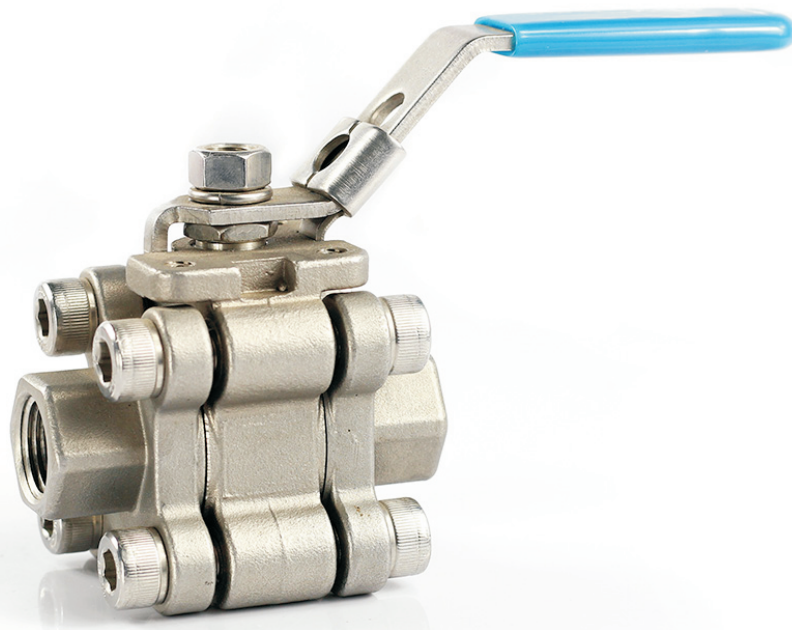


3-piece High Pressure Ball Valves

BV6 Series



- ❖ Maximum working pressure up to 3000 psig (207 bar)
- ❖ Working temperature from -20°F to 450°F (-28°C to 232°C)
- ❖ 2-way and 3-way pattern
- ❖ Orifice sizes: 4.8 mm to 38.1 mm
- ❖ Blowout-proof stem and coned-disc spring-loaded seat
- ❖ Variety of end connections

Features

On-off (2-way) valves

- ❖ Maximum working pressure up to 3000 psig (207 bar)
- ❖ Working temperature from -20°F to 450°F (-28°C to 232°C)
- ❖ Orifice sizes: 4.8 mm to 38.1 mm
- ❖ Blowout-proof stem
- ❖ Coned-disc spring-loaded seat
- ❖ Live-loaded chevron stem packing
- ❖ Pneumatic and electric actuators
- ❖ Variety of end connections
- ❖ Lever, oval, extended oval, and locking handles

Switching (3-Way) valves

- ❖ Maximum working pressure up to 1000 psig (68.9 bar)
- ❖ Working temperature from -20°F to 450°F (-28°C to 232°C)
- ❖ Orifice sizes: 4.8 mm to 50 mm
- ❖ One-piece center body
- ❖ Incorporate many of the features of the on-off (2-way) design

Fire series valves

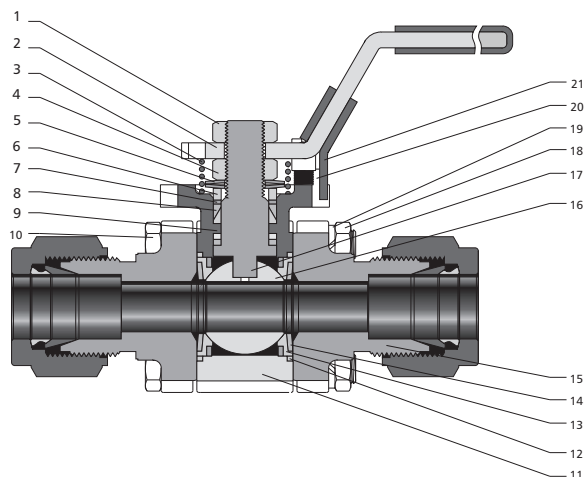
- ❖ Maximum working pressure up to 2200 psig (151 bar)
- ❖ Working temperature from -20°F to 450°F (-28°C to 232°C)
- ❖ Orifice sizes: 4.8 mm to 50 mm
- ❖ Meet fire test specification API Standard 607
- ❖ Live-loaded Grafoil stem packing
- ❖ Grafoil flange seals for body
- ❖ Seats with integral weir rings for fire conditions

Pressure vs. Temperature

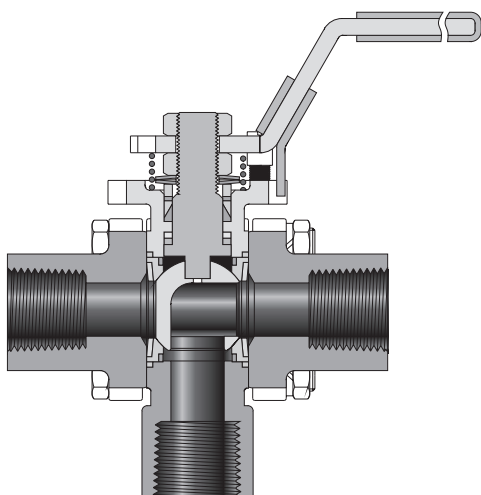
Pattern	On-Off	Switching	Fire
Body Material	CF3M, CF8M, CF3, CF8		
Seat Material	PEEK		
Temperature, °F (°C)	Working Pressure, psig(bar)		
-20 (-28) to 100 (37)	3000 (207)	1000 (68.9)	2200 (151)
150 (65)	2420 (166)	1000 (68.9)	1960 (135)
200 (93)	1870 (128)	1000 (68.9)	1760 (121)
250 (121)	1770 (121)	1000 (68.9)	1570 (108)
300 (148)	1600 (110)	1000 (68.9)	1370 (94.3)
350 (176)	1430 (98.5)	1000 (68.9)	1180 (81.3)
400 (204)	1260 (66.8)	1000 (68.9)	990 (68.2)
450 (232)	800 (55.1)	800 (55.1)	800 (55.1)

Standard Materials of Construction

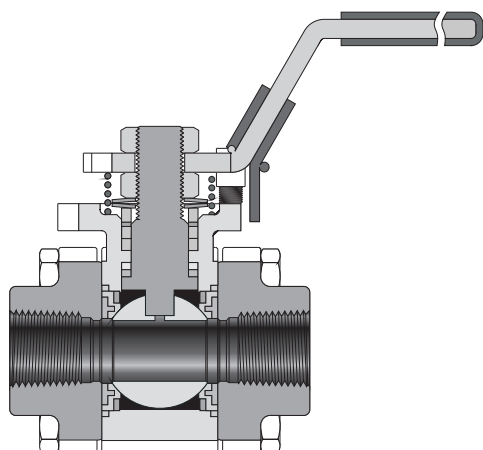
On-off (2-way) valves



Switching (3-Way) valves



Fire series valves

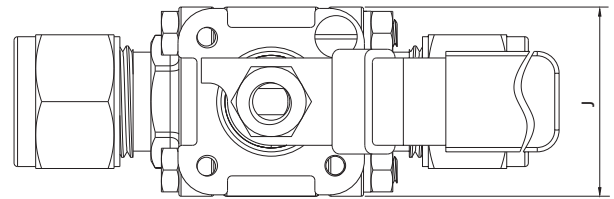
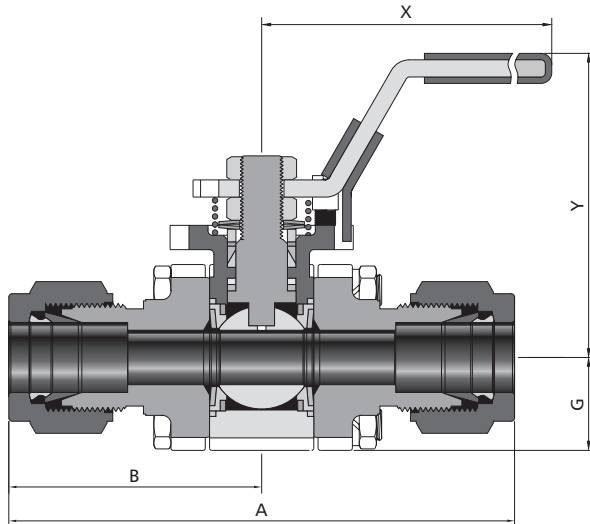


Item	Component	Valve Body Material
		CF3M, CF8M, CF3, CF8/A351
1	Stem Nut	Gr. 8M/A194
2	Handle	CF8/A351 (with vinyl sleeve)
3	Grounding Spring	304 SS/A313
4	Stem Nut	Gr. 8M/A194
5	Stem Spring	Strain-hardened 316 S.S./A240
6	Gland	PTFE-coated 316 S.S./B 783
7	Packing Support	PEEK or Grafoil
8	Top Packing	PTFE/D1710 or Grafoil
9	Bottom Packing	PTFE/D1710 or Grafoil
10	Body Bolt	Gr. B8M/A193
11	Body	CF3M, CF8M, CF3, CF8/A351
12	Flange Seal	PTFE/D1710 or Graphite
13	Seat	PEEK or PEEK with Grafoil weir ring
14	Coned-disc Spring	Strain-hardened 316 SS/A167 or 316 SS/A240
15	Flange	PTFE/D1710 or Graphite
16	Ball	316 S.S./A479
17	Stem	316 S.S./A479
18	Nut	Gr. 8M/A194
19	Gasket	304 S.S.
20	Stop Bolt	304 S.S./A479
21	Handle Lock	304 S.S./A240

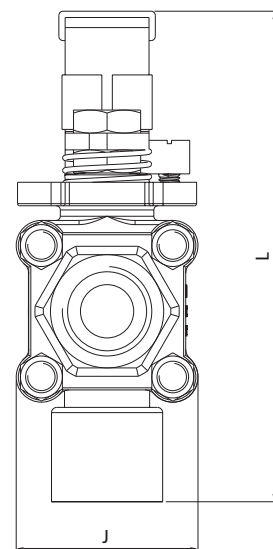
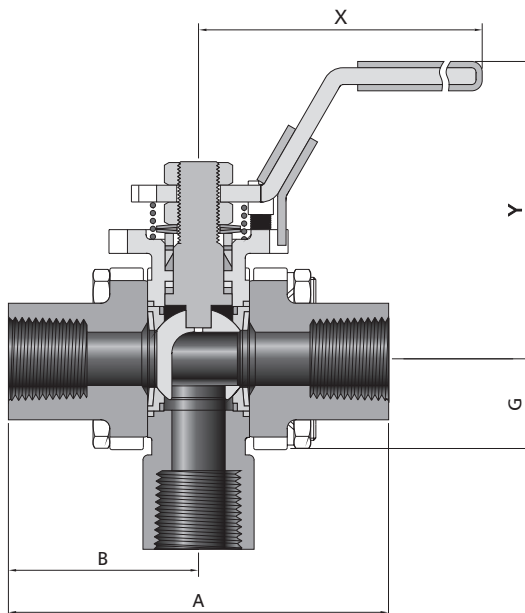
Dimensions

On-off (2-way) valves

Fire series valves



Switching (3-Way) valves



Basic Ordering Number	Connection Type and Size	Orifice in. (mm)	Cv	Dimension, in. (mm)										
				A	B	G	J	X	Y	L				
BV6-F4-05-	1/4" Hikelok	0.188 (4.8)	1.2	3.17 (80.5)	1.59 (40.4)	0.68 (17.3)	1.35 (34.3)	2.37 (60.2)	1.66 (42.2)	3.35 (85.1)				
BV6-M6-05-	6 mm Hikelok													
BV6-M8-05-	8 mm Hikelok													
BV6-FSW4-05-	1/4" FSW			2.16 (54.8)	1.08 (27.4)					—				
BV6-MSW6-05-	6 mm MSW													
BV6-PBW4-05-	1/4 PBW													
BV6-FNPT2-07-	1/8 Female NPT	0.281 (7.1)	3.8	2.16 (54.9)	1.08 (27.4)	0.68 (17.3)	1.35 (34.6)	2.37 (60.2)	1.66 (42.2)	3.12 (79.2)				
BV6-FBT2-07-	1/8 Female BSPT													
BV6-FBP2-07-	1/8 Female BSPP													
BV6-FNPT4-07-	1/4 Female NPT							2.31 (58.7)						
BV6-FBT4-07-	1/4 Female BSPT													
BV6-FBP4-07-	1/4 Female BSPP													
BV6-F5-07-	5/16" Hikelok			3.17 (80.5)	1.59 (40.4)			2.37 (60.2)		4.37 (111)				
BV6-F6-07-	3/8" Hikelok													
BV6-M10-07-	10 mm Hikelok													
BV6-FSW6-07-	3/8" FSW										2.16 (54.8)	1.08 (27.4)	—	
BV6-PBW6-07-	3/8 PBW													
BV6-F8-10-	1/2" Hikelok			0.406 (10.3)	7.5					4.04 (102.6)	2.02 (51.3)	0.89 (22.6)	1.78 (45.2)	4.50 (114.0)
BV6-M12-10-	12 mm Hikelok	0.375 (9.5)												
BV6-FSW8-10-	1/2" FSW	0.411 (10.4)												
BV6-FNPT6-13-	3/8 Female NPT	0.516 (13.1)	12	2.70 (68.6)	1.35 (34.3)	0.89 (22.6)	1.78 (45.2)	4.50 (114.0)	2.35 (59.7)	4.19 (106)				
BV6-FBT6-13-	3/8 Female BSPT													
BV6-FBP6-13-	3/8 Female BSPP													
BV6-FNPT8-13-	1/2 Female NPT													
BV6-FBT8-13-	1/2 Female BSPT													
BV6-FBP8-13-	1/2 Female BSPP													
BV6-F12-13-	3/4" Hikelok		13.6	4.04 (102.6)	2.02 (51.3)					4.84 (123)				
BV6-M16-13-	16 mm Hikelok													
BV6-M18-13-	18 mm Hikelok													
BV6-FSW12-13-	3/4" FSW		15	2.70 (68.6)	1.34 (34.0)					—				
BV6-PSW8-13-	1/2 PSW													
BV6-PBW8-13-	1/2 PBW													

Basic Ordering Number	Connection Type and Size	Orifice in. (mm)	Cv	Dimension, in. (mm)							
				A	B	G	J	X	Y	L	
BV6-PBW12-13-	3/4 PBW	0.516 (13.1)	13.6	2.69 (68.3)	1.34 (34.0)	0.89 (22.6)	1.78 (45.2)	4.50 (114.0)	2.35 (59.7)	only 3-way	
BV6-FNPT12-22-	3/4 Female NPT	0.875 (22.2)	31.0	3.59 (91.2)	1.80 (45.7)	1.25 (31.8)	2.50 (63.5)	6.00 (152.0)	2.94 (74.7)	5.45 (138)	
BV6-FBT12-22-	3/4 Female BSPT										
BV6-FBP12-22-	3/4 Female BSPP										
BV6-FNPT16-22-	1 Female NPT		38.0	4.45 (113.0)	2.23 (56.6)						
BV6-FBT16-22-	1 Female BSPT										
BV6-FBP16-22-	1 Female BSPP										
BV6-F16-22-	1" Hikelok		40.0	5.36 (136.0)	2.68 (68.0)					5.91 (150)	
BV6-F20-22-	1 1/4" Hikelok			6.34 (161.0)	3.17 (80.5)						
BV6-M25-22-	25 mm Hikelok		40.0	5.36 (136.0)	2.68 (68.0)						
BV6-M28-22-	28 mm Hikelok			6.14 (156.0)	3.07 (78.0)						
BV6-FSW16-22-	1" FSW			3.59 (91.2)	1.80 (45.7)						
BV6-MSW25-22-	25 mm MSW		38.0	3.59 (91.2)	1.80 (45.7)						—
BV6-PSW12-22-	3/4 PSW		36.0								
BV6-PSW16-22-	1 PSW		42.0								
BV6-PBW12-22-	3/4 PBW		36.0			1.25 (31.8)	2.51 (63.8)	6.00 (152.0)			
BV6-PBW16-22-	1 PBW		40.0						3.46 (87.9)		
BV6-FSW20-29-	1 1/4" FSW	1.125 (28.6)	80.0	4.39 (112.0)	2.19 (55.6)	1.53 (38.9)	3.06 (77.7)	9.14 (232.0)	4.03 (102.0)		
BV6-PBW20-29-	1 1/4 PBW			4.57 (116.0)	2.28 (57.9)						
BV6-FNPT20-32-	1 1/4 Female NPT	1.25 (31.8)	100.0	4.39 (112.0)	2.19 (55.6)	1.53 (38.9)	3.06 (77.7)	9.14 (232.0)	4.03 (102.0)		6.86 (174)
BV6-FNPT24-32-	1 1/2 Female NPT										
BV6-FSW24-32-	1 1/2" FSW		90.0	4.50 (114.3)	2.25 (57.2)						—
BV6-PSW20-32-	1 1/4 PSW										
BV6-PSW24-32-	1 1/2 PSW		100.0	4.57 (116.0)	2.28 (57.9)						
BV6-PBW24-32-	1 1/2 PBW			4.57 (116.0)	2.29 (58.0)						
BV6-FNPT32-38-	2 Female NPT	1.5 (38.1)	130.0	4.94 (125.4)	2.47 (62.7)	1.74 (44.2)	3.47 (88.1)	9.14 (232.0)	4.16 (106.0)	7.21 (183)	
BV6-FBT32-38-	2 Female BSPT										
BV6-FSW32-38-	2" FSW					1.70 (43.2)	3.47 (86.6)			—	
BV6-PSW32-38-	2 PSW										
BV6-PBW32-38-	2 PBW			5.09 (129.0)	2.55 (64.8)	1.74 (44.2)	3.47 (88.1)				

How to Order

BV6 —		M12	— FNPT8		— P10		— Y3		— 316	
Series	Port 1 Type	Port 1 Size	Port 2/3 Port 2/3 Type Size		Seat Material	Orifice Size	Handle	Flow Pattern	Body Material	
BV6	FNPT Female NPT	2 1/8 in.	Same as port 1 type and port 1 size		P PEEK	05 0.188 in. (4.8 mm)	Blue	Straight	316L CF3M	
	NPT Male NPT	3 3 mm			G PEEK with Grafoil weir ring	07 0.281 in. (7.1 mm)	R Red	3 3-way	316 CF8M	
	FBT Female BSPT	4 1/4 in.	If port 2/3 and port 1 are the same, eliminate the port 2/3 designator						304L CF3	
	MBT Male BSPT	5 5/16 in.								
	6 3/8 in. or 6 mm									
	8 1/2 in. or 8 mm									
	10 10 mm									
	12 3/4 in. or 12 mm									
	14 14 mm									
	16 1 in. or 16 mm									
	18 18 mm									
	20 1 1/4 in. or 20 mm									
	22 22 mm									
	24 1 1/2 in.									
	25 25 mm									
	27 M27x 2									
	28 28 mm									
	32 2 in. or 32 mm									