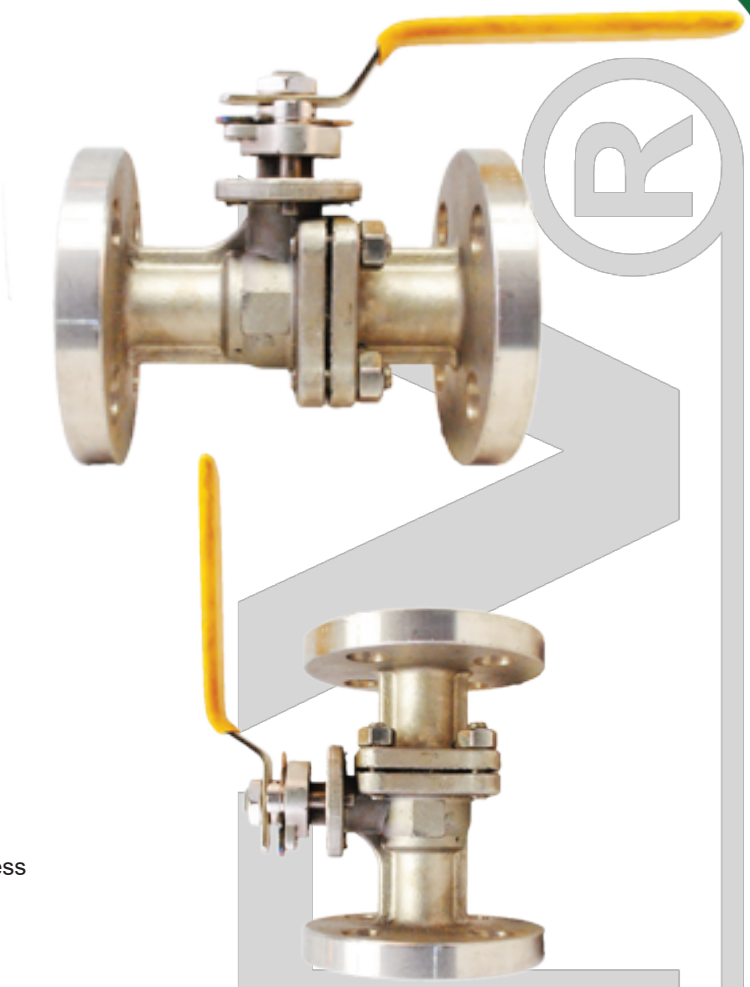
PTV® Solutions

Ball Valve Fire Safe Super Steel Series BVSS607

API 6D- Full Port - Anti-static Construction

In process industries, petroleum and flammable applications often require Fire-safe equipment. The Fire Safe Super Steel Series can be used additionally in Highly Corrosive Environments. It is a 2 piece Full Port, Flanged end Valve in Ansi Class 150 and 300 Ansi B16.5 RF. Our Fire Safe Ball Valve meets Api 607 4th Edition and API 6FA, with Fire Safe design, including fire safe lip, graphite seals, and anti-static devices. Standard body material is SS316L, one the best stainless steel for any corrosive media including Sea Water and desalination process. Our Super Steel Series ball valve has a revolutionary easy in-line maintenance design. Better yet, equipped with the ever-important ISO 5211 direct-mounting pad. The Super Steel Series offers the flexibility to be automated with actuator, or operated manually with hand lever.



Features:

A) Stem Packing: The stem packing is designed to self-adjust for temperature variation and pipeline system vibration, and thus providing safe working conditions of the valve. In SBM PTV ball valves, graphite stem packing is used to prevent stem leakage after fire.

(B) Blowout-Proof Stem: The stem is inserted from inside the body bore. This particular design prevents the stem from shooting out when there is excess pressure in the bore caused by high temperature heat.

(C) Anti-Static Device: All SBM PTV ball valves are equipped with Anti-Static Device in the ball bore. This device provides a grounding path between the valve body and the ball for static electric charges built up by valve operation.

D) Floating Ball Design: The floating ball design, combined with soft seat, offers bubble-tight shutoff, low operating torque, and prolonged life cycle. For fire safe purposes, the floating ball design plays important role in the formation of secondary metal-to-metal sealing property.

(E) Fire-Safe Contact: The special designed fire-safe contact forms an alternative seal after the soft ball seat has been burnt away during fire. The new metal-to-metal seal reduces the leaking possibilities to the minimum.

(F) Valve Operation: SBM PTV Ball Valves are provided with Hand lever or Gearbox operators according to the torques requirement. Square stem and twin ISO 5211 pattern mounting pad allow easy valve automation product installation with bracket and adaptor SBM PTV can also be provided with pneumatic, electric, hydro-pneumatic, hydraulic, electro-pneumatic actuators.

Technical Data

1. Size range: NPS 1/2"~8"
2. Pressure ratings: 150LB / 300LB
3. Working temperature: -29°~ +200°C.
4. Service Fields: corrosive fluids, sea water, concentrated H2S04, water, air, stem, gas, and oil.
5. Body Material: A351 CF3M SS316L
6. Trim Material: SS316L
7. Seat Material: RPTFE
8. Full Bore

Performance Standard

1. Design and manufacture standard as to: API 6D
2. Face-to-face dimension standard as to: ASME B16.10
3. Flange dimension conforms as to: ASME B16.5
   Finish, Flange facing: RA=3.2-6.4 Micron
4. Testing And Inspection as to: API 598
5. Pressure-temperature conforms as to: ASME B16.34
6. Fire Safe Design Conforms To: API 607 / API 6FA
7. Anti Corrosion as per NACE MR-0175(2002) requirement
8. Locking device for safe service
9. Mounting platform conforming to ISO 5211
10. Size 8" with Manual Gear

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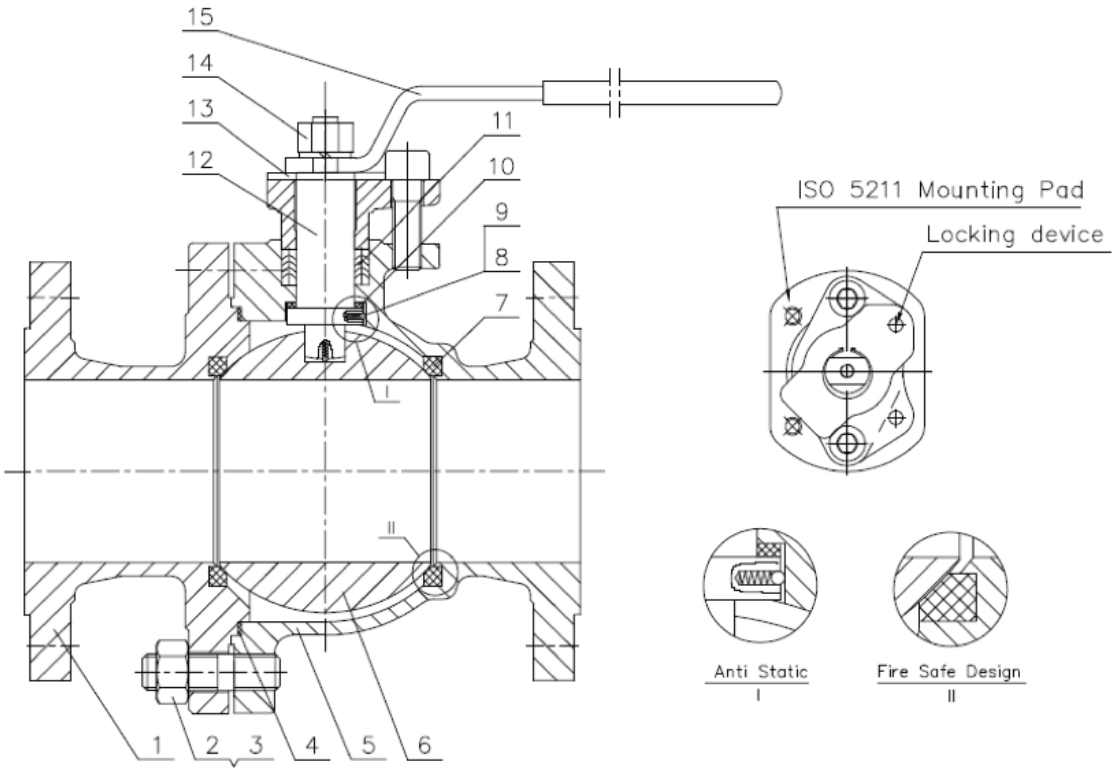

Part List:

No	Part Name	Material	Standard
1.	Bonnet	A351 CF3M	ASTM A351
2.	Bonnet Bolt	B8M	ASTM A193
3.	Bonnet Nut	8M	ASTM A194
4.	Gasket	SS316L+Graphite	MFR-STD
5.	Body	A351 CF3M	ASTM A351
6.	Ball	F316L	ASTM A182
7.	Seat	RPTFE	MFR-STD
8.	Anti static Ball	SS316L	ASTM A276
9.	Anti Static Spring	SS316L	ASTM A276
10.	Thrust ring	PTFE	MFR-STD
11.	Packing	Graphite	MFR-STD
12.	Stem	F316L	ASTM A182
13.	Stopper	SS304	ASTM A276
14.	Stem Nut	8M	ASTM A194
15.	Hand Lever	SS201+PVC	ASTM A276

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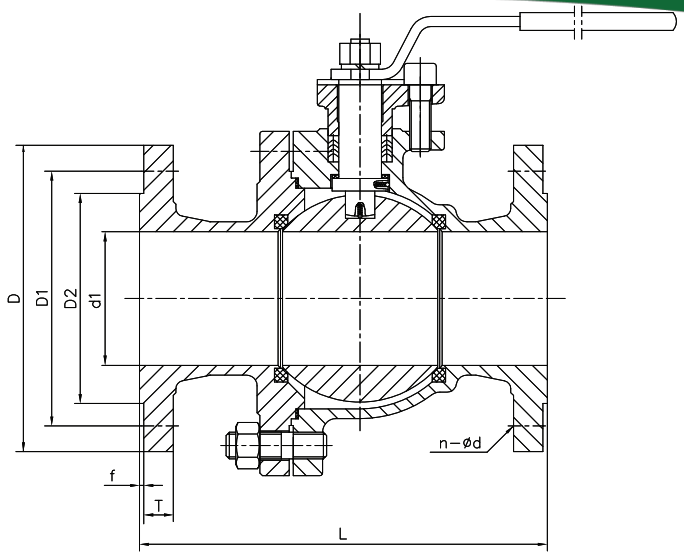

Class 150LB RF

Flange dimension standard conforms as to: ASME B16.5

NPS	d1	L	D	D1	D2	T	n-Φd	f	Max Working Torque(N*M)	Weight Kg
1/2"	15	108	89	60.3	35	10	4-Φ16	2	3	2
3/4"	19	117	99	69.9	43	11.5	4-Φ16	2	5	2.5
1"	25	127	108	79.4	51	13	4-Φ16	2	11	3.3
1 1/2"	38	165	127	98.4	73	16	4-Φ16	2	16	6
2″	49	178	152	120.7	92	17.5	4-Φ19	2	25	9
2 1/2"	62	190	178	139.7	105	21	4-Φ19	2	50	13
3″	74	203	191	152.4	127	22.5	4-Φ19	2	65	18.5
4″	100	229	229	190.5	157	22.5	8-Φ19	2	125	27.5
6"	150	394	279	241.3	216	24	8-Φ22	2	410	60.3
*8″	200	457	343	298.5	270	27	8-Φ22	2	700	138

Remark: 150 LB-8" Ball valve is Gear Operation

Class 300LB RF

Flange dimension standard conforms as to: ASME B16.5

NPS	d1	L	D	D1	D2	T	n-Φd	f	Max Working Torque(N*M)	Weight Kg
1/2"	15	140	95	66.7	35	13	4-Φ16	2	7	2.5
3/4"	19	152	117	82.6	43	14.5	4-Φ19	2	12	3
1"	25	165	124	88.9	51	16	4-Φ19	2	26	4.5
1 1/2"	38	190	155	114.3	73	19.5	4-Φ22	2	38	8.5
2″	49	216	165	127	92	21	8-Φ19	2	60	12
2 1/2"	62	241	191	149.2	105	24	8-Φ22	2	120	11.5
3″	74	283	210	168.3	127	27	8-Φ22	2	160	26
4″	100	305	254	200	157	30.5	8-Φ22	2	280	40
6"	150	403	318	269.9	216	35	12-Φ22	2	950	72
*8"	200	502	381	330.2	270	40	12-Φ25.5	2	1550	180

300LB-8" Ball valve is Gear Operation

* Max Working Torque is with safety factor 1.2

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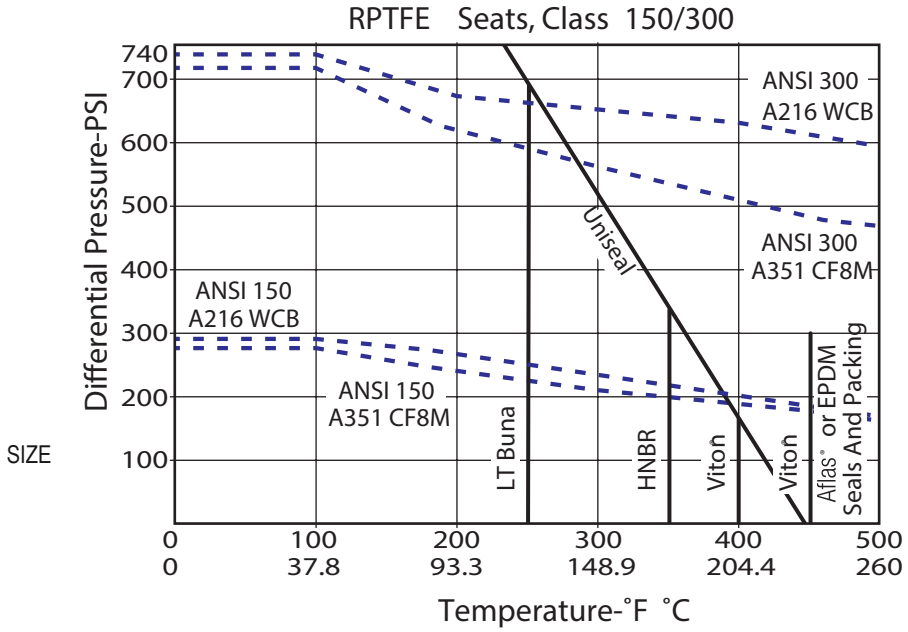
SBM PTV EngineeringData

Pressure Temperature (sizes listed on Teflon® chart indicate bore size)



Low temperature Limits

Body Material	ºF	ºC
WCC	-20º	-28.9
LCC	-50º	-45.6
WCB	-20º	-28.9
CF8M	-50º	-45.6

Inch	DN	Cv	Kv
1/2″	15	23	19.7
3/4″	20	45	38.6
1″	25	77	66.0
1 1/2″	40	192	165
2″	50	358	307
2 1/2″	65	611	524
3″	80	858	736
4″	100	1512	1296
6″	150	3664	3140
8″	200	9500	8080

The left table represents the Flow Coefficients (CV) an Flow Factor (KV) for ball valves. This number represents the volume of water at 60ºF that will flow in US gallon per minute through a valve with a 1 lb/in² pressure dropacross in the full open position. For Kv, it is the flow of water with temperature from 5ºC - 30ºC in cubic meters per hour (m3/h) with a pressure drop of 1 bar.

The Cv is dependent on flow rate, pressure drop, specific gravity. The larger the Cv value, the easier the fluid will flow within the valve. However, Cv value is easily affected by various factors, such as fluid type, fluid viscosity, saturated steam pressure.

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ORDERING CODE:

Example: 1000LT-222-1-200

Ball Valve, SS316 CF8M Body, SS316 CF8M ball and stem, RPTFE Seat, NPT Thread, Size 2”

Available Body Material Code:

SS304 CF8 Stainless Steel: 1

SS316 CF8M Stainless Steel: 2

SS316L CF3M Stainless Steel: 3

Available Ball and Stem Material:

SS304 CF8 Stainless

Steel: 1 SS316 CF8M

Stainless Steel: 2 SS316L

CF3M Stainless Steel: 3

Available End Code:

Female NPT Thread: 1

Female BSP Thread: 2

Available Seat Material Code:

PTFE: 1

RPTFE: 2