

Swing-out Ball Valves



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SWB 320 Series



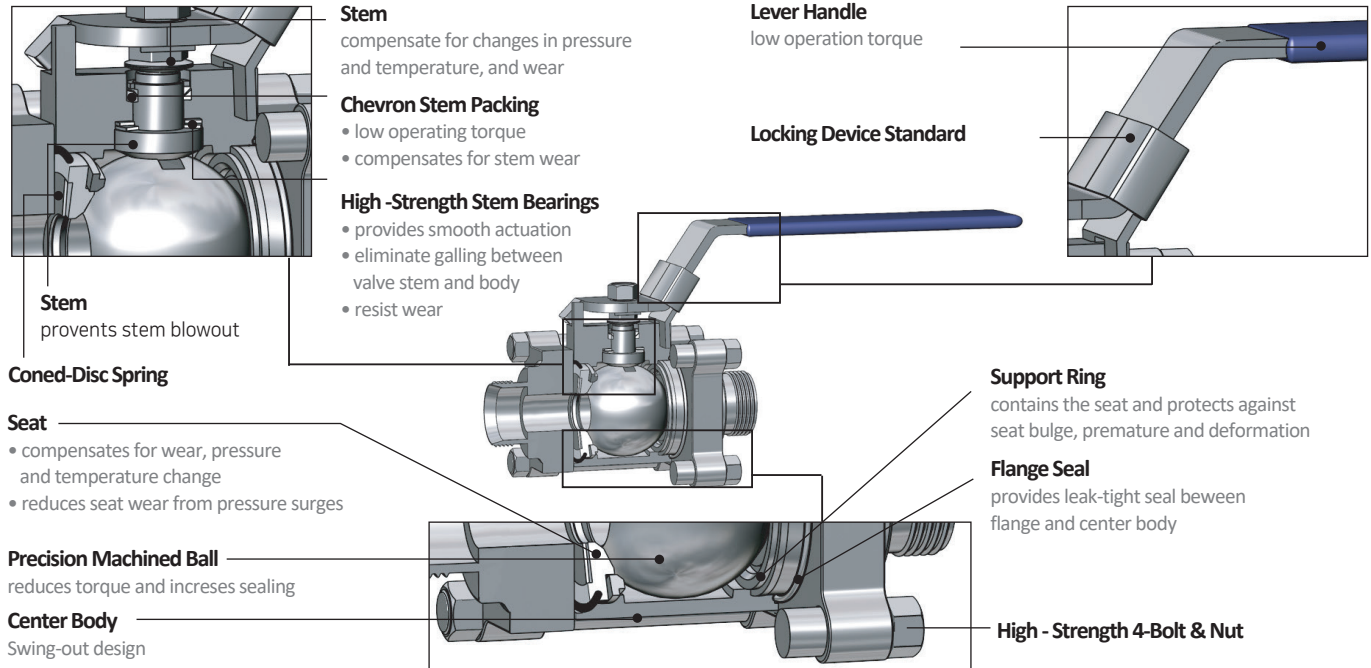
SWB 320 Series

Specifications

Pressure Rating up to 3000 psig (206 bar) at 100°F (37°C) / Temperature Range from -20°F (-28°C) to 450°F (232°C)

Testing

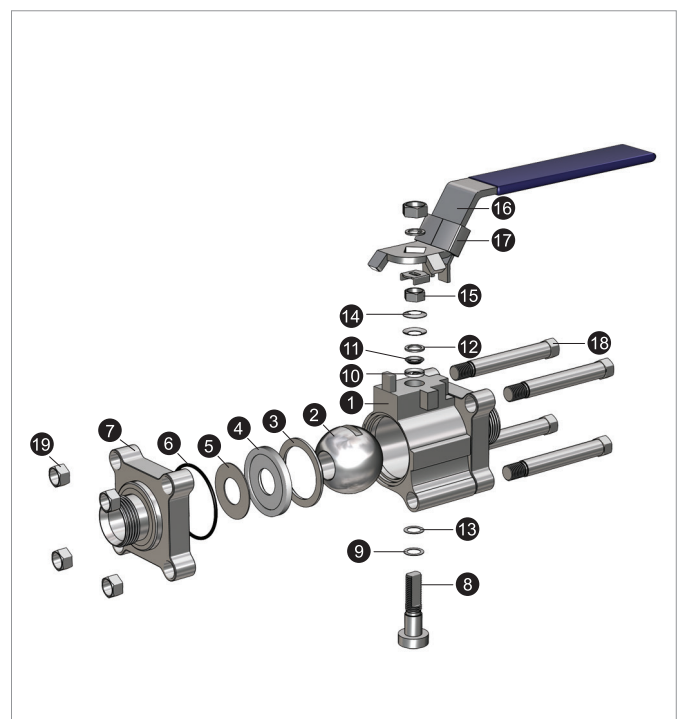
- Each valve is tested with nitrogen at 1000 psig (69 bar) to maximum allowable leak rate of 0.1 SCCM.
- Hydrostatic shell test is performed at 1.5 times the working pressure (optional).



Materials of Construction

Component	Valve Body Materials		Q'TY
	Material /	ASTM Specification	
*1	Body	CF8M / A351	1
*2	Ball	CF8M / A351	1
*3	Support Ring	SS316 / A276	2
*4	Seats	Reinforced PTFE	2
*5	Seat Spring	Strain Hardned 316 SS / A240	2
6	Flange Seal	PTFE	2
7	Flange	CF8M / A351	2
*8	Stem	SS316 / A276	1
*9	Stem Bearing	PEEK	1
*10	Lower Packing	Reinforced PTFE	1
*11	Upper Packing	Reinforced PTFE	1
12	Packing Support	SS316 / A276	1
13	Packing Gland	SS316 / A276	1
14	Stem Spring	Stainless Steel	3
15	Packing Nut	Stainless Steel	2
16	Handle	Stainless Steel	1
17	Locking Device	Stainless Steel	1
18	Flange Bolt	A193/B8M	4
19	Flange Nut	A194/8M	4

* Wetted components

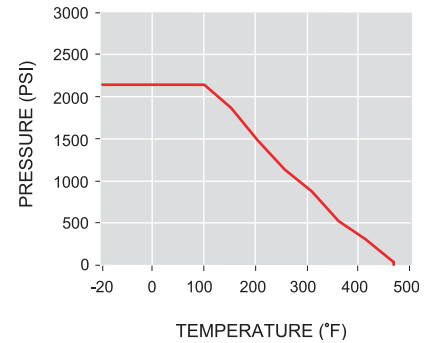


- Components can limit the pressure and temperature ranges of the valve. Please consult BMT (SUPERLOK) sales representative for your specific application.

Pressure - Temperature Rating

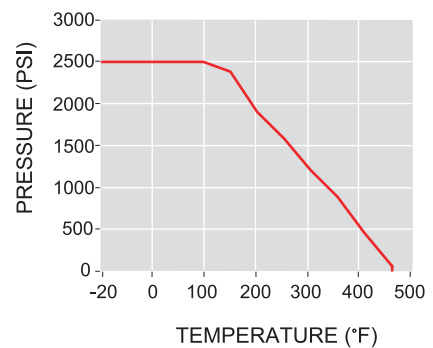
Reinforced PTFE Seats (R-PTFE) : Standard

Series	Pressure - Temperature Rating	
	Temperature °F (°C)	Working Pressure psig (bar)
SWB 320	-20 to 100 (-28 to 37)	2200 (151)
	150 (65)	1850 (127)
	200 (93)	1500 (103)
	250 (121)	1150 (79.2)
	300 (148)	800 (55.1)
	350 (176)	560 (38.5)
	400 (204)	330 (22.7)
	450 (232)	100 (6.8)



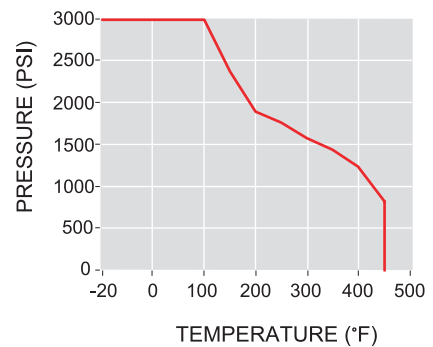
Carbon / Glass PTFE Seats : option

Series	Pressure - Temperature Rating	
	Temperature °F (°C)	Working Pressure psig (bar)
SWB 320	-20 to 100 (-28 to 37)	2500 (172)
	150 (65)	2430 (167)
	200 (93)	1870 (128)
	250 (121)	1620 (111)
	300 (148)	1240 (85.4)
	350 (176)	860 (59.2)
	400 (204)	480 (33.0)
	450 (232)	100 (6.8)



PEEK Seats : option

Series	Pressure - Temperature Rating	
	Temperature °F (°C)	Working Pressure psig (bar)
SWB 320	-20 to 100 (-28 to 37)	3000 (206)
	150 (65)	2420 (166)
	200 (93)	1870 (128)
	250 (121)	1770 (121)
	300 (148)	1600 (110)
	350 (176)	1430 (98.5)
	400 (204)	1260 (86.8)
	450 (232)	800 (55.1)



Virgin PTFE Seats : option

Series	Pressure - Temperature Rating	
	Temperature °F (°C)	Working Pressure psig (bar)
SWB 320	-20 to 100 (-28 to 37)	1500 (103)
	150 (65)	1500 (103)
	200 (93)	1500 (103)
	250 (121)	1150 (79.2)
	300 (148)	800 (55.1)
	350 (176)	560 (38.5)
	400 (204)	330 (22.7)
	450 (232)	100 (6.8)

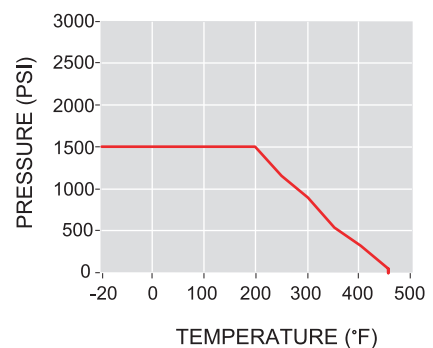
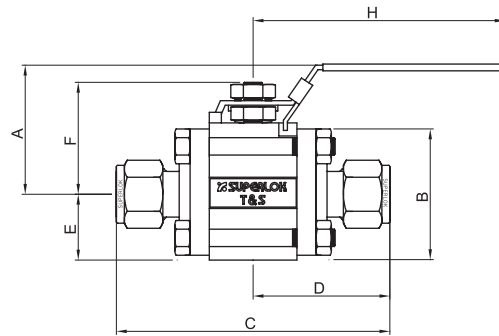
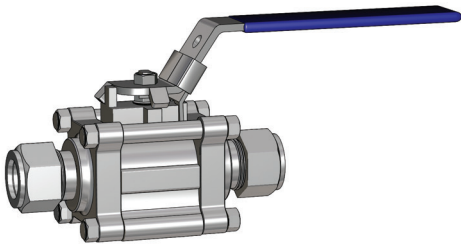
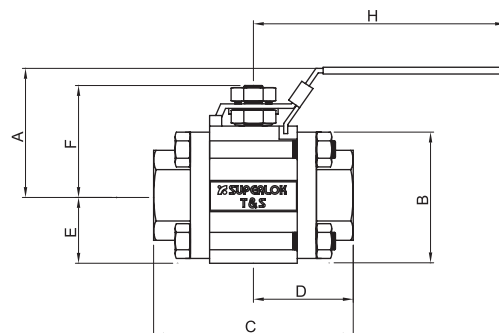
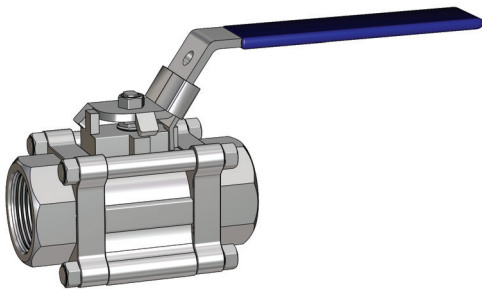


Table of Dimensions



SUPERLOK Tube End Connection

Part No.	Orifice in.(mm)	Cv	End Connection	Dimension							
				A	B	C	D	E	F	H	
SWB3201	S4	0.188 (4.8)	1.2	1/4 " Superlok	47.7	33.0	80.8	40.40	16.75	31.8	57.2
	S6	0.281 (7.1)	3.8	3/8 " Superlok							
	S6M	0.188 (4.8)	1.2	6mm Superlok							
	S8M	0.250 (6.4)	2.5	8mm Superlok							
	S10M	0.281 (7.1)	3.8	10mm Superlok							
SWB3202	S8	0.411 (10.4)	7.5	1/2 " Superlok	64.8	44.5	103.8	51.90	22.25	44.2	111.0
	S12	0.516 (13.1)	13.6	3/4 " Superlok							
	S12M	0.411 (10.4)	7.5	12mm Superlok							
SWB3203	S16	0.875 (22.2)	40.0	1 " Superlok	79.0	62.0	136.7	68.35	31.0	61.9	149.4
	S25M			25mm Superlok							
SWB3204	S24	1.250 (31.8)	100	1-1/2 " Superlok	102.0	77.7	192.6	96.3	38.9	79.8	232.0
SWB3205	S32	1.500 (38.1)	130	2 " Superlok	106.0	88.1	252.0	126.0	44.2	85.3	232.0

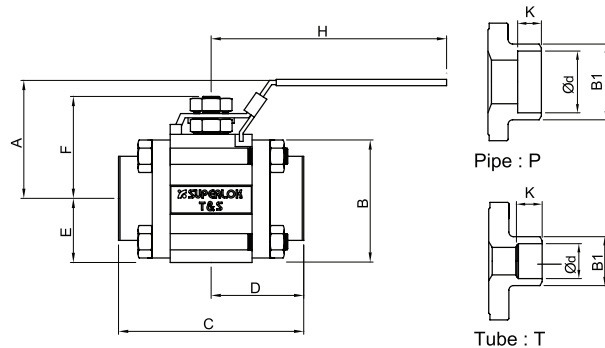
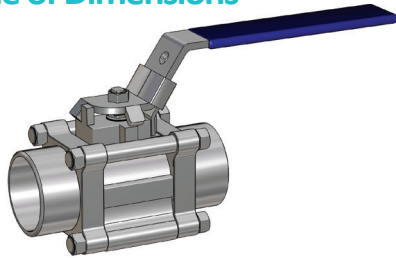


Female Pipe Thread End Connections

Part No.	Orifice in.(mm)	Cv	End Connection	Dimension							
				A	B	C	D	E	F	H	
SWB3201	F2N	0.281 (7.1)	3.8	1/8 " Female NPT	47.7	33.0	55.4	27.70	16.75	31.8	57.2
	F4N			1/4 " Female NPT							
	F4R			1/4 " Female PT							
SWB3202	F6N	0.516 (13.1)	12.0	3/8 " Female NPT	64.8	44.5	68.9	34.45	22.25	44.2	111.0
	F8N			1/2 " Female NPT							
	F8R			1/2 " Female PT							
SWB3203	F12N	0.875 (22.2)	40.0	3/4 " Female NPT	79.0	62.0	92.0	46.0	31.0	61.9	149.4
	F16N			1 " Female NPT							
	F12R			3/4 " Female PT							
	F16R			1 " Female PT							
SWB3204	F20N	1.250 (31.8)	90	1-1/4 " Female NPT	102.0	77.7	112.2	55.6	38.9	79.8	232.0
	F24N		100	1-1/2 " Female NPT							
	F24R		100	1-1/2 " Female PT							
SWB3205	F32N	1.500 (38.1)	130	2 " Female NPT	106.0	88.1	125.4	62.7	44.2	85.3	232.0
	F32R			2 " Female PT							

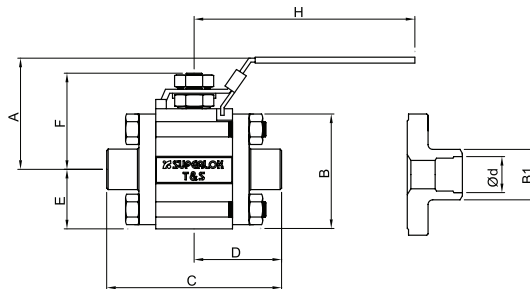
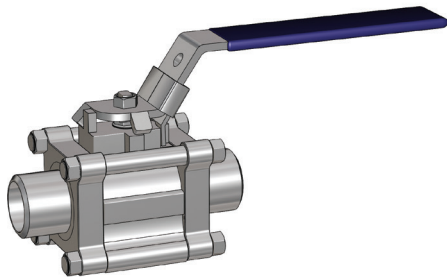
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- Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

Table of Dimensions



Socket weld end connections

Part No.	Orifice in.(mm)	Cv	End Connection	Dimension											
				ød	B1	A	B	C	D	E	F	H	K		
SWB3201	SW4T	0.188 (4.8)	1.2	1/4 " Socket Weld	6.50	13.70	47.7	33.0	55.4	27.70	16.75	31.8	57.2	7.1	
	SW6T	0.281 (7.1)	3.8	3/8 " Socket Weld	9.70	17.10								7.9	
SWB3202	SW8T	0.411 (10.4)	7.5	1/2 " Socket Weld	12.90	21.30	64.8	44.5	68.9	34.45	22.25	44.2	111.0	9.7	
	SW12T	0.516 (13.1)	13.6	3/4 " Socket Weld	19.20	26.70								11.2	
	SW8P	0.516 (13.1)	15.0	1/2 " Socket Weld	21.80	31.20								9.7	
SWB3203	SW16T	0.875 (22.2)	40.0	1 " Socket Weld	25.65	33.40	79.0	62.0	92.0	46.00	31.00	61.9	149.4	16.0	
	SW12P		36.0	3/4 " Socket Weld	27.20	42.16								12.7	
	SW16P		42.0	1 " Socket Weld	33.90	45.30									
SWB3204	SW20T	1.125 (28.6)	80.0	1-1/4 " Socket Weld	32.00	42.20	102.0	77.7	112.2	55.6	38.9	79.8	232.0	15.7	
	SW24T	100.0	1-1/2 " Socket Weld	38.30		19.1									
	SW20P	90.0	1-1/4 " Socket Weld	42.70	62.20	114.4								57.2	
	SW24P	100.0	1-1/2 " Socket Weld	48.80		116.4								58.2	12.7
SWB3205	SW32T	1.500 (38.1)	130.0	2 " Sockect Weld	51.10	70.10	106.0	88.1	125.4	62.7	44.2	85.3	232.0	19.1	
	SW32P		61.20	2 " Sockect Weld	75.10									43.2	16.0



Butt weld end connections

Part No.	Schedule	Orifice in.(mm)	Cv	End Connection	Dimension															
					ød	B1	A	B	C	D	E	F	H							
SWB3201	10	0.188 (4.8)	1.2	1/4 " Butt Weld	10.40	13.70	47.7	33.0	52.4	26.20	16.75	31.8	57.2							
SWB3202		0.516 (13.1)	15.0	1/2 " Butt Weld	17.10	21.30	64.8	44.5	68.9	34.45	22.25	44.2	111.0							
SWB3203		0.875 (22.2)	36.0	3/4 " Butt Weld	22.45	26.67	79.0	62.0	92.0	46.00	31.0	61.9	149.4							
SWB3203		0.875 (22.2)	40.0	1 " Butt Weld	27.90	33.40			88.9	44.45										
SWB3201	40	0.188 (4.8)	1.2	1/4 " Butt Weld	9.20	13.70	47.7	33.0	52.4	26.20	16.75	31.8	57.2							
SWB3202		0.516 (13.1)	15.0	1/2 " Butt Weld	15.80	21.30	64.8	44.5	68.9	34.45	22.25	44.2	111.0							
SWB3203		0.875 (22.2)	36.0	3/4 " Butt Weld	20.93	26.67	47.7	62.0	92.0	46.00	31.0	61.9	149.4							
SWB3203		0.875 (22.2)	40.0	1 " Butt Weld	26.60	33.40			88.9	44.45										
SWB3201	80	0.188 (4.8)	1.2	1/4 " Butt Weld	7.70	13.70	79.0	33.0	52.4	26.20	16.75	31.8	57.2							
SWB3201		0.281 (7.1)	3.8	3/8 " Butt Weld	10.70	17.10														
SWB3202		0.411 (10.4)	7.5	1/2 " Butt Weld	13.90	21.30								64.8	44.5	68.9	34.45	22.25	44.2	111.0
SWB3202		0.516 (13.1)	13.6	3/4 " Butt Weld	18.80	26.70														
SWB3203	0.875 (22.2)	40.0	1 " Butt Weld	23.90	33.40	79.0	62.0	88.9	44.45	31.00	61.9	149.4								
SWB3204	10	1.125 (28.6)	100	1-1/2 " Butt Weld	42.70	48.30	102.0	77.7	113.2	56.60	38.90	79.8	232.0							
SWB3205		1.500 (38.1)	130	2 " Butt Weld	54.80	60.30	106.0	88.1	121.4	60.70	44.20	85.3								
SWB3204	40	1.125 (28.6)	100	1-1/2 " Butt Weld	40.90	48.30	102.0	77.7	113.2	56.60	38.90	79.8	232.0							
SWB3205		1.500 (38.1)	130	2 " Butt Weld	52.50	60.30	106.0	88.1	123.4	61.70	44.20	85.3								
SWB3204	80	1.125 (28.6)	100	1-1/2 " Butt Weld	38.10	48.30	102.0	77.7	115.8	57.90	38.90	79.8	232.0							
SWB3205		1.500 (38.1)	130	2 " Butt Weld	49.30	60.30	106.0	88.1	129.6	64.80	44.20	85.3								

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Ordering Information

Example :

S W B 3 2 0 2 - S 1 2 - P E - O H

1
2
3
4
5

• 316 Stainless Steel is standard body material.

1. Valve Series

- SWB3201
- SWB3202
- SWB3203
- SWB3204
- SWB3205

2. Port Type

- S** = SUPERLOK Tube Fitting
- F** = Female Thread
- BW** = Butt Weld
- M** = Male Thread
- SW** = Socket Weld
- SA** = SANITARY

3. Port Size

Tube O.D Designator

Tube O.D (inch)	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Designator	4	6	8	12	16	20	24	32
Tube O.D (mm)	6	8	10	12	20	25	32	38
Designator	6M	8M	10M	12M	20M	25M	32M	38M

Pipe Thread Designator

Size (inch)	1/8	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Screwed BSPT	2R	4R	6R	8R	12R	16R	20R	24R	32R
Screwed NPT	2N	4N	6N	8N	12N	16N	20N	24N	32N

Socket Weld & Butt Weld Designator

Size (inch)	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Tube	4T	6T	8T	12T	16T	20T	24T	32T
Pipe	4P	6P	8P	12P	16P	20P	24P	32P

4. Seat Material

- (**Blank**) = GLASS15% PTFE (T1)
- PE** = PEEK
- PT** = PTFE
- T2** = GLASS25% PTFE
- T3** = CARBON15% PTFE
- T4** = CARBON25% PTFE

5. Option

- OH** = Oval Handle
- Actuator**
- P1** = Single Acting - 90° Turn
- P2** = Single Acting - 180° Turn
- P3** = Double Acting - 90° Turn
- P4** = Double Acting - 180° Turn

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

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