

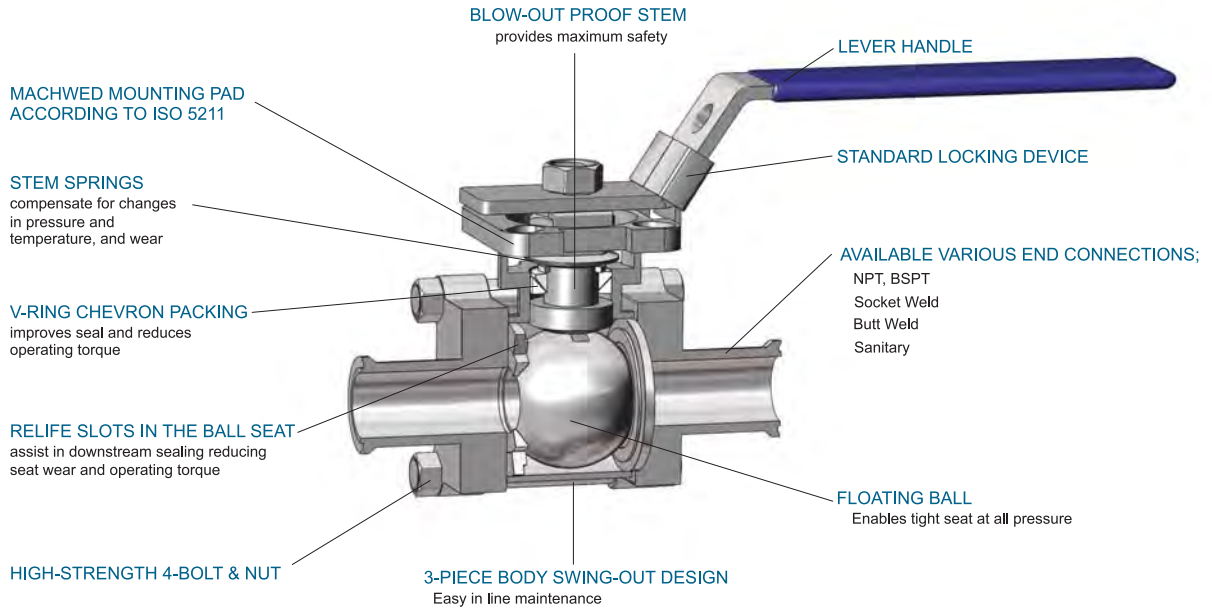
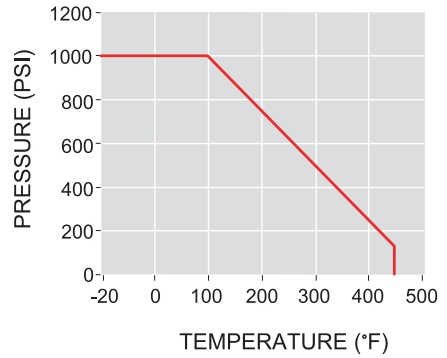
SWING - OUT BALL VALVES SWB 310 SERIES

SPECIFICATION

- Pressure Rating up to 1000 psig (69 bar) at 100 °F (37 °C)
- Temperature Range from -20 °F (-28 °C) to 450 °F (232 °C)

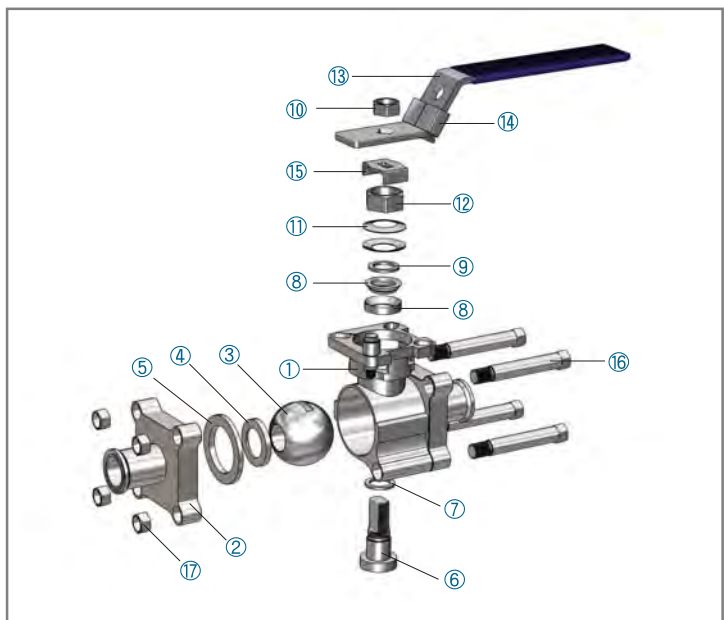
TESTING

- 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.



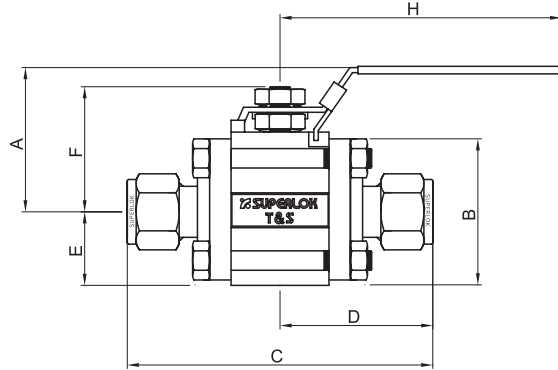
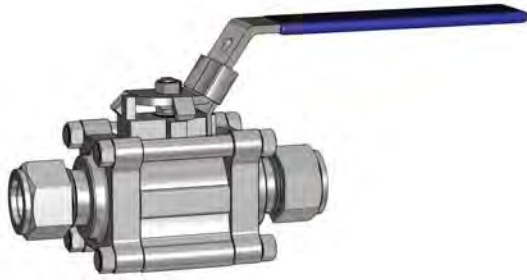
MATERIALS OF CONSTRUCTION

Component	Material	Q' TY
1	Body	ASTM A351GR/CF8M 1
2	End Cap	ASTM A351GR/CF8M 2
3	Ball	SS316 1
4	Ball Seal	PTFE 2
5	Flange Seal	PTFE 2
6	Stem	SS316 1
7	Stem Seal	PTFE 1
8	Upper/Lower Packing	PTFE 1
9	Packing Gland	SS304 1
10	Handle Nut	STRAIN HARDNED 316 1
11	Disc Spring	SS304 2
12	Stem Nut	SS304 1
13	Handle	SS304 1
14	Locking Device	SS304 1
15	Stem Nut Lock	SS304 1
16	Flange Bolt	SS304 4
17	Flange Nut	SS304 4



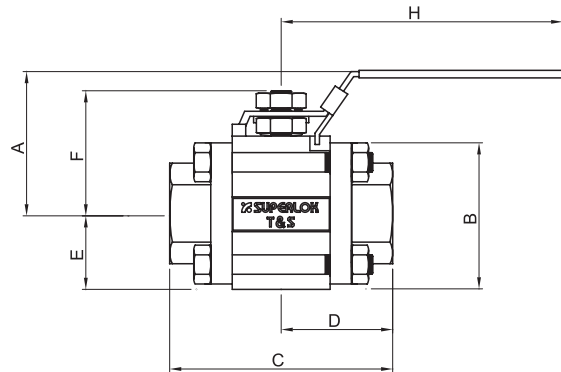
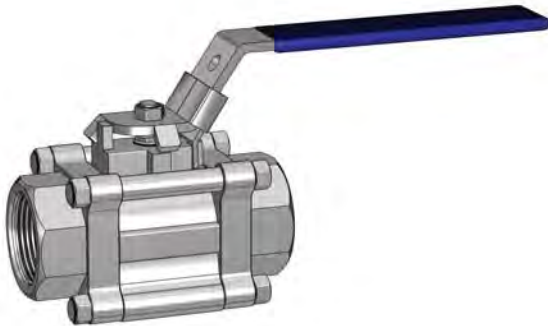
SWING - OUT BALL VALVES

TABLE OF DIMENSIONS



■ SUPERLOK TUBE END CONNECTION

Ordering Number		Ori ce in. (mm)	Cv	End Connection	Dimension (mm)							
Series	Part NO.				A	B	C	D	E	F	H	
SWB3201	S	4	0.188 (4.8)	1.2	1/4 " Superlok	47.7	33.0	80.8	40.40	16.75	31.8	57.2
		6	0.281 (7.1)	3.8	3/8 " Superlok							
		6M	0.188 (4.8)	1.2	6mm Superlok							
		8M	0.250 (6.4)	2.5	8mm Superlok							
		10M	0.281 (7.1)	3.8	10mm Superlok							
SWB3202	S	8	0.411 (10.4)	7.5	1/2 " Superlok	64.8	44.5	103.8	51.90	22.25	44.2	111.0
		12	0.516 (13.1)	13.6	3/4 " Superlok							
		12M	0.411 (10.4)	7.5	12mm Superlok							
SWB3203	S	16	0.875 (22.2)	40.0	1 " Superlok	79.0	62.0	136.7	68.35	31.0	61.9	149.4
		25M			25mm Superlok							



■ FEMALE PIPE THREAD END CONNECTIONS

Ordering Number		Ori ce in. (mm)	Cv	End Connection	Dimension (mm)							
Series	Part NO.				A	B	C	D	E	F	H	
SWB3201	F	0.281 (7.1)	3.8	1/8 " Female NPT	47.7	33.0	55.4	27.70	16.75	31.8	57.2	
				4N								1/4 " Female NPT
				4R								1/4 " Female PT
SWB3202	F	0.516 (13.1)	12.0	3/8 " Female NPT	64.8	44.5	68.9	34.45	22.25	44.2	111.0	
				8N								1/2 " Female NPT
				8R								1/2 " Female PT
SWB3203	F	0.875 (22.2)	40.0	3/4 " Female NPT	79.0	62.0	92.0	46.0	31.0	61.9	149.4	
				12N								1 " Female NPT
				16N								3/4 " Female PT
				12R								1 " Female PT

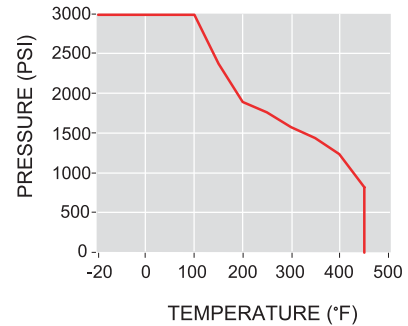
SWING - OUT BALL VALVES

PRESSURE/TEMPERATURE RATING

■ 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)

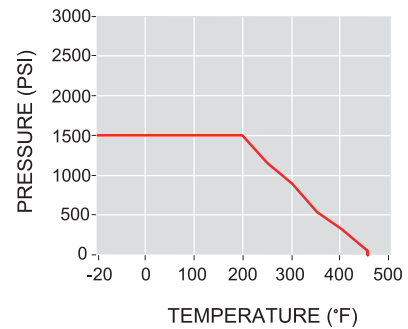
To order option item, add P to the end of ordering number.



■ VIRGIN PTFE SEATS : OPTION

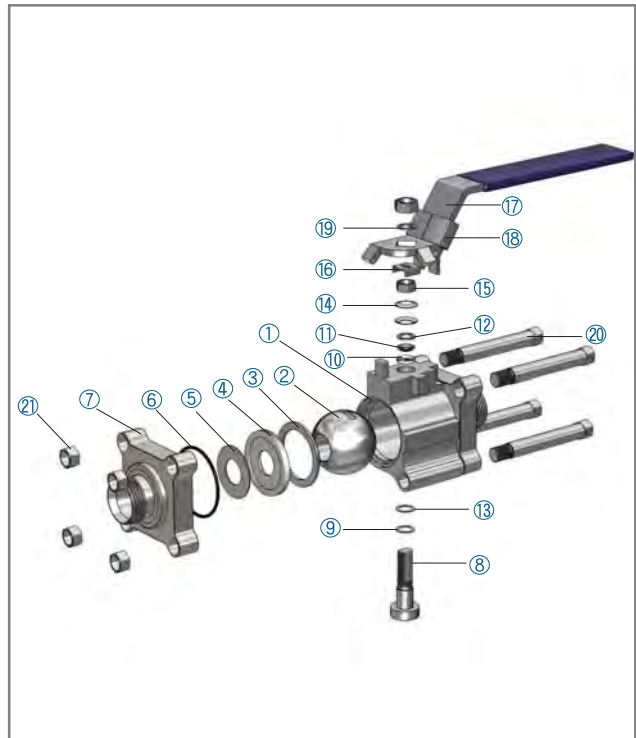
Series	Pressure - Temperature Rating	
	Temperature °F (°C)	Working Pressure psig (bar)
SWB 320	-20 to 100 (-28 to 37)	1500 (103)
	150 (65)	1500 (103)
	200 (93)	1500 (103)
	250 (121)	1150 (79.2)
	300 (148)	800 (55.1)
	350 (176)	560 (38.5)
	400 (204)	330 (22.7)
	450 (232)	100 (6.8)

To order option item, add V to the end of ordering number.



■ MATERIALS OF CONSTRUCTION

Component	Valve Body Materials		QTY
	Material / ASTM Specification		
1	Body	CF8M / A351	1
2	Ball	SS 316 / A479	1
3	Support ring	SS 316 / A479	2
4	Seats	Reinforced PTFE	2
5	Seat spring	Strain Hardened 316 SS / A240	2
6	Flange seal	PTFE	2
7	Flange	CF8M / A351 or SS 316 / A479	2
8	Stem	SS 316 / A479	1
9	Stem bearing	Alloy X750	1
10	Lower packing	Reinforced PTFE	1
11	Upper packing		1
12	Packing support	PEEK	1
13	Packing gland	SS 316 / A479	1
14	Stem spring	Strain Hardened 316	2
15	Packing nut	Stainless Steel	2
16	Stem nut lock		1
17	Handle		1
18	Locking device		1
19	Tooth washer		1
20	Flange bolt	SS304	4
21	Flange nut	SS304	4



SWING - OUT BALL VALVES

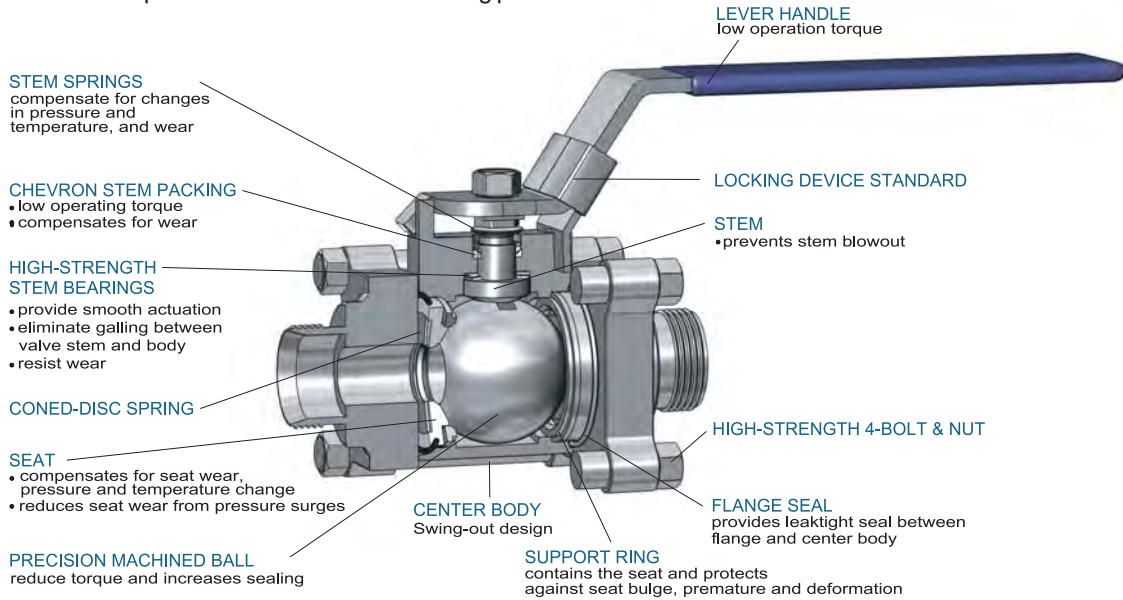
SWB 320 SERIES

SPECIFICATION

- 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

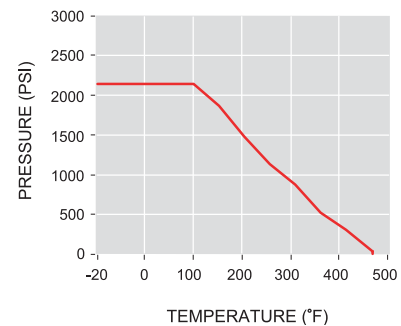
- Each valve is tested with nitrogen at 1000 psig (69 bar) to maximum allowable leak rate of 0.1 SCCM.
- Hydrostatic shell test is performed at 1.5 times the working pressure.



PRESSURE/TEMPERATURE RATING

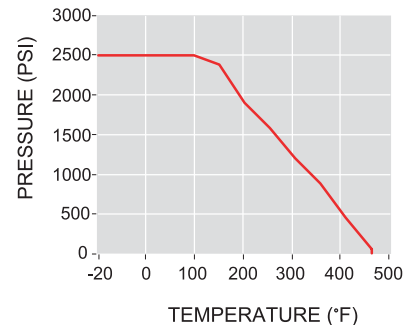
■ REINFORCED PTFE SEATS (R-PTFE) : STANDARD

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

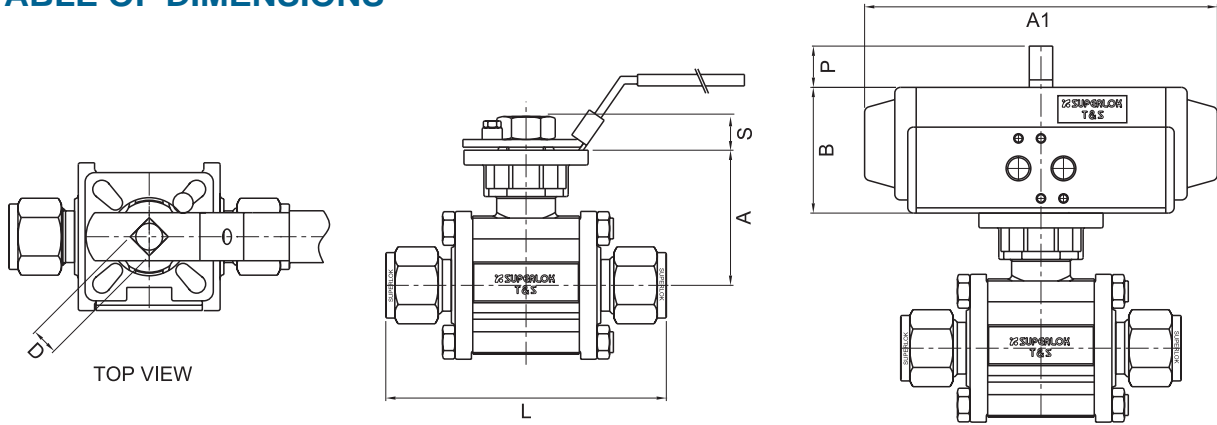
Series	Pressure - Temperature Rating	
	Temperature °F (°C)	Working Pressure psig (bar)
SWB 320	-20 to 100 (-28 to 37)	2500 (172)
	150 (65)	2430 (167)
	200 (93)	1870 (128)
	250 (121)	1620 (111)
	300 (148)	1240 (85.4)
	350 (176)	860 (59.2)
	400 (204)	480 (33.0)
	450 (232)	100 (6.8)



To order option item, add C to the end of ordering number.

SWING - OUT BALL VALVES

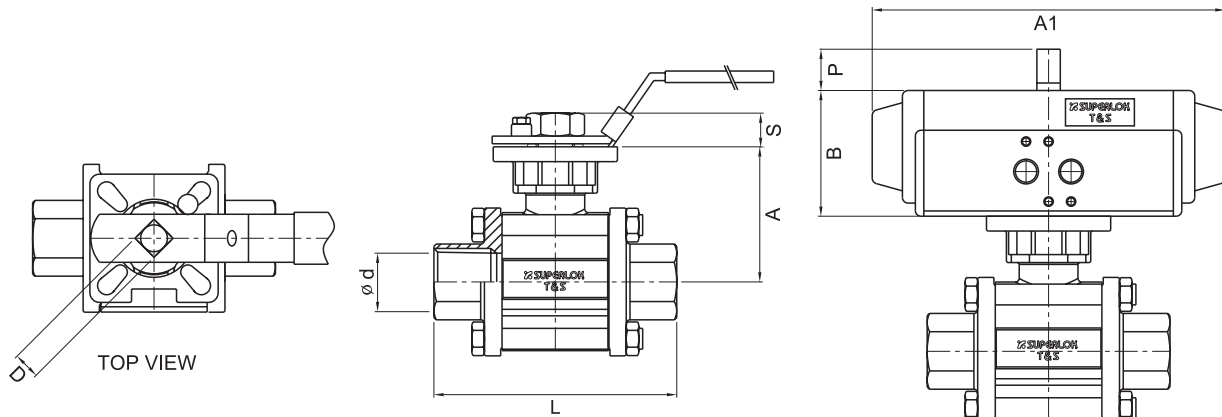
TABLE OF DIMENSIONS



ROTATING PNEUMATIC ACTUATORS
(DOUBLE ACTING TYPE)

■ SUPERLOK TUBE END CONNECTIONS

Ordering Number			SIZE	Dimension (mm)							
Series	Part NO.			A	S	D	L	A1	B	P	
SWB	3101	SW	4	1/4 " SUPERLOK	39.0	8.5	9	72.6	188	67	20
			6	3/8 " SUPERLOK				74.2			
			8	1/2 " SUPERLOK				75.6			
	3102	12	3/4 " SUPERLOK	43.0	86.0						
	3103	16	1 " SUPERLOK	53.0	11.4	104.0					



ROTATING PNEUMATIC ACTUATORS
(DOUBLE ACTING TYPE)

■ FEMALE PIPE THREAD END CONNECTIONS

Ordering Number			SIZE	Dimension (mm)								
Series	Part NO.			A	S	D	ø d	L	A1	B	P	
SWB	3101	F	4N	1/4 "	39.0	8.5	9	11.5	63.5	188	67	20
			6N	3/8 "				12.5				
			8N	1/2 "				15.0				
	3102	12N	3/4 "	43.0	20.0	72.5						
	3103	16N	1 "	53.0	11.4	25.0	81.0					
	3104	24N	1-1/2 "	70.0	14.0	11	38.0	108.0	234	86		
	3105	32N	2 "	78.0	13.7	14	50.0	121.5				