

Trunnion Ball Valves

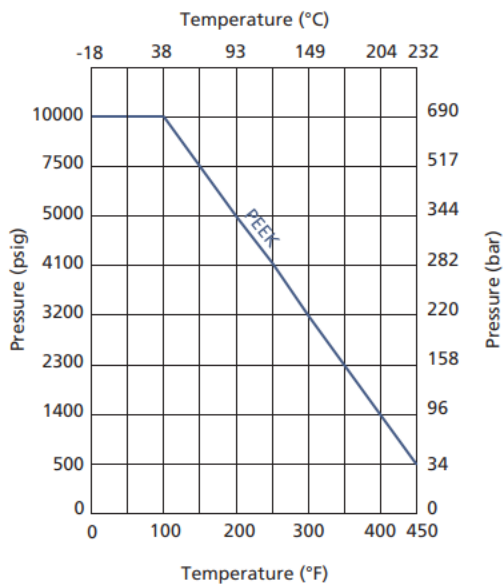
BV71 Series

Features

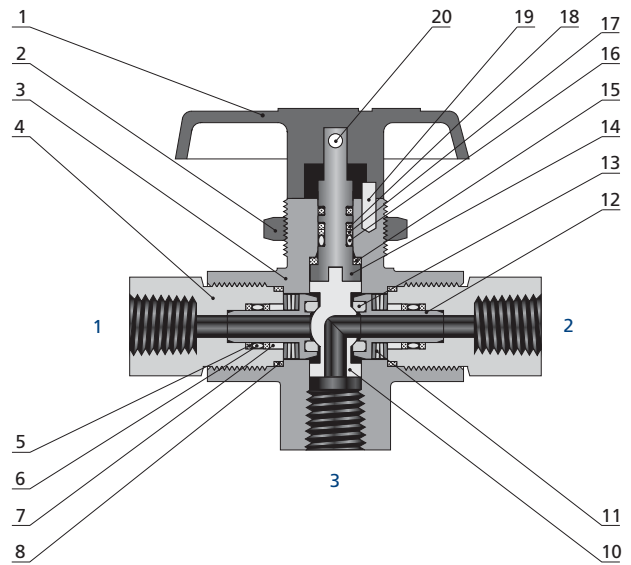
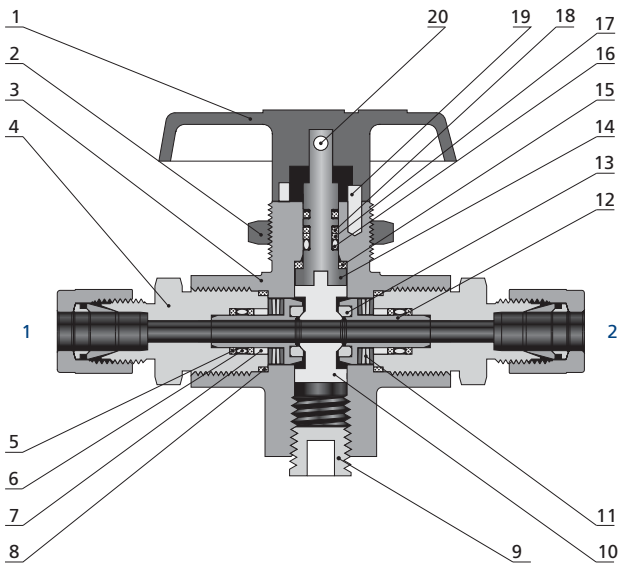
- ❖ Maximum working pressure up to 10 000 psig (690 bar)
- ❖ Working temperature from -65°F to 450°F (-54°C to 232°C)
- ❖ 2-way and 3-way pattern, same rating on any port as inlet
- ❖ Spring-loaded seats reduce seat wear from pressure surges
- ❖ Field repairable with seal kits
- ❖ Trunnion-style ball and low operating torque
- ❖ Bottom-loaded stem prevents stem blowout
- ❖ Panel mountable
- ❖ 316 stainless steel, brass and alloy body material
- ❖ Variety of end connections
- ❖ Color coded handles



Pressure-Temperature Ratings



Standard Materials of Construction

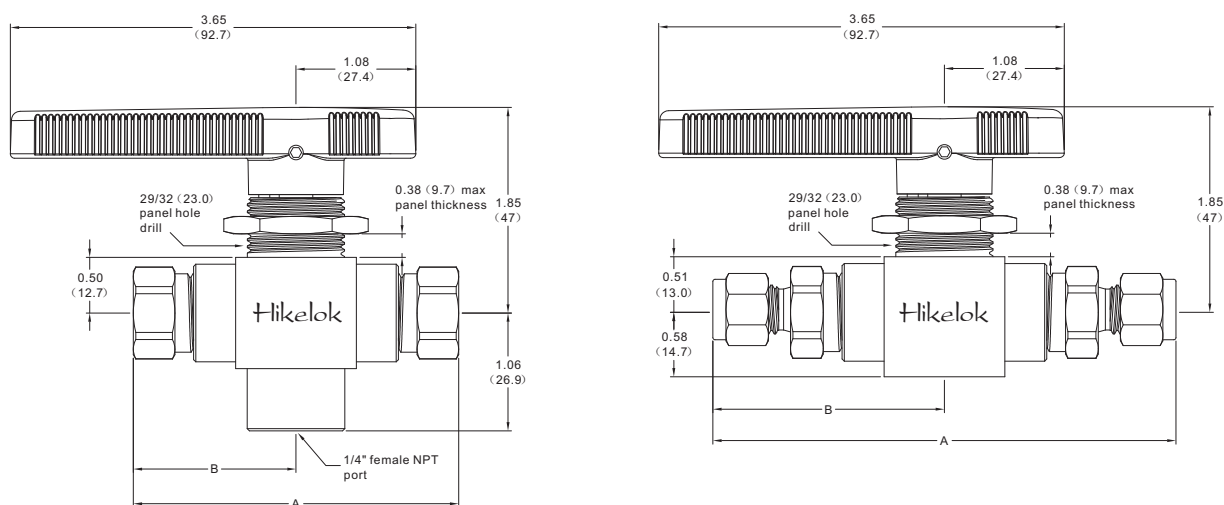


Item	Component	2-way	3-way
		Material Grade/ASTM Specification	
1	<i>Handle</i>	<i>Nylon with SS insert</i>	
2	<i>Panel Nut</i>	<i>316 SS/A479</i>	
3	<i>Body</i>	<i>316 SS/A182</i>	
4	<i>End Connection</i>	<i>316 SS/A479</i>	
5	<i>Seat Retainer Backup Ring</i>	<i>Reinforced PTFE</i>	
6	<i>Seat Retainer O-ring</i>	<i>Fluorocarbon FKM</i>	
7	<i>Seat Retainer Guide</i>	<i>316 SS/A479</i>	
8	<i>End Connection Seal</i>	<i>PTFE/D1710</i>	
9	<i>Plug</i>	<i>316 SS/A479</i>	
10	<i>Ball</i>	<i>S21800/A479</i>	
11	<i>Seat Spring</i>	<i>Alloy X-750/AMS 5542</i>	
12	<i>Seat Retainer</i>	<i>316 SS/A479</i>	
13	<i>Seat</i>	<i>PEEK</i>	
14	<i>Stem</i>	<i>316 SS/A479</i>	
15	<i>Stem Washer</i>	<i>PEEK</i>	
16	<i>Stem O-ring</i>	<i>Fluorocarbon FKM</i>	
17	<i>Secondary Stem Backup Ring</i>	<i>PTFE/D1710</i>	
18	<i>Primary Stem Backup Ring</i>	<i>PEEK</i>	
19	<i>Stop Pin</i>	<i>SS</i>	
20	<i>Set Screw</i>	<i>SS</i>	
<i>Lubricants</i>		<i>Fluorinated-based</i>	

Note: Wetted components are listed in italics.

1. Ball trunnions are Xylan® coated for 2-way valves.

Dimensions



2-way Valve

Basic Ordering Number	Connection Size	Orifice Size in. (mm)	Cv	Dimension, in. (mm)	
				A	B
BV71-FNPT2-05-	1/8" Female NPT	0.187 (4.75)	1.2	2.94 (74.7)	1.47 (37.3)
BV71-FNPT4-05-	1/4" Female NPT			4.25 (108.0)	2.13 (54.1)
BV71-FNPT8-05-	1/2" Female NPT			4.14 (105.2)	2.07 (52.6)
BV71-F4-05-	1/4" Hikelok			4.39 (111.5)	2.19 (55.6)
BV71-F6-05-	3/8" Hikelok			4.60 (116.8)	2.30 (58.4)
BV71-F8-05-	1/2" Hikelok			4.14 (105.2)	2.07 (52.6)
BV71-M6-05-	6 mm Hikelok			4.15 (105.4)	2.07 (52.6)
BV71-M8-05-	8 mm Hikelok			4.41 (112.0)	2.20 (55.9)
BV71-M10-05-	10 mm Hikelok			4.60 (116.8)	2.30 (58.4)
BV71-M12-05-	12 mm Hikelok				

3-way Valve

Basic Ordering Number	Connection Size	Orifice Size in. (mm)	Cv	Dimension, in. (mm)	
				A	B
BV71-FNPT2-05-3-	1/8 Female NPT	0.187 (4.75)	0.75	2.94 (74.7)	1.47 (37.3)
BV71-FNPT4-05-3-	1/4 Female NPT			4.14 (105.2)	2.07 (52.6)
BV71-F4-05-3-	1/4" Hikelok			4.39 (111.5)	2.19 (55.6)
BV71-F6-05-3-	3/8" Hikelok			4.60 (116.8)	2.30 (58.4)
BV71-F8-05-3-	1/2" Hikelok			4.14 (105.2)	2.07 (52.6)
BV71-M6-05-3-	6 mm Hikelok			4.15 (105.4)	2.07 (52.6)
BV71-M8-05-3-	8 mm Hikelok			4.41 (112.0)	2.20 (55.9)
BV71-M10-05-3-	10 mm Hikelok			4.60 (116.8)	2.30 (58.4)
BV71-M12-05-3-	12 mm Hikelok				

Seal Kits

❖ Seal kits contain components of the same materials as new components

Valve Series	Basic Seal Kits Ordering Number	Kit Contents
BV71 2-way	BV71-SK-S-316-	Instructions, O-rings, stem bearing, ball, seat subassemblies (seats and seat carriers), seat springs, end screw seals, lubricant.
BV71 3-way	BV71-SK-3-316-	Instructions, stem, O-rings, backup rings, bearings, ball, seat subassemblies (seats and seat carriers), seat springs, end screw seals, lubricant.

How to Order

BV7 — SK — S — 316 — P

Series	Seal kits	Flow Pattern	Body Material	Packing Material
BV7	SK Seal kits	S Straight 3 3-way	316 316L 304 304L Alloy 400	T PTFE K PCTFE P PEEK

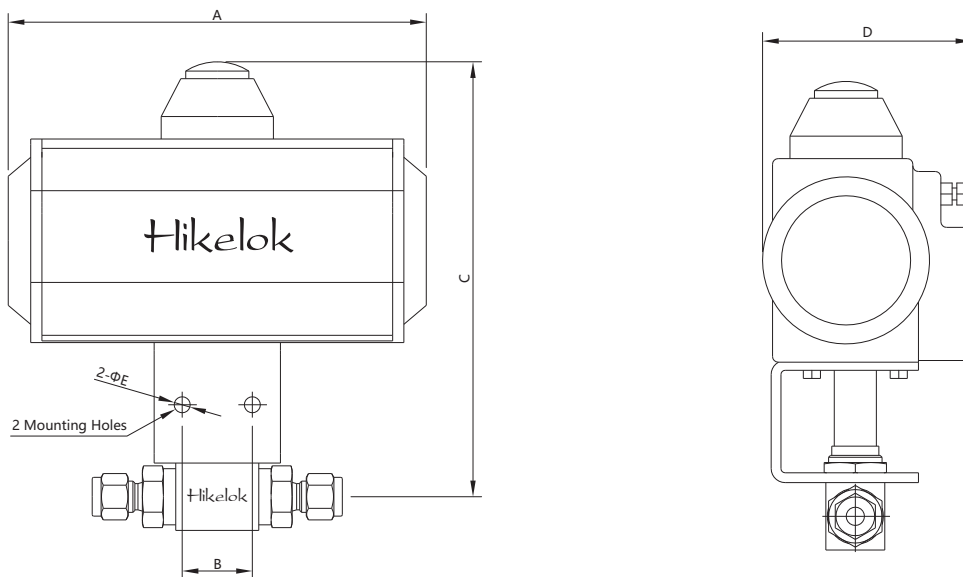
ISO 5211-Compliant Pneumatic Actuators

❖ Hikelok ISO 5211-compliant rack and pinion pneumatic actuators are available in spring-return and double-acting modes.

Pressure-Temperature Ratings

Temperature Range °F (°C)	Maximum Actuator Pressure, psig(bar)
-4 to 176 (-20 to 80)	101 (7.0)

Dimensions



Valve Series®	Actuation Modes (Angle range)	Dimensions, in.(mm)®				
		A	B	C	D	E
BV71-05	Spring Return or Double Acting (0-90°)	5.70 (145)	0.98 (25)	6.10 (155)	2.79 (71)	0.22 (5.7)

① Example: BV7-05 refers to BV7 series, 2-way, orifice 4.75mm valves
 ② Dimensions are for reference only and are subject to change

How to Order

Series	Port 1 Type	Port 1 Size	Port 2/3 Type	Port 2/3 Size	Seat Material	Orifice Size	Handle	Flow Pattern	Body Material
BV71	FNPT Female NPT NPT Male NPT FBT Female BSPT MBT Male BSPT FMS Female Metric MS Male Metric (for BG) FBP Female BSPP MBP Male BSPP (for BG) F Fractional Tube Fitting M Metric Tube Fitting	2 1/8 in. 3 3 mm 4 1/4 in. 5 5/16 in. 6 3/8 in. or 6 mm 8 1/2 in. or 8 mm 10 10 mm 12 12 mm	Same as port 1 type and port 2 size If port 2/3 and port 1 are the same, eliminate the port 2/3 designator	P PEEK	05 0.187 in. (4.7 mm)	Black L Blue R Red G Green Y Yellow PSC PSO PD EA	Straight 3 3-way	316 316 S.S. 316L 316L S.S. 304 304 S.S. 304L 304L S.S. A400 Alloy 400	

Note:
PSC (ISO 5211-Compliant Pneumatic Actuators, spring return normally closed)
PSO (ISO 5211-Compliant Pneumatic Actuators, spring return normally open)
PD (ISO 5211-Compliant Pneumatic Actuators, double acting)
EA (Electric Actuator, Please consult customer service for parameters)