

SBV120H Ball Valves

One-piece Type

Features

- Simple design with one piece body
- Tight and smooth, low torque and easy operation
- One-piece ball stem
- Panel mountable
- Variety of End Connections
- Straight, Angle and 3-Way flow patterns
- Each and every valve is tested at the factory



Specifications

- Pressure rating : up to 3000psig (206bar)@70°F (21°C)
- Temperature rating : 50 to 150°F (10 to 65°C) with PTFE seat and packing
- Body material : 316 stainless steel and Brass
- Port Connections : 1/16" to 3/4" and 3mm to 12mm
- Orifice : 0.052 to 0.406 in. (1.3 to 10.3mm)

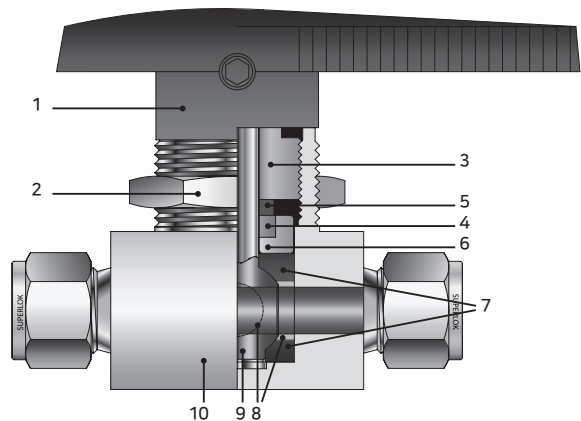
Testing

Each Valve is tested with nitrogen at 1000psig (69bar) to maximum allowable leak rate of 0.1 SCCM.

Packing Adjustment

- Valves are adjusted for factory testing at 1000psig (69bar).
- Packing must be readjusted for service at higher pressures.

Materials of Construction



No.	Component	Material Grade / ASTM Specification	
		Stainless Steel	Brass
1	Handle	Nylon	
	Set Screw	Stainless Steel	
2	Panel Nut	Stainless Steel	Brass
3	Packing Bolt	SS316 / A276	Brass / B16
*4	Packing	PTFE	
5	Upper Packing Gland	SS316 / A276	
6	Lower Packing Gland		
*7	Upper&Lower Ball Seat	PTFE	
*8	Side Disc	SS316 - Sintered	
	Side Ring		
*9	Ball Stem	SS316 / A276	
*10	Body	SS316 / A182	Brass / B16

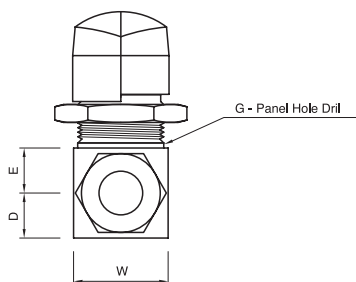
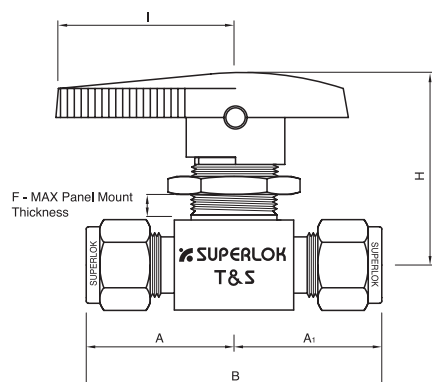
* Wetted components

Components can limit the pressure and temperature ranges of the valve. Please consult BMT (SUPERLOK) sales representative for your specific application.

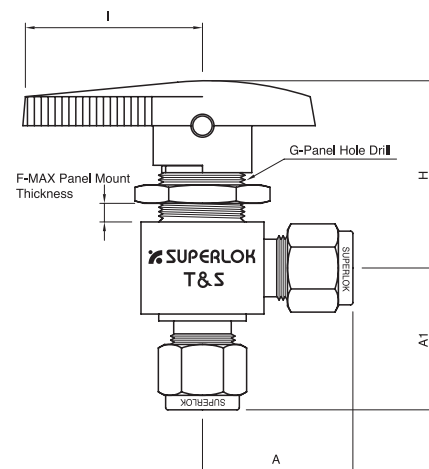
Table of Dimensions

2-Way (On-off Valve)

STRAIGHT TYPE



ANGLE TYPE



		Orifice	Cv	End Connections		Dimensions																
				Inlet	Outlet	A	A1	B	D	E	F	G	H	I	W							
SBV120 H1		1.3	0.1	1/16" SUPERLOK		21.3	21.3	42.6	8.7	8.7	6.4	15.0	36.0	29.0	17.4							
		2.4	0.2	3mm SUPERLOK		25.4	25.4	50.8														
			0.2	1/8" SUPERLOK																		
		3.2	0.5	1/8" FEMALE NPT		20.6	20.6	41.2														
			0.6	6mm SUPERLOK		27.7	27.7	55.4														
			0.6	1/4" SUPERLOK																		
SBV120 H2		4.8	1.2	1/8" FEMALE NPT		25.4	25.4	50.8	10.0	10.0	4.8	19.8	43.7	38.5	20.0							
			0.9	1/4" FEMALE NPT		26.2	26.2	52.4														
			0.9	1/4" ISO FEMALE																		
			1.2	1/4" MALE NPT		25.4	25.4	50.8														
			1.6	1/4" MALE NPT	1/4" SUPERLOK	25.4	30.2	55.6														
			1.4	6mm SUPERLOK		30.2	30.2	60.4														
			1.4	1/4" SUPERLOK																		
			1.5	8mm SUPERLOK		31.0	31.0	62.0														
			1.5	3/8" SUPERLOK		32.5	32.5	65.0														
SBV120 H3		7.1	3.0	1/4" FEMALE NPT		31.8	31.8	63.6	14.3	14.2	9.4	28.5	56.1	51.0	28.5							
			2.6	3/8" FEMALE NPT																		
			2.6	3/8" ISO FEMALE																		
			6.0	3/8" SUPERLOK		38.9	38.9	77.8														
			6.0	10mm SUPERLOK																		
SBV120 H4		10.3	6.3	1/2" FEMALE NPT		39.6	39.6	79.2	17.5	17.5	9.4	38.1	71.8	75.0	39.0							
			6.3	1/2" ISO FEMALE																		
			12.0	12mm SUPERLOK		50.0	50.0	100														
			12.0	1/2" SUPERLOK																		
			6.4	3/4" SUPERLOK																		

- Dimensions and Drawings are for reference only and are subject to change without prior notice.

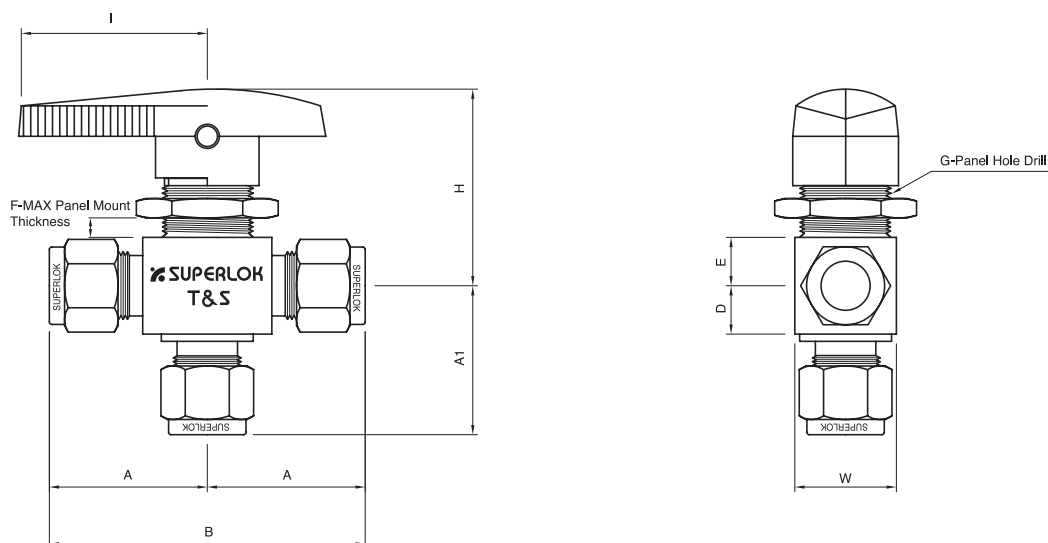
- Unless otherwise specified, all dimensions are in millimeters.

- Sizes, pressure classes, and end connections not listed are available upon request.

- Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

Table of Dimensions

3-Way (Switching Valve)



		Orifice	Cv	End Connections		Dimensions												
				Inlet	Outlet	A	A1	B	D	E	F	G	H	I	W			
SBV120 H13		1.3	0.08	1/16" SUPERLOK		21.3	20.6	42.6	8.7	8.7	6.4	15.0	36.0	29.0	17.4			
		2.4	0.15	3mm SUPERLOK		25.4	24.6	50.8										
			0.15	1/8" SUPERLOK		25.4	24.6	50.8										
		3.2	0.3	1/8" FEMALE NPT		20.6	20.6	41.2										
			0.35	6mm SUPERLOK		27.7	26.9	55.4										
			0.35	1/4" SUPERLOK		27.7	26.9	55.4										
SBV120 H23		4.8	0.75	1/4" FEMALE NPT		26.2	26.2	52.4	10.0	10.0	4.8	19.8	43.7	38.5	21			
				1/4" ISO FEMALE		26.2	26.2	52.4										
			0.8	1/4" MALE NPT	1/4" SUPERLOK	25.4	30.2	55.6										
			0.9	6mm SUPERLOK		30.2	30.2	60.4										
				1/4" SUPERLOK		30.2	30.2	60.4										
			0.8	8mm SUPERLOK		31.0	31.0	62.0										
SBV120 H33		7.1	1.7	1/4" FEMALE NPT		31.8	31.8	63.6	14.3	14.2	9.4	28.5	56.1	51.0	28.5			
			1.5	3/8" FEMALE NPT														
				3/8" ISO FEMALE														
			2.0	3/8" SUPERLOK		38.9	38.9	77.8										
				10mm SUPERLOK		38.9	38.9	77.8										
SBV120 H43		10.3	3.5	1/2" FEMALE NPT		39.6	39.6	79.2	17.5	17.5	9.4	38.1	71.8	75.0	38.1			
				1/2" ISO FEMALE														
			4.6	12mm SUPERLOK		50.0	50.0	100										
				1/2" SUPERLOK														
			3.8	3/4" SUPERLOK		50.0	50.0	100										

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- Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

Pressure Rating

Valve	2-Way Straight Pattern psig (bar)	2-Way Angle Pattern psig (bar)	3-Way Switching psig (bar)
SBV120H1	2500 (172)	2500 (172)	2500 (172)
SBV120H2	3000 (206)	2500 (172)	2500 (172)
SBV120H3	2500 (172)	1500 (103)	1500 (103)
SBV120H4	2500 (172)	1500 (103)	1500 (103)

Flow Data at 70°F (21°C)

Straight Type

Cv	Pressure Drop to Atmosphere (Δp), psi					
	10	50	100	10	50	100
	Air Flow, SCFM			Water Flow, US GPM		
0.50	6.9	19.1	33.9	1.6	3.5	5.0
0.60	8.3	23.0	40.7	1.9	4.2	6.0
0.90	12.0	34.0	61.0	2.8	6.4	9.0
1.2	17.0	46.0	81.0	3.8	8.5	12.0
1.5	21.0	57.0	100.0	4.7	11.0	15.0
1.6	22.0	61.0	110.0	5.0	11.0	16.0
2.4	33.0	92.0	160.0	7.6	17.0	24.0
2.6	36.0	99.5	176.0	8.2	18.0	26.0
3.0	41.5	115.0	203.0	9.5	21.0	30.0
6.0	83.0	230.0	407.0	19.0	42.0	60.0
6.3	87.2	241.0	427.0	19.9	44.5	63.0
6.4	88.6	245.0	434.0	20.2	45.3	64.0
12	166.0	459.0	814.0	38.0	85.0	120.0

Angle Type & 3-Way

Cv	Pressure Drop to Atmosphere (Δp), psi					
	10	50	100	10	50	100
	Air Flow, SCFM			Water Flow, US GPM		
0.30	4.2	11.5	20.3	0.9	2.1	3.0
0.35	4.8	13.4	23.7	1.1	2.4	3.5
0.75	10.0	29.0	51.0	2.3	5.3	7.5
0.80	11.0	31.0	54.0	2.5	5.6	8.0
0.90	12.0	34.0	61.0	2.8	6.3	9.0
1.5	20.6	57.4	102.0	4.7	11.0	15.0
1.7	23.5	65.0	115.0	5.3	12.0	17.0
20.	27.7	76.5	136.0	6.3	14.0	20.0
3.5	48.4	134.0	237.0	11.0	25.0	35.0
3.8	52.6	145.0	258.0	12.0	27.0	38.0
4.6	63.7	176.0	312.0	15.0	33.0	46.0

