

FD-LOK[®]

One-piece Ball Valves

B1 Series

Features

- ⦿ Working pressure up to 3000 psig (207 bar)
- ⦿ Working temperature from -65°F to 300°F (-54°C to 148°C)
- ⦿ 2-way, 3-way models for on-off and switching service available
- ⦿ One piece body and one piece ball stem eliminates multiple seal points
- ⦿ Top entry design allows in-line inspection and repair after system depressurizing, simplifies maintenance
- ⦿ Live-loading with packing springs compensates for thermal effects and wear
- ⦿ Pneumatic and electric actuation available
- ⦿ Panel mountable
- ⦿ 100% factory tested



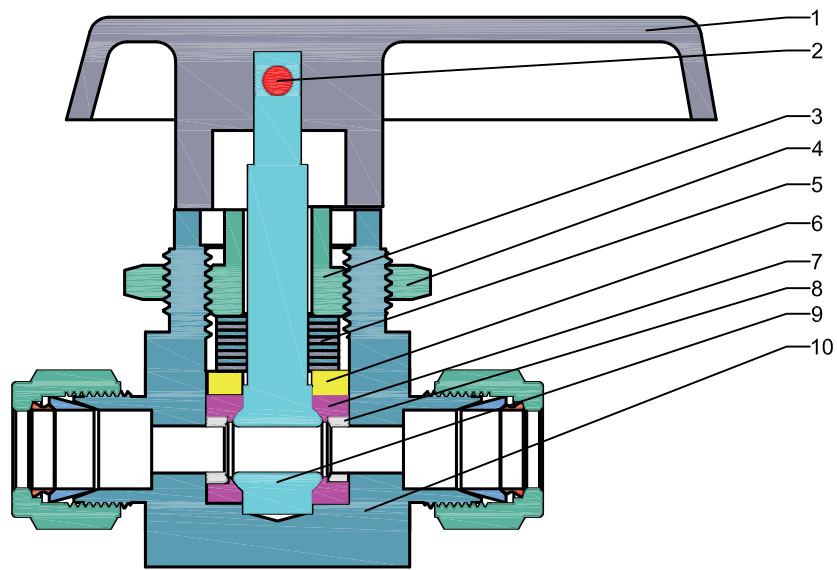
SS-B1-SM6-A3

Technical Data

Temperature		Working pressure, psig (bar)
°F	°C	
-65~50	-54~10	3000(207)
50~150	10~65	3000(207)
200	93	2800(193)
250	121	2650(182)
300	148	2500(172)

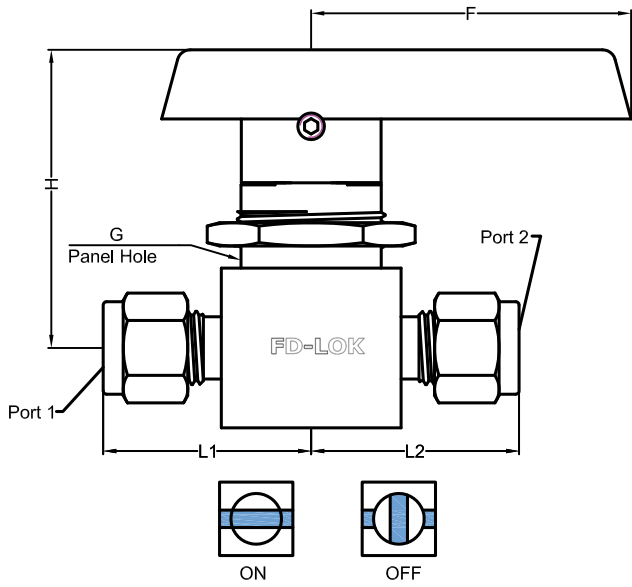


SS-B1-X-S4-5

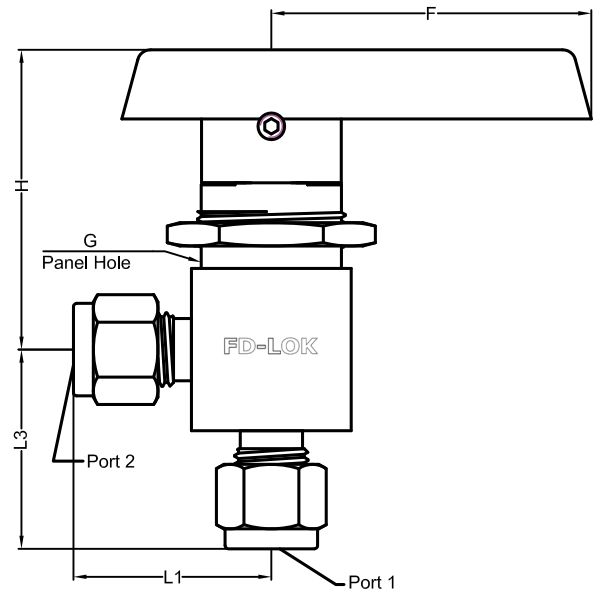


Materials of Construction

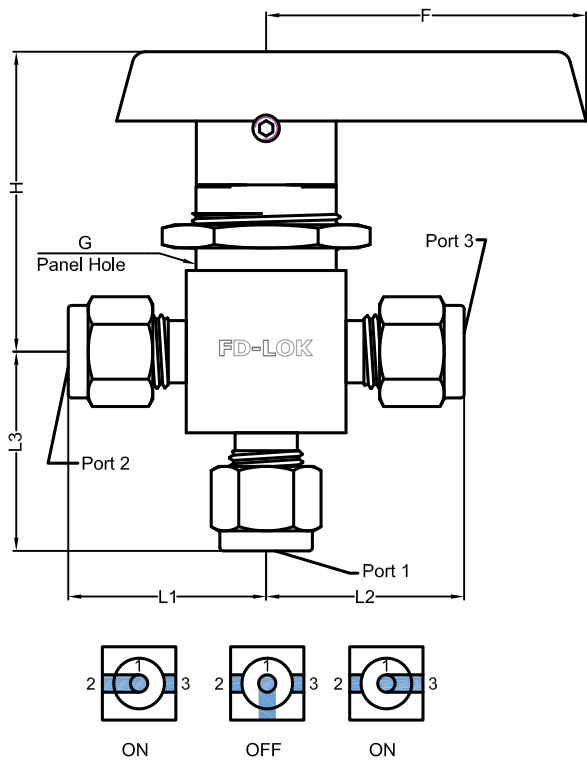
Item	Component	Valve Body Materials		
		Stainless Steel	Brass	Alloy 400
		Material Grade/ASTM Specification		
1	Handle	Aluminum alloy		
2	Set screw	302 SS		
3	Packing screw	316 SS/A176	Brass CDA 360/B16	Alloy R-405/B164
4	Panel nut	S17400S	Brass CDA 360/B16	S17400S
5	Packing springs	316 SS/A240		
6	Gland	316 SS/A276		
7	Packing seat	PTFE/Reinforced PTFE/UHMWPE		
8	Support rings	Fluorocarbon coated 316 SS/A276		Fluorocarbon coated alloy 400
9	Ball stem	316 SS/A276 and A479		Alloy R-405/B164
10	Body	316 SS/A182	Brass CDA 360/B283	Alloy 400/B564
	Lubricant	Hydrocarbon-based and silicone-based		



B1 (straight pattern)



B1-A (angle pattern)



B1-X (3-way pattern)

Table of Dimensions

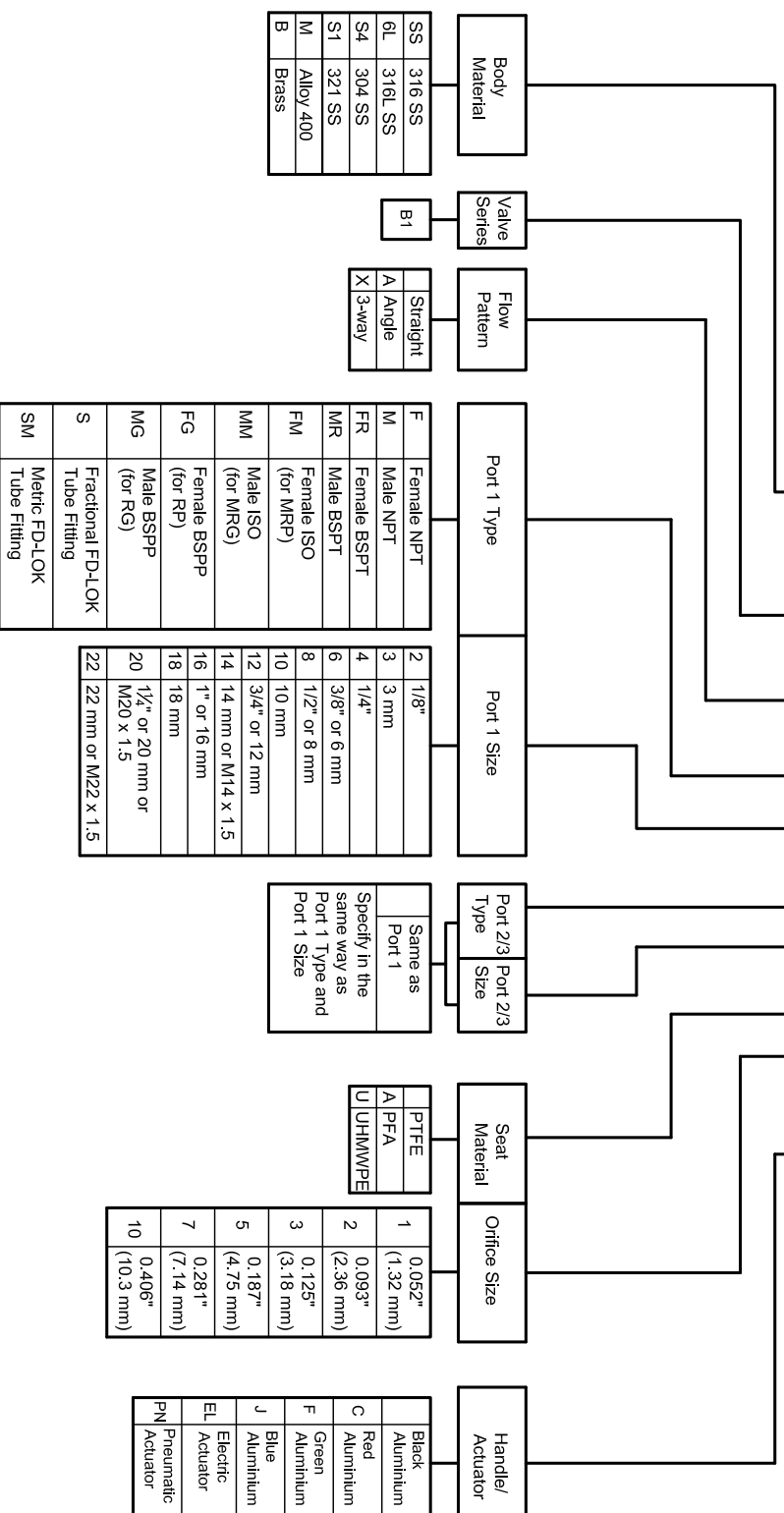
Valve Series	Basic Model Number	End Connection		Orifice in. (mm)	Cv	L1	L2	L3	H	F	G
		Port 1	Port2 / 3			in. (mm)					
B1	-B1-S1-1	1/16" FD-LOK	1/16" FD-LOK	0.052 (1.32)	0.10	0.84 (21.3)	0.84 (21.3)		1.36 (34.5)	1.12 (28.4)	0.59 (15.1)
	-B1-S2-2	1/8" FD-LOK	1/8" FD-LOK	0.093 (2.36)	0.20	1.01 (25.7)	1.01 (25.7)	0.97 (24.6)	1.36 (34.5)	1.12 (28.4)	0.59 (15.1)
	-B1-SM3-2	3mm FD-LOK	3mm FD-LOK								
	-B1-F2-3	1/8" Female NPT	1/8" Female NPT	0.125 (3.18)	0.60	0.81 (20.6)	0.81 (20.6)	0.81 (20.6)	1.36 (34.5)	1.12 (28.4)	0.59 (15.1)
	-B1-S4-3	1/4" FD-LOK	1/4" FD-LOK			1.10 (27.9)	1.10 (27.9)	1.07 (27.2)			
	-B1-SM6-3	6mm FD-LOK	6mm FD-LOK								
	-B1-F2-5	1/8" Female NPT	1/8" Female NPT	0.187 (4.75)	1.5	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)	1.47 (37.3)	1.53 (38.9)	0.78 (19.8)
	-B1-F4-5	1/4" Female NPT	1/4" Female NPT			1.03 (26.2)	1.03 (26.2)	1.03 (26.2)			
	-B1-FR4-5	1/4" Female BSPT	1/4" Female BSPT								
	-B1-M4-5	1/4" Male NPT	1/4" Male NPT			1.00 (25.4)	1.00 (25.4)	1.03 (26.2)			
	-B1-M4-S4-5	1/4" Male NPT	1/4" FD-LOK			1.12 (28.4)	1.00 (25.4)	1.03 (26.2)			
	-B1-S4-5	1/4" FD-LOK	1/4" FD-LOK			1.20 (30.5)	1.20 (30.5)	1.17 (29.7)			
	-B1-S6-5	3/8" FD-LOK	3/8" FD-LOK			1.29 (32.8)	1.29 (32.8)	1.29 (32.8)			
	-B1-SM6-5	6mm FD-LOK	6mm FD-LOK			1.20 (30.5)	1.20 (30.5)	1.17 (29.7)			
	-B1-SM8-5	8mm FD-LOK	8mm FD-LOK			1.23 (31.2)	1.23 (31.2)	1.20 (30.5)			
	-B1-F4-7	1/4" Female NPT	1/4" Female NPT			0.281 (7.14)	6.0	1.25 (31.8)			
	-B1-F6-7	3/8" Female NPT	3/8" Female NPT								
	-B1-FR6-7	3/8" Female BSPT	3/8" Female BSPT								
	-B1-S6-7	3/8" FD-LOK	3/8" FD-LOK	1.52 (38.6)	1.52 (38.6)			1.43 (36.3)			
	-B1-SM10-7	10mm FD-LOK	10mm FD-LOK								
-B1-SM12-7	12mm FD-LOK	12mm FD-LOK	1.56 (39.7)	1.56 (39.7)	1.47 (37.4)						
-B1-SM14-7	14mm FD-LOK	14mm FD-LOK									
-B1-F8-10	1/2" Female NPT	1/2" Female NPT	0.406 (10.3)	12	1.56 (39.7)	1.56 (39.7)	1.56 (39.7)	2.43 (61.7)	3.00 (76.2)	1.50 (38.1)	
-B1-FR8-10	1/2" Female BSPT	1/2" Female BSPT									
-B1-S8-10	1/2" FD-LOK	1/2" FD-LOK									
-B1-S12-10	3/4" FD-LOK	3/4" FD-LOK			1.96 (49.8)	1.96 (49.8)	1.74 (44.2)				
-B1-SM12-10	12mm FD-LOK	12mm FD-LOK									
-B1-SM14-10	14mm FD-LOK	14mm FD-LOK									
-B1-SM16-10	16mm FD-LOK	14mm FD-LOK									

Remarks:

- FD-LOK means FD-LOK double ferrule tube fittings.
- Dimensions shown with FD-LOK nuts finger-tight. All dimensions are for reference only, subject to change.
For dimensions not shown above, consult the factory please.
- The sizes and types listed are standard. Other sizes and types are available upon request.
- Stem packing required periodically check and adjust during the valve service life to prevent seat leakage.
- Valves that have not been cycled for a period of time may have a higher initial actuation torque.

Ordering Information

SS-B1-A-M4-S4-A5-PN



SS	316 SS
6L	316L SS
S4	304 SS
S1	321 SS
M	Alloy 400
B	Brass

Valve Series	B1
Flow Pattern	Straight A Angle X 3-way

Port 1 Type	F Female NPT M Male NPT FR Female BSPT MR Male BSPT FM Female ISO (for MRP) MM Male ISO (for MRG) FG Female BSPP (for RP) MG Male BSPP (for RG) S Fractional FD-LOK Tube Fitting SM Metric FD-LOK Tube Fitting
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Port 1 Size	2 1/8" 3 3 mm 4 1/4" 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
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Port 2/3 Type and Size	Same as Port 1 Specify in the same way as Port 1 Type and Port 1 Size
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Seat Material	PTFE A PFA U UHMWPE
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Orifice Size	1 0.052" (1.32 mm) 2 0.093" (2.36 mm) 3 0.125" (3.18 mm) 5 0.187" (4.75 mm) 7 0.281" (7.14 mm) 10 0.406" (10.3 mm)
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Handle/Actuator	Black Aluminium Red Aluminium C Aluminium Green Aluminium Blue Aluminium J Aluminium E Electric Actuator P Pneumatic Actuator
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FD-LOK®

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