Stainless Steel Ball Valves

2-Piece Body, Full Port, 1000/800 PSI
1/4" to 4" NPT

SERIES
5518

Features

- Full port design for unrestricted flow
- Stainless hand lever with latch locking device
- Actuator ready ISO5211 direct mounting pad
- 316SS 2-piece investment casting body
- 316SS ball and stem
- RTFE (reinforced Teflon) ball seats
- Triple PTFE/Viton live loaded stem seals, adjustable
- Anti-static device
- Silicone free

Description

Investment cast 2-piece full port stainless steel body/ball for unrestricted flow and minimum pressure loss. Adjustable live loaded stem seal packing helps compensate for wear, pressure or temperature fluctuations, extending the cycle life of the valve. Blow-out proof stem.

Applications

Stainless steel ball valves with PTFE/Viton seals are typically used for on-off control of water, air, oil, vacuum and other media compatible with the materials of construction. Valves can be direct mounted to air or electric actuators using the standard ISO5211 mounting pad, eliminating the need for extra mounting brackets and couplings. Steam service up to 125 PSI. Suitable for vacuum service up to 29inHg.

Operation

Turning the hand lever one quarter-turn (90°) rotates the ball from closed to the open position. A latch locking device allows for pad locking the valve in either the open or closed position for safety lockout applications. The valve is actuator ready with standard ISO5211 mounting pad and square output shaft.

Standards

- Design: API 608
- Testing: API 598
- Threaded Connection:

ASME B1.20.1 (NPT)/ ISO 228-1/ BS21

- Pressure/Temperature Rating:

ASME B16.34

- Marking: MSS SP-25
- CE conformance– PED 2014/68/UE

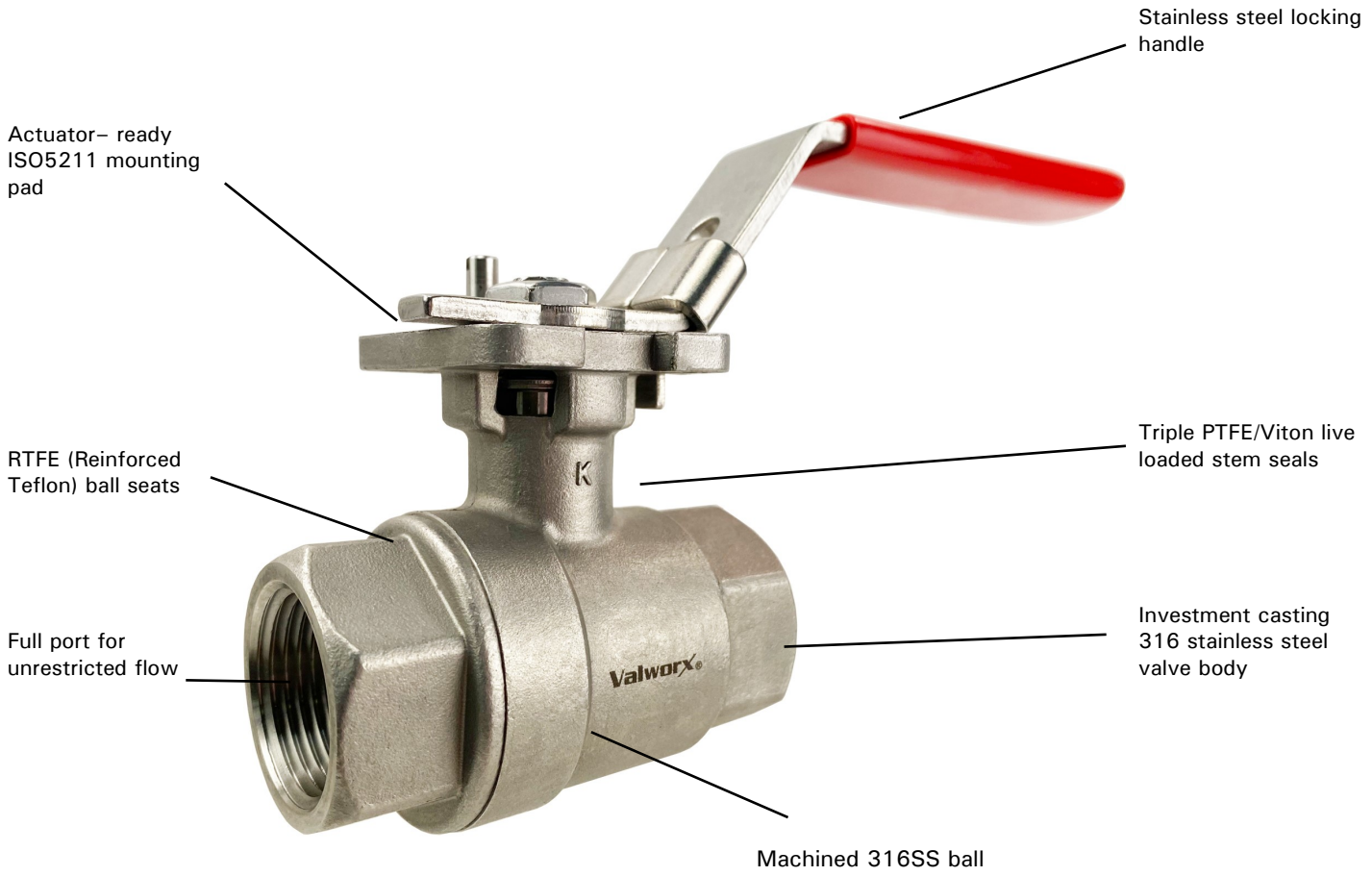
Construction

Valve Body	316SS ASTM A351, CF8M
Ball	316SS CF8M
Stem	316SS
Ball Seats	RTFE (reinforced Teflon)
Stem Seals	PTFE, Viton
Hand Lever	304SS with vinyl cover
Belleville Washers/Adjust. Nut	304SS

Options

- Air Actuators
- Electric Actuators

Construction Features



Pressure-Temperature

Pressure Rating*: 1000 PSI (69 Bar) (1/4"-2")
800 PSI (55 Bar) (2-1/2"-4") CWP non-shock,
125 PSI saturated steam, Vacuum 29inHg

Temperature Rating: -4 to 392° F (-20 to 200°C)

Specifications (English units)

Stock Number	Pipe Size (NPT)	Orifice Diam. (inch)	Cv	Pressure* (PSI)	Torque (inch lbs)	ISO5211 Mount	Weight (lbs)
551802A	1/4	0.5	6.9	1000	49.6	F03/F05	1.0
551803A	3/8	0.5	6.9	1000	49.6	F03/F05	1.0
551804A	1/2	0.6	9.7	1000	49.6	F03/F05	0.9
551806A	3/4	0.8	18.4	1000	70.8	F03/F05	1.4
551808A	1	1.0	55.4	1000	106.2	F03/F05	2.1
551810A	1-1/4	1.3	89.7	1000	123.9	F03/F05	3.3
551812A	1-1/2	1.5	144.2	1000	283.2	F05/F07	4.4
551816A	2	2.0	226.0	1000	318.6	F05/F07	7.1
551820A	2-1/2	2.6	289.0	800	619.6	F07/F10	15.7
551824A	3	3.1	454.0	800	885.1	F07/F10	22.3
551832A	4	3.9	710.0	800	1106.3	F07/F10	37.5

Cv = The GPM of water at 60° F that will pass through the valve with 1 PSI pressure drop

* Pressure @ 0-100° F (reduced pressure at higher temperatures—see P/T chart)

• Torque values at 0 PSI and 75°F

Specifications (Metric units)

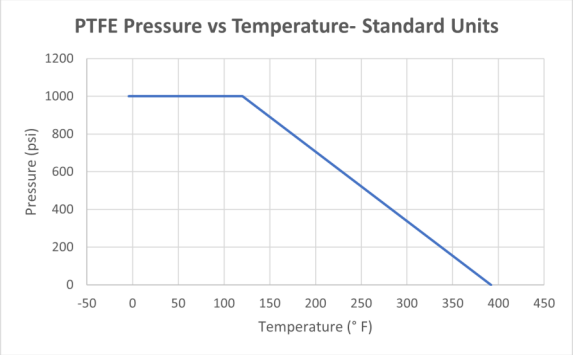
Stock Number	Pipe Size (NPT)	Orifice Diam. (mm)	Kv	Pressure* (Bar)	Torque (Nm)	ISO5211 Mount	Weight (Kg)
551802A	1/4	11.5	5.9	69	5.6	F03/F05	0.5
551803A	3/8	12.5	5.9	69	5.6	F03/F05	0.5
551804A	1/2	15	8.4	69	5.6	F03/F05	0.4
551806A	3/4	20	15.9	69	8.0	F03/F05	0.6
551808A	1	25	47.9	69	12.0	F03/F05	0.9
551810A	1-1/4	32	77.6	69	14.0	F03/F05	1.5
551812A	1-1/2	38	124.7	69	32.0	F05/F07	2.0
551816A	2	50	195.5	69	36.0	F05/F07	3.2
551820A	2-1/2	65	250.0	55	70.0	F07/F10	7.1
551824A	3	80	392.7	55	100.0	F07/F10	10.1
551832A	4	100	614.2	55	125.0	F07/F10	17.0

* Pressure range @ -18 to 38° C (reduced pressure at higher temperatures—see P/T chart)

Pressure/Temperature Chart:

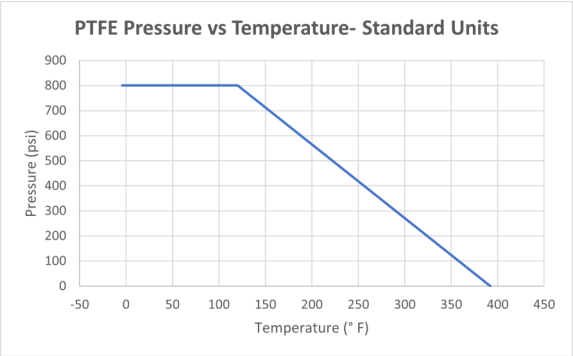
Pressure/Temp. Chart - 1000 PSI (69 Bar)

P/T Chart (PSI/°F)				
PSI	1000	1000	100	0
°F	-4	50	330	392



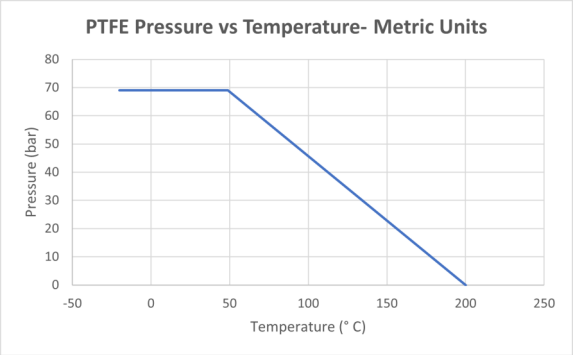
Pressure/Temp. Chart - 800 PSI (55 Bar)

P/T Chart (PSI/°F)				
PSI	800	800	100	0
°F	-4	50	330	392



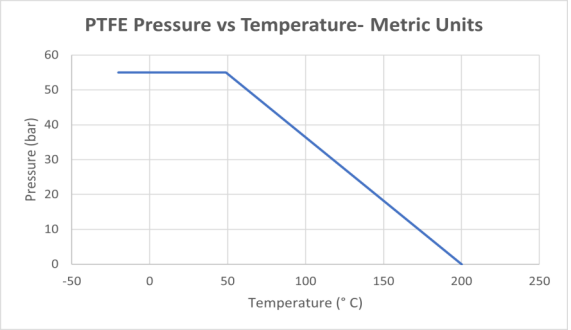
Pressure/Temp. Chart - 69 Bar (1000 PSI)

P/T Chart (BAR/°C)				
Bar	69	69	7	0
°C	-20	10	166	200

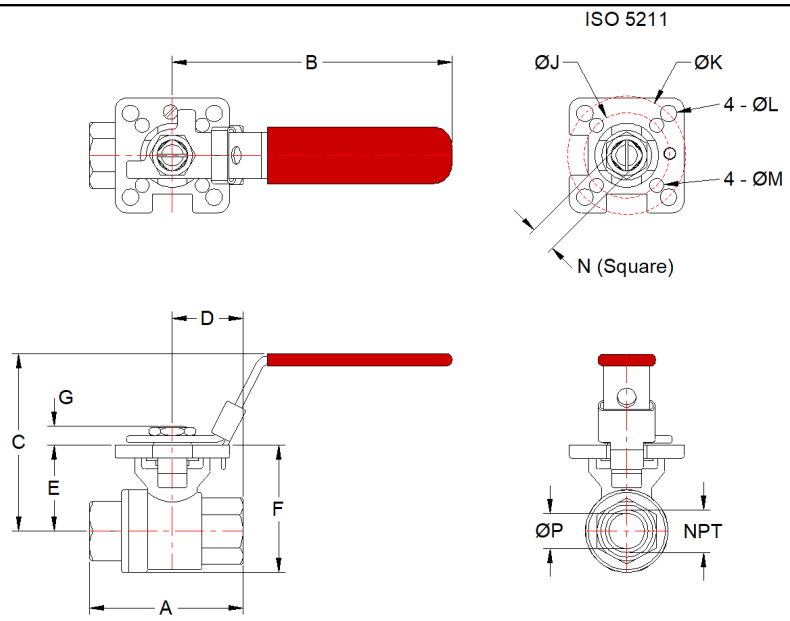


Pressure/Temp. Chart - 55 Bar (800 PSI)

P/T Chart (BAR/°C)				
Bar	55	55	7	0
°C	-20	10	166	200



Dimensions:



Pipe NPT		A	B	C	D	E	F	G	J	K	L	M	N	P	ISO	Weight
1/4	inch	2.6	4.4	2.9	1.2	1.5	2.1	0.4	1.4	2.0	0.3	0.2	0.4	0.5	F03/F05	1.0 lb
	mm	65.3	112.0	72.9	31.0	37.0	54.5	9.0	36.0	50.0	7.0	6.0	9.0	11.5		0.5 kg
3/8	inch	2.6	4.4	2.9	1.2	1.5	2.1	0.4	1.4	2.0	0.3	0.2	0.4	0.5	F03/F05	1.0 lb
	mm	65.3	112.0	72.9	31.0	37.0	54.5	9.0	36.0	50.0	7.0	6.0	9.0	12.5		0.5 kg
1/2	inch	2.6	4.4	2.9	1.2	1.5	2.1	0.4	1.4	2.0	0.3	0.2	0.4	0.6	F03/F05	0.9 lb
	mm	65.3	112.0	72.9	31.0	37.0	54.5	9.0	36.0	50.0	7.0	6.0	9.0	15.0		0.4 kg
3/4	inch	3.0	4.4	3.2	1.5	1.8	2.6	0.4	1.4	2.0	0.3	0.2	0.4	0.8	F03/F05	1.4 lb
	mm	77.3	112.0	81.8	38.9	45.0	67.0	9.0	36.0	50.0	7.0	6.0	9.0	20.0		0.6 kg
1	inch	3.5	5.4	3.6	1.7	2.1	3.1	0.4	1.4	2.0	0.3	0.2	0.4	1.0	F03/F05	2.1 lb
	mm	88.7	136.0	90.5	44.3	53.5	78.7	9.0	36.0	50.0	7.0	6.0	9.0	25.0		0.9 kg
1-1/4	inch	4.0	7.3	3.9	2.0	2.3	3.6	0.4	1.4	2.0	0.3	0.2	0.4	1.3	F03/F05	3.3 lb
	mm	102.4	185.0	98.0	50.7	59.0	90.7	9.0	36.0	50.0	7.0	6.0	9.0	32.0		1.5 kg
1-1/2	inch	4.3	7.8	4.5	2.2	2.9	4.4	0.6	2.0	2.8	0.4	0.3	0.6	1.5	F05/F07	4.4 lb
	mm	109.0	198.0	114.7	55.0	74.8	112.0	14.0	50.0	70.0	9.0	7.0	14.0	38.0		2.0 kg
2	inch	4.9	7.8	4.9	2.4	3.3	5.1	0.6	2.0	2.8	0.4	0.3	0.6	2.0	F05/F07	7.1 lb
	mm	125.3	198.0	124.0	62.2	83.5	128.3	14.0	50.0	70.0	9.0	7.0	14.0	50.0		3.2 kg
2-1/2	inch	6.5	10.5	6.1	3.2	4.3	6.3	0.7	2.8	4.0	0.4	0.4	0.7	2.6	F07/F10	15.7 lb
	mm	165.0	267.0	155.0	82.5	108.8	161.0	18.0	70.0	102.0	11.0	9.0	17.0	65.0		7.1 kg
3	inch	7.5	10.5	6.5	3.7	4.7	7.3	0.7	2.8	4.0	0.4	0.4	0.7	3.1	F07/F10	22.3 lb
	mm	189.5	267.0	164.5	94.8	118.3	186.5	18.0	70.0	102.0	11.0	9.0	17.0	80.0		10.1 kg
4	inch	9.4	12.8	8.5	4.7	6.1	9.3	0.7	2.8	4.0	0.4	0.4	0.7	3.9	F07/F10	37.5 lb
	mm	238.0	325.0	217.0	119.0	153.8	236.0	18.0	70.0	102.0	11.0	9.0	17.0	100.0		17.0 kg