



TRUNNION BALL VALVE



SERIES - 8200

Table of Contents

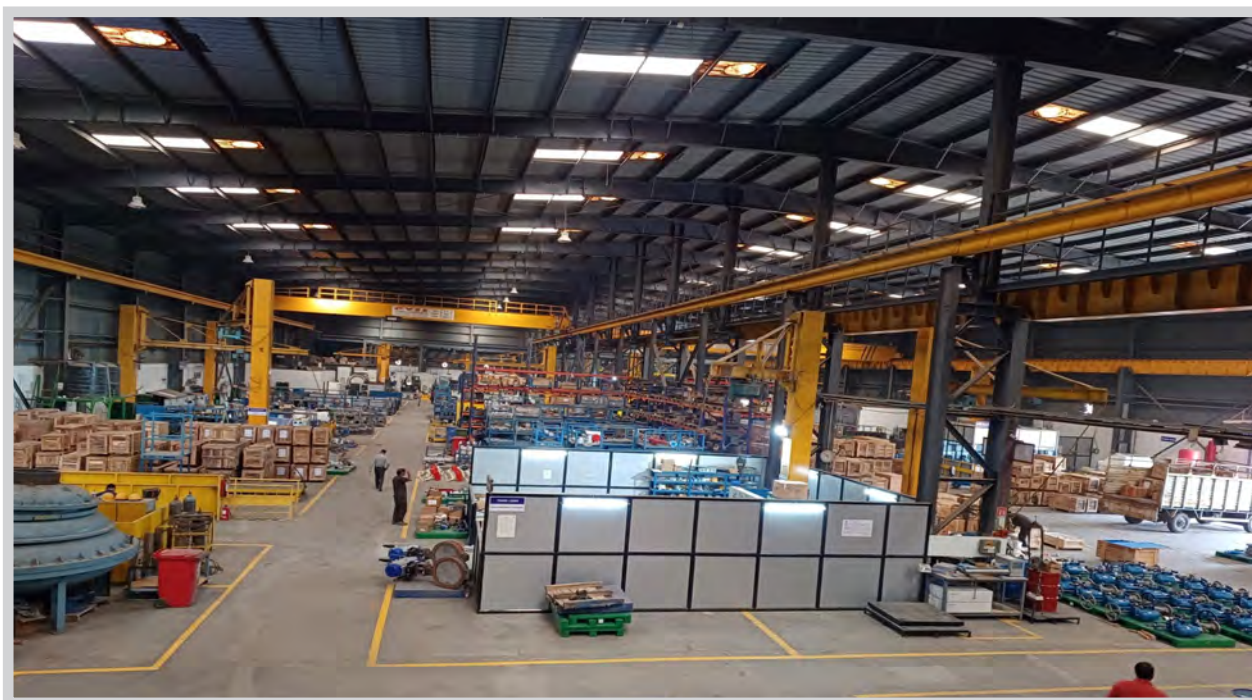
Introduction

Introduction.....	01
Product Range.....	02
Dembla Facilities.....	03
Quality Achievements.....	05
Quality Control.....	06
Product Overview.....	07
Design Features.....	09
Series 8200 Ball Valve 2 Piece Design.....	13
Series 8200 Ball Valve 3 Piece Design.....	21
Engineering Data.....	32
Address.....	35

This catalogue represents Dembla Trunnion Ball Valves in two Designs:

- 1] Two Piece Design Ball Valves
 - 2] Three Piece Design Ball Valves
- these Ball Valves are produced with advanced design features complying to API 6D, BS 5351 standards.

The valves are side entry type design construction that allows easy maintenance. Valves are available with solid ball design for full Bore and reduced Bore valves.



Product Range

2 Piece Ball Valve

Valve Size Inch	2	2.5	3	4	5	6	8	10	12	14	16	18	20	24
150#														
300#														
600#														
900#														
1500#														

3 Piece Ball Valve

Valve Size Inch	2	2.5	3	4	5	6	8	10	12	14	16	18	20	24	26	28	30	32	36	48	56	60	
150#																							
300#																							
600#																							
900#																							
1500#																							
2500#																							



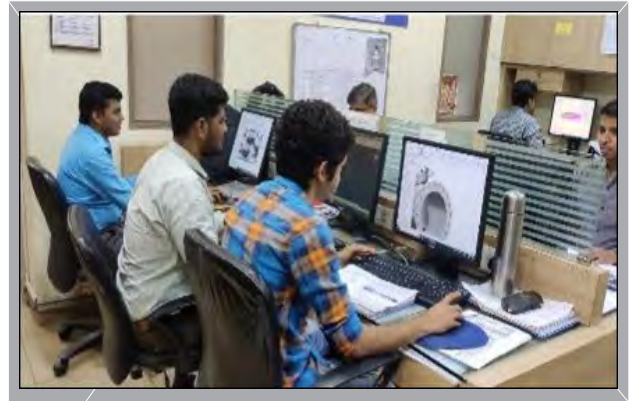
Dembla Facilities

Dembla has developed complete manufacturing facilities based on “Lean Manufacturing Systems”. All the valve component are identified for traceability for the entire manufacturing operation and finished products. The assembly work stations are specially designed and equipped with modern power tools for faster and effort less assembly operations. The machining is carried out on ultra

modern machines including CNC machining center HMC and VMC machining centers, numeric controlled drilling machines.

The entire facility is working very effectively on Lean Manufacturing production systems to maintain I) Lowest stores inventory ii) Lowest inventory at work in progress iii) Mini Material iv) Lowest manufacturing cycle time v) Mini Wastage.

DESIGN



TEST FACILITY



HYDRO TEST FACILITY



TEST BENCHES



ON SITE TESTING



Dembla Facilities

MACHINES



CNC MACHINES



FIRE SAFE FACILITY



SHOT BLASTING



VMC MACHINE



CNC VTL



HMC MACHINE



VMC MACHINE



Quality Control

Dembla has extensive Quality control Department. Experienced engineers are trained and qualified to level II for testings requirements like radiography, Ultrasonic test, Dye penetrate test, Magnetic, Particle Test etc. Additional testing requirements like fire test, Low Fugitive Emission test,

and Vacuum are under quality control department. Valves are offered with 3.1 certificate whenever required. Extensive quality documentation are produced and submitted to customer for every project. Third party / Customers inspections

are carried out on routine basis. The factory has independent testing equipments and separate inspection cell who offers final inspection to customers.

Dembla Quality Processes

- Chemical Composition (PMI)
- Mechanical Property Testing
- NDT Tests (UT, RT, PT, MT)
- Dimensional Inspection
- Degreasing & Cleaning for Oxygen Service
- Pressure Testing
- Fire Safe Testing
- Low fugitive Emission Testing
- Vacuum Testing
- Painting Inspection like
- Surface Preparation Inspection
- Dry film thickn. measurement
- Wet film thick. measurement
- Scratch Testing
- Paint adherence testing

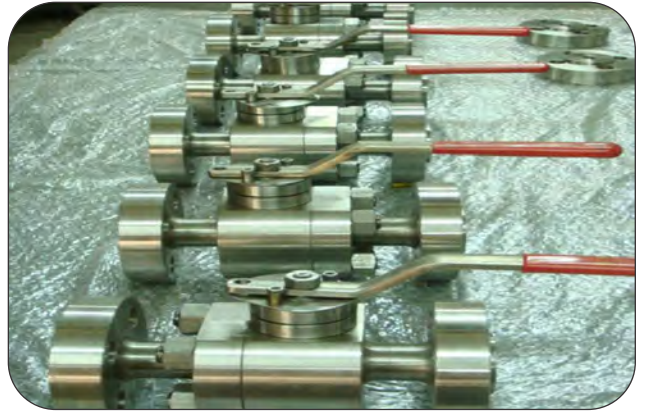
Design and Testing Standards

- Face-to-Face : ANSI B16.10, API 6D
- Flange Drilling : ANSI B16.5, ANSI B16.47 Series A & B, MSS SP 44, EN 1092
- Design Standards : ASME B16.34, API 6D, BS 5351, BS/EN 17292
- Buttweld Ends : ASME B16.25, ASME B31.3, ASME B31.4, ASME B31.8
- Actuator Mounting Pad : ISO 5211
- Drain / By Pass : API 6D
- Materials : ASME SEC.II
- Nace Compliance : NACE MR 01-75
- Quality Standard : ISO 9001:2015, N° CE-0062-PED-H-DVL 001-21-IND, ATEX, 94/9/EC
- Valve Testing : API 598, API 6D, EN 12266-1 & 2, ISO 5208
- Fire Safe Design : API 607, API 6FA
- Casting Inspection : MSS SP -55
- Fugitive Emission Test : ISO 15848

Product Overview



Product Overview



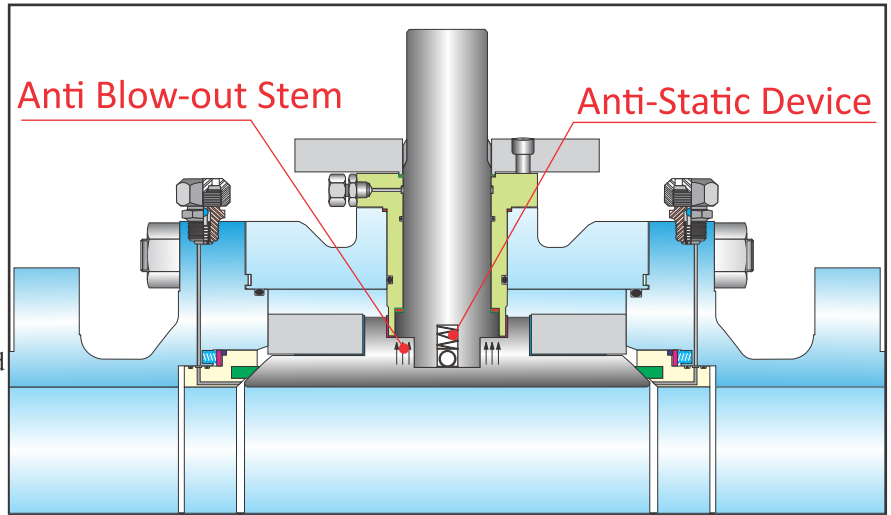
Design Features

Anti Blow-out Stem

The valve stem is designed with a Collor which makes it blow out proof under pressure conditions.

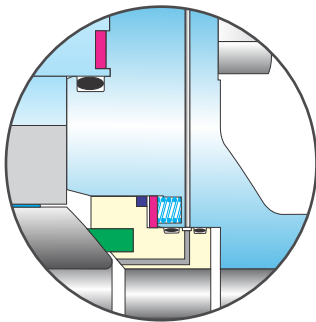
Anti-static Device

A spring loaded ball makes positive electrical continuity between ball, stem and body. This is a standard feature on all Dembla ball valves.



Fire Safe Design

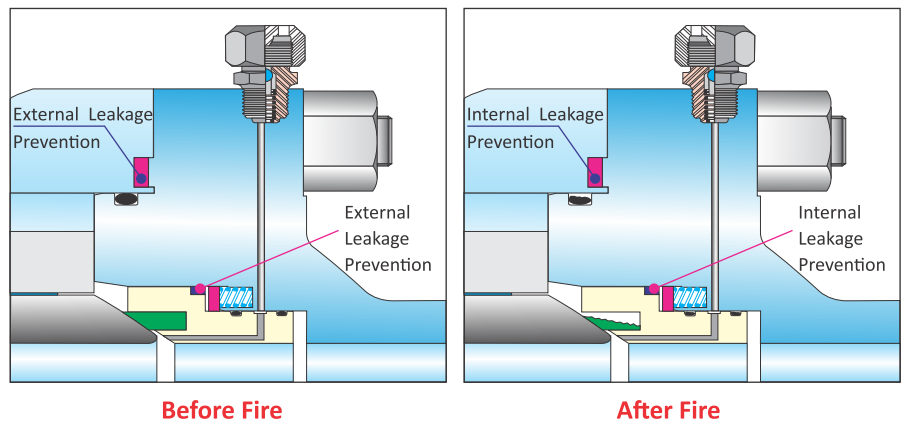
Valves when supplied with fire safe design the external and internal process fluid leakage is restricted as follows so that the valve meet API607 / API 6FA requirements.



Internal Leakage Prevention External Leakage Prevention

The seat design is such that in case of fire the polymer soft seat gets decomposed or deteriorated, the adjacent metallic edge of seat retainer comes in contact with the ball as the seat retainer is energized with multiple seat springs. This minimizes the leakage in the valve bore. Also an additional graphite ring is provided on the outer diameter of seat retainer. This graphite ring prevents internal leakage through the periphery of seat retainer.

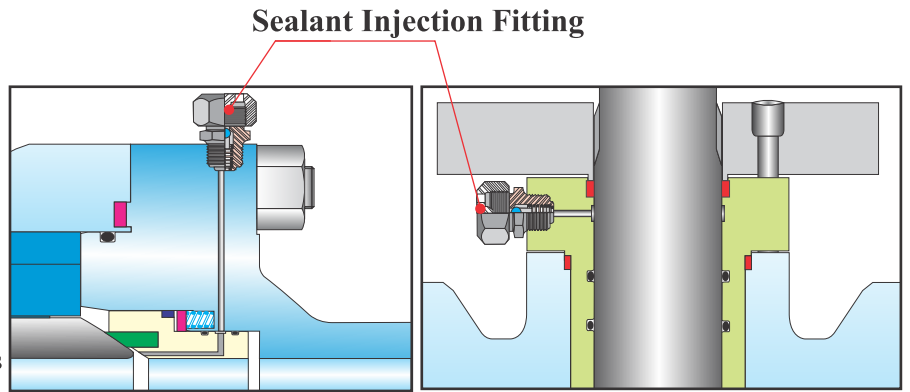
The gland arrangement has two nos 'o' rings and a graphite gasket. The gland packing is of graphite material. The leakage from body to side connection is designed with graphite gasket in addition to 'o' ring. In case of fire the graphite gland packings and graphite gasket prevent external leakage.



Design Features

Emergency Sealant Injection System

The sealant injection fittings are provided on ball valves for the seat and valve stem. In case the soft seat or gland seals are damaged due to some accidental cases the liquid sealants can be injected through these fittings at seat ring and gland area to prevent leakage. These fitting contain internal check valves. These fittings are provided on all Dembla Trunnion Ball Valves sizes 6' and above.



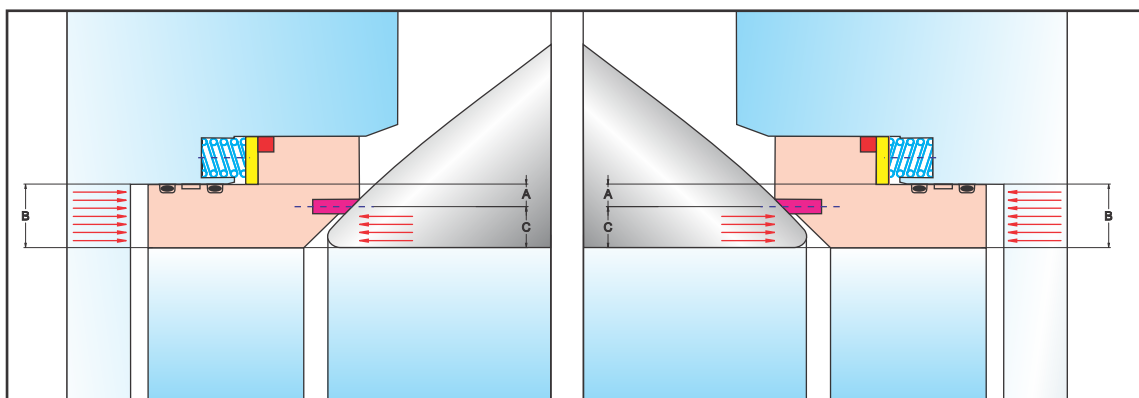
Double Block and Bleed

Both up stream and down stream seats are capable of sealing fluid pressure independently when valve is in fully closed / open position. If pressure is applied simultaneously from up stream and down stream the cavity is isolated and the pressure in the body cavity can be released through drain plug.

The seat assembly is provided with multiple helical springs on its back

face. With the ball and seat assembly these springs are compressed and push the seat towards the ball ensuring ball and seat contact even at zero line pressure.

When the line pressure increases the seat differential area $A=(B-C)$ that creates a piston effect facing the seat against ball. This additional load increases seal effectiveness.

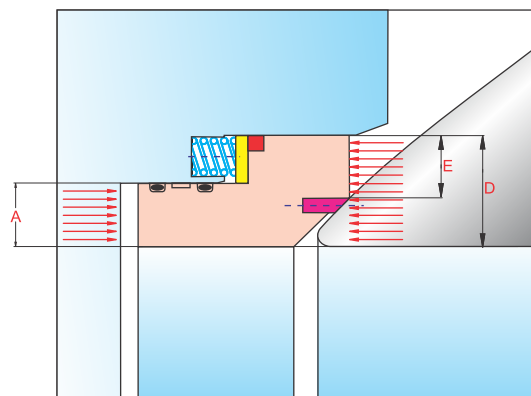


Double Block and Bleed

Design Features

Automatic Cavity Relief

If the valve cavity pressure increases beyond the line pressure the differential area at the inner face of seat creates a differential area $E = (D - A)$ that pushes the seat away from the ball thus releasing the excess cavity pressure back to line pressure at up stream / down stream.



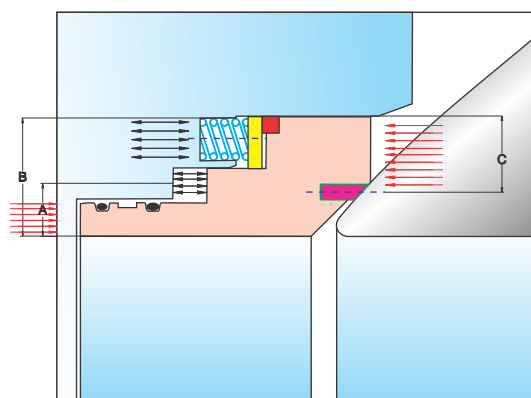
Double Piston effect Seats

With standard cavity relief seats create single seal on the seat exposed to line pressure. The opposite seat relieves the cavity pressure.

If the up stream seat fails it may be appropriate to use down stream seat as a secondary sealing arrangement.

This arrangement can be given using double piston effect with modified seats.

The seats are designed with a double piston profile exploring more surface area to cavity pressure than a normal floating seat. The fluid pressure upstream / downstream as well as in the body cavity creates a resultant thrust that pushes the seat towards ball. The differential area $A = B - C$ creates a piston effect forcing the

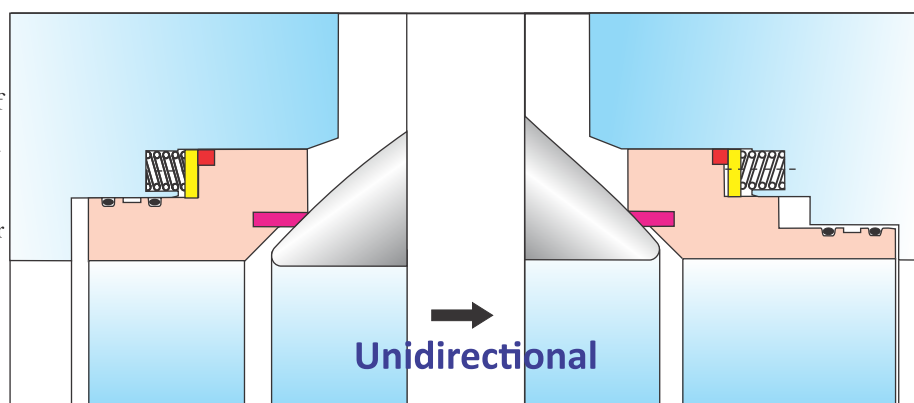


seat against the ball. Valve with double piston effect seat rings require a relief valve to be provided in the body cavity in order to reduce the build up of over pressure in the body cavity.

Self Relieving Upstream and Double Piston Effect Down-stream Seat

As an option it is possible to adapt the self relieving seat at upstream side and double piston effect seat on the downstream side. In this case the need for cavity pressure relief valve is eliminated.

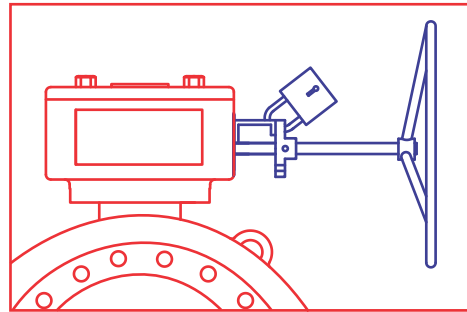
With this combination of seats the valve becomes unidirectional. This arrangement is available on request.



Design Features

Locking Devices

Locking facility is available as standard on all Dembla Gear Operators. This facility is also available on Lever Operators.



Actuation

Dembla ball valves are designed with ISO 5211 top flanges to accept pneumatic, electric and hydraulic actuators. The valve components are engineered so that the breakaway torques are minimum that allow for economical actuator packages. The automated ball valves are fully mounted, tested and calibrated with actuators and accessories before shipment.

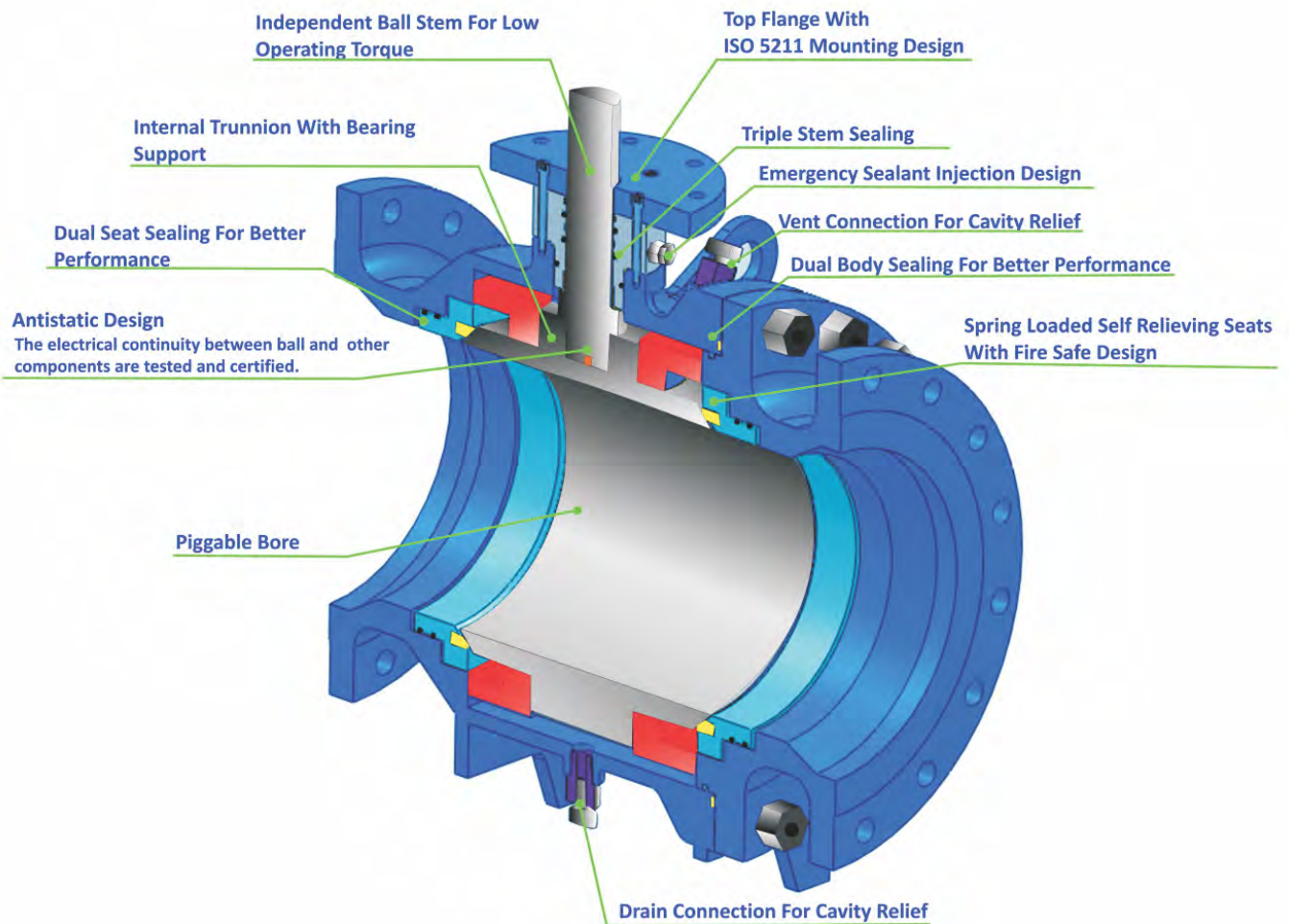


Coatings / Weld Overlay Technology

A wide variety of coatings like hard chrome, electro less nickel coatings and weld overlay of Stellite, Tungsten carbide, Inconel 625 can be provided on ball seat and other components to provide a cost affective solutions for corrosive and erosive applications. Using these technologies could result in considerable savings without affecting the performance of the valve and service life.



2 Piece Design



NOTE:

External Trunnion Design is applicable upto size 20" #150, for other sizes & ratings Internal Trunnion design shall be provided.

Material Specifications

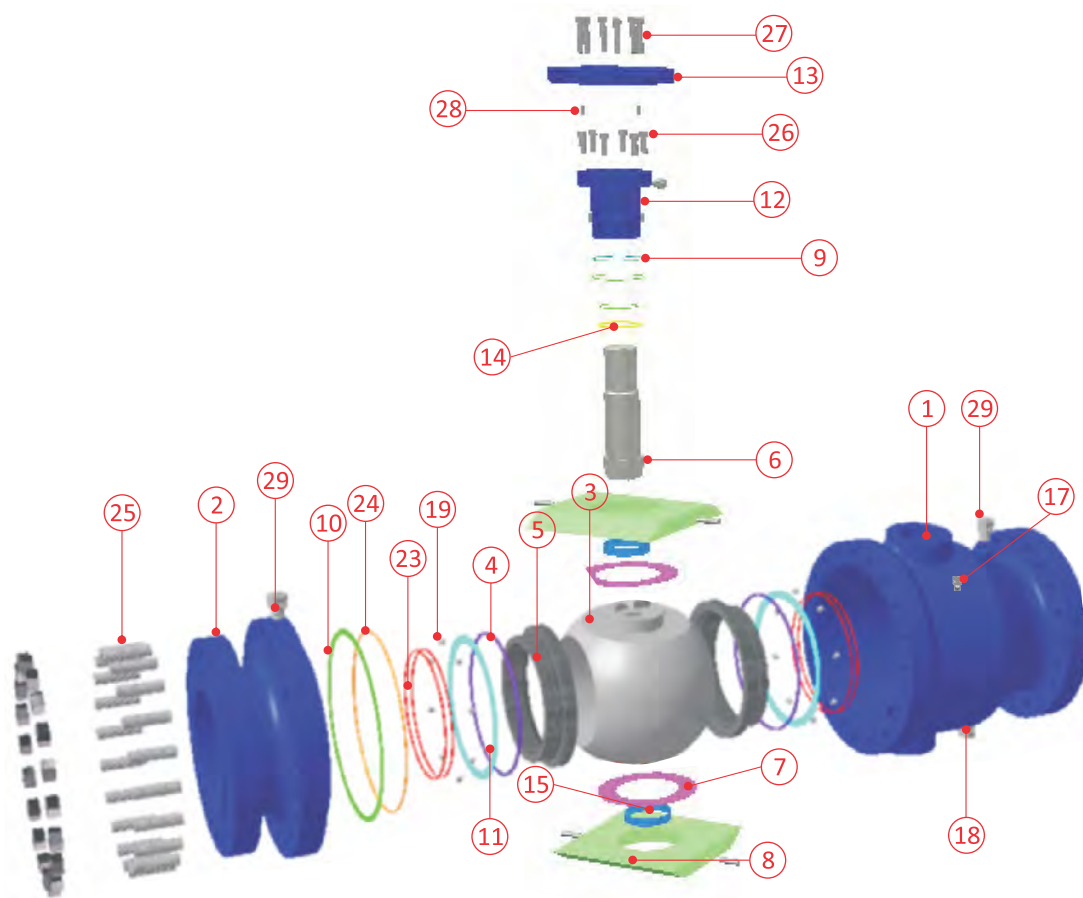
2 Piece Design

Part No.	Part	Carbon Steel (Nace Service)	Stainless Steel	Low Temperature Service	Carbon steel + Inconel Alloy
1	Body	ASTMA216-WCB	ASTMA351-CF8M	ASTMA352-LCB	ASTMA216-WCB + Inconel 625
2	Side Connection	ASTMA216-WCB	ASTMA351-CF8M	ASTMA352-LCB	ASTMA216-WCB + Inconel 625
3	Ball	ASTMA105N/ENP	ASTMA182-F316	ASTMA350-LF2/ENP	ASTMA105N/ENP + Inconel 625
4	Soft Seat	RPTFE/NYLON/PEEK DEVLON	RPTFE/NYLON/PEEK DEVLON	RPTFE/NYLON/PEEK DEVLON	RPTFE/NYLON/PEEK DEVLON
5	Seat Retainer	ASTMA105N/ENP	ASTMA182-F316	ASTMA350-LF2/ENP	B564 UNS 6625
6	Valve Shaft	ASTMA105N/ENP	ASTMA182-F316	ASTMA350-LF2/ENP	B564 UNS 6625
7	Thrust Washer (Trunnion to Ball)	PTFE COATED- CARBON STEEL	PTFE COATED + SS	PTFE COATED + SS	PTFE COATED + INCONEL
8	Trunnion	ASTMA216-WCB-ENP	ASTMA351-CF8M	ASTMA352-LCB/ENP	ASTMA216-WCB/ENP
9	Gasket (Bonnet to Body)	316SS+Graphite	316SS + Graphite	316SS+Graphite	INCONEL + Graphite
10	Gasket (Body to Side Conn)	316SS+Graphite	316SS + Graphite	316SS + Graphite	INCONEL + Graphite
11	Backup Gasket	Graphite	Graphite	Graphite	Graphite
12	Bonnet	ASTMA105N	ASTMA182-F316	ASTMA350-LF2	ASTMA105N+Inconel 625
13	Mounting Flange	ASTMA105N	ASTMA182-F316	ASTMA350-LF2	ASTMA105N+Inconel 625
14	Thrust Washer (Shaft to Bonnet)	PTFE + COATED + SS 316	PTFE + COATED + SS 316	PTFE + COATED + SS 316	PTFE + COATED + Inconel
15	Bearing Bush (Ball to Trunnion)	PTFE+COATED+SS 316	PTFE+COATED+SS 316	PTFE+COATED+SS 316	PTFE+COATED+Inconel
16	Vent	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
17	Drain	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
18	Seat Spring	Inconel X-750	Inconel X-750	Inconel X-750	Inconel X-750
19	O-Ring (Shaft to Bonnet)	VITON/NBR/EPDM	VITON/NBR/EPDM	VITON/NBR/EPDM	VITON/NBR/EPDM
20	O-Ring (Bonnet to Body)	VITON/NBR/EPDM	VITON/NBR/EPDM	VITON/NBR/EPDM	VITON/NBR/EPDM
21	O-Ring (Seat Retainer to Side Conn.)	VITON/NBR/EPDM	VITON/NBR/EPDM	VITON/NBR/EPDM	VITON/NBR/EPDM
22					
23	O-Ring (Side Connection to Body)	VITON/NBR/EPDM	VITON/NBR/EPDM	VITON/NBR/EPDM	VITON/NBR/EPDM
24	Stud with one nut (Body to Side Conn.)	ASTMA193-B7	ASTMA193-B8	ASTMA320-L7M	ASTMA193-B7
25	Allen Bolt (Bonnet to Body)	ASTMA194-2H	ASTMA194-8	ASTMA194-7M	ASTMA194-2H
26	Allen Bolt (Mounting Flange to Bonnet)	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
27	Lock Pin (Mounting Flange to Bonnet)	Carbon Steel	Stainless Steel	ASTMA320-L7M	Carbon Steel
29	Seat Injection	Carbon Steel	Stainless Steel	Stainless Steel	Carbon Steel
30	Stem Injection	Carbon Steel	Stainless Steel	Stainless Steel	Carbon Steel

1] Please contact factory for materials supplied.

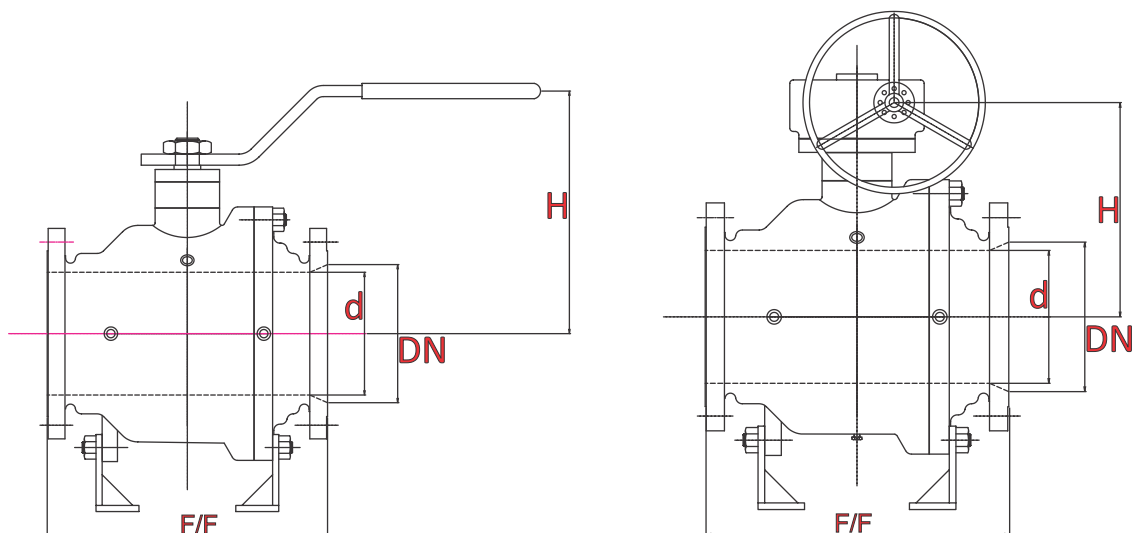
Material Specifications

Part No.	Parts	Part No.	Parts
1	Body	17	Vent
2	Side Connection	18	Drain
3	Ball	19	Seat Spring
4	Soft Seat	21	'O'-Ring (Shaft to Bonnet)
5	Seat Retainer	22	O-Ring (Bonnet to Body)
6	Valve Shaft	23	O-Ring (Seat Retainer to Side Conn.)
7	Thrust Washer (Trunnion to Ball)	24	O-Ring (Side Connection to Body)
8	Trunnion	25	Stud with one nut (Body to Side Conn.)
9	Gasket (Bonnet to Body)	26	Allen Bolt (Bonnet to Body)
10	Gasket (Body to Side Conn.)	27	Allen Bolt (Mounting Flange to Bonnet)
11	Backup Gasket	28	Lock Pin (Mounting Flange to Bonnet)
12	Bonnet	29	Seat Sealant Injection
13	Mounting Flange	30	Stem Sealant Injection
14	Thrust Washer (Shaft to Bonnet)		
15	Bearing Bush (Ball to Trunnion)		
16	Allen Bolt (Trunnion to Body)		



NOTE:
External Trunnion Design is applicable upto size 20" #150,
for other sizes & ratings Internal Trunnion design shall be provided.

Dimensions



150 LB Dimensions

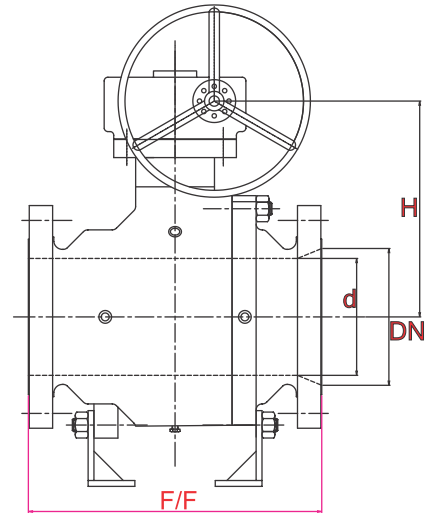
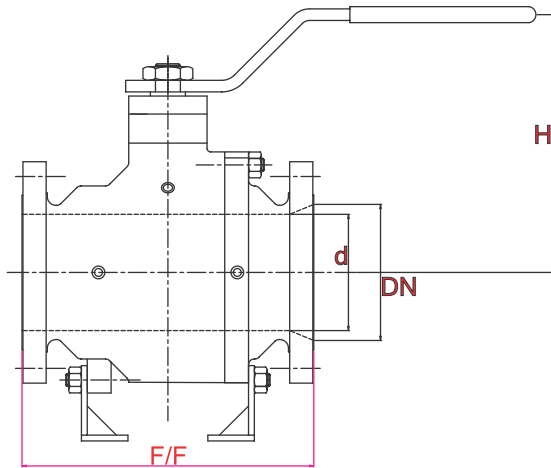
Full Bore

Size		d		F/F		H		Weight	
NB	DN	Inch	mm	Inch	mm	Inch	mm	lbs	Kg
2	50	2.01	51	7.01	178	6.48	162	26.4	12
3	80	2.99	76	7.99	203	7.6	190	50.6	23
4	100	4.02	102	9.02	229	9.2	230	96.8	44
6	150	5.98	152	15.51	394	13.28	332	204.6	93
8	200	7.99	203	17.99	457	15.6	390	365.2	166
10	250	10.00	254	20.98	533	16.12	403	600.6	273
12	300	12.01	305	24.02	610	17.64	441	807.4	367
14	350	13.27	337	27.01	686	19.28	482	1254	570
16	400	15.24	387	30.00	762	23.84	596	1711.6	778
18	450	17.24	438	34.02	864	25.6	640	2057	935
20	500	19.25	489	35.98	914	28.08	702	2618	1190
22	550	21.26	540	40.00	1016	31.8	795	-	-
24	600	23.27	591	42.01	1067	34.52	863	3473.8	1579

Reduced Bore

Size		d		D		F/F		H		Weight	
NB	DN	Inch	mm	Inch	mm	Inch	mm	Inch	mm	lbs	Kg
3 x 2	80 x 50	2.01	51	2.99	76	7.99	203	6.48	162	35.2	16
4 x 3	100 x 80	2.99	76	4.02	102	9.02	229	7.6	190	85.8	39
6 x 4	150 x 100	4.02	102	5.98	152	15.51	394	9.28	232	140.8	64
8 x 6	200 x 150	5.98	152	7.99	203	17.99	457	13.28	332	270.6	123
10 x 8	250 x 200	7.99	203	10.00	254	20.98	533	15.6	390	455.4	207
12 x 10	300 x 250	10.10	254	12.01	305	24.02	610	15.6	390	638	290
14 x 12	350 x 300	12.01	305	13.27	337	27.01	686	17.64	441	1034	470
16 x 14	400 x 350	13.27	337	15.24	387	30.00	762	19.32	483	1298	590
18 x 16	450 x 400	15.24	387	17.24	438	34.02	864	23.8	595	1738	790
20 x 18	500 x 450	17.24	438	19.25	489	35.98	914	25.6	640	2266	1030
22 x 20	550 x 500	19.25	489	21.26	540	40.00	1016	25.6	640	-	-
24 x 20	600 x 550	19.25	489	23.27	591	42.01	1067	28.08	702	3344	1520

Dimensions



300 LB Dimensions

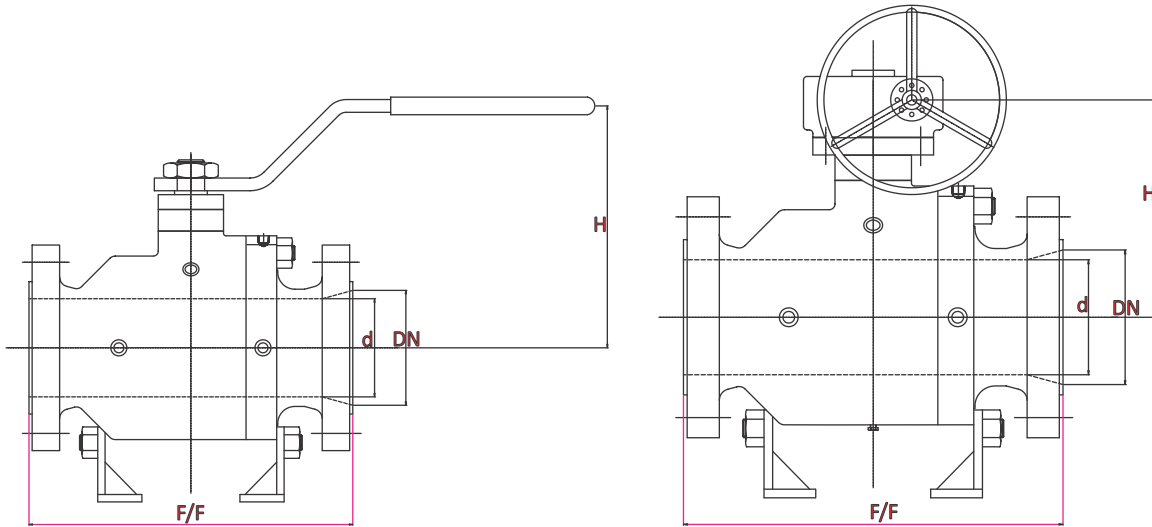
Full Bore

Size		d		F/F		H		Weight	
NB	DN	Inch	mm	Inch	mm	Inch	mm	lbs	Kg
2	50	2.01	51	8.50	216	6.48	162	35.2	16
3	80	2.99	76	11.14	283	7.6	190	81.4	37
4	100	4.02	102	12.01	305	9.28	232	127.6	58
6	150	5.98	152	15.87	403	13.28	332	319	145
8	200	7.99	203	19.76	502	15.6	390	528	240
10	250	10.00	254	22.36	568	16.12	403	763.4	347
12	300	12.01	305	25.51	648	17.64	441	1115.4	507
14	350	13.27	337	30.00	762	19.32	483	1564	710
16	400	15.24	387	32.99	838	23.8	595	2200	1000
18	450	17.24	438	35.98	914	25.6	640	2552	1160
20	500	19.25	489	39.02	991	28.08	702	2904	1320
22	550	21.26	540	42.99	1092	31.8	795	-	-
24	600	23.27	591	45.00	1143	34.4	860	4122.8	1874

Reduced Bore

Size		d		D		F/F		H		Weight	
NB		Inch	mm	Inch	mm	Inch	mm	Inch	mm	lbs	Kg
3 x 2	80 x 50	2.01	51	2.99	76	11.14	283	6.48	162	61.6	28
4 x 3	100 x 80	2.99	76	4.02	102	12.01	305	7.6	190	112.2	51
6 x 4	150 x 100	4.02	102	5.98	152	15.87	403	9.28	232	200.2	91
8 x 6	200 x 150	5.98	152	7.99	203	19.76	502	13.28	332	398.2	181
10 x 8	250 x 200	7.99	203	10.00	254	22.36	568	15.6	390	638.0	290
12 x 10	300 x 250	10.10	254	12.01	305	25.51	648	15.6	390	948.2	431
14 x 12	350 x 300	12.01	305	13.27	337	30.00	762	17.64	441	1287.0	585
16 x 14	400 x 350	13.27	337	15.24	387	32.89	838	19.32	483	1667.6	758
18 x 16	450 x 400	15.24	387	17.24	438	35.98	914	23.8	595	2156.0	980
20 x 18	500 x 450	17.24	438	19.25	489	39.02	991	25.68	642	2512.4	1142
22 x 20	550 x 500	19.25	489	21.26	540	42.99	1092	25.68	642	-	-
24 x 20	600 x 500	19.25	489	23.27	591	45.00	1143	28.08	702	3968	1804

Dimensions



600 LB Dimensions

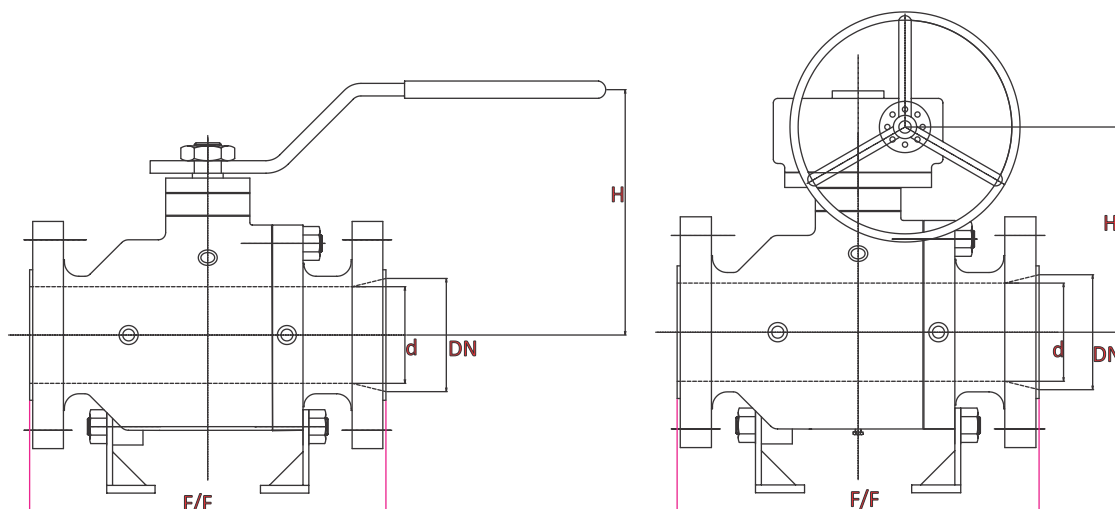
Full Bore

Size		d		F/F		H		Weight	
NB	DN	Inch	mm	Inch	mm	Inch	mm	lbs	Kg
2	50	2.01	51	11.50	292	6.88	172	55.0	25
3	80	2.99	76	14.02	356	9.92	248	110	50
4	100	4.02	102	17.01	432	10.88	272	191.4	87
6	150	5.98	152	22.01	559	14.4	360	462.0	210
8	200	7.99	203	25.98	660	14.4	360	792.0	360
10	250	10.00	254	30.98	787	17.12	428	1221	555
12	300	12.01	305	32.99	838	22.08	552	1804	820
14	350	13.27	337	35.00	889	23.8	595	2233	1015
16	400	15.24	387	39.02	991	26.08	652	2871	1305
18	450	17.24	438	42.99	1092	29.68	742	3223	1465

Reduced Bore

Size		d		D		F/F		H		Weight	
NB	DN	Inch	mm	Inch	mm	Inch	mm	Inch	mm	lbs	Kg
3 x 2	80 x 50	2.01	51	2.99	76	14.02	356	6.88	172	90.2	41
4 x 3	100 x 80	2.99	76	4.02	102	17.01	432	9.92	248	154	70
6 x 4	150 x 100	4.02	102	5.98	152	22.01	559	10.88	272	268.4	122
8 x 6	200 x 150	5.98	152	7.99	203	25.98	660	14.4	360	561.0	255
10 x 8	250 x 200	7.99	203	10.00	305	30.98	787	14.4	360	968.0	440
12 x 10	300 x 250	10.00	254	12.01	337	32.99	838	17.12	428	1456.4	662
14 x 12	350 x 300	12.01	305	13.27	387	35.00	889	22.08	552	1839.4	836
16 x 14	400 x 350	13.27	337	15.24	438	39.02	991	23.8	595	2175.8	989
18 x 16	450 x 400	15.24	387	17.24	489	42.099	1092	26.08	652	2723.6	1238

Dimensions



900 LB Dimensions

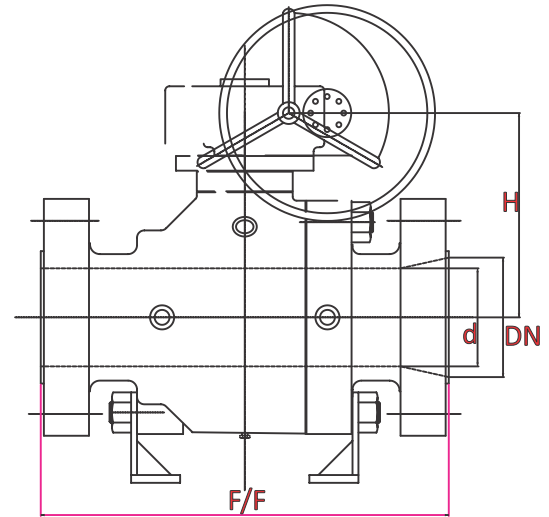
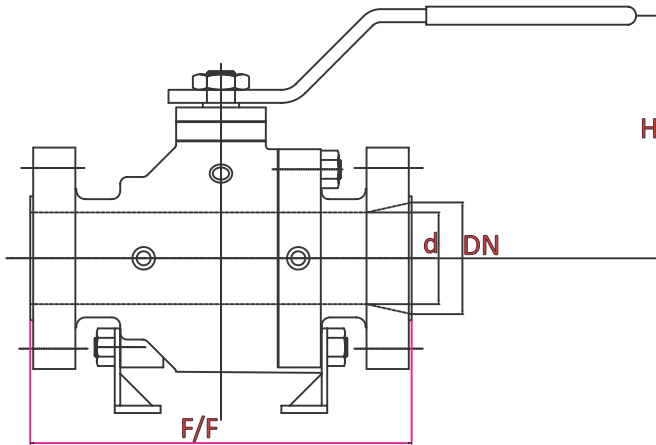
Full Bore

Size		d		F/F		H		Weight	
NB	DN	Inch	mm	Inch	mm	Inch	mm	lbs	Kg
2	50	2.01	51	14.49	368	7.6	190	114.4	52
3	80	2.99	76	15.00	381	10.0	250	187	85
4	100	4.02	102	17.99	457	12.64	316	279.4	127
6	150	5.98	152	24.02	610	12.96	324	624.8	284
8	200	7.99	203	29.02	737	15.32	383	985.6	448
10	250	10.00	254	32.99	838	20.64	516	1518	690
12	300	12.01	305	37.99	965	22.52	563	2239.6	1018
14	350	12.76	324	40.51	1029	26.6	665	2970	1350
16	400	14.76	375	44.49	1130	29.28	732	3850	1750

Reduced Bore

Size		d		D		F/F		H		Weight	
NB	DN	Inch	mm	Inch	mm	Inch	mm	Inch	mm	lbs	Kg
3 x 2	80 x 50	2.01	51	2.99	76	15.00	381	7.6	190	129.8	59
4 x 3	100 x 80	2.99	76	4.02	102	17.99	457	10.0	250	226.6	103
6 x 4	150 x 100	4.02	102	5.98	152	24.02	610	12.64	316	374	170
8 x 6	200 x 150	5.98	152	7.99	203	29.02	737	12.96	324	765.6	348
10 x 8	250 x 200	7.99	203	10.00	254	32.99	838	15.32	383	1315.6	598
12 x 10	300 x 250	10.00	254	12.01	305	37.99	965	20.64	516	1689.6	768
14 x 12	350 x 300	12.01	305	12.76	324	40.51	1029	22.52	563	2420	1100
16 x 14	400 x 350	12.76	324	14.76	375	44.49	1130	26.6	665	3124	1420

Dimensions



1500 LB Dimensions

Full Bore

Size		d		F/F		H		Weight	
NB	DN	Inch	mm	Inch	mm	Inch	mm	lbs	Kg
2	50	2.01	51.76	14.49	368	10.0	250	189.2	86
3	80	2.99	102	18.50	470	12.08	302	299.2	136
4	100	4.02	146	21.50	546	11.04	276	486.2	221
6	150	5.75	194	27.76	705	13.76	344	853.6	388
8	200	7.64	241	32.76	832	19.6	490	1276	580
10	250	9.49	289	39.02	991	22.72	568	2085.6	948
12	300	11.38	318	44.49	1130	28.0	700	2943.6	1338

Reduced Bore

Size		d		D		F/F		H		Weight	
NB	DN	Inch	mm	Inch	mm	Inch	mm	Inch	mm	lbs	Kg
3 x 2	80 x 50	2.01	51	2.99	76	18.50	470	10.0	250	215.6	98
4 x 3	100 x 80	2.99	76	4.02	102	21.50	546	12.08	302	299.2	136
6 x 4	150 x 100	4.02	102	5.75	146	27.76	705	11.04	276	629.2	286
8 x 6	200 x 150	5.75	146	7.64	194	32.76	832	13.68	342	985.6	448
10 x 8	250 x 200	7.64	194	9.49	241	39.02	991	19.6	490	1645.6	748
12 x 10	300 x 250	9.49	241	11.38	289	44.49	1130	22.52	563	2244	1020

3 Piece Design

TRUNNION

Side load generated by the pressure acting on the ball is absorbed by bearings.

INDEPENDENT BALL AND STEM

Independent ball and stem to minimize side thrust.

FLOATING SEAT SUPPORTED BY MULTIPLE SPRINGS

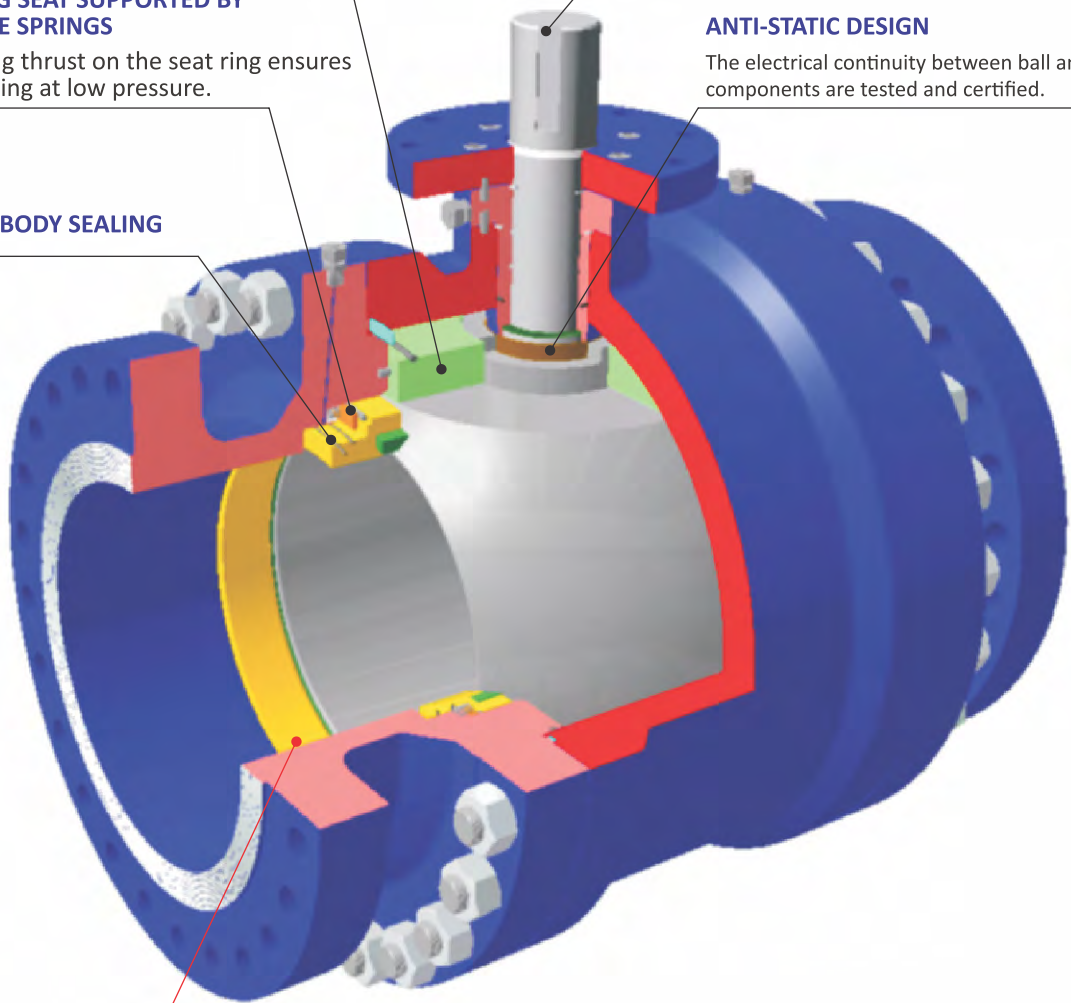
The spring thrust on the seat ring ensures tight sealing at low pressure.

ANTI-STATIC DESIGN

The electrical continuity between ball and other components are tested and certified.

DOUBLE BODY SEALING

PIGABLE BORE



Material Specifications

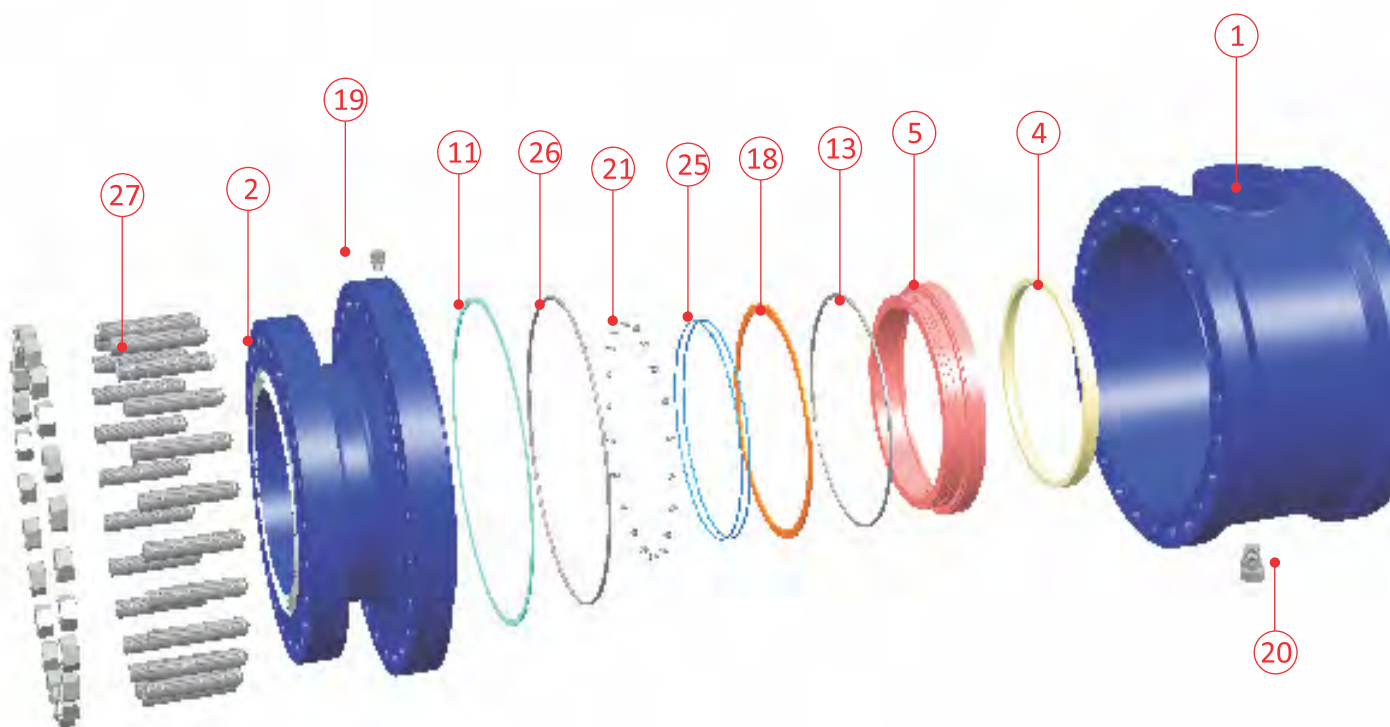
3 Piece Design

Part No.	Part	Carbon Steel (Nace Service)	Stainless Steel	Low Temperature Service	Carbon steel + Inconel Alloy
1	Body	ASTMA216-WCB	ASTMA351-CF8M	ASTMA352-LCB	ASTMA216-WCB + Inconel 625
2	Side Connection	ASTMA216-WCB	ASTMA351-CF8M	ASTMA352-LCB	ASTMA216-WCB + Inconel 625
3	Ball	ASTMA105N/ENP	ASTMA182-F316	ASTMA350-LF2/ENP	ASTMA105N/ENP + Inconel 625
4	Soft Seat	RPTFE/NYLON/PEEK DEVLON	RPTFE/NYLON/PEEK DEVLON	RPTFE/NYLON/PEEK DEVLON	RPTFE/NYLON/PEEK DEVLON
5	Seat Retainer	ASTMA105N/ENP	ASTMA182-F316	ASTMA350-LF2/ENP	B564 UNS 6625
6	Valve Shaft	ASTMA105N/ENP	ASTMA182-F316	ASTMA350-LF2/ENP	B564 UNS 6625
7	Thrust Washer (Trunnion to Ball)	PTFE COATED- CARBON STEEL	PTFE COATED + SS	PTFE COATED + SS	PTFE COATED + INCONEL
8	Trunnion	ASTMA216-WCB-ENP	ASTMA351-CF8M	ASTMA352-LCB/ENP	ASTMA216-WCB/ENP
9	Gasket (Bonnet to Body)	316SS+Graphite	316SS + Graphite	316SS+Graphite	INCONEL + Graphite
10	Gasket (Body to Side Conn)	316SS+Graphite	316SS + Graphite	316SS + Graphite	INCONEL + Graphite
11	Backup Gasket	Graphite	Graphite	Graphite	Graphite
12	Bonnet	ASTMA105N	ASTMA182-F316	ASTMA350-LF2	ASTMA105N+Inconel 625
13	Mounting Flange	ASTMA105N	ASTMA182-F316	ASTMA350-LF2	ASTMA105N+Inconel 625
14	Thrust Washer (Shaft to Bonnet)	PTFE + COATED + SS 316	PTFE + COATED + SS 316	PTFE + COATED + SS 316	PTFE + COATED + Inconel
15	Bearing Bush (Ball to Trunnion)	PTFE+COATED+SS 316	PTFE+COATED+SS 316	PTFE+COATED+SS 316	PTFE+COATED+Inconel
16	Vent	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
17	Drain	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
18	Seat Spring	Inconel X-750	Inconel X-750	Inconel X-750	Inconel X-750
19	O-Ring (Shaft to Bonnet)	VITON/NBR/EPDM	VITON/NBR/EPDM	VITON/NBR/EPDM	VITON/NBR/EPDM
20	O-Ring (Bonnet to Body)	VITON/NBR/EPDM	VITON/NBR/EPDM	VITON/NBR/EPDM	VITON/NBR/EPDM
21	O-Ring (Seat Retainer to Side Conn.)	VITON/NBR/EPDM	VITON/NBR/EPDM	VITON/NBR/EPDM	VITON/NBR/EPDM
22					
23	O-Ring (Side Connection to Body)	VITON/NBR/EPDM	VITON/NBR/EPDM	VITON/NBR/EPDM	VITON/NBR/EPDM
24	Stud with one nut (Body to Side Conn.)	ASTMA193-B7	ASTMA193-B8	ASTMA320-L7M	ASTMA193-B7
25	Allen Bolt (Bonnet to Body)	ASTMA194-2H	ASTMA194-8	ASTMA194-7M	ASTMA194-2H
26	Allen Bolt (Mounting Flange to Bonnet)	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
27	Lock Pin (Mounting Flange to Bonnet)	Carbon Steel	Stainless Steel	ASTMA320-L7M	Carbon Steel
29	Seat Injection	Carbon Steel	Stainless Steel	Stainless Steel	Carbon Steel
30	Stem Injection	Carbon Steel	Stainless Steel	Stainless Steel	Carbon Steel

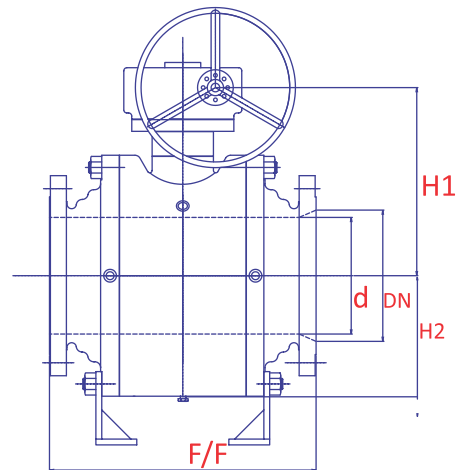
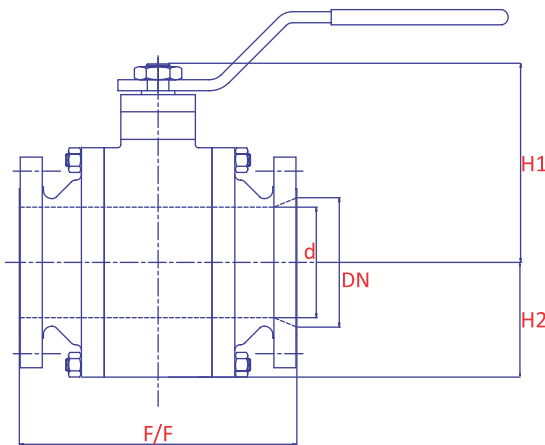
Note :- Please contact factory for materials supplied.

Material Specifications

Part No.	Part	Part No.	Part
1	Body	18	Backup Ring
2	Side Connection	19	Vent
3	Ball	20	Drain
4	Soft Seat	21	Seat Spring
5	Seat Retainer	22	Gasket (Trunnion to Ball)
6	Valve Shaft	23	'O'-Ring (Shaft to Bonnet)
7	Lock Pin(Trunnion to Side Conn.)	24	O-Ring (Bonnet to Body)
8	Thrust Washer (Trunnion to Ball)	25	O-Ring (Seat Retainer to Side Conn.)
9	Trunnion	26	O-Ring (Side Connection to Body)
10	Gasket (Bonnet to Body)	27	Stud with one nut (Body to Side Conn.)
11	Gasket (Body to Side Conn.)	28	Allen Bolt (Bonnet to Body)
12	Gasket (Bonnet to Mounting Flange)	29	Allen Bolt (Mounting Flange to Bonnet)
13	Backup Gasket	30	Lock Pin (Mounting Flange to Bonnet)
14	Bonnet	31	Lock Pin (Bonnet to Body)
15	Mounting Flange	32	Seat Sealant Injection
16	Thrust Washer (Shaft to Bonnet)	33	Stem Sealant Injection
17	Bearing Bush (Ball to Trunnion)		



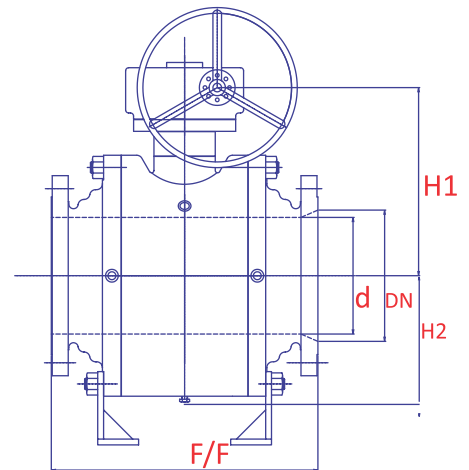
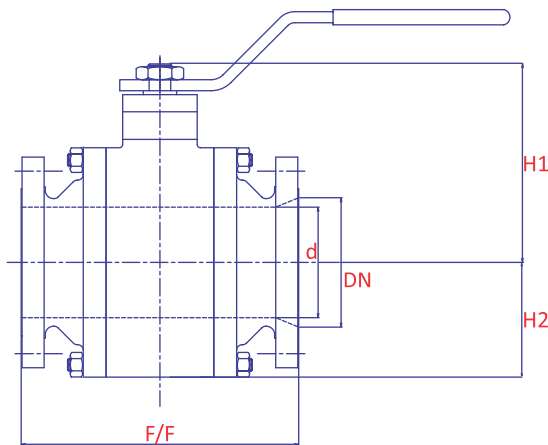
Dimensions



150 LB Dimensions

Size		d		F/F		H 1		H 2		Weight	
NB	DN	Inch	mm	Inch	mm	Inch	mm	Inch	mm	lbs	Kg
2	50	2.01	51	7.01	178	8.0	200	4.48	112	37.4	17
3	80	2.99	76	7.99	203	12.0	300	5.12	128	68.2	31
4	100	4.02	102	9.02	229	12.64	316	6.6	165	114.4	52
6	150	5.98	152	15.51	394	13.28	332	6.6	165	330	150
8	200	7.99	203	17.99	497	16.0	400	8.0	200	525.8	239
10	250	10.00	254	21.02	534	17.12	428	8.0	200	756.8	344
12	300	12.01	305	24.02	610	18.52	463	8.88	222	1031.8	469
14	350	13.27	337	27.01	686	20.12	503	10.4	260	1667.6	758
16	400	15.27	387	30.00	762	24.8	620	11.6	290	2195.6	998
18	450	17.24	438	34.02	864	26.6	665	13.68	342	2673	1215
20	500	19.25	489	35.98	914	29.12	728	16.64	416	3693.8	1679
22	550	21.26	540	39.02	991	33.4	835	17.44	436		
24	600	23.27	591	42.01	1067	35.68	892	19.32	483	4109.6	1868
26	650	25.00	635	45.00	1143	36.0	900	20.64	516	-	-
28	700	27.01	686	49.02	1245	37.2	930	21.28	532	-	-
30	750	29.02	737	50.98	1295	40.48	1012	21.84	546	6615.4	3007
32	800	30.75	781	54.02	1372	42.48	1062	24.2	605	-	-
34	850	32.76	832	57.99	1473	42.96	1074	26.08	652	-	-
36	900	34.49	876	60.00	1524	44.64	1116	26.08	652	-	-

Dimensions

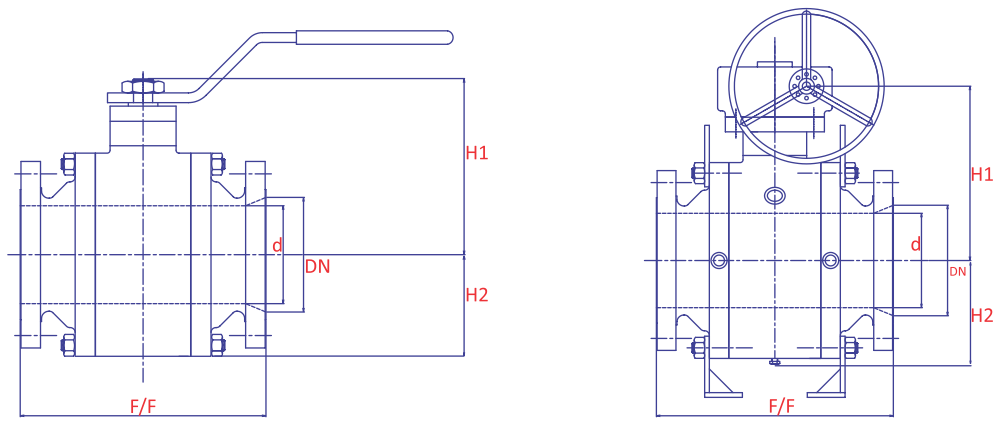


150 LB Dimensions

Reduced Bore

Size		d		D		F/F		H 1		H 2		Weight	
NB	DN	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	lbs	Kg
3 x 2	80 x 50	2.01	51	2.99	76	7.99	203	8.0	200	4.64	116	50.6	23
4 x 3	100 x 80	2.99	76	4.02	102	9.02	229	12.0	300	5.12	128	88	40
6 x 4	150 x 100	4.02	102	5.96	152	15.51	394	12.64	316	6.6	165	180.4	82
8 x 6	200 x 150	5.98	152	7.99	203	17.99	457	13.28	332	6.92	173	389.4	177
10 x 8	250 x 200	7.99	203	10.00	254	21.02	534	16.0	400	8.0	200	640.2	291
12 x 10	300 x 250	10.00	254	12.01	305	24.02	610	17.12	428	8.96	224	877.8	399
14 x 12	350 x 300	12.01	305	13.27	337	27.01	686	18.52	463	10.6	265	1135.2	516
16 x 14	400 x 350	13.27	337	15.24	387	30.00	762	20.32	508	11.6	290	1804	820
18 x 16	450 x 400	15.24	387	17.24	438	34.02	864	24.8	620	13.68	342	2332	1060
20 x 18	500 x 450	17.24	438	19.25	489	35.98	914	26.6	665	15.6	390	2618	1190
22 x 18	550 x 450	17.24	438	21.26	540	39.02	991	26.6	665	15.6	390	-	-
24 x 20	600 x 500	19.25	489	23.27	591	42.01	1067	29.28	732	17.2	430	3300	1500
26 x 22	650 x 650	21.26	540	25.00	635	45.00	1143	33.36	834	19.4	485	-	-
28 x 24	700 x 600	23.27	591	27.01	686	49.02	1245	35.6	890	20.8	520	-	-
30 x 24	750 x 600	23.27	951	29.02	737	50.98	1295	35.6	890	20.8	520	5500	2500
32 x 26	800 x 650	25.00	635	30.75	781	54.02	1372	36.4	910	21.2	530	-	-
34 x 28	850 x 700	27.01	686	32.76	832	57.99	1473	37.2	930	21.8	545	-	-
36 x 30	900 x 750	29.02	737	34.49	876	60.00	1524	40.56	1014	24.4	610	-	-

Dimensions



300 LB Dimensions

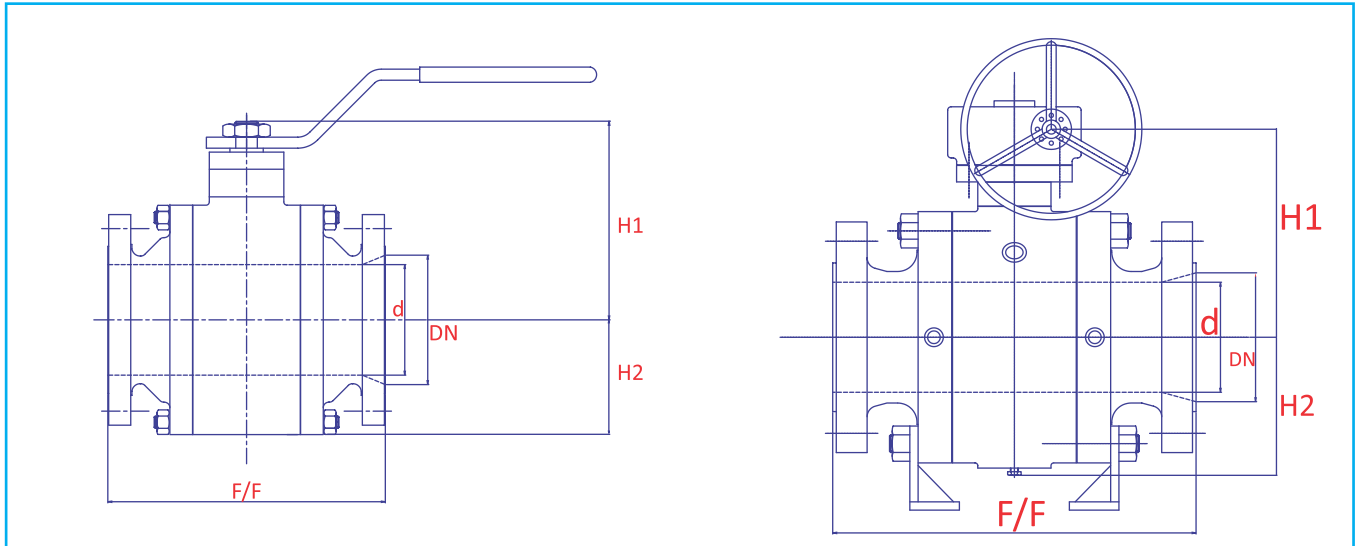
Full Bore

Size		d		F/F		H 1		H 2		Weight	
NB	DN	Inch	mm	Inch	mm	Inch	mm	Inch	mm	lbs	Kg
2	50	2.01	51	8.50	216	8.4	210	4.6	115	50.6	23
3	80	2.99	76	11.14	283	12.64	316	5.2	130	94.6	43
4	100	4.02	102	12.01	305	13.4	335	6.8	170	202.4	92
6	150	5.98	152	15.87	403	13.8	345	6.8	170	352	160
8	200	7.99	203	19.76	502	16.8	420	8.4	210	611.6	278
10	250	10.00	254	22.36	568	17.12	428	8.72	218	987.8	449
12	300	12.01	305	25.51	648	18.8	470	10.4	260	1438.8	654
14	350	13.27	337	30.00	762	20.8	520	11.6	290	2173.6	988
16	400	15.24	384	32.99	838	13.68	640	13.68	340	3119.6	1418
18	450	17.24	438	35.98	914	27.4	685	16.6	415	3414.4	1552
20	500	19.25	489	39.02	991	30.0	750	17.2	430	4829	2195
22	550	21.26	540	42.99	1092	34.4	860	19.2	480	-	-
24	600	23.27	591	45.00	1143	36.8	920	20.8	520	7612	3460
28	700	27.01	686	52.99	1346	22.4	560	21.6	540	-	-
30	750	29.02	737	55.00	1397	41.6	1040	24.4	610	12254	5570

Reduced Bore

Size		d		D		F/F		H 1		H 2		Weight	
NB	DN	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	lbs	Kg
3 x 2	80 x 50	2.01	57	2.99	76	11.14	76	8.4	210	4.6	115	70.4	32
4 x 3	100 x 80	2.99	76	4.02	102	12.01	102	12.64	316	5.2	130	136.4	62
6 x 4	150 x 100	4.02	102	5.98	152	15.87	152	13.28	332	6.8	170	253	115
8 x 6	200 x 150	5.98	152	7.99	203	19.76	203	13.6	340	6.08	152	481.8	219
10 x 8	250 x 200	7.99	203	10.00	254	22.36	254	16.64	416	7.4	185	642.4	292
12 x 10	300 x 250	10.00	254	12.01	305	25.51	305	17.12	428	9.2	230	1234.2	561
14 x 12	350 x 300	12.01	305	13.27	337	30.00	337	18.6	465	10.8	270	1707.2	776
16 x 14	400 x 350	13.27	337	15.24	387	32.99	387	20.8	520	12.2	305	2195.6	998
18 x 16	450 x 400	15.24	387	17.24	438	35.98	438	25.6	640	14.08	352	2481.6	1128
20 x 18	500 x 450	17.24	438	19.25	489	39.02	489	27.2	680	16.2	405	3942.4	1792
22 x 18	550 x 450	17.24	438	21.26	540	42.99	540	27.2	680	16.2	405	-	-
24 x 20	600 x 500	19.25	489	23.27	591	45.00	591	30.08	752	18.0	450	5854.2	2661
28 x 24	700 x 600	23.27	591	27.01	686	52.99	686	36.8	920	21.2	530	-	-
30 x 24	750 x 600	23.27	591	29.02	737	55.00	737	36.8	920	21.2	530	11928.4	-

Dimensions



Full Bore

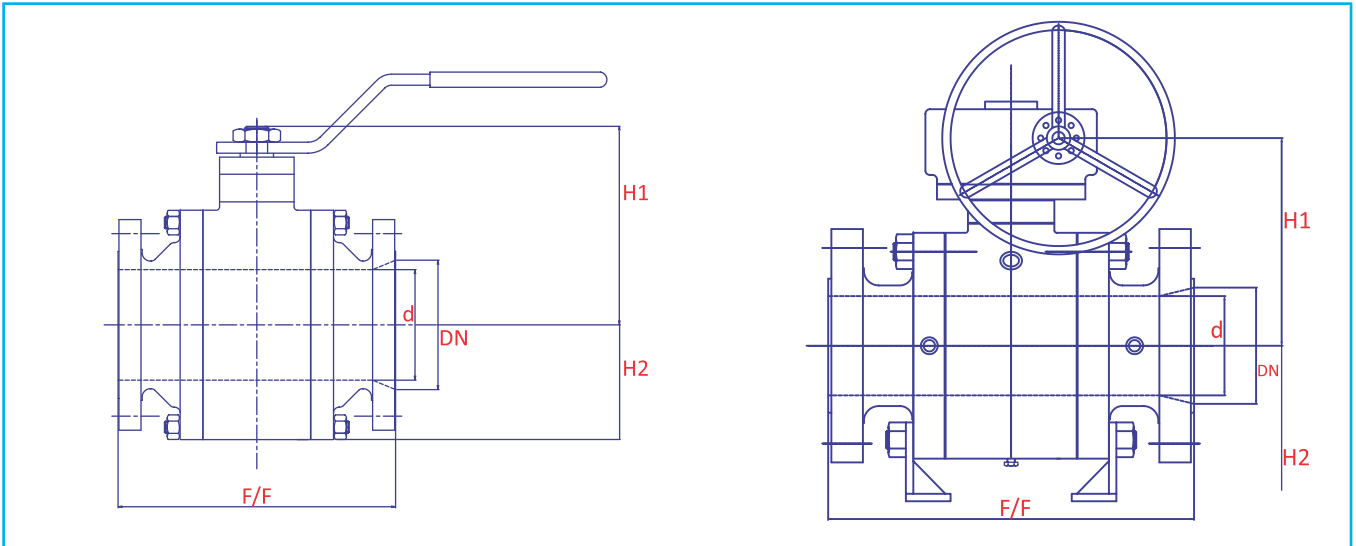
600 LB Dimensions

Size		d		F/F		H 1		H 2		Weight	
NB	DN	Inch	mm	Inch	mm	Inch	mm	Inch	mm	lbs	Kg
2	50	2.01	51	11.50	292	8.4	210	4.6	115	66	30
3	80	2.99	76	14.02	356	12.64	316	5.2	130	136.4	62
4	100	4.02	102	17.01	432	13.28	332	6.08	152	248.6	113
6	150	5.98	152	22.01	559	14.0	350	6.08	170	525.8	239
8	200	7.99	203	25.98	660	16.64	416	7.2	180	1067	485
10	250	10.00	254	30.98	787	17.2	430	9.2	230	1317.8	599
12	300	12.01	305	32.99	838	18.8	470	10.8	270	1828.2	831
14	350	13.27	337	35.00	889	20.08	520	12.4	310	2382.6	1083
16	400	15.24	387	39.02	991	25.6	640	14.4	360	3355	1525
18	450	17.24	438	42.99	1092	25.6	640	16.2	405	4609	2095
20	500	19.25	489	47.01	1194	30.08	752	18.08	452	5803.6	2638
22	550	21.26	540	50.98	1295	34.4	860	19.6	490	-	-
24	600	23.27	591	55.00	1397	36.8	920	21.2	530	8756	3980

Reduced Bore

Size		d		D		F/F		H 1		H 2		Weight	
NB	DN	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	lbs	Kg
3 x 2	80 x 50	2.01	51	2.99	76	14.02	356	8.4	210	4.6	115	85.5	39
4 x 3	100 x 80	2.99	76	4.02	102	17.01	432	12.64	316	5.2	130	171.6	78
6 x 4	150 x 100	4.02	102	5.98	152	22.01	559	13.2	330	6.08	152	330	150
8 x 6	200 x 150	5.98	152	7.99	203	25.98	660	14.0	350	6.8	170	642.4	292
10 x 8	250 x 200	7.99	203	10.00	254	30.98	787	16.64	416	7.2	180	1210	550
12 x 10	300 x 250	10.00	254	12.01	305	32.99	838	17.2	430	9.2	230	1427.8	649
14 x 12	350 x 300	12.01	305	13.27	337	35.00	889	18.8	470	10.8	270	2010.8	914
16 x 14	400 x 350	13.27	337	15.24	387	39.02	991	20.8	520	12.4	310	2382.6	1083
18 x 16	450 x 400	15.24	387	17.24	438	42.099	1092	25.6	640	14.08	352	3322	1510
20 x 18	500 x 450	17.24	438	19.25	489	47.01	1194	27.2	680	16.2	405	5225	2375
22 x 18	550 x 450	17.24	438	21.26	540	50.98	1295	27.2	680	16.2	405	-	-
24 x 20	600 x 500	19.25	489	23.27	591	55.00	1397	30.08	752	18.08	452	7145.6	3248

Dimensions



900 LB Dimensions

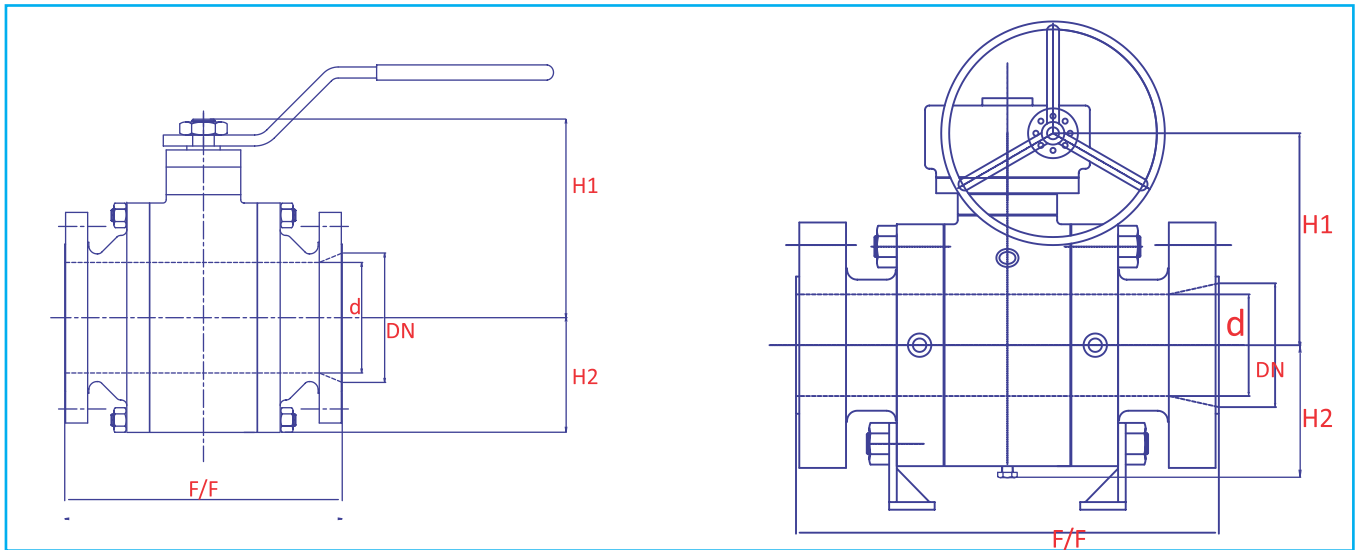
Full Bore

Size		d		F/F		H 1		H 2		Weight	
NB	DN	Inch	mm	Inch	mm	Inch	mm	Inch	mm	lbs	Kg
2	50	2.01	51	14.49	368	4.8	120	4.8	120	138.6	63
3	80	2.99	76	15.00	381	5.44	136	5.44	136	154	70
4	100	4.02	102	17.99	457	6.4	160	6.4	160	319	145
6	150	5.98	152	24.02	610	7.2	180	7.2	180	734.8	334
8	200	7.99	203	29.02	737	7.6	190	7.6	190	1031.8	469
10	250	10.00	254	32.99	838	9.44	236	9.44	236	2191.2	996
12	300	12.01	305	37.99	965	11.32	283	11.32	283	2952.4	1342
14	350	12.76	324	40.51	1029	12.6	315	12.6	315	3190	1450
16	400	14.76	375	44.49	1130	14.8	370	14.8	370	4730	2150

Reduced Bore

Size		d		D		F/F		H 1		H 2		Weight	
NB	DN	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	lbs	Kg
3 x 2	80 x 50	2.01	51	2.99	76	15.00	381	8.88	222	4.8	120	114.4	52
4 x 3	100 x 80	2.99	76	4.02	102	17.99	457	13.2	330	5.44	136	209	95
6 x 4	150 x 100	4.02	102	5.98	152	24.02	610	13.8	345	6.4	160	440	200
8 x 6	200 x 150	5.98	152	7.99	203	29.02	737	14.4	360	7.2	180	899.8	409
10 x 8	250 x 200	7.99	203	10.00	254	32.99	838	17.4	435	7.6	190	2026.2	921
12 x 10	300 x 250	10.00	254	12.01	305	37.99	965	18.08	452	9.6	240	2541	1155
14 x 12	350 x 300	12.01	305	12.76	324	40.51	1029	19.2	480	11.4	285	2875.4	1307
16 x 14	400 x 350	12.76	324	17.76	375	44.49	1130	21.68	542	12.64	316	3168	1440

Dimensions



1500 LB Dimensions

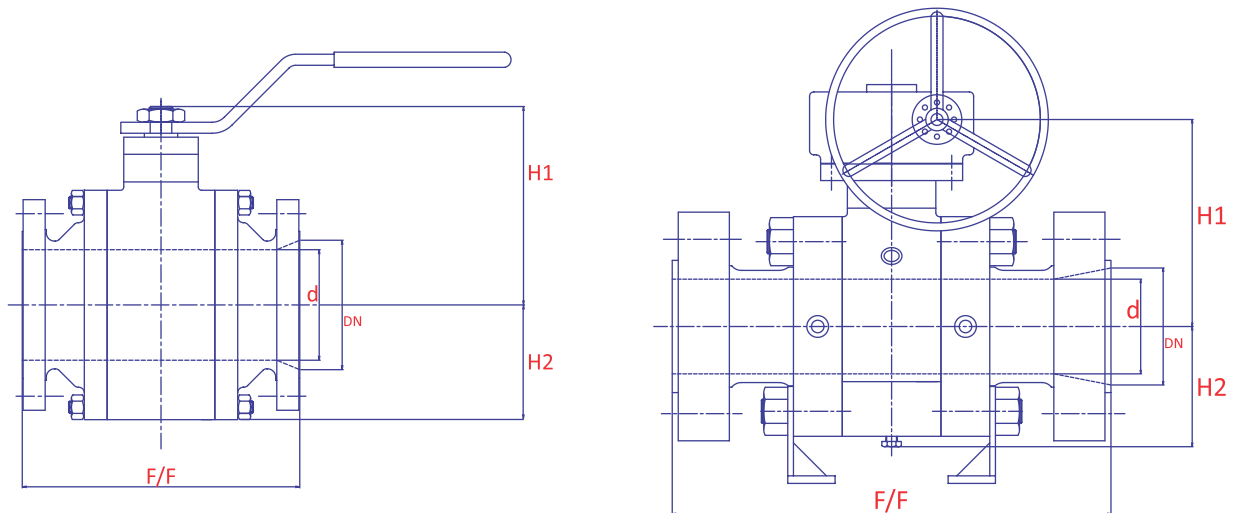
Full Bore

Size		d		F/F		H 1		H 2		Weight	
NB	DN	Inch	mm	Inch	mm	Inch	mm	Inch	mm	lbs	Kg
2	50									158.4	72
3	80									213.4	97
4	100	4.02	102	21.50	546	6.8	170	6.8	170	371.8	169
6	150	5.75	146	27.76	705	7.6	190	7.6	190	1056	480
8	200	7.64	194	32.76	832	9.6	240	9.6	240	1804	820
10	250	9.41	239	39.02	991	11.2	280	11.2	280	3300	1500
12	300	11.38	289	44.49	1130	12.8	320	12.8	320	4950	2250

Reduced Bore

Size		d		D		F/F		H 1		H 2		Weight	
NB	DN	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	lbs	Kg
3 x 2	80 x 50											149.6	68
4 x 3	100 x 80											268.4	122
6 x 4	150 x 100	4.02	102	5.75	146	27.76	705	14.08	352	6.8	170	627.0	285
8 x 6	200 x 150	5.75	146	7.64	194	32.76	832	14.8	370	7.6	190	1245.2	566
10 x 8	250 x 200	7.64	194	9.49	241	39.02	991	17.2	430	9.68	242	2248.4	1022
12 x 10	300 x 250	9.49	241	11.38	289	44.49	1130	22.48	562	11.2	280	3872	1760

Dimensions



2500 LB Dimensions

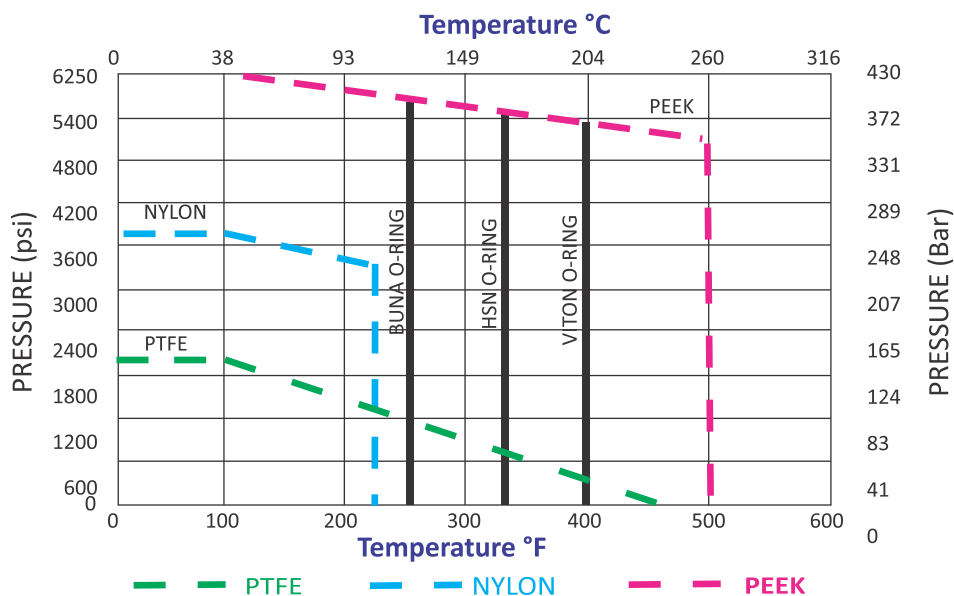
Full Bore

Size		d		F/F		H 1		H 2		Weight	
NB	DN	Inch	mm	Inch	mm	Inch	mm	Inch	mm	lbs	Kg
2	50	1.73	44	17.76	451	9.68	242	5.92	148	224.4	102
3	80	2.52	64	22.76	578	10.8	270	7.6	190	411.4	187
4	100	3.50	89	26.50	673	11.4	285	8.0	200	704	320
6	150	5.24	133	35.98	914	21.2	530	15.28	382	1694	770
8	200	7.13	181	40.24	1022	24.8	620	17.68	442	2985.4	1357



Engineering Data

Pressure Temperature Chart



O-ring Materials for represent Seat, Body, Trunnion and Stem 'O' Rings.

Soft Seat Material

Properties	PTFE	NYLON	PEEK	PCTFE	DEVLON V-API
Temperature Range °F	-328~428	-58~248	-148~500	-328~302	-148~302
Temperature Range °C	-200~220	-50~120	-100~260	-200~150	-100~150
Pressure Rating	150~600	150~1500	150~2500	150~1500	150~1500
Mechanical Property Hardness (D)	58	72	88	85	78
Tensile Strength (Mpa)	14~34	55.2	134	35.9	79.9
Tensile Elongation (Break,%)	350	250	2.2	150	5.4
Physical Property Specific Gravity (g/cm3)	2.17	1.02	1.44	2.12	1.14
Water Absorption 24hrs(%)	0.00	1	0.06	0.00	0.1
Water Absorption Saturation	<0.01	1.6	0.2	<0.01	3
Service Application	Chemical & low Temperature	High Pressure & Hydrocarbon	High Pressure & temperature	Cryogenic	High Pressure & Hydrocarbon

Seal Rings

Type	VITON	EPDM	NBR	HNBR	FFKM
Temperature Rang °F	-4 ~392	-58 ~302	-22~230	-40~302	-4 ~620
Temperature Rang °C	-20 ~200	-50 ~150	-30~110	-40~150	-20 ~327
Specific Gravity (g/cm3)	1.85	0.87	1.31	1.34	2
Hardness (shore A)	75	75	75	75	75

Note :- Other elastomer materials available upon request.

Engineering Data

Torque Values (Nm)

VALVE SIZE		CLASS 150 (Pressure Bar)				CLASS 300 (Pressure Bar)			CLASS 600 (Pressure Bar)				
INCH	MM	7	10	15	20	30	40	50	60	70	80	90	100
2	50	49	54	63	72	89	85	87	89	92	95	99	105
3	80	104	115	133	152	180	205	223	230	241	268	294	320
4	100	165	183	214	245	275	310	345	355	370	383	422	460
6	150	283	310	355	401	491	581	671	733	819	906	993	1080
8	200	618	660	731	802	944	1086	1228	1443	1615	1787	1958	2130
10	250	795	868	990	1111	1240	1477	1715	1897	2127	2358	2589	2820
12	300	943	1108	1332	1497	1650	1800	2050	2247	2505	2763	3022	3280
14	350	1602	1767	2093	2318	2454	2997	3480	3733	4192	4651	5110	5570
16	400	2308	2557	2971	3385	3735	4210	4785	4751	5338	5925	6512	7100
18	450	3106	3422	3948	4473	5156	6138	7120	8390	9142	9895	10647	11400
20	500	3973	4373	5039	5704	7036	8368	9700	11352	12464	13576	14688	15800
22	550	4690	5175	5983	6792	8409	10026	11644	14345	15734	17122	18512	19900
24	600	6280	6955	8081	9207	11458	13709	15960	19385	20851	22317	23784	25250

VALVE SIZE		CLASS 900 (Pressure Bar)					CLASS 1500 (Pressure Bar)						CLASS 2500 (Pressure Bar)	
INCH	MM	110	120	130	140	150	160	180	200	220	240	260	340	425
2	50	114	120	126	132	138	183	198	214	229	245	260	315	370
3	80	346	369	391	413	435	411	451	491	530	570	610	885	1160
4	100	483	500	547	578	610	623	684	746	807	868	930	1270	1610
6	150	1217	1288	1359	1430	1500	1786	1951	2107	2268	2429	2590	2840	3090
8	200	2518	2686	2854	3022	3190	3300	3630	3960	4290	4620	4950	6365	7780
10	250	3144	3346	3551	3755	3960	4054	4471	4888	5305	5723	6140	9148	12156
12	300	3908	4161	4414	4667	4920	5936	6517	7097	7678	8259	8840	13173	17505
14	350	6240	7025	7467	7908	8350	10951	12079	13207	14335	15462	16590	20208	23826
16	400	8165	8719	9273	9826	10380	17839	19646	21453	23260	25066	22250	26685	31120
18	450	13549	14436	15325	16212	17100								
20	500	18748	19982	21214	22447	23680								
22	550	23092	24719	26346	27973	29600								
24	600	31576	33565	35553	37541	39530								

. Above Values Represent Torque Values for Full Bore Ball Valve

(For Reduced Bore Valves Consider Torque for Port Size as Valve Size)

. Torque Values given above are suitable for clean fluid.

(for dry Gas application multiply by 1.2 & for Cryogenic application by 2.5)

. For Seat Material as PEEK multiply values by 2.0

. For Metal Seated take multiplying factor as 3.0 For Class IV leakage.

. For Metal Seated take multiplying factor as 4.0 for Class VI leakage.

. ACTUATOR SIZING

First consider factor of safety for fluid conditions and seat MOC then,

A. For selecting Gear Operator multiply by 1.5.

B. For Selecting pneumatic or electric Actuator multiply by 1.3.

. SEAT MATERIAL SHALL BE :-

• CLASS 150 : SIZE 2" TO 10" :- PTFE
12" TO 24" :- RPTFE

• CLASS 300 : SIZE 2" TO 8" :-PTFE
10" TO 24" :- RPTFE

• CLASS 600 : SIZE 2" TO 16" :-RPTFE
18" TO 24" :-DEVLON/NYLON/DELIN/PEEK

• CLASS 900 " SIZES : 2" TO 24" :- DEVLON/NYLON/
DELIN/PEEK

• CLASS 1500/2500 :- SIZES : 2" TO 16" :- DEVLON/NYLON/
DELIN/PEEK

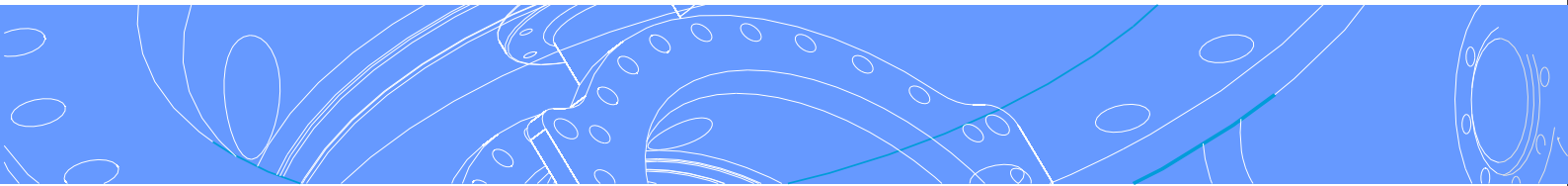
Cv Values (USgpm)

Full Bore

VALVE SIZE		CLASSES					
NB	DN	150	300	600	900	1500	2500
2	50	399	399	380	314	314	238
2 ½	65	656	656	580	494	485	304
3	80	1140	998	950	865	779	475
4	100	2090	1995	1758	1710	1615	1045
6	150	4893	4845	4370	4161	3610	2375
8	200	9025	8930	8550	8075	7030	5035
10	250	14250	14250	13965	13775	10925	
12	300	21850	21850	21375	20045	17100	
14	350	26600	26600	26600	23750		
16	400	35340	35340	35340	32775		
18	450	46550	46550	46550			
20	500	56050	56050	56050			
22	550	64790	64790	64790			
24	600	87400	87400	87400			
26	650	104500	104500				
28	700	114950	114950				
30	750	137750	136800				
32	800	161500	161500				
36	900	199500	199500				
40	1000	254125					
42	1050	266000					
48	1200	364800					

Reduced Bore

VALVE SIZE		CLASSES					
NB	DN	150	300	600	900	1500	2500
3 x 2	80 x 50	190	190	190	181	171	190
4 x 3	100 x 80	570	570	570	561	523	532
6 x 4	150 x 100	760	760	751	751	741	708
8 x 6	200 x 150	2043	2043	2043	2043	2043	2043
10 x 8	250 x 200	4085	4085	4085	4228	4228	3895
12 x 10	300 x 250	7173	7173	7173	7600	8550	
14 x 10	350 x 250	5700	5700	5700	5795	5795	
14 x 12	350 x 300	13300	13300	13300	12160	12350	
16 x 12	400 x 300	8645	8645	8645	8455	8455	
16 x 14	400 x 350	14250	14250	14250	13490		
18 x 16	450 x 400	19950	19950	19950	18240		
20 x 16	500 x 400	14535	14535	14535			
20 x 18	500 x 450	26980	26980	26980			
24 x 20	600 x 500	26790	26790	26600			
30 x 24	750 x 600	34200	34200	34200			
36 x 30	900 x 750	60800	60800				
36 x 32	900 x 800	82650	82650				
42 x 36	1050 x 900	91865					



Dembla

Sales Office:

M/S. Dembla Valves Ltd.
C-30, Jai Matadi Compound, Kalher
Village, Thane-Bhiwandi-Agra Raod -
421302, Maharashtra, India.
Tel - +91-9292234790 - 97
E-mail - expo@dembla.com
[More info - www.dembla.com](http://www.dembla.com)

Works:

M/S. Dembla Valves Ltd.
A/8, Arahm Logipark, Valshind Village,
Mumbai -Nashik Highway (NH3),
Bhiwandi Thane - 421302.
Maharashtra (India)