

Bellows-sealed Valves

SVH Series High Pressure Bellows-sealed Valves

Features

- ⦿ Packless valves with all-metal seal to atmosphere
- ⦿ Compact designed body with minimal dead space
- ⦿ 316L SS precision-formed bellows for long cycle life
- ⦿ PCTFE stem tip material with remarkable chemical and thermal resistance
- ⦿ Normally closed and normally open pneumatic actuator optional
- ⦿ Bottom mounting
- ⦿ Indicator switch available assembled on pneumatic valves, transmitting a signal to an electrical device to indicated either the open or closed position of the valves
- ⦿ Normally open and normally closed indicator switches optional

Technical Data

Ports Size	1/4" to 3/8" or 6 mm to 8 mm	
Flow Coefficient (Cv)	0.30	
Orifice Size	0.15 in. (3.8 mm)	
Max. Working Pressure	3500 psig (241 bar)	
Pneumatic Actuator Operating Pressure	60 to 90 psig (4.2 to 6.2 bar)	
Temperature	PCTFE: -40~150°F (-40~65°C) Vespel: -40~400°F (-40~204°C)	
Leak Rate (Helium)	Internal	≤4x10 ⁻⁹ mbar l/s
	External	≤4x10 ⁻⁹ mbar l/s

Flow Data

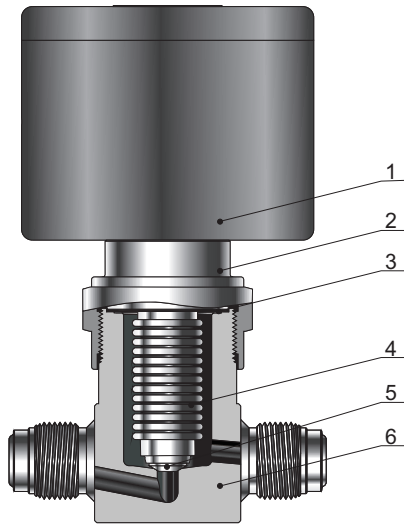
Air @ 70°F (21°C)
Water @ 60°F (16°C)

Pressure Drop to Atmosphere psi (bar)	Air (l/min)	Water (l/min)
10 (0.68)	96	3.6
50 (3.4)	250	7.9
100 (6.8)	450	11.0

Product Technology Grade

Product Grade Technology	General Purpose	Special Cleaning and Packaging (F2)	Ultra High Purity (F3)
Material/Specification	316 SS/ASTM A479 316L SS/ASTM A479		316L SS/ASTM A479
Wetted Surface Roughness	Ra 20 μin. (0.51 μm)		Ra 10 μin. (0.25 μm)
Polishing Process	Machine finished		Electropolished
Process Specification	FC-01 Standard Cleaning and Packaging	FC-02 Special Cleaning and Packaging	FC-03 Ultra High Purity Process Specification
Cleaning	Thrice degreasing ultrasonic cleaning	Special cleaning with non-ozone-depleting chemicals	Ultra high purity cleaning in continuously monitored ultrasonic cleaning system with deionized water
Assembly Environment	At atmosphere	In specially cleaned areas	In ISO Class 5/Federal Class 100 cleanroom
Packaging	Individually bagged	Double bagged	Double bagged and vacuum sealed in cleanroom

Major Materials of Construction



Normally Closed Model

Item	Component	Material/Specification
1	Pneumatic Actuator	Aluminum
2	Bonnet Nut	304 SS/ASTM A479
3	Gasket	PTFE-coated 316L SS/A240
4	Bellows	316L SS/ASTM A269
5	Seat	PCTFE/ASTM D1430 or Vsepel
6	Body	316 SS/ASTM A479 or 316L SS/ASTM A479

Pneumatic Actuators

- ⊙ Normally open, "N.O." marked on the top of the cylinder
- ⊙ Normally closed, "N.C." marked on the top of the cylinder



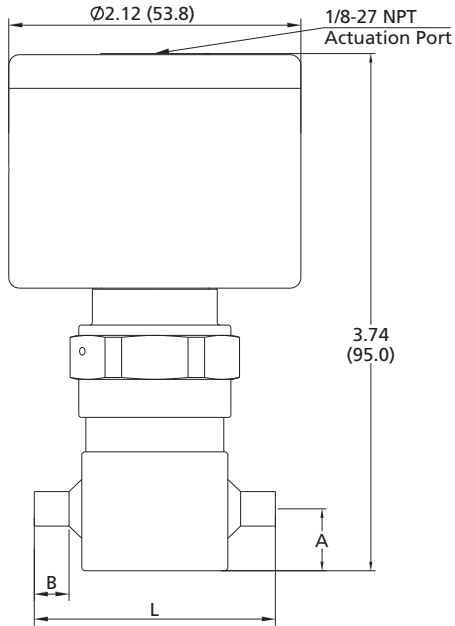
Dimensions and Ordering Information

Straight Type

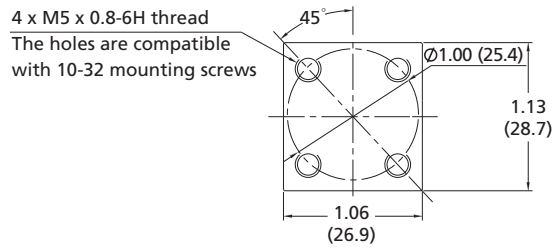
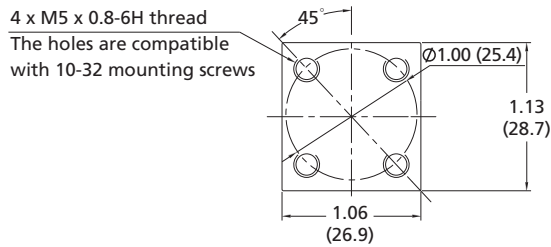
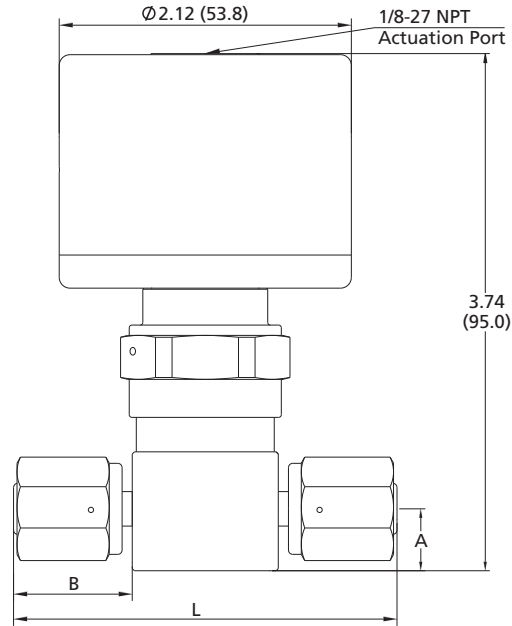
Dimensions

Dimensions, in inches (millimeters), are for reference only.

Normally Closed

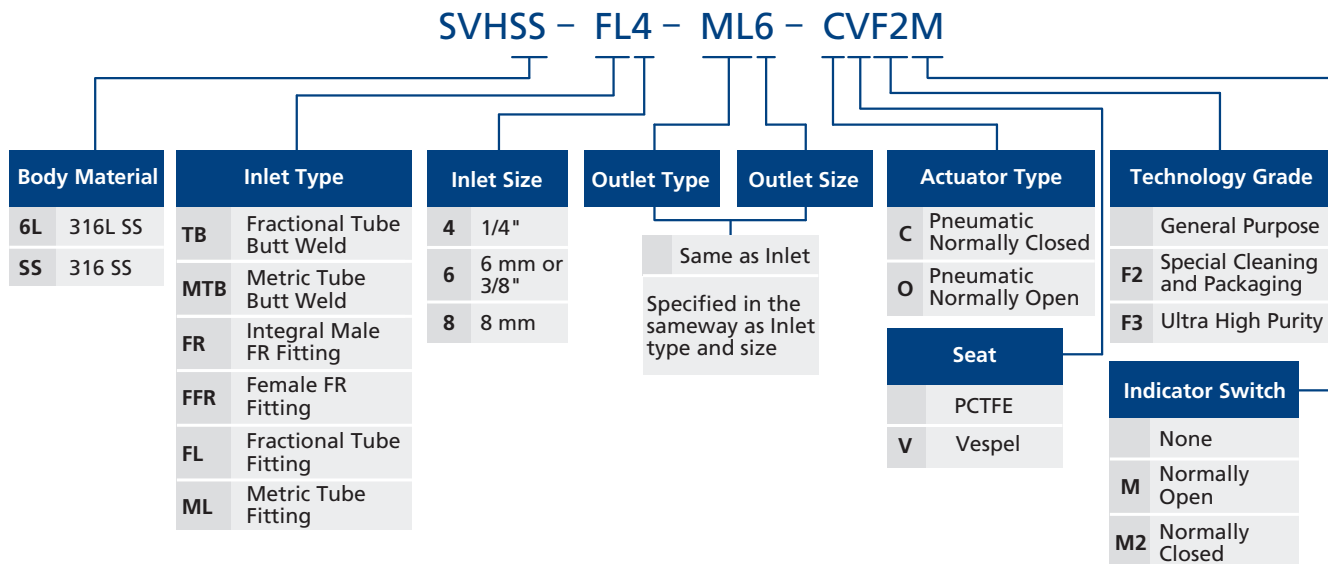


Normally Open



Basic Ordering Number	Connection Type and Size	Dimensions in. (mm)		
		A	B	L
SVH□□-TB4-	1/4" Tube Butt Weld	0.44 (11.2)	0.25 (6.4)	1.75 (44.4)
SVH□□-FFR4-	1/4" Female FR	0.44 (11.2)	0.85 (21.6)	2.76 (70.1)
SVH□□-FR4-	1/4" Integral Male FR	0.44 (11.2)	0.62 (15.7)	2.30 (58.4)
SVH□□-FL4-	1/4" FITOK Tube Fitting	0.44 (11.2)	0.70 (17.8)	2.46 (62.5)
SVH□□-FL6-	3/8" FITOK Tube Fitting	0.44 (11.2)	0.76 (19.3)	2.58 (65.5)
SVH□□-ML6-	6 mm FITOK Tube Fitting	0.44 (11.2)	0.70 (17.8)	2.46 (62.5)

Ordering Number Description

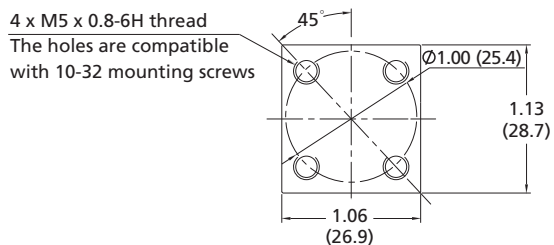
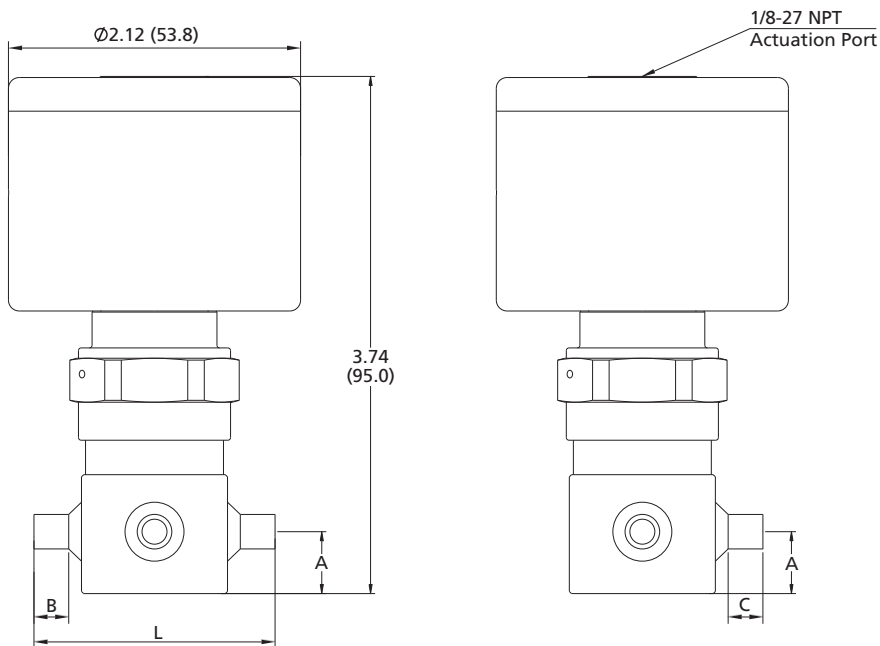


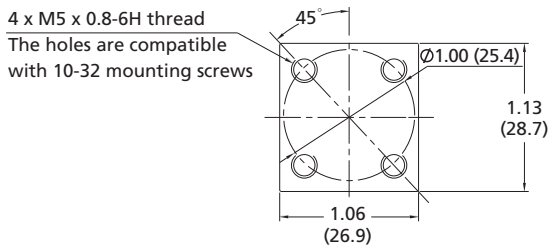
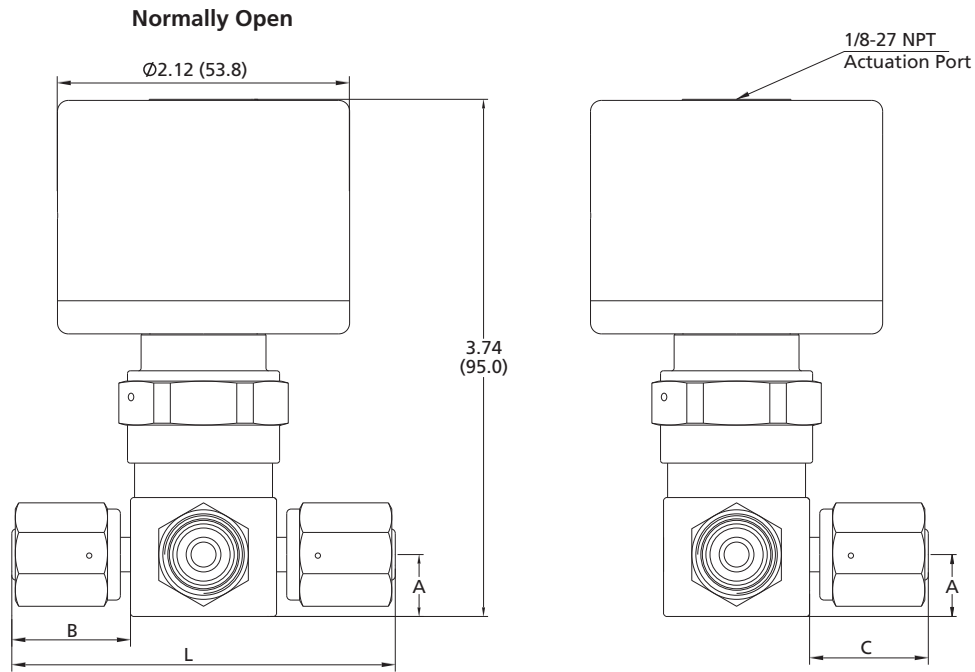
Branch Type

Dimensions

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Normally Closed

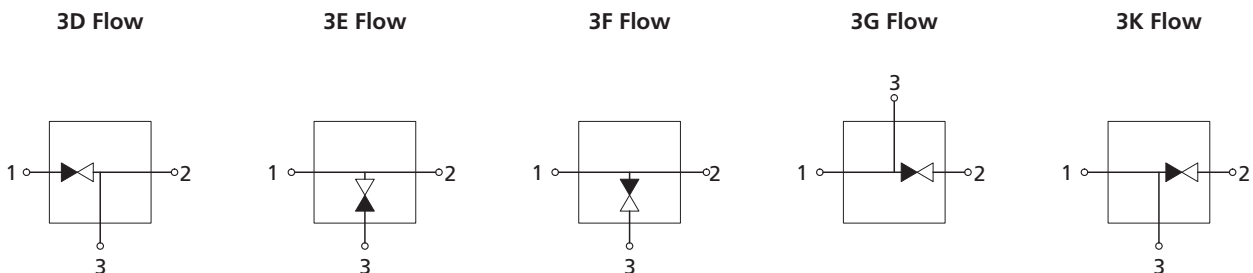




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Flow Paths

☉ Flow paths as viewed from the top



Ordering Number Description

SVHSS – TB4 – FR4 – FFR4 – 3G – CVF2M

