

High Performance Ball Valves

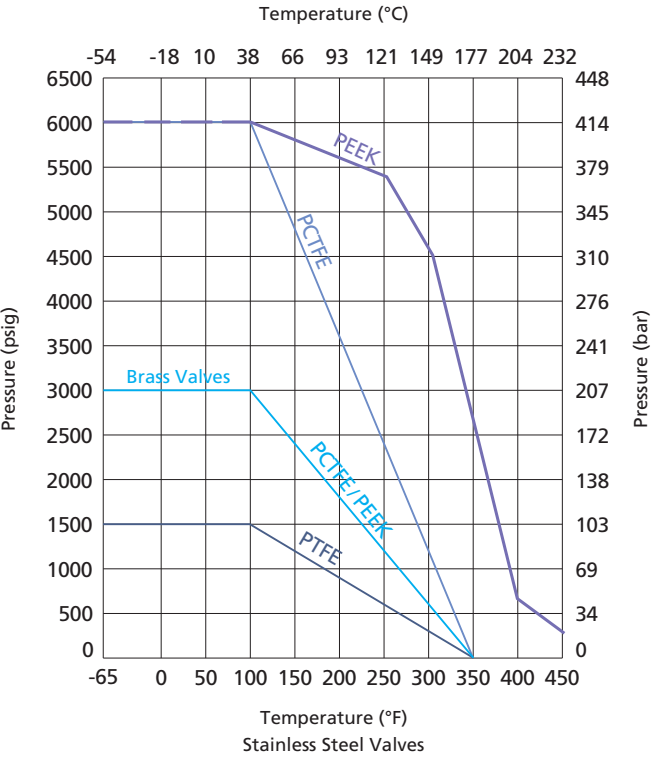
BV Series

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
- The inlet of 3-way valves and angle pattern valves should be only from the bottom.



Pressure vs. Temperature

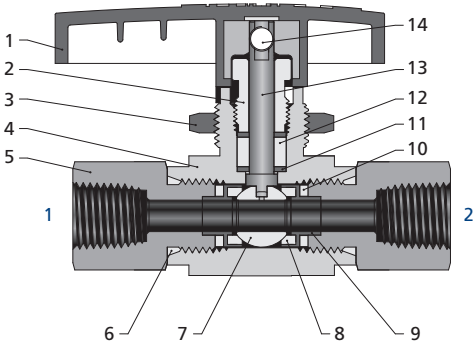


Temperature Ranges

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)

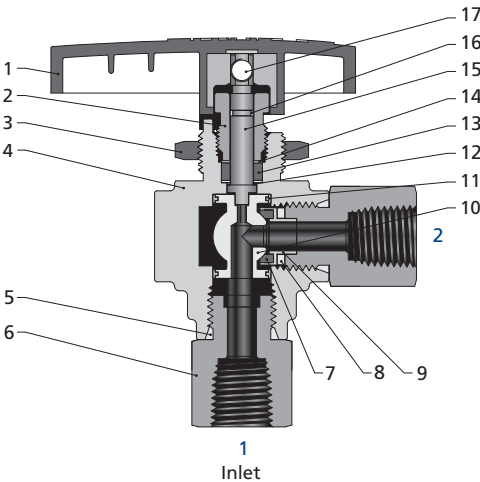
Standard Materials of Construction

Straight Valves



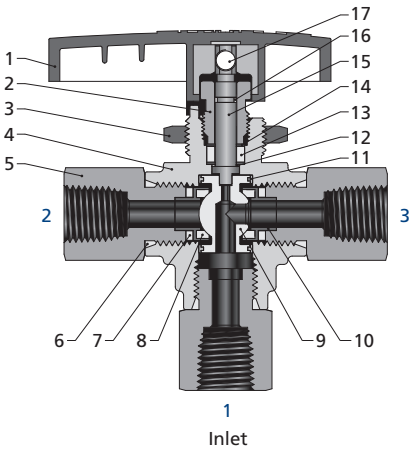
Item	Component	Valve Body Material	
		Stainless steel	Brass
1	Handle	Nylon or Aluminium	
2	Packing Nut	316 SS/A276	C34000/B453
3	Panel Nut	316 SS/A276	C36000/B16
4	Body	CF8M/A351	C37700/B283
5	End Connector	316 SS/A479	C36000/B16
6	Connector O-ring	PTFE/D1710	
7	Ball	316 SS/A479	
8	Seat	PTFE or PCTFE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

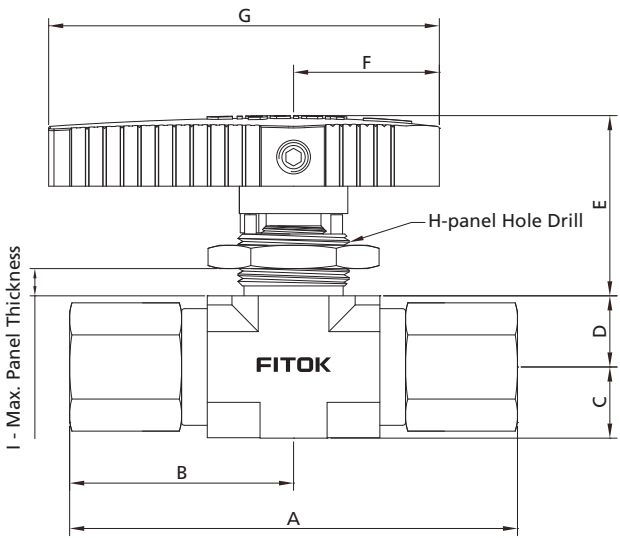
3-way Valves



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	Trunnion Bearing	PEEK	
12	Stem Back-up Ring	PEEK	
13	Stem Packing	PTFE or Fluorocarbon FKM or Neoprene or Buna N	
14	Stem Washer	316 SS/A276	
15	Stem	316 SS/A276	
16	Stem Bearing	PTFE/D1710	
17	Set Screw	Stainless steel	
Lubricants		Fluorinated-based and silicone-based	

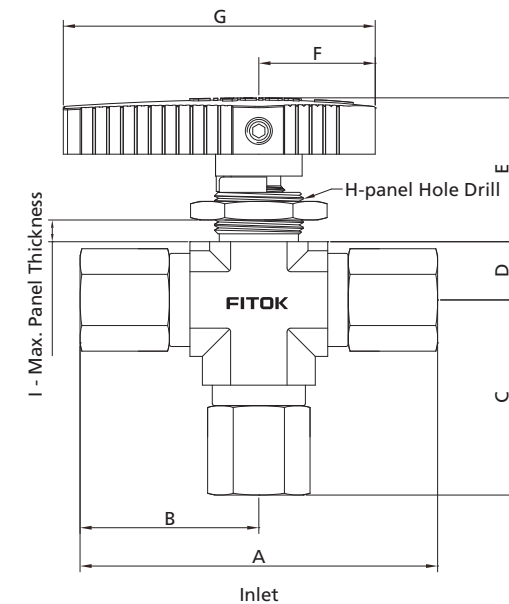
Dimensions

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" FITOK	1/16" FITOK	0.05 (1.3)	0.06	2.60 (66.0)	1.30 (33.0)																
BV□□-FL2-02	1/8" FITOK	1/8" FITOK	0.09 (2.4)	0.21	2.72 (69.0)	1.36 (34.5)																
BV□□-ML3-02	3 mm FITOK	3 mm FITOK			2.74 (69.6)	1.37 (34.8)																
BV□□-FRT2-04	1/8 Female BSPT	1/8 Female BSPT	0.17 (4.2)	0.93	2.14 (54.4)	1.07 (27.2)	0.36 (9.2)	0.33 (8.5)	0.94 (23.9)	0.79 (20.0)	1.97 (50.0)	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			2.36 (60.0)	1.18 (30.0)																
BV□□-BP2-04	1/8 Male BSPP	1/8 Male BSPP																				
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" FITOK	1/4" FITOK			0.19 (4.7)	1.04								3.48 (88.4)	1.74 (44.2)							
BV□□-ML6-05	6 mm FITOK	6 mm FITOK	3.50 (89.0)	1.75 (44.5)																		
BV□□-FL6-06	3/8" FITOK	3/8" FITOK	0.25 (6.4)	2.34	3.60 (91.4)	1.80 (45.7)	0.48 (12.2)	0.48 (12.2)	1.24 (31.5)	0.59 (25.0)	2.64 (67.0)	0.77 (19.6)	0.25 (6.4)									
BV□□-ML8-06	8 mm FITOK	8 mm FITOK			3.56 (90.4)	1.78 (45.2)																
BV□□-ML10-06	10 mm FITOK	10 mm FITOK			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)																
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												3.24 (82.2)	1.62 (41.1)							
BV□□-BP4-06	1/4 Male BSPP	1/4 Male BSPP																				
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			3/8 Male BSPT	3/8 Male BSPP																
BV□□-NS6-06	3/8 Male NPT	3/8 Male NPT																				
BV□□-FL8-10	1/2 " FITOK	1/2 " FITOK			0.41 (10.3)	6.42								4.68 (118.8)	2.34 (59.4)							
BV□□-FL12-10	3/4" FITOK	3/4" FITOK																				
BV□□-ML12-10	12 mm FITOK	12 mm FITOK	0.37 (9.5)	5.57																		
BV□□-ML14-10	14 mm FITOK	14 mm FITOK	0.41 (10.3)	6.42	4.66 (118.4)	2.33 (59.2)	0.75 (19.0)	0.71 (18.0)	1.54 (39.0)	1.42 (36.0)	3.78 (96.0)	0.90 (22.9)	0.38 (9.7)									
BV□□-ML16-10	16 mm FITOK	16 mm FITOK																				
BV□□-ML18-10	18 mm FITOK	18 mm FITOK																				
BV□□-ML20-10	20 mm FITOK	20 mm FITOK			4.84 (123.0)	2.42 (61.5)																
BV□□-ML22-10	22 mm FITOK	22 mm FITOK																				
BV□□-FRT6-10	3/8 Female BSPT	3/8 Female BSPT																				
BV□□-FRP6-10	3/8 Female BSPP	3/8 Female BSPP			3.90 (99.0)	1.95 (49.5)																
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)																
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			4.50 (114.2)	2.25 (57.1)																
BV□□-FNS12-10	3/4 Female NPT	3/4 Female NPT																				
BV□□-RT8-10	1/2 Male BSPT	1/2 Male BSPT																				
BV□□-BP8-10	1/2 Male BSPP	1/2 Male BSPP			4.44 (112.8)	2.22 (56.4)																
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																				

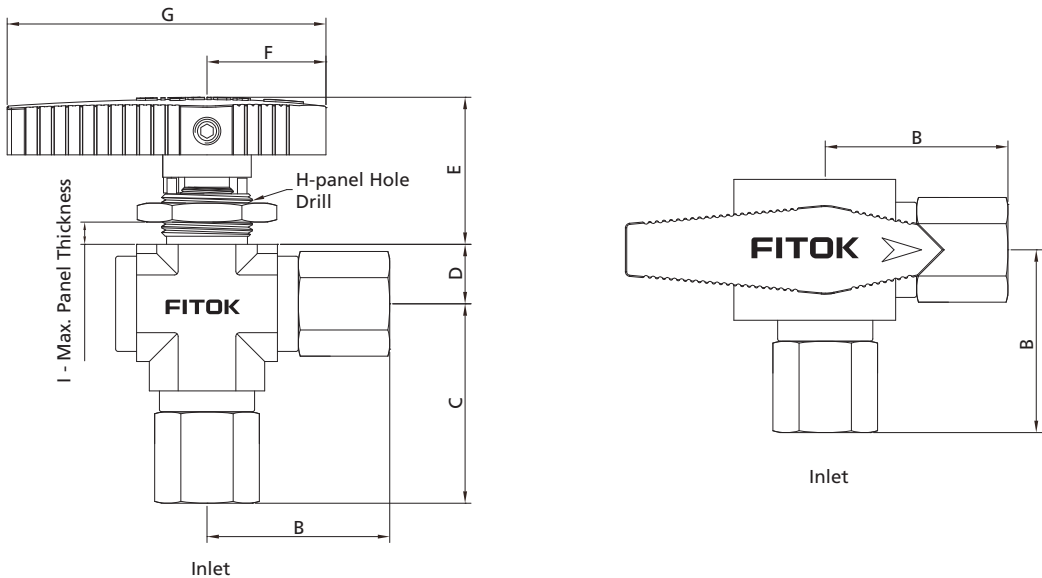
3-way Valves



FLOTECH® FLOW CONTROL 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" FITOK	1/16" FITOK	0.05 (1.3)	0.06	2.60 (66.0)	1.30 (33.0)	1.35 (34.3)						
BV□□-FL2-02-3	1/8" FITOK	1/8" FITOK	0.09 (2.4)	0.21	2.72 (69.0)	1.36 (34.5)	1.41 (35.8)						
BV□□-ML3-02-3	3 mm FITOK	3 mm FITOK			2.74 (69.6)	1.37 (34.8)	1.42 (36.1)						
BV□□-FRT2-04-3	1/8 Female BSPT	1/8 Female BSPT	0.12 (3.0)	0.28	2.14 (54.4)	1.07 (27.2)	1.12 (28.5)	0.33 (8.5)	0.94 (23.9)	0.79 (20.0)	1.97 (50.0)	0.58 (14.7)	0.18 (4.6)
BV□□-FRP2-04-3	1/8 Female BSPP	1/8 Female BSPP											
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											
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											
BV□□-FL4-05-3	1/4" FITOK	1/4" FITOK	0.19 (4.7)	0.70	3.48 (88.4)	1.74 (44.2)	1.88 (47.7)	0.48 (12.2)	1.24 (31.5)	0.59 (25.0)	2.64 (67.0)	0.77 (19.6)	0.25 (6.4)
BV□□-ML6-05-3	6 mm FITOK	6 mm FITOK			3.50 (89.0)	1.75 (44.5)	1.89 (48.0)						
BV□□-FL6-06-3	3/8" FITOK	3/8" FITOK			3.60 (91.4)	1.80 (45.7)	1.94 (49.2)						
BV□□-ML8-06-3	8 mm FITOK	8 mm FITOK			3.56 (90.4)	1.78 (45.2)	1.92 (48.7)						
BV□□-ML10-06-3	10 mm FITOK	10 mm FITOK			3.62 (92.0)	1.81 (46.0)	1.95 (49.5)						
BV□□-FRT4-06-3	1/4 Female BSPT	1/4 Female BSPT											
BV□□-FRP4-06-3	1/4 Female BSPP	1/4 Female BSPP			3.02 (76.8)	1.51 (38.4)	1.65 (41.9)						
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											
BV□□-NS4-06-3	1/4 Male NPT	1/4 Male NPT											
BV□□-RT6-06-3	3/8 Male BSPT	3/8 Male BSPT			3.24 (82.2)	1.62 (41.1)	1.76 (44.6)						
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			B	C	D	E	F	G	H	I
BV□□-FL8-10-3	1/2" FITOK	1/2" FITOK	0.37 (9.5)	3.48	2.34 (59.4)	2.68 (68.1)	0.71 (18.0)	1.54 (39.0)	1.42 (36.0)	3.78 (96.0)	0.90 (22.9)	0.38 (9.7)
BV□□-FL12-10-3	3/4" FITOK	3/4" FITOK			2.33 (59.2)	2.67 (67.9)						
BV□□-ML12-10-3	12 mm FITOK	12 mm FITOK										
BV□□-ML14-10-3	14 mm FITOK	14 mm FITOK										
BV□□-ML16-10-3	16 mm FITOK	16 mm FITOK										
BV□□-ML18-10-3	18 mm FITOK	18 mm FITOK			2.42 (61.5)	2.76 (70.2)						
BV□□-ML20-10-3	20 mm FITOK	20 mm FITOK										
BV□□-ML22-10-3	22 mm FITOK	22 mm FITOK			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			2.15 (54.6)	2.49 (63.3)						
BV□□-FNS6-10-3	3/8 Female NPT	3/8 Female NPT										
BV□□-FRT8-10-3	1/2 Female BSPT	1/2 Female BSPT			2.25 (57.1)	2.59 (65.8)						
BV□□-FRP8-10-3	1/2 Female BSPP	1/2 Female BSPP										
BV□□-FNS8-10-3	1/2 Female NPT	1/2 Female NPT										
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										
BV□□-RT8-10-3	1/2 Male BSPT	1/2 Male BSPT					2.22 (56.4)	2.56 (65.1)				
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



Basic Ordering Number	Connection type and size		Orifice in. (mm)	Cv	Dimension, in. (mm)								
	Connection 1	Connection 2/3			B	C	D	E	F	G	H	I	
BV□□-FL1-01-A	1/16" FITOK	1/16" FITOK	0.05 (1.3)	0.06	1.30 (33.0)	1.35 (34.3)							
BV□□-FL2-02-A	1/8" FITOK	1/8" FITOK	0.09 (2.4)	0.21	1.36 (34.5)	1.41 (35.8)							
BV□□-ML3-02-A	3 mm FITOK	3 mm FITOK			1.37 (34.8)	1.42 (36.1)							
BV□□-FRT2-04-A	1/8 Female BSPT	1/8 Female BSPT	0.12 (3.0)	0.28	1.07 (27.2)	1.12 (28.5)	0.33 (8.5)	0.94 (23.9)	0.79 (20.0)	1.97 (50.0)	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											
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											
BV□□-FL4-05-A	1/4" FITOK	1/4" FITOK	0.19 (4.7)	0.70	1.74 (44.2)	1.88 (47.7)	0.48 (12.2)	1.24 (31.5)	0.59 (25.0)	2.64 (67.0)	0.77 (19.6)	0.25 (6.4)	
BV□□-ML6-05-A	6 mm FITOK	6 mm FITOK			1.75 (44.5)	1.89 (48.0)							
BV□□-FL6-06-A	3/8" FITOK	3/8" FITOK			1.80 (45.7)	1.94 (49.2)							
BV□□-ML8-06-A	8 mm FITOK	8 mm FITOK			1.78 (45.2)	1.92 (48.7)							
BV□□-ML10-06-A	10 mm FITOK	10 mm FITOK			1.81 (46.0)	1.95 (49.5)							
BV□□-FRT4-06-A	1/4 Female BSPT	1/4 Female BSPT			1.51 (38.4)	1.65 (41.9)							
BV□□-FRP4-06-A	1/4 Female BSPP	1/4 Female BSPP											
BV□□-FNS4-06-A	1/4 Female NPT	1/4 Female NPT			1.62 (41.1)	1.76 (44.6)							
BV□□-RT4-06-A	1/4 Male BSPT	1/4 Male BSPT											
Bv□□-BP4-06-A	1/4 Male BSPP	1/4 Male BSPP											
BV□□-NS4-06-A	1/4 Male NPT	1/4 Male NPT											
BV□□-RT6-06-A	3/8 Male BSPT	3/8 Male BSPT											
BV□□-BP6-06-A	3/8 Male BSPP	3/8 Male BSPP											
BV□□-NS6-06-A	3/8 Male NPT	3/8 Male NPT											

