

Ball Valves

BF, BFH, BG, BH, BO, BP,
BR and BV Series



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Gigalok
Instrument Valves and Fittings

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BF and BFH Series



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Trunnion Ball Valves

BF and BFH Series

High Pressure Service

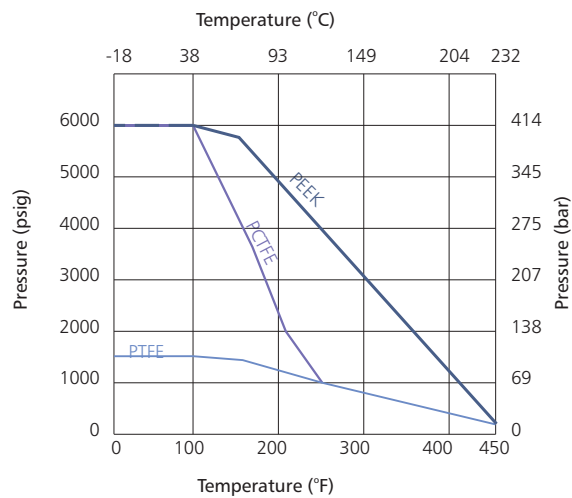
Features

- Maximum working pressure: 10000 psig (689 bar)
- Working temperature: 0°F to 450°F (-18°C to 232°C)
- Fixed ball with double sealing
- Automatic compensation of seat sealing
- Low operating torque
- Blowout proof stem
- Handle as indicator of flow direction
- Positive handle stop
- Options for handle color
- Pneumatic or electric actuator available
- Panel mountable
- Leak-tight performance testing with nitrogen for every valve at the maximum working pressure, but not higher than 6000 psig

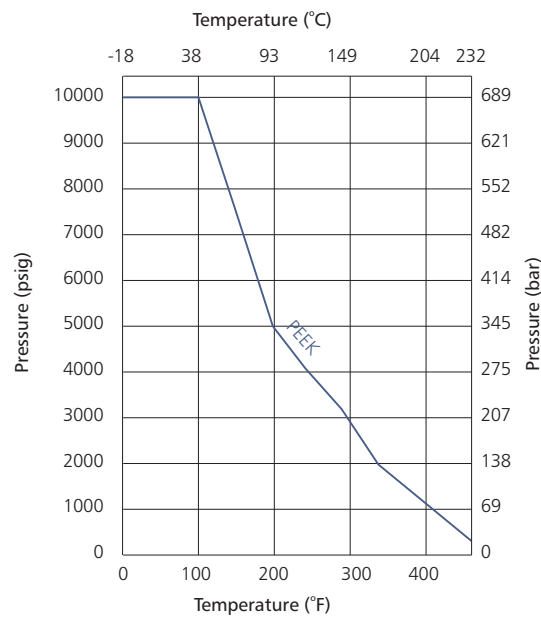


Pressure vs. Temperature

BF Series



BFH Series



- Graphs are for 2-way valves only.
- Maximum working pressure for 3-way valves:
 - 6000 psig: connection 1 as inlet, connection 2 and connection 3 as outlet
 - 3000 psig: connection 2 and connection 3 as inlet, connection 1 as outlet

Flow Data at 70°F (20°C)

BF Series 2-way

0.187" (4.8 mm) orifice, 1.2 Cv

Inlet Pressure psig (bar)	Pressure Drop (Δ p) psig (bar)	Air Flow std ft³/min (std L/min)	Water Flow U.S. gal/min (L/min)
1000 (69)	10 (0.69)	14 (334)	3.5 (13)
3000 (207)	50 (3.45)	30 (834)	7.5 (28)
6000 (414)	100 (6.89)	60 (1670)	11.0 (41)

BF Series 3-way

0.187" (4.8 mm) orifice, 0.75 Cv

Inlet Pressure psig (bar)	Pressure Drop (Δ p) psig (bar)	Air Flow std ft³/min (std L/min)	Water Flow U.S. gal/min (L/min)
1000 (69)	10 (0.69)	10 (275)	3.0 (11)
3000 (207)	50 (3.45)	23 (630)	7.0 (26)
6000 (414)	100 (6.89)	42 (1150)	9.5 (35)

BFH Series 2-way

0.187" (4.8 mm) orifice, 1.2 Cv

Inlet Pressure psig (bar)	Pressure Drop (Δ p) psig (bar)	Air Flow std ft³/min (std L/min)	Water Flow U.S. gal/min (L/min)
1000 (69)	150 (10.3)	90 (2550)	15 (56)
6000 (414)	600 (41.4)	345 (9660)	30 (111)
10000 (689)	1000 (68.9)	560 (15680)	40 (148)

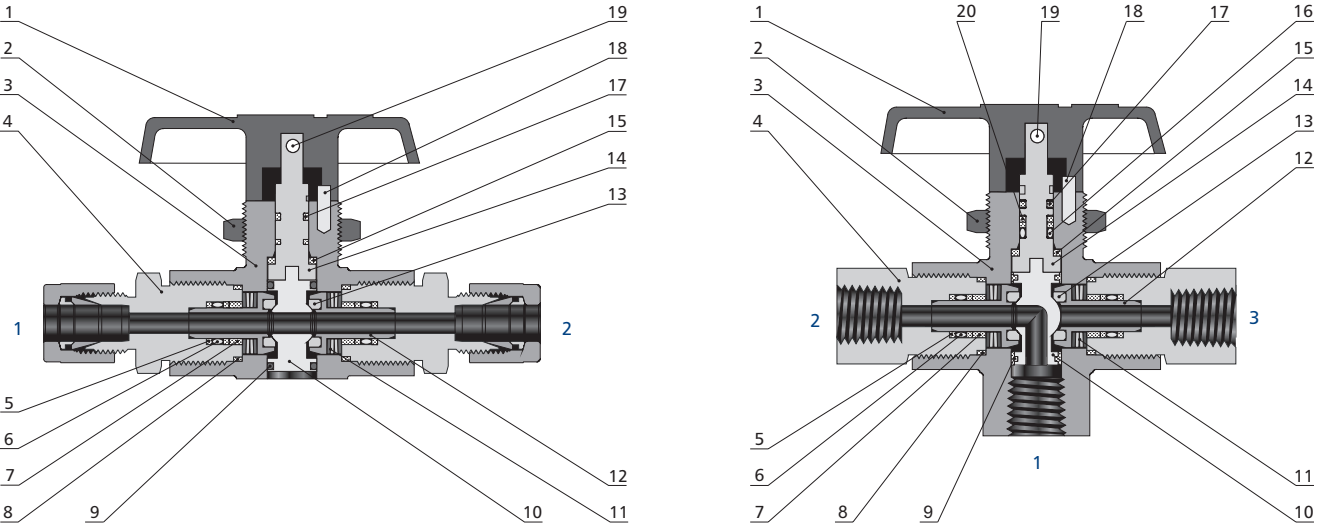
BFH Series 3-way

0.187" (4.8 mm) orifice, 0.75 Cv

Inlet Pressure psig (bar)	Pressure Drop (Δ p) psig (bar)	Air Flow std ft³/min (std L/min)	Water Flow U.S. gal/min (L/min)
1000 (69)	150 (10.3)	55 (1540)	10 (37.0)
6000 (414)	600 (41.4)	200 (5600)	20 (74.0)
10000 (689)	1000 (68.9)	330 (9240)	25 (92.5)

Standard Materials of Construction

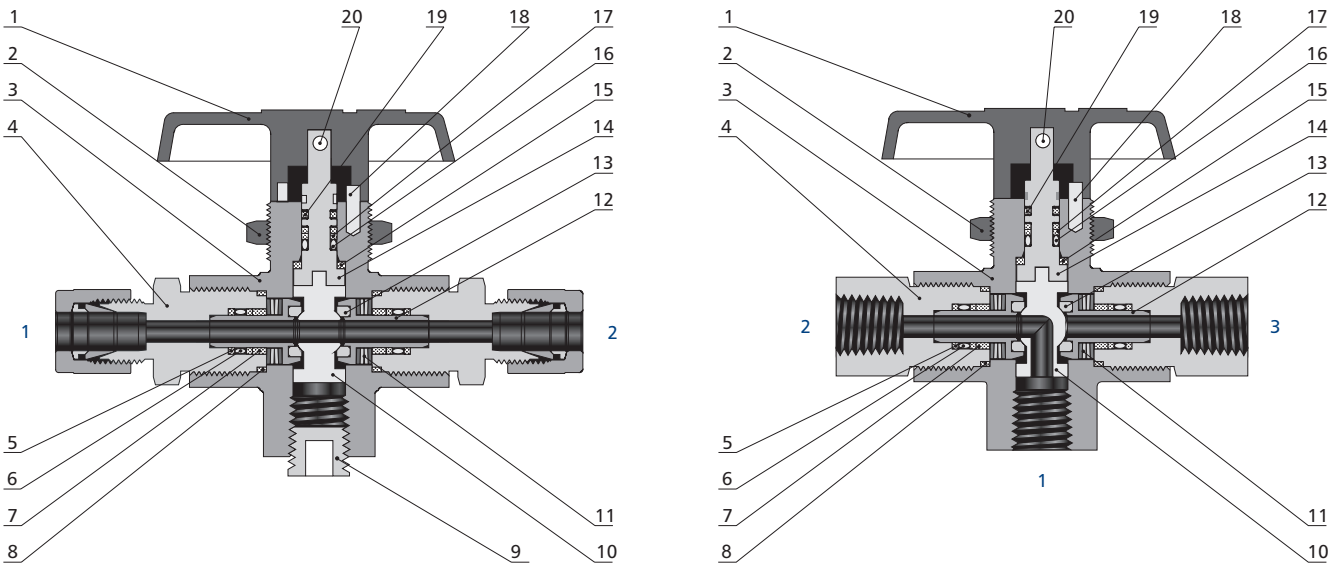
BF Series



Item	Component	Valve Body Material			
		316 Stainless Steel		Alloy 400	
		2-way	3-way	2-way	3-way
		Material Grade/ASTM Specification			
1	Handle	Nylon or Aluminium			
2	Panel Nut	316 SS/B783			
3	Body	316 SS/A479	316 SS/A182	Alloy 400/B164	
4	End Connector	316 SS/A479		Alloy R-405/B164	
5	Seat Retainer Guide	Reinforced PTFE			
6	Seat Retainer O-ring	Fluorocarbon FKM			
7	Seat Carrier Guide	316 SS/A276		Alloy R-405/B164	
8	End Connector Seal	PTFE/D1710			
9	Trunnion Bearing	Fluorocarbon FKM	PEEK	Fluorocarbon FKM	PEEK
10	Ball	316 SS/A276	S21800/A276	Alloy R-405/B164	
11	Seat Spring	Alloy X-750/AMS 5542			
12	Seat Retainer	316 SS/A276		Alloy R-405/B164	
13	Seat	PTFE or PEEK or PCTFE			
14	Stem	316 SS/A276		Alloy R-405/B164	
15	Stem Washer	Reinforced PTFE	PEEK	Reinforced PTFE	PEEK
16	Stem O-ring	——	Fluorocarbon FKM	——	Fluorocarbon FKM
17	Primary Stem Backup Ring	PTFE/D1710			
18	Pin	Stainless Steel			
19	Set Screw	Stainless Steel			
20	Secondary Stem Backup Ring	——	PEEK	——	PEEK
Lubricants		Molybdenum and Tungsten disulfide and Fluorinated-based			

1. Ball trunnions are PTFE coated in BF series 2-way valve.
2. Other materials are available upon request, refer to the ordering information.

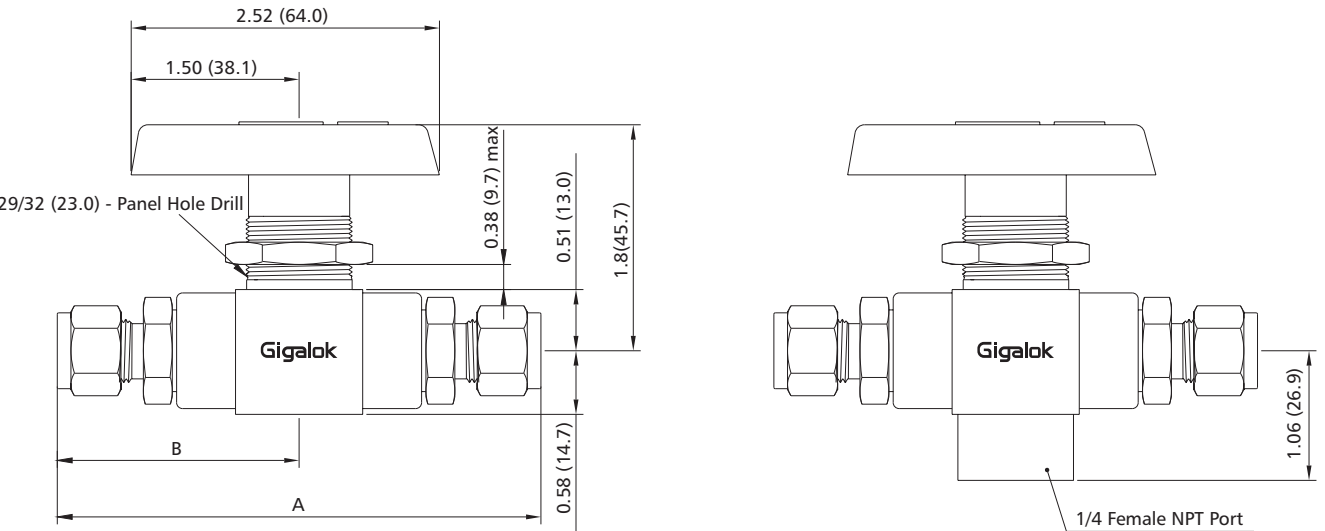
BFH Series



Item	Component	2-way	3-way
		Material Grade/ASTM Specification	
1	Handle	Nylon or Aluminium	
2	Panel Nut	316 SS/B783	
3	Body	316 SS/A479	316 SS/A182
4	End Connector	316 SS/A479	
5	Seat Retainer Guide	Reinforced PTFE	
6	Seat Retainer O-ring	Fluorocarbon FKM	
7	Seat Carrier Guide	316 SS/A276	
8	End Connector Seal	PTFE/D1710	
9	Plug	316 SS/A276	
10	Ball	S21800/A276	
11	Seat Spring	Alloy X-750/AMS 5542	
12	Seat Retainer	316 SS/A276	
13	Seat	PEEK	
14	Stem	316 SS/A276	
15	Stem Washer	PEEK	
16	Stem O-ring	Fluorocarbon FKM	
17	Stem Back-up Ring	PTFE/D1710	
18	Pin	Stainless Steel	
19	Stem Backup Ring	PEEK	
20	Set Screw	Stainless Steel	
Lubricants		Molybdenum and Tungsten disulfide and Fluorinated-based	

1. Ball trunnions are Xylan® coated in BFH series 2-way valve.
2. Other materials are available upon request, refer to the ordering information.

Dimensions



2-way Valve

Basic Ordering Number		Connection Size		Cv	Dimension, in. (mm)	
BF Series	BFH Series	Connection 1	Connection 2		A	B
BF□□-FNS2	BFH□□-FNS2	1/8 Female NPT	1/8 Female NPT	1.2	2.94 (74.7)	1.47 (37.3)
BF□□-FNS4	———	1/4 Female NPT	1/4 Female NPT		3.93 (99.8)	1.97 (50.0)
———	BFH□□-FNS4	1/2 Female NPT	1/2 Female NPT		4.25 (108.0)	2.13 (54.1)
BF□□-FNS8	———	1/4" Gigalok	1/4" Gigalok		4.14 (105.2)	2.07 (52.6)
BF□□-FL4	BFH□□-FL4	3/8" Gigalok	3/8" Gigalok		4.39 (111.5)	2.19 (55.6)
BF□□-FL6	BFH□□-FL6	1/2" Gigalok	1/2" Gigalok		4.60 (116.8)	2.30 (58.4)
BF□□-FL8	BFH□□-FL8	6 mm Gigalok	6 mm Gigalok		4.14 (105.2)	2.07 (52.6)
BF□□-ML6	BFH□□-ML6	8 mm Gigalok	8 mm Gigalok		4.15 (105.4)	
BF□□-ML8	BFH□□-ML8	10 mm Gigalok	10 mm Gigalok		4.41 (112.0)	2.20 (55.9)
BF□□-ML10	BFH□□-ML10	12 mm Gigalok	12 mm Gigalok		4.60 (116.8)	2.30 (58.4)
BF□□-ML12	BFH□□-ML12					

3-way Valve

Basic Ordering Number		Connection Size			Cv	Dimension, in. (mm)	
BF Series	BFH Series	Connection 1	Connection 2	Connection 3		A	B
BF□□-FNS2-3	BFH□□-FNS2-3	1/4 Female NPT	1/8 Female NPT	1/8 Female NPT	0.75	2.94 (74.7)	1.47 (37.3)
BF□□-FNS4-3	———		1/4 Female NPT	1/4 Female NPT		3.93 (99.8)	1.97 (50.0)
———	BFH□□-FNS4-3		1/4" Gigalok	1/4" Gigalok		4.14 (105.2)	2.07 (52.6)
BF□□-FL4-3	BFH□□-FL4-3		3/8" Gigalok	3/8" Gigalok		4.39 (111.5)	2.19 (55.6)
BF□□-FL6-3	BFH□□-FL6-3		1/2" Gigalok	1/2" Gigalok		4.60 (116.8)	2.30 (58.4)
BF□□-FL8-3	BFH□□-FL8-3		6 mm Gigalok	6 mm Gigalok		4.14 (105.2)	2.07 (52.6)
BF□□-ML6-3	BFH□□-ML6-3		8 mm Gigalok	8 mm Gigalok		4.15 (105.4)	
BF□□-ML8-3	BFH□□-ML8-3		10 mm Gigalok	10 mm Gigalok		4.41 (112.0)	2.20 (55.9)
BF□□-ML10-3	BFH□□-ML10-3		12 mm Gigalok	12 mm Gigalok		4.60 (116.8)	2.30 (58.4)
BF□□-ML12-3	BFH□□-ML12-3						

1. Gigalok means Gigalok double ferrule tube fittings.
2. Sizes and types listed are standard. Other sizes and types are available upon request, refer to the ordering information.
3. Dimensions are shown with Gigalok nuts finger-tightened. All dimensions are for reference only and are subject to change.
For dimensions not shown above, please contact the authorized representative or Gigalok.

Service Option

Low-temperature Service

Trunnion ball valves for low-temperature service, with a temperature rating of -40°F to 200°F (-40°C to 93°C) are available. Low-temperature valves have low-temperature Buna C O-rings. All other materials and ratings are the same as those of standard valves.

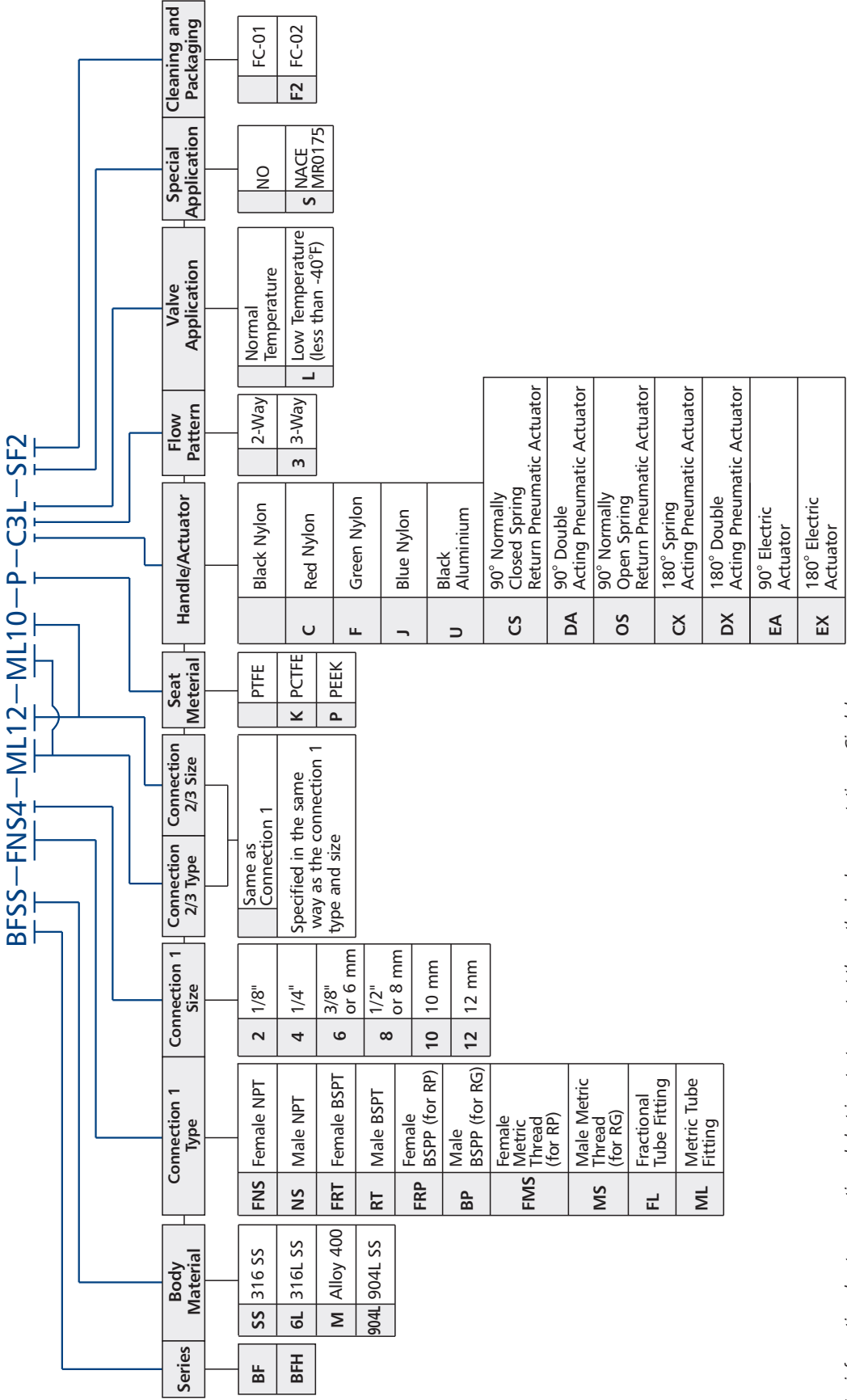
BF Series Low-temperature service Pressure - temperature Ratings

Material	316 SS		Alloy 400	
Seat Material	PCTFE PEEK	PTFE	PCTFE PEEK	PTFE
Temperature, °F (°C)	Working Pressure, psig (bar)			
-40 to 100 (-40 to 37)	6000 (414)	1500 (103)	5000 (344)	1500 (103)
100 to 200 (37 to 93)	See Pressure vs. Temperature			

BFH Series Low-temperature service Pressure - temperature Ratings

Material	316 SS				
End Connection	FNS2, FNS4 FL4, ML6	ML10	FL6 ML8	FL8	ML12
Temperature, °F (°C)	Working Pressure, psig (bar)				
-40 to 100 (-40 to 37)	10000 (689)	8400 (578)	7500 (516)	6700 (461)	6600 (454)
100 to 200 (37 to 93)	See Pressure vs. Temperature				

Ordering Information



1. For information about pneumatic and electric actuator, contact the authorized representative or Gigalok.
2. For oxygen or virulent medium service, contact the authorized representative or Gigalok.
3. Cleaning and Packaging :
FC-01 : Standard cleaning and packaging for general industrial procedures.
FC-02 : Special cleaning and packaging for wetted system components to ensure compliance with product cleanliness requirement as stated in ASTM G93 Level C.

3-piece Ball Valves

BG Series

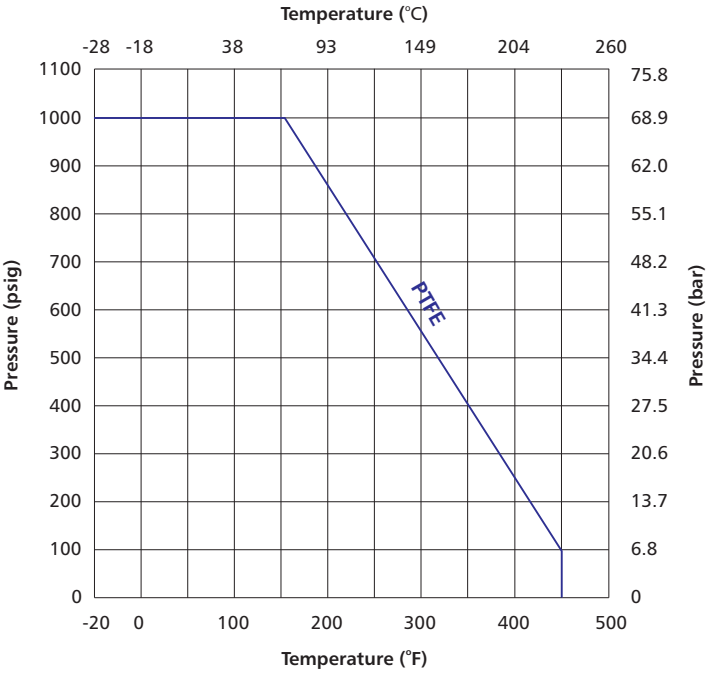
General Application

Features

- Maximum working pressure: 1000 psig (68.9 bar)
- Working temperature: -20°F to 450°F (-28°C to 232°C)
- End connections:
 - 1/8 to 3 thread
 - 1/8 to 3 pipe butt or socket weld
 - 1/2" to 2" and 12 mm to 50 mm tube butt or socket weld
 - 1/2" to 2" and 12 mm to 38 mm tube fitting
 - 1/2 to 4 flange
- Orifice sizes: 4.8 mm to 76 mm
- Blowout proof stem
- Options for handle color
- Pneumatic and electric actuation available
- Leak-tight performance testing for every valve at the maximum working pressure with nitrogen

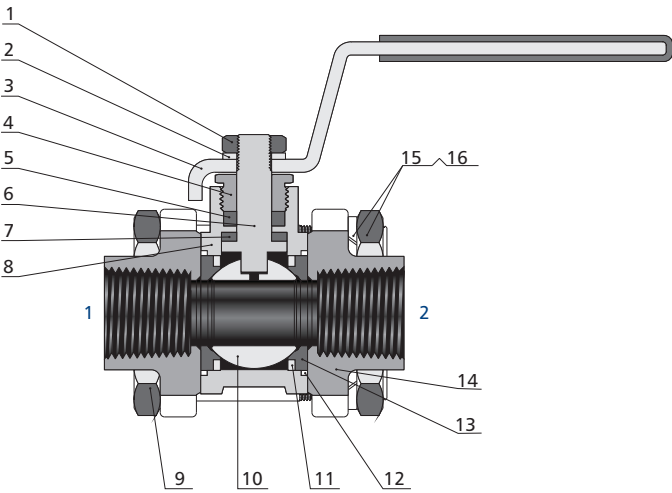


Pressure vs. Temperature

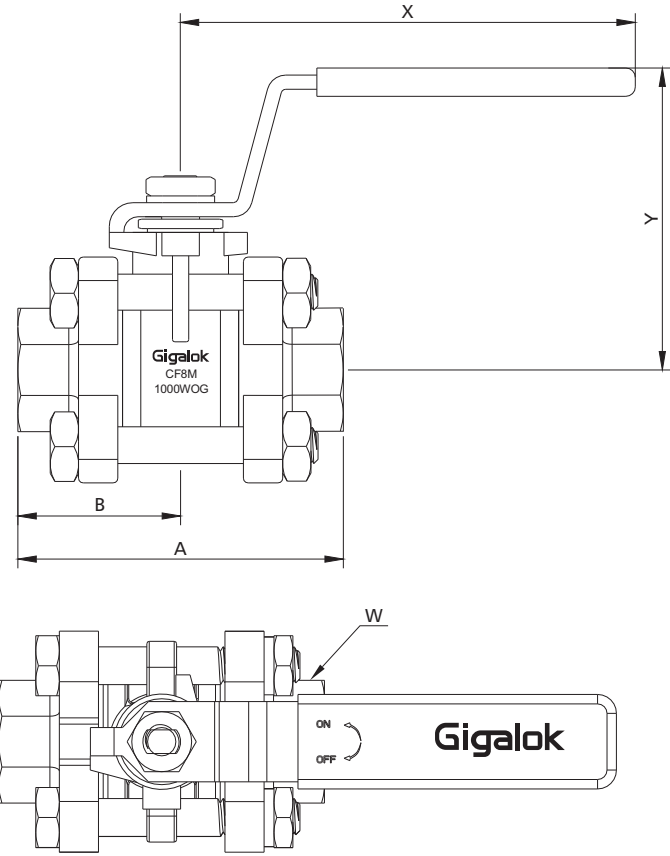


Standard Materials of Construction

Item	Component	Valve Body Material			
		CF8M/A351	CF3M/A351	CF8/A351	CF3/A351
1	Stem Nut	Gr. 8M/A194			
2	Gasket	304 SS			
3	Handle	CF8/A351 (with vinyl sleeve)			
4	Gland	316 SS/A276 or 304 SS/A276			
5	Stem Packing	PTFE/D1710			
6	Stem	316 SS/A276			
7	Stem Bearing	PTFE/D1710			
8	Body	CF8M/A351	CF3M/A351	CF8/A351	CF3/A351
9	Body Bolt	Gr. 8M/A193			
10	Ball	316 SS/A276			
11	Support Ring	316 SS/A276			
12	Flange Seal	PTFE/D1710			
13	Seat	PTFE/D1710			
14	Flange	CF8M/A351	CF3M/A351	CF8/A351	CF3/A351
15	Gasket	304 SS			
16	Nut	Gr. 8M/A194			
Lubricants		Silicone-based and PTFE-based			



Dimensions



Basic Ordering Number	Connection Type and Size		Orifice in. (mm)	Cv	Dimension, in. (mm)				
	Connection 1	Connection 2			A	B	W	X	Y
BG □□-FNS2-05	1/8 Female NPT	1/8 Female NPT	0.188 (4.8)	1.2	2.57 (65.2)	1.28 (32.6)	0.93 (23.5)	3.94 (100.0)	2.15 (54.7)
BG □□-FRP2-05	1/8 Female BSPP	1/8 Female BSPP							
BG □□-PB4-05	1/4 PB	1/4 PB							
BG □□-FL4-05	1/4" Gigalok	1/4" Gigalok							
BG □□-ML6-05	6 mm Gigalok	6 mm Gigalok							
BG □□-ML8-05	8 mm Gigalok	8 mm Gigalok							
BG □□-FNS4-07	1/4 Female NPT	1/4 Female NPT	0.281 (7.1)	3.8	2.57 (65.2)	1.28 (32.6)			
BG □□-FRP4-07	1/4 Female BSPP	1/4 Female BSPP							
BG □□-PS4-07	1/4 PS	1/4 PS							
BG □□-PB6-07	3/8 PB	3/8 PB							
BG □□-FL6-07	3/8" Gigalok	3/8" Gigalok							
BG □□-ML10-07	10 mm Gigalok	10 mm Gigalok							
BG □□-FL8-11	1/2" Gigalok	1/2" Gigalok	0.417 (10.6)	7.5	4.04 (103.0)	2.02 (51.3)			
BG □□-ML12-11	12 mm Gigalok	12 mm Gigalok							
BG □□-ML14-11	14 mm Gigalok	14 mm Gigalok							
BG □□-FNS6-13	3/8 Female NPT	3/8 Female NPT	0.50 (12.7)	11.3	2.57 (65.2)	1.28 (32.6)	0.88 (22.3)	3.94 (100.0)	2.26 (57.5)
BG □□-FRP6-13	3/8 Female BSPP	3/8 Female BSPP							
BG □□-PS6-13	3/8 PS	3/8 PS							
BG □□-PB8-13	1/2 PB	1/2 PB							
BG □□-FL10-13	5/8" Gigalok	5/8" Gigalok							
BG □□-ML16-13	16 mm Gigalok	16 mm Gigalok							
BG □□-FNS8-15	1/2 Female NPT	1/2 Female NPT	0.591 (15.0)	13.0	2.74 (69.5)	1.37 (34.8)			
BG □□-FRP8-15	1/2 Female BSPP	1/2 Female BSPP							
BG □□-PS8-15	1/2 PS	1/2 PS							
BG □□-MTB22-15	22 mm MTB	22 mm MTB							
BG □□-TS12-15	3/4" TS	3/4" TS							
BG □□-MTS18-15	18 mm MTS	18 mm MTS							
BG □□-FL12-15	3/4" Gigalok	3/4" Gigalok							
BG □□-ML18-15	18 mm Gigalok	18 mm Gigalok							
BG □□-ML20-15	20 mm Gigalok	20 mm Gigalok							
BG □□-FNS12-20	3/4 Female NPT	3/4 Female NPT	0.787 (20.0)	50.0	3.15 (80.0)	1.57 (40.0)	1.34 (34.0)	5.08 (129.0)	2.48 (63.0)
BG □□-FRP12-20	3/4 Female BSPP	3/4 Female BSPP							

Basic Ordering Number	Connection Type and Size		Orifice in. (mm)	Cv	Dimension, in. (mm)				
	Connection 1	Connection 2			A	B	W	X	Y
BG□□-PB12-20	3/4 PB	3/4 PB	0.787 (20.0)	50.0	3.15 (80.0)	1.57 (40.0)	1.34 (34.0)	5.08 (129.0)	2.48 (63.0)
BG□□-PS12-20	3/4 PS	3/4 PS							
BG□□-TS16-20	1" TS	1" TS							
BG□□-MTB25-20	25 mm MTB	25 mm MTB							
BG□□-MTS25-20	25 mm MTS	25 mm MTS							
BG□□-FL16-20	1" Gigalok	1" Gigalok			5.36 (136.0)	2.68 (68.1)			
BG□□-ML22-20	22 mm Gigalok	22 mm Gigalok							
BG□□-ML25-20	25 mm Gigalok	25 mm Gigalok							
BG□□-ML28-20	28 mm Gigalok	28 mm Gigalok							
BG□□-FNS16-25	1 Female NPT	1 Female NPT	0.984 (25.0)	93.0	3.54 (90.0)	1.77 (45.0)	1.63 (41.3)	6.14 (156.0)	2.97 (75.5)
BG□□-FRP16-25	1 Female BSPP	1 Female BSPP							
BG□□-PS16-25	1 PS	1 PS							
BG□□-PB16-25	1 PB	1 PB							
BG□□-FL20-25	1 1/4" Gigalok	1 1/4" Gigalok			7.59 (193.0)	3.79 (96.3)			
BG□□-FNS20-32	1 1/4 Female NPT	1 1/4 Female NPT	1.260 (32.0)	110.0	4.33 (110.0)	2.17 (55.0)	1.94 (49.2)	6.14 (156.0)	3.19 (81.0)
BG□□-FRP20-32	1 1/4 Female BSPP	1 1/4 Female BSPP							
BG□□-PB20-32	1 1/4 PB	1 1/4 PB							
BG□□-FNS24-38	1 1/2 Female NPT	1 1/2 Female NPT	1.50 (38.0)	130.0	4.72 (120.0)	2.36 (60.0)	2.24 (57.0)	7.19 (182.5)	3.70 (94.0)
BG□□-FRP24-38	1 1/2 Female BSPP	1 1/2 Female BSPP							
BG□□-PB24-38	1 1/2 PB	1 1/2 PB							
BG□□-FNS32-50	2 Female NPT	2 Female NPT	1.97 (50.0)	270.0	5.51 (140.0)	2.75 (70.0)	2.76 (70.0)	7.19 (182.5)	4.11 (104.5)
BG□□-FRP32-50	2 Female BSPP	2 Female BSPP							
BG□□-PB32-50	2 PB	2 PB							
BG□□-FNS40-64	2 1/2 Female NPT	2 1/2 Female NPT	2.50 (63.5)	350.0	7.28 (185.0)	3.64 (92.5)	3.39 (86.0)	9.92 (252.0)	5.16 (131.0)
BG□□-FRP40-64	2 1/2 Female BSPP	2 1/2 Female BSPP							
BG□□-PB40-64	2 1/2 PB	2 1/2 PB							
BG□□-FNS48-76	3 Female NPT	3 Female NPT	2.99 (76.0)	500.0	8.07 (205.0)	4.04 (102.5)	3.98 (101.0)	9.92 (252.0)	5.47 (139.0)
BG□□-FRP48-76	3 Female BSPP	3 Female BSPP							
BG□□-PB48-76	3 PB	3 PB			8.66 (220.0)	4.33 (110.0)			

1. Gigalok means Gigalok double ferrule tube fittings, TS means fractional tube socket weld, MTS means metric tube socket weld, TB means fractional tube butt weld, MTB means metric tube butt weld, PS means pipe socket weld, PB means pipe butt weld.

2. Sizes and types listed are standard. Other sizes and types are available upon request, refer to the ordering information.

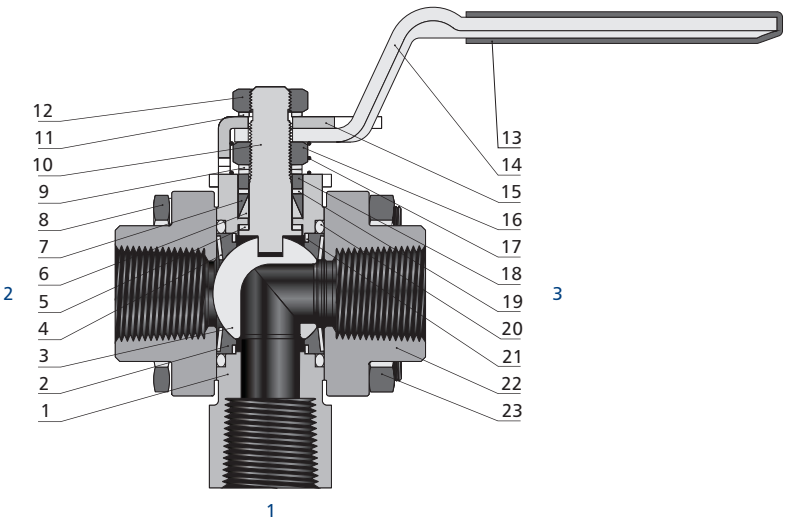
3. Dimensions are shown with Gigalok nuts finger-tightened. All dimensions are for reference only and are subject to change. For dimensions not shown above, please contact the authorized representative or Gigalok.

BGSS — FNS8 — ML18 — 15 — LSF2													
Series	Body Material	Connection 1 Type		Connection 1 Size		Connection 2		Orifice Size	Locking Device	Special Application	Cleaning and Packaging		
BG	SS	CF8M	FNS	Female NPT	2	1/8"	Same as Connection 1	05	No	No	FC-01		
	6L	CF3M	NS	Male NPT	4	1/4"		07	L	Yes	NAACE S MR0175	F2 FC-02	
	S4	CF8	FRT	Female BSPT	5	5/16"		11					
	4L	CF3	RT	Male BSPT	6	3/8" or 6 mm		13					
	904L SS		FRP	Female BSPP (for RP)	8	1/2" or 8 mm		15					
			BP	Male BSPP (for RG)	10	10 mm		20					
			FMS	Female Metric Thread (for RP)	12	3/4" or 12 mm		25					
			MS	Male Metric Thread (for RG)	14	14 mm or M14 x 1.5		32					
			MTS	Metric Tube Socket	16	1" or 16 mm		38					
			TS	Fractional Tube Socket	18	18 mm		50					
		MTB	Metric Tube Butt Weld	20	1 1/4" or 20 mm or M20 x 1.5	64							
		TB	Fractional Tube Butt Weld	22	22 mm or M22 x 1.5	76							
		PS	Pipe Socket	24	1 1/2" or M24 x 1.5								
		PB	Pipe Butt Weld	25	25 mm								
		FL	Fractional Tube Fitting	27	M27 x 2								
		ML	Metric Tube										

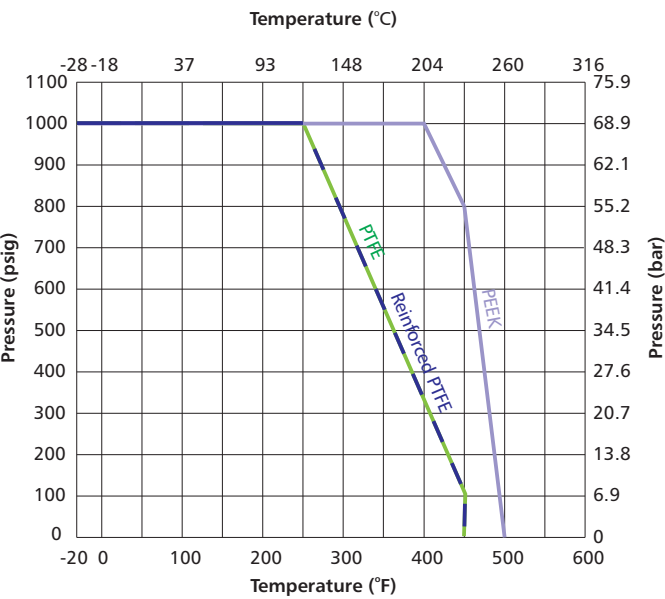
3-way Valves

Features

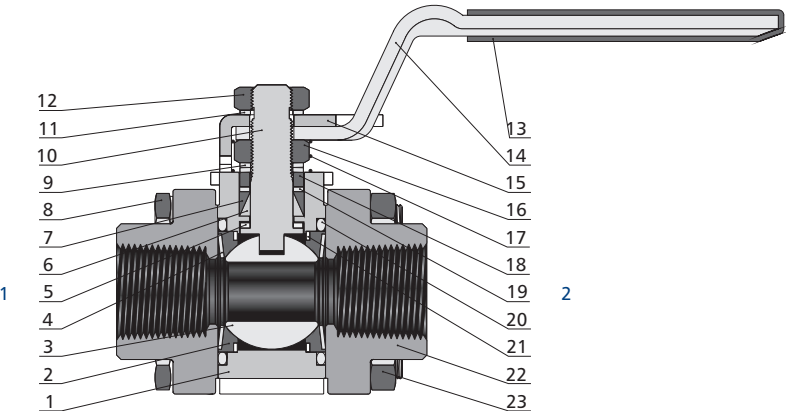
- Maximum working pressure: 1000 psig (68.9 bar)
- Working temperature:-20°F to 450°F (-28°C to 232°C)
- End connections:
 - 1/4 to 2 thread
 - 1/4" to 2" and 12 mm to 38 mm tube fitting
- One-piece center body without welding
- 180° actuation
- Inlet and outlet for 3-way valve: connection 1 as inlet, connection 2 and connection 3 as outlet
- Leak-tight performance testing for every valve at the maximum working pressure with nitrogen



Pressure vs. Temperature



Standard Materials of Construction



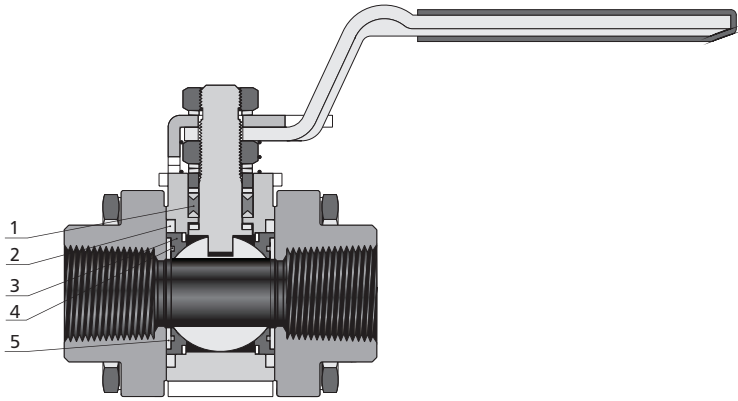
Item	Component	Valve Body Material			
		Material Grade/ASME Specification			
1	Body	CF8M/A351	CF3M/A351	CF8/A351	CF3/A351
2	Seat	PTFE/D1710			
3	Ball	316 SS/A276			
4	Coned-disc Spring	Strain-hardened 316 SS/A240			
5	Stem Bearing	PEEK (Polyetheretherketone)			
6	Lower Packing	Reinforced PTFE			
7	Upper Packing	Reinforced PTFE			
8	Body Bolt	Gr. B8M/A193			
9	Stem Spring	Strain-hardened 316 SS/A240			
10	Stem	316 SS/A479			
11	Stem Spring	Strain-hardened 316 SS/A240			
12	Stem Nut	Gr. 8M/A194			
13	Handle Sleeve	Vinyl			
14	Handle	304 SS/A240			
15	Stop Plate	304 SS/A240			
16	Stem Nut	Gr. 8M/A194			
17	Grounding Spring	302 SS/A313			
18	Gland	PTFE-coated 316 SS/B783			
19	Packing Support	PEEK (Polyetheretherketone)			
20	Flange Seal	Fluorocarbon FKM			
21	Support Ring	316 SS/A240			
22	Flange	CF8M/A351	CF3M/A351	CF8/A351	CF3/A351
23	Body Nut	Gr.8M/A194			
Lubricants		Silicone-based and PTTE-based			

Other materials available upon request

Fire-safe Application

Features

- Maximum working pressure: 2200psig (152bar)
- Working temperature: -20°F to 400°F (-28°C to 244°C)
- Live-loaded Graphite stem packing
- High strength metal stem bearing
- Encased 8-bolt construction
- Graphite flange seals and seat seals
- Fire-safe valves are designed, tested to meet the requirement of API 607 4th edition

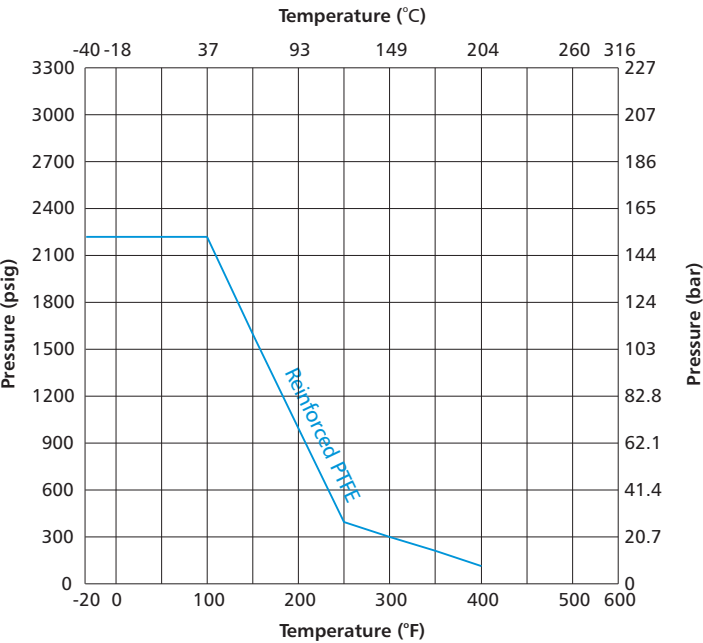


Standard Materials of Construction

Item	Component	Valve Body Material			
		CF8M/A351	CF3M/A351	CF8/A351	CF3/A351
1	Packing	Graphite			
2	Flange Seal	Graphite with 316 SS wire			
3	Seat	Reinforced PTFE			
4	Seat Ring	Graphite with 316 SS wire			
5	Coned-disc spring	Grafoil-lined 316 SS/A167			

All other components are same as general application.

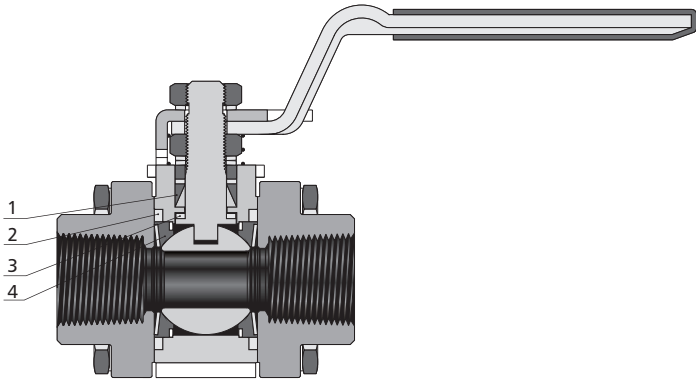
Pressure vs. Temperature



Steam Service

Features

- Maximum working pressure: 2500psig (172bar)
- Working temperature: -20°F to 600°F (-28°C to 316°C)
- Encased 8-bolt construction
- Graphite flange seals
- PEEK seats and stem seals

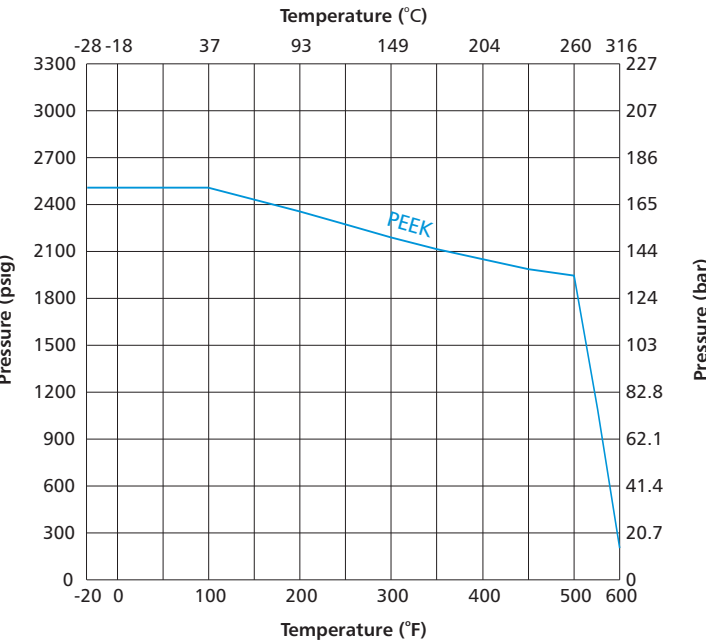


Materials of Construction

Item	Component	Valve Body Material			
		CF8M/A351	CF3M/A351	CF8/A351	CF3/A351
1	Packing	Molybdenum disulfide-coated PEEK			
2	Flange seal	Graphite with 316 SS			
3	Stem bearing	Molybdenum disulfide-coated PEEK			
4	Seat	Molybdenum disulfide-coated PEEK			
Lubricant		PTFE-based			

All other components are same as general application.

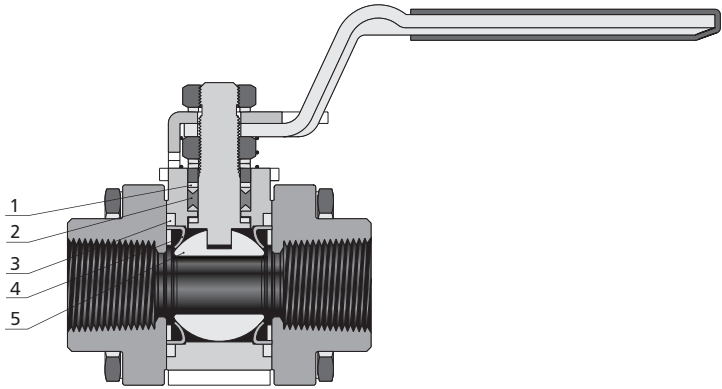
Pressure vs. Temperature



Thermal Service

Features

- Maximum working pressure: 1000psig (68.9bar)
- Working temperature: -65°F to 850°F (-54°C to 454°C)
- Spring-loaded metal seats
- Encased 8-bolt Construction

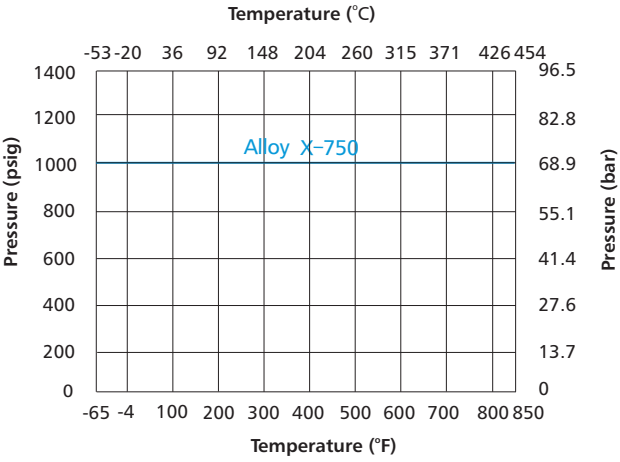


Materials of Construction

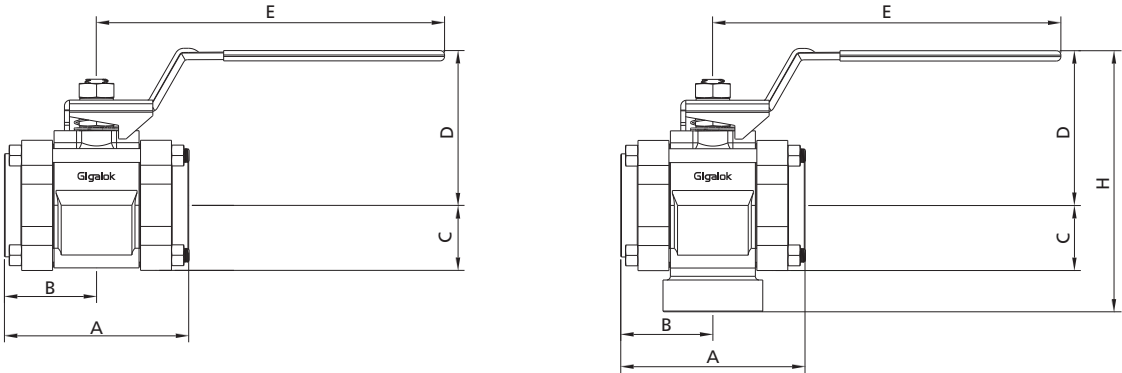
Item	Component	Valve Body Material			
		CF8M/A351	CF3M/A351	CF8/A351	CF3/A351
1	Packing bearing	Alloy X-750 /AMS 5542			
2	Packing	Graphite with 316 SS			
3	Flange seal	Graphite with 316 SS			
4	Seat	Alloy X-750 /AMS 5542			
5	Ball	S17400 SS/A564			
Lubricant		Fluorinated tungsten disulfide			

All other components same as general application.

Pressure vs. Temperature



Dimensions



Basic Ordering Number		Connection Type and Size		Orifice in. (mm)	Cv	Dimension, in. (mm)									
Straight	3-way	Connection 1	Connection 2/3			A	B	C	D	E	H				
BH□□-FL4-05	BH□□-FL4-05-3	1/4" Gigalok	1/4" Gigalok	0.188 (4.8)	1.2	3.17 (80.5)	1.59 (40.4)	0.68 (17.3)	1.66 (42.2)	2.37 (60.2)	3.35 (85.1)				
BH□□-ML6-05	BH□□-ML6-05-3	6 mm Gigalok	6 mm Gigalok								—				
BH□□-ML8-05	BH□□-ML8-05-3	8 mm Gigalok	8 mm Gigalok												
BH□□-TS4-05	BH□□-TS4-05-3	1/4" TS	1/4" TS			2.16 (54.8)	1.08 (27.4)								
BH□□-MTS6-05	BH□□-MTS6-05-3	6 mm MTS	6 mm MTS												
BH□□-PB4-05	BH□□-PB4-05-3	1/4 PB	1/4 PB			2.08 (52.8)	1.04 (26.4)								
BH□□-FNS2-07	BH□□-FNS2-07-3	1/8 Female NPT	1/8 Female NPT	0.281 (7.1)	3.8	2.16 (54.9)	1.08 (27.4)	0.68 (17.3)	1.66 (42.2)	2.37 (60.2)	3.12 (79.2)				
BH□□-FRT2-07	BH□□-FRT2-07-3	1/8 Female BSPT	1/8 Female BSPT								4.37 (111)				
BH□□-FRP2-07	BH□□-FRP2-07-3	1/8 Female BSPP	1/8 Female BSPP												
BH□□-FNS4-07	BH□□-FNS4-07-3	1/4 Female NPT	1/4 Female NPT												
BH□□-FRT4-07	BH□□-FRT4-07-3	1/4 Female BSPT	1/4 Female BSPT			3.17 (80.5)	1.59 (40.4)								
BH□□-FRP4-07	BH□□-FRP4-07-3	1/4 Female BSPP	1/4 Female BSPP												
BH□□-FL5-07	BH□□-FL5-07-3	5/16" Gigalok	5/16" Gigalok				—								
BH□□-FL6-07	BH□□-FL6-07-3	3/8" Gigalok	3/8" Gigalok												
BH□□-ML10-07	BH□□-ML10-07-3	10 mm Gigalok	10 mm Gigalok			3.2 (81.3)					1.6 (40.6)				
BH□□-TS6-07	BH□□-TS6-07-3	3/8" TS	3/8" TS			2.16 (54.8)					1.08 (27.4)				
BH□□-PB6-07	BH□□-PB6-07-3	3/8 PB	3/8 PB			2.08 (52.8)					1.04 (26.4)				
BH□□-FL8-10	BH□□-FL8-10-3	1/2" Gigalok	1/2" Gigalok	0.406 (10.3)	7.5	4.04 (102.6)	2.02 (51.3)	0.89 (22.6)	2.35 (59.7)	4.5 (114)	4.48 (114)				
BH□□-ML12-10	BH□□-ML12-10-3	12 mm Gigalok	12 mm Gigalok	0.375 (9.5)							—				
BH□□-TS8-10	BH□□-TS8-10-3	1/2" TS	1/2" TS	0.411 (10.4)		2.7 (68.6)	1.34 (34)								
BH□□-FNS6-13	BH□□-FNS6-13-3	3/8 Female NPT	3/8 Female NPT	0.516 (13.1)	12	2.7 (68.6)	1.35 (34.3)	0.89 (22.6)	2.35 (59.7)	4.5 (114)	4.19 (106)				
BH□□-FRT6-13	BH□□-FRT6-13-3	3/8 Female BSPT	3/8 Female BSPT								4.84 (123)				
BH□□-FRP6-13	BH□□-FRP6-13-3	3/8 Female BSPP	3/8 Female BSPP												
BH□□-FNS8-13	BH□□-FNS8-13-3	1/2 Female NPT	1/2 Female NPT												
BH□□-FRT8-13	BH□□-FRT8-13-3	1/2 Female BSPT	1/2 Female BSPT												
BH□□-FRP8-13	BH□□-FRP8-13-3	1/2 Female BSPP	1/2 Female BSPP												
BH□□-FL12-13	BH□□-FL12-13-3	3/4" Gigalok	3/4" Gigalok		13.6	4.04 (102.6)	2.02 (51.3)				—				
BH□□-ML16-13	BH□□-ML16-13-3	16 mm Gigalok	16 mm Gigalok												
BH□□-ML18-13	BH□□-ML18-13-3	18 mm Gigalok	18 mm Gigalok												
BH□□-TS12-13	BH□□-TS12-13-3	3/4" TS	3/4" TS		15	2.7 (68.6)	1.34 (34)				—				
BH□□-PS8-13	BH□□-PS8-13-3	1/2 PS	1/2 PS												
BH□□-PB8-13	BH□□-PB8-13-3	1/2 PB	1/2 PB			2.69 (68.3)	1.34 (34)								

Fittings and Connections													
Basic Ordering Number		Connection Type and Size		Orifice in. (mm)	Cv	Dimension, in. (mm)							
Straight	3-way	Connection 1	Connection 2/3			A	B	C	D	E	H		
BH□□-PB12-13	BH□□-PB12-13-3	3/4 PB	3/4 PB	0.516 (13.1)	13.6	2.69 (68.3)	1.34 (34)	0.89 (22.6)	2.35 (59.7)	4.5 (114)	—		
BH□□-FNS12-22	BH□□-FNS12-22-3	3/4 Female NPT	3/4 Female NPT	0.875 (22.2)	31	3.59 (91.2)	1.8 (45.7)	1.25 (31.8)	2.94 (74.7)	6 (152)	5.45 (138)		
BH□□-FRT12-22	BH□□-FRT12-22-3	3/4 Female BSPT	3/4 Female BSPT										
BH□□-FRP12-22	BH□□-FRP12-22-3	3/4 Female BSPP	3/4 Female BSPP										
BH□□-FNS16-22	BH□□-FNS16-22-3	1 Female NPT	1 Female NPT		38	4.45 (113)	2.23 (56.6)						
BH□□-FRT16-22	BH□□-FRT16-22-3	1 Female BSPT	1 Female BSPT										
BH□□-FRP16-22	BH□□-FRP16-22-3	1 Female BSPP	1 Female BSPP										
BH□□-FL16-22	BH□□-FL16-22-3	1" Gigalok	1" Gigalok		40	5.36 (136)	2.68 (68)				5.91 (150)		
BH□□-FL20-22	BH□□-FL20-22-3	1 1/4" Gigalok	1 1/4" Gigalok			6.34 (161)	3.17 (80.5)						
BH□□-ML25-22	BH□□-ML25-22-3	25 mm Gigalok	25 mm Gigalok		40	5.36 (136)	2.68 (68)						
BH□□-ML28-22	BH□□-ML28-22-3	28 mm Gigalok	28 mm Gigalok			6.14 (156)	3.07 (78)						
BH□□-TS16-22	BH□□-TS16-22-3	1" TS	1" TS		40	3.59 (91.2)	1.8 (45.7)				—		
BH□□-MTS25-22	BH□□-MTS25-22-3	25 mm MTS	25 mm MTS										
BH□□-PS12-22	BH□□-PS12-22-3	3/4 PS	3/4 PS	42	3.59 (91.2)	1.8 (45.7)	1.25 (31.8)						
BH□□-PS16-22	BH□□-PS16-22-3	1 PS	1 PS										
BH□□-PB12-22	BH□□-PB12-22-3	3/4 PB	3/4 PB	36	3.46 (87.9)	1.73 (43.9)							
BH□□-PB16-22	BH□□-PB16-22-3	1 PB	1 PB	40									
BH□□-TS20-29	BH□□-TS20-29-3	1 1/4" TS	1 1/4" TS	80	4.39 (112)	2.19 (55.6)	1.53 (38.9)	4.03 (102)	9.14 (232)	—			
BH□□-PB20-29	BH□□-PB20-29-3	1 1/4 PB	1 1/4 PB		4.57 (116)	2.28 (57.9)							
BH□□-FNS20-32	BH□□-FNS20-32-3	1 1/4 Female NPT	1 1/4 Female NPT	1.25 (31.8)	100	4.39 (112)	2.19 (55.6)	1.53 (38.9)	4.03 (102)	9.14 (232)	6.86 (174)		
BH□□-FNS24-32	BH□□-FNS24-32-3	1 1/2 Female NPT	1 1/2 Female NPT										
BH□□-TS24-32	BH□□-TS24-32-3	1 1/2 " TS	1 1/2 " TS		90	4.50 (114.3)	2.25 (57.2)				—		
BH□□-PS20-32	BH□□-PS20-32-3	1 1/4 PS	1 1/4 PS			4.57 (116)	2.28 (57.9)						
BH□□-PS24-32	BH□□-PS24-32-3	1 1/2 PS	1 1/2 PS			4.57 (116)	2.29 (58)						
BH□□-PB24-32	BH□□-PB24-32-3	1 1/2 PB	1 1/2 PB	100									
BH□□-FNS32-38	BH□□-FNS32-38-3	2 Female NPT	2 Female NPT	1.5 (38.1)	130	4.94 (125.4)	2.47 (62.7)	1.74 (44.2)	4.16 (106)	9.14 (232)	7.21 (183)		
BH□□-FRT32-38	BH□□-FRT32-38-3	2 Female BSPT	2 Female BSPT										
BH□□-TS32-38	BH□□-TS32-38-3	2" TS	2" TS										
BH□□-PS32-38	BH□□-PS32-38-3	2 PS	2 PS			1.7 (43.2)							
BH□□-PB32-38	BH□□-PB32-38-3	2 PB	2 PB			5.09 (129)	2.55 (64.8)	1.74 (44.2)					

1. Gigalok means Gigalok double ferrule tube fittings, TS means fractional tube socket weld, MTS means metric tube socket weld, TB means fractional tube butt weld, MTB means metric tube butt weld, PS means pipe socket weld, PB means pipe butt weld.
2. Sizes and types listed are standard. Other sizes and types are available upon request, refer to the ordering information.
3. Dimensions are shown with Gigalok nuts finger-tightened. All dimensions are for reference only and are subject to change. For dimensions not shown above, please contact the authorized representative or Gigalok.

Ordering Information

BH6L — FNS8 — FRT8 — FL8 — P13G — OS3IL — SF2

Series

BH

Body Material

SS CF8M
6L CF3M
S4 CF8
4L CF3
904L904L SS

Connection 1 Type

FNS Female NPT
NS Male NPT
FRT Female BSPT
RT Male BSPT
FRP Female BSPP (for RP)
BP Male BSPP (for RG)
FMS Female ISO (for RP)
MS Male ISO (for RG)
MTS Metric Tube Socket
TS Fractional Tube Socket
MTB Metric Tube Butt Weld
TB Fractional Tube Butt Weld
PS Pipe Socket Weld
PB Pipe Butt Weld
FL Fractional Tube Fitting
ML Metric Tube Fitting
UPB Nut + Gasket + Bulge Fractional Tube Nipple
UNB Nut + Gasket + Metric Tube Bulge Nipple
UPB Nut + Gasket + Bulge Pipe Nipple
FO FO Fitting
FR FR Fitting

Connection 1 Size

2 1/8"
4 1/4"
5 5/16"
6 3/8" or 6 mm
8 1/2" or 8 mm
10 10 mm
12 3/4" or 12 mm
14 14 mm or M14 x 1.5
16 1" or 16 mm
18 18 mm
20 1 1/4" or 20 mm or M20 x 1.5
22 22 mm or M22 x 1.5
24 1 1/2" or M24 x 1.5
25 25 mm
27 M27 x 2
28 28 mm
32 2" or 32 mm
36 2 1/4" or M36 x 2
40 2 1/2" or M40 x 2
48 3" or M48 x 2

Connection 2/3 Type

Same as Connection 1

Connection 2/3 Size

Specify in the same way as the Connection 1 type and size

Seat Material

Virgin PTFE
Reinforced PTFE
PEEK

Orifice Size

05 0.189" (4.8 mm)
07 0.281" (7.1 mm)
10 0.41" (10.4 mm)
13 0.516" (13.1 mm)
22 0.875" (22.2 mm)
29 1.125" (28.6 mm)
32 1.250" (31.8 mm)
38 1.500" (38.1 mm)

Packing Material

Reinforced PTFE
Graphite
O-ring

Handle/Actuator

Yellow Handle Sleeve
Red Handle Sleeve
Green Handle Sleeve
Blue Handle Sleeve
Elliptical Handle
90° Electric Actuator
180° Electric Actuator
90° Normally Closed Spring Return
90° Double Acting Pneumatic Actuator
90° Normally Open Spring Return Pneumatic Actuator
180° Spring Acting Pneumatic Actuator
180° Double Acting Pneumatic Actuator

Flow Pattern

Straight
3 3-way

Valve Application

General
Fire Safe Series
Steam Service
Thermal Service

Locking Device

No
Yes

Special Application

No
NACE
MR0175

Cleaning and Packaging

FC-01
FC-02

1. Standard thread pitch for metric threads are as follows:
M10 and below: 1 mm
M12 to M24: 1.5 mm
M27 and above: 2 mm
Standard thread pitch should be ignored in the ordering number, others should be specified.
2. FO means Gigalok O-seal fittings.
3. FR means Gigalok metal ring seal fittings.
For information about pneumatic and electric actuator, please contact the authorized representative or Gigalok.
4. For oxygen or virulent medium service, contact the authorized representative or Gigalok.
5. Cleaning and Packaging:
FC-01: Standard cleaning and packaging for general industrial procedures.
FC-02: Special cleaning and packaging for wetted system components to ensure compliance with product cleanliness requirements as stated in ASTM G93 Lever C.

One-piece Instrument Ball Valves

BO Series

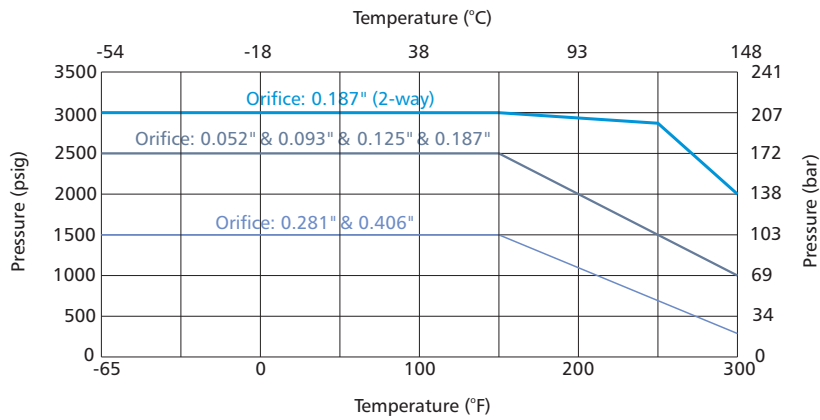
Features

- Maximum working pressure: 3000 psig (207 bar)
- Working temperature: -65°F to 300°F (-54°C to 148°C)
- Size from 1/16" to 3/4" or 3 mm to 18 mm
- 2-, 3-, 4-, 5-, 6- and 7-way models for on-off, switching and crossover service available
- One-piece body and one-piece ball stem
- No dead zone, such as area between the ball and valve chamber
- In-line inspection and repair after system relieved by top entry design
- Thermal cycle performance improved and wear compensated by live-loaded design
- Any reasonable connections available
- Pneumatic and electric actuator available
- Options for handle color
- Full operating pressure at any port
- Leak-tight performance testing for every valve at the maximum working pressure with nitrogen

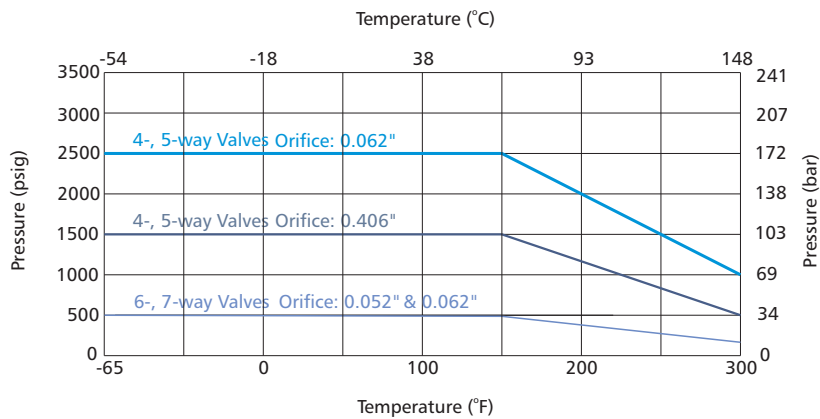


Pressure vs. Temperature

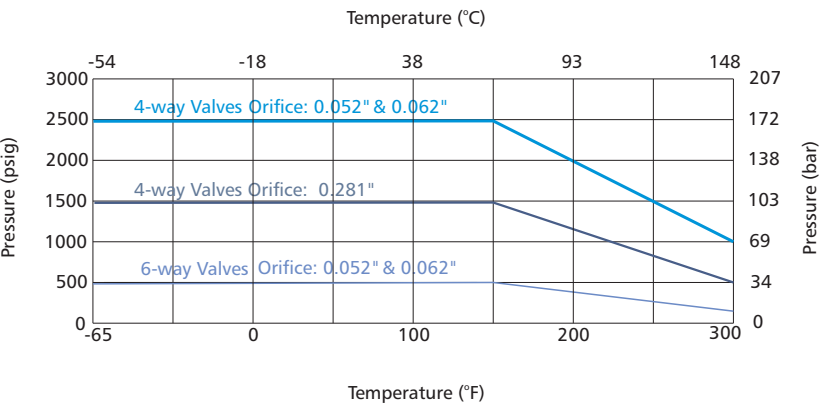
2-, 3-way, Angle Valves



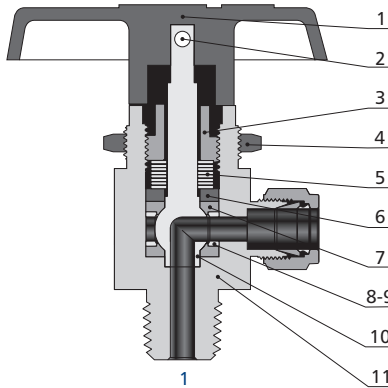
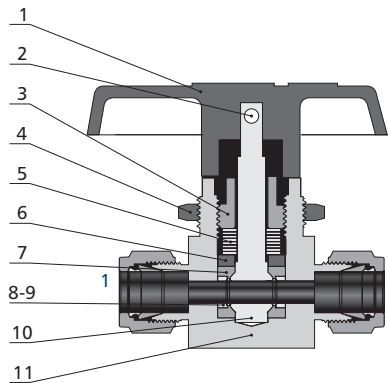
4-, 5-, 6-, 7-way Valves



Crossover (4-, 6-way) Valves



Standard Materials of Construction

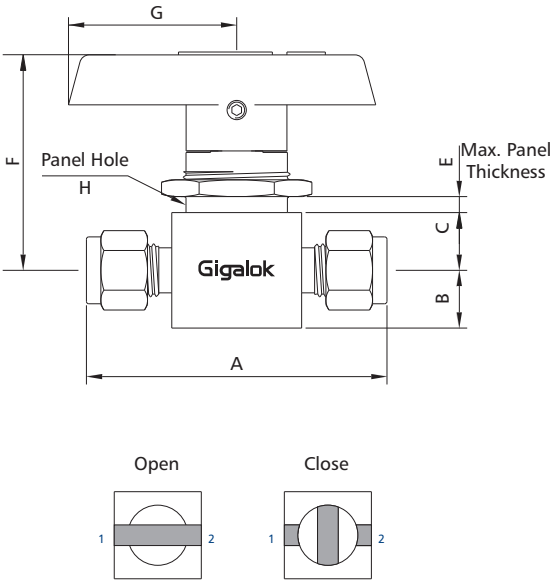


Item	Component	Valve Body Material		
		Stainless Steel	Brass	Alloy 400
		Material Grade/ASTM Specification		
1	Handle	Nylon or Aluminium		
2	Set Screw	S17400 SS/A564		
3	Packing Bolt	Powdered metal 300 series SS or 316 SS/A276, A479	Brass CDA 36000/B16	Alloy R-405/B164
4	Panel Nut	Powdered metal 300 series SS /B783 or 316 SS/A276, A479	Brass CDA 36000/B16	Powdered metal 300 series SS /B783 or 316 SS/A276, A479
5	Dishing Spring	S17700/A693		
6	Gland	Powdered metal 300 series SS/B783 or 316 SS/A276	Brass CDA 36000/B16	Alloy 400/B164
7	Packing Seat	PTFE/D1710 or UHMWPE/D4020		
8	Support Ring	Fluorocarbon-coated powdered metal 300 series SS/B783	Fluorocarbon-coated brass	Fluorocarbon-coated alloy 400
9	Support Disc		powdered metal	powdered metal
10	Ball Stem	316 SS/A276	Brass CDA 36000/B16	Alloy 400/B164
11	Body	316 SS/A182	Brass CDA 37700/B16	Alloy 400/B164
Wetted Lubricant		Fluorinated-based and silicone-based		
Non-wetted Lubricant		Molybdenum disulfide with hydrocarbon binder coat		

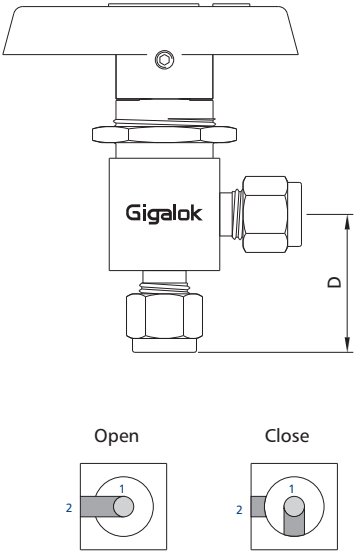
Contact the authorized representative or Gigalok for valves of other materials.

Dimensions

2-way Valves



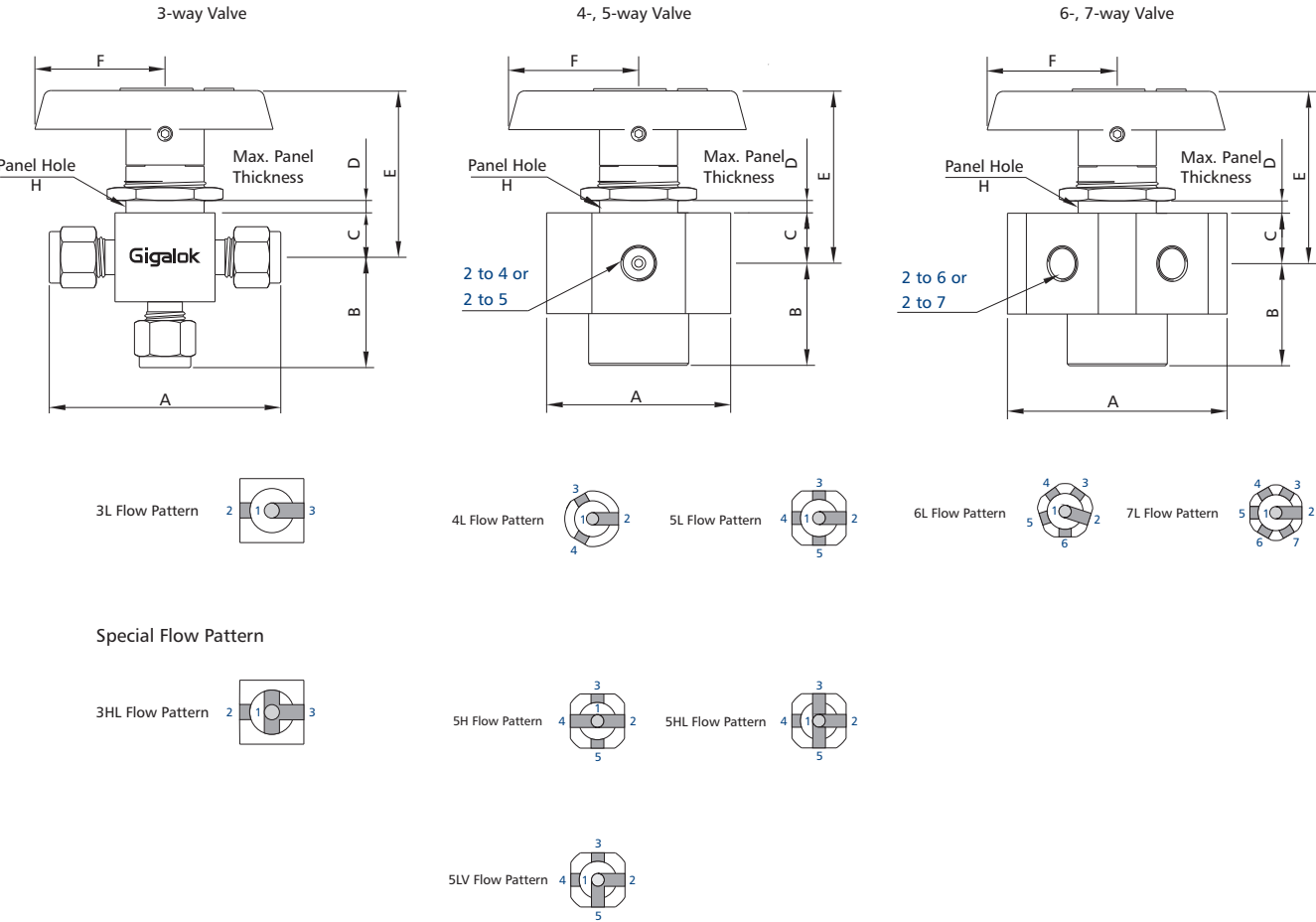
Angle Pattern Valves



Basic Ordering Number	Connection Type and Size	Orifice in. (mm)	Cv		Dimension, in. (mm)							
			Straight	Angle	A	B	C	D	E	F	G	H
BO□□-FL1-00	1/16" Gigalok	0.052 (1.3)	0.10	—	1.68 (42.7)	0.28 (7.1)	0.34 (8.6)	—	1/4 (6.4)	1.36 (34.5)	1.12 (28.4)	19/32 (15.1)
BO□□-FL2-02	1/8" Gigalok	0.093 (2.4)	0.20	0.15	2.01 (51.1)			0.97 (24.6)				
BO□□-FL4-03	1/4" Gigalok	0.125 (3.2)	0.60	0.35	2.21 (56.1)			1.07 (27.2)				
BO□□-FL4-05		3/8" Gigalok	0.187 (4.8)	1.40	0.90	2.39 (60.7)	0.38 (9.7)	0.44 (11.2)	1.17 (29.7)	3/16 (4.8)	1.47 (37.3)	1.53 (38.9)
BO□□-FL6-05	1.50			2.58 (65.5)		1.29 (32.8)						
BO□□-FL6-07	1/2" Gigalok		0.281 (7.1)	6.00	2.00	3.05 (77.5)	0.56 (14.2)	0.56 (14.2)	1.43 (36.3)	3/8 (9.5)	2.07 (52.6)	2.00 (50.8)
BO□□-FL8-10		0.406 (10.3)	12.00	4.60	3.92 (99.6)	0.69 (17.5)	0.69 (17.5)	1.74 (44.2)	2.43 (61.7)		3.00 (76.2)	1 1/2 (38.1)
BO□□-FL12-10			3/4" Gigalok	6.40	3.80							
BO□□-ML3-02	3 mm Gigalok	0.093 (2.4)	0.20	0.15	2.01 (51.1)	0.28 (7.1)	0.34 (8.6)	0.97 (24.6)	1/4 (6.4)	1.36 (34.5)	1.36 (34.5)	19/32 (15.1)
BO□□-ML6-03	6 mm Gigalok	0.125 (3.2)	0.60	0.35	2.21 (56.1)			1.07 (27.2)				
BO□□-ML6-05		0.187 (4.8)	1.40	0.90	2.39 (60.7)			0.38 (9.7)				
BO□□-ML8-05	8 mm Gigalok		1.50		2.46 (62.5)	1.20 (30.5)						
BO□□-ML10-07	10 mm Gigalok	0.281 (7.1)	6.00	2.00	3.07 (78.0)	0.56 (14.2)	0.56 (14.2)	1.43 (36.3)	3/8 (9.5)	2.07 (52.6)	2.07 (52.6)	1 1/8 (28.6)
BO□□-ML12-10	12 mm Gigalok	0.406 (10.3)	12.00	4.60	3.92 (99.6)	0.69 (17.5)	0.69 (17.5)	1.74 (44.2)		2.43 (61.7)	2.43 (61.7)	1 1/2 (38.1)

Basic Ordering Number	Connection Type and Size	Orifice in. (mm)	Cv		Dimension, in. (mm)							
			Straight	Angle	A	B	C	D	E	F	G	H
BO□□-FNS2-03	1/8 Female NPT	0.125 (3.2)	0.50	0.30	1.63 (41.4)	0.28 (7.1)	0.34 (8.6)	0.81 (20.6)	1/4 (6.4)	1.36 (34.5)	1.12 (28.4)	19/32 (15.1)
BO□□-FNS2-05		0.187 (4.8)	1.20	0.70	2.0 (50.8)	0.38 (9.7)	0.44 (11.2)	1.0 (25.4)	3/16 (4.8)	1.47 (37.3)	1.53 (38.9)	25/32 (19.8)
BO□□-FNS4-05	1/4 Female NPT		0.90	0.75	2.06 (52.3)			1.03 (26.2)				
BO□□-FNS4-07		3/8 Female NPT	0.281 (7.1)	3.00	1.70	2.50 (63.5)	0.56 (14.2)	0.56 (14.2)	1.25 (31.8)	3/8 (9.5)	2.07 (52.6)	2.00 (50.8)
BO□□-FNS6-07	2.60			1.50								
BO□□-FNS8-10	1/2 Female NPT	0.406 (10.3)	6.30	3.50	3.12 (79.2)	0.69 (17.5)	0.69 (17.5)	1.56 (39.6)		2.43 (61.7)	3.00 (76.2)	1 1/2 (38.1)
BO□□-NS4-05	1/4 Male NPT	0.187 (4.8)	1.20	0.75	2.00 (50.8)	0.38 (9.7)	0.44 (11.2)	1.03 (26.2)	3/16 (4.8)	1.47 (37.3)	1.53 (38.9)	25/32 (19.8)
BO□□-FRT4-05	1/4 Female BSPT		0.90		2.06 (52.3)							
BO□□-FRT6-07	3/8 Female BSPT	0.281 (7.1)	2.60	—	2.50 (63.5)	0.56 (14.2)	0.56 (14.2)	—	3/8 (9.5)	2.07 (52.6)	2.00 (50.8)	1 1/8 (28.6)
BO□□-FRT8-10	1/2 Female BSPT	0.406 (10.3)	6.30		3.12 (79.2)	0.69 (17.5)	0.69 (17.5)			2.43 (61.7)	3.00 (76.2)	1 1/2 (38.1)
BO□□-FO4-03	1/4 Male FO	0.125 (3.2)	0.60	0.35	1.75 (44.4)	0.38 (9.7)	0.44 (11.2)	0.94 (23.9)	1/8 (3.2)	1.36 (34.5)	1.12 (28.4)	19/32 (15.1)
BO□□-FO4-05		0.187 (4.8)	2.40	0.90	1.88 (47.8)				3/16 (4.8)	1.47 (37.3)	1.53 (38.9)	25/32 (19.8)
BO□□-FR4-03	1/4 Male FR	0.125 (3.2)	0.60	0.35	2.13 (54.1)			1.09 (27.7)	1/8 (3.2)	1.36 (34.5)	1.12 (28.4)	19/32 (15.1)
BO□□-FR4-05		0.187 (4.8)	2.40	0.90		3/16 (4.8)	1.47 (37.3)		1.53 (38.9)	25/32 (19.8)		
BO□□-FR8-07	1/2 Male FR	0.281 (7.1)	6.00	—	2.88 (73.2)	0.56 (14.2)	—	3/8 (9.5)	2.07 (52.6)	2.00 (50.8)	1 1/8 (28.6)	
BO□□-FR8-10		0.406 (10.3)	12.00		3.12 (79.2)	0.69 (17.5)			2.43 (61.7)	3.00 (76.2)	1 1/2 (38.1)	

Switching (3-, 4-, 5-, 6- and 7-way) Valves



3-way Valve										
Basic Ordering Number	Connection Type and Size	Orifice in. (mm)	Cv	Dimension, in. (mm)						
				A	B	C	D	E	F	H
BO□□-FL1-00-3L	1/16" Gigalok	0.052 (1.3)	0.08	1.68 (42.7)	0.81 (20.6)	0.34 (8.6)	1/4 (6.4)	1.36 (34.5)	1.13 (28.7)	19/32 (15.1)
BO□□-FL2-02-3L	1/8" Gigalok	0.093 (2.4)	0.15	2.01 (51.1)	0.97 (24.6)					
BO□□-FL4-03-3L	1/4" Gigalok	0.125 (3.2)	0.35	2.21 (56.1)	1.07 (27.2)					
BO□□-FL4-05-3L		0.187 (4.8)	0.90	2.39 (60.7)	1.17 (29.7)	0.44 (11.2)	3/16 (4.8)	1.47 (37.3)	1.53 (38.9)	25/32 (19.8)
BO□□-FL6-07-3L	3/8" Gigalok	0.281 (7.1)	2.00	2.89 (73.4)	1.43 (36.3)	0.56 (14.2)	3/8 (9.5)	2.07 (52.6)	2.00 (50.8)	1 1/2 (28.6)
BO□□-FL8-10-3L	1/2" Gigalok	0.406 (10.3)	4.60	3.48 (88.4)	1.74 (44.2)	0.69 (17.5)		2.43 (61.7)	3.00 (76.2)	1 1/2 (38.1)
BO□□-FL12-10-3L	3/4" Gigalok		4.90							

Basic Ordering Number	Connection Type and Size	Orifice in. (mm)	Cv	Dimension, in. (mm)						
				A	B	C	D	E	F	H
BO□□-ML3-02-3L	3 mm Gigalok	0.093 (2.4)	0.15	2.01 (51.1)	0.97 (24.6)	0.34 (8.6)	1/4 (6.4)	1.36 (34.5)	1.13 (28.7)	19/32 (15.1)
BO□□-ML6-03-3L	6 mm Gigalok	0.125 (3.2)	0.35	2.21 (56.1)	1.07 (27.2)					
BO□□-ML6-05-3L		0.187 (4.8)	0.90	2.39 (60.7)	1.17 (29.7)	0.44 (11.2)	3/16 (4.8)	1.47 (37.3)	1.53 (38.9)	25/32 (19.8)
BO□□-ML8-05-3L	8 mm Gigalok		0.80	2.46 (62.5)	1.20 (30.5)					
BO□□-ML10-07-3L	10 mm Gigalok	0.281 (7.1)	2.00	2.89 (73.4)	1.43 (36.3)	0.56 (14.2)	3/8 (9.5)	2.07 (52.6)	2.00 (50.8)	1 1/2 (28.6)
BO□□-ML12-07-3L	12 mm Gigalok	0.406 (10.3)	4.60	3.48 (88.4)	1.74 (44.2)	0.69 (17.5)		2.43 (61.7)	3.00 (76.2)	1 1/2 (38.1)
BO□□-FNS2-03-3L	1/8 Female NPT	0.125 (3.2)	0.30	1.63 (41.4)	0.81 (20.6)	0.34 (8.6)	1/4 (6.4)	1.36 (34.5)	1.13 (28.7)	19/32 (15.1)
BO□□-FNS4-05-3L	1/4 Female NPT	0.187 (4.8)	0.75	2.06 (52.3)	1.03 (26.2)	0.44 (11.2)	3/16 (4.8)	1.47 (37.3)	1.53 (38.9)	25/32 (19.8)
BO□□-FNS4-07-3L		0.281 (7.1)	1.70	2.50 (63.5)	1.25 (31.8)	0.56 (14.2)		2.07 (52.6)	2.00 (50.8)	1 1/8 (28.6)
BO□□-FNS6-07-3L	3/8 Female NPT		1.50				3/8 (9.5)	2.43 (61.7)	3.00 (76.2)	1 1/2 (38.1)
BO□□-FNS8-10-3L	1/2 Female NPT	0.406 (10.3)	3.50	3.13 (79.5)	1.56 (39.6)	0.69 (17.5)				
BO□□-FRT4-05-3L	1/4 Female BSPT	0.187 (4.8)	0.75	2.06 (52.3)	1.03 (26.2)	0.44 (11.2)	3/16 (4.8)	1.47 (37.3)	1.53 (38.9)	25/32 (19.8)
BO□□-FRT6-07-3L	3/8 Female BSPT	0.281 (7.1)	1.50	2.50 (63.5)	1.25 (31.8)	0.56 (14.2)	3/8 (9.5)	2.07 (52.6)	2.00 (50.8)	1 1/8 (28.6)
BO□□-FRT8-10-3L	1/2 Female BSPT	0.406 (10.3)	3.50	3.13 (79.5)	1.56 (39.6)	0.69 (17.5)		2.43 (61.7)	3.00 (76.2)	1 1/2 (38.1)

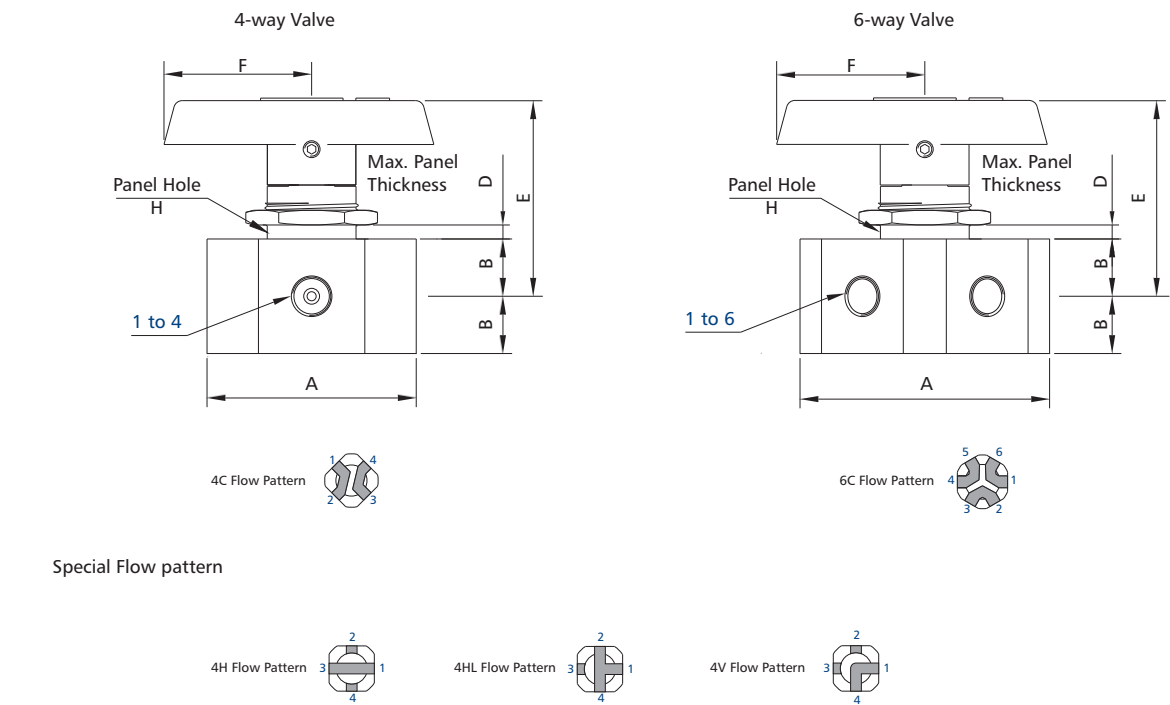
4- & 5-way Valve

BO□□-FL2-01-4L	1/8" Gigalok	0.062 (1.6)	0.07	1.94 (49.3)	0.97 (24.6)	0.44 (11.2)	5/32 (4.1)	1.69 (42.9)	1.53 (38.9)	29/32 (23.1)
BO□□-FL2-01-5L										
BO□□-FNS2-01-4L	1/8 Female NPT	0.062 (1.6)	0.07	1.55 (39.4)	0.88 (22.4)	0.69 (17.5)	3/8 (9.7)	2.43 (61.7)	3.00 (76.0)	1 1/2 (38.1)
BO□□-FNS2-01-5L										
BO□□-FNS8-10-4L	1/2 Female NPT	0.406 (10.3)	3.50	3.13 (79.5)	1.56 (39.6)	0.69 (17.5)	3/8 (9.7)	2.43 (61.7)	3.00 (76.0)	1 1/2 (38.1)
BO□□-FNS8-10-5L										

6- & 7-way Valve

BO□□-FL1-00-6L	1/16" Gigalok	0.052 (1.3)	0.05	1.94 (49.3)	0.97 (24.6)	0.44 (11.2)	5/32 (4.1)	1.69 (42.9)	1.53 (38.9)	29/32 (23.1)
BO□□-FL1-00-7L										
BO□□-FL2-01-6L	1/8" Gigalok	0.062 (1.6)	0.07	1.94 (49.3)	0.97 (24.6)	0.44 (11.2)	5/32 (4.1)	1.69 (42.9)	1.53 (38.9)	29/32 (23.1)
BO□□-FL2-01-7L										

Crossover (4-, 6-way) Valves



Basic Ordering Number	Connection Type and Size	Orifice in. (mm)	Cv	Dimension, in. (mm)					
				A	B	D	E	F	H
4-way Valve									
BO□□-FL1-00-4C	1/16" Gigalok	0.052 (1.3)	0.06	1.55 (39.4)	0.44 (11.2)	3/16 (4.8)	1.68 (42.7)	1.53 (38.9)	29/32 (23.1)
BO□□-FL2-01-4C	1/8" Gigalok	0.062 (1.6)	0.08	1.95 (49.5)					
BO□□-FNS2-01-4C	1/8 Female NPT			1.55 (39.4)					
BO□□-FNS8-07-4C	1/2 Female NPT	0.281 (7.1)	1.60	3.13 (79.5)	0.69 (17.5)	3/8 (9.7)	2.43 (61.7)	3.00 (76.2)	1 1/2 (38.1)
6-way Valve									
BO□□-FL1-00-6C	1/16" Gigalok	0.052 (1.3)	0.06	1.95 (49.5)	0.44 (11.2)	3/16 (4.8)	1.68 (42.7)	1.53 (38.9)	29/32 (23.1)
BO□□-FL2-01-6C	1/8" Gigalok	0.062 (1.6)	0.08						

1. Gigalok means Gigalok double ferrule tube fittings.
2. Sizes and types listed are standard. Other sizes and types are available upon request, refer to the ordering information.
3. Dimensions are shown with FTIOK nuts finger-tightened. All dimensions are for reference only and are subject to change.
For dimensions not shown above, please contact the authorized representative or Gigalok.

Vent Port Options

Vented Valves

The maximum working pressure for vented valves is 500 psig (34.4 bar).

Straight-pattern Valves

A vent hole in the side of the valve body makes the downstream port vent to atmosphere when the valve is closed.

Angle-pattern and 3-way Valves

A vent hole in the side of the valve body makes the bottom port vent to atmosphere when the valve is closed.

Welded Vent Port Connections

A Gigalok tube fitting or a tube stub welded to the vent port is available for stainless steel vented valves.

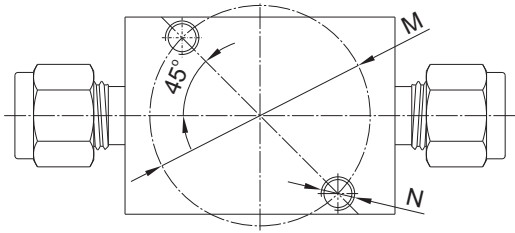
Bottom Screw Panel Mounting Options

Remark

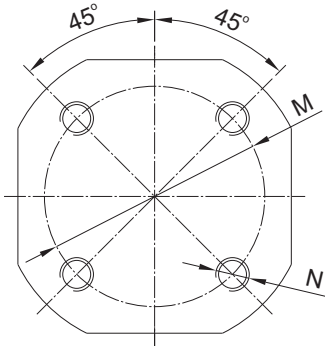
The bottom screw panel mounting options is not available on angle-pattern valves,3-way valves,6-way valves and 7-way valves.

Mounting Dimension

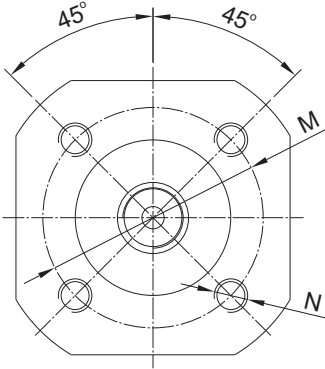
2-way



4-way

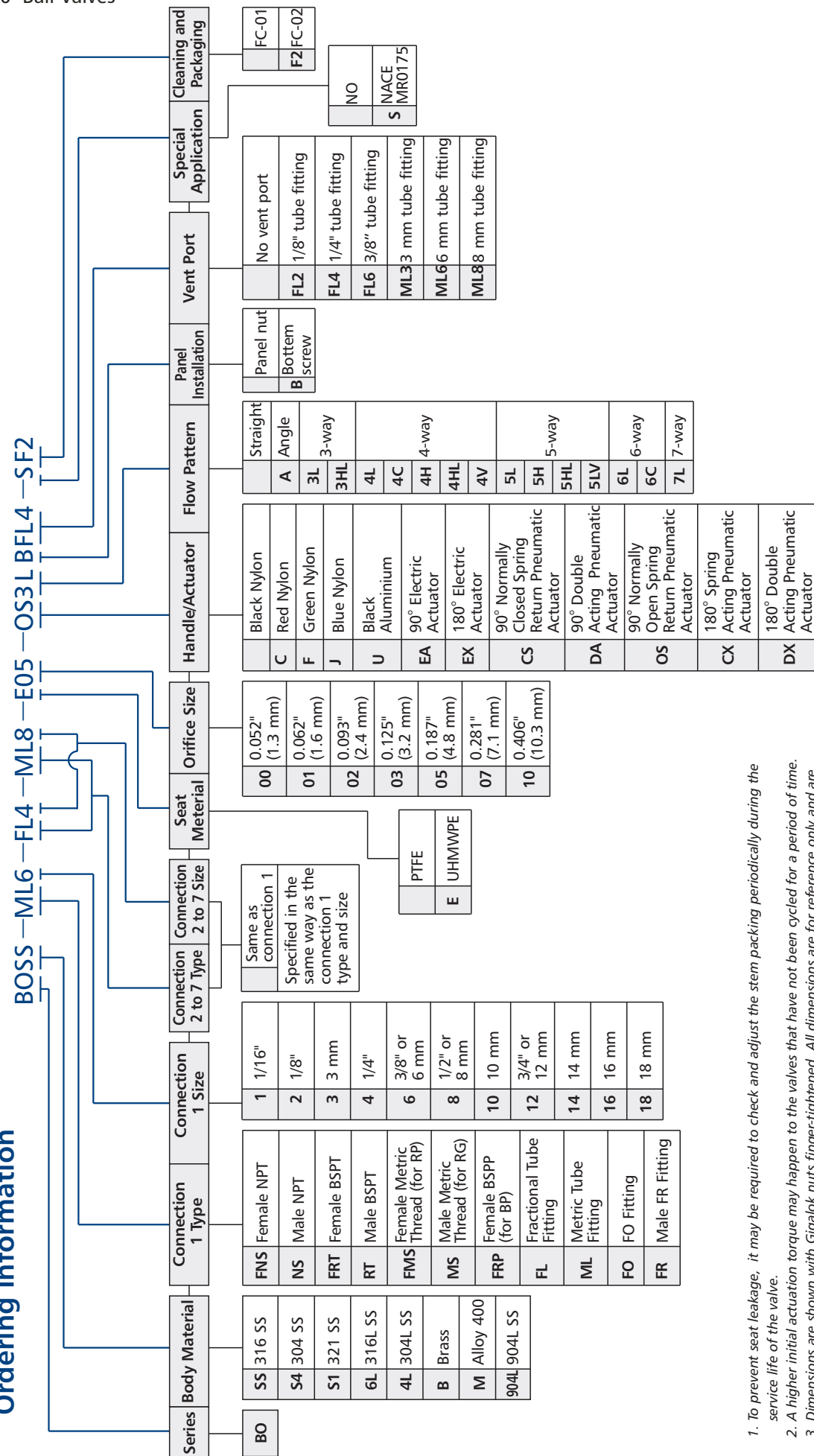


5-way



	Orifice in. (mm)	Dimensions, in. (mm)	
		M	N
2-way	0.052~0.125 (1.3~3.2)	0.625 (15.88)	M2.5 x 0.45 deep 0.24" (6)
	0.187 (4.8)	0.875 (22.23)	M3 x 0.5 deep 0.24" (6)
	0.281 (7.1)	1.25 (31.75)	M5 x 0.8 deep 0.24" (6)
	0.406 (10.3)	1.625 (41.28)	M5 x 0.8 deep 0.24" (6)
4-way	0.052~0.062 (1.3~1.6)	1.25 (31.75)	M5 x 0.8 deep 0.24" (6)
	0.281 (7.1)	2 (50.8)	M5 x 0.8 deep 0.24" (6)
5-way	0.052~0.062 (1.3~1.6)	1.25 (31.75)	M5 x 0.8 deep 0.24" (6)
	0.406 (10.3)	2 (50.8)	M5 x 0.8 deep 0.24" (6)

Ordering Information



1. To prevent seat leakage, it may be required to check and adjust the stem packing periodically during the service life of the valve.
 2. A higher initial actuation torque may happen to the valves that have not been cycled for a period of time.
 3. Dimensions are shown with Gigalok nuts finger-tightened. All dimensions are for reference only and are subject to change.
 4. Sizes and types listed are standard. Other sizes and types are available upon request.
 5. For information about pneumatic and electric actuator, please contact the authorized representative or Gigalok.
 6. For oxygen or virulent medium service, contact the authorized representative or Gigalok.
6. Cleaning and Packaging:
- FC-01: Standard cleaning and packaging for general industrial procedures.
- FC-02: Special cleaning and packaging for wetted system components to ensure compliance with product cleanliness requirement as stated in ASTM G93 Level C.

Bar Stock Ball Valves

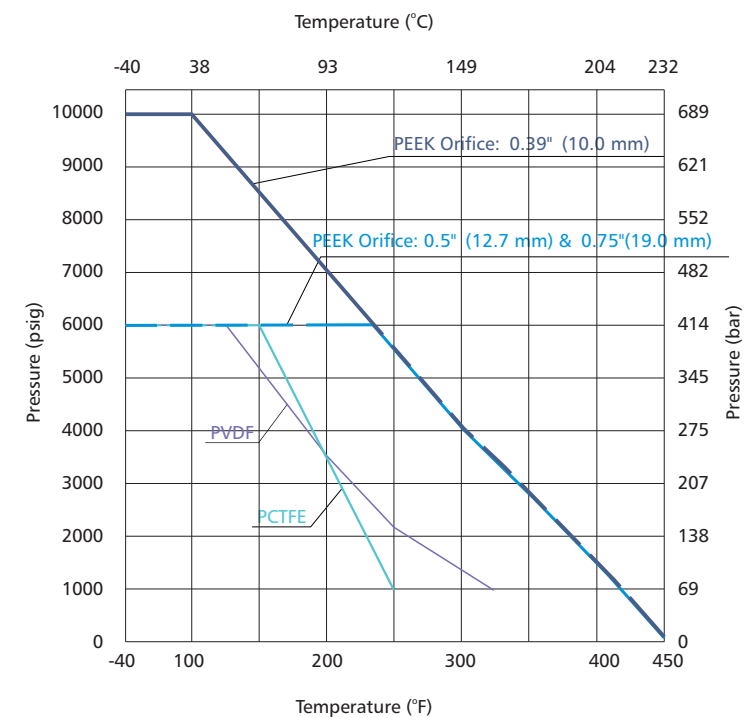
BP Series

Features

- Maximum working pressure: 10000 psig (689 bar)
- Working temperature: -40°F to 450°F (-40°C to 232°C)
- 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



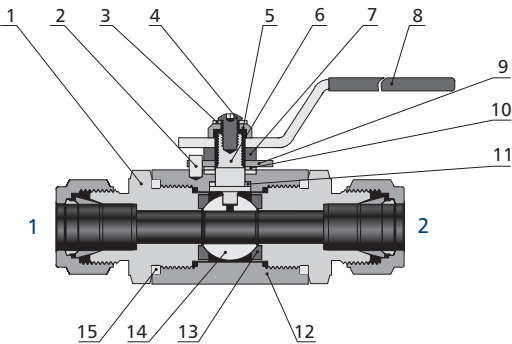
Pressure vs. Temperature



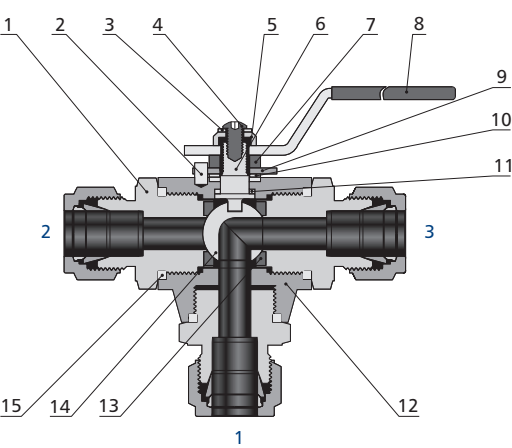
1. Graphs are for 2-way valves only.
2. Maximum working pressure for 3-way valves:
6000 psig: connection 1 as inlet, connection 2 and connection 3 as outlet
3000 psig: connection 2 and connection 3 as inlet, connection 1 as outlet

Standard Materials of Construction

2-way Valves

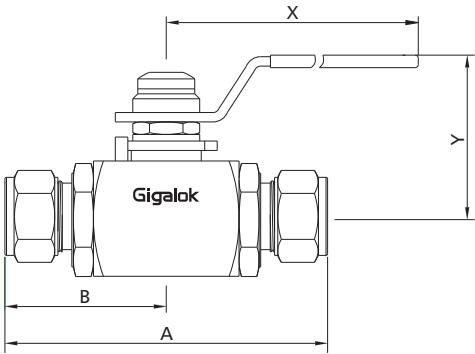
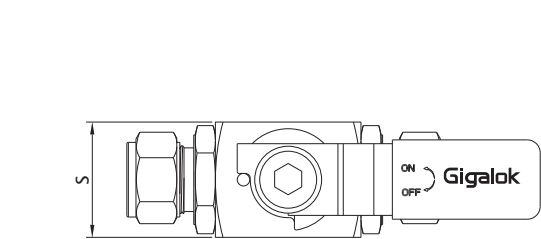


3-way Valves



Dimensions

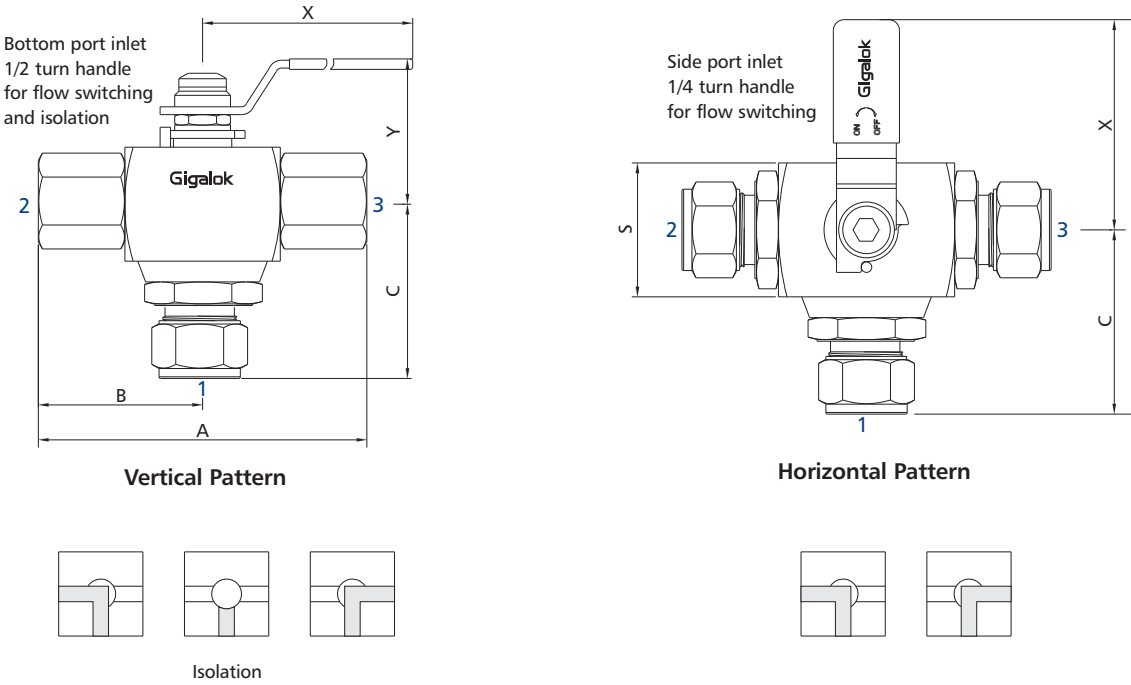
2-way Valves



Item	Component	Body Material	
		316 SS	Alloy 400
1	End Connector	316 SS/A276	Alloy 400/B164
2	Stop Pin	Stainless steel	
3	Spring Washer	316 SS/A276	
4	Bolt	Stainless steel	
5	Cover	316 SS/A276	
6	Stem	316 SS/A276	Alloy 400/B164
7	Stem Nut	Stainless steel	
8	Handle	Stainless steel with vinyl cover	
9	Stop Block	316 SS/A240	
10	Stem Washer	316 SS/A276	
11	Stem Packing	PTFE/D1710	
12	Body	316 SS/A479	Alloy 400/B164
13	Seat	PVDF or PCTFE or PEEK	
14	Ball	316 SS/A479	Alloy R- 405/B164
15	End Seal	PTFE/D1710	

Basic Ordering Number	Connection Type and Size		Orifice in. (mm)	Cv	Dimension, in. (mm)				
	Connection 1	Connection 2			A	B	X	Y	S
BP□□-ML6-10	6 mm Gigalok	6 mm Gigalok	0.39 (10.0)	1.2	3.54 (90.0)	1.77 (45.0)	5.12 (130.0)	1.73 (44.0)	1.30 (32.0)
BP□□-ML8-10	8 mm Gigalok	8 mm Gigalok			3.60 (91.6)	1.80 (45.8)			
BP□□-ML10-10	10 mm Gigalok	10 mm Gigalok		3.7	3.70 (94.0)	1.85 (47.0)			
BP□□-ML12-10	12 mm Gigalok	12 mm Gigalok		7.5	3.94 (100.0)	1.97 (50.0)			
BP□□-ML14-10	14 mm Gigalok	14 mm Gigalok		1.2	3.60 (91.6)	1.80 (45.8)			
BP□□-FL4-10	1/4" Gigalok	1/4" Gigalok		3.7	3.72 (94.6)	1.86 (47.3)			
BP□□-FL6-10	3/8" Gigalok	3/8" Gigalok		7.5	3.92 (99.6)	1.96 (49.8)			
BP□□-FL8-10	1/2" Gigalok	1/2" Gigalok			2.52 (64.0)	1.26 (32.0)			
BP□□-FNS4-10	1/4 Female NPT	1/4 Female NPT			2.80 (71.0)	1.40 (35.5)			
BP□□-FNS6-10	3/8 Female NPT	3/8 Female NPT			3.11 (79.0)	1.56 (39.5)			
BP□□-FNS8-10	1/2 Female NPT	1/2 Female NPT		3.7	3.36 (85.4)	1.68 (42.7)			
BP□□-NS4-10	1/4 Male NPT	1/4 Male NPT		7.5	3.75 (95.2)	1.88 (47.6)			
BP□□-NS6-10	3/8 Male NPT	3/8 Male NPT	0.5 (12.7)	10.0	4.04 (102.6)	2.02 (51.3)	5.71 (145.0)	1.89 (48.0)	1.50 (38.0)
BP□□-NS8-10	1/2 Male NPT	1/2 Male NPT			4.12 (104.6)	2.06 (52.3)			
BP□□-ML16-13	16 mm Gigalok	16 mm Gigalok			4.43 (112.6)	2.22 (56.3)			
BP□□-ML18-13	18 mm Gigalok	18 mm Gigalok			4.36 (110.6)	2.18 (55.3)			
BP□□-ML20-13	20 mm Gigalok	20 mm Gigalok			3.54 (90.0)	1.77 (45.0)			
BP□□-ML22-13	22 mm Gigalok	22 mm Gigalok			4.14 (105.2)	2.07 (52.6)			
BP□□-FL10-13	5/8" Gigalok	5/8" Gigalok							
BP□□-FL12-13	3/4" Gigalok	3/4" Gigalok							
BP□□-FNS8-13	1/2 Female NPT	1/2 Female NPT		19.0	4.87 (123.8)	2.43 (61.9)	6.30 (160.0)	2.08 (53.0)	1.96 (50.0)
BP□□-FNS12-13	3/4 Female NPT	3/4 Female NPT			5.11 (129.8)	2.66 (64.9)			
BP□□-NS12-13	3/4 Male NPT	3/4 Male NPT			4.59 (116.6)	2.29 (58.3)			
BP□□-ML20-19	20 mm Gigalok	20 mm Gigalok			5.11 (129.8)	2.66 (64.9)			
BP□□-ML22-19	22 mm Gigalok	22 mm Gigalok			3.54 (90.0)	1.77 (45.0)			
BP□□-FL12-19	3/4" Gigalok	3/4" Gigalok			4.26 (108.2)	2.13 (54.1)			
BP□□-FL16-19	1" Gigalok	1" Gigalok			4.54 (115.2)	2.27 (57.6)			
BP□□-FNS12-19	3/4 Female NPT	3/4 Female NPT			4.91 (124.8)	2.45 (62.4)			
BP□□-FNS16-19	1 Female NPT	1 Female NPT	0.71 (18.0)	30.0					
BP□□-NS12-19	3/4 Male NPT	3/4 Male NPT		19.0					
BP□□-NS16-19	1 Male NPT	1 Male NPT		30.0					

3-way Valves



Basic Ordering Number	Connection Type and Size		Orifice in. (mm)	Cv	Dimension, in. (mm)					
	Connection 1	Connection 2/3			A	B	C	X	Y	S
BP□□-ML6-10-3□	6 mm Gigalok	6 mm Gigalok	0.39 (10.0)	1.2	3.54 (90.0)	1.77 (45.0)	2.00 (51.0)	5.12 (130.0)	1.73 (44.0)	1.30 (32.0)
BP□□-ML8-10-3□	8 mm Gigalok	8 mm Gigalok			3.60 (91.6)	1.80 (45.8)	2.02 (51.3)			
BP□□-ML10-10-3□	10 mm Gigalok	10 mm Gigalok			3.70 (94.0)	1.85 (47.0)	2.07 (52.5)			
BP□□-ML12-10-3□	12 mm Gigalok	12 mm Gigalok		3.7	3.70 (94.0)	1.85 (47.0)	2.07 (52.5)			
BP□□-ML14-10-3□	14 mm Gigalok	14 mm Gigalok			3.94 (100.0)	1.97 (50.0)	2.18 (55.5)			
BP□□-FL4-10-3□	1/4" Gigalok	1/4" Gigalok		7.5	1.2	3.60 (91.6)	1.80 (45.8)			
BP□□-FL6-10-3□	3/8" Gigalok	3/8" Gigalok			3.7	3.72 (94.6)	1.86 (47.3)			
BP□□-FL8-10-3□	1/2" Gigalok	1/2" Gigalok			3.92 (99.6)	1.96 (49.8)	2.13 (54.0)			
BP□□-FNS4-10-3□	1/4 Female NPT	1/4 Female NPT		7.5	2.52 (64.0)	1.26 (32.0)	1.44 (36.5)			
BP□□-FNS6-10-3□	3/8 Female NPT	3/8 Female NPT			2.80 (71.0)	1.40 (35.5)	1.57 (40.0)			
BP□□-FNS8-10-3□	1/2 Female NPT	1/2 Female NPT			3.11 (79.0)	1.56 (38.5)	1.73 (44.0)			
BP□□-NS4-10-3□	1/4 Male NPT	1/4 Male NPT		3.7	3.36 (85.4)	1.68 (42.7)	1.90 (48.2)			
BP□□-NS6-10-3□	3/8 Male NPT	3/8 Male NPT			3.75 (95.2)	1.88 (47.6)	2.09 (53.1)			
BP□□-NS8-10-3□	1/2 Male NPT	1/2 Male NPT			3.75 (95.2)	1.88 (47.6)	2.09 (53.1)			

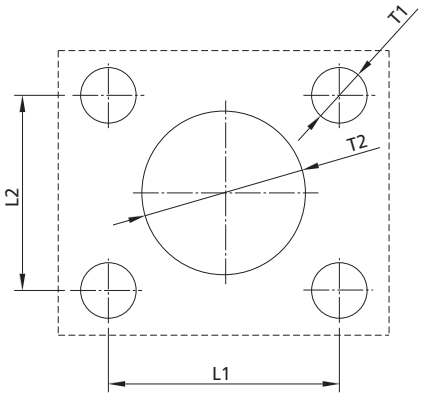
Basic Ordering Number	Connection Type and Size		Orifice in. (mm)	Cv	Dimension, in. (mm)					
	Connection 1	Connection 2/3			A	B	C	X	Y	S
BP□□-ML16-13-3□	16 mm Gigalok	16 mm Gigalok	0.5 (12.7)	10.0	4.04 (102.6)	2.02 (51.3)	2.41 (61.3)	5.71 (145.0)	1.89 (48.0)	1.50 (38.0)
BP□□-ML18-13-3□	18 mm Gigalok	18 mm Gigalok			4.12 (104.6)	2.06 (52.3)	2.45 (62.3)			
BP□□-ML20-13-3□	20 mm Gigalok	20 mm Gigalok			4.43 (112.6)	2.22 (56.3)	2.61 (66.3)			
BP□□-ML22-13-3□	22 mm Gigalok	22 mm Gigalok			4.36 (110.6)	2.18 (55.3)	2.57 (65.3)			
BP□□-FL10-13-3□	5/8" Gigalok	5/8" Gigalok			3.54 (90.0)	1.77 (45.0)	1.95 (49.5)			
BP□□-FL12-13-3□	3/4" Gigalok	3/4" Gigalok					2.16 (55.0)			
BP□□-FNS8-10-3□	1/2 Female NPT	1/2 Female NPT					2.46 (62.6)			
BP□□-FNS12-13-3□	3/4 Female NPT	3/4 Female NPT			4.14 (105.2)	2.07 (52.6)	2.46 (62.6)			
BP□□-NS12-13-3□	3/4 Male NPT	3/4 Male NPT	0.71 (18.0)	19.0	4.87 (123.8)	2.43 (61.9)	2.89 (73.4)	6.30 (160.0)	2.08 (53.0)	1.96 (50.0)
BP□□-ML20-19-3□	20 mm Gigalok	20 mm Gigalok			30.0	5.11 (129.8)	2.66 (64.9)			
BP□□-ML22-19-3□	22 mm Gigalok	22 mm Gigalok			19.0	4.59 (116.6)	2.29 (58.3)			
BP□□-ML25-19-3□	25 mm Gigalok	25 mm Gigalok			30.0	5.11 (129.8)	2.66 (64.9)			
BP□□-FL12-19-3□	3/4" Gigalok	3/4" Gigalok				5.11 (129.8)	2.66 (64.9)			
BP□□-FL16-19-3□	1" Gigalok	1" Gigalok				3.54 (90.0)	1.77 (45.0)			
BP□□-FNS12-19-3□	3/4 Female NPT	3/4 Female NPT				4.26 (108.2)	2.13 (54.1)			
BP□□-FNS16-19-3□	1 Female NPT	1 Female NPT			19.0	4.54 (115.2)	2.27 (57.6)			
BP□□-NS12-19-3□	3/4 Male NPT	3/4 Male NPT			30.0	4.91 (124.8)	2.45 (62.4)			
BP□□-NS16-19-3□	1 Male NPT	1 Male NPT			30.0	4.91 (124.8)	2.45 (62.4)			

1. Gigalok means Gigalok double ferrule tube fittings, TS means fractional tube socket weld, MTS means metric tube socket weld, TB means fractional tube butt weld, MTB means metric tube butt weld, PS means pipe socket weld, PB means pipe butt weld.
2. Sizes and types listed are standard. Other sizes and types are available upon request, refer to the ordering information.
3. Dimensions are shown with Gigalok nuts finger-tightened. All dimensions are for reference only and are subject to change. For dimensions not shown above, please contact the authorized representative or Gigalok.

Panel Mounting Options

Dimension for panel mounting

Orifice in. (mm)	L1 in. (mm)	L2 in. (mm)	T1 in. (mm)	T2 in. (mm)	Panel Thickness 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)	1.34 (34.0)	1.34 (34.0)	0.20 (5.0)	1.50 (38.0)	
0.75 (19.0)	1.73 (44.0)	1.73 (44.0)	0.20 (5.0)	1.50 (38.0)	



Ordering Information

BPSS — ML20 — FL12 — FNS8 — P13 — OS3M — SF2									
Series	Body Material	Connection 1 Type	Connection 1 Size	Connection 2/3 Type	Connection 2/3 Size	Seat Material	Orifice Size	Handle / Actuator	Flow Pattern
BP	SS	FNS	4	Same as Connection 1 Specify in the same way as the Connection 1 type and size	10	PVDF	0.39" (10.0 mm)	Stainless Steel with Yellow Vinyl Cover	Straight
	S4	NS	6			K PCTFE	0.5" (12.7 mm)	Stainless Steel with Red Vinyl Cover	3-Way (Vertical Pattern)
	S1	FRT	8			P PEEK	0.71" (18.0 mm)	Stainless Steel with Blue Vinyl Cover	3-Way (Horizontal Pattern)
	904L	RT	10					90° Electric Actuator	
		FMS	12					180° Electric Actuator	
		MS	14					90° Normally Closed Spring Return Pneumatic Actuator	
		FRP	16					90° Double Acting Pneumatic Actuator	
		BP	18					90° Normally Open Spring Return Pneumatic Actuator	
		FL	20					180° Spring Acting Pneumatic Actuator	
		ML	22					180° Double Acting Pneumatic Actuator	
		UFB	25						
		UMB	28						
		UPB	30						
			32						

1. Standard thread pitch for metric threads are as follows:
M10 and below: 1 mm
M12 to M24: 1.5 mm
M27 and above: 2 mm

2. Standard thread pitch should be ignored in the ordering number, others should be specified.
FO means Gigalok O-seal fittings.

3. FR means Gigalok metal ring seal fittings.
For information about pneumatic and electric actuator, please contact the authorized representative or Gigalok.

4. For oxygen or virulent medium service, contact the authorized representative or Gigalok.

5. Cleaning and Packaging:
FC-01: Standard cleaning and packaging for general industrial procedures.
FC-02: Special cleaning and packaging for wetted system components to ensure compliance with product cleanliness requirements as stated in ASTM G93 Lever C.

Hex Bar Stock Ball Valves

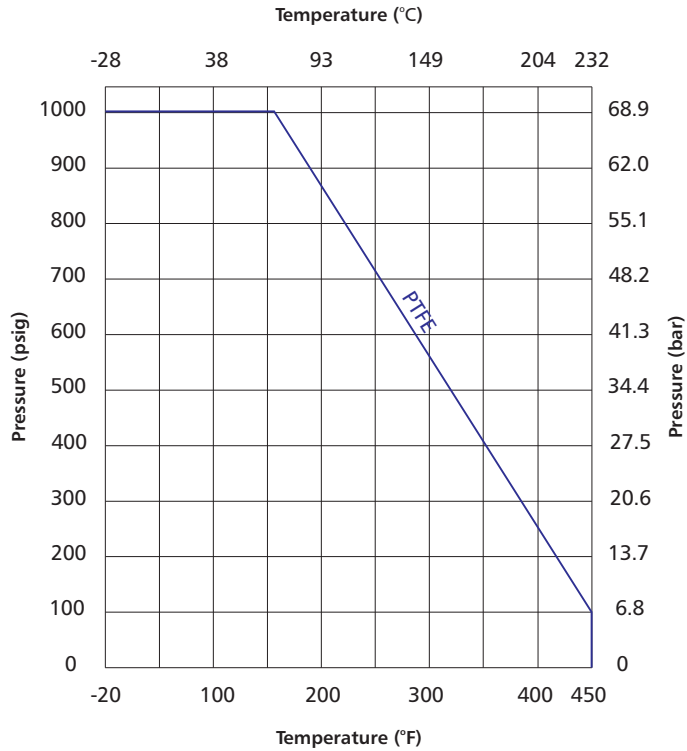
BR Series

Features

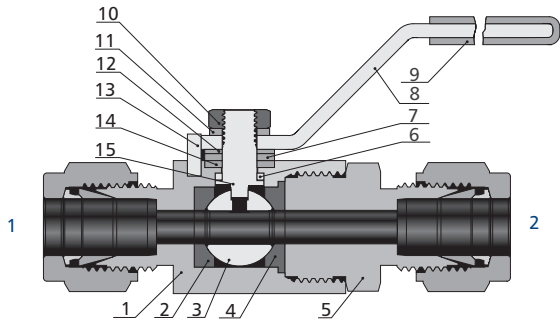
- Maximum working pressure: 1000 psig (68.9 bar)
- Working temperature: -20°F to 450°F (-28°C to 232°C)
- Compact and economical design
- Free floating ball design for seat wear compensation
- Bi-directional flow
- Low operating torque
- Any reasonable connections available
- Blowout proof stem
- Options for handle color
- Leak-tight performance testing for every valve at the maximum working pressure with nitrogen



Pressure vs. Temperature



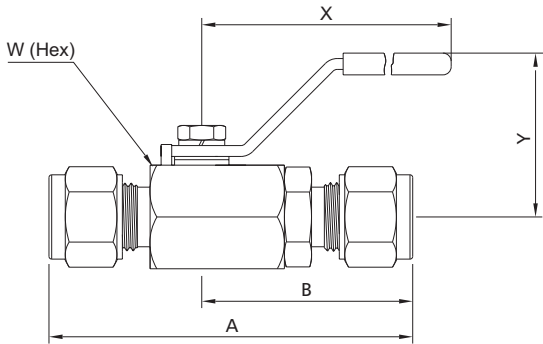
Standard Materials of Construction



Item	Component	Valve Body Material			
		316 SS	304 SS	316L SS	Brass
1	Body	316 SS/A276 316 SS/A351	304 SS/A276 304 SS/A351	316L SS/A276 316L SS/A351	Brass/B16
2	Front Seat	PTFE/D1710			
3	Ball	316 SS/A276			
4	Back Seat	PTFE/D1710			
5	End Connector	316 SS/A276	304 SS/A276	316L SS/A276	Brass/B16
6	Bottom Packing	PTFE/D1710			
7	Washer	316 SS/A276			
8	Handle	304 SS/A240 or Aluminium			
9	Sleeve	Vinyl			
10	Stem Nut	Stainless steel			
11	Gasket	Stainless steel			
12	Coned-disk Spring	Stainless steel			
13	Pin	Stainless steel			
14	Top Packing	PTFE/D1710			
15	Stem	316 SS/A276			

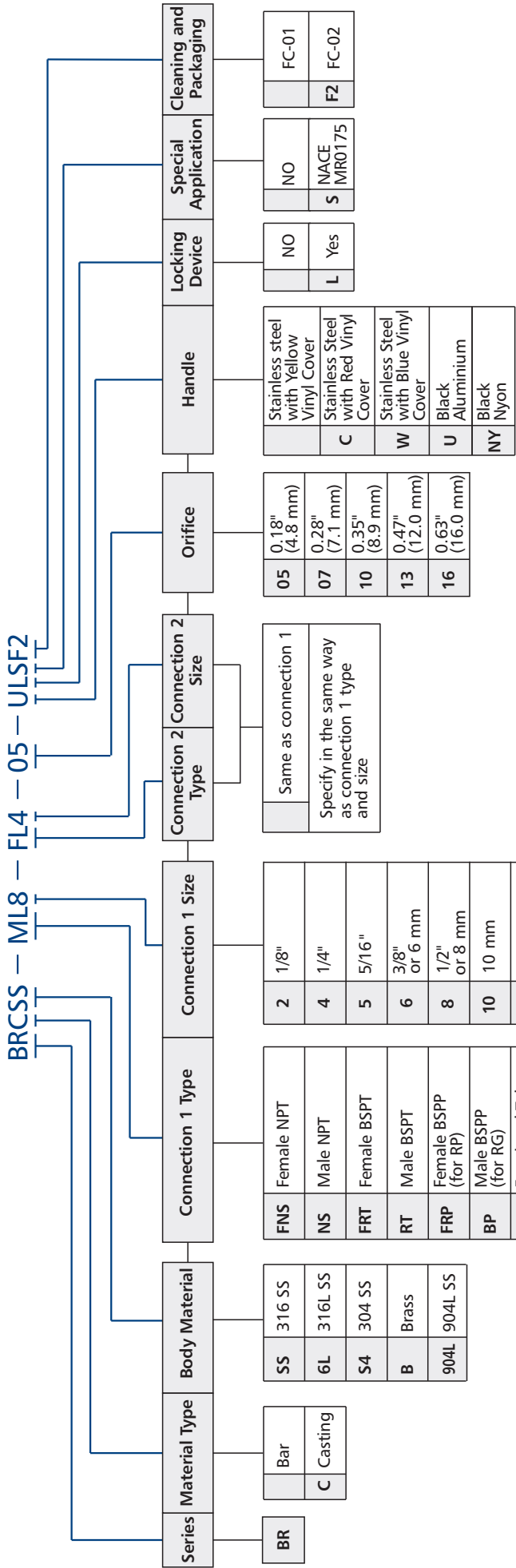
Other materials available upon request.

Dimensions



Basic Ordering Number	Connection Type and Size		Orifice in. (mm)	Cv	Dimension, in. (mm)				
	Connection 1	Connection 2			A	B	W	X	Y
BR□□-ML6-05	6 mm Gigalok	6 mm Gigalok	0.18 (4.8)	1.25	2.63 (66.8)	1.50 (38.1)	3/4 (19.05)	2.36 (60)	1.18 (30)
BR□□-ML8-05	8 mm Gigalok	8 mm Gigalok							
BR□□-FL4-05	1/4" Gigalok	1/4" Gigalok							
BR□□-FL5-05	5/16" Gigalok	5/16" Gigalok							
BR□□-FNS2-05	1/8 Female NPT	1/8 Female NPT							
BR□□-FRP2-05	1/8 Female BSPP	1/8 Female BSPP							
BR□□-FRP4-05	1/4 Female BSPP	1/4 Female BSPP							
BR□□-FNS4-05	1/4 Female NPT	1/4 Female NPT							
BR□□-ML10-07	10 mm Gigalok	10 mm Gigalok	0.28 (7.1)	2.50	2.87 (72.9)	1.68 (42.7)	7/8 (22.23)		
BR□□-FL6-07	3/8" Gigalok	3/8" Gigalok							
BR□□-FRP6-07	3/8 Female BSPP	3/8 Female BSPP							
BR□□-FNS6-07	3/8 Female NPT	3/8 Female NPT							
BR□□-ML12-10	12 mm Gigalok	12 mm Gigalok	0.35 (8.9)	9.25	3.15 (80.0)	1.83 (46.5)	15/16 (24.0)	3.15 (80)	1.54 (39)
BR□□-FL8-10	½" Gigalok	1/2" Gigalok							
BR□□-FL10-10	5/8" Gigalok	5/8" Gigalok							
BR□□-FRP8-10	1/2 Female BSPP	1/2 Female BSPP							
BR□□-FNS8-10	1/2 Female NPT	1/2 Female NPT							
BR□□-ML14-13	14 mm Gigalok	14 mm Gigalok	0.47 (12.0)	12.65	3.50 (88.9)	2.00 (50.8)	1 1/4 (31.75)	3.94 (100)	1.77 (45)
BR□□-ML16-13	16 mm Gigalok	16 mm Gigalok							
BR□□-ML18-13	18 mm Gigalok	18 mm Gigalok							
BR□□-FL12-13	3/4" Gigalok	3/4" Gigalok							
BR□□-FRP12-13	3/4 Female BSPP	3/4 Female BSPP							
BR□□-FNS12-13	3/4 Female NPT	3/4 Female NPT							
BR□□-ML22-16	22 mm Gigalok	22 mm Gigalok	0.63 (16.0)	17.35	3.93 (99.8)	2.24 (56.9)	1 5/8 (41.27)		
BR□□-ML25-16	25 mm Gigalok	25 mm Gigalok							
BR□□-FL16-16	1" Gigalok	1" Gigalok							
BR□□-FRP16-16	1 Female BSPP	1 Female BSPP							
BR□□-FNS16-16	1 Female NPT	1 Female NPT							

1. Gigalok means Gigalok double ferrule tube fittings.
2. Sizes and types listed are standard. Other sizes and types are available upon request.
3. Dimensions are shown with Gigalok nuts finger-tightened. All dimensions are for reference only and are subject to change.
For dimensions not shown above, please contact the authorized representative or Gigalok.



1. Standard thread pitch for metric threads are as follows:
M10 and below: 1 mm
M12 to M24: 1.5 mm
M27 and above: 2 mm
Standard thread pitch should be ignored in the ordering number, others should be specified.
2. For oxygen or virulent medium service, contact the authorized representative or Gigalok.
3. Cleaning and Packaging:
FC-01: Standard cleaning and packaging for general industrial procedures.
FC-02: Special cleaning and packaging for wetted system components to ensure compliance with product cleaning requirement as stated in ASTM G93 Level C.

High Performance Ball Valves

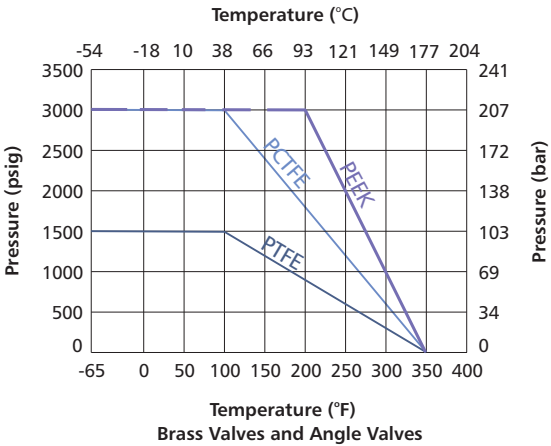
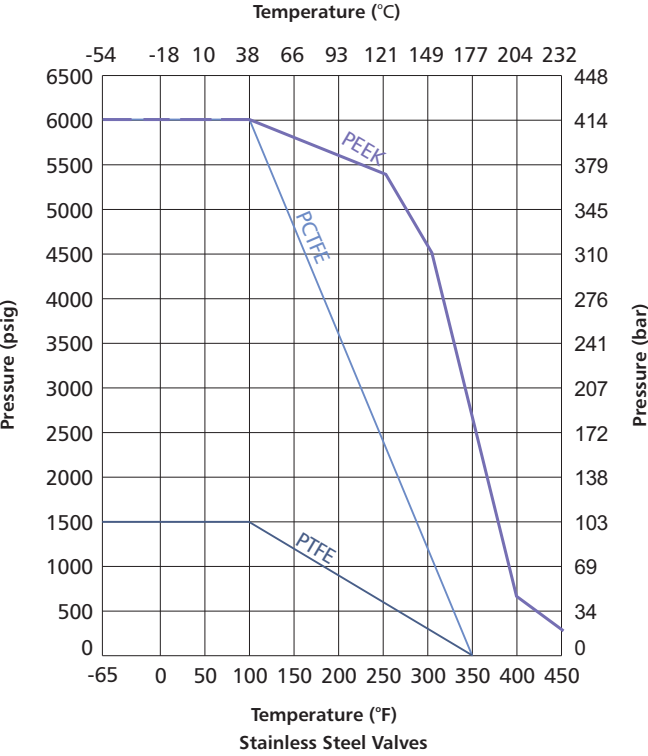
BV Series

Features

- Maximum working pressure: 6000 psig (414 bar)
- Working temperature: -65°F to 450°F (-54°C to 232°C)
- Bi-directional flow for straight valves
- Low operating torque
- Positive handle stop
- Handle as flow direction indicator
- Options for handle color
- Manual, electric or pneumatic actuator available
- Leak-tight performance testing for every valve at the maximum working pressure with nitrogen



Pressure vs. Temperature



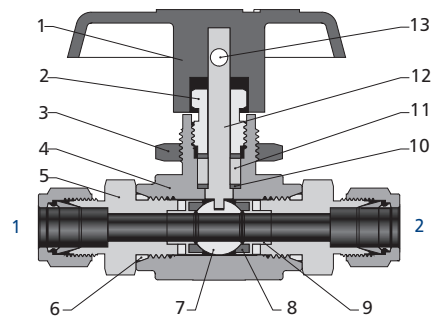
1. Graphs are for 2-way valves only.
2. Maximum working pressure for 3-way valves:
6000 psig: connection 1 as inlet, connection 2 and connection 3 as outlet
3000 psig: connection 2 and connection 3 as inlet, connection 1 as outlet

Temperature Ranges

Packing Materials	Temperature Range °F (°C)
PTFE	-40 to 450 (-40 to 232)
Buna-N	-40 to 250 (-40 to 121)
Fluorocarbon FKM	-10 to 400 (-23 to 204)
Neoprene	-40 to 250 (-40 to 121)

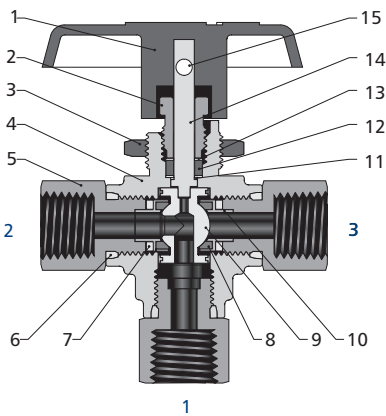
Standard Materials of Construction

Straight Valves



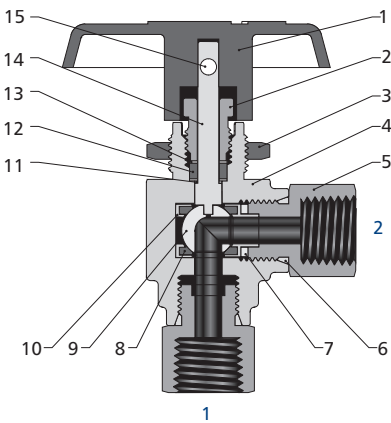
Item	Component	Valve Body Material	
		Stainless steel	Brass
1	Handle	Nylon or Aluminium	
2	Packing Nut	316 SS/A276	C34000/B453
3	Panel Nut	316 SS/A276	C36000/B16
4	Body	CF8M/A351	C37700/B283
5	End connector	316 SS/A479	C36000/B16
6	Connector O-ring	PTFE/D1710	
7	Ball	316 SS/A479	
8	Seat	PTFE or PCTFE or PEEK	
9	Seat Retainer	316 SS/A276	C36000/B16
10	Stem Washer	316/A276	
11	Stem Packing	PTFE or Fluorocarbon FKM or Neoprene or Buna N	
12	Stem	316 SS/A276	
13	Set Screw	Stainless steel	
Lubricants		Fluorinated-based and silicone-based	

3-way Valves



Item	Component	Valve Body Material	
		Stainless Steel	Brass
1	Handle	Nylon or Aluminium	
2	Packing Nut	316 SS/A276	C34000/B453
3	Panel Nut	316 SS/A276	C36000/B16
4	Body	CF8M/A351	C37700/B283
5	End Connector	316 SS/A479	C36000/B16
6	Connector O-ring	PTFE/D1710	
7	Packing	PTFE/D1710	
8	Seat	PTFE or PCTFE or PEEK	
9	Ball	316 SS/A479	
10	Seat Retainer	316 SS/A276	C36000/B16
11	Stem Back-up Ring	PEEK	
12	Stem Packing	PTFE or Fluorocarbon FKM or Neoprene or Buna N	
13	Stem Washer	316 SS/A276	
14	Stem	316 SS/A276	
15	Set Screw	Stainless steel	
Lubricants		Fluorinated-based and silicone-based	

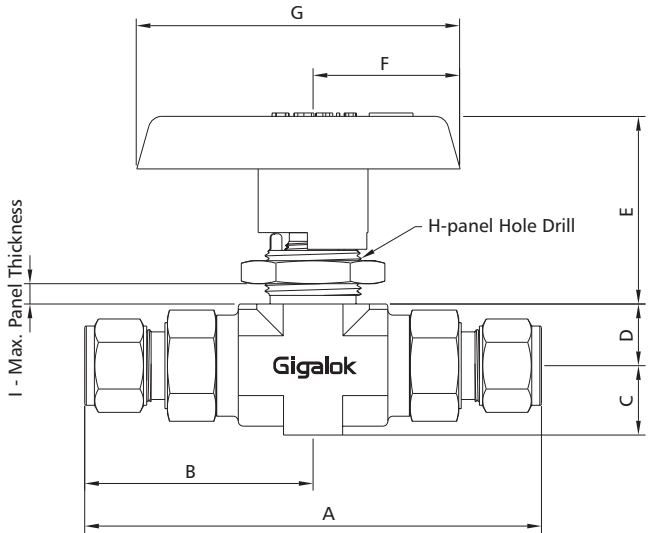
Angle Pattern Valves



Item	Component	Valve Body Material	
		Stainless Steel	Brass
1	Handle	Nylon or Aluminium	
2	Packing Nut	316 SS/A276	C34000/B453
3	Panel Nut	316 SS/A276	C36000/B16
4	Body	CF8M/A351	C37700/B283
5	End Connector	316 SS/A479	C36000/B16
6	Connector O-ring	PTFE/D1710	
7	Packing	PTFE/D1710	
8	Seat	PTFE or PCTFE or PEEK	
9	Ball	316 SS/A479	
10	Seat Retainer	316 SS/A276	C36000/B16
11	Stem Back-up Ring	PEEK	
12	Stem Packing	PTFE or Fluorocarbon FKM or Neoprene or Buna N	
13	Stem Washer	316 SS/A276	
14	Stem	316 SS/A276	
15	Set Screw	Stainless steel	
Lubricants		Fluorinated-based and silicone-based	

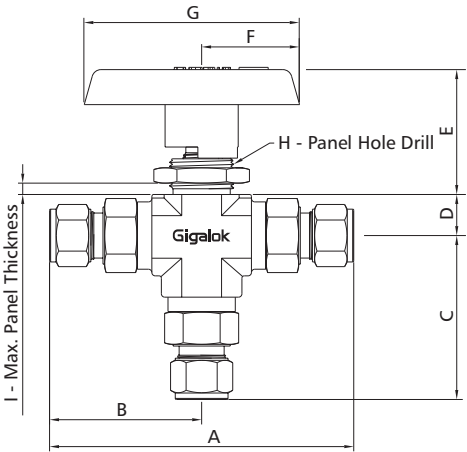
Dimensions

Straight Valves



Basic Ordering Number	Connection Type and Size		Orifice in. (mm)	Cv	Dimension, in. (mm)																				
	Connection 1	Connection 2			A	B	C	D	E	F	G	H	I												
BV□□-FL1-01	1/16" Gigalok	1/16" Gigalok	0.052 (1.3)	0.06	2.60 (66.0)	1.30 (33.0)																			
BV□□-ML3-01	3 mm Gigalok	3 mm Gigalok			2.74 (69.6)	1.37 (34.8)																			
BV□□-FL2-02	1/8" Gigalok	1/8" Gigalok	0.093 (2.4)	0.21	2.72 (69.1)	1.36 (34.5)																			
BV□□-ML3-02	3 mm Gigalok	3 mm Gigalok			2.74 (69.6)	1.37 (34.8)																			
BV□□-FRT2-04	1/8 Female BSPT	1/8 Female BSPT	0.165 (4.2)	0.93	2.14 (54.4)	1.07 (27.2)	0.33 (8.4)	0.33 (8.4)	1.00 (25.4)	1.16 (29.5)	1.88 (47.8)	0.58 (14.7)	0.18 (4.6)												
BV□□-FRP2-04	1/8 Female BSPP	1/8 Female BSPP																							
BV□□-FNS2-04	1/8 Female NPT	1/8 Female NPT																							
BV□□-RT2-04	1/8 Male BSPT	1/8 Male BSPT																							
BV□□-BP2-04	1/8 Male BSPP	1/8 Male BSPP			2.36 (60.0)	1.18 (30.0)																			
BV□□-NS2-04	1/8 Male NPT	1/8 Male NPT																							
BV□□-RT4-04	1/4 Male BSPT	1/4 Male BSPT																							
BV□□-BP4-04	1/4 Male BSPP	1/4 Male BSPP			2.70 (68.6)	1.35 (34.3)																			
BV□□-NS4-04	1/4 Male NPT	1/4 Male NPT																							
BV□□-FL4-05	1/4" Gigalok	1/4" Gigalok	0.187 (4.8)	1.05	3.48 (88.4)	1.74 (44.2)																			
BV□□-ML6-05	6 mm Gigalok	6 mm Gigalok			3.50 (89.0)	1.75 (44.5)																			
BV□□-FL6-06	3/8" Gigalok	3/8" Gigalok	0.250 (6.4)	2.34	3.60 (91.4)	1.80 (45.7)																			
BV□□-ML8-06	8 mm Gigalok	8 mm Gigalok			3.56 (90.4)	1.78 (45.2)																			
BV□□-ML10-06	10 mm Gigalok	10 mm Gigalok			3.62 (92.0)	1.81 (46.0)																			
BV□□-FRT4-06	1/4 Female BSPT	1/4 Female BSPT			3.02 (76.8)	1.51 (38.4)	0.42 (10.7)	0.47 (11.9)	1.48 (37.5)	0.75 (19.05)	2.52 (64.0)	0.77 (19.6)	0.25 (6.4)												
BV□□-FRP4-06	1/4 Female BSPP	1/4 Female BSPP																							
BV□□-FNS4-06	1/4 Female NPT	1/4 Female NPT																							
BV□□-RT4-06	1/4 Male BSPT	1/4 Male BSPT																							
BV□□-BP4-06	1/4 Male BSPP	1/4 Male BSPP			3.24 (82.2)	1.62 (41.1)																			
BV□□-NS4-06	1/4 Male NPT	1/4 Male NPT																							
BV□□-RT6-06	3/8 Male BSPT	3/8 Male BSPT																							
BV□□-BP6-06	3/8 Male BSPP	3/8 Male BSPP																							
BV□□-NS6-06	3/8 Male NPT	3/8 Male NPT																							
BV□□-FL8-10	1/2" Gigalok	1/2" Gigalok	0.406 (10.3)	6.42	4.68 (118.8)	2.34 (59.4)																			
BV□□-FL12-10	3/4" Gigalok	3/4" Gigalok			4.66 (118.4)	2.33 (59.2)																			
BV□□-ML12-10	12 mm Gigalok	12 mm Gigalok				0.69 (17.5)	0.70 (17.8)																		
BV□□-ML14-10	14 mm Gigalok	14 mm Gigalok																							
BV□□-ML16-10	16 mm Gigalok	16 mm Gigalok			4.84 (123.0)	2.42 (61.5)	0.89 (22.5)	0.89 (22.5)																	
BV□□-ML18-10	18 mm Gigalok	18 mm Gigalok																							
BV□□-ML20-10	20 mm Gigalok	20 mm Gigalok																							
BV□□-ML22-10	22 mm Gigalok	22 mm Gigalok																							
BV□□-FRT6-10	3/8 Female BSPT	3/8 Female BSPT			3.90 (99.0)	1.95 (49.5)																			
BV□□-FRP6-10	3/8 Female BSPP	3/8 Female BSPP																							
BV□□-FNS6-10	3/8 Female NPT	3/8 Female NPT																							
BV□□-FRT8-10	1/2 Female BSPT	1/2 Female BSPT																							
BV□□-FRP8-10	1/2 Female BSPP	1/2 Female BSPP			4.30 (109.2)	2.15 (54.6)			1.71 (43.5)	1.42 (36.0)	4.0 (101.6)	0.90 (22.9)	0.38 (9.7)												
BV□□-FNS8-10	1/2 Female NPT	1/2 Female NPT																							
BV□□-FRT12-10	3/4 Female BSPT	3/4 Female BSPT																							
BV□□-FRP12-10	3/4 Female BSPP	3/4 Female BSPP				0.69 (17.5)	0.70 (17.8)																		
BV□□-FNS12-10	3/4 Female NPT	3/4 Female NPT																							
BV□□-RT8-10	1/2 Male BSPT	1/2 Male BSPT			4.44 (112.8)									2.22 (56.4)											
BV□□-BP8-10	1/2 Male BSPP	1/2 Male BSPP																							
BV□□-NS8-10	1/2 Male NPT	1/2 Male NPT																							
BV□□-RT12-10	3/4 Male BSPT	3/4 Male BSPT																							
BV□□-BP12-10	3/4 Male BSPP	3/4 Male BSPP																							
BV□□-NS12-10	3/4 Male NPT	3/4 Male NPT																							

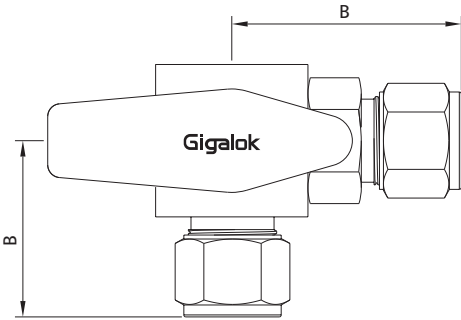
3-way Valves



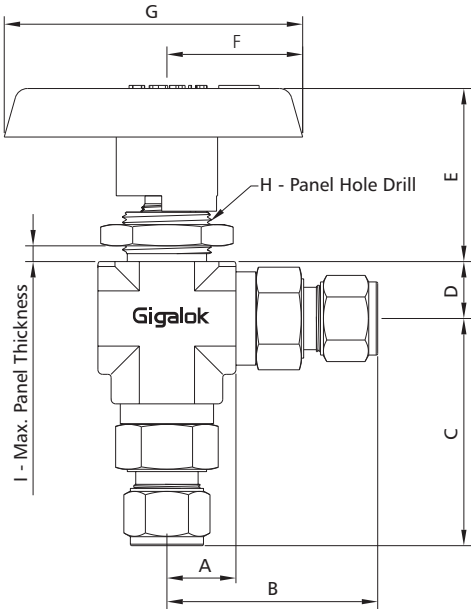
Basic Ordering Number	Connection type and size		Orifice in. (mm)	Cv	Dimension, in. (mm)															
	Connection 1	Connection 2/3			A	B	C	D	E	F	G	H	I							
BV□□-FL1-01-3	1/16" Gigalok	1/16" Gigalok	0.052 (1.3)	0.06	2.60 (66.0)	1.30 (33.0)	1.39 (35.3)													
BV□□-ML3-01-3	3 mm Gigalok	3 mm Gigalok			2.74 (69.6)	1.37 (34.8)														
BV□□-FL2-02-3	1/8" Gigalok	1/8" Gigalok	0.093 (2.4)	0.21	2.72 (69.1)	1.36 (34.5)														
BV□□-ML3-02-3	3 mm Gigalok	3 mm Gigalok			2.74 (69.6)	1.37 (34.8)														
BV□□-FRT2-04-3	1/8 Female BSPT	1/8 Female BSPT	0.165 (4.2)	0.63	2.14 (54.4)	1.07 (27.2)	1.15 (29.2)	0.33 (8.4)	1.00 (25.4)	1.16 (29.5)	1.88 (47.8)	0.58 (14.7)	0.18 (4.6)							
BV□□-FRP2-04-3	1/8 Female BSPP	1/8 Female BSPP			2.36 (60.0)	1.18 (30.0)	1.26 (32.0)													
BV□□-FNS2-04-3	1/8 Female NPT	1/8 Female NPT																		
BV□□-RT2-04-3	1/8 Male BSPT	1/8 Male BSPT																		
BV□□-BP2-04-3	1/8 Male BSPP	1/8 Male BSPP			2.70 (68.6)	1.35 (34.3)	1.43 (36.3)													
BV□□-NS2-04-3	1/8 Male NPT	1/8 Male NPT																		
BV□□-RT4-04-3	1/4 Male BSPT	1/4 Male BSPT																		
BV□□-BP4-04-3	1/4 Male BSPP	1/4 Male BSPP																		
BV□□-NS4-04-3	1/4 Male NPT	1/4 Male NPT			0.187 (4.8)	0.75	3.48 (88.4)							1.74 (44.2)	1.89 (48.0)					
BV□□-FL4-05-3	1/4" Gigalok	1/4" Gigalok					3.50 (89.0)							1.75 (44.5)	1.88 (47.8)					
BV□□-ML6-05-3	6 mm Gigalok	6 mm Gigalok	0.250 (6.4)	1.35	3.60 (91.4)	1.80 (45.7)	1.94 (49.3)													
BV□□-ML8-06-3	8 mm Gigalok	8 mm Gigalok			3.56 (90.4)	1.78 (45.2)	1.91 (48.5)													
BV□□-ML10-06-3	10 mm Gigalok	10 mm Gigalok			3.62 (92.0)	1.81 (46.0)	1.95 (49.5)													
BV□□-FRT4-06-3	1/4 Female BSPT	1/4 Female BSPT			3.02 (76.8)	1.51 (38.4)	1.65 (41.9)	0.47 (11.9)	1.48 (37.5)	0.75 (19.1)	2.52 (64.0)	0.77 (19.6)	0.25 (6.4)							
BV□□-FRP4-06-3	1/4 Female BSPP	1/4 Female BSPP																		
BV□□-FNS4-06-3	1/4 Female NPT	1/4 Female NPT																		
BV□□-RT4-06-3	1/4 Male BSPT	1/4 Male BSPT																		
BV□□-BP4-06-3	1/4 Male BSPP	1/4 Male BSPP			3.24 (82.2)	1.62 (41.1)	1.76 (44.7)													
BV□□-NS4-06-3	1/4 Male NPT	1/4 Male NPT																		
BV□□-RT6-06-3	3/8 Male BSPT	3/8 Male BSPT																		
BV□□-BP6-06-3	3/8 Male BSPP	3/8 Male BSPP																		
BV□□-NS6-06-3	3/8 Male NPT	3/8 Male NPT																		

Basic Ordering Number	Connection type and size		Orifice in. (mm)	Cv	Dimension, in. (mm)														
	Connection 1	Connection 2/3			A	B	C	D	E	F	G	H	I						
BV□□-FL8-10-3	1/2" Gigalok	1/2" Gigalok	0.406 (10.3)	3.62	4.68 (118.8)	2.34(59.4)	2.68(68.0)												
BV□□-FL12-10-3	3/4" Gigalok	3/4" Gigalok			4.66(118.4)	2.33 (59.2)	2.67 (67.8)												
BV□□-ML12-10-3	12 mm Gigalok	12 mm Gigalok																	
BV□□-ML14-10-3	14 mm Gigalok	14 mm Gigalok																	
BV□□-ML16-10-3	16 mm Gigalok	16 mm Gigalok																	
BV□□-ML18-10-3	18 mm Gigalok	18 mm Gigalok			4.84 (123.0)	2.42 (61.5)	2.76 (70.1)												
BV□□-ML20-10-3	20 mm Gigalok	20 mm Gigalok																	
BV□□-ML22-10-3	22 mm Gigalok	22 mm Gigalok			3.90 (99.0)	1.95 (49.5)	2.29 (58.2)												
BV□□-FRT6-10-3	3/8 Female BSPT	3/8 Female BSPT																	
BV□□-FRP6-10-3	3/8 Female BSPP	3/8 Female BSPP			4.30 (109.2)	2.15 (54.6)	2.49 (63.2)												
BV□□-FNS6-10-3	3/8 Female NPT	3/8 Female NPT																	
BV□□-FRT8-10-3	1/2 Female BSPT	1/2 Female BSPT																	
BV□□-FRP8-10-3	1/2 Female BSPP	1/2 Female BSPP																	
BV□□-FNS8-10-3	1/2 Female NPT	1/2 Female NPT			4.36 (110.8)	2.18 (55.4)	2.54 (64.5)												
BV□□-FRT12-10-3	3/4 Female BSPT	3/4 Female BSPT																	
BV□□-FRP12-10-3	3/4 Female BSPP	3/4 Female BSPP																	
BV□□-FNS12-10-3	3/4 Female NPT	3/4 Female NPT			4.50 (114.2)	2.25 (57.1)	2.59 (65.8)												
BV□□-RT8-10-3	1/2 Male BSPT	1/2 Male BSPT																	
BV□□-BP8-10-3	1/2 Male BSPP	1/2 Male BSPP																	
BV□□-NS8-10-3	1/2 Male NPT	1/2 Male NPT																	
BV□□-RT12-10-3	3/4 Male BSPT	3/4 Male BSPT																	
BV□□-BP12-10-3	3/4 Male BSPP	3/4 Male BSPP																	
BV□□-NS12-10-3	3/4 Male NPT	3/4 Male NPT																	

Angle Pattern Valves



Side Port Inlet



Bottom Port Inlet

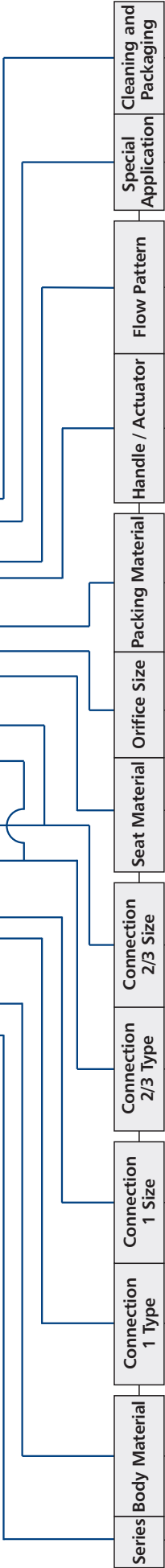
Basic Ordering Number	Connection type and size		Orifice in. (mm)	Cv	Dimension, in. (mm)									
	Connection 1	Connection 2			A	B	C	D	E	F	G	H	I	
BV□□-FL1-01-A□	1/16" Gigalok	1/16" Gigalok	0.052 (1.3)	0.06	1.30 (33.0)	1.37 (34.8)	1.39 (35.3)							
BV□□-ML3-01-A□	3 mm Gigalok	3 mm Gigalok												
BV□□-FL2-02-A□	1/8" Gigalok	1/8" Gigalok	0.093 (2.4)	0.21										
BV□□-ML3-02-A□	3 mm Gigalok	3 mm Gigalok												
BV□□-FRT2-04-A□	1/8 Female BSPT	1/8 Female BSPT	0.165 (4.2)	0.63	0.480 (12.2)	1.07 (27.2)	1.15 (29.2)	0.33 (8.4)	1.00 (25.4)	1.16 (29.5)	1.88 (47.8)	0.58 (14.7)	0.18 (4.6)	
BV□□-FRP2-04-A□	1/8 Female BSPP	1/8 Female BSPP												
BV□□-FNS2-04-A□	1/8 Female NPT	1/8 Female NPT												
BV□□-RT2-04-A□	1/8 Male BSPT	1/8 Male BSPT												
BV□□-BP2-04-A□	1/8 Male BSPP	1/8 Male BSPP			1.18 (30.0)	1.26 (32.0)								
BV□□-NS2-04-A□	1/8 Male NPT	1/8 Male NPT												
BV□□-RT4-04-A□	1/4 Male BSPT	1/4 Male BSPT												
BV□□-BP4-04-A□	1/4 Male BSPP	1/4 Male BSPP												
BV□□-NS4-04-A□	1/4 Male NPT	1/4 Male NPT	0.187 (4.8)	0.75	0.583 (14.8)	1.74 (44.2)	1.89 (48.0)							
BV□□-FL4-05-A□	1/4" Gigalok	1/4" Gigalok												
BV□□-ML6-05-A□	6 mm Gigalok	6 mm Gigalok												
BV□□-FL6-06-A□	3/8" Gigalok	3/8" Gigalok												
BV□□-ML8-06-A□	8 mm Gigalok	8 mm Gigalok			0.250 (6.4)	1.35	1.78 (45.2)	1.91 (48.5)	0.47 (11.9)	1.48 (37.5)	0.75 (19.1)	2.52 (64.0)	0.77 (19.6)	0.25 (6.4)
BV□□-ML10-06-A□	10 mm Gigalok	10 mm Gigalok												
BV□□-FRT4-06-A□	1/4 Female BSPT	1/4 Female BSPT												
BV□□-FRP4-06-A□	1/4 Female BSPP	1/4 Female BSPP												
BV□□-FNS4-06-A□	1/4 Female NPT	1/4 Female NPT	1.51 (38.4)	1.65 (41.9)										

1. Gigalok means Gigalok double ferrule tube fittings.
2. Sizes and types listed are standard. Other sizes and types are available upon request.
3. Dimensions are shown with Gigalok nuts finger-tightened. All dimensions are for reference only and are subject to change.
- For dimensions not shown above, please contact the authorized representative or Gigalok.

Cautions:

1. For better quality maintenance, Gigalok ball valve should be kept in closed position in warehouse.
2. Gigalok ball valves should be operated in a fully open or fully closed position.
3. If the valve system needs to be tested at higher pressure than the maximum working pressure, the valve must be in open position during the test so as not to damage the valve seat.

BVSS — FL8 — ML12 — ML10 — P06V — C3 — SF2



Series	Body Material	Connection 1 Type	Connection 1 Size	Connection 2/3 Type	Connection 2/3 Size	Seat Material	Orifice Size	Packing Material	Handle / Actuator	Flow Pattern	Special Application	Cleaning and Packaging
BV	SS	CF8M	FNS	Female NPT	2	1/8"	PTFE	02	0.093" (2.4 mm)	PTFE	Black Nylon	Straight
	6L	CF3M	NS	Male NPT		3	K	03	0.125" (3.2 mm)	B		
	S4	CF8	FRT	Female BSPT		4	P	04	0.165" (4.2 mm)	N		
	4L	CF3	RT	Male BSPT		5		05	0.187" (4.7 mm)	V		
	B	Brass	FMS	Female Metric Thread (for RP)		6		06	0.250" (6.4 mm)			
	904L	904L SS	MS	Male Metric Thread (for RG)	8	1/2" or 8 mm		10	0.406" (10.3 mm)		Red Nylon	Angle (Bottom Port Inlet)
			FRP	Female BSPP (For RP)		10						
			BP	Male BSPP (For RG)		12						
			FL	Fractional Tube Fitting		14						
			ML	Metric Tube Fitting		16						
			UFB	Nut + Gasket + Bulge Fractional Tube Nipple	18	18 mm					Green Nylon	Angle (Side Port Inlet)
			UMB	Nut + Gasket + Metric Tube Bulge Nipple		20						
			UPB	Nut + Gasket + Bulge Pipe Nipple		22						
						24						
					20	20 mm or M20 x 1.5					Blue Nylon	3-Way (Diverter Valve)
						22						
					10	10 mm or M10 x 1					Yellow Nylon	90° Normally Closed Spring Return Pneumatic Actuator
						12						
						14						
						16						
						18						
					9	9 mm or M9 x 1					Black Aluminium	90° Double Acting Pneumatic Actuator
						11						
						13						
						15						
						17						
					12	12 mm or M12 x 1.5					90° Electric Actuator	180° Electric Actuator
						14						
						16						
						18						
						20						
					10	10 mm or M10 x 1					180° Spring Acting Pneumatic Actuator	180° Double Acting Pneumatic Actuator
						12						
						14						
						16						
						18						

1. Standard thread pitch for metric threads are as follows:
M10 and below: 1 mm
M12 to M24: 1.5 mm
M27 and above: 2 mm
Standard thread pitch should be ignored in the ordering number; others should be specified.
2. For information about pneumatic and electric actuator, please contact the authorized representative or Gigalok.
3. For oxygen or virulent medium service, contact the authorized representative or Gigalok.
4. Cleaning and Packaging:
FC-01: Standard cleaning and packaging for general industrial procedures.
FC-02: Special cleaning and packaging for wetted system components to ensure compliance with product cleaning requirement as stated in ASTM G93 Level C.