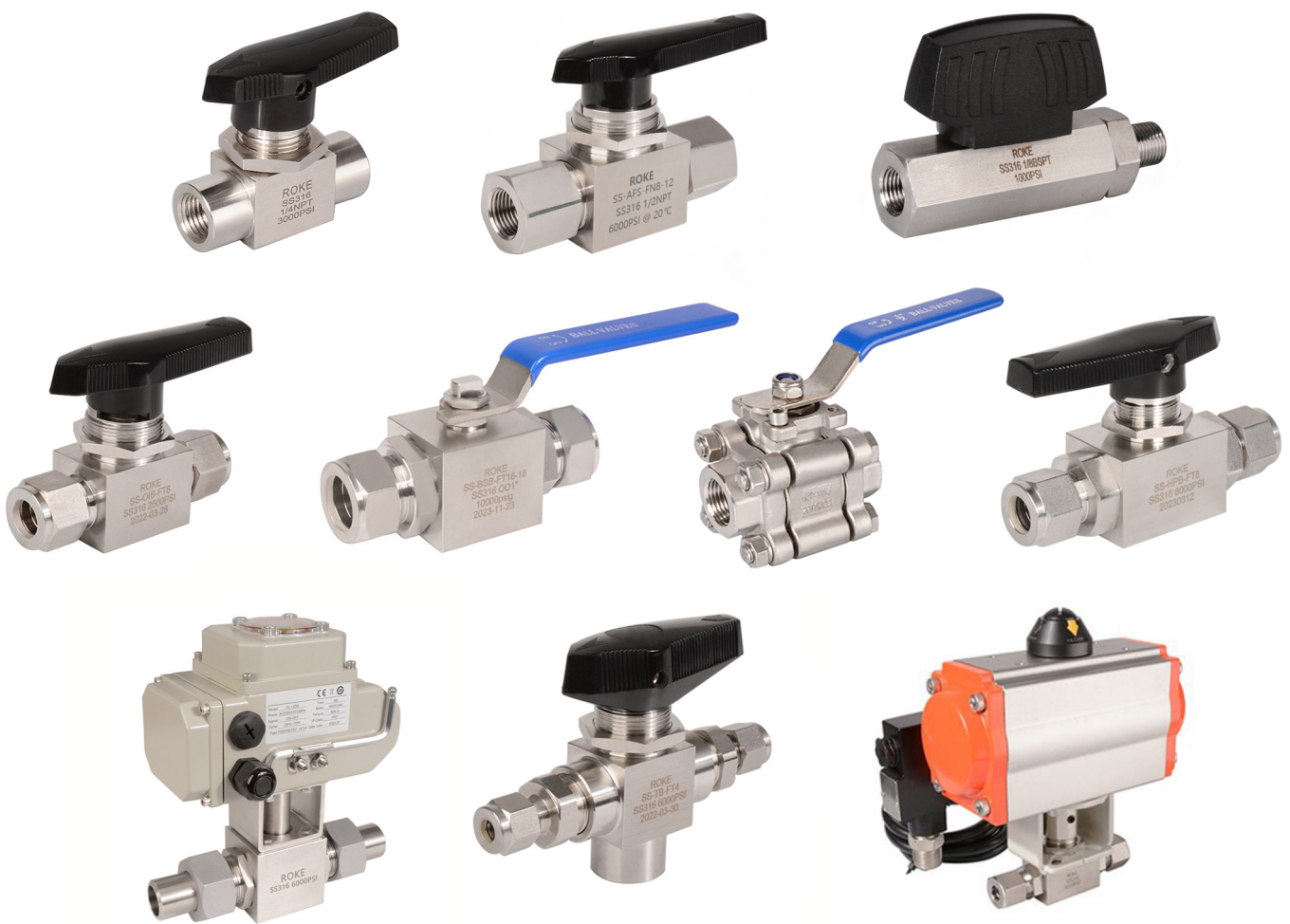


Ball Valves



ROKE
Valves ,Fittings and Tubing

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Part NO. Description

For Example: **SS-OPB-MN4-FN4-5-A**

Material	Series	Inlet or Outlet	Size	Orifice	Type
SS: Stainles Steel 316	OPB Series	FN: Female Npt	2: 1/8"	2: 2.4mm	A: ANgle
S9: Stainles Steel 904L	HBB Series	MN: Male Npt	3: 3/16" or 3mm	3: 3.2mm	3W: 3-way
S4: Stainles Steel 304	HPB Series	FR: Female BSPT	4: 1/4"	4: 4.2mm	
S2: Stainles Steel 321	TB Series	MR: Male BSPT	5: 5/16"	5: 4.8mm	
M4: Monle 400	TBH Series	FT: Frantional Tube	6: 3/8" or 6mm	7: 7.1mm	
I6: Inconle 625		MT: Metric Tube	8: 1/2" Or 8mm	9: 8.9mm	
HC: Hastelly C 276		BW: Butt Weld	10: 5/8" or 10mm	9h: 9.5mm	
B: Brass		SW: Socket Weld	12: 3/4" or 12mm	10: 10.3mm	
			16: 1" or 16mm	16: 16mm	

Hex Bar Stock Ball Valves

HBB Series (1000 psig)

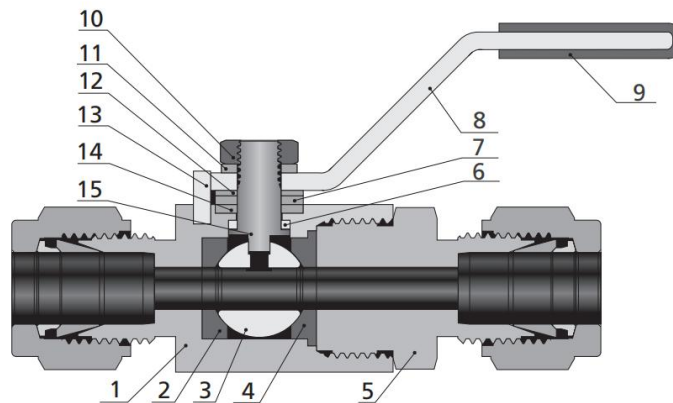
HBF Series (2000 psig)

Features

- ⊙ Compact and economical design.
- ⊙ Free floating ball design for seat wear compensation.
- ⊙ Bi-directional flow.
- ⊙ Low operating torque.
- ⊙ Any reasonable connections available.
- ⊙ Options for handle color.
- ⊙ Leak-tight performance testing for every valve at the maximum working pressure with nitrogen.
- ⊙ Maximum working pressure:
 - HBB Series (PTFE) : 1000 psig (69 bar)
 - HBF Series (PFA) : 2000 psig (138 bar)
- ⊙ Working temperature:
 - HBB Series: -20°F to 450°F (-28°C to 232°C)
 - HBF Series: -65°F to 400°F (-54°C to 204°C)

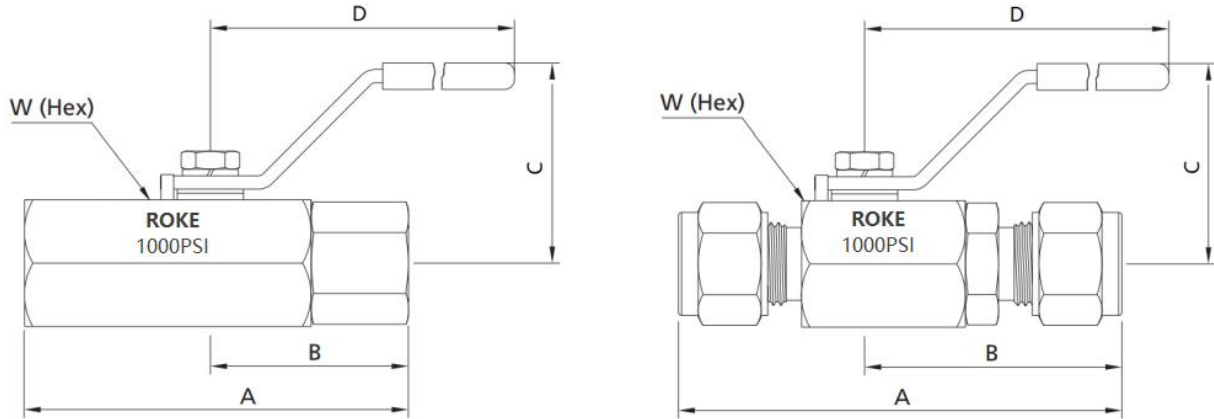


Standard Materials of Construction



NO.	Component	Material		
		316 SS	304 SS	Brass
1	Body	316 SS/A276	304 SS/A276	Brass 36000/B16
2	Front Seat	PTFE/D1710 or PFA		
3	Ball	316 SS/A276		
4	Back Seat	PTFE/D1710 or PFA		
5	End Connector	316 SS/A276	304 SS/A276	Brass 36000/B16
6	Bottom Packing	PTFE/D1710		
7	Washer	316 SS/A276		
8	Handle	Nylon or Aluminium or 304 SS/A240		
9	Sleeve	Vinyl		
10	Stem Nut	Stainless steel		
11	Gasket	Stainless steel		
12	Coned-disk Spring	S17700/A693		
13	Pin	Stainless steel		
14	Top Packing	PTFE/D1710		
15	Stem	316 SS/A276		

Dimensions

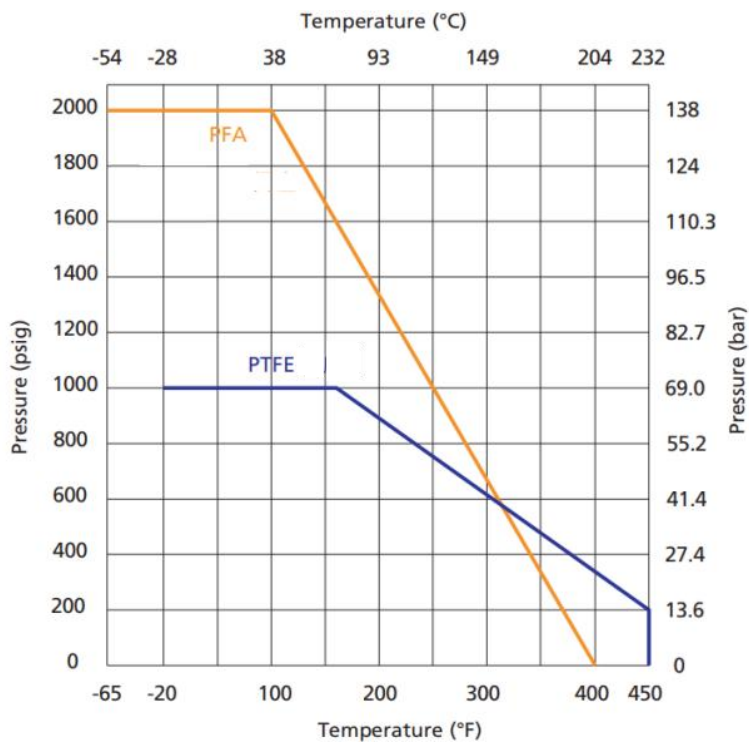


Basic Ordering Number	Connection Type and Size	Orifice in.(mm)	Cv	Dimension, in.(mm)				
				A	B	C	D	W
-HBB-FN2-5	1/8 Female NPT	0.19 (4.8)	1.25	1.85 (47.0)	1.08 (27.4)	2.36 (60.0)	1.18 (30.0)	0.75 (19.1)
-HBB-FN4-5	1/4 Female NPT	0.19 (4.8)	1.25	1.85 (47.0)	1.08 (27.4)	2.36 (60.0)	1.18 (30.0)	0.75 (19.1)
-HBB-FN6-7	3/8 Female NPT	0.28 (7.1)	2.50	2.03 (51.6)	1.18 (30.0)	2.36 (60.0)	1.26 (32.0)	0.87 (22.2)
-HBB-FN8-9	1/2 Female NPT	0.35 (8.9)	9.25	2.08 (53.0)	1.18 (30.0)	3.15 (80.0)	1.54 (39.0)	1.00 (25.4)
-HBB-FN12-12	3/4 Female NPT	0.47 (12.0)	12.65	2.39 (60.7)	1.20 (30.5)	3.94 (100.0)	2.03 (51.7)	1.26 (32.0)
-HBB-FN16-16	1 Female NPT	0.63 (16.0)	17.35	3.00 (76.5)	1.50 (38.1)	3.94 (100.0)	2.15 (54.8)	1.50 (38.1)
Note: If you choose BSPT female thread, the basic ordering no. is FR; If you choose BSPP female thread, the the basic ordering no. is FG.								
Basic Ordering Number	Connection Type and Size	Orifice in.(mm)	Cv	Dimension, in.(mm)				
				A	B	C	D	W
-HBB-MN4-5	1/4 Male NPT	0.19 (4.8)	1.25	1.85 (47.0)	1.08 (27.4)	2.36 (60.0)	1.18 (30.0)	0.75 (19.1)
-HBB-MN6-7	3/8 Male NPT	0.28 (7.1)	2.50	2.03 (51.6)	1.18 (30.0)	2.36 (60.0)	1.26 (32.0)	0.87 (22.2)
-HBB-MN8-9	1/2 Male NPT	0.35 (8.9)	9.25	2.08 (53.0)	1.18 (30.0)	3.15 (80.0)	1.54 (39.0)	1.00 (25.4)
-HBB-MN12-12	3/4 Male NPT	0.47 (12.0)	12.65	2.39 (60.7)	1.20 (30.5)	3.94 (100.0)	2.03 (51.7)	1.26 (32.0)
-HBB-MN16-16	1 Male NPT	0.63 (16.0)	17.35	3.00 (76.5)	1.50 (38.1)	3.94 (100.0)	2.15 (54.8)	1.50 (38.1)
Note: If you choose BSPT male thread, the basic ordering no. is MR; If you choose BSPP male thread, the the basic ordering no. is MG.								
Basic Ordering Number	Connection Type and Size	Orifice in.(mm)	Cv	Dimension, in.(mm)				
				A	B	C	D	W
-HBB-FT4-5	1/4 Tube	0.19 (4.8)	1.25	2.57 (65.2)	1.50 (38.1)	2.36 (60.0)	1.18 (30.0)	0.75 (19.1)
-HBB-FT6-7	3/8 Tube	0.28 (7.1)	2.50	2.87 (72.9)	1.68 (42.7)	2.36 (60.0)	1.26 (32.0)	0.87 (22.2)
-HBB-FT8-9	1/2 Tube	0.35 (8.9)	9.25	3.15 (80.0)	1.83 (46.5)	3.15 (80.0)	1.54 (39.0)	1.00 (25.4)
-HBB-FT12-12	3/4 Tube	0.47 (12.0)	12.65	3.50 (88.9)	2.00 (50.8)	3.94 (100.0)	2.03 (51.7)	1.26 (32.0)
-HBB-FT16-16	1 Tube	0.63 (16.0)	17.35	4.31 (109.5)	2.42 (61.5)	3.94 (100.0)	2.15 (54.8)	1.50 (38.1)

Basic Ordering Number	Connection Type and Size	Orifice in.(mm)	Cv	Dimension, in.(mm)				
				A	B	C	D	W
-HBB-MT6-5	6mm Tube	0.19 (4.8)	1.25	2.57 (65.2)	1.50 (38.1)	2.36 (60.0)	1.18 (30.0)	0.75 (19.1)
-HBB-MT8-5	8mm Tube	0.19 (4.8)	1.25	2.63 (66.8)	1.53 (38.8)	2.36 (60.0)	1.18 (30.0)	0.75 (19.1)
-HBB-MT10-7	10mm Tube	0.28 (7.1)	2.50	2.87 (72.9)	1.68 (42.7)	2.36 (60.0)	1.26 (32.0)	0.87 (22.2)
-HBB-MT12-9	12mm Tube	0.35 (8.9)	9.25	3.15 (80.0)	1.83 (46.5)	3.15 (80.0)	1.54 (39.0)	1.00 (25.4)
-HBB-MT14-9	14mm Tube	0.35 (8.9)	9.25	3.24 (82.2)	1.87 (47.5)	3.15 (80.0)	1.54 (39.0)	1.00 (25.4)
-HBB-MT16-12	16mm Tube	0.47 (12.0)	12.65	3.50 (88.9)	2.00 (50.8)	3.94 (100.0)	2.03 (51.7)	1.26 (32.0)
-HBB-MT18-12	18mm Tube	0.47 (12.0)	12.65	3.50 (88.9)	2.00 (50.8)	3.94 (100.0)	2.03 (51.7)	1.26 (32.0)
-HBB-MT22-16	22mm Tube	0.63 (16.0)	17.35	3.96 (100.6)	2.24 (56.9)	3.94 (100.0)	2.15 (54.8)	1.50 (38.1)
-HBB-MT25-16	25mm Tube	0.63 (16.0)	17.35	4.31 (109.5)	2.42 (61.5)	3.94 (100.0)	2.15 (54.8)	1.50 (38.1)

1. Sizes and types listed are standard. Other sizes and types are available upon request, refer to the ordering information.
2. Dimensions are shown with ROKE nuts finger-tightened. All dimensions are for reference only and are subject to change.
3. For dimensions not shown above, please contact ROKE Sales department or local distributor.

Pressure vs. Temperature



One-piece Instrumentation Ball Valves

OPB & OPD Series (Max 3000 psig)

Features

- ⊙ One-piece body and one-piece ball stem.
- ⊙ No dead zone, such as area between the ball and valve chamber.
- ⊙ Full operating pressure at any port.
- ⊙ Leak-tight performance testing for every valve at the maximum working pressure with nitrogen.
- ⊙ In-line inspection and repair after system relieved by top entry design.
- ⊙ Maximum working pressure: 3000 psig (207 bar).
Please refer to the Temperature vs. Pressure Diagram for details.
- ⊙ Working temperature:
OPB Series: -20°F至 300°F (-28°C to 148°C)
OPD Series: -65°F至 300°F (-54°C to 148°C)



Standard Materials of Construction

OPB Series

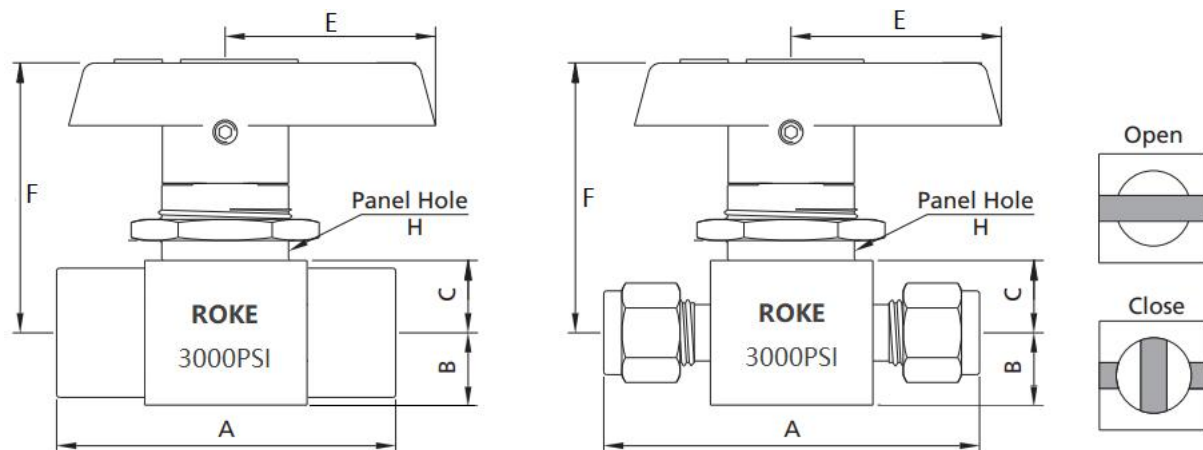
NO.	Component	Material		
		316 SS	Brass	Alloy 400
1	Handle	Nylon or Aluminium		
2	Set Screw	S17400 SS/A564		
3	Packing Bolt	316 SS/A276	Brass 36000	Alloy 400/B164
4	Panel Nut	316 SS/A276	Brass 36000	316 SS/A276
5	Packing	PTFE		
6	Gland	316 SS/A276	Brass 36000	Alloy 400/B164
7	Packing Set	PTFE/D1710 or UHMWPE/D4020		
8	Support Ring	316 SS/A276	Brass 36000	Alloy 400/B164
9	Ball Stem	316 SS/A276	Brass 36000	Alloy 400/B164
10	Body	316 SS/A276	Brass 36000	Alloy 400/B164

OPD Series

NO.	Component	Material		
		316 SS	Brass	Alloy 400
1	Handle	Nylon or Aluminium		
2	Set Screw	S17400 SS/A564		
3	Packing Bolt	316 SS/A276	Brass 36000	Alloy 400/B164
4	Panel Nut	316 SS/A276	Brass 36000	316 SS/A276
5	Dishing Spring	S17700 SS/A693		
6	Gland	316 SS/A276	Brass 36000	Alloy 400/B164
7	Packing Set	PTFE/D1710 or UHMWPE/D4020		
8	Support Ring	316 SS/A276	Brass 36000	Alloy 400/B164
9	Ball Stem	316 SS/A276	Brass 36000	Alloy 400/B164
10	Body	316 SS/A276	Brass 36000	Alloy 400/B164

Dimensions OPB Series

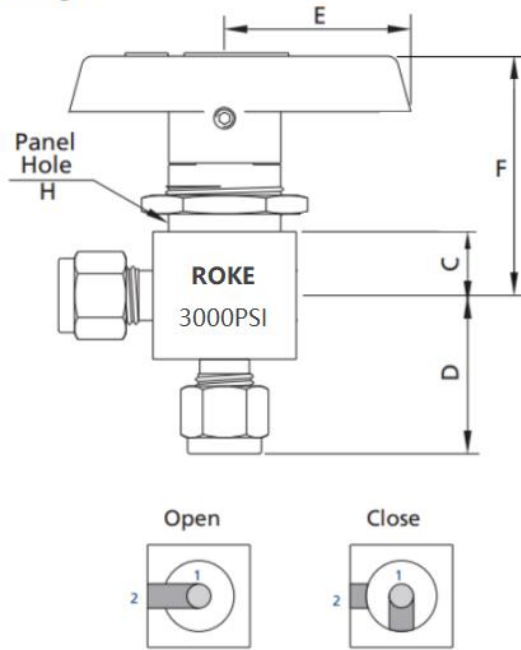
Straight



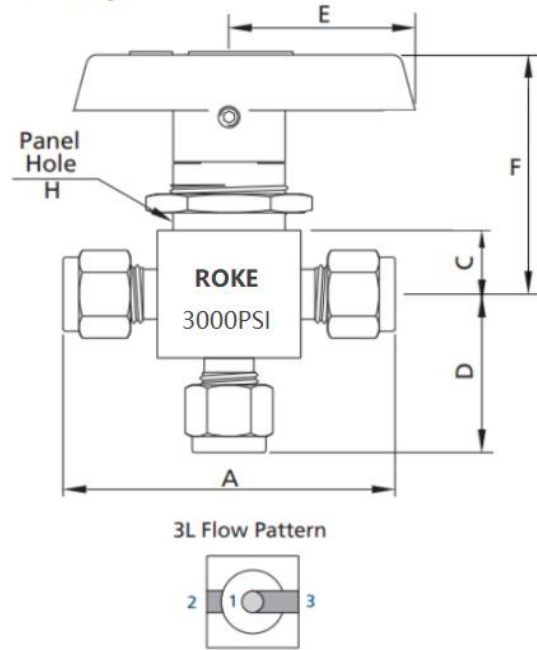
Basic Ordering Number	Connection Type and Size	Orifice in.(mm)	Working Pressure (Psig)	Cv	Dimension, in.(mm)					
					A	B	C	E	F	H
-OPB-FN2-3	1/8 Female NPT	0.13 (3.2)	3000	0.50	1.63 (41.4)	0.28 (7.1)	0.34 (8.6)	1.10 (28.0)	1.43 (36.2)	0.59 (15.0)
-OPB-FN2-5		0.19 (4.8)	3000	0.90	2.00 (50.8)	0.38 (9.7)	0.44 (11.2)	1.57 (39.9)	1.64 (41.7)	0.78 (19.8)
-OPB-FN4-5	1/4 Female NPT	0.19 (4.8)	3000	0.90	2.06 (52.3)	0.38 (9.7)	0.44 (11.2)	1.57 (39.9)	1.64 (41.7)	0.78 (19.8)
-OPB-FN4-7		0.28 (7.1)	2500	2.60	2.50 (63.5)	0.56 (14.2)	0.56 (14.2)	2.05 (52)	2.19 (55.5)	1.13 (28.6)
-OPB-FN6-7	3/8 Female NPT	0.28 (7.1)	2500	2.60	2.50 (63.5)	0.56 (14.2)	0.56 (14.2)	2.05 (52)	2.19 (55.5)	1.13 (28.6)
-OPB-FN8-7	1/2 Female NPT	0.28 (7.1)	2500	2.60	2.88 (73.2)	0.56 (14.2)	0.56 (14.2)	2.05 (52)	2.19 (55.5)	1.13 (28.6)
-OPB-FN8-10		0.41 (10.3)	2500	6.30	3.12 (79.2)	0.69 (17.5)	0.69 (17.5)	3.13 (79.6)	2.67 (67.7)	1.50 (38.1)
-OPB-FN12-10	3/4 Female NPT	0.41 (10.3)	2500	6.30	3.12 (79.2)	0.69 (17.5)	0.69 (17.5)	3.13 (79.6)	2.67 (67.7)	1.50 (38.1)
Note: If you choose BSPT female thread, the basic ordering no. is FR; If you choose BSPP female thread, the the basic ordering no. is FG.										
-OPB-MN2-3	1/8 Male NPT	0.13 (3.2)	3000	0.60	1.63 (41.4)	0.28 (7.1)	0.34 (8.6)	1.10 (28.0)	1.43 (36.2)	0.59 (15.0)
-OPB-MN4-3	1/4 Male NPT	0.13 (3.2)	3000	0.60	1.75 (44.4)	0.28 (7.1)	0.34 (8.6)	1.10 (28.0)	1.43 (36.2)	0.59 (15.0)
-OPB-MN4-5		0.19 (4.8)	3000	0.90	2.00 (50.8)	0.38 (9.7)	0.44 (11.2)	1.57 (39.9)	1.64 (41.7)	0.78 (19.8)
-OPB-MN6-7	3/8 Male NPT	0.28 (7.1)	2500	2.60	2.50 (63.5)	0.56 (14.2)	0.56 (14.2)	2.05 (52)	2.19 (55.5)	1.13 (28.6)
-OPB-MN8-7	1/2 Male NPT	0.28 (7.1)	2500	2.60	2.88 (73.2)	0.56 (14.2)	0.56 (14.2)	2.05 (52)	2.19 (55.5)	1.13 (28.6)
-OPB-MN12-10	3/4 Male NPT	0.41 (10.3)	2500	6.30	3.12 (79.2)	0.69 (17.5)	0.69 (17.5)	3.13 (79.6)	2.67 (67.7)	1.50 (38.1)
Note: If you choose BSPT male thread, the basic ordering no. is MR; If you choose BSPP male thread, the the basic ordering no. is MG.										
-OPB-FT2-2	1/8" Tube	0.09 (2.4)	3000	0.20	2.01 (51.0)	0.28 (7.1)	0.34 (8.6)	1.10 (28.0)	1.43 (36.2)	0.59 (15.0)
-OPB-FT4-3	1/4" Tube	0.13 (3.2)	3000	0.60	2.21 (56.1)	0.28 (7.1)	0.34 (8.6)	1.10 (28.0)	1.43 (36.2)	0.59 (15.0)
-OPB-FT4-5		0.19 (4.8)	3000	1.40	2.39 (60.7)	0.38 (9.7)	0.44 (11.2)	1.57 (39.9)	1.64 (41.7)	0.78 (19.8)
-OPB-FT6-5	3/8" Tube	0.19 (4.8)	3000	1.50	2.58 (65.5)	0.38 (9.7)	0.44 (11.2)	1.57 (39.9)	1.64 (41.7)	0.78 (19.8)
-OPB-FT6-7		0.28 (7.1)	2500	2.60	3.05 (77.5)	0.56 (14.2)	0.56 (14.2)	2.05 (52)	2.19 (55.5)	1.13 (28.6)
-OPB-FT8-7	1/2" Tube	0.28 (7.1)	2500	2.60	3.28 (83.3)	0.56 (14.2)	0.56 (14.2)	2.05 (52)	2.19 (55.5)	1.13 (28.6)
-OPB-FT8-10		0.41 (10.3)	2500	6.30	3.92 (99.6)	0.69 (17.5)	0.69 (17.5)	3.00 (76.2)	2.43 (61.7)	1.50 (38.1)
-OPB-FT12-10	3/4" Tube	0.41 (10.3)	2500	6.30	3.92 (99.6)	0.69 (17.5)	0.69 (17.5)	3.00 (76.2)	2.43 (61.7)	1.50 (38.1)
-OPB-MT3-2	3mm Tube	0.09 (2.4)	3000	0.20	2.01 (51.0)	0.28 (7.1)	0.34 (8.6)	1.10 (28.0)	1.43 (36.2)	0.59 (15.0)
-OPB-MT6-5	6mm Tube	0.19 (4.8)	3000	1.40	2.39 (60.7)	0.38 (9.7)	0.44 (11.2)	1.57 (39.9)	1.64 (41.7)	0.78 (19.8)
-OPB-MT8-5	8mm Tube	0.19 (4.8)	3000	1.40	2.46 (62.5)	0.38 (9.7)	0.44 (11.2)	1.57 (39.9)	1.64 (41.7)	0.78 (19.8)
-OPB-MT10-7	10mm Tube	0.28 (7.1)	2500	2.60	3.05 (77.5)	0.56 (14.2)	0.56 (14.2)	2.05 (52)	2.19 (55.5)	1.13 (28.6)
-OPB-MT12-7	12mm Tube	0.28 (7.1)	2500	2.60	3.28 (83.3)	0.56 (14.2)	0.56 (14.2)	2.05 (52)	2.19 (55.5)	1.13 (28.6)
-OPB-MT12-10		0.41 (10.3)	2500	6.30	3.92 (99.6)	0.69 (17.5)	0.69 (17.5)	3.00 (76.2)	2.43 (61.7)	1.50 (38.1)

Dimensions OPB Series

Angle



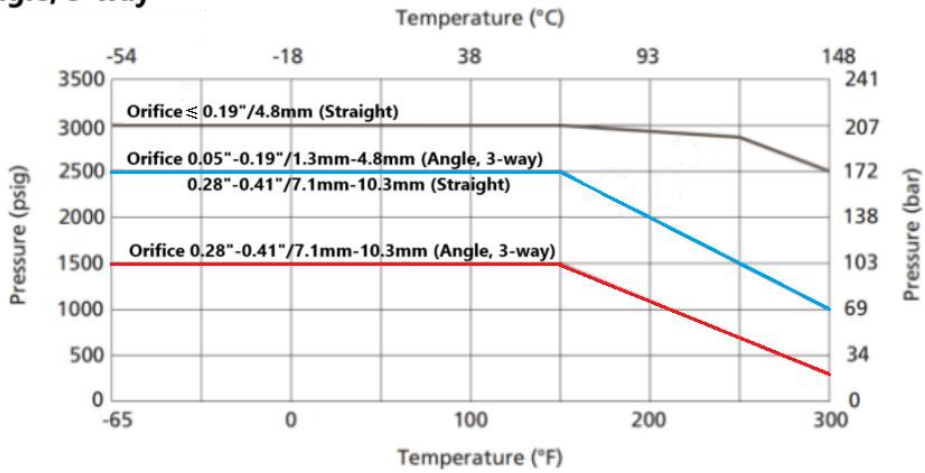
3-way



Basic Ordering Number	Connection Type and Size	Orifice in.(mm)	Working Pressure (Psig)	Cv	Dimension, in.(mm)					
					A	C	D	E	F	H
-OPB-FN2-3-A	1/8 Female NPT	0.13 (3.2)	2500	0.35	1.63	0.34	0.81	1.10	1.43	0.59
-OPB-FN2-3-3W					(41.4)	(8.6)	(20.6)	(28.0)	(36.2)	(15.0)
-OPB-FN4-5-A	1/4 Female NPT	0.19 (4.8)	2500	0.90	2.06	0.44	1.03	1.57	1.64	0.78
-OPB-FN4-5-3W					(52.3)	(11.2)	(26.2)	(39.9)	(41.7)	(19.8)
-OPB-FN6-7-A	3/8 Female NPT	0.28 (7.1)	1500	2.00	2.50	0.56	1.25	2.05	2.19	1.13
-OPB-FN6-7-3W					(63.5)	(14.2)	(31.8)	(52)	(55.5)	(28.6)
-OPB-FN8-7-A	1/2 Female NPT	0.28 (7.1)	1500	2.00	2.88	0.56	1.96	2.05	2.19	1.13
-OPB-FN8-7-3W					(73.2)	(14.2)	(39.6)	(52)	(55.5)	(28.6)
Note: If you choose BSPT female thread, the basic ordering no. is FR; If you choose BSPP female thread, the the basic ordering no. is FG.										
-OPB-MN2-3-A	1/8 Male NPT	0.13 (3.2)	2500	0.35	1.63	0.34	0.81	1.10	1.43	0.59
-OPB-MN2-3-3W					(41.4)	(8.6)	(20.6)	(28.0)	(36.2)	(15.0)
-OPB-MN4-5-A	1/4 Male NPT	0.19 (4.8)	2500	0.90	2.06	0.44	1.00	1.57	1.64	0.78
-OPB-MN4-5-3W					(52.3)	(11.2)	(25.4)	(39.9)	(41.7)	(19.8)
-OPB-MN6-7-A	3/8 Male NPT	0.28 (7.1)	1500	2.00	2.50	0.56	1.25	2.05	2.19	1.13
-OPB-MN6-7-3W					(63.5)	(14.2)	(31.8)	(52)	(55.5)	(28.6)
-OPB-MN8-7-A	1/2 Male NPT	0.28 (7.1)	1500	2.00	2.88	0.56	1.56	2.05	2.19	1.13
-OPB-MN8-7-3W					(73.2)	(14.2)	(39.6)	(52)	(55.5)	(28.6)
Note: If you choose BSPT male thread, the basic ordering no. is MR; If you choose BSPP male thread, the the basic ordering no. is MG.										
-OPB-FT2-2-A	1/8" Tube	0.09 (2.4)	2500	0.15	2.01	0.34	0.97	1.10	1.43	0.59
-OPB-FT2-2-3W					(51.0)	(8.6)	(24.6)	(28.0)	(36.2)	(15.0)
-OPB-FT4-5-A	1/4" Tube	0.19 (4.8)	2500	0.90	2.39	0.44	1.17	1.57	1.64	0.78
-OPB-FT4-5-3W					(60.7)	(11.2)	(29.7)	(39.9)	(41.7)	(19.8)
-OPB-FT6-7-A	3/8" Tube	0.28 (7.1)	1500	2.00	3.05	0.56	1.43	2.05	2.19	1.13
-OPB-FT6-7-3W					(77.5)	(14.2)	(36.3)	(52)	(55.5)	(28.6)
-OPB-FT8-7-A	1/2" Tube	0.28 (7.1)	1500	2.00	3.28	0.56	1.43	2.05	2.19	1.13
-OPB-FT8-7-3W					(83.3)	(14.2)	(36.3)	(52)	(55.5)	(28.6)
-OPB-MT3-2-A	3mm Tube	0.09 (2.4)	2500	0.15	2.01	0.34	0.97	1.10	1.43	0.59
-OPB-MT3-2-3W					(51.0)	(8.6)	(24.6)	(28.0)	(36.2)	(15.0)
-OPB-MT6-5-A	6mm Tube	0.19 (4.8)	2500	0.90	2.39	0.44	1.29	1.57	1.64	0.78
-OPB-MT6-5-3W					(60.7)	(11.2)	(32.8)	(39.9)	(41.7)	(19.8)
-OPB-MT8-5-A	8mm Tube	0.19 (4.8)	2500	0.90	2.46	0.44	1.29	1.64	1.64	0.78
-OPB-MT8-5-3W					(62.5)	(11.2)	(32.8)	(41.7)	(41.7)	(19.8)
-OPB-MT10-7-A	10mm Tube	0.28 (7.1)	1500	2.00	3.05	0.56	1.43	2.05	2.19	1.13
-OPB-MT10-7-3W					(77.5)	(14.2)	(36.3)	(52)	(55.5)	(28.6)
-OPB-MT12-7-A	12mm Tube	0.28 (7.1)	1500	2.00	3.28	0.56	1.43	2.05	2.19	1.13
-OPB-MT12-7-3W					(83.3)	(14.2)	(36.3)	(52)	(55.5)	(28.6)

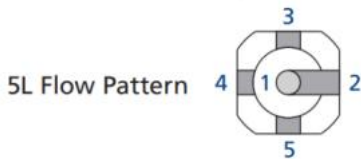
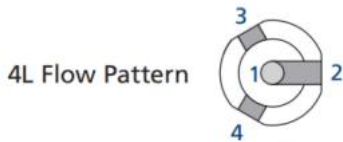
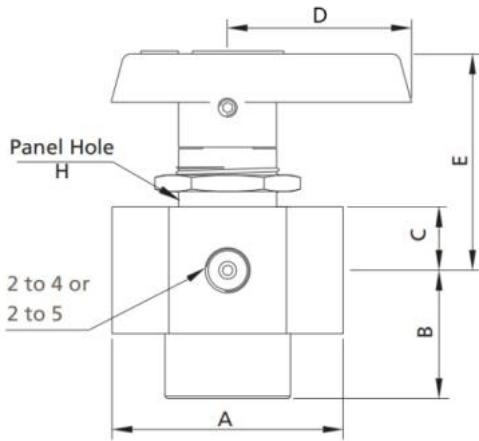
Pressure vs. Temperature

Straight, Angle, 3-way

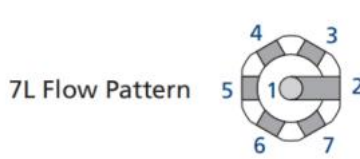
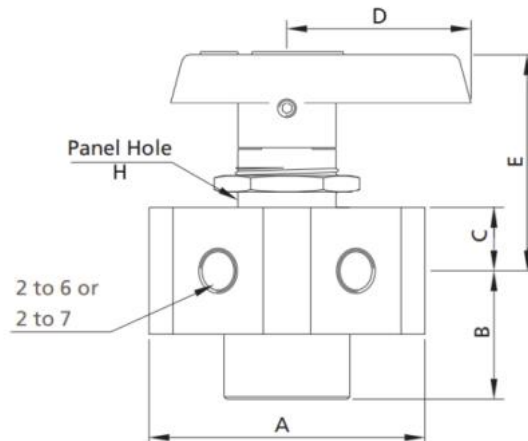


Switching Valves (4, 5, 6 and 7-way)

4, 5-way Valve



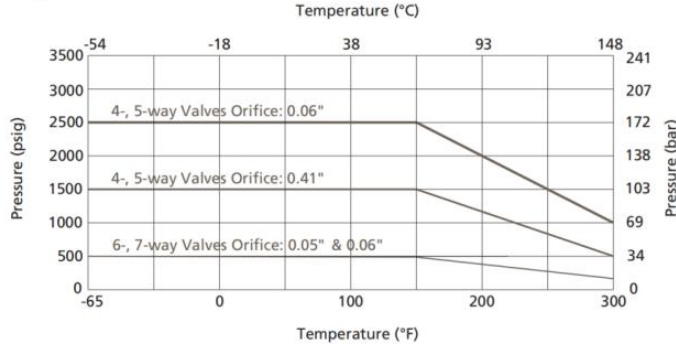
6, 7-way Valve



Basic Ordering Number	Connection Type and Size	Orifice in.(mm)	Working Pressure (Psig)	Cv	Dimension, in.(mm)					
					A	B	C	D	E	H
-OPB-FN2-2-4L	1/8 Female NPT	0.06 (1.6)	2500	0.07	1.85 (47.0)	0.88 (22.4)	0.44 (11.2)	1.57 (39.9)	1.76 (44.6)	0.91 (23.1)
-OPB-FN2-2-5L					3.13 (79.5)	1.56 (39.6)	0.69 (17.5)	3.13 (79.6)	2.63 (66.7)	1.50 (38.1)
-OPB-FN8-10-4L	1/2 Female NPT	0.41 (10.3)	1500	3.50	2.64 (67.0)	1.32 (33.5)	0.44 (11.2)	1.57 (39.9)	1.76 (44.6)	0.91 (23.1)
-OPB-FN8-10-5L					2.64 (67.0)	1.32 (33.5)	0.44 (11.2)	1.57 (39.9)	1.76 (44.6)	0.91 (23.1)
-OPB-FT2-2-4L	1/8 Tube	0.06 (1.6)	2500	0.07	2.64 (67.0)	1.32 (33.5)	0.44 (11.2)	1.57 (39.9)	1.76 (44.6)	0.91 (23.1)
-OPB-FT2-2-5L					2.64 (67.0)	1.32 (33.5)	0.44 (11.2)	1.57 (39.9)	1.76 (44.6)	0.91 (23.1)
-OPB-FT2-1-6L	1/16 Tube	0.05 (1.3)	1500	0.05	2.64 (67.0)	1.32 (33.5)	0.44 (11.2)	1.57 (39.9)	1.76 (44.6)	0.91 (23.1)
-OPB-FT2-1-7L					2.64 (67.0)	1.32 (33.5)	0.44 (11.2)	1.57 (39.9)	1.76 (44.6)	0.91 (23.1)
-OPB-FT2-2-6L	1/8 Tube	0.06 (1.6)	1500	0.07	2.64 (67.0)	1.32 (33.5)	0.44 (11.2)	1.57 (39.9)	1.76 (44.6)	0.91 (23.1)
-OPB-FT2-2-7L					2.64 (67.0)	1.32 (33.5)	0.44 (11.2)	1.57 (39.9)	1.76 (44.6)	0.91 (23.1)

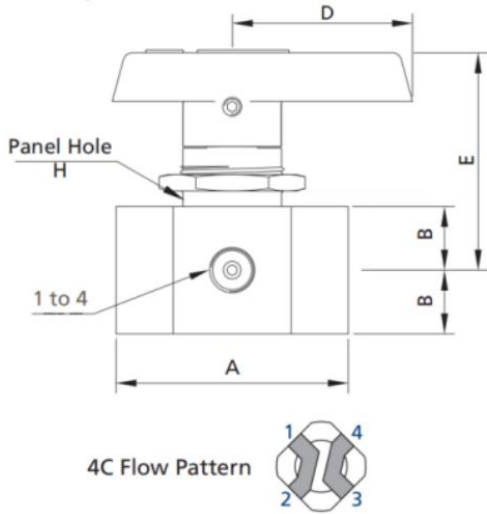
Pressure vs. Temperature

4-, 5-, 6-, 7-way Valves

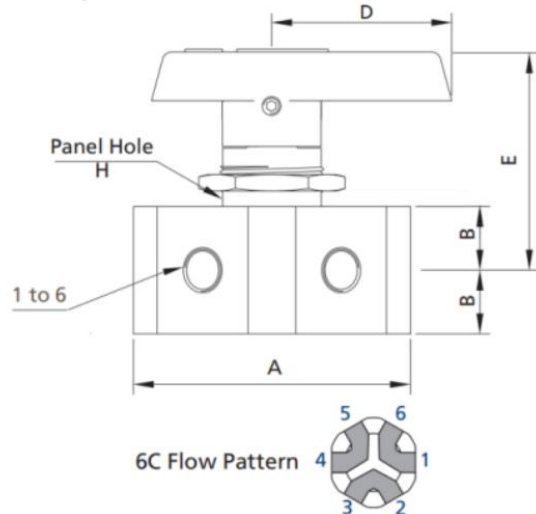


Crossover Valves (4, 6-way)

4-way Valve



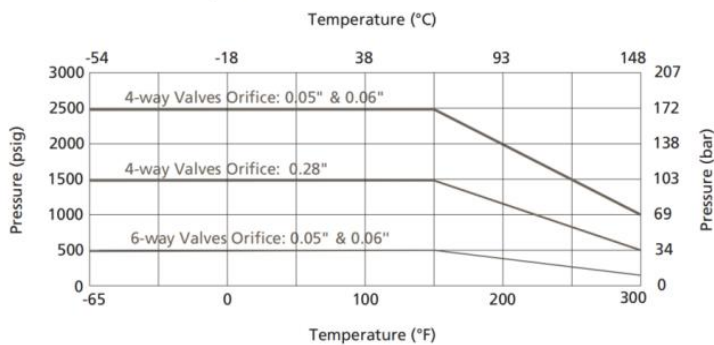
6-way Valve



Basic Ordering Number	Connection Type and Size	Orifice in. (mm)	Working Pressure (Psig)	Cv	Dimension, in. (mm)				
					A	B	D	E	H
-OPB-FN2-2-4C	1/8 Female NPT	0.06 (1.6)	2500	0.08	1.55 (39.4)	0.44 (11.2)	1.57 (39.9)	1.64 (41.7)	0.78 (19.8)
-OPB-FN8-7-4C	1/2 Female NPT	0.28 (7.1)	1500	1.60	3.13 (79.5)	0.69 (17.5)	3.13 (79.6)	2.67 (67.7)	1.50 (38.1)
-OPB-FT1-1-4C	1/16 Tube	0.05 (1.3)	2500	0.06	1.95 (49.6)	0.44 (11.2)	1.57 (39.9)	1.64 (41.7)	0.78 (19.8)
-OPB-FT2-2-4C	1/8 Tube	0.06 (1.6)	2500	0.08	2.61 (66.3)	0.44 (11.2)	1.57 (39.9)	1.64 (41.7)	0.78 (19.8)
-OPB-FT1-1-6C	1/16 Tube	0.05 (1.3)	1500	0.06	1.95 (49.6)	0.44 (11.2)	1.57 (39.9)	1.64 (41.7)	0.78 (19.8)
-OPB-FT2-2-6C	1/8 Tube	0.06 (1.6)	1500	0.08	1.95 (49.6)	0.44 (11.2)	1.57 (39.9)	1.64 (41.7)	0.78 (19.8)

Pressure vs. Temperature

Crossover (4-, 6-way) Valves



High Performance Ball Valves

HPB Series (6000 psig)

Features

- ⦿ Bi-directional flow for straight valves.
- ⦿ Low operating torque.
- ⦿ Positive handle stop.
- ⦿ Handle as flow direction indicator.
- ⦿ Options for handle color.
- ⦿ The inlet of 3-way valves and angle pattern valves should be only from the bottom.
- ⦿ Leak-tight performance testing for every valve at the maximum working pressure with nitrogen.
- ⦿ Maximum working pressure: 6000 psig (414 bar).
- ⦿ Working temperature:
 - PEEK: -65°F to 450°F (-54°C to 232°C)
 - PCTFE: -65°F to 300°F (-54°C to 149°C)



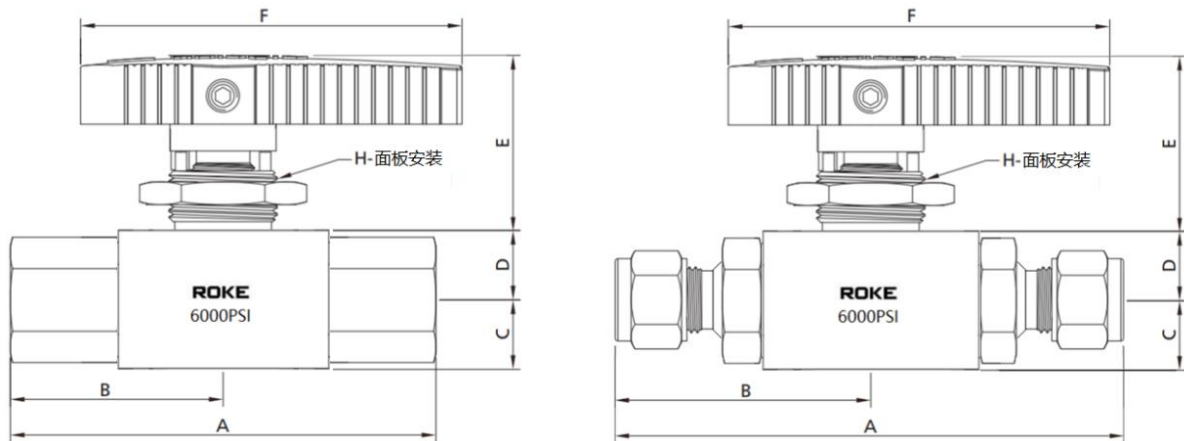
Straight Valves:

Construction	NO.	Component	Material	
			316 SS	Brass
	1	Handle	Nylon or Aluminium	
	2	Packing Nut	316 SS/A276	C36000/B16
	3	Panel Nut	316 SS/A276	C36000/B16
	4	Body	316 SS/A276	C36000/B16
	5	End Connector	316 SS/A276	C36000/B16
	6	Packing	PTFE	
	7	Ball	316 SS/A479	
	8	Seat	PTFE or PCTFE or PEEK	
	9	Stem Washer	316 SS/A276	
	10	Stem Packing	PTFE	
	11	Stem	316 SS/A276	
	12	Seat Screw	S17400 SS/A564	

3-way Valves:

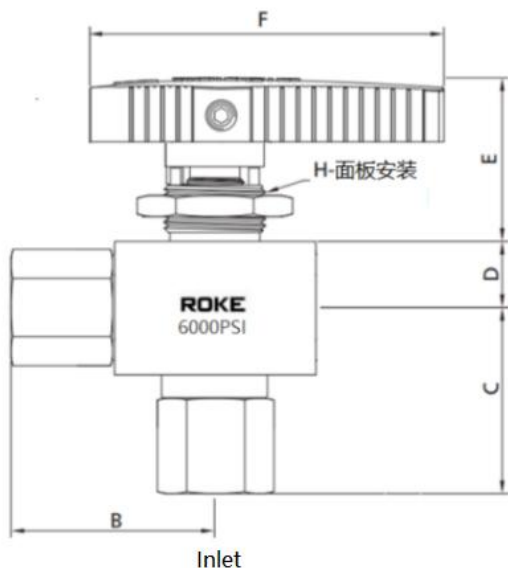
Construction	NO.	Component	Material	
			316 SS	Brass
	1	Handle	Nylon or Aluminium	
	2	Packing Nut	316 SS/A276	C36000/B16
	3	Panel Nut	316 SS/A276	C36000/B16
	4	Body	316 SS/A276	C36000/B16
	5	End Connector	316 SS/A276	C36000/B16
	6	Packing	PTFE	
	7	Ball	316 SS/A479	
	8	Seat	PTFE or PCTFE or PEEK	
	9	Stem Washer	316 SS/A276	
	10	Stem Packing	PTFE	
	11	Stem	316 SS/A276	
	12	Seat Screw	S17400 SS/A564	

Straight

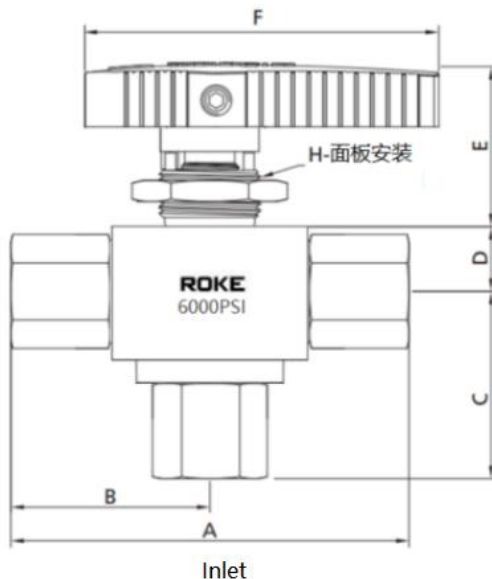


Basic Ordering Number	Connection Type and Size	Orifice in.(mm)	Cv	Dimension, in.(mm)						
				A	B	C	D	E	F	H
-HPB-FN2-5	1/8 Female NPT	0.19 (4.8)	1.2	2.47 (62.8)	1.24 (31.4)	0.44 (11.1)	0.44 (11.1)	1.10 (28.0)	1.97 (50.0)	0.77 (19.5)
-HPB-FN4-5	1/4 Female NPT	0.19 (4.8)	1.2	2.83 (72.0)	1.42 (36.0)	0.44 (11.1)	0.44 (11.1)	1.10 (28.0)	1.97 (50.0)	0.77 (19.5)
-HPB-FN4-7	1/4 Female NPT	0.28 (7.1)	4.0	3.07 (78.0)	1.54 (39.0)	0.54 (13.8)	0.54 (13.8)	1.32 (33.5)	2.56 (65.0)	0.90 (22.8)
-HPB-FN6-7	3/8 Female NPT	0.28 (7.1)	4.0	3.23 (82.0)	1.61 (41.0)	0.54 (13.8)	0.54 (13.8)	1.32 (33.5)	2.56 (65.0)	0.90 (22.8)
-HPB-FN6-10	3/8 Female NPT	0.41 (10.3)	6.4	3.54 (90.4)	1.77 (45.2)	0.63 (16.0)	0.63 (16.0)	1.45 (37.0)	3.27 (83.0)	0.90 (22.8)
-HPB-FN8-10	1/2 Female NPT	0.41 (10.3)	6.4	3.80 (96.6)	1.90 (48.3)	0.63 (16.0)	0.63 (16.0)	1.45 (37.0)	3.27 (83.0)	0.90 (22.8)
-HPB-FN12-10	3/4 Female NPT	0.41 (10.3)	6.4	3.87 (98.2)	1.93 (49.1)	0.63 (16.0)	0.63 (16.0)	1.45 (37.0)	3.27 (83.0)	0.90 (22.8)
Note: If you choose BSPT female thread, the basic ordering no. is FR; If you choose BSPP female thread, the the basic ordering no. is FG.										
-HPB-MN2-5	1/8 Male NPT	0.19 (4.8)	1.2	2.57 (65.4)	1.29 (32.7)	0.44 (11.1)	0.44 (11.1)	1.10 (28.0)	1.97 (50.0)	0.77 (19.5)
-HPB-MN4-5	1/4 Male NPT	0.19 (4.8)	1.2	2.94 (74.7)	1.47 (37.4)	0.44 (11.1)	0.44 (11.1)	1.10 (28.0)	1.97 (50.0)	0.77 (19.5)
-HPB-MN6-5	3/8 Male NPT	0.19 (4.8)	1.2	2.94 (74.7)	1.47 (37.4)	0.44 (11.1)	0.44 (11.1)	1.10 (28.0)	1.97 (50.0)	0.77 (19.5)
-HPB-MN6-7	3/8 Male NPT	0.28 (7.1)	4.0	3.32 (84.4)	1.66 (42.2)	0.54 (13.8)	0.54 (13.8)	1.32 (33.5)	2.56 (65.0)	0.90 (22.8)
-HPB-MN8-10	1/2 Male NPT	0.41 (10.3)	6.4	4.02 (102.2)	2.01 (51.1)	0.63 (16.0)	0.63 (16.0)	1.45 (37.0)	3.27 (83.0)	0.90 (22.8)
-HPB-MN12-10	3/4 Male NPT	0.41 (10.3)	6.4	4.02 (102.2)	2.01 (51.1)	0.63 (16.0)	0.63 (16.0)	1.45 (37.0)	3.27 (83.0)	0.90 (22.8)
Note: If you choose BSPT male thread, the basic ordering no. is MR; If you choose BSPP male thread, the the basic ordering no. is MG.										
-HPB-FT2-2	1/8 Tube	0.09 (2.4)	0.3	3.02 (76.6)	1.51 (38.3)	0.44 (11.1)	0.44 (11.1)	1.10 (28.0)	1.97 (50.0)	0.77 (19.5)
-HPB-FT4-5	1/4 Tube	0.19 (4.8)	1.2	3.20 (81.4)	1.60 (40.7)	0.44 (11.1)	0.44 (11.1)	1.10 (28.0)	1.97 (50.0)	0.77 (19.5)
-HPB-FT6-5	3/8 Tube	0.19 (4.8)	1.2	3.34 (84.8)	1.67 (42.4)	0.44 (11.1)	0.44 (11.1)	1.10 (28.0)	1.97 (50.0)	0.77 (19.5)
-HPB-FT6-7	3/8 Tube	0.28 (7.1)	4.0	3.72 (94.6)	1.86 (47.3)	0.54 (13.8)	0.54 (13.8)	1.32 (33.5)	2.56 (65.0)	0.90 (22.8)
-HPB-FT8-7	1/2 Tube	0.28 (7.1)	4.0	3.95 (100.2)	1.97 (55.1)	0.54 (13.8)	0.54 (13.8)	1.32 (33.5)	2.56 (65.0)	0.90 (22.8)
-HPB-FT8-10	1/2 Tube	0.41 (10.3)	6.4	4.26 (108.3)	2.13 (54.2)	0.63 (16.0)	0.63 (16.0)	1.45 (37.0)	3.27 (83.0)	0.90 (22.8)
-HPB-FT12-10	3/4 Tube	0.41 (10.3)	6.4	4.26 (108.3)	2.13 (54.2)	0.63 (16.0)	0.63 (16.0)	1.45 (37.0)	3.27 (83.0)	0.90 (22.8)
-HPB-MT6-5	6mm Tube	0.19 (4.8)	1.2	3.20 (81.3)	1.60 (40.7)	0.44 (11.1)	0.44 (11.1)	1.10 (28.0)	1.97 (50.0)	0.77 (19.5)
-HPB-MT8-5	8mm Tube	0.19 (4.8)	1.2	3.28 (83.3)	1.64 (41.7)	0.44 (11.1)	0.44 (11.1)	1.10 (28.0)	1.97 (50.0)	0.77 (19.5)
-HPB-MT10-5	10mm Tube	0.19 (4.8)	1.2	3.35 (85.2)	1.68 (42.6)	0.44 (11.1)	0.44 (11.1)	1.10 (28.0)	1.97 (50.0)	0.77 (19.5)
-HPB-MT10-7	10mm Tube	0.28 (7.1)	4.0	3.75 (95.2)	1.88 (47.6)	0.54 (13.8)	0.54 (13.8)	1.32 (33.5)	2.56 (65.0)	0.90 (22.8)
-HPB-MT12-7	12mm Tube	0.28 (7.1)	4.0	3.95 (100.2)	1.97 (55.1)	0.54 (13.8)	0.54 (13.8)	1.32 (33.5)	2.56 (65.0)	0.90 (22.8)
-HPB-MT12-10	12mm Tube	0.41 (10.3)	6.4	4.26 (108.2)	2.13 (54.2)	0.63 (16.0)	0.63 (16.0)	1.45 (37.0)	3.27 (83.0)	0.90 (22.8)
-HPB-MT14-10	14mm Tube	0.41 (10.3)	6.4	4.26 (108.2)	2.13 (54.2)	0.63 (16.0)	0.63 (16.0)	1.45 (37.0)	3.27 (83.0)	0.90 (22.8)
-HPB-MT18-10	18mm Tube	0.41 (10.3)	6.4	4.26 (108.2)	2.13 (54.2)	0.63 (16.0)	0.63 (16.0)	1.45 (37.0)	3.27 (83.0)	0.90 (22.8)

Angle



3-way

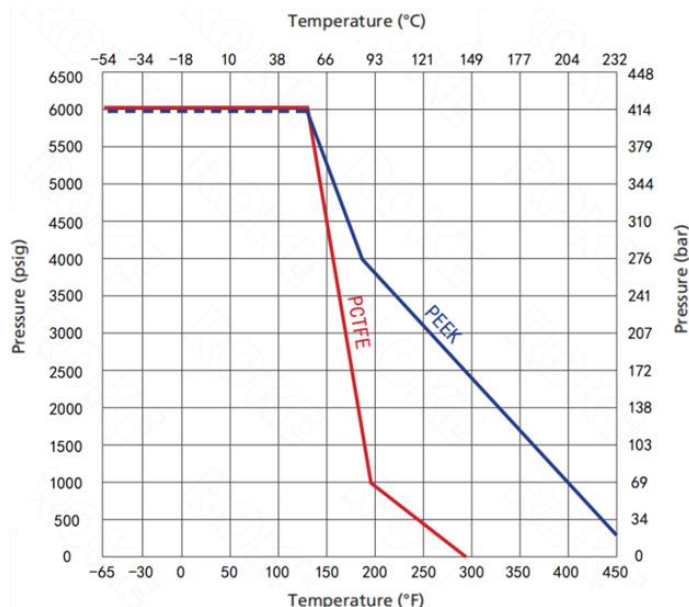


Basic Ordering Number	Connection Type and Size	Orifice in.(mm)	Cv	Dimension, in.(mm)						
				A	B	C	D	E	F	H
-HPB-FN2-5-A	1/8 Female NPT	0.19	1.2	2.47	1.24	1.24	0.44	1.10	1.97	0.77
-HPB-FN2-5-3W		(4.8)		(62.8)	(31.4)	(31.4)	(11.1)	(28.0)	(50.0)	(19.5)
-HPB-FN4-5-A	1/4 Female NPT	0.19	1.2	2.83	1.42	1.42	0.44	1.10	1.97	0.77
-HPB-FN4-5-3W		(4.8)		(72)	(36.0)	(36.0)	(11.1)	(28.0)	(50.0)	(19.5)
-HPB-FN4-7-A	1/4 Female NPT	0.28	4.0	3.07	1.54	0.54	0.54	1.32	2.56	0.90
-HPB-FN4-7-3W		(7.1)		(78.0)	(39.0)	(13.8)	(13.8)	(33.5)	(65.0)	(22.8)
-HPB-FN6-7-A	3/8 Female NPT	0.28	4.0	3.23	1.61	0.54	0.54	1.32	2.56	0.90
-HPB-FN6-7-3W		(7.1)		(82.0)	(41.0)	(13.8)	(13.8)	(33.5)	(65.0)	(22.8)
-HPB-FN6-10-A	3/8 Female NPT	0.41	6.4	3.54	1.77	0.63	0.63	1.45	3.27	0.90
-HPB-FN6-10-3W		(10.3)		(90.4)	(45.2)	(16.0)	(16.0)	(37.0)	(83.0)	(22.8)
-HPB-FN8-10-A	1/2 Female NPT	0.41	6.4	3.80	1.90	1.90	0.63	1.45	3.27	0.90
-HPB-FN8-10-3W		(10.3)		(96.6)	(48.3)	(48.3)	(16.0)	(37.0)	(83.0)	(22.8)
-HPB-FN12-10-A	3/4 Female NPT	0.41	6.4	3.87	1.93	1.93	0.63	1.45	3.27	0.90
-HPB-FN12-10-3W		(10.3)		(98.2)	(49.1)	(49.1)	(16.0)	(37.0)	(83.0)	(22.8)
-HPB-MN2-5-A	1/8 Male NPT	0.19	1.2	2.57	1.29	1.29	0.44	1.10	1.97	0.77
-HPB-MN2-5-3W		(4.8)		(65.4)	(32.7)	(32.7)	(11.1)	(28.0)	(50.0)	(19.5)
-HPB-MN4-5-A	1/4 Male NPT	0.19	1.2	2.94	1.47	1.47	0.44	1.10	1.97	0.77
-HPB-MN4-5-3W		(4.8)		(74.7)	(37.4)	(37.4)	(11.1)	(28.0)	(50.0)	(19.5)
-HPB-MN6-5-A	3/8 Male NPT	0.19	1.2	2.94	1.47	1.47	0.44	1.10	1.97	0.77
-HPB-MN6-5-3W		(4.8)		(74.7)	(37.4)	(37.4)	(11.1)	(28.0)	(50.0)	(19.5)
-HPB-MN6-7-A	3/8 Male NPT	0.28	4.0	3.32	1.66	0.54	0.54	1.32	2.56	0.90
-HPB-MN6-7-3W		(7.1)		(84.4)	(42.2)	(13.8)	(13.8)	(33.5)	(65.0)	(22.8)
-HPB-MN8-10-A	1/2 Male NPT	0.41	6.4	4.02	2.01	2.01	0.63	1.45	3.27	0.90
-HPB-MN8-10-3W		(10.3)		(102.2)	(51.1)	(51.1)	(16.0)	(37.0)	(83.0)	(22.8)
-HPB-MN12-10-A	3/4 Male NPT	0.41	6.4	4.02	2.01	2.01	0.63	1.45	3.27	0.90
-HPB-MN12-10-3W		(10.3)		(102.2)	(51.1)	(51.1)	(16.0)	(37.0)	(83.0)	(22.8)
-HPB-FT2-2-A	1/8 Tube	0.09	0.3	3.02	1.51	1.51	0.44	1.10	1.97	0.77
-HPB-FT2-2-3W		(2.4)		(76.6)	(38.3)	(38.3)	(11.1)	(28.0)	(50.0)	(19.5)
-HPB-FT4-5-A	1/4 Tube	0.19	1.2	3.20	1.60	1.60	0.44	1.10	1.97	0.77
-HPB-FT4-5-3W		(4.8)		(81.4)	(40.7)	(40.7)	(11.1)	(28.0)	(50.0)	(19.5)
-HPB-FT6-5-A	3/8 Tube	0.19	1.2	3.34	1.67	1.67	0.44	1.10	1.97	0.77
-HPB-FT6-5-3W		(4.8)		(84.8)	(42.4)	(42.4)	(11.1)	(28.0)	(50.0)	(19.5)
-HPB-FT6-7-A	3/8 Tube	0.28	4.0	3.72	1.86	0.54	0.54	1.32	2.56	0.90
-HPB-FT6-7-3W		(7.1)		(94.6)	(47.3)	(13.8)	(13.8)	(33.5)	(65.0)	(22.8)
-HPB-FT8-7-A	1/2 Tube	0.28	4.0	3.95	1.97	0.54	0.54	1.32	2.56	0.90
-HPB-FT8-7-3W		(7.1)		(100.2)	(55.1)	(13.8)	(13.8)	(33.5)	(65.0)	(22.8)
-HPB-FT8-10-A	1/2 Tube	0.41	6.4	4.26	2.13	2.13	0.63	1.45	3.27	0.90
-HPB-FT8-10-3W		(10.3)		(108.3)	(54.2)	(54.2)	(16.0)	(37.0)	(83.0)	(22.8)
-HPB-FT12-10-A	3/4 Tube	0.41	6.4	4.26	2.13	2.13	0.63	1.45	3.27	0.90
-HPB-FT12-10-3W		(10.3)		(108.3)	(54.2)	(54.2)	(16.0)	(37.0)	(83.0)	(22.8)

Basic Ordering Number	Connection Type and Size	Orifice in.(mm)	Cv	Dimension, in.(mm)						
				A	B	C	D	E	F	H
-HPB-MT3-2-A	3mm Tube	0.09	0.3	3.02	1.51	1.51	0.44	1.10	1.97	0.77
-HPB-MT3-2-3W		(2.4)		(76.6)	(38.3)	(38.3)	(11.1)	(28.0)	(50.0)	(19.5)
-HPB-MT6-5-A	6mm Tube	0.19	1.2	3.20	1.60	1.60	0.44	1.10	1.97	0.77
-HPB-MT6-5-3W		(4.8)		(81.3)	(40.7)	(40.7)	(11.1)	(28.0)	(50.0)	(19.5)
-HPB-MT8-5-A	8mm Tube	0.19	1.2	3.28	1.64	1.64	0.44	1.10	1.97	0.77
-HPB-MT8-5-3W		(4.8)		(83.3)	(41.7)	(41.7)	(11.1)	(28.0)	(50.0)	(19.5)
-HPB-MT10-5-A	10mm Tube	0.19	1.2	3.35	1.68	1.68	0.44	1.10	1.97	0.77
-HPB-MT10-5-3W		(4.8)		(85.2)	(42.6)	(42.6)	(11.1)	(28.0)	(50.0)	(19.5)
-HPB-MT10-7-A	10mm Tube	0.28	4.0	3.75	1.88	0.54	0.54	1.32	2.56	0.90
-HPB-MT10-7-3W		(7.1)		(95.2)	(47.6)	(13.8)	(13.8)	(33.5)	(65.0)	(22.8)
-HPB-MT12-7-A	12mm Tube	0.28	4.0	3.95	1.97	0.54	0.54	1.32	2.56	0.90
-HPB-MT12-7-3W		(7.1)		(100.2)	(55.1)	(13.8)	(13.8)	(33.5)	(65.0)	(22.8)
-HPB-MT12-10-A	12mm Tube	0.41	6.4	4.26	2.13	2.13	0.63	1.45	3.27	0.90
-HPB-MT12-10-3W		(10.3)		(108.2)	(54.2)	(54.2)	(16.0)	(37.0)	(83.0)	(22.8)
-HPB-MT14-10-A	14mm Tube	0.41	6.4	4.26	2.13	2.13	0.63	1.45	3.27	0.90
-HPB-MT14-10-3W		(10.3)		(108.2)	(54.2)	(54.2)	(16.0)	(37.0)	(83.0)	(22.8)
-HPB-MT16-10-A	16mm Tube	0.41	6.4	4.26	2.13	2.13	0.63	1.45	3.27	0.90
-HPB-MT16-10-3W		(10.3)		(108.2)	(54.2)	(54.2)	(16.0)	(37.0)	(83.0)	(22.8)
-HPB-MT18-10-A	18mm Tube	0.41	6.4	4.26	2.13	2.13	0.63	1.45	3.27	0.90
-HPB-MT18-10-3W		(10.3)		(108.2)	(54.2)	(54.2)	(16.0)	(37.0)	(83.0)	(22.8)

1. Sizes and types listed are standard. Other sizes and types are available upon request, refer to the ordering information.
2. Dimensions are shown with ROKE nuts finger-tightened. All dimensions are for reference only and are subject to change.
3. For dimensions not shown above, please contact ROKE Sales department or local distributor.

Pressure vs. Temperature



Temperature Ranges

Packing Materials	Temperature Range °F (°C)
PTFE	-65 to 450 (-54 to 232)
Buna-N	-40 to 250 (-40 to 121)
Fluorocarbon FKM	-15 to 450 (-26 to 232)
Neoprene	-40 to 250 (-40 to 121)

Alternative Fuel Service Ball Valves

AFS Series (6000 psig)

Features

- ⦿ Spring-loaded seat provides leak-tight integrity in both low-and high-pressure systems and reduces seat wear from pressure surges
- ⦿ High flow-Cv from 4.0 to 13.8
- ⦿ Low operating torque.
- ⦿ All wetted components are compatible with hydrogen and compressed natural gas (CNG)
- ⦿ No packing adjustment required
- ⦿ Bidirectional flow
- ⦿ Options for handle color.
- ⦿ Pneumatic actuators available
- ⦿ Leak-tight performance testing for every valve at the maximum working pressure with nitrogen.
- ⦿ Maximum working pressure: 6000 psig (414 bar).
- ⦿ Working temperature: -40°F to 300°F (-40°C to 149°C).

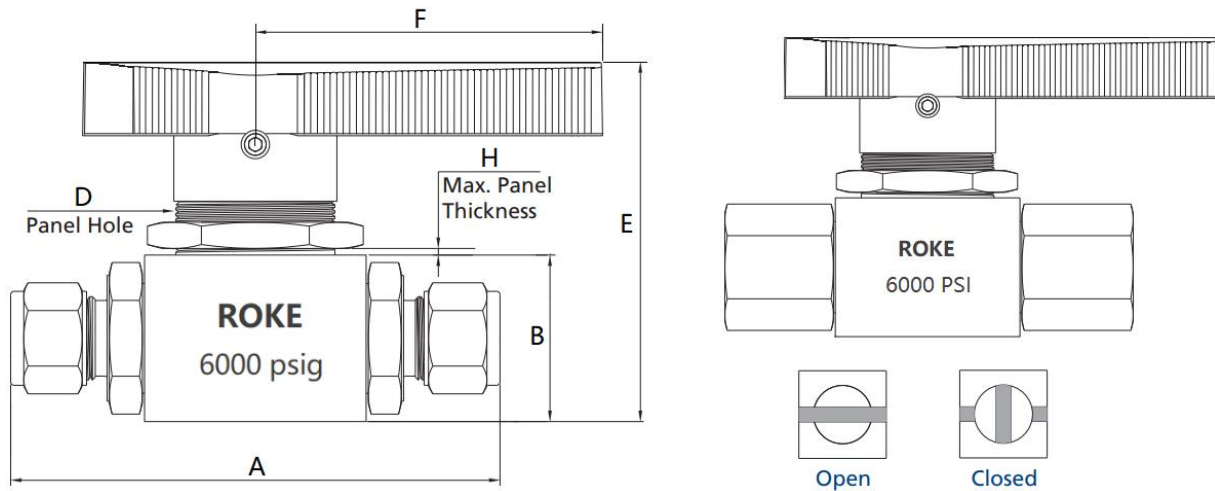


Standard Materials of Construction:

Construction	NO.	Component	Material
	1	Handle	Nylon
	2	Seat Screw	S17400 SS/A564
	3	Guide ring	PTFE/D1710
	4	Stem	316 SS/A479
	5	Packing Bolt	316 SS/A479
	6	Stem Backup Ring	PEEK
	7	Lock Nut	316 SS/A479
	8	Stem O-ring	Low-temperature fluorocarbon
	9	Packing bolt washer	Silver-plated 316 SS
	10	Thrust washer	PEEK
	11	Coned-disc spring	316 SS/A240
	12	Seat gland	316 SS/A479
	13	Seat Backup ring	PTFE/D1710
	14	Seat O-ring	Low-temperature fluorocarbon
	15	Seat	PEEK
	16	End Gasket	Silver-plated 316 SS
	17	Ball	316 SS/A479
	18	Body	316 SS/A479
	19	End Connector	316 SS/A276

The graph plots Pressure (psig) and Pressure (bar) against Temperature (°F) and Temperature (°C). The pressure remains constant at 6000 psig (414 bar) across the entire temperature range from -40°F to 300°F.

Dimensions AFS Series



Basic Ordering Number	Connection Type and Size	Orifice in.(mm)	Cv	Dimension, in.(mm)					
				A	B	E	F	D	H
-AFS-FN2-5	1/8 Female NPT	0.19 (4.8)	1.2	2.47 (67.8)	0.91 (23.0)	2.17 (55.0)	1.58 (40.0)	0.77 (19.5)	0.25 (6.4)
-AFS-FN4-5	1/4 Female NPT	0.19 (4.8)	1.2	2.95 (75.0)	0.91 (23.0)	2.17 (55.0)	1.58 (40.0)	0.77 (19.5)	0.25 (6.4)
-AFS-FN4-7	1/4 Female NPT	0.28 (7.1)	4.0	3.00 (88.9)	1.13 (28.6)	2.64 (67.0)	2.05 (52.0)	1.08 (27.5)	0.31 (7.9)
-AFS-FN6-7	3/8 Female NPT	0.28 (7.1)	4.0	3.00 (88.9)	1.13 (28.6)	2.64 (67.0)	2.05 (52.0)	1.08 (27.5)	0.31 (7.9)
-AFS-FN6-10	3/8 Female NPT	0.41 (10.3)	6.4	3.79 (96.2)	1.50 (38.1)	3.25 (82.5)	3.07 (78.0)	1.46 (37.0)	0.35 (9.0)
-AFS-FN8-12	1/2 Female NPT	0.47 (12.0)	7.8	3.97 (100.8)	1.50 (38.1)	3.25 (82.5)	3.07 (78.0)	1.46 (37.0)	0.35 (9.0)
-AFS-FN12-12	3/4 Female NPT	0.47 (12.0)	7.8	4.09 (104)	1.50 (38.1)	3.25 (82.5)	3.07 (78.0)	1.46 (37.0)	0.35 (9.0)
Note: If you choose BSPT female thread, the basic ordering no. is FR; If you choose BSPP female thread, the the basic ordering no. is FG.									
-AFS-MN2-5	1/8 Male NPT	0.19 (4.8)	1.2	2.79 (70.8)	0.91 (23.0)	2.17 (55.0)	1.58 (40.0)	0.77 (19.5)	0.25 (6.4)
-AFS-MN4-5	1/4 Male NPT	0.19 (4.8)	1.2	3.14 (79.8)	0.91 (23.0)	2.17 (55.0)	1.58 (40.0)	0.77 (19.5)	0.25 (6.4)
-AFS-MN6-7	3/8 Male NPT	0.28 (7.1)	4.0	3.52 (89.4)	1.13 (28.6)	2.64 (67.0)	2.05 (52.0)	1.08 (27.5)	0.31 (7.9)
-AFS-MN8-7	1/2 Male NPT	0.28 (7.1)	4.0	3.90 (99.1)	1.13 (28.6)	2.64 (67.0)	2.05 (52.0)	1.08 (27.5)	0.31 (7.9)
-AFS-MN8-12	1/2 Male NPT	0.47 (12.0)	7.8	4.29 (109)	1.50 (38.1)	3.25 (82.5)	3.07 (78.0)	1.46 (37.0)	0.35 (9.0)
-AFS-MN12-12	3/4 Male NPT	0.47 (12.0)	7.8	4.48 (114)	1.50 (38.1)	3.25 (82.5)	3.07 (78.0)	1.46 (37.0)	0.35 (9.0)
Note: If you choose BSPT male thread, the basic ordering no. is MR; If you choose BSPP male thread, the the basic ordering no. is MG.									
-AFS-FT4-5	1/4 Tube	0.19 (4.8)	1.2	3.41 (86.6)	0.91 (23.0)	2.17 (55.0)	1.58 (40.0)	0.77 (19.5)	0.25 (6.4)
-AFS-FT6-5	3/8 Tube	0.19 (4.8)	1.2	3.55 (90.2)	0.91 (23.0)	2.17 (55.0)	1.58 (40.0)	0.77 (19.5)	0.25 (6.4)
-AFS-FT6-7	3/8 Tube	0.28 (7.1)	4.0	3.92 (99.6)	1.13 (28.6)	2.64 (67.0)	2.05 (52.0)	1.08 (27.5)	0.31 (7.9)
-AFS-FT8-7	1/2 Tube	0.28 (7.1)	4.0	4.17 (106)	1.13 (28.6)	2.64 (67.0)	2.05 (52.0)	1.08 (27.5)	0.31 (7.9)
-AFS-FT8-10	1/2 Tube	0.41 (10.3)	6.4	4.41 (112)	1.50 (38.1)	3.25 (82.5)	3.07 (78.0)	1.46 (37.0)	0.35 (9.0)
-AFS-FT12-12	3/4 Tube	0.47 (12.0)	7.8	4.57 (116)	1.50 (38.1)	3.25 (82.5)	3.07 (78.0)	1.46 (37.0)	0.35 (9.0)
-AFS-MT6-5	6mm Tube	0.19 (4.8)	1.2	3.41 (86.6)	0.91 (23.0)	2.17 (55.0)	1.58 (40.0)	0.77 (19.5)	0.25 (6.4)
-AFS-MT8-75	8mm Tube	0.19 (4.8)	1.2	3.55 (90.2)	0.91 (23.0)	2.17 (55.0)	1.58 (40.0)	0.77 (19.5)	0.25 (6.4)
-AFS-MT10-7	10mm Tube	0.28 (7.1)	4.0	3.92 (99.6)	1.13 (28.6)	2.64 (67.0)	2.05 (52.0)	1.08 (27.5)	0.31 (7.9)
-AFS-MT12-7	12mm Tube	0.28 (7.1)	4.0	4.17 (106)	1.13 (28.6)	2.64 (67.0)	2.05 (52.0)	1.08 (27.5)	0.31 (7.9)
-AFS-MT12-10	12mm Tube	0.41 (10.3)	6.4	4.41 (112)	1.50 (38.1)	3.25 (82.5)	3.07 (78.0)	1.46 (37.0)	0.35 (9.0)
-AFS-MT18-12	18mm Tube	0.47 (12.0)	7.8	4.57 (116)	1.50 (38.1)	3.25 (82.5)	3.07 (78.0)	1.46 (37.0)	0.35 (9.0)

- Sizes and types listed are standard. Other sizes and types are available upon request, refer to the ordering information.
- Dimensions are shown with ROKE nuts finger-tightened. All dimensions are for reference only and are subject to change.
- For dimensions not shown above, please contact ROKE Sales department or local distributor.

Bar Stock Ball Valves

BSB Series (10000 psig)

Features

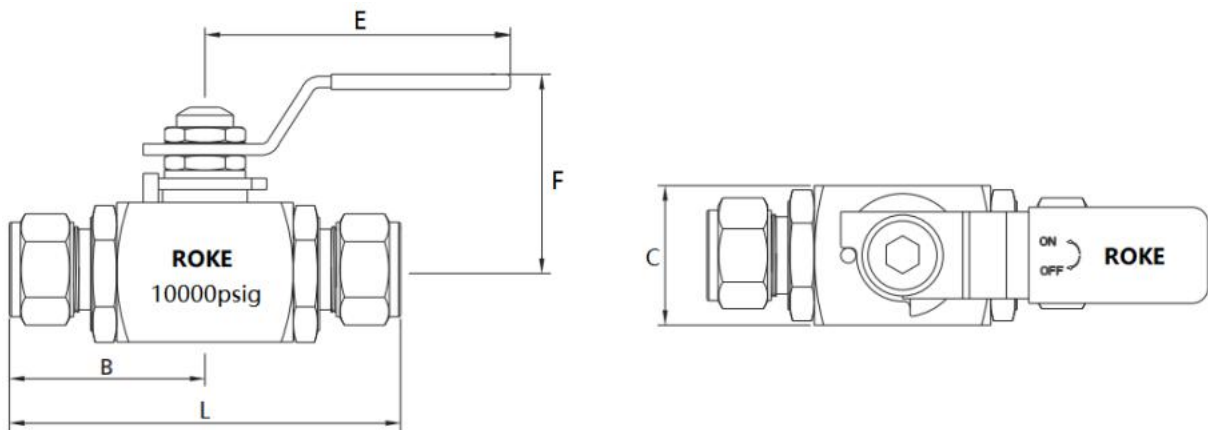
- Bi-directional flow for 2-way valves.
- Seat wear compensation by free floating ball Variety of end connections.
- Blowout proof stem with self-sealing function.
- Options for handle color.
- Optional pneumatic and electric actuator.
- Leak-tight performance testing with nitrogen for every valve at the maximum working pressure, but not higher than 6000 psig.
- Maximum working pressure:
 - Orifice ≤ 10.3 , 10000 psig (689 bar)
 - Orifice ≥ 12.7 , 6000 psig (414 bar)
- Working temperature: -40°F to 450°F (-40°C to 232°C).



Standard Materials of Construction

Construction	NO.	Component	Material	
			316 SS	Alloy 400
	1	End Connector	316 SS/A276	Alloy 400B164
	2	Ball	316 SS/A479	Alloy 400B164
	3	O-ring	Fluorocarbon FKM	
	4	Body	316 SS/A276	Alloy 400B164
	5	Seat	PVDF or PCTFE or PEEK	
	6	Stop Pin	Stainless Steel	
	7	Stem Packing	PTFE	
	8	Stem Washer	316 SS/A276	
	9	Stem Nut	316 SS/A276	
	10	Spring Washer	316 SS/A276	
	11	Stem	316 SS/A276	Alloy 400B164
	12	Stop Block	304 SS/A240	
	13	Handle	Stainless Steel	

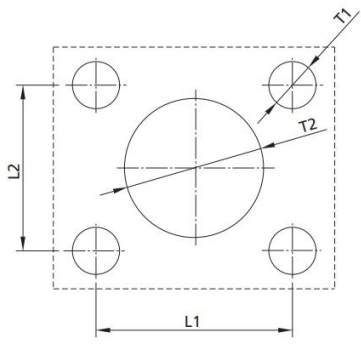
Dimensions BSB Series



Basic Ordering Number	Connection Type and Size	Orifice in.(mm)	Cv	Dimension, in.(mm)				
				L	B	C	E	F
-BSB-FN4-10	1/4 Female NPT	0.41 (10.3)	7.5	2.80 (71.0)	1.40 (35.5)	1.30 (32.0)	5.12 (130)	1.73 (44.0)
-BSB-FN6-10	3/8 Female NPT	0.41 (10.3)	7.5	2.80 (71.0)	1.40 (35.5)	1.30 (32.0)	5.12 (130)	1.73 (44.0)
-BSB-FN8-10	1/2 Female NPT	0.41 (10.3)	7.5	3.11 (79.0)	1.56 (39.5)	1.30 (32.0)	5.12 (130)	1.73 (44.0)
-BSB-FN8-13	1/2 Female NPT	0.50 (12.7)	10	3.45 (90.0)	1.77 (45.0)	1.50 (38.0)	5.71 (145)	1.89 (48.0)
-BSB-FN12-13	3/4 Female NPT	0.50 (12.7)	10	4.09 (104)	2.05 (52.0)	1.50 (38.0)	5.71 (145)	1.89 (48.0)
-BSB-FN12-18	3/4 Female NPT	0.71 (18.0)	30	3.81 (96.8)	1.91 (48.4)	1.96 (50.0)	6.30 (160)	2.08 (53.0)
-BSB-FN16-18	1 Female NPT	0.71 (18.0)	30	4.80 (122)	2.40 (61.0)	1.96 (50.0)	6.30 (160)	2.08 (53.0)
Note: If you choose BSPT female thread, the basic ordering no. is FR; If you choose BSPP female thread, the the basic ordering no. is FG.								
-BSB-MN4-7	1/4 Male NPT	0.28 (7.1)	3.7	3.36 (85.4)	1.68 (42.7)	1.30 (32.0)	5.12 (130)	1.73 (44.0)
-BSB-MN6-10	3/8 Male NPT	0.28 (7.1)	3.7	3.36 (85.4)	1.68 (42.7)	1.30 (32.0)	5.12 (130)	1.73 (44.0)
-BSB-MN8-10	1/2 Male NPT	0.41 (10.3)	7.5	3.75 (95.2)	1.88 (47.6)	1.30 (32.0)	5.12 (130)	1.73 (44.0)
-BSB-MN12-13	3/4 Male NPT	0.50 (12.7)	10	4.14 (105.2)	2.07 (52.6)	1.50 (38.0)	5.71 (145)	1.89 (48.0)
-BSB-MN12-18	3/4 Male NPT	0.71 (18.0)	19	4.54 (115.2)	2.27 (57.6)	1.96 (50.0)	6.30 (160)	2.08 (53.0)
-BSB-MN16-18	1 Male NPT	0.71 (18.0)	30	4.91 (124.8)	2.45 (62.4)	1.96 (50.0)	6.30 (160)	2.08 (53.0)
Note: If you choose BSPT male thread, the basic ordering no. is MR; If you choose BSPP male thread, the the basic ordering no. is MG.								
-BSB-FT4-5	1/4 Tube	0.19 (4.8)	1.2	3.60 (91.6)	1.80 (45.8)	1.30 (32.0)	5.12 (130)	1.73 (44.0)
-BSB-FT6-7	3/8 Tube	0.39 (7.1)	3.7	3.72 (94.6)	1.86 (47.3)	1.30 (32.0)	5.12 (130)	1.73 (44.0)
-BSB-FT8-10	1/2 Tube	0.41 (10.3)	7.5	3.92 (99.6)	1.96 (49.8)	1.30 (32.0)	5.12 (130)	1.73 (44.0)
-BSB-FT10-13	5/8 Tube	0.50 (12.7)	10	4.36 (110.6)	2.29 (58.3)	1.50 (38.0)	5.71 (145)	1.89 (48.0)
-BSB-FT12-13	3/4 Tube	0.50 (12.7)	10	4.36 (110.6)	2.29 (58.3)	1.50 (38.0)	5.71 (145)	1.89 (48.0)
-BSB-FT12-18	3/4 Tube	0.71 (18.0)	19	4.59 (116.6)	2.29 (58.3)	1.96 (50.0)	6.30 (160)	2.08 (53.0)
-BSB-FT16-18	1 Tube	0.71 (18.0)	30	5.11 (129.8)	2.66 (64.9)	1.96 (50.0)	6.30 (160)	2.08 (53.0)
-BSB-MT6-5	6mm Tube	0.19 (4.8)	1.2	3.56 (90.4)	1.78 (45.2)	1.30 (32.0)	5.12 (130)	1.73 (44.0)
-BSB-MT8-6	8mm Tube	0.25 (6.4)	2.3	3.60 (91.6)	1.80 (45.8)	1.30 (32.0)	5.12 (130)	1.73 (44.0)
-BSB-MT10-7	10mm Tube	0.39 (7.1)	3.7	3.72 (94.6)	1.86 (47.3)	1.30 (32.0)	5.12 (130)	1.73 (44.0)
-BSB-MT12-10	12mm Tube	0.41 (10.3)	7.5	3.92 (99.6)	1.96 (49.8)	1.30 (32.0)	5.12 (130)	1.73 (44.0)
-BSB-MT14-10	14mm Tube	0.41 (10.3)	7.5	3.94 (100)	1.97 (50.0)	1.30 (32.0)	5.12 (130)	1.73 (44.0)
-BSB-MT16-13	16mm Tube	0.50 (12.7)	10	4.42 (112.2)	2.21 (56.1)	1.50 (38.0)	5.71 (145)	1.89 (48.0)
-BSB-MT18-13	18mm Tube	0.50 (12.7)	10	4.42 (112.2)	2.21 (56.1)	1.50 (38.0)	5.71 (145)	1.89 (48.0)
-BSB-MT20-13	20mm Tube	0.50 (12.7)	10	4.44 (112.8)	2.22 (56.4)	1.50 (38.0)	5.71 (145)	1.89 (48.0)
-BSB-MT22-18	22mm Tube	0.50 (12.7)	10	4.44 (112.8)	2.22 (56.4)	1.50 (38.0)	5.71 (145)	1.89 (48.0)
-BSB-MT22-18	22mm Tube	0.71 (18.0)	19	4.87 (123.8)	2.43 (61.9)	1.96 (50.0)	6.30 (160)	2.08 (53.0)
-BSB-MT25-18	25mm Tube	0.71 (18.0)	30	5.11 (129.8)	2.66 (64.9)	1.96 (50.0)	6.30 (160)	2.08 (53.0)

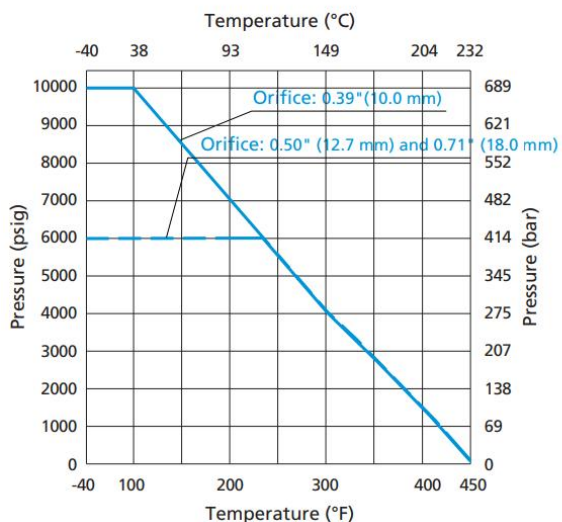
1. Sizes and types listed are standard. Other sizes and types are available upon request, refer to the ordering information.
2. Dimensions are shown with ROKE nuts finger-tightened. All dimensions are for reference only and are subject to change.
3. For dimensions not shown above, please contact ROKE Sales department or local distributor.

Panel Mounting Options

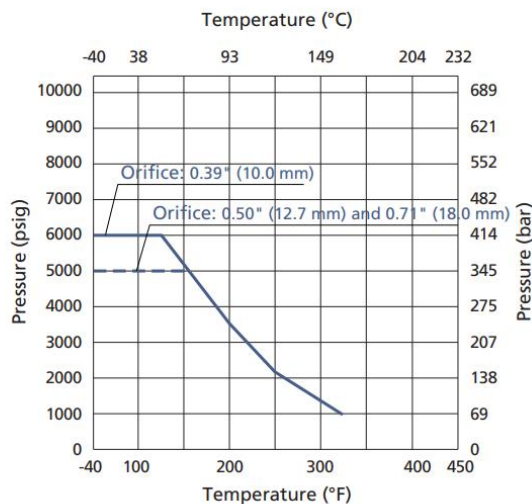
	Orifice	L1	L2	T1	T2	Panel Thickness in. (mm)
	in.(mm)	in.(mm)	in.(mm)	in.(mm)	in.(mm)	
	0.39 (10.0)	1.02 (26.0)	1.02 (26.0)	0.20 (5.0)	1.18 (30.0)	Max. 3/8 (9.5)
	0.50 (12.7)	1.18 (30.0)	1.18 (30.0)	0.20 (5.0)	1.50 (38.0)	
	0.71 (18.0)	1.42 (36.0)	1.42 (36.0)	0.20 (5.0)	1.50 (38.0)	

Pressure vs. Temperature

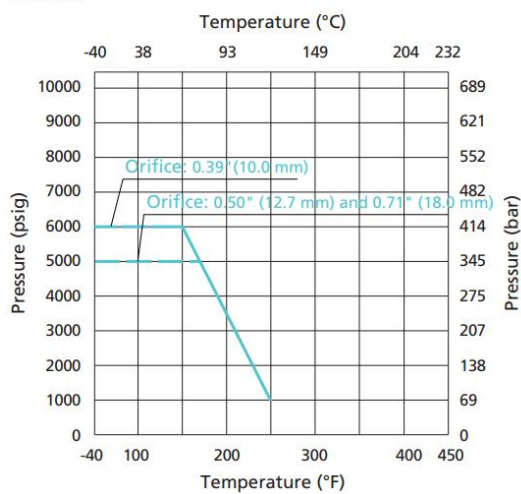
PEEK



PVDF



PCTFE



Trunnion Ball Valves

TB Series (6000 psig)

TBH Series (10000 psig)

Features

- ⦿ Fixed ball with double sealing.
- ⦿ Automatic compensation of seat sealing.
- ⦿ Low operating torque.
- ⦿ Handle as indicator of flow direction.
- ⦿ Positive handle stop.
- ⦿ Handle color options are available.
- ⦿ Compact maximum-flow design.
- ⦿ Trunnion-style ball: Prevents ball blow out.
- ⦿ 2- or 3-way flow patterns.
- ⦿ Spring-loadseats: Provide leak tight integrity in both low and high-pressure systems, reduce seat wear from pressure surges.
- ⦿ Leak-tight performance testing for every valve at the maximum working pressure with nitrogen.
- ⦿ Maximum working pressure:
TB Series: 6000 psig (414 bar).
TBH Series: 10000 psig (689 bar).
- ⦿ Working temperature: -0°F to 450°F (-18°C to 232°C).

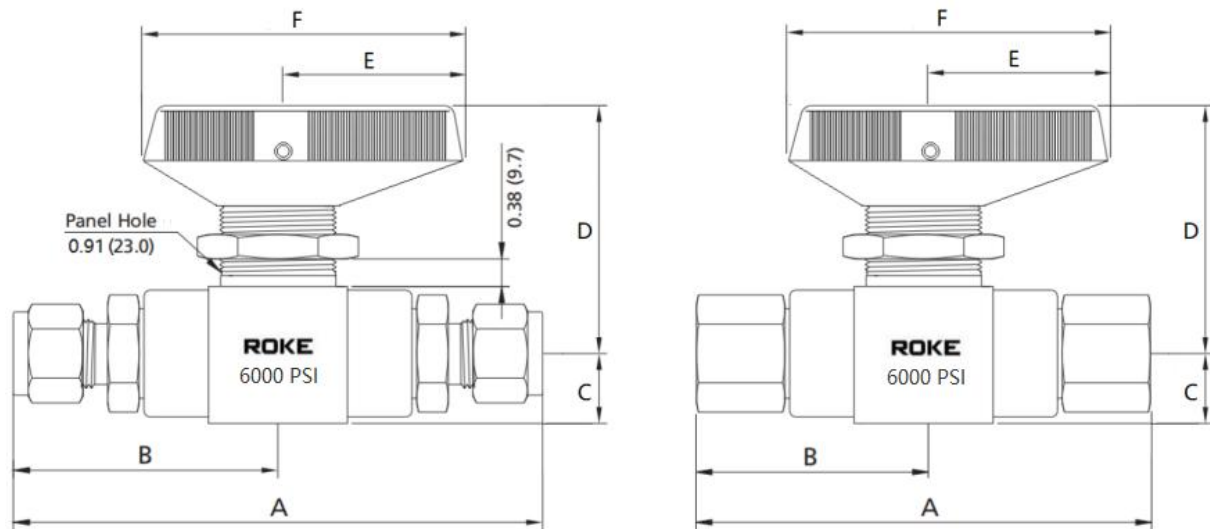


Standard Materials of Construction

Construction	NO.	Component	Material	
			316 SS	Alloy 400
	1	Handle	Nylon or Aluminium	
	2	Panel Nut	316 SS/B783	
	3	Body	316 SS/A479	Alloy 400/B164
	4	End Connector	316 SS/A276	Alloy R-405/B164
	5	Seat Retainer Backup Ring	Reinforced PTFE	
	6	Seat Retainer O-ring	Fluorocarbon FKM	
	7	Seat Retainer Guide	316 SS/A276	Alloy R-405/B164
	8	End Connector Seal	PTFE/D1710	
	9	Trunnion O-ring	Fluorocarbon FKM	
	10	Trunnion Backup Ring	Reinforced PTFE	
	11	Trunnion Bearing	PEEK	
	12	Ball	316 SS/A276	Alloy R-405/B164
	13	Seat Spring	Alloy X-750/AMS 5542	
	14	Seat Retainer	316 SS/A276	Alloy R-405/B164
	15	Seat	PTFE or PEEK or PCTFE	
	16	Stem	316 SS/A276	Alloy R-405/B164
	17	Stem Washer	PEEK	
	18	Stem O-ring	Fluorocarbon FKM	
	19	Secondary Stem Backup Ring	PTFE/D1710	
	20	Primary Stem Backup Ring	PEEK	
	21	Pin	Stainless Steel	
	22	Set Screw	Stainless Steel	

TB Series-6000PSI

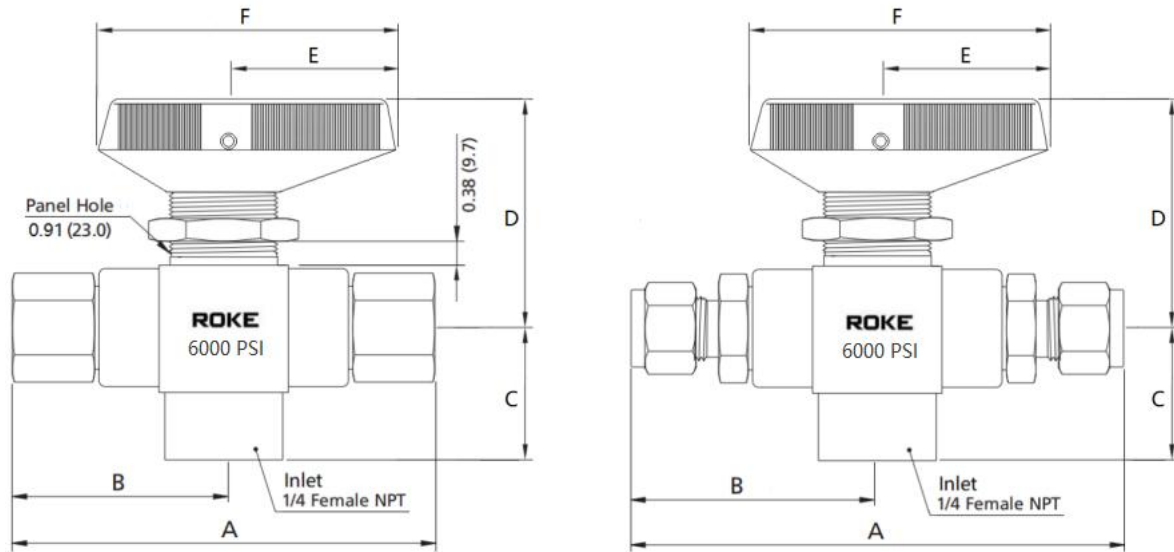
2-way Valves



Basic Ordering Number	Connection Type and Size	Orifice in.(mm)	Cv	Dimension, in.(mm)					
				A	B	C	D	E	F
-TB-FN2-5	1/8 Female NPT	0.19 (4.8)	1.2	2.94 (74.7)	1.47 (37.3)	0.50 (12.7)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TB-FN4-5	1/4 Female NPT	0.19 (4.8)	1.2	2.94 (74.7)	1.47 (37.3)	0.50 (12.7)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TB-FN6-7	3/8 Female NPT	0.19 (4.8)	1.2	3.93 (99.8)	1.97 (49.9)	0.50 (12.7)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TB-FN8-5	1/2 Female NPT	0.19 (4.8)	1.2	4.25 (108)	2.13 (54.0)	0.50 (12.7)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
Note: If you choose BSPT female thread, the basic ordering no. is FR.									
-TB-FT4-5	1/4 Tube	0.19 (4.8)	1.2	4.09 (103.8)	2.04 (51.9)	0.50 (12.7)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TB-FT6-5	3/8 Tube	0.19 (4.8)	1.2	4.25 (108)	2.13 (54.0)	0.50 (12.7)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TB-FT8-5	1/2 Tube	0.19 (4.8)	1.2	4.60 (116.8)	2.30 (58.4)	0.50 (12.7)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TB-MT4-5	6mm Tube	0.19 (4.8)	1.2	4.09 (103.8)	2.04 (51.9)	0.50 (12.7)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TB-MT8-5	8mm Tube	0.19 (4.8)	1.2	4.14 (105.2)	2.07 (52.6)	0.50 (12.7)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TB-MT10-5	10mm Tube	0.19 (4.8)	1.2	4.25 (108)	2.13 (54.0)	0.50 (12.7)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TB-MT12-5	12mm Tube	0.19 (4.8)	1.2	4.60 (116.8)	2.30 (58.4)	0.50 (12.7)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)

TB Series-6000PSI

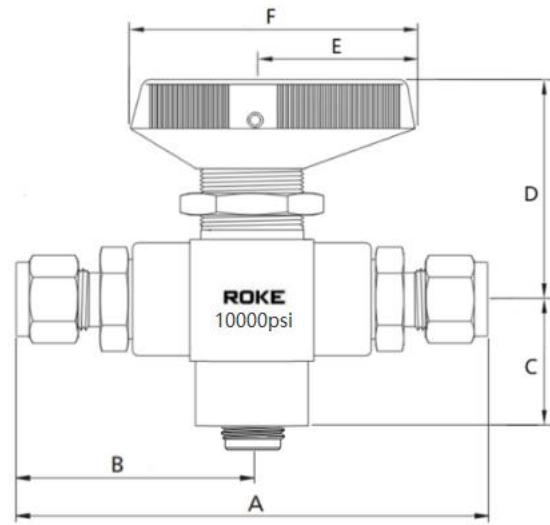
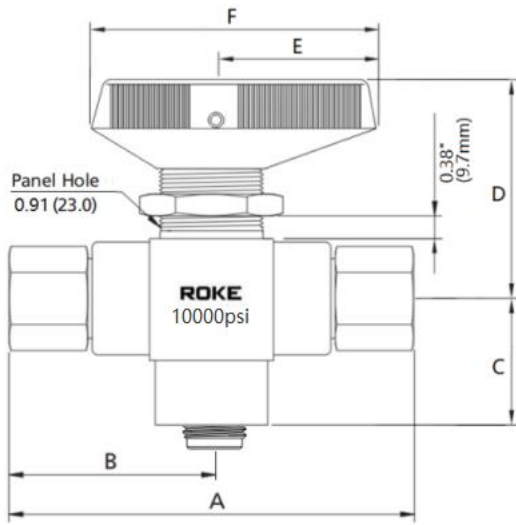
3-way Valves



Basic Ordering Number	Connection Type and Size	Orifice in.(mm)	Cv	Dimension, in.(mm)					
				A	B	C	D	E	F
-TB-FN2-5-3W	1/8 Female NPT	0.19 (4.8)	0.75	2.94 (74.7)	1.47 (37.3)	1.06 (26.9)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TB-FN4-5-3W	1/4 Female NPT	0.19 (4.8)	0.75	2.94 (74.7)	1.47 (37.3)	1.06 (26.9)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TB-FN6-7-3W	3/8 Female NPT	0.19 (4.8)	0.75	3.93 (99.8)	1.97 (49.9)	1.06 (26.9)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TB-FN6-8-3W	3/8 Female NPT	0.32 (8.0)	4.8	4.57 (116)	2.28 (58.0)	1.38 (35.0)	2.40 (61.0)	3.97 (78.0)	4.35 (110.5)
-TB-FN8-5-3W	1/2 Female NPT	0.19 (4.8)	0.75	4.25 (108)	2.13 (54.0)	1.06 (26.9)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TB-FN8-5-3W	1/2 Female NPT	0.32 (8.0)	4.8	4.57 (116)	2.28 (58.0)	1.38 (35.0)	2.40 (61.0)	3.97 (78.0)	4.35 (110.5)
Note: If you choose BSPT female thread, the basic ordering no. is FR.									
-TB-FT4-5-3W	1/4 Tube	0.19 (4.8)	0.75	4.09 (103.8)	2.04 (51.9)	1.06 (26.9)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TB-FT6-5-3W	3/8 Tube	0.19 (4.8)	0.75	4.25 (108)	2.13 (54.0)	1.06 (26.9)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TB-FT6-8-3W	3/8 Tube	0.32 (8.0)	4.8	4.87 (123.7)	2.44 (61.9)	1.38 (35.0)	2.40 (61.0)	3.97 (78.0)	4.35 (110.5)
-TB-FT8-5-3W	1/2 Tube	0.19 (4.8)	0.75	4.60 (116.8)	2.30 (58.4)	1.06 (26.9)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TB-FT8-8-3W	1/2 Tube	0.32 (8.0)	4.8	5.09 (129.2)	2.54 (64.6)	1.38 (35.0)	2.40 (61.0)	3.97 (78.0)	4.35 (110.5)
-TB-MT4-5-3W	6mm Tube	0.19 (4.8)	0.75	4.09 (103.8)	2.04 (51.9)	1.06 (26.9)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TB-MT8-5-3W	8mm Tube	0.19 (4.8)	0.75	4.14 (105.2)	2.07 (52.6)	1.06 (26.9)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TB-MT10-5-3W	10mm Tube	0.19 (4.8)	0.75	4.25 (108)	2.13 (54.0)	1.06 (26.9)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TB-MT10-8-3W	10mm Tube	0.32 (8.0)	4.8	4.87 (123.7)	2.44 (61.9)	1.38 (35.0)	2.40 (61.0)	3.97 (78.0)	4.35 (110.5)
-TB-MT12-5-3W	12mm Tube	0.19 (4.8)	0.75	4.60 (116.8)	2.30 (58.4)	1.06 (26.9)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TB-MT12-8-3W	12mm Tube	0.32 (8.0)	4.8	5.09 (129.2)	2.54 (64.6)	1.38 (35.0)	2.40 (61.0)	3.97 (78.0)	4.35 (110.5)

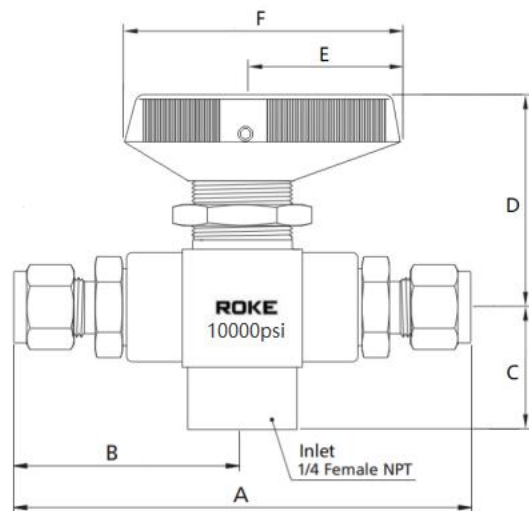
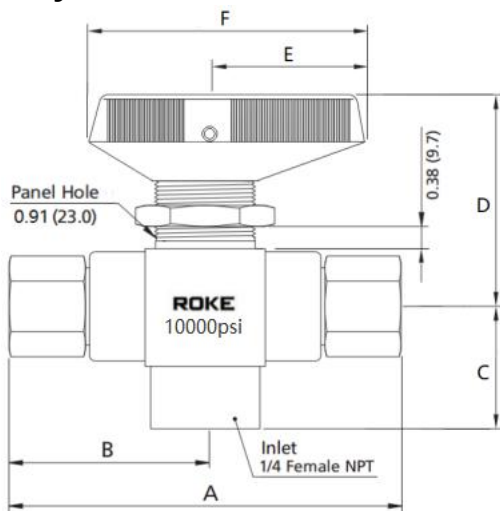
TBH Series-10000PSI

2-way Valves



Basic Ordering Number	Connection Type and Size	Orifice in.(mm)	Cv	Dimension, in.(mm)					
				A	B	C	D	E	F
-TBH-FN2-5	1/8 Female NPT	0.19 (4.8)	1.2	2.94 (74.7)	1.47 (37.3)	0.50 (12.7)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TBH-FN4-5	1/4 Female NPT	0.19 (4.8)	1.2	3.93 (99.8)	1.96 (49.9)	0.50 (12.7)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TBH-FN8-5	1/2 Female NPT	0.19 (4.8)	1.2	4.25 (108)	2.13 (54.0)	0.50 (12.7)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
Note: If you choose BSPT female thread, the basic ordering no. is FR.									
-TBH-FT4-5	1/4 Tube	0.19 (4.8)	1.2	4.09 (103.8)	2.04 (51.9)	0.50 (12.7)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TBH-FT6-5	3/8 Tube	0.19 (4.8)	1.2	4.25 (108)	2.13 (54.0)	0.50 (12.7)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TBH-FT8-5	1/2 Tube	0.19 (4.8)	1.2	4.60 (116.8)	2.30 (58.4)	0.50 (12.7)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TBH-MT4-5	6mm Tube	0.19 (4.8)	1.2	4.09 (103.8)	2.04 (51.9)	0.50 (12.7)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TBH-MT8-5	8mm Tube	0.19 (4.8)	1.2	4.14 (105.2)	2.07 (52.6)	0.50 (12.7)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TBH-MT10-5	10mm Tube	0.19 (4.8)	1.2	4.25 (108)	2.13 (54.0)	0.50 (12.7)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TBH-MT12-5	12mm Tube	0.19 (4.8)	1.2	4.60 (116.8)	2.30 (58.4)	0.50 (12.7)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)

3-way Valves

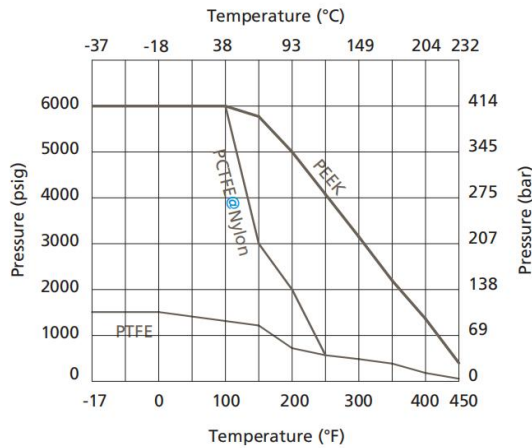


Basic Ordering Number	Connection Type and Size	Orifice in.(mm)	Cv	Dimension, in.(mm)					
				A	B	C	D	E	F
-TBH-FN2-5-3W	1/8 Female NPT	0.19 (4.8)	0.75	2.94 (74.7)	1.47 (37.3)	1.06 (26.9)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TBH-FN4-5-3W	1/4 Female NPT	0.19 (4.8)	0.75	2.94 (74.7)	1.47 (37.3)	1.06 (26.9)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TBH-FN8-9-3W	1/2 Female NPT	0.19 (4.8)	0.75	4.25 (108)	2.13 (54.0)	1.06 (26.9)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
Note: If you choose BSPT female thread, the basic ordering no. is FR.									
-TBH-FT4-5-3W	1/4 Tube	0.19 (4.8)	0.75	4.09 (103.8)	2.04 (51.9)	1.06 (26.9)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TBH-FT6-5-3W	3/8 Tube	0.19 (4.8)	0.75	4.25 (108)	2.13 (54.0)	1.06 (26.9)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TBH-FT8-5-3W	1/2 Tube	0.19 (4.8)	0.75	4.60 (116.8)	2.30 (58.4)	1.06 (26.9)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TBH-MT4-5-3W	6mm Tube	0.19 (4.8)	0.75	4.09 (103.8)	2.04 (51.9)	1.06 (26.9)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TBH-MT8-5-3W	8mm Tube	0.19 (4.8)	0.75	4.14 (105.2)	2.07 (52.6)	1.06 (26.9)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TBH-MT10-5-3W	10mm Tube	0.19 (4.8)	0.75	4.25 (108)	2.13 (54.0)	1.06 (26.9)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)
-TBH-MT12-5-3W	12mm Tube	0.19 (4.8)	0.75	4.60 (116.8)	2.30 (58.4)	1.06 (26.9)	1.88 (47.7)	1.57 (40.0)	2.56 (65.0)

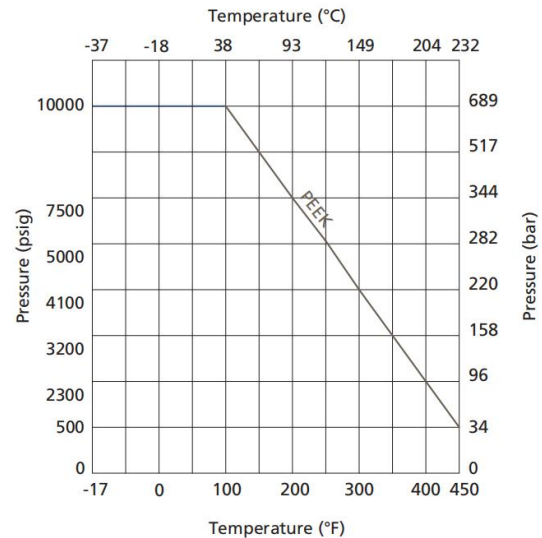
1. Sizes and types listed are standard. Other sizes and types are available upon request, refer to the ordering information.
2. Dimensions are shown with ROKE nuts finger-tightened. All dimensions are for reference only and are subject to change.
3. For dimensions not shown above, please contact ROKE Sales department or local distributor.

Pressure vs. Temperature

TBV Series



TBVH Series



TB & TBH Series Seal Kits

1. Seal kits contain components of the same material as original valve. See standard material of construction.
2. To complete the ordering number, please add SK for seal kits. Example: TBSS-FN4-5-3W-SK

2-piece Casting Ball Valves

2CB Series (2000 psig)

Features

- ◉ Casting Valve Body.
- ◉ Blowout proof stem with self-sealing function.
- ◉ Options for handle color.
- ◉ Optional pneumatic and electric actuator.
- ◉ Leak-tight performance testing for every valve at the maximum working pressure with nitrogen.
- ◉ Maximum working pressure: 2000 psig (138 bar).
- ◉ Working temperature: -20°F to 250°F (-28°C to 121°C).



Standard Materials of Construction

Construction	NO.	Component	Material	
			316 SS	304 SS
	1	End Connector	316 SS/A479	304 SS/A479
	2	Seat	PTFE/D1710	
	3	Ball	316 SS/A479	304 SS/A479
	4	Gasket	PTFE/D1710	
	5	Body	316 SS/A479	304 SS/A479
	6	Stem Gasket	PTFE/D1710	
	7	Stem Packing	PTFE/D1710	
	8	Stem	316 SS/A479	304 SS/A479
	9	Packing Gland	316 SS/A479	304 SS/A479
	10	Handle	304 SS/A479	201 SS/A479
	11	Spring Washer	304 SS/A479	
	12	Handle Nut	304 SS/A479	
	13	Handle Lock	304 SS/A479	201 SS/A479

Dimensions

产品编号	连接形式及尺寸 T	内孔 D in.(mm)	Cv	尺寸数据 in.(mm)		
				L	H	E
-2CB-FN4-10	1/4 Female NPT	0.39 (10)	6.5	2.28 (58.0)	2.17 (55.0)	4.13 (105)
-2CB-FN6-12	3/8 Female NPT	0.47 (12)	9.0	2.28 (58.0)	2.17 (55.0)	4.13 (105)
-2CB-FN8-15	1/2 Female NPT	0.59 (15.0)	13.0	2.56 (65.0)	2.62 (66.5)	4.53 (115)
-2CB-FN12-20	3/4 Female NPT	0.79 (20.0)	50.0	2.87 (73.0)	2.76 (70.0)	4.92 (125)
-2CB-FN16-25	1 Female NPT	0.98 (25.0)	93.0	3.39 (86.0)	3.15 (80.0)	5.51 (140)
-2CB-FN20-32	1 1/4 Female NPT	1.26 (32.0)	110	3.93 (100)	3.37 (85.5)	5.51 (140)
-2CB-FN24-38	1 1/2 Female NPT	1.50 (38.0)	130	4.53 (115)	4.13 (105)	6.69 (170)
-2CB-FN32-49	2 Female NPT	1.97 (49.0)	250	5.28 (134)	4.45 (113)	6.69 (170)
-2CB-FN40-65	2 1/2 Female NPT	2.56 (65)	500	6.50 (165)	5.31 (135)	9.45 (240)
-2CB-FN48-78	3 Female NPT	3.07 (78)	800	7.48 (190)	5.71 (145)	9.45 (240)
-2CB-FN64-100	4 Female NPT	3.93 (100)	1500	8.66 (220)	6.58 (167)	11.81 (300)

Note: If you choose BSPT female thread, the basic ordering no. is FR; If you choose BSPP female thread, the the basic ordering no. is FG.

1. Sizes and types listed are standard. Other sizes and types are available upon request, refer to the ordering information.
2. Dimensions are shown with ROKE nuts finger-tightened. All dimensions are for reference only and are subject to change.
3. For dimensions not shown above, please contact ROKE Sales department or local distributor.

3-piece Casting Ball Valves

3CB Series (2000 psig)

Features

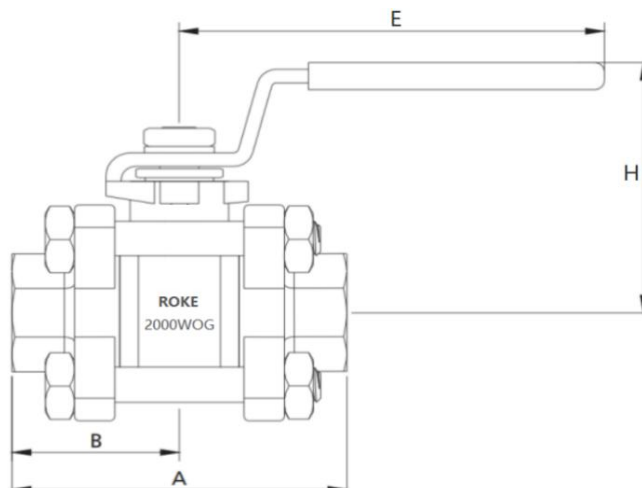
- ◉ Casting Valve Body.
- ◉ Blowout proof stem with self-sealing function.
- ◉ Options for handle color.
- ◉ Optional pneumatic and electric actuator.
- ◉ Leak-tight performance testing for every valve at the maximum working pressure with nitrogen.
- ◉ Maximum working pressure: 2000 psig (138 bar).
- ◉ Working temperature: -20°F to 450°F (-28°C to 232°C).



Standard Materials of Construction

Construction	NO.	Component	Material	
			316 SS	304 SS
	1	Stem Nut	Gr. 8M/A194	
	2	Gasket	304 SS	
	3	Handle	304 SS/A240 (with vinyl sleeve)	
	4	Gland	316 SS/A479	304 SS/A479
	5	Stem Packing	PTFE/D1710	
	6	Stem	316 SS/A479	304 SS/A479
	7	Stem Bearing	PTFE/D1710	
	8	Body	316 SS/A479	304 SS/A479
	9	Body Bolt	Gr. 8M/A194	
	10	Ball	316 SS/A479	304 SS/A479
	11	Support Ring	316 SS/A479	304 SS/A479
	12	Flange Seal	PTFE/D1710	
	13	Seat	PTFE/D1710	
	14	Flange	316 SS/A479	304 SS/A479
	15	Gasket	PTFE/D1710	
	16	Nut	Gr. 8M/A194	

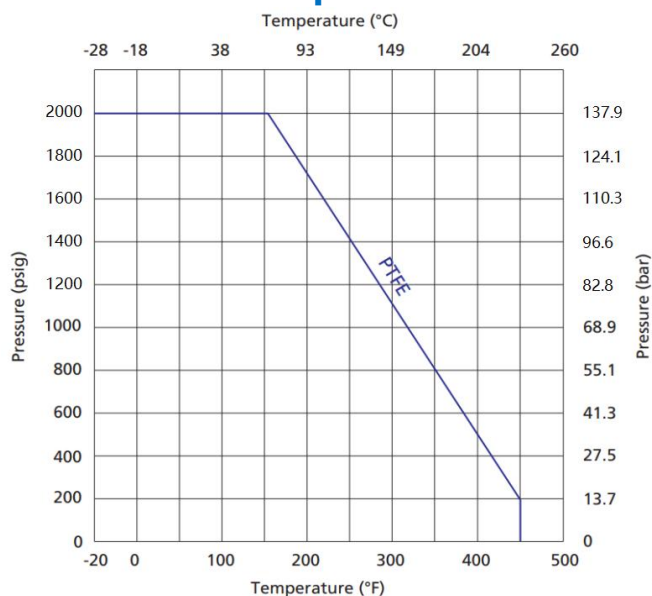
Dimensions



Basic Ordering Number	Connection Type and Size	Orifice in.(mm)	Cv	Dimension, in.(mm)			
				A	B	E	H
-3CB-FN4-10	1/4 Female NPT	0.39 (10.0)	6.5	2.36 (60.0)	1.18 (30.0)	4.92 (125)	2.03 (51.5)
-3CB-FN6-12	3/8 Female NPT	0.47 (12.0)	9.0	2.36 (60.0)	1.18 (30.0)	4.92 (125)	2.03 (51.5)
-3CB-FN8-15	1/2 Female NPT	0.59 (15.0)	13.0	2.95 (75.0)	1.48 (37.5)	4.92 (125)	2.17 (55.0)
-3CB-FN12-20	3/4 Female NPT	0.79 (20.0)	50.0	3.15 (80.0)	1.58 (40.0)	4.92 (125)	2.36 (60.0)
-3CB-FN16-25	1 Female NPT	0.98 (25.0)	93.0	3.54 (90.0)	1.77 (45.0)	4.92 (125)	2.76 (70.0)
-3CB-FN20-32	1 1/4 Female NPT	1.26 (32.0)	110	4.33 (110)	2.17 (55.0)	5.91 (150)	3.23 (82.0)
-3CB-FN24-38	1 1/2 Female NPT	1.50 (38.1)	130	4.72 (120)	2.36 (60.0)	6.69 (170)	3.62 (92.0)
-3CB-FN32-50	2 Female NPT	1.97 (50.0)	270	5.51 (140)	2.75 (70.0)	8.66 (220)	4.13 (105)
Note: If you choose BSPP female thread, the the basic ordering no. is FG.							
-3CB-FR8-15	1/2 Female BSPT	0.59 (15.0)	13.0	2.95 (75.0)	1.48 (37.5)	4.92 (125)	2.17 (55.0)
-3CB-FR12-20	3/4 Female BSPT	0.79 (20.0)	50.0	3.15 (80.0)	1.58 (40.0)	4.92 (125)	2.36 (60.0)
-3CB-FR16-25	1 Female BSPT	0.98 (25.0)	93.0	3.54 (90.0)	1.77 (45.0)	4.92 (125)	2.76 (70.0)
-3CB-FR20-32	1 1/4 Female BSPT	1.26 (32.0)	110	4.33 (110)	2.17 (55.0)	5.91 (150)	3.23 (82.0)
-3CB-FR24-38	1 1/2 Female BSPT	1.50 (38.1)	130	4.72 (120)	2.36 (60.0)	6.69 (170)	3.62 (92.0)
-3CB-FR32-50	2 Female BSPT	1.97 (50.0)	270	5.51 (140)	2.75 (70.0)	8.66 (220)	4.13 (105)
-3CB-SW8-10	1/2 Socket Weld	0.59 (15.0)	13.0	2.95 (75.0)	1.48 (37.5)	4.92 (125)	2.17 (55.0)
-3CB-SW12-15	3/4 Socket Weld	0.79 (20.0)	50.0	3.15 (80.0)	1.58 (40.0)	4.92 (125)	2.36 (60.0)
-3CB-SW16-20	1 Socket Weld	0.98 (25.0)	93.0	3.54 (90.0)	1.77 (45.0)	4.92 (125)	2.76 (70.0)
-3CB-SW20-32	1 1/4 Socket Weld	1.26 (32.0)	110	4.33 (110)	2.17 (55.0)	5.91 (150)	3.23 (82.0)
-3CB-SW24-38	1 1/2 Socket Weld	1.50 (38.1)	130	4.72 (120)	2.36 (60.0)	6.69 (170)	3.62 (92.0)
-3CB-SW32-50	2 Socket Weld	1.97 (50.0)	270	5.51 (140)	2.75 (70.0)	8.66 (220)	4.13 (105)

1. Sizes and types listed are standard. Other sizes and types are available upon request, refer to the ordering information.
2. Dimensions are shown with ROKE nuts finger-tightened. All dimensions are for reference only and are subject to change.
3. For dimensions not shown above, please contact ROKE Sales department or local distributor.

Pressure vs. Temperature



3-piece Forged Ball Valves

3FB Series (3000 psig)

Features

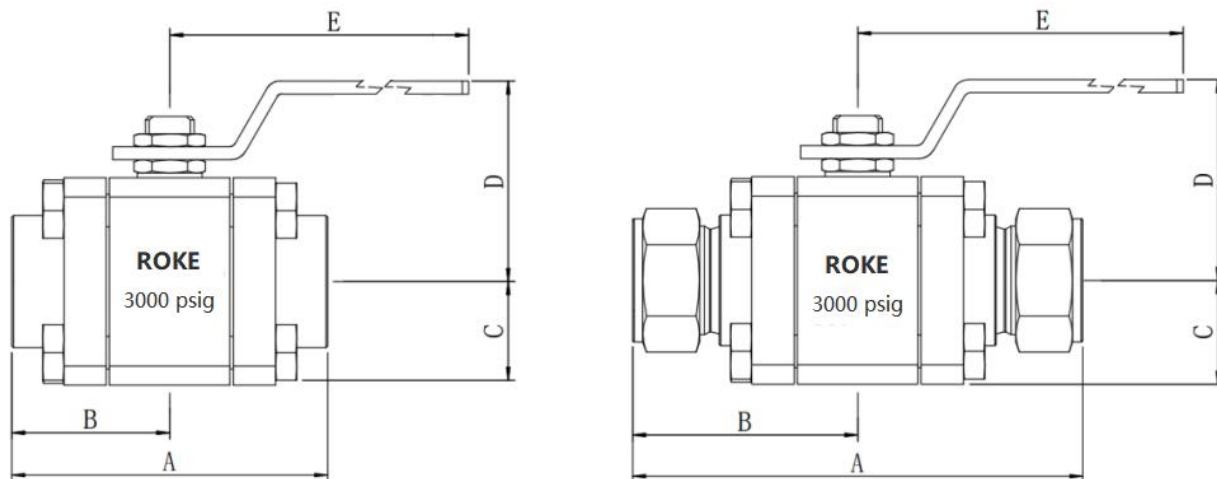
- ⦿ Forged Valve Body.
- ⦿ Blowout proof stem with self-sealing function.
- ⦿ Options for handle color.
- ⦿ Optional pneumatic and electric actuator.
- ⦿ Leak-tight performance testing for every valve at the maximum working pressure with nitrogen.
- ⦿ Maximum working pressure: 3000 psig (207 bar).
- ⦿ Working temperature: -20°F to 450°F (-28°C to 232°C).



Standard Materials of Construction

Construction	NO.	Component	Material	
			316 SS	304 SS
	1	Stem Nut	304 SS	
	2	Stem	316 SS/A479	304 SS/A479
	3	Stop Pin	304 SS/A240	
	4	Stem Packing	Reinforced PTFE	
	5	Stem Bearing	PEEK	
	6	Handle	304 SS	
	7	Body Nut	304 SS	
	8	valve seat	PEEK	
	9	O-ring	Fluorocarbon FKM	
	10	Body	316 SS/A479	304 SS/A479
	11	Ball	316 SS/A479	304 SS/A479
	12	Flange	316 SS/A479	304 SS/A479
	13	Body Bolt	304 SS/A240	
	14	Stem Spring	304 SS/A240	

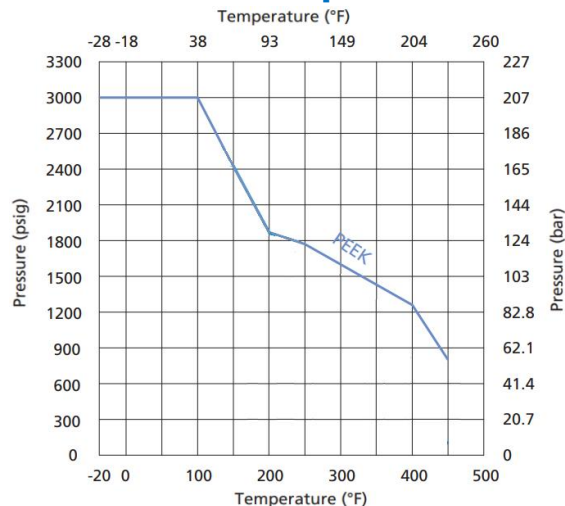
Dimensions



Basic Ordering Number	Connection Type and Size	Orifice in.(mm)	Cv	Dimension, in.(mm)				
				A	B	C	D	E
-3FB-FN2-7	1/8 Female NPT	0.28 (7.1)	3.80	2.09 (53.2)	1.05 (26.6)	0.68 (17.3)	1.56 (39.6)	2.60 (66.0)
-3FB-FN4-7	1/4 Female NPT	0.28 (7.1)	3.80	2.25 (57.2)	1.13 (28.6)	0.68 (17.3)	1.56 (39.6)	2.60 (66.0)
-3FB-FN6-13	3/8 Female NPT	0.51 (13.0)	12.0	2.89 (73.4)	1.44 (36.7)	0.89 (22.7)	1.97 (50.0)	4.29 (109)
-3FB-FN8-13	1/2 Female NPT	0.51 (13.0)	12.0	2.89 (73.4)	1.44 (36.7)	0.89 (22.7)	1.97 (50.0)	4.29 (109)
-3PF-FN12-22	3/4 Female NPT	0.87 (22.0)	31.0	3.91 (99.4)	1.96 (49.7)	1.25 (31.8)	2.48 (63.0)	6.26 (159)
-3FB-FN16-22	1 Female NPT	0.87 (22.0)	38.0	3.91 (99.4)	1.96 (49.7)	1.25 (31.8)	2.48 (63.0)	6.26 (159)
-3FB-FN20-32	1 1/4 Female NPT	1.26 (32.0)	90	4.65 (118)	2.32 (59.0)	1.53 (38.9)	2.74 (69.6)	6.26 (159)
-3FB-FN24-32	1 1/2 Female NPT	1.26 (32.0)	100	4.80 (122)	2.40 (61.0)	1.53 (38.9)	2.74 (69.6)	6.26 (159)
-3FB-FN32-38	2 Female NPT	1.50 (38.0)	130	5.35 (136)	2.68 (68.1)	1.73 (44.0)	3.46 (87.9)	7.09 (180)
Note: If you choose BSPT female thread, the basic ordering no. is FR; If you choose BSPP female thread, the the basic ordering no. is FG.								
-3FB-FT4-5	1/4 Tube	0.19 (4.8)	1.2	3.16 (80.4)	1.58 (40.2)	0.68 (17.3)	1.56 (39.6)	2.60 (66.0)
-3FB-FT6-7	3/8 Tube	0.28 (7.1)	3.8	3.30 (83.8)	1.65 (41.9)	0.68 (17.3)	1.56 (39.6)	2.60 (66.0)
-3FB-FT8-10	1/2 Tube	0.41 (10.4)	7.5	4.04 (103)	2.02 (51.3)	0.83 (21.0)	1.90 (48.4)	4.50 (114)
-3FB-FT12-13	3/4 Tube	0.51 (13.0)	13.5	4.04 (103)	2.02 (51.3)	0.89 (22.7)	1.97 (50.0)	4.29 (109)
-3FB-FT16-22	1 Tube	0.87 (22.0)	40.0	5.38 (136.6)	2.69 (68.3)	1.25 (31.8)	2.48 (63.0)	6.26 (159)
-3FB-MT6-5	6mm Tube	0.19 (4.8)	1.2	3.16 (80.4)	1.58 (40.2)	0.68 (17.3)	1.56 (39.6)	2.60 (66.0)
-3FB-MT8-5	8mm Tube	0.19 (4.8)	1.2	3.24 (82.2)	1.62 (41.1)	0.68 (17.3)	1.56 (39.6)	2.60 (66.0)
-3FB-MT10-7	10mm Tube	0.28 (7.1)	3.8	3.20 (81.3)	1.60 (40.6)	0.68 (17.3)	1.56 (39.6)	2.60 (66.0)
-3FB-MT12-10	12mm Tube	0.41 (10.4)	7.5	4.04 (103)	2.02 (51.3)	0.83 (21.0)	1.90 (48.4)	4.50 (114)
-3FB-MT14-10	14mm Tube	0.41 (10.4)	7.5	4.04 (103)	2.02 (51.3)	0.89 (22.6)	2.35 (59.7)	4.50 (114)
-3FB-MT16-10	16mm Tube	0.51 (13.0)	13.5	4.04 (103)	2.02 (51.3)	0.89 (22.7)	1.97 (50.0)	4.29 (109)
-3FB-MT18-13	18mm Tube	0.51 (13.0)	13.5	4.04 (103)	2.02 (51.3)	0.89 (22.7)	1.97 (50.0)	4.29 (109)
-3FB-MT20-13	20mm Tube	0.51 (13.0)	13.5	4.16 (105.7)	2.08 (52.9)	0.89 (22.7)	1.97 (50.0)	4.29 (109)
-3FB-MT25-22	25mm Tube	0.87 (22.0)	40.0	5.38 (136.6)	2.69 (68.3)	1.25 (31.8)	2.48 (63.0)	6.26 (159)

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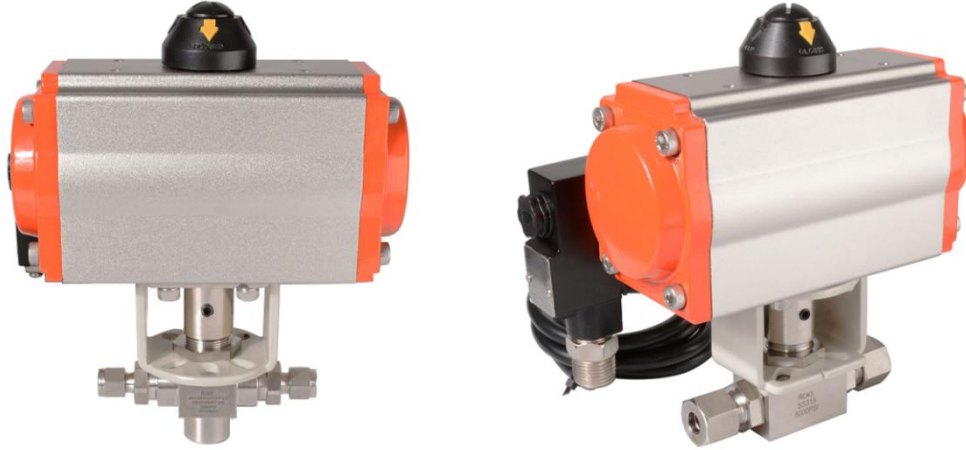
Pressure vs. Temperature



Pneumatic Actuators

DA Series

- ⦿ All ball valves can be connected to pneumatic actuators.
- ⦿ During installation, the output shaft of the pneumatic actuator must be coaxial with the valve shaft.
- ⦿ It can be equipped with solenoid valve, electric positioner, electric converter, pneumatic positioner, etc.



Construction

Structure	NO.	Part name	Material
	1	Screw	SS
	2	Indicator	Plastic
	3	Circlip	SS
	4	Washer	SS
	5	Outer washer	Plastic
	6	Body	Aluminium
	7	O-ring	FKM
	8	Backup ring	Plastic
	9	inner washer	Plastic
	10	Axis	Alloy steel
	11	Backup ring	Plastic
	12	O-ring	FKM
	13	Plug	NBR
	14	piston	Aluminium
	15	O-ring	FKM
	16	Backup ring	Plastic
	17	Guide plate	Nylon
	18	Spring	Spring steel
	19	Left sleeve	Nylon
	20	Right sleeve	Nylon
	21	sleeve rod	Brass
	22	O-ring	FKM
	23	End cap	Aluminium
	24	Tighten screw	SS
	25	Adjusting bolt	SS
	26	Adjusting nut	SS
	27	Washer	SS
	28	O-ring	FKM
	29	Cam	Alloy steel
	30	Limit screw	SS

Gas consumption

Spec.	Opening Volume (L)	Closing Volume (L)	Spec.	Opening Volume (L)	Closing Volume (L)
DA-32	0.04	0.04	DA-210	7.4	9.7
DA-45	0.08	0.11	DA-240	10.7	14.3
DA-52	0.11	0.14	DA-270	16.9	22.5
DA-63	0.20	0.23	DA-300	23.8	29.7
DA-75	0.29	0.38	DA-350	35.1	46.3
DA-83	0.41	0.55	DA-400	52.6	36
DA-92	0.62	0.91	DA-450		
DA-105	0.94	1.18	DA-500		
DA-125	1.47	1.85	DA-550		
DA-140	2.43	3.20	DA-600		
DA-160	3.65	5.03	DA-700		
DA-190	5.9	7.9	DA-800		

Output Torque

Double Acting Pneumatic Actuators

(N./M.)

Spec.	Air Supply Pressure (bar)									
	2	2.5	3	4	4.5	5	5.5	6	7	8
DA-32	3.1	3.8	4.6	6.1	6.9	7.6	8.4	9.2	10.7	12.2
DA-45	6.0	7.6	9.1	12.1	13.6	15.1	16.6	18.1	21.1	24.2
DA-52	8.1	10.1	12.1	16.1	18.1	20.2	22.2	24.2	28.2	32.3
DA-63	14.2	17.8	21.3	28.4	32.0	35.5	39.1	42.6	49.7	56.8
DA-75	20.1	25.2	30.2	40.3	45.3	50.3	55.4	60.4	70.5	80.5
DA-83	30.8	38.5	46.2	61.6	69.4	77.1	84.8	92.5	107.9	123.3
DA-92	45.4	56.8	68.2	90.9	102.3	113.6	125.0	136.3	159.1	181.8
DA-105	65.8	82.2	98.7	131.6	148.0	164.4	180.9	197.3	230.2	263.1
DA-125	103	128	154	205	231	256	282	308	359	410
DA-140	175	219	263	351	395	439	482	526	614	702
DA-160	267	334	401	535	601	668	735	802	935	1069
DA-190	431	538	646	861	969	1077	1185	1292	1508	1723
DA-210	526	658	789	1052	1184	1316	1447	1579	1842	2105
DA-240	773	966	1160	1546	1740	1933	2126	2320	2706	3093
DA-270	1174	1468	1761	2349	2642	2936	3229	3523	34110	4697
DA-300	1526	1908	2289	3052	3434	3815	4197	4578	5341	6104
DA-350	2285	2856	3427	4570	5141	5712	6283	6854	7997	9139
DA-400	3256	4069	4883	6511	7325	8139	8953	9767	11394	13022
DA-450	5076	6345	7614	10153	11422	12691	13960	15229	17768	20306
DA-500	7162	8953	10744	14325	16116	17907	19697	21488	25069	28651
DA-550	9750	12187	14625	19500	21938	24375	26813	29251	34126	39001
DA-600	12893	16116	19339	25786	29009	32232	35455	38679	45125	51572
DA-700	21058	26323	31588	42117	47382	52646	57911	63176	73705	84234
DA-800	32089	40111	48134	64178	72201	80223	88246	96268	112313	128357

Quart or Turn Electric Actuator HL Series



Construction

HL Series		
	NO.	Component
	1	Connecting Flange
	2	Mechanical Limit Screw
	3	Heat Sink
	4	Mechanical Scale Indication
	5	Manual Device
	6	Wiring Chamber
7	Cable Connectors	

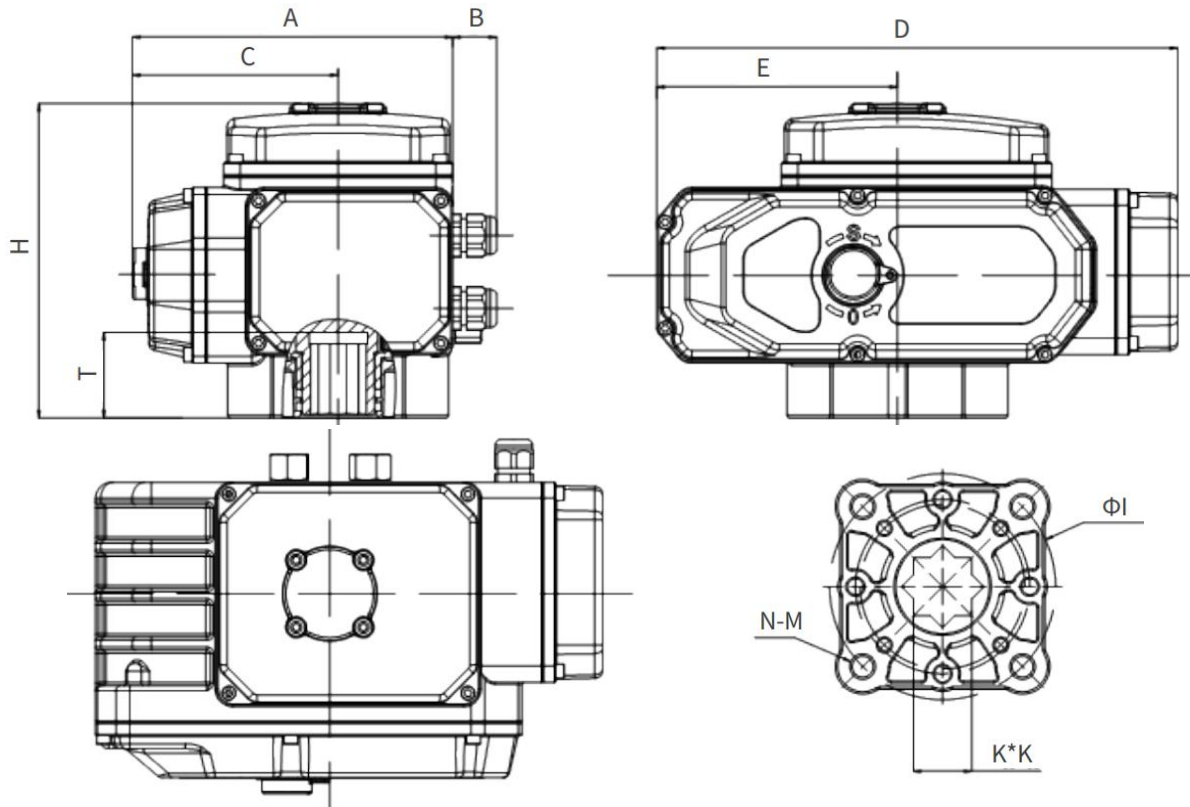
Installation method and precautions

Ambient Temperature: -25°C to +70°C

Ambient Humidity: ≤ 95%

HL Series		
No inversion allowed!	When power outage, do not push in the handle for operation	Strictly install and connect cables according to specifications (Choose wire diameter 6 to 12)

External Dimensions



HL Series									
Specifications	A	B	C	D	E	H	T	K*K	N-M
HL1	113	26.5	70.5	178	87	119.5	30	14*14	4-M5.4-M6.4-M8
HL2	124.5	26.5	82.5	217	105	137.5	35	17*17	4-M6.4-M8

Basic Specification

HL Series		
NO.	Parameter Category	Parameter Details
1	Torque Range	50 to 6000 N.M.
2	Supply Voltage	AC24V/220V/380V... (±10%) . DC12V/24V/48V... (±10%)
3	Frequency	50/60 Hz (±5%)
4	Travel Angle	0 to 90° (±1°)
5	Travel/Auxiliary Switch	2×SPDT, 250VAC 5A
6	Cable Interface	Switch type: 1-M20*1.5. Adjustable/Intelligent: 2-M20*1.5
7	Connecting Flange	ISO 5211
8	Position Indication	Flat cover indicator window
9	Manual Device	Handle (Optional handwheel)
10	Protection Grade	IP67 (Optional IP68,15M-72hour)
11	Ambient Temperature	-25°C to +70°C
12	Ambient Humidity	≤ 95%
13	Anti Condensation Device	Moisture-Proof Heater Inside
14	Overheat Protection	Overheat Protector inside the Motor. Starting Temperature 125° (±5%)
15	Power Failure State	Power off Protection
16	Signal Failure State	4-20 mA/2-10V fully open/closed Modulating. 0-10V, fully open/closed
17	Duty Cycle	Switch Type: S2-30 min. Modulating Type: S4-50%
18	Overtorque Protection	Optional
19	Motor	Squirrel Cage Induction Motor, Insulation Class F
20	Noisy	≤ 70 dB (A) -1M

Mechanical Data

HL Series					
Specifications	Torque (N.M.)	Adaptor (mm)	Flange ISO5211	Switch Type (Kg)	Modulating Type (Kg)
HL1-05	50	14*14	F03/F05/F07	3	3
HL2-10	100	17*17	F05/F07	4.5	4.5
HL2-15	150	17*17	F05/F07	4.5	4.5

Electrical Performance Data

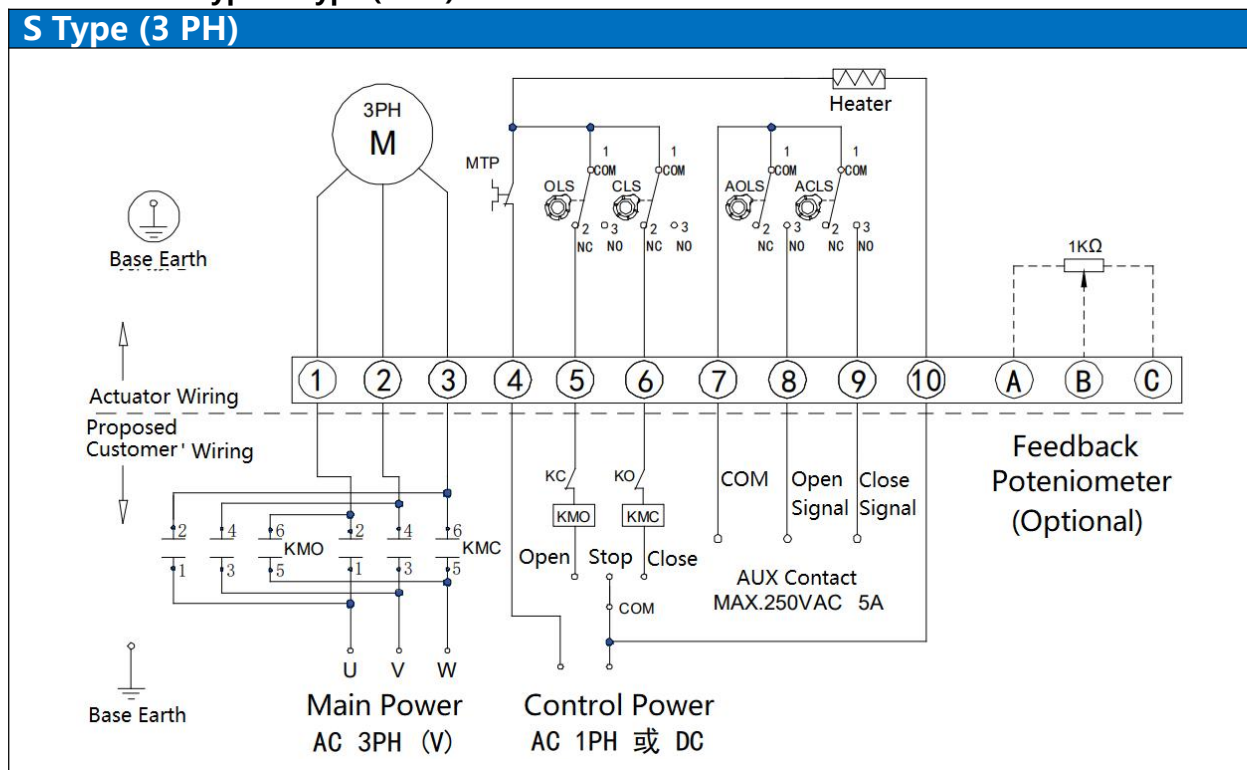
HL Series (1 PH)						
Specifications	Time (sec./0-90°)	Motor Power (W)	110 VAC Current(A)		220 VAC Current(A)	
			Running	Blocking	Running	Blocking
HL1-05	30	10	0.45	0.67	0.24	0.31
HL2-10	20	30	0.65	0.96	0.35	0.45
HL2-15	30	30	0.65	0.96	0.35	0.45

HL Series (DC)						
Specifications	Time (sec./0-90°)	Motor Power (W)	240 VDC Current(A)		48 VDC Current(A)	
			Running	Blocking	Running	Blocking
HL1-05	15	12	1.25	2.3	0.7	1.5
HL2-10	10	30	3.5	5.3	1.9	3.4
HL2-15	15	30	3.5	5.3	1.9	3.4

HL Series (3 PH)						
Specifications	Time (sec./0-90°)	Motor Power (W)	380 VAC Current(A)		440 VAC Current(A)	
			Running	Blocking	Running	Blocking
HL1-05	30	10	0.11	0.13	0.1	0.12
HL2-10	20	30	0.12	0.17	0.11	0.13
HL2-15	30	30	0.13	0.17	0.12	0.13

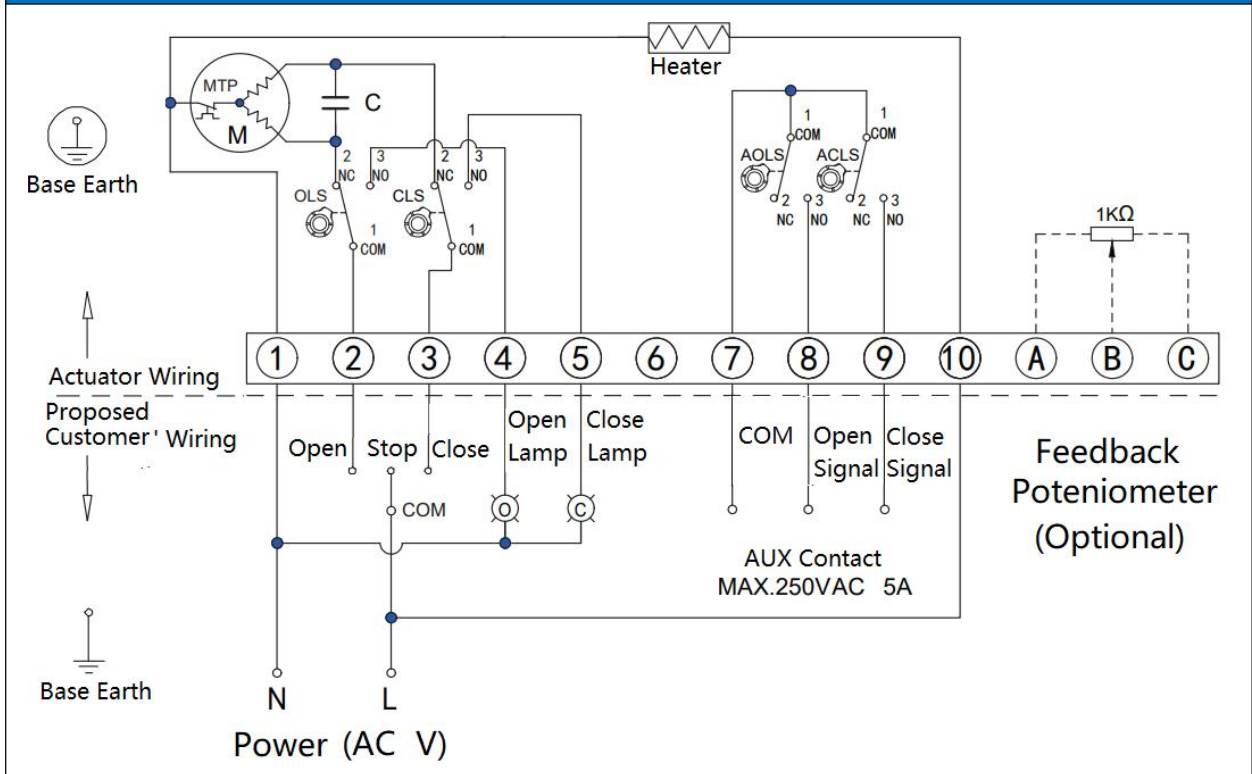
Wiring Diagram

Basic Switch Type: S Type (3 PH)



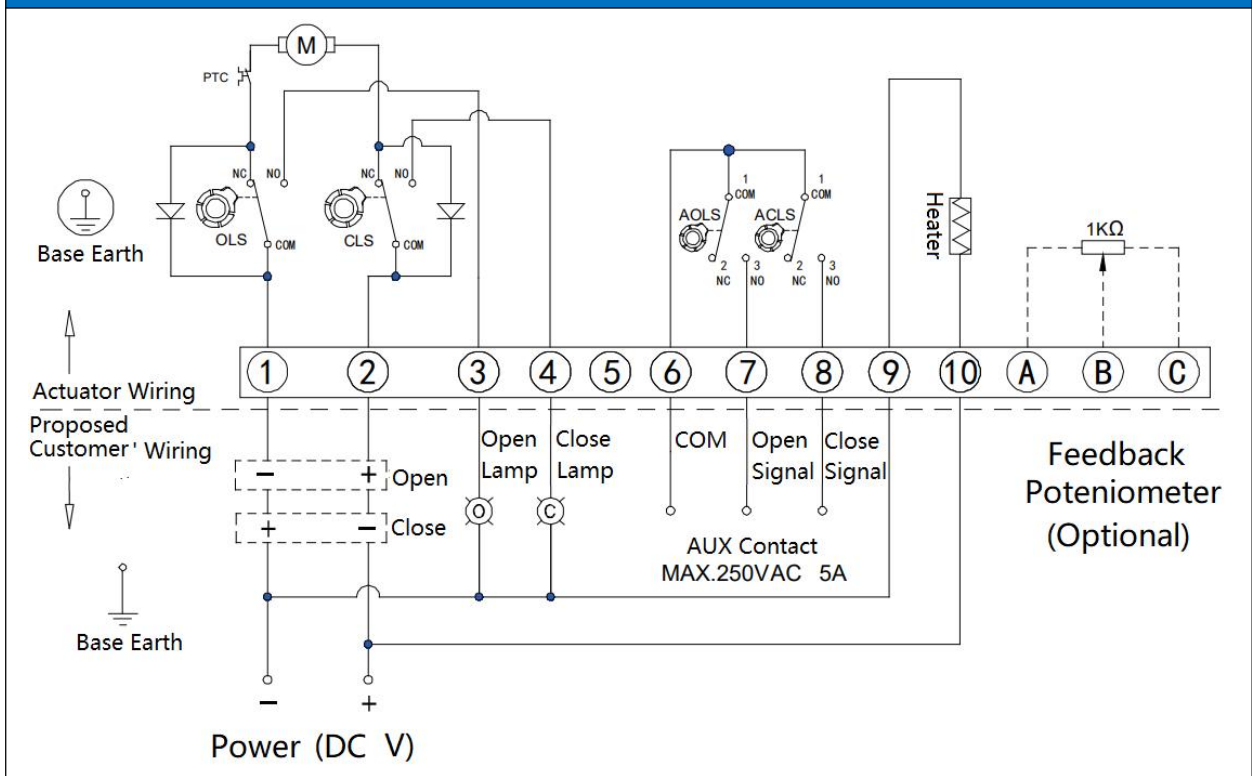
Basic Switch Type: S Type (1 PH)

S Type (1 PH)



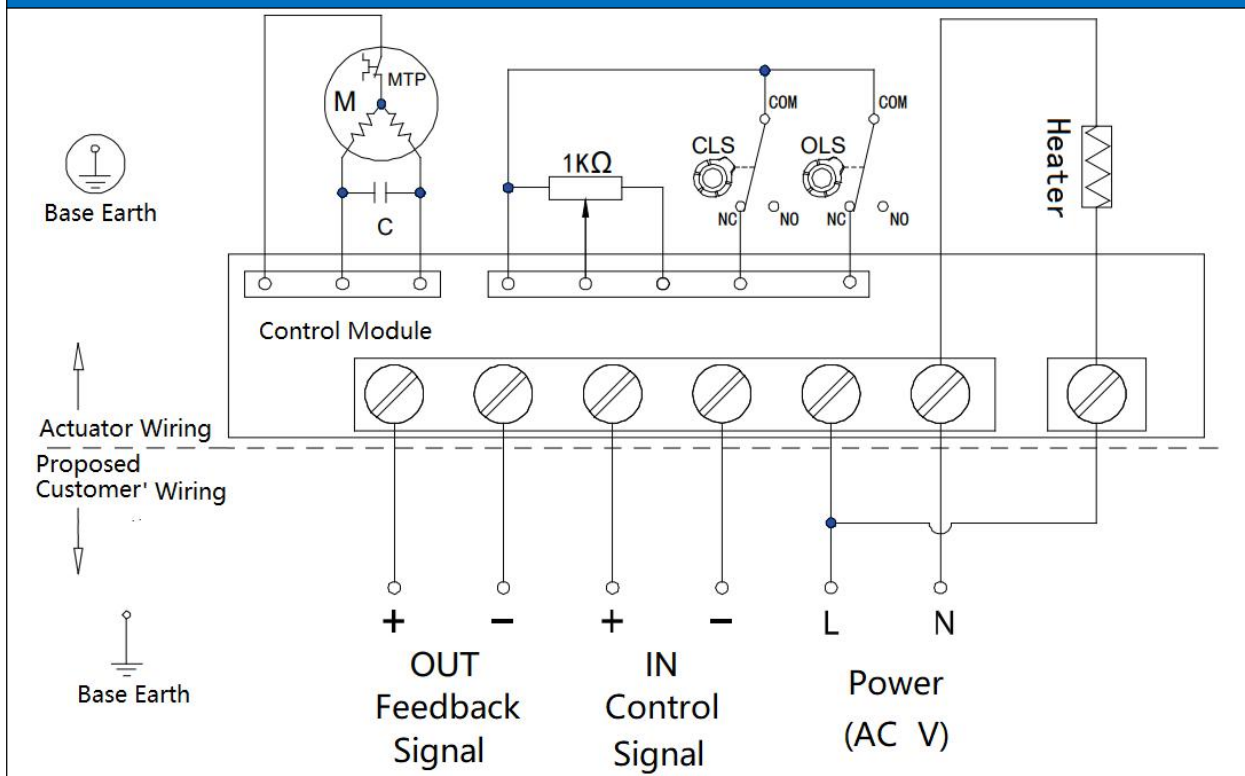
Basic Switch Type: S Type (DC Power)

S Type (DC Power)



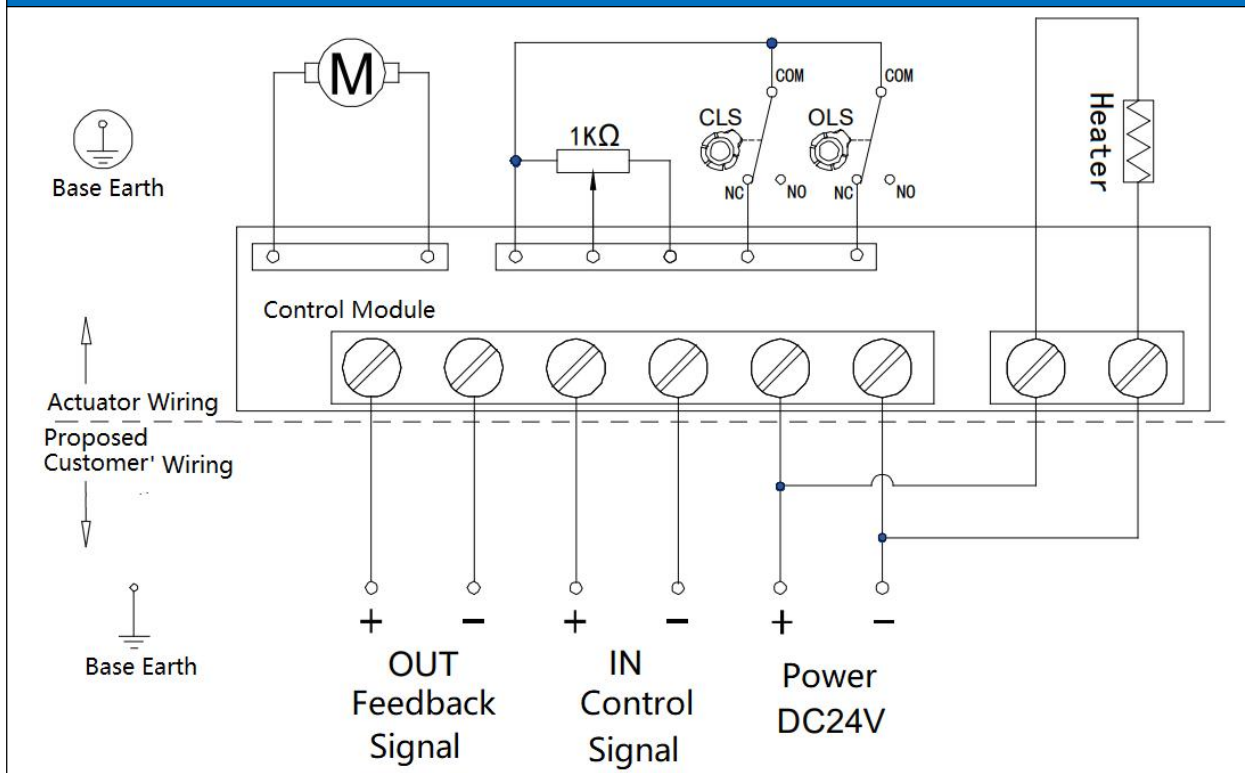
Basic Modulating Type: A Type (1 PH)

A Type (1 PH)



Basic Modulating Type: A Type (DC Power)

A Type (DV Power)



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