

# Bellows-sealed Valves

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Bellows-sealed Valves

BSV1 Series

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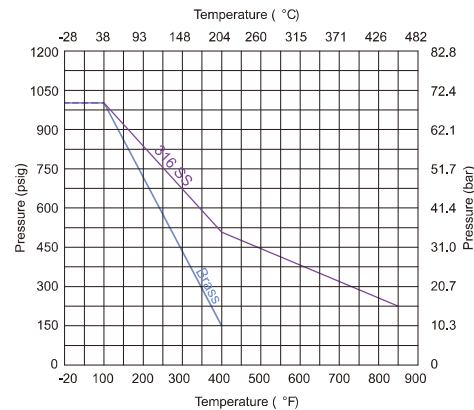
## Bellows-sealed Valves BSV1 Series

### Features

- ⦿ Working pressure up to: 1000 psig (69.0 bar)
- ⦿ Working temperature: -20°F to 842°F (-28°C to 450°C)
- ⦿ Variety of end connections
- ⦿ Body material: 316 SS, brass
- ⦿ Hydraulic-formed multilayer bellows for longer cycle life
- ⦿ Nonrotating stem tip eliminates galling within the seat area
- ⦿ Externally pressurized bellows design for maximum strength
- ⦿ Strictly controlled bellows stroke to improve safety and cycle life
- ⦿ Replaceable bellows and stem tip assembly
- ⦿ Regulating, conical and spherical stem tips available
- ⦿ Handle color options are available
- ⦿ Panel and bottom mounting available
- ⦿ Every XINVAL bellows-sealed valve leak tested with helium at the seat, envelope and all seals (maximum allowable leak rate:  $4 \times 10^{-9}$  std cm<sup>3</sup>/s)



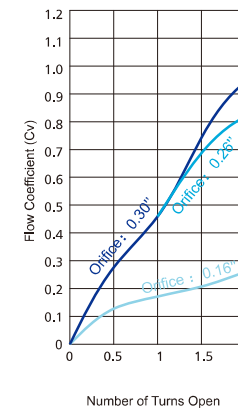
### Pressure vs. Temperature



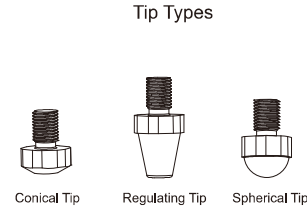
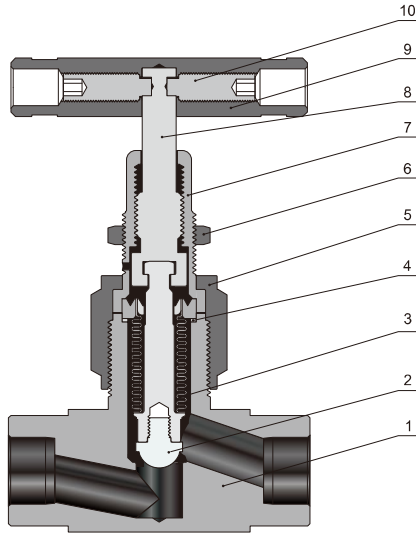
200°F (93°C) max. with PCTFE stem tip (soft tip).

### Flow Coefficient vs. Turns Open

Regulating Stem



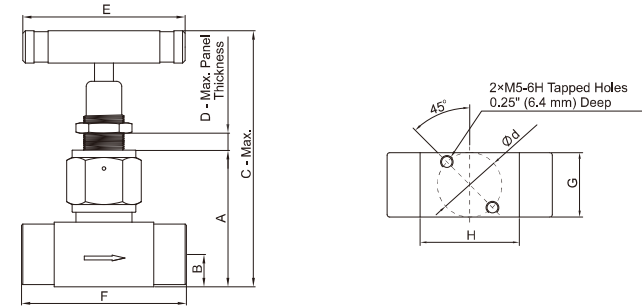
### Standard Materials of Construction



Component	Valve Body Material Grade/ASTM Specification	
	316 SS	Brass
1 Body	316 SS/A182	Brass/B283
2 Stem Tip	Regulating	316 SS/A479 or Stellite
	Conical	PCTFE/D1430 or 316/A479 or Stellite
	Spherical	Stellite
3 Bellows	316 SS/A240	
3 Stem	316 SS/A479	
3 Weld Ring	316 SS/A479	
4 Gasket	Silver-plated 316/A269	
5 Bonnet Nut	316 SS/A479	Brass/B16
6 Panel Mount Nut	Stainless steel	Brass/B16
7 Bonnet	316 SS/A479	Brass/B16
8 Actuator	316 SS/A479	316 SS/A479
9 Handle	6061/B211 or stainless steel	
10 Set Screws	Galvanized carbon steel	
Non-wetted Lubricant	Molybdenum diBSV2lfide	

Contact XINVAL Group or our authorized distributors for valves of other materials.

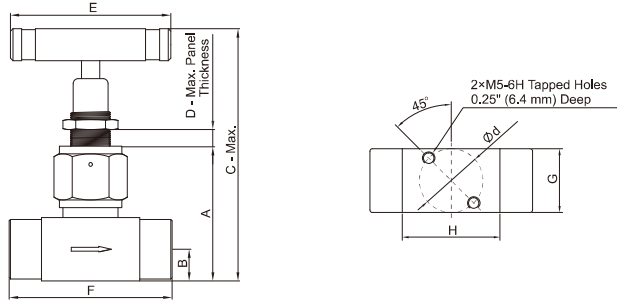
### Dimensions



Basic Ordering Number	Connection Type and Size		Orifice in. (mm)	Cv	Dimensions, in. (mm)									
	Inlet	Outlet			A	B	C	D	E	F	G	H	Ød	
-BSV1-F4-2-	1/4" XINVAL	1/4" XINVAL	0.16 (4.1)	0.36	2.16 (54.8)	0.54 (13.7)	4.05 (102.8)	0.39 (10.0)	2.50 (63.5)	2.46 (62.5)	1.00 (25.4)	1.06 (26.9)	1.00 (25.4)	
-BSV1-F6-3-	3/8" XINVAL	3/8" XINVAL	0.26 (6.6)	0.85	2.20 (55.8)	0.54 (13.7)	4.09 (103.8)	0.39 (10.0)	2.50 (63.5)	3.09 (78.5)	1.10 (25.4)	1.57 (39.9)	1.00 (25.4)	
-BSV1-F8-5-	1/2" XINVAL	1/2" XINVAL	0.30 (7.6)	1.20	2.16 (54.8)	0.54 (13.7)	4.05 (102.8)	0.39 (10.0)	2.50 (63.5)	3.30 (83.8)	1.13 (25.4)	1.57 (40.0)	1.00 (25.4)	
-BSV1-F6M-2-	6 mm XINVAL	6 mm XINVAL	0.16 (4.1)	0.36	2.16 (54.8)	0.54 (13.7)	4.05 (102.8)	0.39 (10.0)	2.50 (63.5)	2.46 (62.5)	1.00 (25.4)	1.07 (27.1)	1.00 (25.4)	
-BSV1-F10M-4-	10 mm XINVAL	10 mm XINVAL	0.28 (7.1)	1.00	2.20 (55.8)	0.54 (13.7)	4.09 (103.8)	0.39 (10.0)	2.50 (63.5)	3.11 (79.0)	1.00 (25.4)	1.57 (39.8)	1.00 (25.4)	
-BSV1-F12M-5-	12 mm XINVAL	12 mm XINVAL	0.30 (7.6)	1.20	2.20 (55.8)	0.54 (13.7)	4.09 (103.8)	0.39 (10.0)	2.50 (63.5)	3.30 (83.8)	1.00 (25.4)	1.57 (39.8)	1.00 (25.4)	
-BSV1-TS4-2-	1/4" TS	1/4" TS	0.16 (4.1)	0.36	2.20 (55.8)	0.54 (13.7)	4.09 (103.8)	0.39 (10.0)	2.50 (63.5)	1.68 (42.7)	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)	
-BSV1-TS6-4-	3/8" TS	3/8" TS	0.28 (7.1)	1.00	2.20 (55.8)	0.54 (13.7)	4.09 (103.8)	0.39 (10.0)	2.50 (63.5)	2.27 (57.7)	1.00 (25.4)	1.51 (38.4)	1.00 (25.4)	
-BSV1-TS8-5-	1/2" TS	1/2" TS	0.30 (7.6)	1.20	2.20 (55.8)	0.54 (13.7)	4.09 (103.8)	0.39 (10.0)	2.50 (63.5)	2.27 (57.7)	1.00 (25.4)	1.25 (31.7)	1.00 (25.4)	
-BSV1-TB8-4-	1/2" TB	1/2" TB	0.28 (7.1)	1.00	2.20 (55.8)	0.54 (13.7)	4.09 (103.8)	0.39 (10.0)	2.50 (63.5)	2.27 (57.7)	1.00 (25.4)	1.51 (38.4)	1.00 (25.4)	
-BSV1-FMR4-2-	1/4" FMR	1/4" FMR	0.16 (4.1)	0.36	2.16 (54.8)	0.54 (13.7)	4.05 (102.8)	0.39 (10.0)	2.50 (63.5)	2.76 (70.1)	1.00 (25.4)	1.02 (25.8)	1.00 (25.4)	
-BSV1-FMR8-5-	1/2" FMR	1/2" FMR	0.30 (7.6)	1.20	2.20 (55.8)	0.54 (13.7)	4.09 (103.8)	0.39 (10.0)	2.50 (63.5)	3.12 (79.2)	1.00 (25.4)	1.25 (31.75)	1.00 (25.4)	
-BSV1-MR4-2-	1/4" MR	1/4" MR	0.16 (4.1)	0.36	2.16 (54.8)	0.54 (13.7)	4.05 (102.8)	0.39 (10.0)	2.50 (63.5)	2.24 (56.9)	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)	
-BSV1-MR8-5-	1/2" MR	1/2" MR	0.30 (7.6)	1.20	2.20 (55.8)	0.54 (13.7)	4.09 (103.8)	0.39 (10.0)	2.50 (63.5)	3.00 (76.2)	1.13 (28.7)	1.50 (38.1)	1.00 (25.4)	

- XINVAL means XINVAL double ferrule tube fittings, FR means metal gasket seal fittings, TS means fractional tube socket weld, TB means fractional tube butt weld.
- Dimensions are shown with XINVAL nuts finger-tightened. All dimensions are for reference only and are BSV2bject to change. For dimensions not shown above, please contact XINVAL Group or our authorized distributors.
- Sizes and types listed are standard. Other sizes and types are available upon request. For special sizes and types, please contact XINVAL Group or our authorized distributors.

## Dimensions



Basic Ordering Number	Connection Type and Size		Orifice in. (mm)	Cv	Dimensions, in. (mm)									
	Inlet	Outlet			A	B	C	D	E	F	G	H	Ød	
-BSV1-F4-2-	1/4" XINVAL	1/4" XINVAL	0.16 (4.1)	0.36	2.16 (54.8)	0.54 (13.7)	4.05 (102.8)	0.39 (10.0)	2.50 (63.5)	2.46 (62.5)	1.00 (25.4)	1.06 (26.9)	1.00 (25.4)	
-BSV1-F6-3-	3/8" XINVAL	3/8" XINVAL	0.26 (6.6)	0.85	2.20 (55.8)	0.54 (13.7)	4.09 (103.8)	0.39 (10.0)	2.50 (63.5)	3.09 (78.5)	1.10 (25.4)	1.57 (39.9)	1.00 (25.4)	
-BSV1-F8-5-	1/2" XINVAL	1/2" XINVAL	0.30 (7.6)	1.20	2.16 (54.8)	0.54 (13.7)	4.05 (102.8)	0.39 (10.0)	2.50 (63.5)	3.30 (83.8)	1.13 (25.4)	1.57 (40.0)	1.00 (25.4)	
-BSV1-F6M-2-	6 mm XINVAL	6 mm XINVAL	0.16 (4.1)	0.36	2.16 (54.8)	0.54 (13.7)	4.05 (102.8)	0.39 (10.0)	2.50 (63.5)	2.46 (62.5)	1.00 (25.4)	1.07 (27.1)	1.00 (25.4)	
-BSV1-F10M-4-	10 mm XINVAL	10 mm XINVAL	0.28 (7.1)	1.00	2.20 (55.8)	0.54 (13.7)	4.09 (103.8)	0.39 (10.0)	2.50 (63.5)	3.11 (79.0)	1.00 (25.4)	1.57 (39.8)	1.00 (25.4)	
-BSV1-F12M-5-	12 mm XINVAL	12 mm XINVAL	0.30 (7.6)	1.20	2.20 (55.8)	0.54 (13.7)	4.09 (103.8)	0.39 (10.0)	2.50 (63.5)	3.30 (83.8)	1.00 (25.4)	1.57 (39.8)	1.00 (25.4)	
-BSV1-TS4-2-	1/4" TS	1/4" TS	0.16 (4.1)	0.36	2.20 (55.8)	0.54 (13.7)	4.09 (103.8)	0.39 (10.0)	2.50 (63.5)	1.68 (42.7)	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)	
-BSV1-TS6-4-	3/8" TS	3/8" TS	0.28 (7.1)	1.00	2.20 (55.8)	0.54 (13.7)	4.09 (103.8)	0.39 (10.0)	2.50 (63.5)	2.27 (57.7)	1.00 (25.4)	1.51 (38.4)	1.00 (25.4)	
-BSV1-TS8-5-	1/2" TS	1/2" TS	0.30 (7.6)	1.20	2.20 (55.8)	0.54 (13.7)	4.09 (103.8)	0.39 (10.0)	2.50 (63.5)	2.27 (57.7)	1.00 (25.4)	1.25 (31.7)	1.00 (25.4)	
-BSV1-TB8-4-	1/2" TB	1/2" TB	0.28 (7.1)	1.00	2.20 (55.8)	0.54 (13.7)	4.09 (103.8)	0.39 (10.0)	2.50 (63.5)	2.27 (57.7)	1.00 (25.4)	1.51 (38.4)	1.00 (25.4)	
-BSV1-FMR4-2-	1/4" FMR	1/4" FMR	0.16 (4.1)	0.36	2.16 (54.8)	0.54 (13.7)	4.05 (102.8)	0.39 (10.0)	2.50 (63.5)	2.76 (70.1)	1.00 (25.4)	1.02 (25.8)	1.00 (25.4)	
-BSV1-FMR8-5-	1/2" FMR	1/2" FMR	0.30 (7.6)	1.20	2.20 (55.8)	0.54 (13.7)	4.09 (103.8)	0.39 (10.0)	2.50 (63.5)	3.12 (79.2)	1.00 (25.4)	1.25 (31.75)	1.00 (25.4)	
-BSV1-MR4-2-	1/4" MR	1/4" MR	0.16 (4.1)	0.36	2.16 (54.8)	0.54 (13.7)	4.05 (102.8)	0.39 (10.0)	2.50 (63.5)	2.24 (56.9)	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)	
-BSV1-MR8-5-	1/2" MR	1/2" MR	0.30 (7.6)	1.20	2.20 (55.8)	0.54 (13.7)	4.09 (103.8)	0.39 (10.0)	2.50 (63.5)	3.00 (76.2)	1.13 (28.7)	1.50 (38.1)	1.00 (25.4)	

1. XINVAL means XINVAL double ferrule tube fittings, FR means metal gasket seal fittings, TS means fractional tube socket weld, TB means fractional tube butt weld.
2. Dimensions are shown with XINVAL nuts finger-tightened. All dimensions are for reference only and are BSV2bject to change. For dimensions not shown above, please contact XINVAL Group or our authorized distributors.
3. Sizes and types listed are standard. Other sizes and types are available upon request. For special sizes and types, please contact XINVAL Group or our authorized distributors.

## Pneumatic Actuators



### Features

- Low actuation pressure
- Opens and closes quickly and reliably
- Rotatable port for normally closed actuators allows easy installation
- Normally open actuators black capped for identification

### Actuation Modes

- Normally closed—air opens, spring closes
- Normally open—air closes, spring opens

### Technical Data

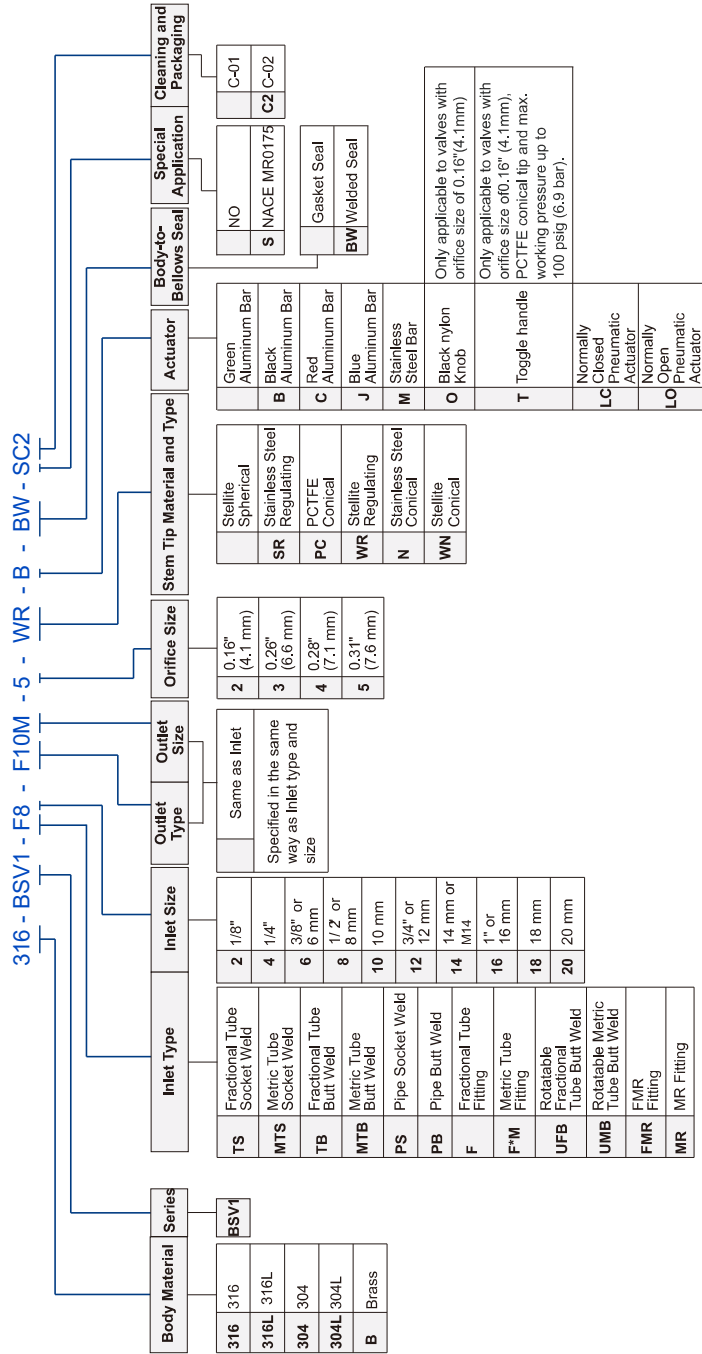
Actuator Type	Actuator Pressure Rating psig (bar)	Valve and Actuator Working Temperature °F (°C)	Valve Working Pressure psig (bar)
Normally Closed	65.3–79.8 (4.5–5.5)	-18–200 (-28–93)	145 (10.0)
Normally Open	72.5–87.0 (5.0–6.0)		500 (34.4)

### Materials of Construction

Component	Material
Housing	Anodized Aluminium
Stem Tip	PCTFE

For valve components, refer to "Standard Materials of Construction" on page B-127.

# Ordering Number Description



Note: "Ordering Number Description" is a reference to understand the combination rules of XINVAL product part number. Not all combinations are available.

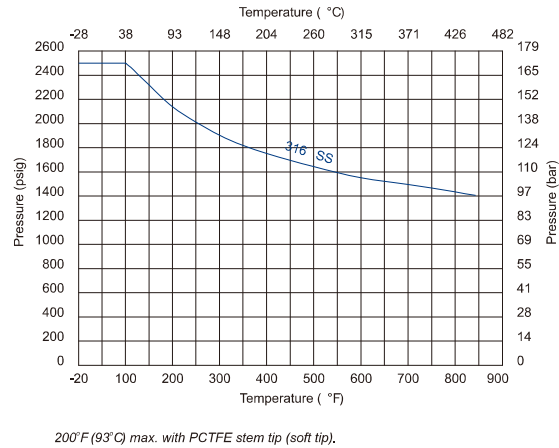
# Bellows-sealed Valves BSV2 Series

## Features

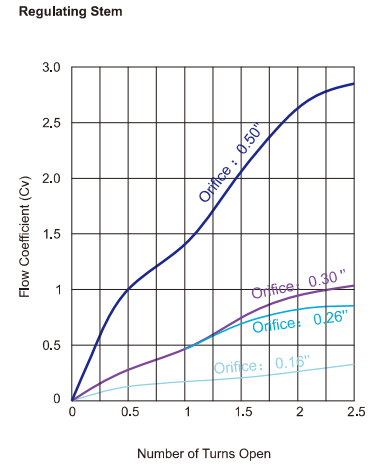
- Working pressure up to: 2500 psig (172 bar)
- Working temperature: -20°F to 842°F (-28°C to 450°C)
- Variety of end connections
- 316 body material
- Upper packing provides secondary containment system above the bellows
- Hydraulic-formed multilayer bellows for longer cycle life
- Nonrotating stem tip eliminates galling within the seat area
- Strictly controlled bellows stroke to improve safety and cycle life
- Replaceable bellows and stem tip assembly
- Regulating, conical, and spherical stem tips available
- Panel and bottom mounting available
- Double lock-pins enable steady and durable fastening of the handle
- Handle color options are available
- Every XINVAL bellows-sealed valve leak tested with helium at the seat, envelope and all seals (maximum allowable leak rate :  $4 \times 10^{-9}$  std cm<sup>3</sup>/s)



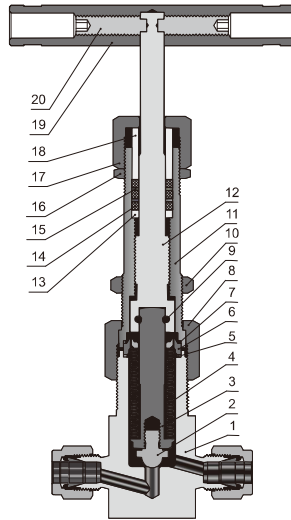
## Pressure vs. Temperature



## Flow Coefficient vs. Turns Open



## Standard Materials of Construction



Tip Types

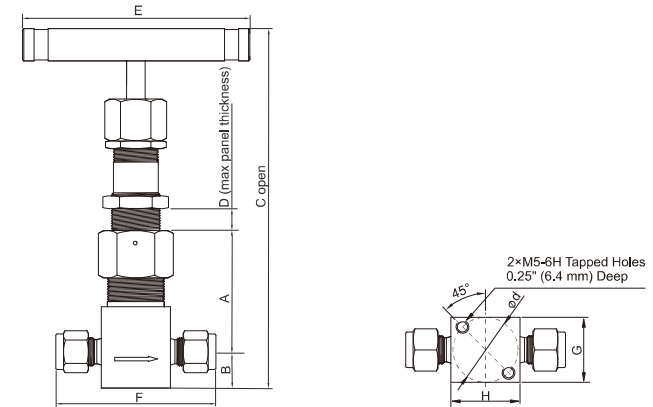


Component	Valve Body Material Grade/ASTM Specification	
	316 SS	
1 Body	316 SS/A182 or A479	
2 Stem Tip	Regulating	316 SS/A479 or Stellite
	Conical	PCTFE/D1430 or 316/A479 or Stellite
	Spherical	Stellite
3 Stem	316 SS/A479	
4 Bellows	316 SS/A240	
5 Gasket	Silver-plated 316 SS /A269	
6 Weld Ring	316 SS/A479	
7 Gasket	Silver-plated 316 SS/A269	
8 Bonnet Nut	316 SS/A479	
9 Pin	Stainless steel	
10 Panel Mount Nut	Stainless steel	
11 Bonnet	316 SS/A479	
12 Actuator	440C SS/A479	
13 Packing washer	316 SS/A479	
14 Packing	Graphite	
15 Packing washer	316 SS/A479	
16 Luck Nut	Stainless steel	
17 Packing Nut	316 SS/A479	
18 Gland	316 SS/A479	
19 Handle	6061/B210 /Stainless steel	
20 Set Screws	Galvanized carbon steel	

Contact XINVAL Group or our authorized distributors for valves of other materials.

## Dimensions

Orifice:  $\leq 0.30"$

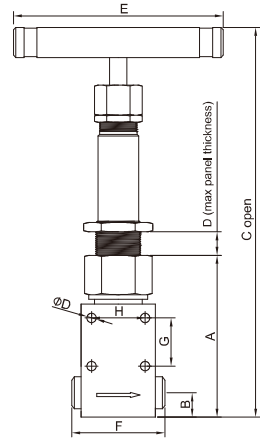


Basic Ordering Number	End Connections		Orifice in. (mm)	Cv	Dimensions, in. (mm)									
	Inlet Size	Outlet Size			A	B	C	D	E	F	G	H	$\alpha d$	
-BSV2-F4-2-	1/4" XINVAL	1/4" XINVAL	0.16 (4.10)	0.36	1.86 (47.3)	0.54 (14.2)	6.34 (161.0)	0.38 (9.7)	3.50 (88.9)	2.46 (62.5)	1.00 (25.4)	1.07 (27.2)	1.00 (25.4)	
-BSV2-F6-3-	3/8" XINVAL	3/8" XINVAL	0.26 (6.60)	0.85	1.94 (49.3)	0.50 (12.7)	6.36 (161.5)	0.38 (9.7)	3.50 (88.9)	3.09 (78.5)	1.13 (28.7)	1.57 (40.0)	1.13 (28.7)	
-BSV2-F8-5-	1/2" XINVAL	1/2" XINVAL	0.30 (7.60)	1.20	1.98 (50.3)	0.50 (12.7)	6.40 (162.5)	0.38 (9.7)	3.50 (88.9)	3.30 (83.8)	1.13 (28.7)	1.57 (40.0)	1.13 (28.7)	
-BSV2-F6M-2-	6 mm XINVAL	6 mm XINVAL	0.16 (4.10)	0.36	1.86 (47.3)	0.56 (14.2)	6.34 (161.0)	0.38 (9.7)	3.50 (88.9)	2.46 (62.5)	1.00 (25.4)	1.05 (26.6)	1.00 (25.4)	
-BSV2-F10M-4-	10 mm XINVAL	10 mm XINVAL	0.28 (7.10)	1.00	1.97 (50.1)	0.50 (12.7)	6.39 (162.3)	0.38 (9.7)	3.50 (88.9)	3.11 (79.0)	1.13 (28.7)	1.57 (40.0)	1.13 (28.7)	
-BSV2-F12M-4-	12 mm XINVAL	12 mm XINVAL	0.28 (7.10)	1.00	1.97 (50.1)	0.50 (12.7)	6.39 (162.3)	0.38 (9.7)	3.50 (88.9)	3.30 (83.8)	1.13 (28.7)	1.57 (40.0)	1.13 (28.7)	
-BSV2-TS4-2-	1/4" TS	1/4" TS	0.16 (4.10)	0.36	1.86 (47.3)	0.56 (14.2)	6.34 (161.0)	0.38 (9.7)	3.50 (88.9)	1.68 (42.7)	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)	
-BSV2-TS6-4-	3/8" TS	3/8" TS	0.28 (7.10)	1.00	1.97 (50.1)	0.50 (12.7)	6.39 (162.3)	0.38 (9.7)	3.50 (88.9)	2.27 (57.7)	1.13 (28.7)	1.52 (38.6)	1.13 (28.7)	
-BSV2-TS8-5-	1/2" TS	1/2" TS	0.30 (7.60)	1.20	1.98 (50.3)	0.50 (12.7)	6.40 (162.5)	0.38 (9.7)	3.50 (88.9)	2.27 (57.7)	1.13 (28.7)	1.52 (38.6)	1.13 (28.7)	
-BSV2-FMR4-2-	1/4" FMR	1/4" FMR	0.16 (4.10)	0.36	1.86 (47.3)	0.56 (14.2)	6.34 (161.0)	0.38 (9.7)	3.50 (88.9)	2.76 (70.1)	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)	
-BSV2-FMR8-5-	1/2" FMR	1/2" FMR	0.30 (7.60)	1.20	1.98 (50.3)	0.50 (12.7)	6.40 (162.5)	0.38 (9.7)	3.50 (88.9)	3.12 (79.2)	1.13 (28.7)	1.52 (38.6)	1.13 (28.7)	
-BSV2-MR4-2-	1/4" MR	1/4" MR	0.16 (4.10)	0.36	1.86 (47.3)	0.56 (14.2)	6.34 (161.0)	0.38 (9.7)	3.50 (88.9)	2.24 (56.9)	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)	
-BSV2-MR8-5-	1/2" MR	1/2" MR	0.30 (7.60)	1.20	1.98 (50.3)	0.50 (12.7)	6.40 (162.5)	0.38 (9.7)	3.50 (88.9)	3.00 (76.2)	1.13 (28.7)	1.52 (38.6)	1.13 (28.7)	

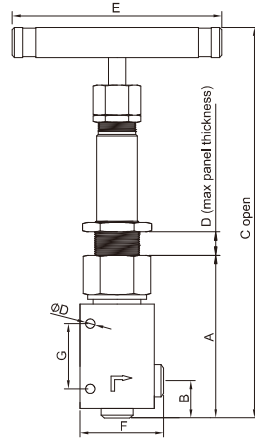
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- Dimensions are shown with XINVAL nuts finger-tightened. All dimensions are for reference only and are BSV2bject to change. For dimensions not shown above, please contact XINVAL Group or our authorized distributors.
- The sizes and types listed are standard. Other sizes and types are available upon request. For special sizes and types, refer to ordering information.

## Dimensions

Orifice: 0.50"



Orifice: 0.61"



Basic Ordering Number	End Connections		Orifice in. (mm)	CV	Dimensions, in. (mm)								
	Inlet Size	Outlet Size			A	B	C	D	E	F	G	H	Ød
-BSV2-TS12-8-	3/4" TS	3/4" TS	0.50 (12.7)	3.10	5.45 (138.5)	1.00 (25.4)	11.60 (295)	0.59 (14.9)	5.00 (127)	2.44 (62.0)	1.25 (31.8)	1.46 (37.0)	0.27 (6.9)
-BSV2-PB12-8-	3/4" PB	3/4" PB	0.50 (12.7)	3.10	5.45 (138.5)	1.00 (25.4)	11.60 (295)	0.59 (14.9)	5.00 (127)	2.44 (62.0)	1.25 (31.8)	1.46 (37.0)	0.27 (6.9)
-BSV2-TS12-8A-	3/4" TS	3/4" TS	0.61 (15.5)	5.30	5.45 (138.5)	1.44 (36.6)	11.60 (295)	0.59 (14.9)	5.00 (127)	2.49 (63.2)	1.60 (40.6)	—	0.27 (6.9)
-BSV2PB12-8A-	3/4" PB	3/4" PB	0.61 (15.5)	5.30	5.45 (138.5)	1.44 (36.6)	11.60 (295)	0.59 (14.9)	5.00 (127)	2.49 (63.2)	1.60 (40.6)	—	0.27 (6.9)
-BSV2-TB16-8A-	1" TB	1" TB	0.61 (15.5)	5.30	5.45 (138.5)	1.44 (36.6)	11.60 (295)	0.59 (14.9)	5.00 (127)	2.49 (63.2)	1.60 (40.6)	—	0.27 (6.9)

## Pneumatic Actuators



### Features

- ⦿ Low actuation pressure
- ⦿ Opens and closes quickly and reliably
- ⦿ Aluminum and stainless steel components

### Actuation Modes

- ⦿ Normally closed—air opens, spring closes
- ⦿ Normally open—air closes, spring opens

### Technical Data

Orifice	Working Temperature °F (°C)	Pressure Rating psig (bar)
≤ 0.30"	-20~200 (-28~93)	80~94 (5.5~6.5)
0.50"		87~116 (6~8)

For valve ratings, please refer to Pressure VS. Temperature on page B-119.

### Materials of Construction

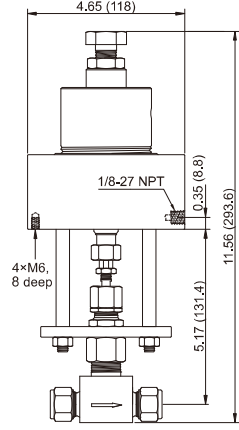
Component	Material
Housing	Anodized Aluminium
Stem Tip	Stellite
Bracket	Stainless Steel

For valve components, refer to "Standard Materials of Construction" on page B-120.

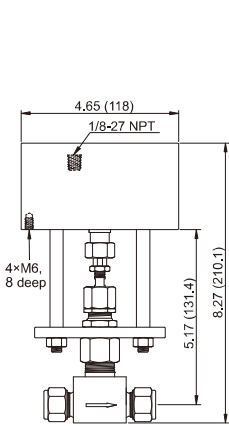
## Dimensions

Dimensions are for reference only and subject to change

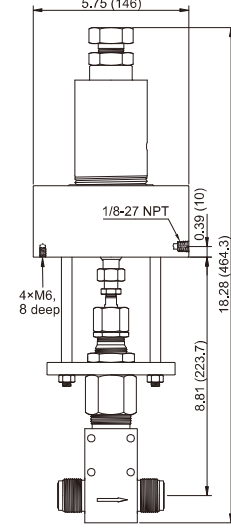
Normally closed, orifice  $\leq 0.30"$



Normally open, orifice  $\leq 0.30"$



Normally closed, orifice 0.50"



## Ordering Information

To order valves with pneumatic actuators, add - LC or -LO to the valve ordering number. LC designates normally closed models; LO designates normally open models.

-BSV2-2/3/4/5-LC/LO

-BSV2-8-LC

316-BSV2-F8-F10M-5-WR-B-BW-SC2

## Ordering Number Description

316 - BSV2 - F8 - F10M - 5 - WR - B - B - BW - SC2

Body Material Series	Inlet Type	Inlet Size	Outlet Type	Outlet Size	Orifice Size	Stem Tip Material and Type	Actuator	Body-to-Bellows Seal	Special Application	Cleaning and Packaging
316	Fractional Tube Socket Weld	2 1/8"		Same as Inlet Type and Size	2 0.16" (4.1 mm)	Stellite Spherical	Green Aluminum Bar		NO	C-01
316L	Metric Tube Socket Weld	4 1/4"		Specify in the same way as Inlet Type and Inlet Size	3 0.26" (6.60 mm)	Stainless Steel Regulating	Black Aluminum Bar	S NACE MR0175		C2 C-02
304	Fractional Tube Butt Weld	6 3/8" or 6 mm			4 0.28" (7.1 mm)	PCTFE Conical	Red Aluminum Bar	Gasket Seal		
304L	Metric Tube Butt Weld	8 1/2" or 8 mm			5 0.30" (7.6 mm)	Stellite Regulating	Blue Aluminum Bar	BW Welded Seal		
	Pipe Socket Weld	10 10 mm			8 0.50" (12.7 mm)	Stainless Steel Conical	Stainless Steel Bar			
	Pipe Butt Weld	12 3/4" or 12 mm			8A 0.61" (15.5 mm)	Stellite Conical	Normally Closed Pneumatic Actuator			
	Fractional Tube Fitting	14 1/4" or 14 mm								
	Metric Tube Fitting	16 1" or 16 mm								
	Metric Tube Fitting	18 18 mm								
	Nut+Gasket+ Fractional Bulge Nipple	20 1 1/4" or 20 mm or M20 x 1.5								
	Nut+Gasket+ Metric Bulge Nipple	22 22 mm or M22 x 1.5								
	FMR Fitting	25 25 mm								
	MR Fitting	27 M27 x 2								
	MR Fitting	28 28 mm								

Note: "Ordering Number Description" is a reference to understand the combination rules of XINVAL product part number. Not all combinations are available.