	27.00	.56	14.2	2700	5000	5300
8-8 SVE	1/2	1/2	1-1/16	.91	23.11	1.34	34.03	.75	19.1	2500	4500	4800
12-12 SVE	3/4	3/4	1-5/16	.97	24.64	1.38	35.10	.75	19.1	2000	3500	3700
16-16 SVE	1	1	1-5/8	1.13	28.70	1.72	43.70	.94	23.9	2300	3900	4200

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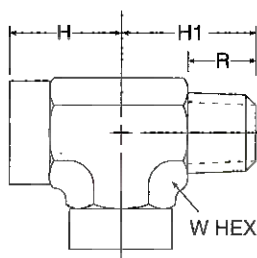
Instrument Pipe Fittings

female tee FT



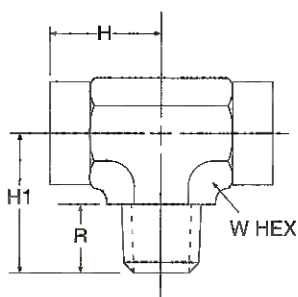
Parker Part No.	NPT Thread Female	W Hex	H		Working Pressures (PSIG)		
			in.	mm	Brass	Stainless Steel	Steel
1-1-1 FT	1/16	7/16	.50	12.70	3800	7000	7500
2-2-2 FT	1/8	9/16	.66	16.80	2900	5500	5900
4-4-4 FT	1/4	3/4	.88	22.40	3000	5600	6000
6-6-6 FT	3/8	7/8	1.02	26.00	2700	5000	5300
8-8-8 FT	1/2	1-1/16	1.23	31.24	2500	4500	4800
12-12-12 FT	3/4	1-5/16	1.36	34.54	2000	3500	3700
16-16-16 FT	1	1-5/8	1.63	41.40	2300	3900	4200
20-20-20 FT	1-1/4	1-7/8	1.70	43.20	1900	3100	3300
24-24-24 FT	1-1/2	2-1/2	2.08	52.83	1700	2500	3600

street tee ST



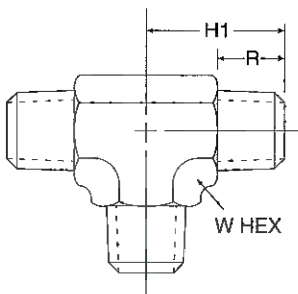
Parker Part No.	NPT Thread		W Hex	H		H ₁		R		Working Pressures (PSIG)		
	Male	Female		in.	mm	in.	mm	in.	mm	Brass	Stainless Steel	Steel
1-1-1 ST	1/16	1/16	7/16	.50	12.70	.72	18.30	.38	9.7	3800	7000	7500
2-2-2 ST	1/8	1/8	9/16	.66	16.80	.78	19.81	.38	9.7	2900	5500	5900
4-4-4 ST	1/4	1/4	3/4	.88	22.40	1.09	27.70	.56	14.2	3000	5600	6000
6-6-6 ST	3/8	3/8	7/8	1.02	26.00	1.22	31.00	.56	14.2	2700	5000	5300
8-8-8 ST	1/2	1/2	1-1/16	1.23	31.24	1.47	37.33	.75	19.1	2500	4500	4800
12-12-12 ST	3/4	3/4	1-5/16	1.36	34.54	1.59	40.40	.75	19.1	2000	3500	3700
16-16-16 ST	1	1	1-5/8	1.63	41.40	1.97	50.03	.94	23.9	2300	3900	4200

male branch tee MBT



Parker Part No.	NPT Thread		W Hex	H		H ₁		R		Working Pressures (PSIG)		
	Male	Female		in.	mm	in.	mm	in.	mm	Brass	Stainless Steel	Steel
1-1-1 MBT	1/16	1/16	7/16	.50	12.70	.72	18.30	.38	9.7	3800	7000	7500
2-2-2 MBT	1/8	1/8	9/16	.66	16.80	.78	19.81	.38	9.7	2900	5500	5900
4-4-4 MBT	1/4	1/4	3/4	.88	22.40	1.09	27.70	.56	14.2	3000	5600	6000
6-6-6 MBT	3/8	3/8	7/8	1.02	26.00	1.22	31.00	.56	14.2	2700	5000	5300
8-8-8 MBT	1/2	1/2	1-1/16	1.23	31.24	1.47	37.33	.75	19.1	2500	4500	4800
12-12-12 MBT	3/4	3/4	1-5/16	1.36	34.54	1.59	40.40	.75	19.1	2000	3500	3700

male tee MT



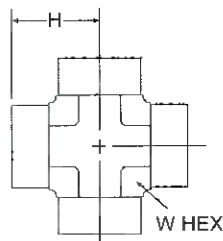
Parker Part No.	NPT Thread Male	W Hex	H ₁		R		Working Pressures (PSIG)		
			in.	mm	in.	mm	Brass	Stainless Steel	Steel
1-1-1 MT	1/16	5/16	.72	18.30	.38	9.7	5500	9500	10100
2-2-2 MT	1/8	7/16	.78	19.81	.42	10.7	5000	9100	9700
4-4-4 MT	1/4	9/16	1.09	27.70	.56	14.2	4100	7500	8000
6-6-6 MT	3/8	3/4	1.22	31.00	.56	14.2	4000	7200	7600
8-8-8 MT	1/2	7/8	1.47	37.33	.75	19.1	3100	5800	6200
12-12-12 MT	3/4	1-1/16	1.59	40.40	.75	19.10	3400	6400	6800
16-16-16 MT	1	1-5/16	1.97	50.00	.94	23.90	2700	4600	4900
20-20-20 MT	1-1/4	1-5/8	2.22	56.40	1.19	30.25	2000	3500	3700
24-24-24 MT	1-1/2	1-7/8	2.64	67.10	1.44	36.60	1800	2900	3100

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Parker
FluidConnectors

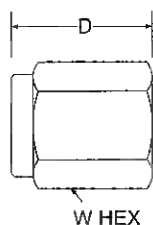
Instrument Pipe Fittings

female cross FX



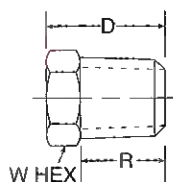
Parker Part No.	NPT Thread Female	W Hex	H		Working Pressures (PSIG)		
			in.	mm	Brass	Stainless Steel	Steel
1 FX	1/16	7/16	.50	12.70	3800	7000	7500
2 FX	1/8	9/16	.66	16.80	2900	5500	5900
4 FX	1/4	3/4	.88	22.40	3000	5600	6000
6 FX	3/8	7/8	1.06	27.00	2700	5000	5300
8 FX	1/2	1-1/16	1.23	31.24	2500	4500	4800
12 FX	3/4	1-5/16	1.36	34.54	2000	3500	3700
16 FX	1	1-5/8	1.63	41.40	2300	3900	4200

pipe cap CP



Parker Part No.	NPT Thread Female	W Hex	D		Working Pressures (PSIG)		
			in.	mm	Brass	Stainless Steel	Steel
1 CP	1/16	7/16	.50	12.70	4300	7500	8000
2 CP	1/8	9/16	.75	19.10	4000	6400	6800
4 CP	1/4	3/4	.91	23.11	4300	6600	7000
6 CP	3/8	7/8	1.03	26.20	3500	5300	5600
8 CP	1/2	1-1/16	1.34	34.03	3600	5200	5500

hex head plug PH



Parker Part No.	NPT Thread Male	W Hex	D		R		Working Pressures (PSIG)		
			in.	mm	in.	mm	Brass	Stainless Steel	Steel
1 PH	1/16	5/16	.59	15.00	.38	9.7	6000	9800	10500
2 PH	1/8	7/16	.59	15.00	.38	9.7	5600	9100	9700
4 PH	1/4	9/16	.81	20.60	.56	14.2	4100	7500	8000
6 PH	3/8	11/16	.81	20.60	.56	14.2	4000	7200	7600
8 PH	1/2	7/8	1.06	27.00	.75	19.1	3900	6600	7000
12 PH	3/4	1-1/16	1.13	28.70	.75	19.1	3800	6400	6800
16 PH	1	1-5/16	1.31	33.30	.94	23.9	2700	4600	4900

hollow hex plug PHH



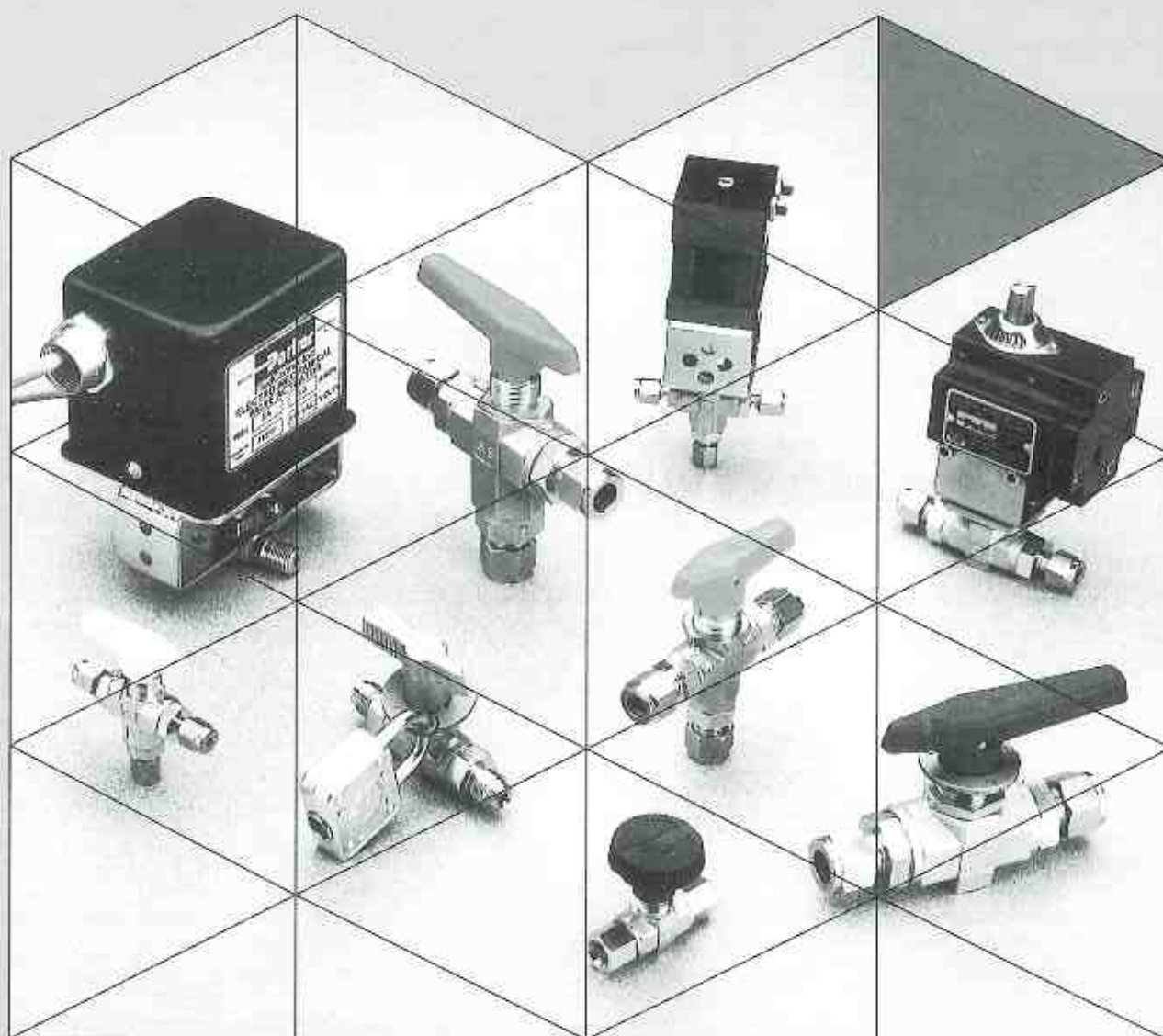
Parker Part No.	NPT Thread Male	W Hex	D		Working Pressures (PSIG)		
			in.	mm	Brass	Stainless Steel	Steel
1 PHH	1/16	5/32	.30	7.6	6000	9800	10500
2 PHH	1/8	3/16	.30	7.6	5600	9100	9700
4 PHH	1/4	1/4	.47	11.9	4100	7500	8000
6 PHH	3/8	5/16	.47	11.9	4000	7200	7600

Specify Material by part number suffix letters:
B= Brass S= Steel SS= Stainless Steel

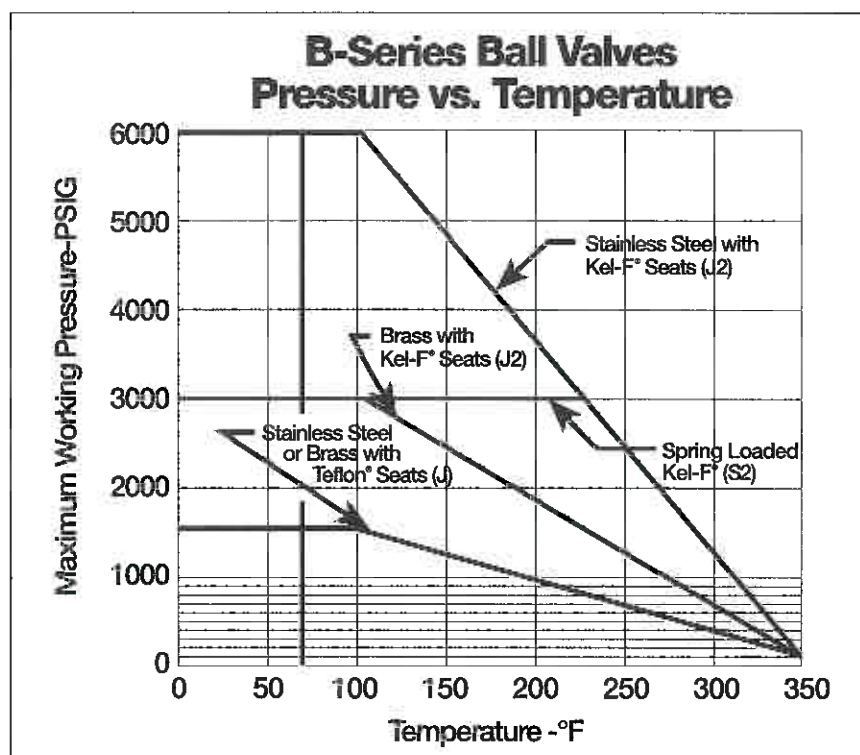


Instrumentation Ball Valves

The World Standard



Ball Valves



Note: Elastomeric stem packing and seals are recommended if the application subjects the valve to thermal cycling.

Flow Calculations

Cv	Pressure Drop ΔP (PSI) to atmosphere	Water (GPM) @ 70°F	Air (SCFM) @ 70°F
.25	10	.79	3.50
	50	1.77	11.00
	100	2.50	19.80
.60	10	1.90	8.28
	50	4.24	23.46
	100	6.00	41.58
.65	10	2.10	9.00
	50	4.60	25.00
	100	6.50	41.00
1.40	10	4.43	19.30
	50	9.40	54.70
	100	14.00	97.00
5.60	10	17.71	77.49
	50	39.60	214.20
	100	56.00	379.73
6.00	10	18.97	83.03
	50	42.43	229.50
	100	60.00	406.85

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Ball Valves (Design Features)

Packing adjustment is easily accomplished by removing the handle and tightening the packing nut

Color coded nylon handles indicate flow direction

Parker Ball Valve design provides a broad temperature range from -65°F to 350°F

Panel mounting is available as standard

Micro-finished ball ensures leak tight shut-off to 6000 psig

Free floating ball design provides seat wear compensation

Straight-thru flow path yields minimum pressure drop

Available with CPI, A-lok, male NPT, female NPT, butt weld, UltraSeal, and VacuSeal end ports

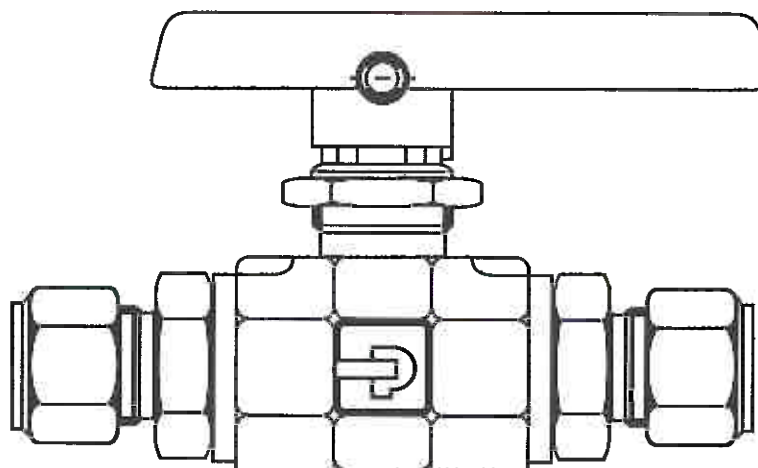
316 stainless steel, brass, monel, and hastelloy construction

Kel-F® is a registered trademark of 3M Company.
Delrin®, Viton®, Teflon® are registered trademarks of E.I. DuPont.

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Parker
FluidConnectors

Two Way Ball Valve



Features

- Free floating ball design provides seat wear compensation
- Available materials include 316 stainless steel, brass, Monel, and Hastelloy
- Bi-directional flow
- 90 degree actuation
- Straight through flow path for minimal pressure drop
- Micro-finished ball provides a positive seal
- Adjustable packing (valve need not be removed from system tubing or piping)
- Panel mountable
- Low operating torques
- Handle indicates flow direction
- Available with CPI, A-lok, male NPT, female NPT, buttweld, VacuSeal, and UltraSeal end connections
- Positive handle stops
- Color coded handles

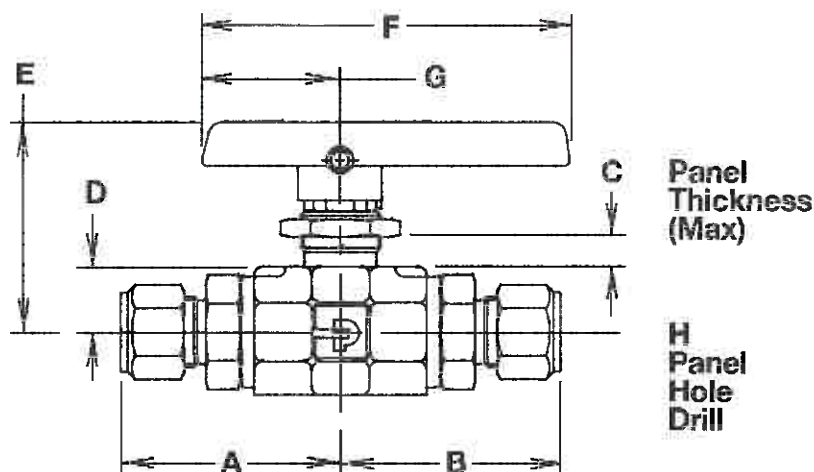
Specifications

- Pressure rating:
1500 psig (316 stainless steel with Teflon® ball seats)
6000 psig (316 stainless steel with Kel-F® ball seats)
1500 psig (brass with Teflon® ball seats)
3000 psig (brass with Kel-F® ball seats)
- Temperature rating:
Teflon: -65° F to 350° F
Kel-F: -65° F to 350° F
PEEK: -65° F to 350° F
Buna-N: -40° F to 250° F
Fluorocarbon Rubber: -65° F to 350° F
Ethylene Propylene: -65° F to 300° F
When combining seat and stem seals, the most restrictive temperature rating becomes the overriding factor.
- Cv rating: .23 to 6.0

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Parker
FluidConnectors

Two Way Ball Valve



Dimensions (Inches), Flow Data

Part Description	Flow Data		Dimensions							
	Orifice	Cv	A	B	C	D	E	F	G	H
2F-B2LJ-*	0.165	0.65	1.06	1.06	0.13	0.32	1.27	1.88	0.75	0.58
2Z(A)-B2LJ-*	0.093	0.23	1.38†	1.38†	0.13	0.32	1.27	1.88	0.75	0.58
2M-B2LJ-*	0.165	0.65	1.17	1.17	0.13	0.32	1.27	1.88	0.75	0.58
4M-B2LJ-*	0.165	0.65	1.34	1.34	0.13	0.32	1.27	1.88	0.75	0.58
4Z(A)-B2LJ-*	0.165	0.65	1.48†	1.48†	0.13	0.32	1.27	1.88	0.75	0.58
2M2F-B2LJ-*	0.165	0.65	1.17	1.06	0.13	0.32	1.27	1.88	0.75	0.58
4M4Z(A)-B2LJ-*	0.165	0.65	1.34	1.48†	0.13	0.32	1.27	1.88	0.75	0.58
4Y-B2LJ-*	0.165	0.65	1.57	1.57	0.13	0.32	1.27	1.88	0.75	0.58
4Q-B2LJ-*	0.165	0.65	1.25	1.25	0.13	0.32	1.27	1.88	0.75	0.58
2Z(A)-B6LJ-*	0.093	0.23	1.66†	1.66†	0.25	0.47	2.00	2.50	1.50	0.77
4Z(A)-B6LJ-*	0.187	0.80	1.75†	1.75†	0.25	0.47	2.00	2.50	1.50	0.77
6Z(A)-B6LJ-*	0.250	1.40	1.84†	1.84†	0.25	0.47	2.00	2.50	1.50	0.77
4V-B6LJ-*	0.188	0.80	1.76	1.76	0.25	0.47	2.00	2.50	1.50	0.77
4Y-B6LJ-*	0.172	0.65	1.79	1.79	0.25	0.47	2.00	2.50	1.50	0.77
4Q-B6LJ-*	0.188	0.80	1.52	1.52	0.25	0.47	2.00	2.50	1.50	0.77
4F-B6LJ-*	0.250	1.40	1.51	1.51	0.25	0.47	2.00	2.50	1.50	0.77
4M-B6LJ-*	0.250	1.40	1.62	1.62	0.25	0.47	2.00	2.50	1.50	0.77
6M-B6LJ-*	0.250	1.40	1.62	1.62	0.25	0.47	2.00	2.50	1.50	0.77
6Y-B6LJ-*	0.250	1.40	1.82	1.82	0.25	0.47	2.00	2.50	1.50	0.77
6Q-B6LJ-*	0.250	1.40	1.51	1.51	0.25	0.47	2.00	2.50	1.50	0.77
4M4Z(A)-B6LJ-*	0.187	0.80	1.62	1.75†	0.25	0.47	2.00	2.50	1.50	0.77
4M4F-B6LJ-*	0.250	1.40	1.62	1.51	0.25	0.47	2.00	2.50	1.50	0.77
4M6Z(A)-B6LJ-*	0.250	1.40	1.62	1.84†	0.25	0.47	2.00	2.50	1.50	0.77
4F4Z(A)-B6LJ-*	0.187	0.80	1.51	1.75†	0.25	0.47	2.00	2.50	1.50	0.77
4F6Z(A)-B6LJ-*	0.250	1.40	1.51	1.84†	0.25	0.47	2.00	2.50	1.50	0.77
8Y-B6LJ-*	0.250	1.40	1.96	1.96	0.25	0.47	2.00	2.50	1.50	0.77
6F-B8LJ-*	0.406	6.00	1.97	1.97	0.38	0.70	2.44	4.00	2.50	0.89
8F-B8LJ-*	0.406	6.00	2.16	2.16	0.38	0.70	2.44	4.00	2.50	0.89
8Q-B8LJ-*	0.312	4.60	1.95	1.95	0.38	0.70	2.44	4.00	2.50	0.89
8Z(A)-B8LJ-*	0.406	6.00	2.38†	2.38†	0.38	0.70	2.44	4.00	2.50	0.89
12Z(A)-B8LJ-*	0.406	6.00	2.36†	2.36†	0.38	0.70	2.44	4.00	2.50	0.89

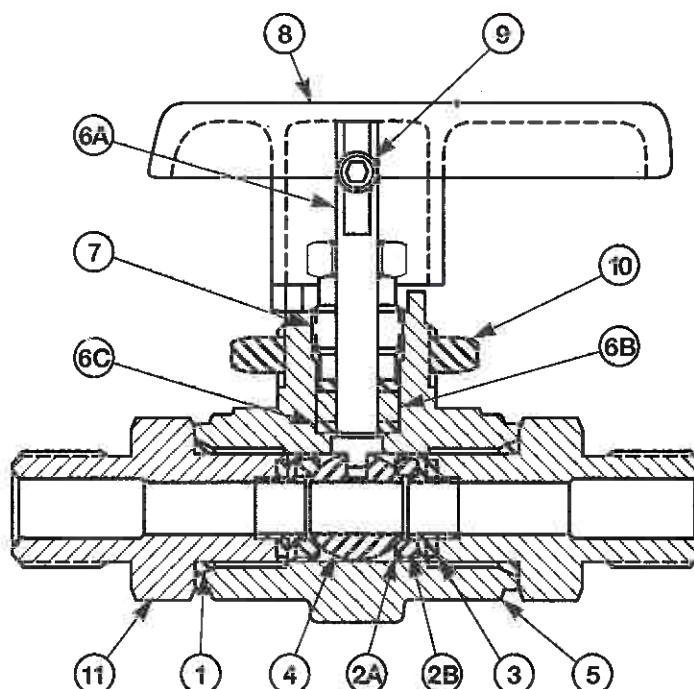
* Material: SSP-stainless steel, BP-brass, MP-monel, HCP-hastelloy C-22

† Measured with nut in the finger tight position

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Parker
FluidConnectors

Two Way Ball Valve



Materials of Construction

Item #	Part Description	Stainless Steel Valve	Brass Valve
1	Connector O-Ring	PTFE Fluorocarbon	PTFE Fluorocarbon
2A	Seat Retainer	ASTM A276 Type 316	ASTM-B-16 Copper Alloy #360
2B	Seat	PTFE Fluorocarbon, CTFE (Kel-F®)	PTFE Fluorocarbon, CTFE (Kel-F®)
3	Retainer Seal	PTFE Fluorocarbon	PTFE Fluorocarbon
4	Ball	316-SS	Brass*
5	Body	ASTM A351, Grade CF3M	ASTM-B-124 Copper Alloy #377
6A	Stem	ASTM A276 Type 316	ASTM-B-371 Copper Alloy #697*
6B	Stem Packing	PTFE Fluorocarbon	PTFE Fluorocarbon
6C	Stem Washer	316-SS	316-SS
7	Packing Nut	ASME-SA-479 Type 316	ASTM-B-16 Copper Alloy #360
8	Handle	Nylon 6/6	Nylon 6/6
9	Set Screw	Stainless Steel	Stainless Steel
10	Panel Nut	ASTM-B-16 Copper Alloy #360	ASTM-B-16 Copper Alloy #360
11	End Connector	ASME-SA-479 Type 316	ASTM-B-16 Copper Alloy #360

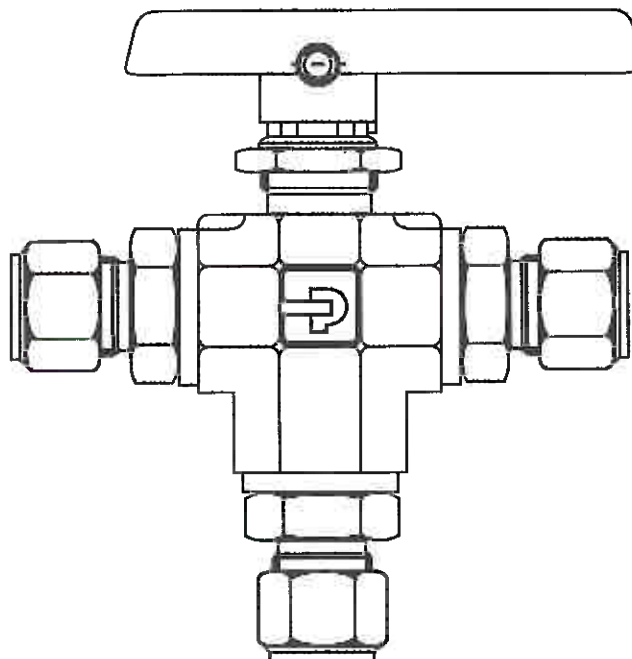
Note: A stainless steel static ground spring and two (2) 316 stainless steel retaining rings are standard with 1/2" ball valves. The static ground spring and the retaining rings are not shown.

* The ball and stem are 316 stainless steel for 1/2" brass ball valves with Kel-F® seats.

The World Standard

Parker
FluidConnectors

Three Way Ball Valve



Features

- Free floating ball design provides seat wear compensation
- Available materials include 316 stainless steel, brass, Monel, and Hastelloy
- 180 degree actuation for directional flow switching
- Micro-finished ball provides a positive seal
- Adjustable packing
- Panel mountable
- Low operating torques
- Handle indicates flow direction
- Available with CPI, A-lok, male NPT, female NPT, butt weld, VacuSeal, and UltraSeal end connections
- Positive handle stops
- Color coded handles

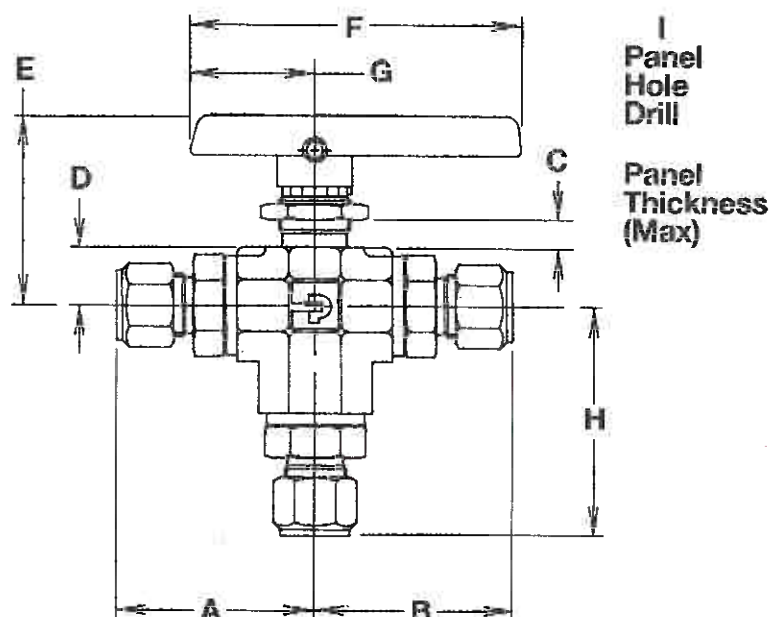
Specifications

- Pressure ratings:
 - 1500 psig (316 stainless steel with Teflon® ball seats)
 - 6000 psig (316 stainless steel with Kel-F® ball seats)
 - 1500 psig (brass with Teflon® ball seats)
 - 3000 psig (brass with Kel-F® ball seats)
- Note:** Bottom port must be used as inlet with service over 150 psig
- Temperature rating:
 - Teflon: -65° F to 350° F
 - Kel-F: -65° F to 350° F
 - PEEK: -65° F to 350° F
 - Buna-N: -40° F to 250° F
 - Fluorocarbon Rubber: -65° F to 350° F
 - Ethylene Propylene: -65° F to 300° F
- When combining seat and stem seals, the most restrictive temperature rating becomes the overriding factor.
- Cv rating: .16 to 5.6

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Three Way Ball Valve



Dimensions (Inches), Flow Data

Part Description	Flow Data		Dimensions								
	Orifice	Cv	A	B	C	D	E	F	G	H	I
2F-B2XJ-*	0.125	0.25	1.06	1.06	0.13	0.32	1.27	1.88	0.75	1.15	0.58
2Z(A)-B2XJ-*	0.093	0.16	1.38†	1.38†	0.13	0.32	1.27	1.88	0.75	1.46†	0.58
2M-B2XJ-*	0.125	0.25	1.17	1.17	0.13	0.32	1.27	1.88	0.75	1.26	0.58
4Z(A)-B2XJ-*	0.125	0.25	1.48†	1.48†	0.13	0.32	1.27	1.88	0.75	1.57†	0.58
4M-B2XJ-*	0.125	0.25	1.34	1.34	0.13	0.32	1.27	1.88	0.75	1.43	0.58
2Z(A)-B6XJ-*	0.093	0.16	1.66†	1.66†	0.25	0.47	2.00	2.50	1.00	1.79†	0.77
4Z(A)-B6XJ-*	0.187	0.60	1.75†	1.75†	0.25	0.47	2.00	2.50	1.00	1.87†	0.77
6Z(A)-B6XJ-*	0.191	0.60	1.83†	1.83†	0.25	0.47	2.00	2.50	1.00	1.95†	0.77
4V-B6XJ-*	0.188	0.60	1.76	1.76	0.25	0.47	2.00	2.50	1.00	1.89	0.77
4Y-B6XJ-*	0.172	0.63	1.79	1.79	0.25	0.47	2.00	2.50	1.00	1.91	0.77
4Q-B6XJ	0.188	0.60	1.52	1.52	0.25	0.47	2.00	2.50	1.00	1.65	0.77
4F-B6XJ-*	0.191	0.60	1.51	1.51	0.25	0.47	2.00	2.50	1.00	1.63	0.77
4M-B6XJ-*	0.191	0.60	1.62	1.62	0.25	0.47	2.00	2.50	1.00	1.74	0.77
6M-B6XJ-*	0.191	0.60	1.62	1.62	0.25	0.47	2.00	2.50	1.00	1.74	0.77
4Z(A)4Z(A)4M-B6XJ-*	0.187	0.60	1.75†	1.75†	0.25	0.47	2.00	2.50	1.00	1.74	0.77
6Y-B6XJ-*	0.196	0.60	1.82	1.82	0.25	0.47	2.00	2.50	1.00	1.95	0.77
6Q-B6XJ-*	0.196	0.60	1.52	1.52	0.25	0.47	2.00	2.50	1.00	1.65	0.77
6F-B8XJ-*	0.406	5.60	1.95	1.95	0.38	0.70	2.44	4.00	1.50	2.29	0.89
8F-B8XJ-*	0.406	5.60	2.16	2.16	0.38	0.70	2.44	4.00	1.50	2.49	0.89
8Z(A)-B8XJ-*	0.406	5.60	2.38†	2.38†	0.38	0.70	2.44	4.00	1.50	2.73†	0.89
12Z(A)-B8XJ-*	0.406	5.60	2.36†	2.36†	0.38	0.70	2.44	4.00	1.50	2.71†	0.89
8Q-B8XJ-*	0.312	4.20	1.95	1.95	0.38	0.70	2.44	4.00	1.50	2.27	0.89
8Z(A)8Z(A)8F-B8XJ-*	0.406	5.60	2.38†	2.38	0.38	0.70	2.44	4.00	1.50	2.49	0.89

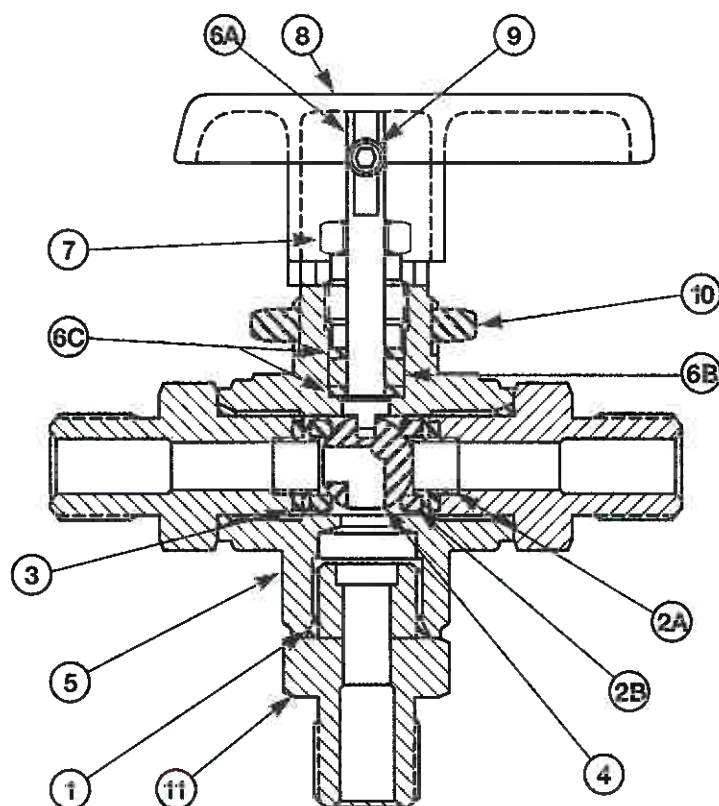
* Material: SSP-stainless steel, BP-brass, MP-monel, HCP-hastelloy C-22

† Measured with nut in the finger tight position

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Three Way Ball Valve



Materials of Construction

Item #	Part Description	Stainless Steel Valve	Brass Valve
1	Connector O-Ring	PTFE Fluorocarbon	PTFE Fluorocarbon
2A	Seat Retainer	ASTM A276 Type 316	ASTM-B-16 Copper Alloy #360
2B	Seat	PTFE Fluorocarbon, CTFE (Kel-F®)	PTFE Fluorocarbon, CTFE (Kel-F®)
3	Retainer Seal	PTFE Fluorocarbon	PTFE Fluorocarbon
4	Ball	316-SS	Brass*
5	Body	ASTM A351, Grade CF3M	ASTM-B-124 Copper Alloy #377
6A	Stem	ASTM A276 Type 316	ASTM-B-371 Copper Alloy #697*
6B	Stem Packing	PTFE Fluorocarbon	PTFE Fluorocarbon
6C	Stem Washer	316-SS	316-SS
7	Packing Nut	ASME-SA-479 Type 316	ASTM-B-16 Copper Alloy #360
8	Handle	Nylon 6/6	Nylon 6/6
9	Set Screw	Stainless Steel	Stainless Steel
10	Panel Nut	ASTM-B-16 Copper Alloy #360	ASTM-B-16 Copper Alloy #360
11	End Connector	ASME-SA-479 Type 316	ASTM-B-16 Copper Alloy #360

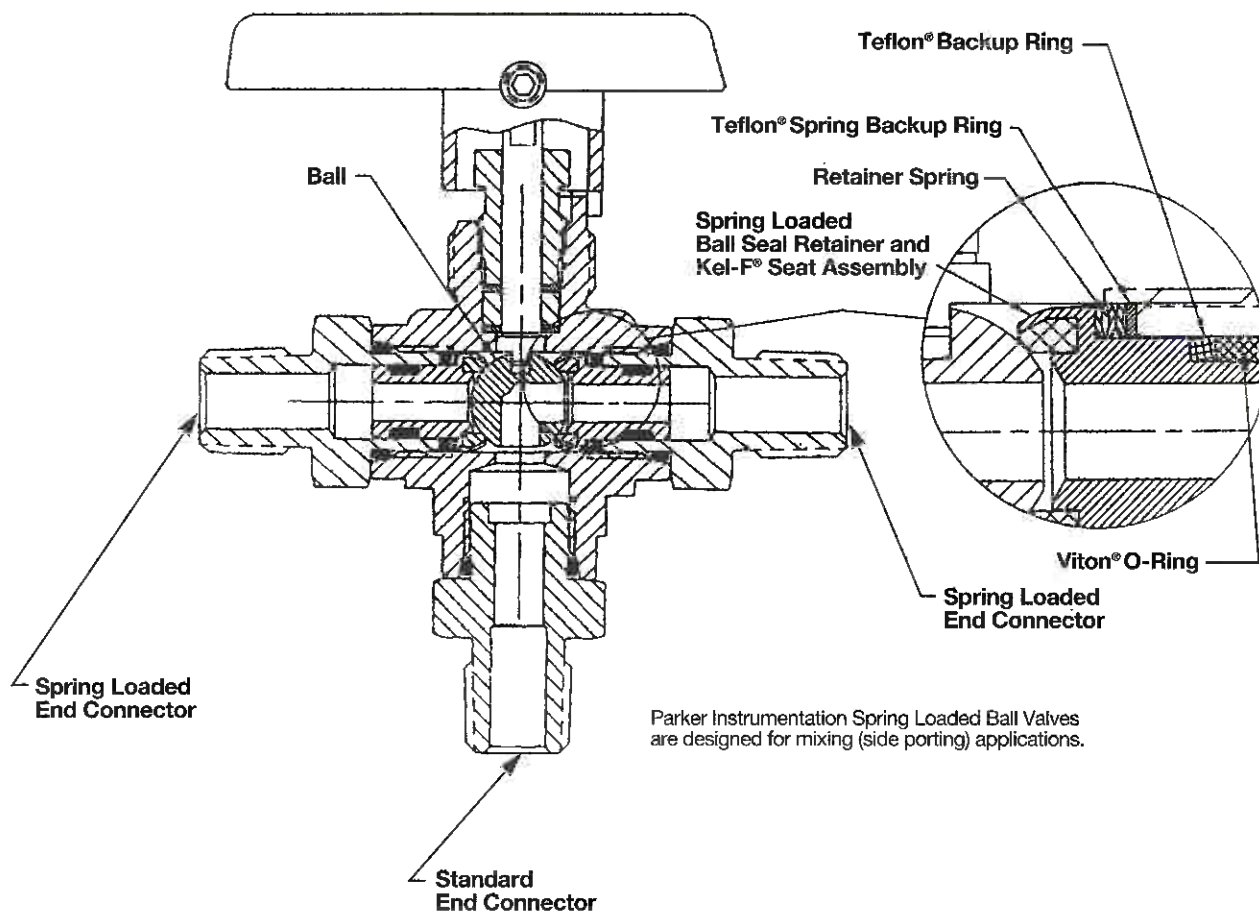
Note: A stainless steel static ground spring and two (2) 316 stainless steel retaining rings are standard with 1/2" ball valves. The static ground spring and the retaining rings are not shown.

* The ball and stem are 316 stainless steel for 1/2" brass ball valves with Kel-F® seats.

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Spring Loaded Three Way Ball Valves



Features

- Spring loaded Kel-F or reinforced PEEK seat design
- Brass and stainless are available
- Available with 1/4" and 3/8" porting

Specifications

- Stainless steel pressure rating:
6000 psig (bottom port as inlet)
3000 psig (side ports as inlet)
- Brass pressure rating:
3000 psig (all ports)
- Temperature rating:
-65° F to 350° F
- Cv rating: .60

Note: Please reference pages 6, 7 and 8 (3-way ball valves) for additional information on specifications, construction and dimensions.

Instrumentation Valve Division
Parker Hannifin Corporation
Jacksonville, Alabama

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Ball Valves How To Order

How to Order (2-Way): The correct part number is easily derived by following the circled number sequence.

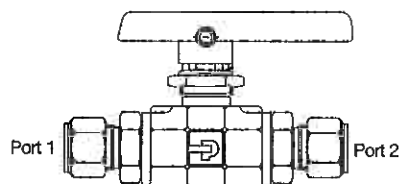
2-Way Ball Valves

Example: ① ② ③ ④ ⑤ ⑥
2M 2F - B2L J - BP

Describes a 1/8" 2-way ball valve equipped with a 1/8" male NPT for port 1, a 1/8" female NPT for port 2, Teflon® seats and stem seal, brass construction, and a panel mounting nut.

Example: ① ② ③ ④ ⑤ ⑥
6Z - B6L PKC - BN - SSP

Describes a 3/8" 2-way ball valve equipped with 3/8" CPI (tube) connections for both ports, reinforced PEEK seats, Buna-N stem seal, stainless steel construction, and a panel mounting nut.



Size	① Port 1	② Port 2	③ Valve Series	④ Seat Material	⑤ Stem Seal	⑥ Material
2	M-male NPT		B2L	J-Teflon®	Blank-Teflon	BP-Brass
4	F-female NPT		B6L	J2-Kel-F®	V-Fluorocarbon	SSP-Stainless Steel
6	Z-CPI (tube-single ferrule)		B8L	PKC-reinforced	Rubber	MP-Monel
8	A-A-lok (tube-double ferrule)			PEEK	EPR-Ethylene	HCP-Hastelloy
12	V-VacuSeal				Propylene	(all materials come standard with a panel mounting nut)
	Q-UltraSeal				BN-Buna-N	
	Y-Automatic Buttweld					

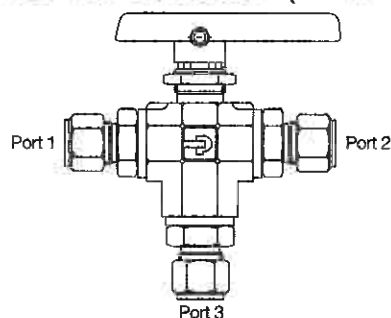
How to Order (3-Way): 3-Way Ball Valves

Example: ① ② ③ ④ ⑤ ⑥ ⑦
2Z 2Z 2M - B2X J - BP

Describes a 1/8" 3-way ball valve equipped with a 1/8" CPI (tube) connections for ports 1 and 2, 1/8" male NPT connection for port 3, Teflon® seats and stem seal, brass construction, and a panel mounting nut.

Example: ① ② ③ ④ ⑤ ⑥ ⑦
4F - B6X J2 - V - SSP

Describes a 3/8" 3-way ball valve equipped with a 1/4" female NPT connections for all 3 ports, Kel-F® seats, fluorocarbon rubber stem seal, stainless steel construction, and a panel mounting nut.



Size	① Port 1	② Port 2	③ Port 3	④ Valve Series	⑤ Seat Material	⑥ Stem Seal	⑦ Material
2	M-male NPT			B2X	J-Teflon®	Blank-Teflon	BP-Brass
4	F-female NPT			B6X	J2-Kel-F®	V-Fluorocarbon	SSP-Stainless Steel
6	Z-CPI (tube-single ferrule)			B8X	PKC-reinforced PEEK	Rubber	MP-Monel
8	A-A-lok (tube-double ferrule)				S2-Spring loaded	EPR-Ethylene	HCP-Hastelloy
12	V-VacuSeal				Kel-F®	Propylene	(all materials come standard with a panel mounting nut)
	Q-UltraSeal				SPKC-Spring loaded	BN-Buna-N	
	Y-Automatic Buttweld				reinforced PEEK		

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