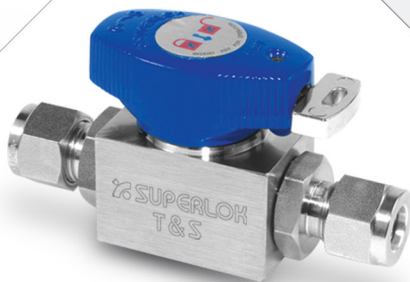
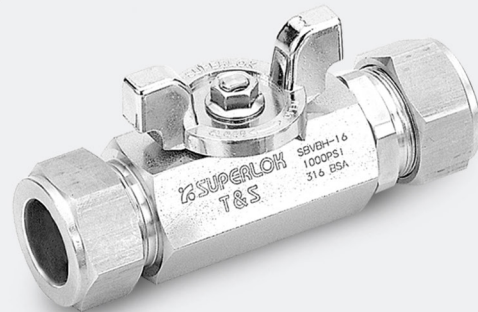


Instrumentation Ball Valves

- SBV210H, SBV120H(-LT), SBV210, SBVH360 Series
- Key Operation Ball Valves (SBVL210 / SBVL360 Series)



Contents

03	SBV120H Series
07	SBV120H-LT Series
10	SBV210 Series
13	SBVH360 Series
16	Key Operation Ball Valves (SBVL210 Series, SBVL360 Series)

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)

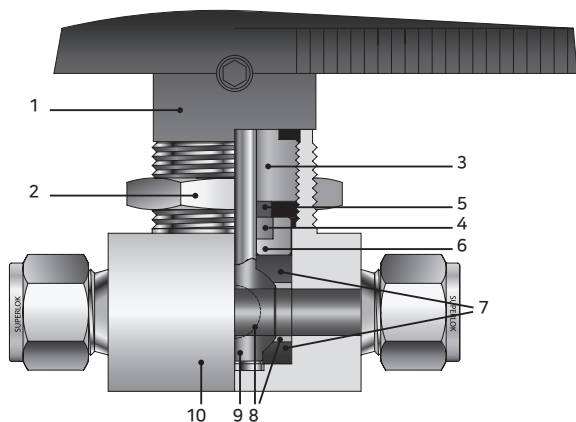
Testing

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



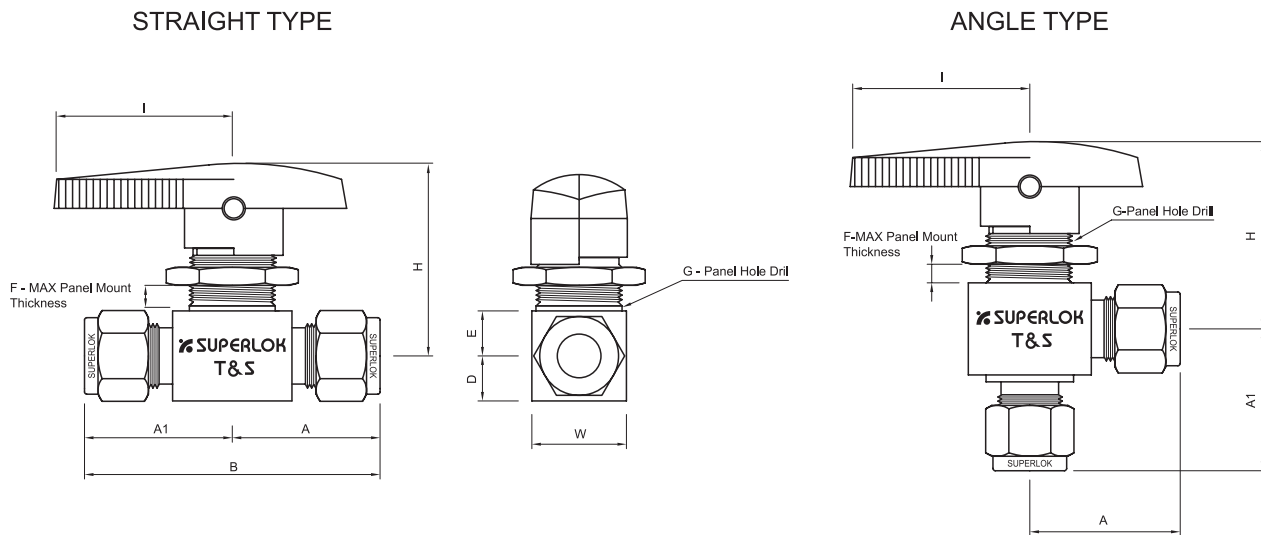
No.	Component	Material Grade / ASTM Specification	
		Stainless Steel	Brass
1	Handle	Nylon	
	Set Screw	Stainless Steel	
2	Panel Nut	Stainless Steel	Brass
3	Packing Bolt	SS316 / A276	Brass / B16
*4	Packing	PTFE	
5	Upper Packing Gland	SS316 / A276	
6	Lower Packing Gland		
*7	Upper&Lower Ball Seat	PTFE	
*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)

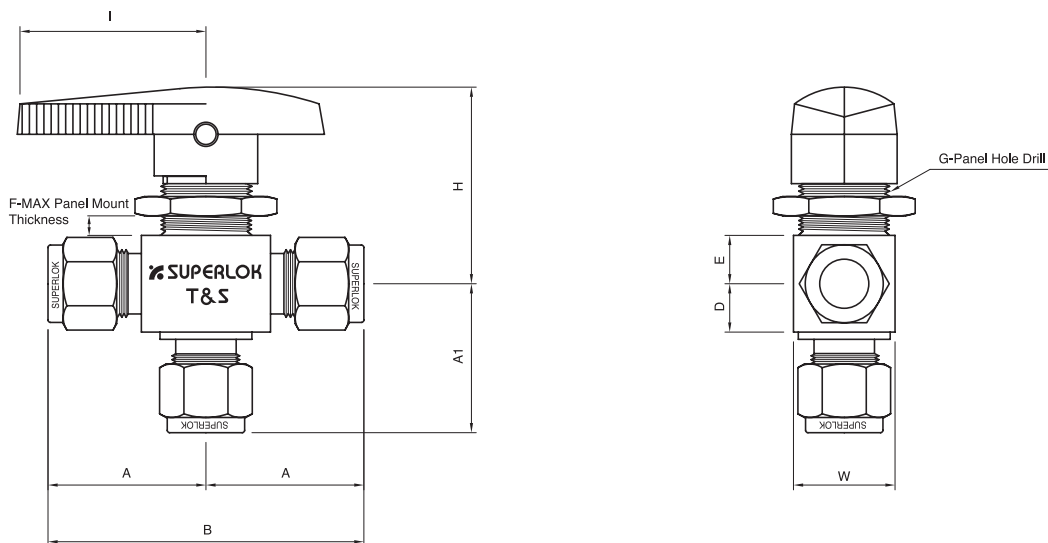


Part No.	Orifice	Cv	End Connections		Dimensions										
			Inlet	Outlet	A1	A	B	D	E	F	G	H	I	W	
SBV120 H1	S1	1.3	0.1	1/16" SUPERLOK		21.3	21.3	42.6	8.7	8.7	6.4	15.0	36.0	29.0	17.4
	S3M	2.4	0.2	3mm SUPERLOK		25.4	25.4	50.8							
	S2		0.2	1/8" SUPERLOK		20.6	20.6	41.2							
	F2N	3.2	0.5	1/8" FEMALE NPT		20.6	20.6	41.2							
	S6M		0.6	6mm SUPERLOK		27.7	27.7	55.4							
	S4		0.6	1/4" SUPERLOK		27.7	27.7	55.4							
F4N	0.9		1/4" FEMALE NPT		26.2	26.2	52.4								
SBV120 H2	F4R	4.8	0.9	1/4" FEMALE PT		26.2	26.2	52.4	10.0	10.0	4.8	19.8	43.7	38.5	20.0
	M4N		1.2	1/4" MALE NPT		25.4	25.4	50.8							
	S4-M4N		1.6	1/4" SUPERLOK	1/4" MALE NPT	25.4	30.2	55.6							
	S6M		1.4	6mm SUPERLOK		30.2	30.2	60.4							
	S4		1.4	1/4" SUPERLOK		30.2	30.2	60.4							
	S8M		1.5	8mm SUPERLOK		31.0	31.0	62.0							
	S6		1.5	3/8" SUPERLOK		32.5	32.5	65.0							
	F4N		7.1	3.0	1/4" FEMALE NPT		31.8	31.8							
F6N	2.6	3/8" FEMALE NPT													
F6R	2.6	3/8" FEMALE PT													
S6	6.0	3/8" SUPERLOK													
S10M	6.0	10mm SUPERLOK													
SBV120 H4	F8N	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
	F8R		6.3	1/2" FEMALE PT											
	S12M		12.0	12mm SUPERLOK											
	S8		12.0	1/2" SUPERLOK											
	S12		6.4	3/4" SUPERLOK											

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- 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)



Part No.	Orifice	Cv	End Connections		Dimensions										
			Inlet	Outlet	A	A1	B	D	E	F	G	H	I	W	
SBV120 H13	S1	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
	S3M	2.4	0.15	3mm SUPERLOK		25.4	24.6	50.8							
	S2		0.15	1/8" SUPERLOK		20.6	20.6	41.2							
	F2N	3.2	0.3	1/8" FEMALE NPT		27.7	26.9	55.4							
	S6M		0.35	6mm SUPERLOK		26.2	26.2	52.4							
	S4		0.35	1/4" SUPERLOK		25.4	30.2	55.6							
SBV120 H23	F4N	4.8	0.75	1/4" FEMALE NPT		25.4	30.2	55.6	10.0	10.0	4.8	19.8	43.7	38.5	21
	F4R			1/4" ISO FEMALE											
	M4N-S4	0.8	1/4" MALE NPT	1/4" SUPERLOK	30.2	30.2	60.4								
	S6M	0.8	6mm SUPERLOK		31.0	31.0	62.0								
	S4		1/4" SUPERLOK												
	S8M		8mm SUPERLOK												
SBV120 H33	F4N	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
	F6N		1.5	3/8" FEMALE NPT											
	F6R			3/8" ISO FEMALE											
	S6		2.0	3/8" SUPERLOK											
	S10M			10mm SUPERLOK											
SBV120 H43	F8N	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
	F8R			1/2" ISO FEMALE											
	S12M		4.6	12mm SUPERLOK											
	S8			1/2" SUPERLOK											
	S12			3.8	3/4" SUPERLOK										

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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 Atmospher (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 Atmospher (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

Ordering Information

Example : **SBV120H1 A - S 6M - B**

1
2
3
4
5

1. Valve Series

- SBVH120H1
- SBVH120H2
- SBVH120H3
- SBVH120H4

2. Pattern

- (Blank) = 2-Way Straight (Standard)
- A = 2-Way Angle
- 3 = 3-Way

3. End Connection Type

- S = SUPERLOK Tube Fitting
- F = Female Thread
- M = Male Thread

4. End Connection Size

Tube O.D Designator

Tube OD (inch)	1/16	1/8	1/4	3/8	1/2	3/4
Designator	1	2	4	6	8	12
Tube OD (mm)	3	6	8	10	12	
Designator	3M	6M	8M	10M	12M	

Pipe Thread Designator

Size(inch)	1/8	1/4	3/8	1/2
Screwed NPT	2N	4N	6N	8N
Screwed BSPT	2R	4R	6R	8R

5. Material

- SS(Blank) = 316 Stainless Steel
- B = BRASS

※ For special sizes and configurations, please consult BMT (SUPERLOK) sales representative.

SBV120H-LT Ball Valves

One-piece Type for Low-temperature Service

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
- Temperatures from -65 to 180°F (-53 to 82°C)



Specifications

- Pressure rating : 3000psig (206bar)@70°F(21°C)
- Temperature rating : -65 to 180°F (-53 to 82°C)
- Body material : 316 stainless steel
- Port Connections : 1/4" to 1/2"
- Orifice : 0.189 in. (4.8 mm)

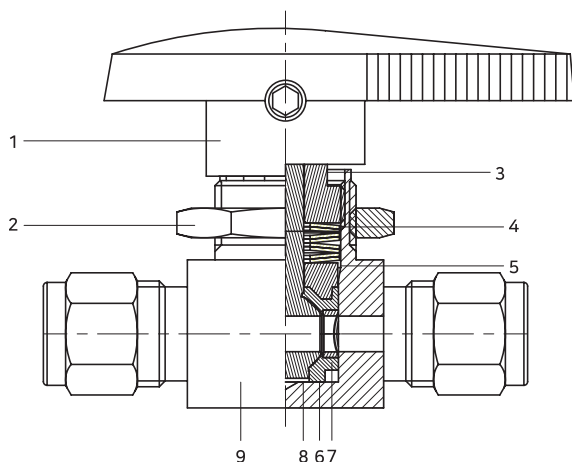
Testing

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).
- A packing must be readjusted for service at higher pressure than test pressure
- A packing adjustment may be required periodically to increase service life and to prevent leakage.
- Valves that have not been cycled for a period of time may have a higher initial actuation torque.

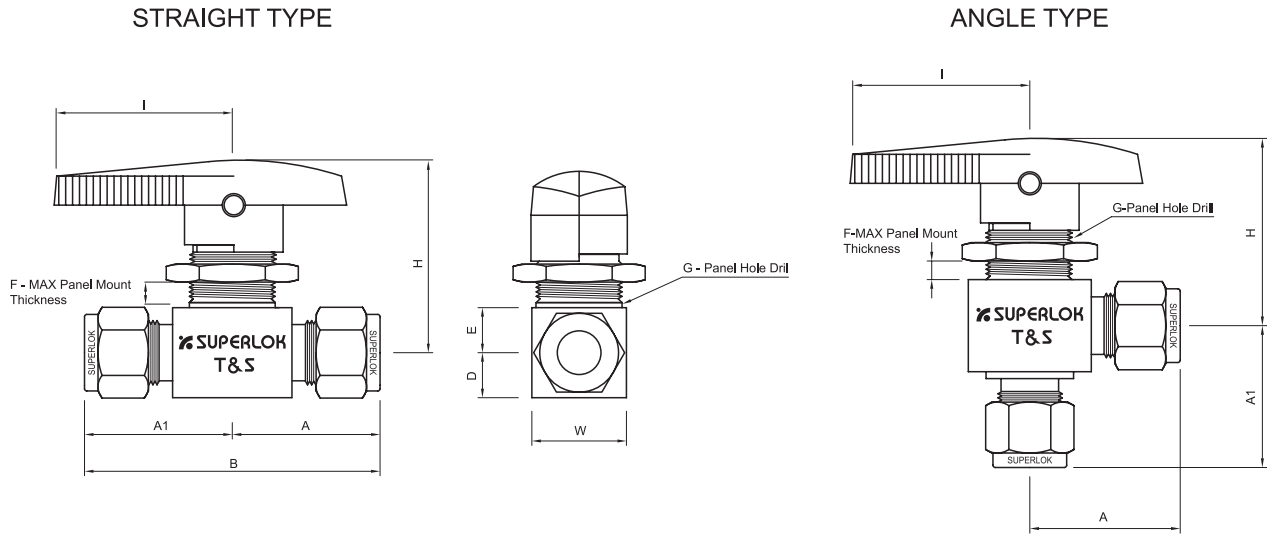
Materials of Construction



No.	Component	Material Grade / ASTM Specification
1	Handle	Nylon
	Set Screw	Stainless Steel
2	Panel Nut	Stainless Steel
3	Packing Bolt	SS316/A276
4	Disc Spring	INCONEL/X-750
5	Gland	SS316/A276
6	Integral Ball Seat	PFA
7	Side Disc	SS316 - Sintered
	Side Ring	SS316 - Sintered
8	Ball Stem	SS316/A276
9	Body	SS316/A182

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

Table of Dimensions



Part No.	Orifice	Cv	End Connections		Dimensions										
			Inlet	Outlet	A	A1	B	D	E	F	G	H	I	W	
SBV120H	S4	LT	4.8	1.4	1/4" SUPERLOK	30.35	30.35	60.70	10.0	10.0	4.8	19.8	38.5	40.9	20.0
	S6				3/8" SUPERLOK	32.70	32.70	65.40							
	S8				1/2" SUPERLOK	35.35	35.35	70.70							
	S6M				6mm SUPERLOK	30.45	30.45	60.90							
	S8M				8mm SUPERLOK	31.70	31.70	63.40							
	F2N				1/8" FEMALE NPT	25.40	25.40	50.80							
	F2R				1/2" FEMALE PT	25.40	25.40	50.80							
	F4N				1/4" FEMALE NPT	25.65	25.65	51.30							
	F4R				1/4" FEMALE PT	25.65	25.65	51.30							
	F4G				1/4" FEMALE PF	25.65	25.65	51.30							
	M4N				1/4" MALE NPT	25.40	25.40	50.80							
	M4R				1/4" MALE PT	25.40	25.40	50.80							

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- Sizes, pressure classes, and end connections not listed are available upon request.
- Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

Flow Data at 70°F (21°C)

Cv	Pressure Drop to Atmospher (Δp), psi					
	10	50	100	10	50	100
	Air Flow, SCFM			Water Flow, US GPM		
1.5	21.0	57.0	100.0	4.7	11.0	15.0

Ordering Information

Example : **SBV120H - S6 - LT**
— —
1 2

1. End Connection Type

- S** = SUPERLOK Tube Fitting
- F** = Female Thread
- M** = Male Thread

2. End Connection Size

Tube O.D Designator

Tube OD (inch)	1/4	3/8	1/2
Designator	4	6	8
Tube OD (mm)	6	8	
Designator	6M	8M	

Pipe Thread Designator

Size (inch)	1/8	1/4
Screwed NPT	2N	4N
Screwed BSPT	2R	4R
Screwed PF	-	4G

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SBV210 Ball Valves

Two-piece Type

Features

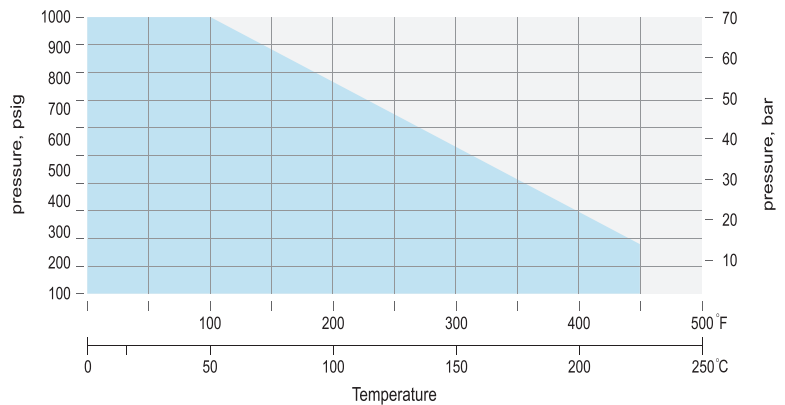
- Compact design
- Tight and smooth, low torque and easy operation
- Butterfly and lever handle available
- Variety of End Connections
- Each and every valve is tested at the factory



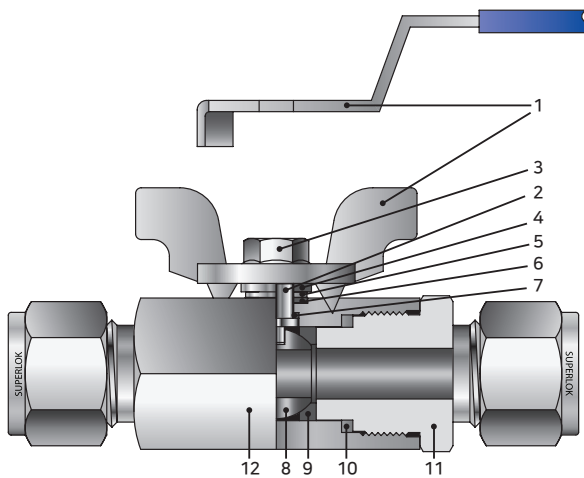
Specifications

- Pressure rating : 1000psig (69bar)@70°F (21°C)
- Temperature rating : 32°F to 445°F (0°C to 232°C)
- Body material : 316 stainless steel and Brass
- Port connections : 1/4 to 1 in. and 6 to 25mm
- Orifice : 5.0 to 16.0mm

Pressure-Temperature Ratings



Materials of Construction



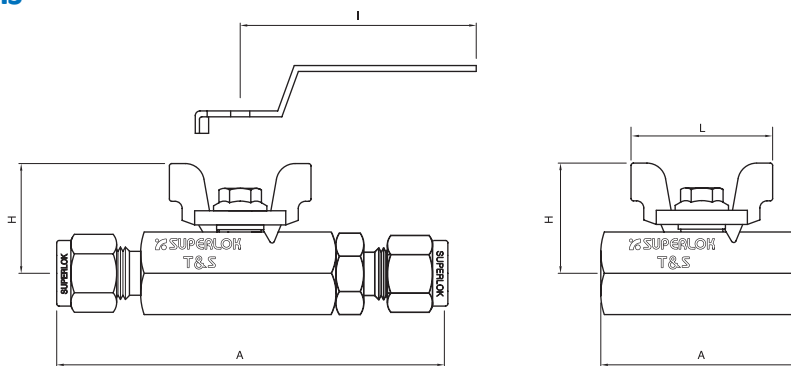
No.	Component	Material Grade / ASTM Specification	
		Stainless Steel	Brass
1	Handle	SS304 Lever handle with PVC color coated Zinc butterfly handle with nickel plated	
2*	Stem	SS316 / A276	
3	Lock Nut	Stainless Steel	
4	Upper Stem Washer	SS304 / A276	
5	Lower Stem Washer		
6	Upper Stem Seal	PTFE	
7	Lower Stem Seal		
*8	Ball	SS316 / A276	
*9	Seat	PTFE	
10	Connector Seal		
*11	End Connector	SS316 / A276	Brass / B16
	Insert(for Female Thread)	SS316 / A276	
*12	Body	SS316 / A276	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.

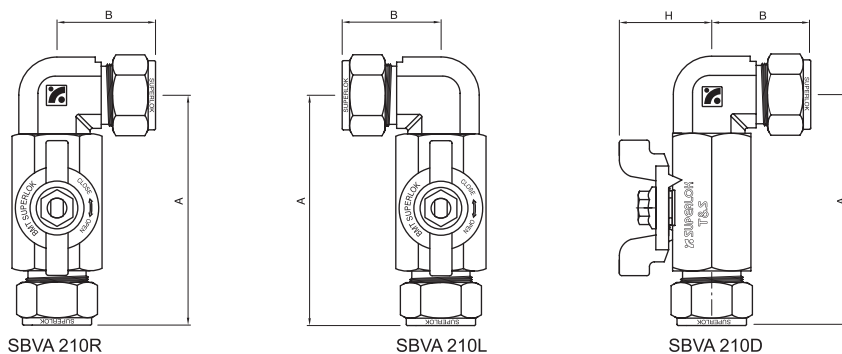
Table of Dimensions

SBV210 Series



Part No.	Orifice	Cv	End Connections	Dimensions				
				A	H	I	L	
SBV210	S6M	5.0	1.25	6mm SUPERLOK	79.8	23.0	60.0	30.0
	S4		1.25	1/4" SUPERLOK	79.8			
	F4N		1.4	1/4" FEMALE NPT	42.8			
	S10M	7.5	2.6	10mm SUPERLOK	91.5	31.0	90.0	48.0
	S6		2.5	3/8" SUPERLOK	91.5			
	F6N		2.6	3/8" FEMALE NPT	46.6			
	S12M	9.0	9.5	12mm SUPERLOK	101.4	34.0	90.0	50.0
	S8		9.5	1/2" SUPERLOK	101.4			
	F8N		9.5	1/2" FEMALE NPT	55.0			
	S16M	12.5	10.6	16mm SUPERLOK	107.6	39.0	100.0	55.0
	S18M		10.6	18mm SUPERLOK	107.8			
	S10		10.6	5/8" SUPERLOK	107.0			
	S12	12.7	3/4" SUPERLOK	107.0				
	F12N	12.7	3/4" FEMALE NPT	61.3				
	S20M	16.0	17.5	20mm SUPERLOK	124.0	45.0	100.0	68.0
	S22M		17.5	22mm SUPERLOK	124.0			
S25M	17.5		25mm SUPERLOK	132.0				
S16	17.5		1" SUPERLOK	131.0				
F16N	17.5		1" FEMALE NPT	76.0				

SBVA210 Series

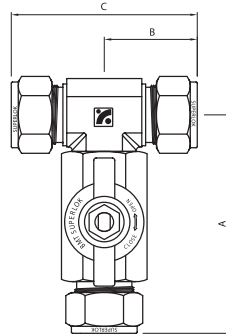


Part No.	Orifice	End Connections	Dimensions			
			A	B	H	
SBVA210	S4	5.0	1/4" SUPERLOK	65.3	30.5	23.0
	S6	7.5	3/8" SUPERLOK	77.5	36.1	31.0
	S8	9.0	1/2" SUPERLOK	87.9	38.1	34.0
	S12	12.5	3/4" SUPERLOK	93.8	39.9	39.0
	S16	16.0	1" SUPERLOK	115.3	49.0	45.0

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

Table of Dimensions

SBVT210 Series



Part No.	Orifice	End Connections	Dimensions			
			A	B	C	
SBVT210	S4	5.0	1/4" SUPERLOK	65.3	30.5	61.0
	S6	7.5	3/8" SUPERLOK	77.5	36.1	72.2
	S8	9.0	1/2" SUPERLOK	87.9	38.1	76.2
	S12	12.5	3/4" SUPERLOK	93.8	39.9	79.8
	S16	16.0	1" SUPERLOK	115.3	49.0	98.0

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

Ordering Information

Example : **SBV210 - S 8 - PE - BH - B**

1
2
3
4
5
6

1. Valve Series

- SBV210
- SBVA210
- SBVT210

2. End Connection

- S = SUPERLOK Tube Fitting
- F = Female Thread
- M = Male Thread

3. End Connection Size

Tube O.D Designator

Tube O.D (inch)	1/4	3/8	1/2	3/4	1			
Designator	4	6	8	12	16			
Tube O.D (mm)	6	10	12	16	18	20	22	25
Designator	6M	10M	12M	16M	18M	20M	22M	25M

Pipe Thread Designator

Size(inch)	1/4	3/8	1/2	3/4	1
Screwed NPT	4N	6N	8N	12N	16N
Screwed BSPT	4R	6R	8R	12R	12R

4. Seat Material

- (Blank) = PTFE
- PE = PEEK

5. Handle

- (Blank) = Butterfly Handle (Standard)
- BH = Bar Handle
- INS = Insulation Handle

6. Seat Material

- (Blank) = 316 Stainless Steel
- B = BRASS

※ For special sizes and configurations, please consult BMT (SUPERLOK) sales representative.

SBVH360 Ball Valves

Three-piece High-pressure Type

Features

- Compact design
- High flow rate with maximum orifice
- Variety of End Connections
- Anti blow-out stem design
- Each and every valve is tested at the factory
- Fire safety design available



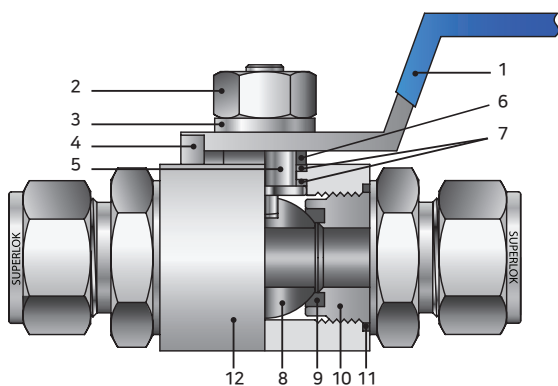
Specifications

- Pressure rating : up to 6000psig (414bar)@70°F (21°C)
- Temperature rating : -22 to 300°F (-30 to 150°C) with PCTFE seat
-65 to 500°F (-54 to 260°C) with PEEK seat
- Body material : 316 stainless steel and Brass
- Port Connections : 1/4 to 1 in. and 6 to 25mm
- Orifice : 10.0 to 19.0mm

Testing

- Each Valve is tested with nitrogen at 1000psig(69bar) to maximum allowable leak rate of 0.1 SCCM.
- Hydrostatic shell test is performed at 1.5 times of the working pressure (Optional).

Materials of Construction



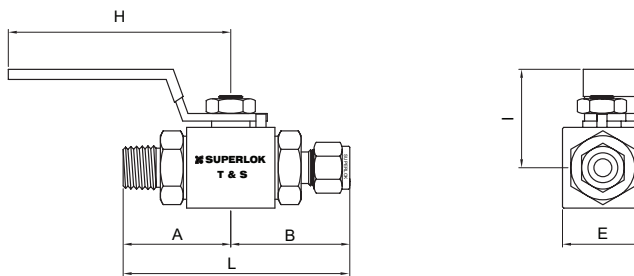
No.	Component	Material Grade / ASTM Specification
		Stainless Steel
1	Handle	SS304 Lever handle with PVC color coated
2	Lock Nut	Stainless Steel
3	Spring Washer	
4	Pin	
*5	Stem	SS316 / A276
6	Stem Washer	SS304 / A276
*7	Stem Packing	PTFE
*8	Ball	SS316 / A276
*9	Seat	PCTFE (Standard)
*10	End Connector	SS316 / A276
*11	Connector Seal	PTFE
*12	Body	SS316 / A276

※ 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

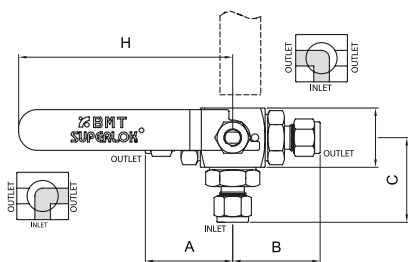
SBVH360 Series(2-Way)



Part No.	Orifice	Cv	End Connections	Dimensions								
				A	B	L	H	I	E			
SBVH3601	S4	1.2	1/4" SUPERLOK	45.7	45.7	91.4	115	38.5	32.0			
	S6	3.7	3/8" SUPERLOK	47.5	47.5	94.4						
	S8	7.5	1/2" SUPERLOK	49.8	49.8	99.6						
	F4N		1/4" FEMALE NPT	37.0	37.0	74.0						
	F6N		3/8" FEMALE NPT	38.0	38.0	76.0						
	F8N	1/2" FEMALE NPT	41.5	41.5	83.0							
	M4N	3.7	1/4" MALE NPT	42.1	42.1	84.2						
	M6N	7.2	3/8" MALE NPT	42.1	42.1	84.2						
M8N	7.5	1/2" MALE NPT	47.0	47.0	94.0							
SBVH3602	F8N	10.0	1/2" FEMALE NPT	45.5	45.5	91.0	165	51.9	40.0			
	F12N		3/4" FEMALE NPT	51.0	51.0	102.0						
	M12N		3/4" MALE NPT	52.5	52.5	105.0						
	S10		5/8" SUPERLOK	54.0	54.0	108.0						
	S12		3/4" SUPERLOK	54.0	54.0	108.0						
SBVH3603	F12N	19.0	3/4" FEMALE NPT	54.0	54.0	108.0	165	57.0	50.0			
	F16N		1" FEMALE NPT	62.5	62.5	125.0						
	S12		3/4" SUPERLOK	61.9	61.9	123.8						
	S16		1" SUPERLOK	66.4	66.4	132.8						
	M12N		3/4" MALE NPT	59.0	59.0	118.0						
	M16N		1" MALE NPT	63.8	63.8	127.6						

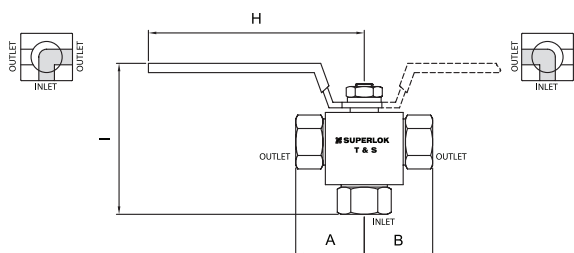
SBVH360-3S Series (3-Way)

Side Inlet Port



SBVH360-3 Series (3-Way)

Bottom Inlet Port



Part No.	Orifice	End Connections	Dimensions					
			A	B	I	H	C	
SBVH36013 & SBVH36013S	S4	1/4" SUPERLOK	45.7	45.7	91.4	115	38.5	53.3
	S6	3/8" SUPERLOK	47.2	47.2	94.4			54.8
	S8	1/2" SUPERLOK	49.8	49.8	99.6			54.0
	F4N	1/4" FEMALE NPT	37.0	37.0	74.0			36.5
	F6N	3/8" FEMALE NPT	38.0	38.0	76.0			40.0
	F8N	1/2" FEMALE NPT	41.5	41.5	83.0			44.0
SBVH36023 & SBVH36023S	S10	5/8" SUPERLOK	54.0	54.0	108.0	165	51.9	65.3
	S12	3/4" SUPERLOK	54.0	54.0	108.0			65.3
	F8N	1/2" FEMALE NPT	45.5	45.5	91.0			49.5
	F12N	3/4" FEMALE NPT	51.0	51.0	102.0			55.0
SBVH36033 & SBVH36033S	S12	3/4" SUPERLOK	61.9	61.9	123.8	165	57.0	69.8
	S16	1" SUPERLOK	66.4	66.4	132.8			69.8
	F12N	3/4" FEMALE NPT	59.0	59.0	118.0			56.5
	F16N	1" FEMALE NPT	63.8	63.8	127.6			60.6

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- 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.

Pressure & Temperature Rating

2-Way Straight

Valve Series	Materials			Pressure Rating @-54 to 21°C (-65 to 70°F)	Temperature Rating
	Seat	Stem Packing	End Connector Seal		
3601	PVDF	PTFE		6000psig (413bar)	-30 to 130°C (-22 to 265°F)
	PCTFE				-30 to 150°C (-22 to 300°F)
	PEEK				-54 to 260°C (-65 to 500°F)
3602 & 3603	PVDF			5000psig (344bar)	-23 to 191°C (-10 to 375°F)
	PCTFE				
	PEEK				6000psig (413bar)

2-Way Angle & 3-Way

Valve Series	Materials			Pressure Rating @-54 to 21°C (-65 to 70°F)	Temperature Rating
	Seat	Stem Packing	End Connector Seal		
3601	PVDF	PTFE	VITON	4000psig(275bar)	-30 to 130°C (-22 to 265°F)
	PCTFE				-30 to 150°C (-22 to 300°F)
	PEEK				-54 to 260°C (-65 to 500°F)
3602 & 3603	PVDF			3000psig(206bar)	-23 to 191°C (-10 to 375°F)
	PCTFE				
	PEEK				4000psig(275bar)

Ordering Information

Example :	S	B	V	H	3	6	0	2	-	S	1	2	-	P	E	-	M	4	0	
	1									2				3			4		5	

1. Valve Series

2-Way straight

- SBVH3601
- SBVH3602
- SBVH3603

2-Way Angle

- SBVH3601A
- SBVH3602A
- SBVH3603A

3-Way : Bottom Inlet Port

- SBVH36013
- SBVH36023
- SBVH36033

3-Way : Side Inlet Port

- SBVH36013S
- SBVH36023S
- SBVH36033S

2. End Connection

- S** = SUPERLOK Tube Fitting
- F** = Female Thread
- M** = Male Thread

3. Connection Size

Tube O.D Designator

Tube O.D (inch)	1/4	3/8	1/2	5/8	3/4	1
Designator	4	6	8	10	12	16

Pipe Thread Designator

Size(inch)	1/4	3/8	1/2	3/4	1
Screwed NPT	4N	6N	8N	12N	16N
Screwed BSPT	4R	6R	8R	12R	12R

4. Seat Material

- (**Blank**) = PCTFE(Standard)
- PV** = PVDF
- PE** = PEEK

5. Body Material

- (**Blank**) = 316 Stainless Steel
- M40** = ALLOY (Monel)

※ For special sizes and configurations, please consult BMT (SUPERLOK) sales representative.

Key Operation Ball Valves

Key Operation Ball Valve (a ball valve that can be opened or closed with Master Key) was first developed by BMT in 2007. Key Operation Ball Valve is secured against undesired manipulation that can lead to massive system failures, leakage of hazardous gases or fluids, ultimately, catastrophic damages and losses.



Features

- The valve can only be operated inserting Master Key into the handle.
- Applicable to various types of valves such as ball, needle, diaphragm, and bellows valves.
- Accidents caused by inadvertent or unauthorized operation can be prevented.
- Ideal to use in areas populated or opened to unauthorized individuals, preventing accidents resulted from undesired manipulation.

Options

- **Standard type** : The locking function works at both open and closed positions as the Master Key is taken out from the handle.
- **Open-Free type** : At fully-opened position, it is impossible to close the valve without the insertion of the key. Suitable for systems where the stop of flow from inadvertent or unauthorized manipulation may lead to catastrophic results.
- **Close-Free Type** : At fully-closed position, it is impossible to open the valve without the insertion of the key. Suitable for systems where the start of fluid flow from inadvertent or unauthorized may lead to catastrophic results.

Low Pressure Key Operation Ball Valves

SBVL210 Series

Features

- Locking handle in On and Off positions
- Compact design
- Low operating torques
- Variety of End connections



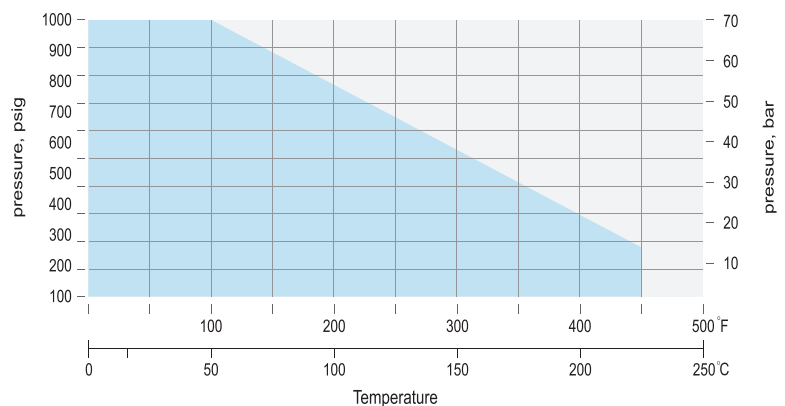
Specifications

- Pressure rating : 1000psig (69bar) @70°F (21°C)
- Temperature rating : 32°F to 445°F (0°C to 232°C)
- Body material : 316 stainless steel
- Port connections : 1/4 to 1 in. and 6 to 25mm
- Orifice : 5.0 to 16.0mm

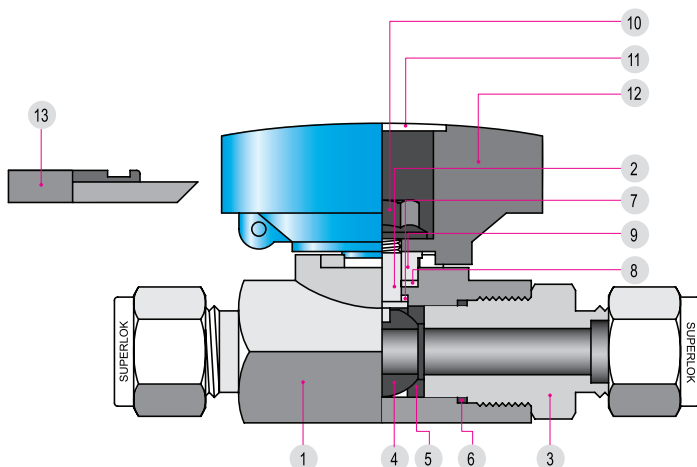
Testing

- Each and every valve is tested with nitrogen at 1000psig (69bar).
- The valves have max allowable leak rate of 0.1 cm³/min
- Shell testing can be performed upon request.

Pressure-Temperature Rating



Materials of Construction



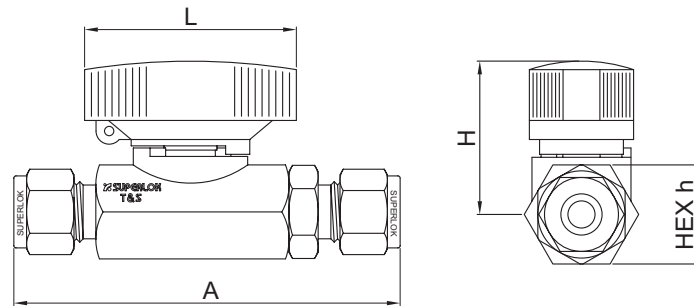
No.	Component	Material Grade ASTM Specification
*1	Body	A185-F316 / A276-316 / A351-CF8M
*2	Stem	A276-316
*3	End Connector	A276-316
*4	Ball	A276-316
*5	Ball Seal	PTFE
*6	Connector Seal	PTFE
*7	Lower Stem Seal	PTFE
*8	Upper Stem Seal	PTFE
*9	Stem Washer	A276-304
10	Nut	Stainless Steel
11	Handle Cap	Aluminum
12	Handle	Aluminum
13	Master Key	Zinc

* 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

SBVL210 Series



Part No.	Orifice	Cv	End Connection	Dimensions				
				h	A	H	L	
SBVL 210	S6M	5.0	1.25	6mm SUPERLOK	18.0	79.8	32.3	42.0
	S4			1/4" SUPERLOK				
	S10M	7.0	2.5	10mm SUPERLOK	22.2	91.5	35.6	50.0
	S6			3/8" SUPERLOK				
	S12M	9.0	9.5	12mm SUPERLOK	27.0	101.4	37.6	50.0
	S8			1/2" SUPERLOK				
	S16M	12.5	12.7	16mm SUPERLOK	31.8	107.0	40.4	60.0
	S12			3/4" SUPERLOK				
S25M	16.0	17.5	25mm SUPERLOK	38.1	131.0	43.5	60.0	
S16			1" SUPERLOK					

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- 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.

Ordering Information

Example :	SBVL 210	-	S8	-	RD	-	OT
	1		2 3		4		5

1. Valve Series

- SBVL210

2. End Connection

- S = SUPERLOK Tube Fitting
 F = Female Thread
 M = Male Thread

3. End Connection Size

Tube O.D

Tube O.D (inch)	1/4	3/8	1/2	3/4	1
Designator	4	6	8	12	16
Tube O.D (inch)	6	10	12	16	25
Designator	6M	10M	12M	16M	25M

Pipe Thread

Size (inch)	1/4	3/8	1/2	3/4	1
Screwed BSPT	4R	6R	8R	12R	16R
Screwed NPT	4N	6N	8N	12N	16N

4. Handle Color

- (Blank) = Blue (Standard)
 RD = Red
 BK = Black

5. Valve Type*

- (Blank) = Standard Type
 OT = Open Free Type
 CT = Close Free Type

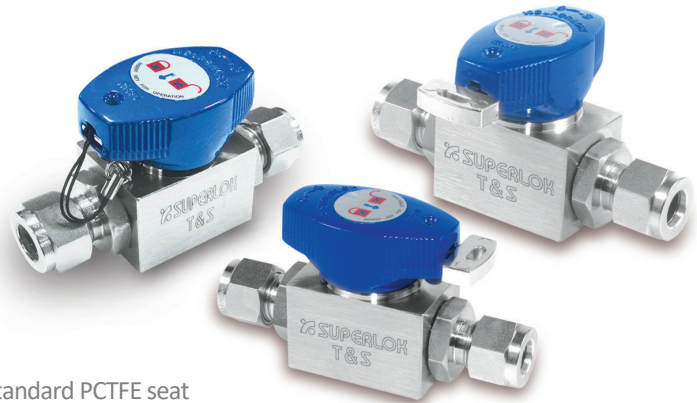
* Please refer to Page 2 for the valve types.

High Pressure Key Operation Ball Valves

SBVL360 Series

Features

- Locking handle in On and Off positions
- High flow capacity in a compact design
- Low operating torques
- Positive handle stops
- Variety of End connections



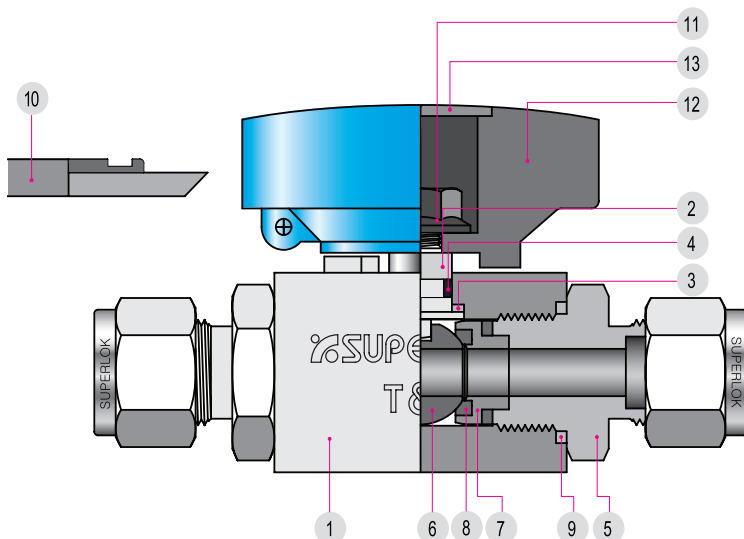
Specifications

- Pressure rating : up to 6000psig (413bar) @70 °F(21 °C) with standard PCTFE seat
- Temperature rating : -65 to 350 °F (-54 to 177 °C) with standard PCTFE seat
- Body material : 316 stainless steel
- Port connections : 1/4 to 3/4 in. and 6 to 25mm

Testing

- Each and every valve is tested with nitrogen at 1000psig (69bar).
- Valve have max allowable leak rate of 0.1 cm³/min
- Shell testing is performed on demand.

Materials of Construction



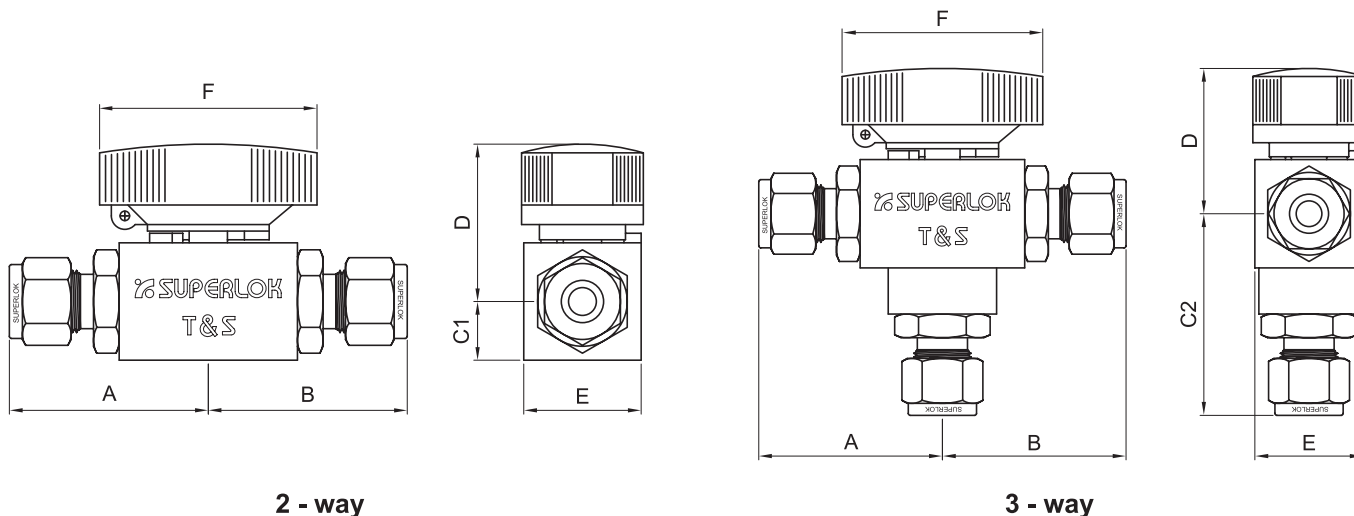
No.	Component	Material Grade ASTM Specification
*1	Body	A276-316 / A351-CF8M
*2	Stem	SS316 / A276
*3	Thrust Washer	PEEK
*4	O-Ring	NBR
*5	End Connector	A276-316
*6	Ball	A276-316
*7	Seal Retainer	A276-316
*8	Ball Seal	PCTFE
*9	Connector Seal	PTFE
10	Master Key	Zinc
11	Nut	Stainless Steel
12	Handle	Aluminum
13	Handle Cap	Aluminum

* 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

SBVL360



2 - way

3 - way

Part No.		Orifice	Cv	End Connection	Dimensions						
					A	B	C1	C2	D	E	F
SBVL3601 or SBVL36013	S6M	4.8	1.04	6mm SUPERLOK	43.8	43.8	12.0	43.8	33.7	24.0	42.0
	S4			1/4" SUPERLOK	43.8	43.8		43.8			
	F2N			1/8" FEMALE NPT	34.0	34.0		34.0			
	M4N			1/4" MALE NPT	40.2	40.2		40.2			
SBVL3602 or SBVL36023	S8M	6.4	2.34	8mm SUPERLOK	45.2	45.2	13.5	53.2	36.2	27.0	50.0
	S10M			10mm SUPERLOK	46.0	46.0		54.0			
	S6			3/8" SUPERLOK	45.7	45.7		53.7			
	F4N			1/4" FEMALE NPT	38.4	38.4		46.4			
	M4N			1/4" MALE NPT	41.1	41.1		49.1			
	M6N			3/8" MALE NPT	41.1	41.1		49.1			
SBVL3603 or SBVL36023	S12M	10.3	6.42	12mm SUPERLOK	59.2	59.2	16.0	69.2	41.5	32.0	60.0
	S16M			16mm SUPERLOK	59.2	59.2		69.2			
	S8			1/2" SUPERLOK	59.4	59.4		69.4			
	S12			3/4" SUPERLOK	59.2	59.2		69.2			
	F6N			3/8" FEMALE NPT	49.5	49.5		59.5			
	F8N			1/2" FEMALE NPT	54.6	54.6		64.6			
	M8N			1/2" MALE NPT	56.4	56.4		66.4			

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

Technical Data

Temperature and Pressure Rating

Seat Material	Temperature Rating	Pressure Rating @ 100°F (38°C)		Pressure Rating @ Max. Temperature	
		Stainless Steel	Brass	Stainless Steel	Brass
PCTFE	-65 to 300°F (-54 to 148°C)	6000psig (413 bar)	3000psig (207 bar)	1000psig@300°F (68.9bar@148°C)	700psig@300°F (48bar@200°C)
PEEK	-65 to 450°F (-54 to 232°C)	6000psig (413 bar)	3000psig (207 bar)	700psig@400°F (48bar@200°C)	
PTFE	-65 to 300°F (-54 to 148°C)	1500psig (103 bar)	1500psig (103 bar)	250psig@300°F (17.2bar@148°C)	

Ordering Information

Example :	SBVL 3602 - S6 - PE - RD - OT					
	1	2 3	4	5	6	

1. Valve Series

2-Way

- SBVL3601
- SBVL3602
- SBVL3603

3-Way

- SBVL36013
- SBVL36023
- SBVL360233

2. End Connection

- S** = SUPERLOK Tube Fitting
- F** = Female Thread
- M** = Male Thread

3. End Connection Size

Tube O.D Designator

Tube OD (inch)	1/4	3/8	1/2	3/4		
Designator	4	6	8	12		
Tube OD (mm)	6	8	10	12	16	20
Designator	6M	8M	10M	12M	16M	20M

Pipe Thread Designator

Size (inch)	1/4	3/8	1/2	3/4
Screwed BSPT	4R	6R	8R	12R
Screwed NPT	4N	6N	8N	12N

4. Seat Material

- (Blank)** = PCTFE
- PE** = PEEK
- PT** = PTFE

5. Handle Color

- (Blank)** = Blue (Standard)
- RD** = Red
- BK** = Black

6. Valve Type*

- (Blank)** = Standard Type
- OT** = Open Free Type
- CT** = Close Free Type
- ST** = Special Type

* Please refer to Page 2 for the valve types.

※ For special sizes and configurations, please consult BMT (SUPERLOK) sales representative.

Memo



BMT Co., Ltd.

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