

Ultra-High Pressure

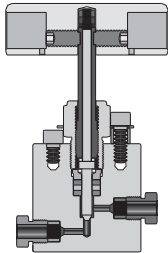
Medium Pressure Valves,
Fittings and Tubing 20000 psig

20 Series

Contents

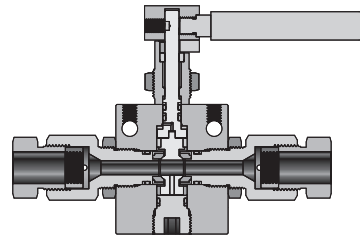
Medium Pressure Needle Valve (20NV Series)

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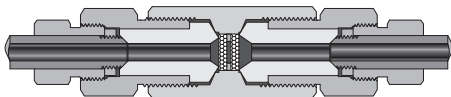
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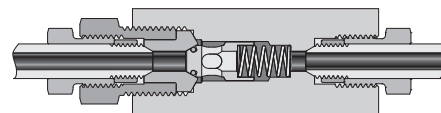
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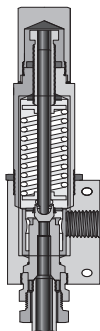
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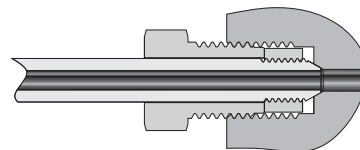
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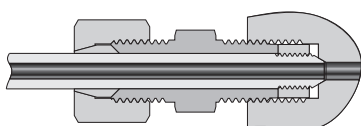
Medium Pressure Fittings, Tubing and Nipples (20 Series)

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Medium Pressure Needle Valve

20NV Series

Features

- ❖ Tubing sizes available for 1/4", 3/8", 9/16", 3/4", 1"
- ❖ Non-rotating stem prevents stem/seat galling.
- ❖ Metal-to-metal seating achieves bubble-tight shutoff, longer stem/seat service life in abrasive flow, greater durability for repeated on/off cycles
- ❖ PTFE is the standard packing material and provides dependable stem and body sealing
- ❖ Graphite packing working temperature up to 800°F(427°C)
- ❖ Stem sleeve and packing gland materials have been selected to achieve extended thread cycle life and reduced handle torque
- ❖ Cold-worked type 316 stainless steel body and aluminum bronze packing gland
- ❖ Vee or Regulating stem tips for options
- ❖ Packing below the thread of valve stem
- ❖ The locking device of packing gland is reliable
- ❖ Five body patterns are available

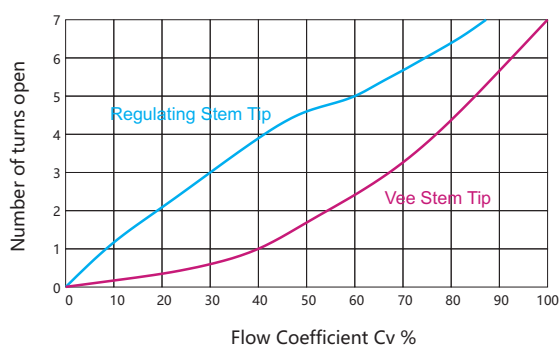
Technical Data

Tube OD in.	Connection Type	Orifice in.(mm)	Cv	Working Pressure psig(bar)
1/4	MPF4	0.125(3.18)	0.31	20,000(1379)
3/8	MPF6	0.219(5.56)	0.75	20,000(1379)
9/16	MPF9	0.312(7.92)	1.30	20,000(1379)
3/4	MPF12	0.438(11.13)	2.50	20,000(1379)
1	MPF16	0.562(14.27)	4.40	20,000(1379)

Notes:

- ❖ Cv value shown are for 2-way straight valve pattern.
Cv value of for 2-way angle pattern will be increase about 50% (Base on water).
- ❖ Work Temperatures
PTFE packing : -65°F (-53°C) to 450°F (232°C)
RPTFE glass packing : -65°F (-53°C) to 600°F (316°C)
Graphite packing : -65°F (-53°C) to 800°F (427°C)

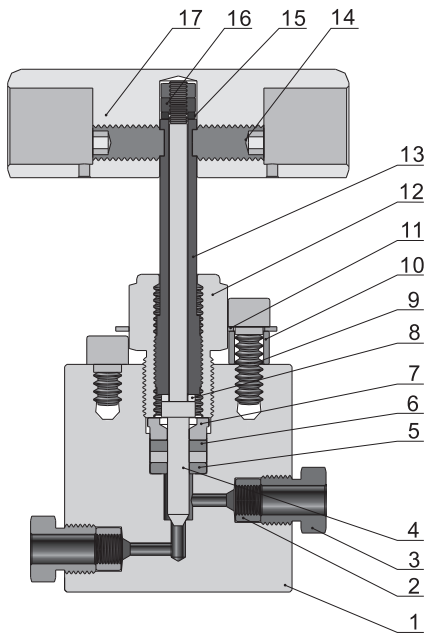
Flow Data at 100°F(38°C)



Pressure-Temperature Ratings

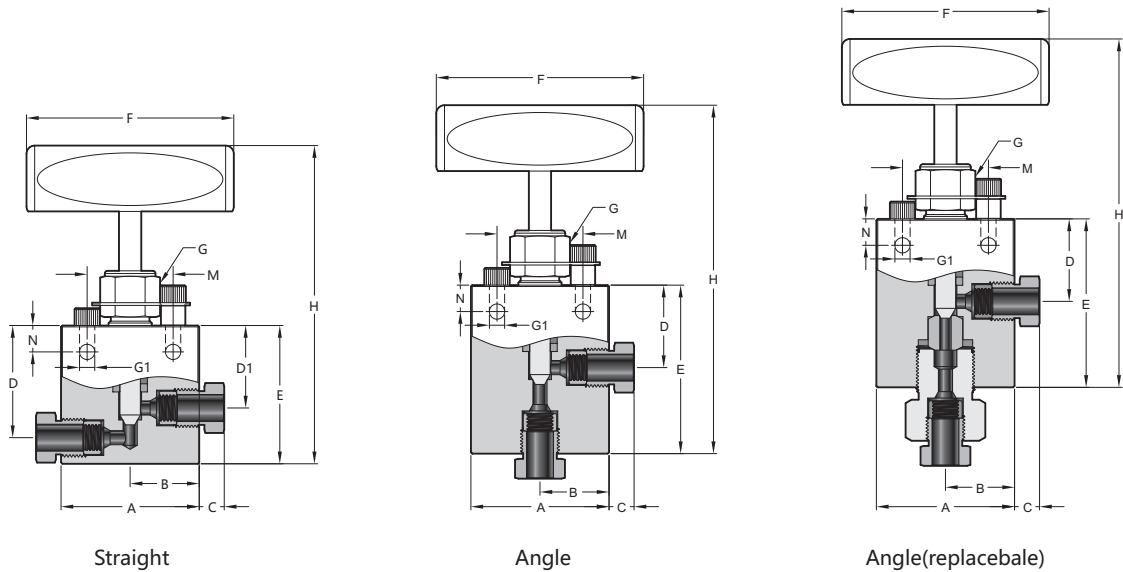
Temperature, °F(°C)	Working Pressure, psig(bar)
-65 (-53) to 200 (93)	20 000 (1378)
300 (148)	19 500 (1344)
400 (204)	19 000 (1310)
500 (260)	18 600 (1282)
600 (315)	18 000 (1241)
700 (371)	17 300 (1192)
800 (427)	16 800 (1158)

Standard Materials of Construction



Item	Component	Material Grade / ASTM Specification
1	Body	316 S.S. / A479
2	Collar	316 S.S. / A479
3	Nut	316 S.S. / A479
4	Stem	630 S.S. / A564
5	Gland	316 S.S. / A479
6	Packing	PTFE / Graphite / RPTFE Glass
7	Packing ring	316 S.S. / A479
8	Gland	C63000 / B150
9	Screw	304 S.S.
10	Ring	304 S.S.
11	Lock plate	304 S.S.
12	Bonnet	C63000 / B150
13	Stem guard	316 S.S. / A479
14	Screw	304 S.S.
15	Gland	C63000 / B150
16	Nut	304 S.S.
17	Handle	303 S.S.

Dimensions



Dimensions(Straight)

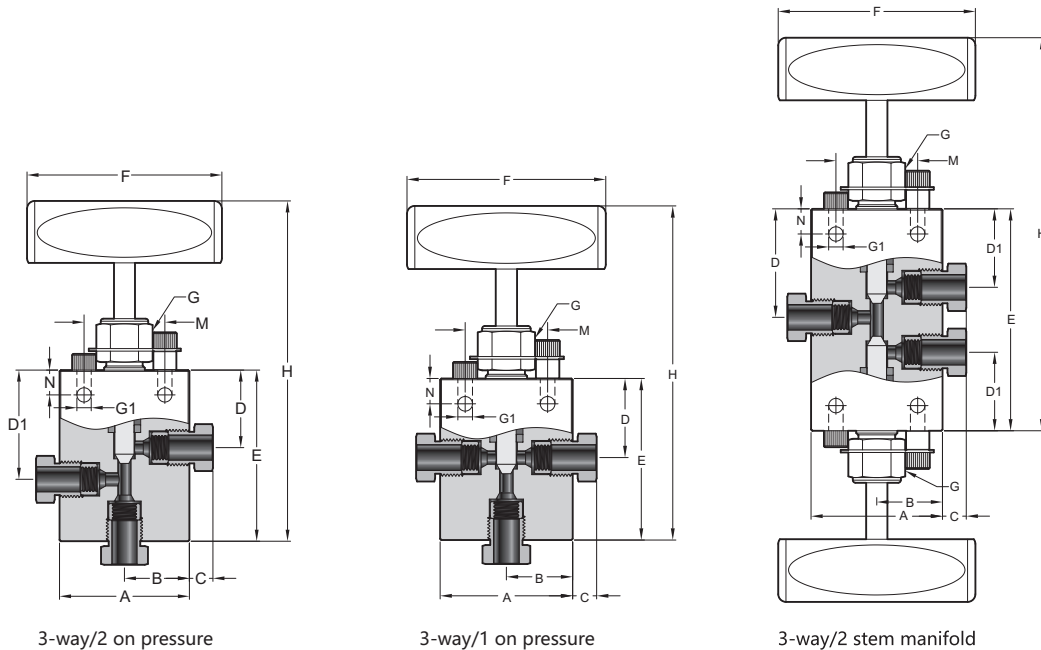
Basic Ordering Number	Connection Type	Orifice in.(mm)	A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
			in.(mm)												
20NV-MPF4-	MPF4	0.125 (3.18)	2.00 (50.8)	1.00 (25.4)	0.38 (9.7)	1.62 (41.2)	1.19 (30.2)	2.00 (50.8)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	4.69 (119.1)	0.62 (15.8)	0.38 (9.7)	0.75 (19.1)
20NV-MPF6-	MPF6	0.219 (5.56)	2.00 (50.8)	1.00 (25.4)	0.47 (11.9)	1.62 (41.2)	1.19 (30.2)	2.00 (50.8)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	4.69 (119.1)	0.62 (15.8)	0.38 (9.7)	0.75 (19.1)
20NV-MPF9-	MPF9	0.312 (7.92)	2.50 (63.5)	1.25 (31.8)	0.53 (13.5)	2.38 (60.5)	1.75 (44.5)	2.88 (73.2)	4.00 (101.6)	1.00 (25.4)	0.34 (8.6)	5.93 (150.9)	0.69 (17.5)	0.50 (12.7)	1.00 (25.4)
20NV-MPF12-	MPF12	0.438 (11.13)	3.00 (76.2)	1.50 (38.1)	0.62 (15.8)	3.00 (76.2)	2.25 (57.2)	3.75 (95.3)	10.25 (260.4)	1.19 (30.2)	0.44 (11.2)	7.00 (177.8)	0.88 (22.4)	0.63 (16.0)	1.38 (35.1)
20NV-MPF16-	MPF16	0.562 (14.27)	4.12 (104.6)	2.06 (52.3)	0.63 (16.0)	3.75 (95.3)	2.81 (71.4)	4.63 (117.6)	10.25 (260.4)	1.62 (41.2)	0.56 (14.2)	9.00 (228.6)	1.25 (31.8)	1.13 (28.7)	1.75 (44.5)

Dimensions(Angle)

Basic Ordering Number	Connection Type	Orifice in.(mm)	A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
			in.(mm)												
20NV-MPF4-A-	MPF4	0.125 (3.18)	2.00 (50.8)	1.00 (25.4)	0.38 (9.7)	1.19 (30.2)	—	2.44 (61.9)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	4.81 (122.3)	0.62 (15.8)	0.38 (9.7)	0.75 (19.1)
20NV-MPF6-A-	MPF6	0.219 (5.56)	2.00 (50.8)	1.00 (25.4)	0.47 (11.9)	1.19 (30.2)	—	2.44 (61.9)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	4.81 (122.3)	0.62 (15.8)	0.38 (9.7)	0.75 (19.1)
20NV-MPF9-A-	MPF9	0.312 (7.92)	2.50 (63.5)	1.25 (31.8)	0.53 (13.5)	1.75 (44.5)	—	3.38 (85.9)	4.00 (101.6)	1.00 (25.4)	0.34 (8.6)	6.43 (163.6)	0.69 (17.5)	0.50 (12.7)	1.00 (25.4)
20NV-MPF12-A-	MPF12	0.438 (11.13)	3.00 (76.2)	1.50 (38.1)	0.62 (15.8)	2.25 (57.2)	—	4.25 (108.0)	10.25 (260.4)	1.19 (30.2)	0.44 (11.2)	7.50 (190.5)	0.88 (22.4)	0.63 (16.0)	1.38 (35.1)
20NV-MPF16-A-	MPF16	0.562 (14.27)	4.12 (104.6)	2.06 (52.3)	0.63 (16.0)	2.81 (71.4)	—	5.12 (130.1)	10.25 (260.4)	1.62 (41.2)	0.56 (14.2)	9.00 (228.6)	1.25 (31.8)	1.13 (28.7)	1.75 (44.5)

Dimensions(Angle/replaceable seat)

Basic Ordering Number	Connection Type	Orifice in.(mm)	A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
			in.(mm)												
20NV-MPF4-AR-	MPF4	0.125 (3.18)	2.00 (50.8)	1.00 (25.4)	0.38 (9.7)	1.19 (30.2)	2.13 (54.0)	2.25 (57.2)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	5.75 (146.1)	0.62 (15.8)	0.38 (9.7)	0.75 (19.1)
20NV-MPF6-AR-	MPF6	0.219 (5.56)	2.00 (50.8)	1.00 (25.4)	0.47 (11.9)	1.19 (30.2)	2.13 (54.0)	2.25 (57.2)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	5.75 (146.1)	0.62 (15.8)	0.38 (9.7)	0.75 (19.1)
20NV-MPF9-AR-	MPF9	0.312 (7.92)	2.50 (63.5)	1.25 (31.8)	0.53 (13.5)	1.75 (44.5)	2.50 (63.5)	3.13 (79.4)	4.00 (101.6)	1.00 (25.4)	0.34 (8.6)	7.34 (186.7)	0.69 (17.5)	0.50 (12.7)	1.00 (25.4)
20NV-MPF12-AR-	MPF12	0.438 (11.13)	3.00 (76.2)	1.50 (38.1)	0.62 (15.8)	2.25 (57.2)	3.44 (87.4)	4.25 (108.0)	10.25 (260.4)	1.19 (30.2)	0.44 (11.2)	9.00 (228.6)	0.88 (22.4)	0.63 (16.0)	1.38 (35.1)
20NV-MPF16-AR-	MPF16	0.562 (14.27)	4.12 (104.6)	2.06 (52.3)	0.63 (16.0)	2.69 (68.3)	4.38 (111.1)	5.25 (133.4)	10.25 (260.4)	1.62 (41.2)	0.56 (14.2)	11.00 (279.7)	1.25 (31.8)	1.13 (28.7)	1.75 (44.5)



Dimensions(3-way/2 on pressure)

Basic Ordering Number	Connection Type	Orifice in.(mm)	A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
			in.(mm)												
20NV-MPF4-3A-	MPF4	0.125 (3.18)	2.00 (50.8)	1.00 (25.4)	0.38 (9.7)	1.63 (41.3)	1.19 (30.2)	2.63 (66.7)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	5.00 (127.0)	0.62 (15.8)	0.38 (9.7)	0.75 (19.1)
20NV-MPF6-3A-	MPF6	0.219 (5.56)	2.00 (50.8)	1.00 (25.4)	0.47 (11.9)	1.63 (41.3)	1.19 (30.2)	2.63 (66.7)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	5.00 (127.0)	0.62 (15.8)	0.38 (9.7)	0.75 (19.1)
20NV-MPF9-3A-	MPF9	0.312 (7.92)	2.50 (63.5)	1.25 (31.8)	0.53 (13.5)	2.38 (60.5)	1.75 (44.5)	3.63 (92.1)	4.00 (101.6)	1.00 (25.4)	0.34 (8.6)	6.51 (165.6)	0.69 (17.5)	0.50 (12.7)	1.00 (25.4)
20NV-MPF12-3A-	MPF12	0.438 (11.13)	3.00 (76.2)	1.50 (38.1)	0.62 (15.8)	3.00 (76.2)	2.25 (57.2)	4.63 (117.5)	10.25 (260.4)	1.19 (30.2)	0.44 (11.2)	7.88 (200.0)	0.88 (22.4)	0.63 (16.0)	1.38 (35.1)
20NV-MPF16-3A-	MPF16	0.562 (14.27)	4.12 (104.6)	2.06 (52.3)	0.63 (16.0)	3.75 (95.3)	2.81 (71.4)	5.88 (149.4)	10.25 (260.4)	1.62 (41.2)	0.56 (14.2)	9.75 (247.9)	1.25 (31.8)	1.13 (28.7)	1.75 (44.5)

Dimensions(3-way/1 on pressure)

Basic Ordering Number	Connection Type	Orifice in.(mm)	A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
			in.(mm)												
20NV-MPF4-3B-	MPF4	0.125 (3.18)	2.00 (50.8)	1.00 (25.4)	0.38 (9.7)	1.19 (30.2)	—	2.44 (61.9)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	4.81 (122.3)	0.62 (15.8)	0.38 (9.7)	0.75 (19.1)
20NV-MPF6-3B-	MPF6	0.219 (5.56)	2.00 (50.8)	1.00 (25.4)	0.47 (11.9)	1.19 (30.2)	—	2.44 (61.9)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	4.81 (122.3)	0.62 (15.8)	0.38 (9.7)	0.75 (19.1)
20NV-MPF9-3B-	MPF9	0.312 (7.92)	2.50 (63.5)	1.25 (31.8)	0.53 (13.5)	1.75 (44.5)	—	3.38 (85.9)	4.00 (101.6)	1.00 (25.4)	0.34 (8.6)	6.31 (160.5)	0.69 (17.5)	0.50 (12.7)	1.00 (25.4)
20NV-MPF12-3B-	MPF12	0.438 (11.13)	3.00 (76.2)	1.50 (38.1)	0.62 (15.8)	2.25 (57.2)	—	4.25 (108.0)	10.25 (260.4)	1.19 (30.2)	0.44 (11.2)	7.5 (190.5)	0.88 (22.4)	0.63 (16.0)	1.38 (35.1)
20NV-MPF16-3B-	MPF16	0.562 (14.27)	4.12 (104.6)	2.06 (52.3)	0.63 (16.0)	2.81 (71.4)	—	5.12 (130.1)	10.25 (260.4)	1.62 (41.2)	0.56 (14.2)	9.09 (231.1)	1.25 (31.8)	1.13 (28.7)	1.75 (44.5)

Dimensions(3-way/2 stem manifold)

Basic Ordering Number	Connection Type	Orifice in.(mm)	A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
			in.(mm)												
20NV-MPF4-3C-	MPF4	0.125 (3.18)	2.00 (50.8)	1.00 (25.4)	0.38 (9.7)	1.69 (42.9)	1.19 (30.2)	3.38 (85.7)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	8.13 (206.4)	0.62 (15.8)	0.38 (9.7)	0.75 (19.1)
20NV-MPF6-3C-	MPF6	0.219 (5.56)	2.00 (50.8)	1.00 (25.4)	0.47 (11.9)	1.69 (42.9)	1.19 (30.2)	3.38 (85.7)	3.00 (76.2)	0.75 (19.1)	0.22 (5.6)	8.13 (206.4)	0.62 (15.8)	0.38 (9.7)	0.75 (19.1)
20NV-MPF9-3C-	MPF9	0.312 (7.92)	2.50 (63.5)	1.25 (31.8)	0.53 (13.5)	2.56 (65.1)	1.75 (44.5)	5.13 (130.2)	4.00 (101.6)	1.00 (25.4)	0.34 (8.6)	11.31 (287.6)	0.69 (17.5)	0.50 (12.7)	1.00 (25.4)
20NV-MPF12-3C-	MPF12	0.438 (11.13)	3.00 (76.2)	1.50 (38.1)	0.62 (15.8)	3.00 (76.2)	2.25 (57.2)	6.50 (165.1)	10.25 (260.4)	1.19 (30.2)	0.44 (11.2)	13.0 (330.2)	0.88 (22.4)	0.63 (16.0)	1.38 (35.1)
20NV-MPF16-3C-	MPF16	0.562 (14.27)	4.12 (104.6)	2.06 (52.3)	0.63 (16.0)	3.75 (95.3)	2.81 (71.4)	7.50 (190.5)	10.25 (260.4)	1.62 (41.2)	0.56 (14.2)	15.44 (292.4)	1.25 (31.8)	1.13 (28.7)	1.75 (44.5)

Notes:

1. G is the drill dimension of packing gland mounting hole.
2. G1 is the dimension of bracket mounting hole.
3. Panel mounting drill size: 0.25" all valves.
4. The dimension of stem in closed position.

How to Order

20NV — MPF4 — R — G — A — 316L

Series	Connection Sizes	Stem Tips	Packing	Flow Patterns	Body Material
20NV	MPF4 1/4 in.	Vee	PTFE	Straight	316 316 S.S.
	MPF6 3/8 in.	R Regulating	RG RPTFE Glass	A Angle	316L 316L S.S.
	MPF9 9/16 in.		G Graphite	AR Angle, replaceable seat	
	MPF12 3/4 in.			3A 3-way, 2 on pressure	
	MPF16 1 in.			3B 3-way, 1 on pressure	
				3C 3-way, 2 stem manifold	

Medium Pressure Ball Valve

20BV Series

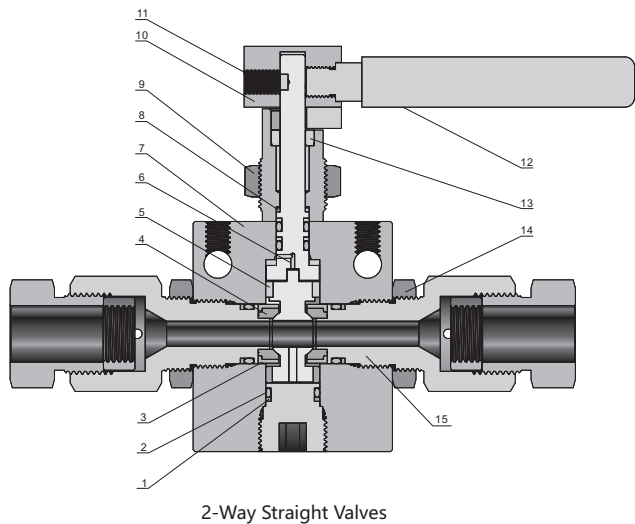
Features

- ❖ One-piece, trunnion mounted style, ideal for severe duty applications.
- ❖ Two-way and three-way valve configurations.
- ❖ PEEK seats offer excellent resistance to chemicals, heat, and wear/abrasion.
- ❖ Full-port flow path minimizes pressure drop.
- ❖ 316 cold worked stainless steel construction.
- ❖ Fluorocarbon FKM O-rings for operation from 0°F to 400°F (-18°C to 204°C)
- ❖ Wide selection of tube and pipe end connections available.

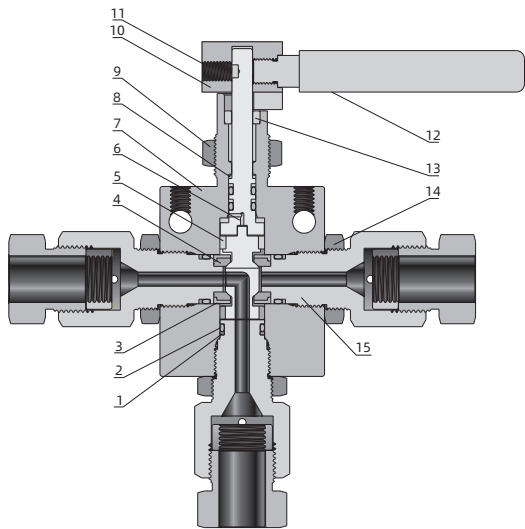
Pressure-Temperature Ratings

Temperature, °F(°C)	Working Pressure, psig(bar)
0(-17) to 100(37)	20 000(1378)
200(93)	20 000(1378)
250(121)	17 500(1206)
300(148)	15 000(1034)
350(176)	12 500(862)
400(204)	10 000(689)

Standard Materials of Construction



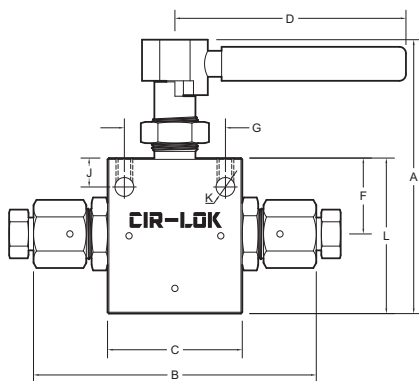
Item	Component	Material Grade / ASTM Specification
1	Ring	PTFE / D1710
2	O-ring	FKM
3	Seat Retainer	316 S.S. / A479
4	Seat	PEEK
5	Bearing	PEEK
6	Stem	316 S.S. / A479
7	Body	316 S.S. / A479
8	Bearing	PEEK
9	Nut	316 S.S. / A479
10	Handle Seat	316 S.S. / A479
11	Screw	304 S.S.
12	Handle	304 S.S.
13	Sleeve	C63000 / B150
14	Lock Nut	316 S.S. / A479
15	Seat Gland	304 S.S. / A479



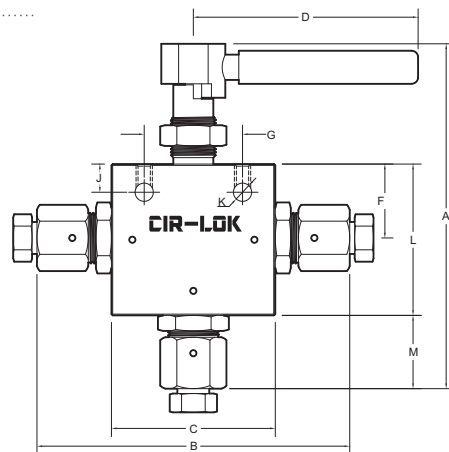
3-Way Valves

Item	Component	Material Grade / ASTM Specification
1	Ring	PTFE / D1710
2	O-ring	FKM
3	Seat Retainer	316 S.S. / A479
4	Seat	PEEK
5	Bearing	PEEK
6	Stem	316 S.S. / A479
7	Body	316 S.S. / A479
8	Bearing	PEEK
9	Nut	316 S.S. / A479
10	Handle Seat	316 S.S. / A479
11	Screw	304 S.S.
12	Handle	304 S.S.
13	Sleeve	C63000 / B150
14	Lock Nut	316 S.S. / A479
15	Seat Gland	304 S.S. / A479

Dimensions



2-Way Valves



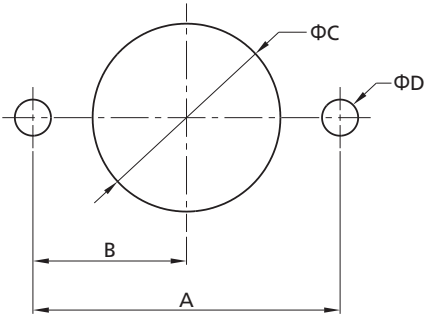
3-Way Valves

Body Style	Ordering Number	Connection Type and Size	CV	A	B	C	D	F	G	H	J	K	L	M	Thickness	Pressure at Room Temperature, psig(bar)
2-Way	20BV-MPF4-06-	MPF4	0.36	4.33 (110)	4.19 (106.5)	2 (50.8)	3.37 (85.6)	1.13 (28.6)	1.5 (38.1)	0.75 (19.1)	0.43 (10.9)	0.28 (7.1)	1.91 (48.4)	—	1 (25.4)	20000 (1379)
	20BV-MPF6-06-	MPF6	1.23													
	20BV-MPF9-06-	MPF9	1.51													
	20BV-HPF4-06-	HPF4	0.26													
	20BV-HPF6-06-	HPF6	0.47													
	20BV-HPF9-06-	HPF9	1.05													
	20BV-MPF9-10-	MPF9	2.93													
	20BV-MPF12-10-	MPF12	3.51													
3-Way	20BV-MPF4-05-3-	MPF4	0.17	5.64 (143.4)	4.72 (119.9)	2.5 (63.5)	3.37 (85.6)	1.13 (28.6)	1.5 (38.1)	0.75 (19.1)	0.43 (10.9)	0.28 (7.1)	2.25 (57.2)	0.97 (24.6)	1 (25.4)	
	20BV-MPF6-05-3-	MPF6	0.5													
	20BV-MPF9-05-3-	MPF9														
	20BV-HPF4-05-3-	HPF4	2.6													
	20BV-HPF6-05-3-	HPF6	0.47													
	20BV-HPF9-05-3-	HPF9	0.5													
	20BV-MPF9-10-3-	MPF9														
	20BV-MPF12-10-3-	MPF12														

Panel Mounting Dimensions

Body Style	Orifice No.	A in.(mm)	B in.(mm)	C in.(mm)	D in.(mm)
2-way	06	1.5 (38.1)	0.75 (19.1)	1.06 (26.9)	0.28 (7.1)
	10	2 (50.8)	1 (25.4)	1.5 (38.1)	0.28 (7.1)
	05	1.5 (38.1)	0.75 (19.1)	1.06 (26.9)	0.28 (7.1)
3-way	10	2 (50.8)	1 (25.4)	1.5 (38.1)	0.28 (7.1)

Note: Body mounting 1/4-20 thread



How to Order

20BV— MPF6 — 05 — 3 — 316

Series	Connector Sizes	Orifice No.	Flow Patterns	Body Material
20BV	MPF6 3/8 in.	For 2-way	Straight 3 3-Way	316 316 S.S.
	MPF9 9/16 in.	06 1/4 in.		
	MPF12 3/4 in.	10 3/8 in.		
	MPF16 1 in.	For 3-way		
	HPF4 1/4 in.	05 3/16 in.		
	HPF6 3/8 in.	10 3/8 in.		
	HPF9 9/16 in.			

Medium Pressure Line Filters

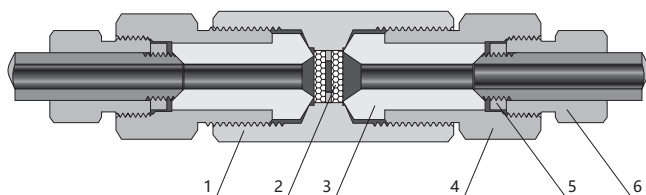
20F Series line Filters

Dual-Disc Line Filters

Features

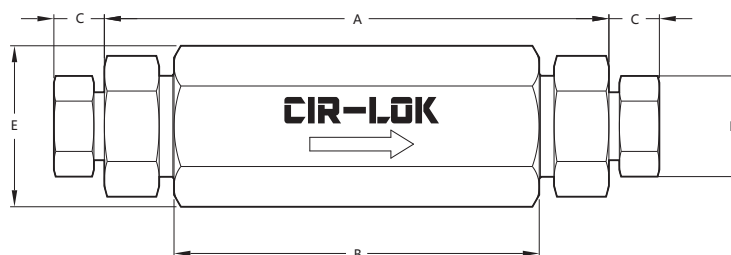
- ❖ Maximum working pressure up to 20,000 psig(1379 bar)
- ❖ Working temperature from -60°F to 660°F (-50°C to 350°C)
- ❖ Tubing size available in 9/16"
- ❖ Dual-disc design allows the upstream filter element to trap the large particulate contaminants before they can reach and clog the smaller pore-size downstream element
- ❖ Downstream/upstream element nominal pore size: 5/10, 10/35 and 35/65 µm. Other element combinations available on request
- ❖ Easy to replace filter elements
- ❖ Pressure differential not to exceed 1000 psig(69 bar) in a flowing condition

Standard Materials of Construction



Item	Component	Material Grade / ASTM Specification
1	Body	316 S.S. / A479
2	Filter Element	Sintered 316 S.S.
3	Cover	316 S.S. / A479
4	Gland Nut	316 S.S. / A479
5	Collar	316 S.S. / A479
6	Gland	316 S.S. / A479

Ordering Information and Dimensions



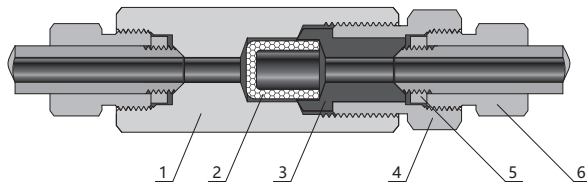
Ordering Number	Connection	Orifice in.(mm)	Nominal Pore Size (µm)	Effective Filter Element Area in. ² (mm ²)	Dimensions, in.(mm)					Working Pressure psig(bar)
					A	B	C	D(Hex)	E(Hex)	
20F-MPF9-0510-	MPF9	0.31 (7.9)	5/10	0.25(161.3)	4.30 (109.2)	2.94 (74.6)	0.55 (14.0)	0.94 (23.8)	1.38 (35.0)	20,000(1379)
20F-MPF9-1035-			10/35							
20F-MPF9-3565-			35/65							

Cup-Type Line Filters

Features

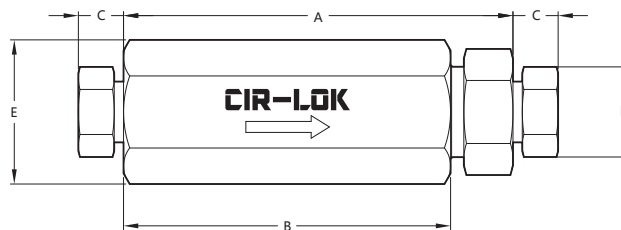
- ❖ Working temperature from -60°F to 660°F (-50°C to 350°C)
- ❖ Tubing sizes available in 1/4", 3/8", 9/16", 3/4" and 1"
- ❖ Cup design to offer about six times the effective filter area as compared to disc-type units, and recommended in systems requiring both maximum filter surface area and high flow rates
- ❖ Nominal pore sizes for filter elements: 5, 35 and 65µm
- ❖ Easy to replace filter elements
- ❖ Pressure differential not to exceed 1000 psig (68.9 bar) in a flowing condition

Standard Materials of Construction



Item	Component	Material Grade/ASTM Specification
1	Body	316 S.S. / A479
2	Filter Element	Sintered 316 S.S.
3	Cover	316 S.S. / A479
4	Gland Nut	316 S.S. / A479
5	Collar	316 S.S. / A479
6	Gland	316 S.S. / A479

Ordering Information and Dimensions



Ordering Number	Connection	Orifice in.(mm)	Nominal Pore Size (µm)	Effective Filter Element Area in. ² mm ²	Dimensions, in.(mm)					Working Pressure psig(bar)
					A	B	C	D(Hex)	E(Hex)	
20F-MPF4-5-	MPF4	0.13 (3.2)	5	0.81(522.6)	2.94 (74.1)	2.50 (63.5)	0.38 (9.7)	0.50 (12.7)	0.81 (20.6)	20,000(1379)
20F-MPF4-35-			35							
20F-MPF4-65-			65							
20F-MPF6-5-	MPF6	0.22 (5.5)	5	0.81(522.6)	3.12 (79.3)	2.62 (66.6)	0.44 (11.2)	0.63 (15.9)	1.00 (25.4)	20,000(1379)
20F-MPF6-35-			35							
20F-MPF6-65-			65							
20F-MPF9-5-	MPF9	0.36 (9.1)	5	1.53(987.1)	4.18 (106.2)	3.50 (88.9)	0.55 (14.0)	0.94 (23.8)	1.38 (35.0)	20,000(1379)
20F-MPF9-35-			35							
20F-MPF9-65-			65							
20F-MPF12-5-	MPF12	0.52 (13.1)	5	2.65(1709.7)	5.50 (139.7)	4.75 (120.7)	0.60 (15.2)	1.19 (30.2)	1.75 (44.5)	20,000(1379)
20F-MPF12-35-			35							
20F-MPF12-65-			65							
20F-MPF16-5-	MPF16	0.69 (17.5)	5	5.00(3225.8)	6.62 (168.2)	5.75 (146.1)	0.74 (18.7)	1.38 (35.0)	2.12 (54.0)	20,000(1379)
20F-MPF16-35-			35							
20F-MPF16-65-			65							

How to Order

20F — MPF4 — 5 — 316

Series	Connection Size	Nominal Pore Size	Body Material
20F	MPF4 1/4 in.	For Dual-Disc Line Filters	316 316 S.S.
		0510 5/10 µm	
	MPF6 3/8 in.	1035 10/35 µm	
	MPF9 9/16 in.	3565 35/65 µm	
	MPF12 3/4 in.	For Cup-Type Line Filters	
		5 5 µm	
	MPF16 1 in.	35 35 µm	
		65 65 µm	

Medium Pressure Check Valve

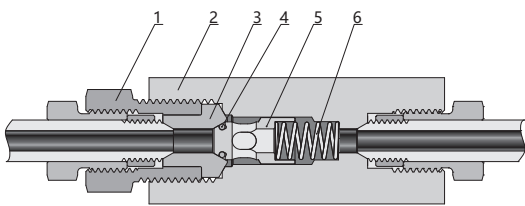
O-ring Check Valves

Features

- ❖ Maximum working pressure up to 20,000 psig (1379 bar)
- ❖ Working temperature from 0°F to 400°F (-18°C to 204°C)
- ❖ Tubing sizes available from 1/4" to 1"
- ❖ Cracking pressure: 14 psig~26 psig (0.966 bar~1.794 bar)
- ❖ Provides unidirectional flow and tight shut-off for liquids and gases with high reliability.
When differential drops below cracking pressure, valve shuts off(Not for use as relief valve)
- ❖ Resilient O-ring seat design for noise-free closing and zero leakage

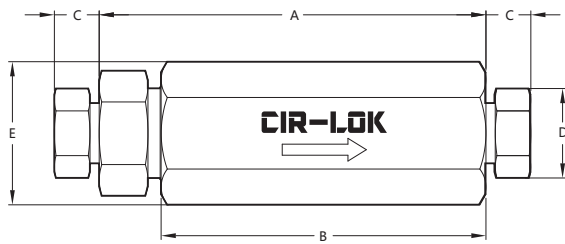


Standard Materials of Construction



Item	Component	Material Grade / ASTM Specification
1	Cover Gland	316 S.S. / A479
2	Valve Body	316 S.S. / A479
3	Cover	316 S.S. / A479
4	O-ring	Fluorocarbon FKM
5	Poppet	316 S.S. / A479
6	Spring	300 Series Stainless Steel

Ordering Information and Dimensions



Ordering Number	Connection	Orifice in.(mm)	Cv	Dimensions, in.(mm)					Working Pressure psig(bar)
				A	B	C	D(Hex)	E(Hex)	
20CV-MPF4-V-	MPF4	0.125(3.18)	0.28	2.94 (74.7)	2.50 (63.5)	0.38 (9.7)	0.50 (12.7)	0.81 (20.6)	20,000(1379)
20CV-MPF6-V-	MPF6	0.218(5.54)	0.84	3.12 (79.3)	2.62 (66.6)	0.44 (11.2)	0.62 (15.8)	1.00 (25.4)	20,000(1379)
20CV-MPF9-V-	MPF9	0.359(9.12)	2.30	4.18 (106.2)	3.50 (88.9)	0.55 (14.0)	0.94 (23.9)	1.38 (35.1)	20,000(1379)
20CV-MPF12-V-	MPF12	0.516(13.11)	4.70	5.50 (139.7)	4.75 (120.7)	0.60 (15.2)	1.19 (30.2)	1.75 (44.5)	20,000(1379)
20CV-MPF16-V-	MPF16	0.688(17.48)	7.40	6.91 (175.6)	5.75 (146.1)	0.74 (18.8)	1.38 (35.1)	2.12 (53.9)	20,000(1379)

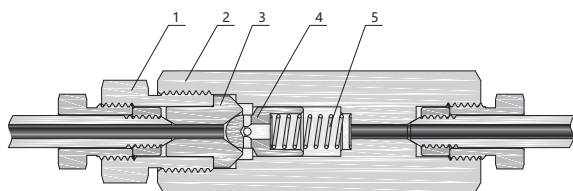
Ball Check Valves

Features

- ❖ Maximum working pressure up to 20,000 psig(1379 bar)
- ❖ Working temperature from -110°F to 800°F(-79°C to 427°C)
- ❖ Tubing sizes available from 1/4" to 1"
- ❖ Prevents reverse flow where leak-tight shut-off is not mandatory(Not for use as relief valve)
- ❖ An integral design of the ball and poppet to assure positive, in-line seating without "chatter".
Poppet is designed essentially for axial flow with minimum pressure drop
- ❖ Optional wetted materials of cover gland and ball poppet for longer life

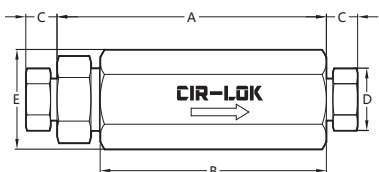


Standard Materials of Construction



Item	Component	Material Grade / ASTM Specification
1	Cover Gland	316 S.S. / A479
2	Valve Body	316 S.S. / A479
3	Cover	316 S.S. / A479
4	Ball Poppet	316 S.S. / A479
5	Spring	300 Series Stainless Steel

Ordering Information and Dimensions



Ordering Number	Connection	Orifice in.(mm)	Cv	Dimensions, in.(mm)					Working Pressure psig(bar)
				A	B	C	D(Hex)	E(Hex)	
20CV-MPF4-B-	MPF4	0.125(3.18)	0.28	2.94 (74.7)	2.50 (63.5)	0.38 (9.7)	0.50 (12.7)	0.81 (20.6)	20,000(1379)
20CV-MPF6-B-	MPF6	0.218(5.54)	0.84	3.12 (79.3)	2.62 (66.6)	0.44 (11.2)	0.62 (15.8)	1.00 (25.4)	20,000(1379)
20CV-MPF9-B-	MPF9	0.359(9.12)	2.30	4.18 (106.2)	3.50 (88.9)	0.55 (14.0)	0.94 (23.9)	1.38 (35.1)	20,000(1379)
20CV-MPF12-B-	MPF12	0.516(13.11)	4.70	5.50 (139.7)	4.75 (120.7)	0.60 (15.2)	1.19 (30.2)	1.75 (44.5)	20,000(1379)
20CV-MPF16-B-	MPF16	0.688(17.48)	7.40	6.91 (175.6)	5.75 (146.1)	0.74 (18.8)	1.38 (35.1)	2.12 (53.9)	20,000(1379)

How to Order

20CV — **MPF4** — **B** — **Z** — **316**

Series	Connection Size	Seal Type	Seal material	Body Material
20CV	MPF4 1/4 in.	V Blunt	Fluorocarbon FKM	316 316 S.S.
	MPF6 3/8 in.	B Ball	BN Buna N	
	MPF9 9/16 in.		E Ethylene Propylene	
	MPF12 3/4 in.		N Neoprene	
	MPF16 1 in.		Z Kalrez	

Medium Pressure Relief Valves

20RV Series

Features

- ❖ Soft seat relief valves.
- ❖ Set pressure: 1500 to 20,000 psig(103 to1379 bar).
- ❖ Working temperature: 32°F to 400°F(0°C to 204°C).
- ❖ Liquid or gas service. Provide bubble tight shut-off of gas.
- ❖ Pressure settings are made at the factory and valves are tagged accordingly.
State the required set pressure with the order please.
- ❖ Lock wired secure cap to maintain set pressure.
- ❖ Easily exchangeable seat.
- ❖ Free assembly positions.
- ❖ Field adjustable and soft seat relief valves.

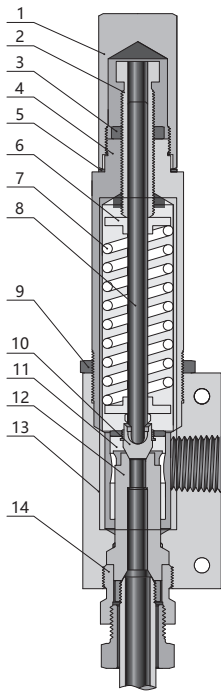


Technical Data

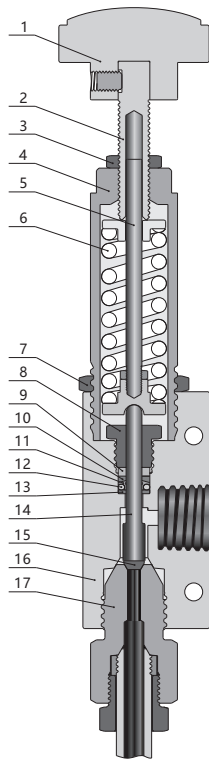
Ordering Number	Inlet		Outlet Connection Type	Orifice Size in.(mm)	Cv	Pressure Rating psig(bar)@100°F(38°C)		
	Tube OD in.	Connection Type				Minimum Set Pressure	Maximum Set Pressure	Maximum Back Pressure
20RV-MPF9-FNPT12-5-	9/16	MPF9	FNPT12	0.312(7.92)	1.2	1500(103)	5000(345)	500(34.5)
20RV-MPF9-FNPT12-10-	9/16	MPF9	FNPT12	0.25(6.35)	0.8	5000(345)	10,000(689)	500(34.5)
20RV-MPF9-FNPT12-20-	9/16	MPF9	FNPT12	0.156(3.96)	0.3	10,000(689)	20,000(1379)	500(34.5)

NOTE:
Maximum system operating pressure should not exceed 90% of relief valve set pressure.

Standard Materials of Construction

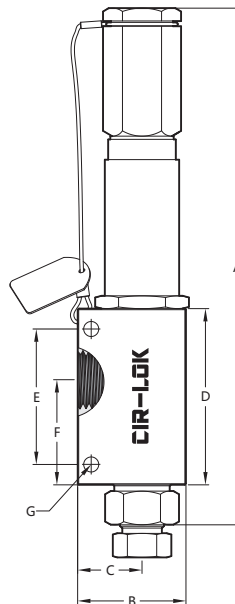


Item	Component	Valve Material
1	Cap	316 S.S. / A479
2	Adjusting Bolt	316 S.S. / A479
3	Lock Nut	316 S.S. / A479
4	Spring Cylinder	316 S.S. / A479
5	Gasket	316L S.S. / A276
6	Spring Washer	316 S.S. / A479
7	Spring	17-7PH / AMS5678
8	Spindle	316 S.S. / A479
9	Lock Nut	316 S.S. / A276
10	Plug	PEEK
11	Plug Guide	316 S.S. / A479
12	Seat	316 S.S. / A479
13	Valve Body	316 S.S. / A479
14	Seat Gland	316 S.S. / A479
Lubricant		Molybdenum Disulfide



Item	Component	Valve Material
1	Handle	6061 / B211
2	Set Screw	316 S.S. / A479
3	Lock Nut	316 S.S. / A276
4	Bonnet	316 S.S. / A479
5	Upper Stem	316 S.S. / A479
6	Spring	17-7PH / AMS5678
7	Lock Nut	316 S.S. / A276
8	Packing Gland	C63000 / B150
9	Washer	C63000 / B150
10	Backing Ring	PEEK
11	Backing Ring	PTFE
12	O-ring	Fluorocarbon FKM
13	Ring	PEEK
14	Lower Stem	316 S.S. / A479
15	Plug	PEEK
16	Body	316 S.S. / A479
17	Seat	316 S.S. / A479
Lubricant		Molybdenum Disulfide

Dimensions



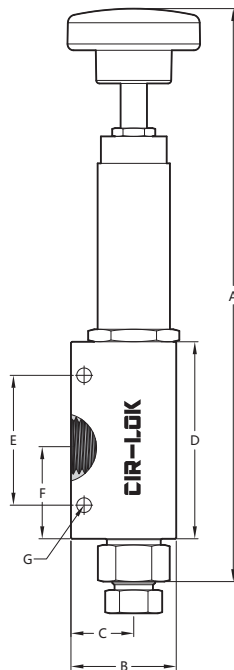
Relief Valves Dimensions

A	B	C	D	E	F	G
in.(mm)						
9.46 (240.4)	2.00 (50.8)	1.19 (30.2)	3.25 (82.6)	2.25 (57.1)	1.94 (49.3)	0.28 (7.1)

NOTE:

❖ G is the dimension of Mounting Holes.

❖ All dimensions are for reference only and are subject to change. For dimensions not shown above, please contact the authorized representative or CIR-LOK Group.



A	B	C	D	E	F	G	H
in.(mm)							
10.98 (278.8)	8.45 (214.6)	3.74 (95.0)	2.46 (62.6)	1.75 (44.4)	2.00 (50.8)	1.19 (30.3)	0.28 (7.1)

NOTE:

❖ H is the dimension of mounting Holes.

❖ All dimensions are reference only and are subject to change. For dimensions not shown above, please contact the authorized representative or CIR-LOK Group.

How to Order

20RV — MPF9 — FNPT12 — 10 — A — 316

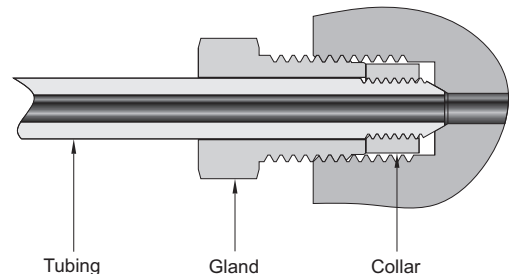
Series	Intel Type and Size	Outel Type and Size	Spring Designato	Adjustable	Body Material
20RV	MPF9 9/16 in.	FNPT12 3/4 in. Female NPT	5 1500-5000 psi 10 5000-10000 psi 20 10000-20000 psi	None A Adjustable	316 316 S.S.

Medium Pressure Fittings, Nipples and Tubing

20 Series

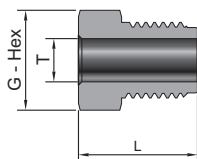
Features

- ❖ Coned-and-Threaded Connection
- ❖ Available sizes are 1/4, 3/8, 9/16, 3/4, and 1 in.
- ❖ Working temperature from -423°F to 1200°F (-252°C to 649°C)
- ❖ Special 316 stainless steel and Alloy 826 material
- ❖ Anti-vibration connection components available
- ❖ CIR-LOK 20 series medium pressure fittings are designed for use with 20 series medium pressure valves



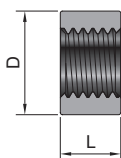
Dimensions

Glands



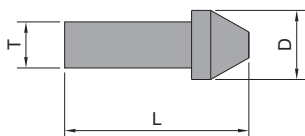
T-Tube O.D. in.	Basic Ordering Number	Dimensions, in.(mm)	
		G	L
1/4	20G-MPF4-	0.50(12.7)	0.58(14.7)
3/8	20G-MPF6-	0.63(15.9)	0.73(18.5)
9/16	20G-MPF9-	0.94(23.8)	0.88(22.4)
3/4	20G-MPF12-	1.19(30.2)	1.00(25.4)
1	20G-MPF16-	1.38(34.9)	1.38(35.1)

Collars



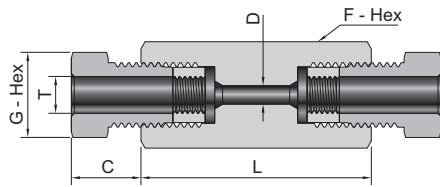
T-Tube O.D. in.	Basic Ordering Number	Dimensions, in.(mm)	
		D	L
1/4	20C-MPF4-	0.38(9.7)	0.22(5.6)
3/8	20C-MPF6-	0.47(11.9)	0.25(6.4)
9/16	20C-MPF9-	0.72(18.3)	0.31(7.9)
3/4	20C-MPF12-	0.94(23.8)	0.37(9.4)
1	20C-MPF16-	1.25(31.8)	0.50(12.7)

Plugs



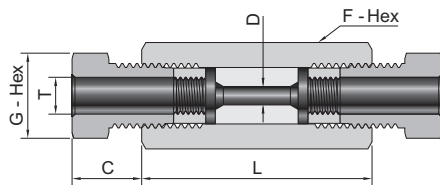
T-Tube O.D. in.	Basic Ordering Number	Dimensions, in.(mm)	
		D	L
1/4	20P-MPF4-	0.38(9.7)	0.94(23.8)
3/8	20P-MPF6-	0.47(11.9)	1.18(30.0)
9/16	20P-MPF9-	0.72(18.3)	1.40(35.6)
3/4	20P-MPF12-	0.94(23.8)	1.69(42.9)
1	20P-MPF16-	1.25(31.8)	2.20(55.9)

Union Couplings



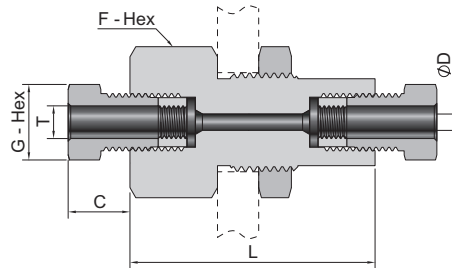
T-Tube O.D. in.	Basic Ordering Number	Dimensions, in.(mm)				
		L	C	D	G	F
1/4	20U-MPF4-	1.62(41.1)	0.38(9.7)	0.11(2.8)	0.50(12.7)	0.63(15.9)
3/8	20U-MPF6-	1.75(44.5)	0.44(11.2)	0.20(5.1)	0.63(15.9)	0.75(19.1)
9/16	20U-MPF9-	2.12(53.9)	0.53(13.5)	0.31(7.9)	0.94(23.8)	1.00(25.4)
3/4	20U-MPF12-	2.50(63.5)	0.62(15.7)	0.44(11.1)	1.19(30.2)	1.38(34.9)
1	20U-MPF16-	3.50(88.9)	0.72(18.3)	0.56(14.3)	1.38(34.9)	1.75(44.5)

Union Couplings(Slip Type)



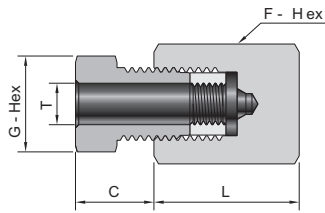
T-Tube O.D. in.	Basic Ordering Number	Dimensions, in.(mm)				
		L	C	D	G	F
1/4	20SU-MPF4-	1.62(41.1)	0.38(9.7)	0.11(2.8)	0.50(12.7)	0.63(15.9)
3/8	20SU-MPF6-	1.75(44.5)	0.44(11.2)	0.20(5.1)	0.63(15.9)	0.75(19.1)
9/16	20SU-MPF9-	2.12(53.9)	0.53(13.5)	0.31(7.9)	0.94(23.8)	1.00(25.4)
3/4	20SU-MPF12-	2.50(63.5)	0.62(15.7)	0.44(11.1)	1.19(30.2)	1.38(34.9)
1	20SU-MPF16-	3.50(88.9)	0.72(18.3)	0.56(14.3)	1.38(34.9)	1.75(44.5)

Bulkhead Couplings



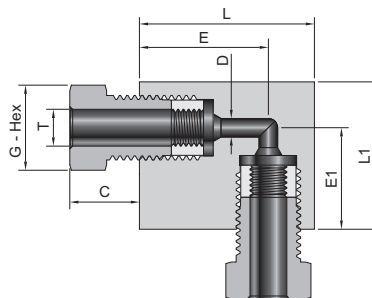
T-Tube O.D. in.	Basic Ordering Number	Dimensions, in.(mm)						
		L	C	D	G	F	Panel Hole Size	Max. Panel Thickness
1/4	20BU-MPF4-	1.88(47.8)	0.38(9.7)	0.11(2.8)	0.50(12.7)	1.00(25.4)	0.81(20.6)	0.38(9.7)
3/8	20BU-MPF6-	2.00(50.8)	0.44(11.2)	0.20(5.1)	0.63(15.9)	1.06(27.0)	0.94(23.9)	0.38(9.7)
9/16	20BU-MPF9-	2.38(60.5)	0.53(13.5)	0.31(7.9)	0.94(23.8)	1.38(34.9)	1.13(28.6)	0.38(9.7)
3/4	20BU-MPF12-	2.62(66.5)	0.62(15.7)	0.44(11.1)	1.19(30.2)	1.88(47.6)	1.69(42.9)	0.38(9.7)
1	20BU-MPF16-	3.50(88.9)	0.72(18.3)	0.56(14.3)	1.38(34.9)	2.13(54.0)	1.94(49.3)	0.38(9.7)

Caps



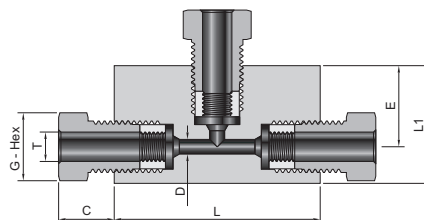
T-Tube O.D. in.	Basic Ordering Number	Dimensions, in.(mm)			
		L	C	G	F
1/4	20CA-MPF4-	0.81(20.6)	0.38(9.7)	0.50(12.7)	0.63(15.9)
3/8	20CA-MPF6-	1.13(28.6)	0.44(11.2)	0.63(15.9)	0.75(19.1)
9/16	20CA-MPF9-	1.38(34.9)	0.53(13.5)	0.94(23.8)	1.00(25.4)
3/4	20CA-MPF12-	1.75(44.5)	0.62(15.7)	1.19(30.2)	1.38(34.9)
1	20CA-MPF16-	2.25(57.2)	0.72(18.3)	1.38(34.9)	1.75(44.5)

Elbows



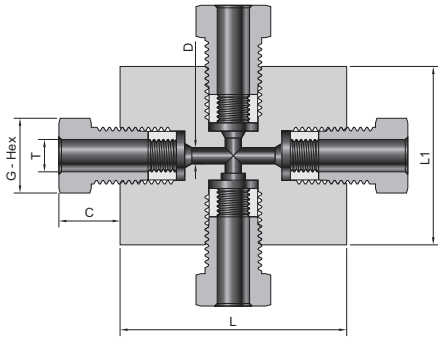
T-Tube O.D. in.	Basic Ordering Number	Dimensions, in.(mm)							
		C	D	G	L	E	L1	E1	Thickness
1/4	20UE-MPF4-	0.38(9.7)	0.11(2.8)	0.50(12.7)	1.12(28.4)	0.75(19.1)	1.12(28.4)	0.75(19.1)	0.63(15.9)
3/8	20UE-MPF6-	0.44(11.2)	0.20(5.1)	0.63(15.9)	1.38(34.9)	1.00(25.4)	1.38(34.9)	1.00(25.4)	0.75(19.1)
9/16	20UE-MPF9-	0.53(13.5)	0.31(7.9)	0.94(23.8)	1.75(44.5)	1.25(31.8)	1.75(44.5)	1.25(31.8)	1.00(25.4)
3/4	20UE-MPF12-	0.62(15.7)	0.44(11.1)	1.19(30.2)	2.25(57.2)	1.50(38.1)	2.25(57.2)	1.50(38.1)	1.38(34.9)
1	20UE-MPF16-	0.72(18.3)	0.56(14.3)	1.38(34.9)	3.00(76.2)	2.06(52.3)	3.00(76.2)	2.06(52.3)	1.75(44.5)

Tees



T-Tube O.D. in.	Basic Ordering Number	Dimensions, in.(mm)						
		C	D	G	L	L1	E	Thickness
1/4	20UT-MPF4-	0.38(9.7)	0.11(2.8)	0.50(12.7)	1.50(38.1)	1.12(28.4)	0.75(19.1)	0.63(15.9)
3/8	20UT-MPF6-	0.44(11.2)	0.20(5.1)	0.63(15.9)	2.00(50.8)	1.38(34.9)	1.00(25.4)	0.75(19.1)
9/16	20UT-MPF9-	0.53(13.5)	0.31(7.9)	0.94(23.8)	2.50(63.5)	1.75(44.5)	1.25(31.8)	1.00(25.4)
3/4	20UT-MPF12-	0.62(15.7)	0.44(11.1)	1.19(30.2)	3.00(76.2)	2.25(57.2)	1.50(38.1)	1.38(34.9)
1	20UT-MPF16-	0.72(18.3)	0.56(14.3)	1.38(34.9)	4.12(104.6)	3.00(76.2)	2.06(52.3)	1.75(44.5)

Crosses



T-Tube O.D. in.	Basic Ordering Number	Dimensions, in.(mm)					
		C	D	G	L	L1	Thickness
1/4	20UC-MPF4-	0.38(9.7)	0.11(2.8)	0.50(12.7)	1.50(38.1)	1.50(38.1)	0.63(15.9)
3/8	20UC-MPF6-	0.44(11.2)	0.20(5.1)	0.63(15.9)	2.00(50.8)	2.00(50.8)	0.75(19.1)
9/16	20UC-MPF9-	0.53(13.5)	0.31(7.9)	0.94(23.8)	2.50(63.5)	2.50(63.5)	1.00(25.4)
3/4	20UC-MPF12-	0.62(15.7)	0.44(11.1)	1.19(30.2)	3.00(76.2)	3.00(76.2)	1.38(34.9)
1	20UC-MPF16-	0.72(18.3)	0.56(14.3)	1.38(34.9)	4.12(104.6)	4.12(104.6)	1.75(44.5)

How to Order

20U — MPF4 — 316

Fitting Type	Port1/2/3/4 Type	Port1/2/3/4 Size	Material
20U Unions	MPF Medium Pressure Female	4 1/4 in.	316 316 S.S.
20RU Reducing Unions		6 3/8 in.	316L 316L S.S.
20BU Bulkhead Unions		9 9/16 in.	
20UE Unions Elbows		12 3/4 in.	
20UT Unions Tees		16 1 in.	
20UC Unions Crosses			
20CA Caps			
20P Plugs			
20G Gland			
20C Collars			

Tubing

- ❖ CIR-LOK 20 series medium pressure tubing is manufactured specifically for high pressure applications
- ❖ 316 stainless steel



T-Tube O.D. in.	Wall Thickness in.	Material	Basic Ordering Number
1/4	0.070	316 S.S.	20FT-4-0.07-6M-
3/8	0.086	316 S.S.	20FT-6-0.086-6M-
9/16	0.125	316 S.S.	20FT-9-0.125-6M-
3/4	0.156	316 S.S.	20FT-12-0.156-6M-
1	0.219	316 S.S.	20FT-16-0.219-6M-

Pressure-Temperature Ratings

Tube O.D. in.	Working Pressure, psig(bar)				
	-423 to 100°F (-252 to 37.8°C)	200°F (93°C)	400°F (204°C)	600°F (316°C)	800°F (427°C)
1/4	20,000(1379)	20,000(1379)	19,250(1327)	18,050(1244)	16,800(1158)
3/8	20,000(1379)	20,000(1379)	19,250(1327)	18,050(1244)	16,800(1158)
9/16	20,000(1379)	20,000(1379)	19,250(1327)	18,050(1244)	16,800(1158)
3/4	20,000(1379)	20,000(1379)	19,250(1327)	18,050(1244)	16,800(1158)
1	20,000(1379)	20,000(1379)	19,250(1327)	18,050(1244)	16,800(1158)

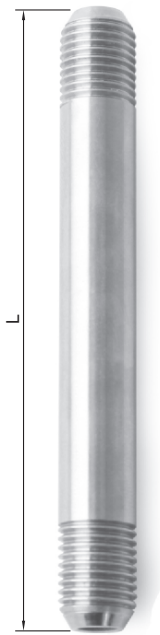
How to Order

20FT — 4 — 0.070 — 6M — TP316

Tubing Type	Tubing O.D. (in.)	Wall Thickness (in.)	Nominal Length (m/feet)	Material Grade
20FT 20 Series Fractional Tubing	4 1/4 in.	0.070	1M 1 meter	TP316
	6 3/8 in.	0.086	2M 2 metres	
	9 9/16 in.	0.125	3M 3 metres	
	12 3/4 in.	0.156	4M 4 metres	
	16 1 in.	0.219	5M 5 metres	
			6M 6 metres	
			10F 10 feet	
			20F 20 feet	

Coned and Threaded Nipples

❖ CIR-LOK supplies precut, coned-and-threaded nipples in various sizes and lengths for 20 series medium pressure valves and fittings



T-Tube O.D. in.	Tx-Tube I.D. in.	Basic Ordering Number	L in.(mm)
1/4	0.109	NIP-MPF4-2.75-	2.75(69.9)
1/4	0.109	NIP-MPF4-3-	3(76.2)
1/4	0.109	NIP-MPF4-4-	4(101.6)
1/4	0.109	NIP-MPF4-6-	6(152.4)
1/4	0.109	NIP-MPF4-8-	8(203.2)
1/4	0.109	NIP-MPF4-10-	10(254.0)
1/4	0.109	NIP-MPF4-12-	12(304.8)
3/8	0.203	NIP-MPF6-3-	3(76.2)
3/8	0.203	NIP-MPF6-4-	4(101.6)
3/8	0.203	NIP-MPF6-6-	6(152.4)
3/8	0.203	NIP-MPF6-8-	8(203.2)
3/8	0.203	NIP-MPF6-10-	10(254.0)
3/8	0.203	NIP-MPF6-12-	12(304.8)
9/16	0.312	NIP-MPF9-4-	4(101.6)
9/16	0.312	NIP-MPF9-6-	6(152.4)
9/16	0.312	NIP-MPF9-8-	8(203.2)
9/16	0.312	NIP-MPF9-10-	10(254.0)
9/16	0.312	NIP-MPF9-12-	12(304.8)
3/4	0.438	NIP-MPF12-4-	4(101.6)
3/4	0.438	NIP-MPF12-6-	6(152.4)
3/4	0.438	NIP-MPF12-8-	8(203.2)
3/4	0.438	NIP-MPF12-10-	10(254.0)
3/4	0.438	NIP-MPF12-12-	12(304.8)
1	0.562	NIP-MPF16-6-	6(152.4)
1	0.562	NIP-MPF16-8-	8(203.2)
1	0.562	NIP-MPF16-10-	10(254.0)
1	0.562	NIP-MPF16-12-	12(304.8)

How to Order

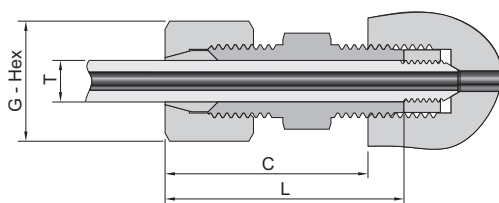
NIP — **MPF4** — **4** — **316**

Type	Connection Type	Connection Size	Nominal Length	Material
NIP Coned and Threaded Nipples	MPF Medium Pressure Fittings	4 1/4 in.	2.75 2.75"	316 316 S.S.
		6 3/8 in.	3 3"	
		9 9/16 in.	4 4"	
		12 3/4 in.	6 6"	
		16 1 in.	8 8"	
			10 10"	
				

Anti-Vibration Collet Gland Assemblies

- ❖ Anti-vibration collet gland assembly sizes from 1/4 to 1 in.(6.35 to 25.4 mm)
- ❖ Completely interchangeable with standard CIR-LOK 20 series medium pressure connections
- ❖ Moving the stress concentration back to the unthreaded part of the tubing and providing a wedge-typegripping action
- ❖ Anti-vibration collet gland assembly strengthens the entire structure

Typical 20 Series Anti-Vibration Collet Gland Assemblies



Dimensions

T-Tube O.D. in.	Basic Ordering Number	Dimensions, in.(mm)		
		L	C	G
1/4	AVA-MPF4-	1.19(30.2)	0.94(23.8)	0.63(15.9)
3/8	AVA-MPF6-	1.50(38.1)	1.19(30.2)	0.81(20.6)
9/16	AVA-MPF9-	1.78(45.2)	1.41(35.8)	0.94(23.8)
3/4	AVA-MPF12-	2.00(50.8)	1.59(40.4)	1.25(31.8)
1	AVA-MPF16-	2.38(60.5)	1.69(42.9)	1.50(38.1)

How to Order

AVA — MPF4 — 316

Type	Connection Type	Connection Size	Material
AVA Anti-Vibration Collet Gland Assemblies	MPF Medium Pressure Fittings	4 1/4 in. 6 3/8 in. 9 9/16 in. 12 3/4 in. 16 1 in.	316 316 S.S.