

Bellows-Sealed Valves

BS2 Series

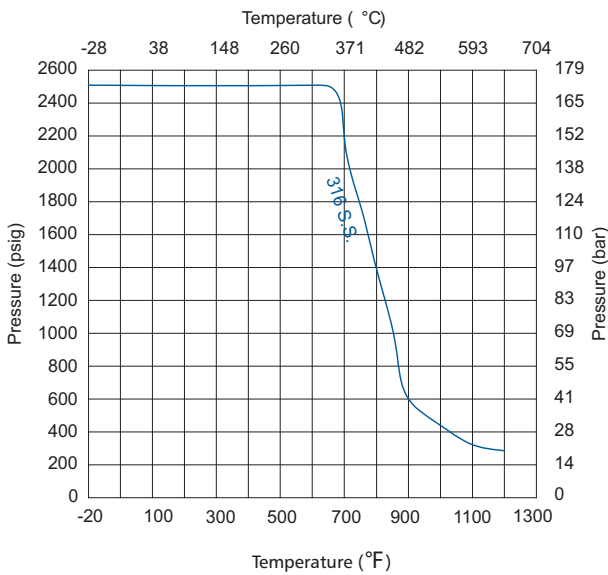


- ❖ Working pressure up to: 2500 psig (172 bar)
- ❖ Working temperature: -20°F to 1200°F (-28°C to 649°C)
- ❖ Variety of end connections
- ❖ 316 SS body material

Features

- ❖ Upper packing provides secondary containment system above the bellows
- ❖ Hydraulic-formed multilayer bellows enhanced cycle life
- ❖ Nonrotating stem tip eliminates galling within the seat area
- ❖ Strictly controlled bellows stroke to improve safety and cycle life
- ❖ Replaceable bellows and stem assembly
- ❖ Regulating, conical, and spherical stem tips available
- ❖ Panel, bottom, and side mounting available
- ❖ Double lock-pins enable steady and durable fastening of the handle.
- ❖ Handle color options are available
- ❖ Every CIR-LOK bellows-sealed valve is factory tested with helium to a maximum leak rate of 4×10^{-9} std cm³/s at the seat, envelope and all seals

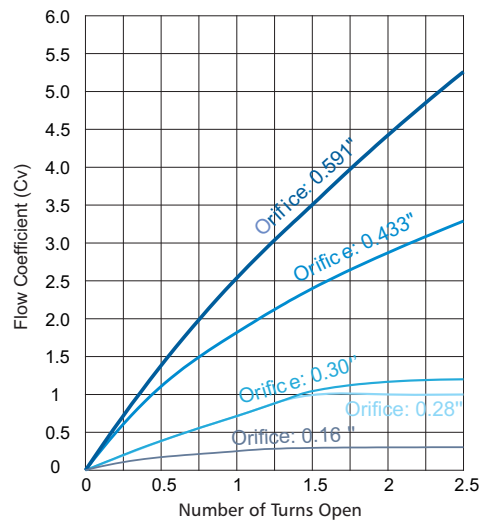
Pressure vs. Temperature



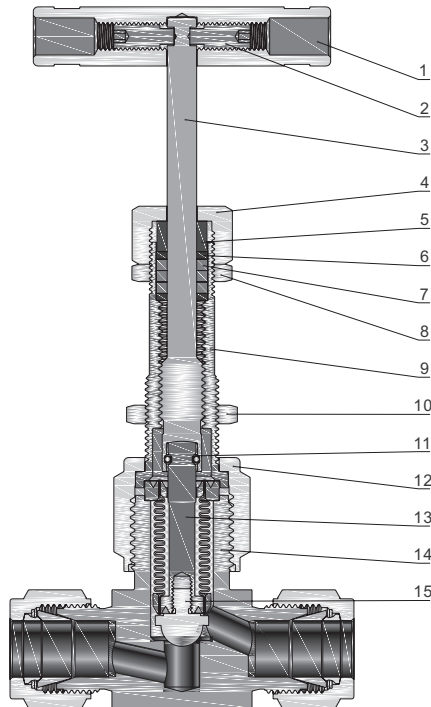
200°F (93°C) max. with PCTFE stem tip (soft tip).

Flow Coefficient vs. Turns Open

Regulating Stem



Standard Materials of Construction

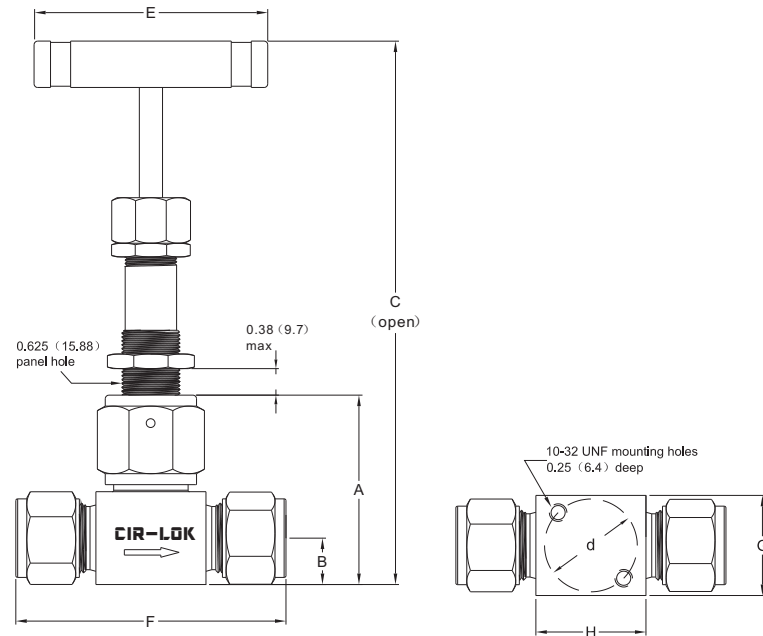


Tip Types



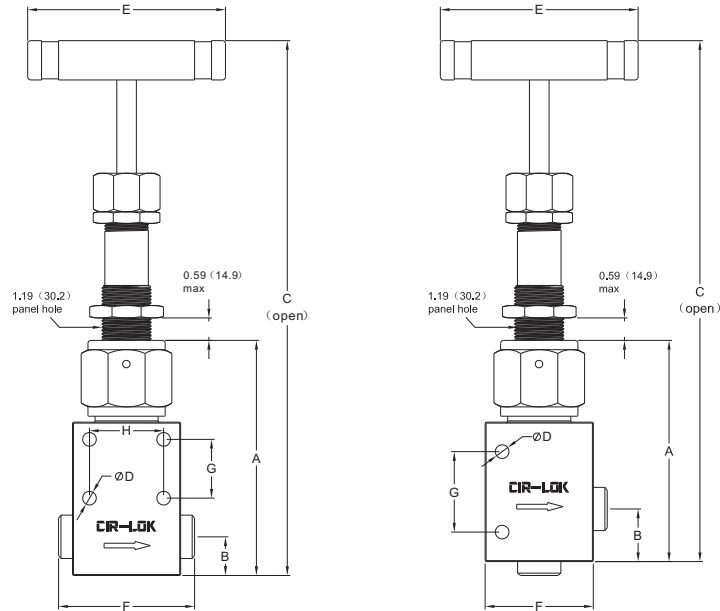
Component		Valve Body Material Grade/ASTM Specification
		316 S.S.
1	Handle	Green anodized aluminum 6061/B211
2	Screw	Alloy Steel/ANSI 18.3
3	Actuator	416 S.S./A582
4	Packing Nut	316 S.S./A276
5	Gland	316 S.S./A276
6	Spacer	316 S.S./A276
7	Packing	PTFE or Graphite
8	Nut	316 S.S./A276
9	Bonnet	316 S.S./A479
10	Nut	316 S.S./A479
11	Pin	Stainless steel
12	Bonnet Nut	316 S.S./A479
13	Stem	316 S.S./A479
	Weld Ring	316 S.S./A479
	Bellows	316L S.S.
14	Body	316 S.S./A182
15	Stem Tip	316 S.S./A479 (regulating)
		PCTFE/D1430 (conical)
		Weld Stellite (regulating or spherical)

Dimensions



Basic Ordering Number	End Connections	Orifice in. (mm)	Cv	Dimensions, in. (mm)							
				A	B	C	E	F	G	H	∅d
BS2-F4-04-	1/4" CIR-LOK	0.16 (4.1)	0.36	2.69 (59.9)	0.56 (14.2)	6.48 (165)	2.50 (63.5)	2.46 (62.5)	1.00 (25.4)	1.06 (26.9)	1.00 (25.4)
BS2-F6-06-	3/8" CIR-LOK	0.26 (6.6)	0.85	1.61 (40.9)	0.50 (12.7)	6.59 (167)	2.50 (63.5)	3.09 (78.5)	1.13 (28.7)	1.57 (39.9)	1.13 (28.7)
BS2-F8-08-	1/2" CIR-LOK	0.30 (7.6)	1.20	1.61 (40.9)	0.50 (12.7)	6.59 (167)	2.50 (63.5)	3.30 (83.8)	1.13 (28.7)	1.57 (39.9)	1.13 (28.7)
BS2-M6-04-	6 mm CIR-LOK	0.16 (4.1)	0.36	1.49 (37.8)	0.56 (14.2)	6.48 (165)	2.50 (63.5)	2.46 (62.5)	1.00 (25.4)	1.06 (26.9)	1.00 (25.4)
BS2-M10-07-	10 mm CIR-LOK	0.28 (7.1)	1.00	1.61 (40.9)	0.50 (12.7)	6.59 (167)	2.50 (63.5)	3.11 (79.0)	1.13 (28.7)	1.57 (39.9)	1.13 (28.7)
BS2-M12-07-	12 mm CIR-LOK	0.28 (7.1)	1.00	1.61 (40.9)	0.50 (12.7)	6.59 (167)	2.50 (63.5)	3.30 (83.8)	1.13 (28.7)	1.57 (39.9)	1.13 (28.7)
BS2-FSW4-04-	1/4" FSW	0.16 (4.1)	0.36	1.49 (37.8)	0.56 (14.2)	6.48 (165)	2.50 (63.5)	1.68 (42.7)	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)
BS2-FSW6-06-	3/8" FSW	0.26 (6.6)	1.00	1.61 (40.9)	0.50 (12.7)	6.59 (167)	2.50 (63.5)	2.27 (57.7)	1.13 (28.7)	1.52 (38.6)	1.13 (28.7)
BS2-FSW8-08-	1/2" FSW	0.30 (7.6)	1.20	1.61 (40.9)	0.50 (12.7)	6.59 (167)	2.50 (63.5)	2.27 (57.7)	1.13 (28.7)	1.52 (38.6)	1.13 (28.7)
BS2-FBW4-04-	1/4" FBW	0.16 (4.1)	0.36	1.49 (37.8)	0.56 (14.2)	6.48 (165)	2.50 (63.5)	1.68 (42.7)	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)
BS2-FBW8-08-	1/2" FBW	0.30 (7.6)	1.20	1.61 (40.9)	0.50 (12.7)	6.59 (167)	2.50 (63.5)	2.27 (57.7)	1.13 (28.7)	1.52 (38.6)	1.13 (28.7)
BS2-FGFS4-04-	1/4" Female GFS	0.16 (4.1)	0.36	1.49 (37.8)	0.56 (14.2)	6.48 (165)	2.50 (63.5)	2.76 (70.1)	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)
BS2-FGFS8-08-	1/2" Female GFS	0.30 (7.6)	1.20	1.61 (40.9)	0.50 (12.7)	6.59 (167)	2.50 (63.5)	2.98 (75.7)	1.13 (28.7)	1.52 (38.6)	1.13 (28.7)
BS2-GFS4-04-	1/4" Male GFS	0.16 (4.1)	0.36	1.49 (37.8)	0.56 (14.2)	6.48 (165)	2.50 (63.5)	2.24 (56.9)	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)
BS2-GFS8-08-	1/2" Male GFS	0.30 (7.6)	1.20	1.61 (40.9)	0.50 (12.7)	6.59 (167)	2.50 (63.5)	3.00 (76.2)	1.13 (28.7)	1.52 (38.6)	1.13 (28.7)

Dimensions



Basic Ordering Number	End Connections	Orifice in. (mm)	CV	Dimensions, in. (mm)							
				A	B	C	E	F	G	H	ØD
BS2-FSW12-11-	3/4" FSW	0.433 (11.0)	3.10	4.88 (124)	1.00 (25.4)	11.60 (295)	4.00 (102)	2.44 (62.0)	1.25 (31.8)	1.46 (37.0)	0.27 (6.9)
BS2-FBW12-11-	3/4" FBW	0.433 (11.0)	3.10	4.88 (124)	1.00 (25.4)	11.60 (295)	4.00 (102)	2.44 (62.0)	1.25 (31.8)	1.46 (37.0)	0.27 (6.9)
BS2-FSW12-15-A-	3/4" FSW	0.591 (15.0)	5.30	4.88 (124)	1.44 (36.6)	11.60 (295)	4.00 (102)	2.49 (63.2)	1.60 (40.6)	—	0.26 (6.6)
BS2-FBW12-15-A-	3/4" FBW	0.591 (15.0)	5.30	4.88 (124)	1.44 (36.6)	11.60 (295)	4.00 (102)	2.49 (63.2)	1.60 (40.6)	—	0.26 (6.6)
BS2-FBW16-15-A-	1" FBW	0.591 (15.0)	5.30	4.88 (124)	1.44 (36.6)	11.60 (295)	4.00 (102)	2.49 (63.2)	1.60 (40.6)	—	0.26 (6.6)

How to Order

Series	MBW10	M10	07	KN	BA	316				
	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Orifice Size	Tip Material	Tip Type	Handle	Flow Pattern	Body Material
BS2	FSW Fractional Tube Socket Weld	2 1/8" 4 1/4"	Same as inlet type and inlet size	04 (4.1 mm)	Standard Material	Spherical	Blue Aluminum Bar	Straight	316 316 S.S.	
	MSW Metric Tube Socket Weld	3/8" or 6 mm 6	If outlet and inlet are the same, eliminate the outlet designator	06 (6.6 mm)	K PCTFE	Regulating	Black Aluminum Bar	A Angle	316L 316L S.S.	
	FBW Fractional Tube Butt Weld	1/2" or 8 mm 8		07 (7.1 mm)	W Stellite	Conical	Red Aluminum Bar		304 304 S.S.	
	MBW Metric Tube Butt Weld	10 10 mm 10		08 (7.6 mm)			Green Aluminum Bar		304L 304L S.S.	
	F Fractional Tube Fitting	3/4" or 12 mm 12		11 (11 mm)			Stainless Steel		A400 Alloy 400	
	M Metric Tube Fitting	14 mm or M14 14		15 (15 mm)						
	UGF Nut+Gasket+ Fractional Bulge Nipple	1" or 16 mm 16		20 (20 mm)						
	UGM Nut+Gasket+ Metric Bulge Nipple	18 18 mm 18								
	FGFS Female FR Fitting	11/4 or 20 mm or M20 x 1.5 20								
	GFS Male FR Fitting		22 mm or M22 x 1.5 22							
			25 25 mm 25							
			27 M27 x 2 27							
			28 28 mm 28							