

Bellows-Sealed Metering Valves

BSM Series



- ❖ Maximum working pressure up to 700 psig (48.2 bar)
- ❖ Working temperature from -20°F to 900°F (-28°C to 482°C)
- ❖ Flow coefficients: 0.019 and 0.30
- ❖ 316 stainless steel materials

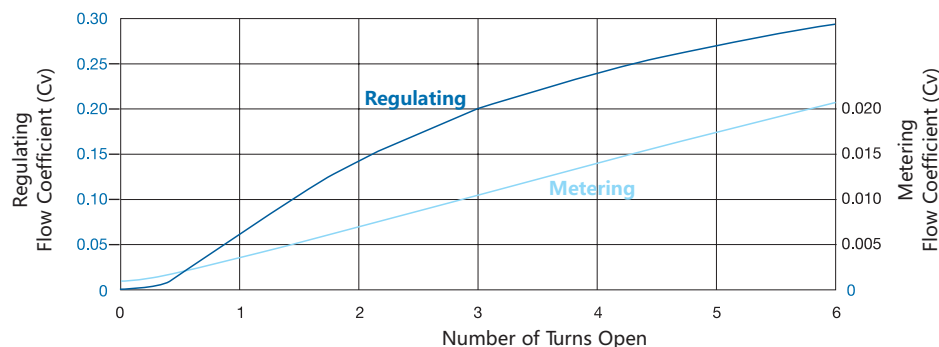
Features

- ❖ Maximum working pressure up to 700 psig (48.2 bar)
- ❖ Working temperature from -20°F to 900°F (-28°C to 482°C)
- ❖ Flow coefficients: 0.019 and 0.30
- ❖ Vernier handle measure stem position in 0.001 in. (0.025 mm) increments.
- ❖ Panel and bottom mounting
- ❖ 316 stainless steel materials

Technical Data

Body-to-Bellows Seal	Stem Tip	Stem Taper	Cv
Gasket	Metering	3°	0.019
	Regulating	20°	0.30
Welded	Metering	3°	0.019
	Regulating	20°	0.30

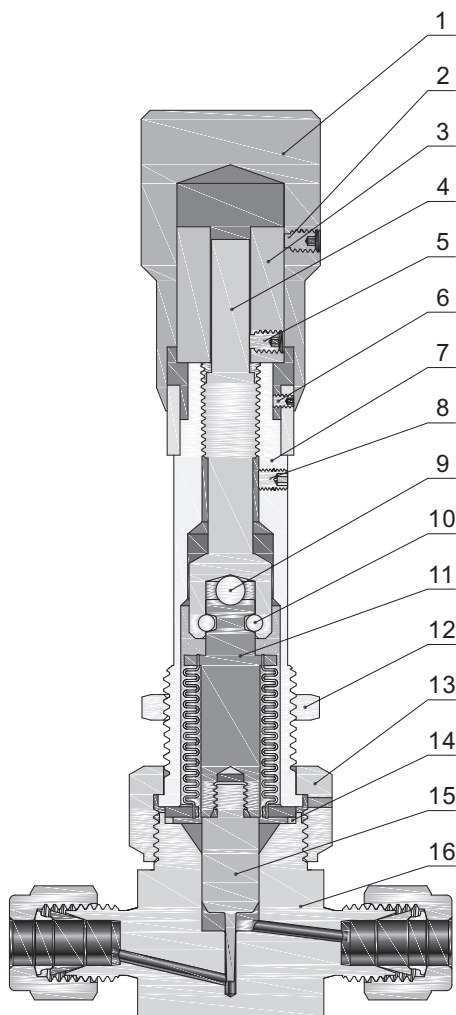
Flow Coefficient vs. Turns Open



Pressure vs. Temperature

Material	316 S.S.	
	Regulating	Metering
Series	Working Pressure, psig (bar)	
Temperature, °F (°C)	Working Pressure, psig (bar)	
-20 (-28) to 100 (37)	700 (48.2)	700 (48.2)
	200 (93)	610 (42.0)
	300 (148)	530 (36.5)
	400 (204)	450 (31.0)
500 (260)	375 (25.8)	375 (25.8)
	600 (315)	300 (20.6)
	650 (343)	260 (17.9)
	700 (371)	230 (15.8)
750 (398)	200 (13.7)	—
	800 (426)	160 (11.0)
	850 (454)	130 (8.9)
	900 (482)	100 (6.8)

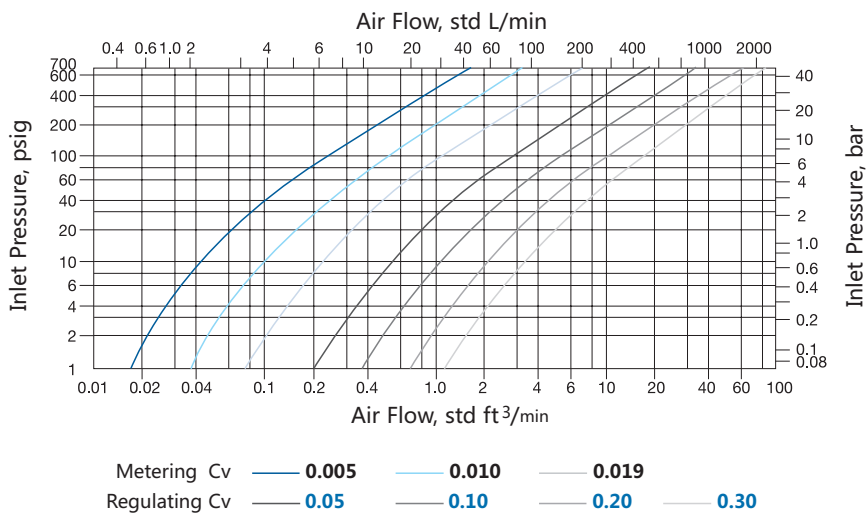
Standard Materials of Construction



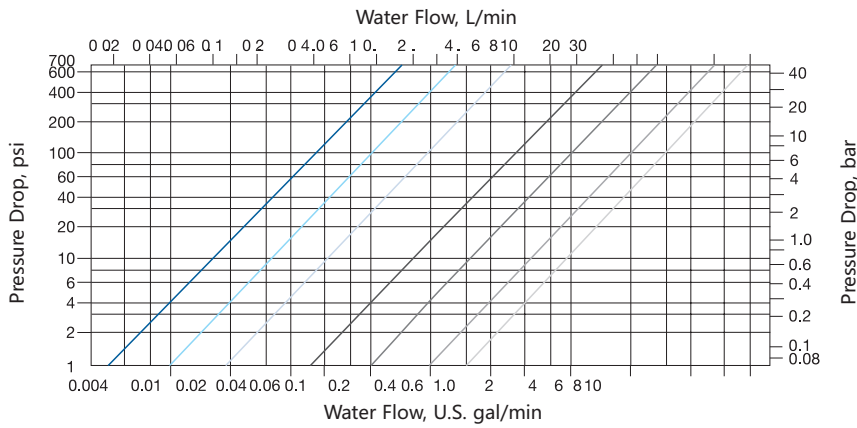
Component		Material Grade/ASTM Specification
1	Handle	Silver-mist chrome-plated 313 S.S./A582
2	Screw	Alloy steel/ANSI 18.3
3	Bushing	303 S.S./A582
4	Actuator	416 S.S./A582
5	Screw	Alloy steel/ANSI 18.3
6	Screw	Alloy steel/ANSI 18.3
7	Bonnet	316 S.S./A479
8	Screw	Alloy steel/ANSI 18.3
9	Bearing	420C S.S.
10	Pin	420 S.S./A276
11	Stem	316 S.S./A479
	Bellows	321 S.S./A269
	Weld ring	316 S.S./A479
12	Panel nut	316 S.S./B783
13	Bonnet nut	Silver-plated 316 S.S./A479
14	Gasket	Silver-plated 316 S.S./A580
15	Stem tip	Hard chrome-plated 316 S.S./A479
16	Body	316 S.S./A479

Flow Data at 70°F (20°C)

Air

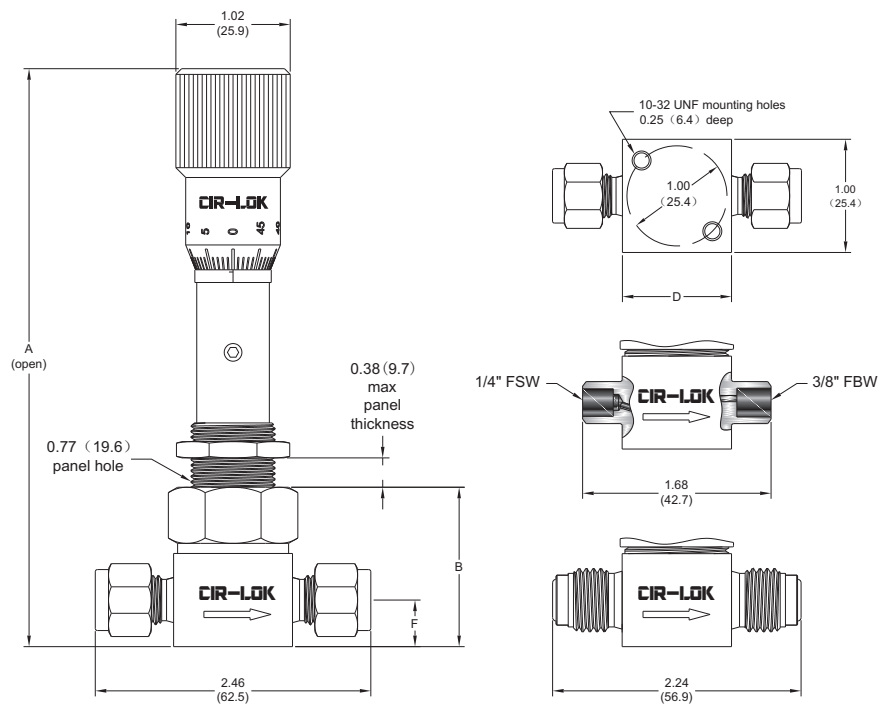


Water



Metering Cv — **0.005** — **0.010** — **0.019**
 Regulating Cv — **0.05** — **0.10** — **0.20** — **0.30**

Dimensions



Basic Ordering Number	Connection Type and Size	Orifice in.(mm)	Cv	Dimension in. (mm)			
				A	B	D	F
BSM-F4-GM-	1/4" CIR-LOK	0.057 (1.4)	0.019	5.24 (133.1)	1.45 (36.8)	1.06 (26.9)	0.56 (14.2)
BSM-F4-GR-	1/4" CIR-LOK	0.166 (4.2)	0.30	5.22 (132.6)			
BSM-F4-WM-	1/4" CIR-LOK	0.057 (1.4)	0.019	5.17 (131.3)	1.42 (36.1)		
BSM-F4-WR-	1/4" CIR-LOK	0.166 (4.2)	0.30	5.15 (130.8)			
BSM-M6-GM-	6 mm CIR-LOK	0.057 (1.4)	0.019	5.24 (133.1)	1.45 (36.8)	1.06 (26.9)	0.56 (14.2)
BSM-M6-GR-	6 mm CIR-LOK	0.166 (4.2)	0.30	5.22 (132.6)			
BSM-M6-WM-	6 mm CIR-LOK	0.057 (1.4)	0.019	5.17 (131.3)	1.42 (36.1)		
BSM-M6-WR-	6 mm CIR-LOK	0.166 (4.2)	0.30	5.15 (130.8)			
BSM-FSW4-FBW6-GM-	1/4"FSW to 3/8" FBW	0.057 (1.4)	0.019	5.24 (133.1)	1.45 (36.8)	1.00 (25.4)	0.56 (14.2)
BSM-FSW4-FBW6-GR-	1/4"FSW to 3/8" FBW	0.166 (4.2)	0.30	5.22 (132.6)			
BSM-FSW4-FBW6-WM-	1/4"FSW to 3/8" FBW	0.057 (1.4)	0.019	5.17 (131.3)	1.42 (36.1)		
BSM-FSW4-FBW6-WR-	1/4"FSW to 3/8" FBW	0.166 (4.2)	0.30	5.15 (130.8)			
BSM-GFS4-GM-	1/4" Male GFS	0.057 (1.4)	0.019	5.24 (133.1)	1.45 (36.8)	1.00 (25.4)	0.44 (11.2)
BSM-GFS4-GR-	1/4" Male GFS	0.166 (4.2)	0.30	5.22 (132.6)			
BSM-GFS4-WM-	1/4" Male GFS	0.057 (1.4)	0.019	5.17 (131.3)	1.42 (36.1)		
BSM-GFS4-WR-	1/4" Male GFS	0.166 (4.2)	0.30	5.15 (130.8)			

How to Order

BSM — **MBW10** — **M10** — **GM** **316**

Series	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Body-to-Bellows Seal	Stem Tip	Body Material
BSM	FBW Fractional Tube Butt Weld	2 1/8 in.	If outlet and inlet are the same, eliminate the outlet designator	Same as inlet type and inlet size	G Gasket W Welded	M Metering R Regulating	316 316 S.S.
	MBW Metric Tube Butt Weld	4 1/4 in.					316L 316L S.S.
	F Fractional Tube Fitting	6 3/8 in. or 6 mm					
	M Metric Tube Fitting	8 1/2 in. or 8 mm					
	FGFS Female GFS Fitting	10 10 mm					
	GFS Male GFS Fitting	12 3/4 in. or 12 mm					