

Ball Valves

MT GROUP

Company Introduction

MT group founded in 2003, is two-decade old international valve company, headquartered in Shanghai.The group's primary objective is to exceed in production quality, safety and value to the worldwide market, and to be a global leader in valve production, supply and customer service. With vast access to rich industrial resources which ensures superior quality of product and expedient delivery to customers.

Our leading products include ball valves, gate valves, globe valves, check valves, plug valves and butterfly valves, which are widely used in the oil, gas, chemical industry, power station, offshore, and water treatment, as well as various other industrial systems.

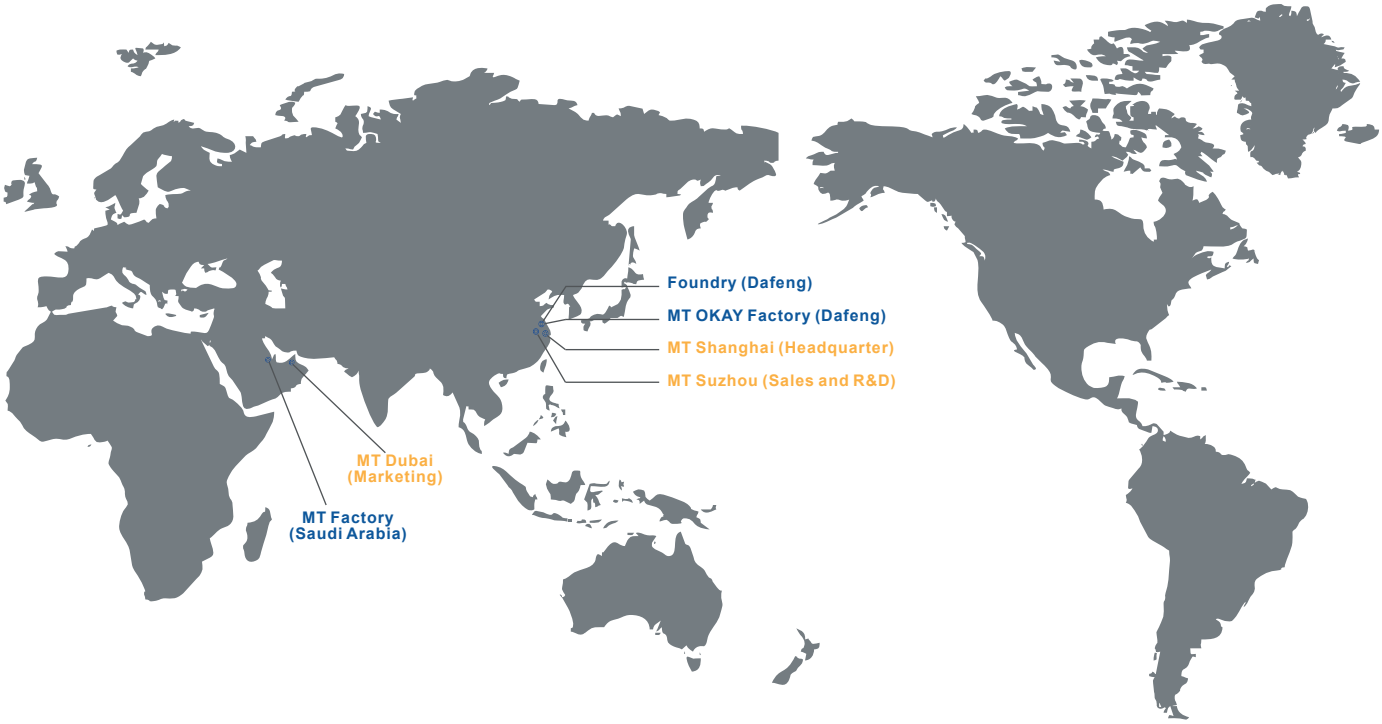
Product size ranges from 1/2 to 72 inches and pressure class ranges from Class150 to 2500. All Our products are in strict compliance with API, ASME, ANSI, DIN, ISO, GB and other reputed international standards. We have more than 50 experienced professionals to provide professional technical response and product application services. We are equipped with a professional valve R&D laboratory to ensure that product design and development meet the requirements of various harsh working conditions.

Backed by its multiple manufacturing units, own foundry, forge shop, innovative design engineering Team, dynamic & professional management, offices, associates and channel partners across all continents; MT Group is emerging as a leading Flow Control solution provider around the globe. MT Group is comitted to provide prompt response, high quality of products and services all time every time. The factories under MT group, respectively, get through the ISO 9001, ISO 14001, ISO 18001, CE, API 6D, API 600, API 607, API 6FA, TS, and a series of international and domestic certification. Products cover Europe, America, Africa, Middle East and Southeast Asia and other regions.

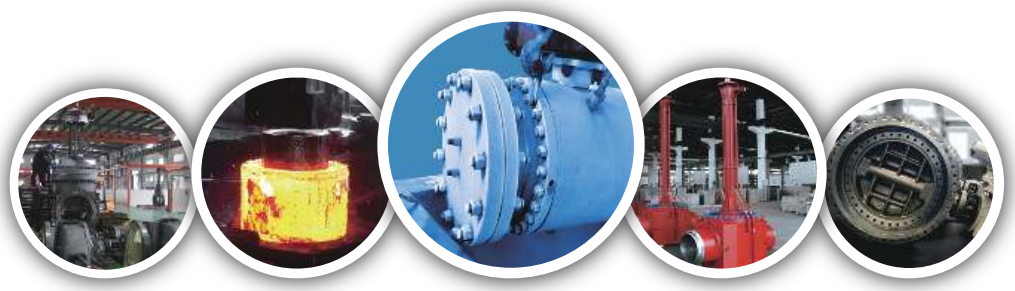
Certification



- API 6D
- API 600
- API 607
- ISO 9001
- AD 2000
- CE/PED
- ISO 14001
- ISO 18001
- API 594
- TS



Fast technical support & delivery capability
High quality castings and forgings from in-house supply
Globalizing collaborative service



The products are widely used in petroleum, natural gas,
chemical industry, power station, marine industry,
water treatment and various industrial systems



Introduction to the factory

CNC Workshop





Assembly Workshop





Painting shop & Warehouse





Foundry




- Bodies and balls are forged in house.
- Regular stock for quick delivery.



PRESSURE TEST



TORQUE TEST

NONDESTRUCTIVE TEST(NDT)



TAT TEST





CRYOGENIC TEST



COORDINATE MEASURING MACHINE

HEAT TREATMENT FURNACE



INDUSTRIAL VALVE MANUFACTURER

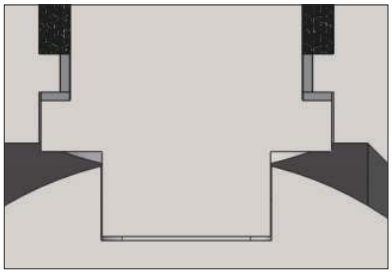
Quality Control

MT Group's factories are equipped with precise measurement and testing equipment to perform UT, MT, PT, PMI, Impact Test, Tensile test, CMM, High Temperature Test, Cryogenic Test, Low Emission Test, High Pressure Gas Test, Paint Thickness Test, Surface Roughness Test, Hydraulic Test etc. Entirely supply chain management， from raw material purchasing until finished goods every process is under control.

Design Features

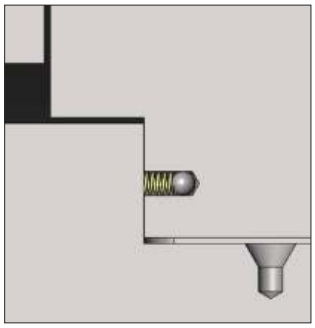
Anti-blowout stem design:

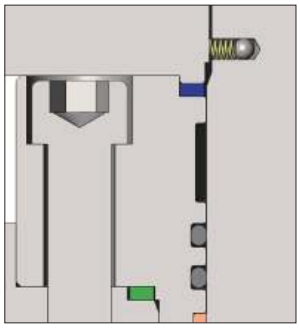
The overall T-shaped structure at the bottom of the stems or optional pendant collect design can prevent the stem from blowing out under pressure.



Anti-static device:

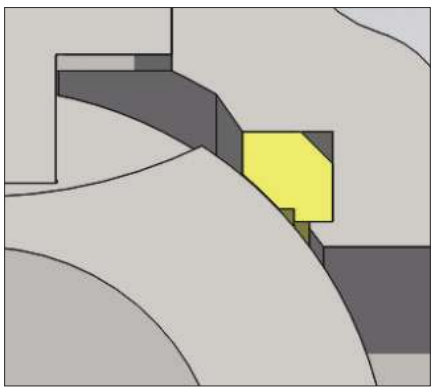
Standard feature of ball valves, a spring between the ball and stem, or between stem and body permits electrial continuity between all valves components.

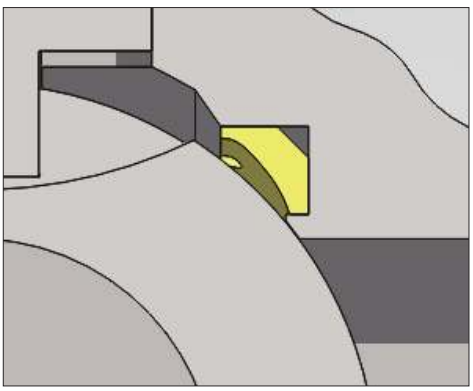




Fire type-testing design:

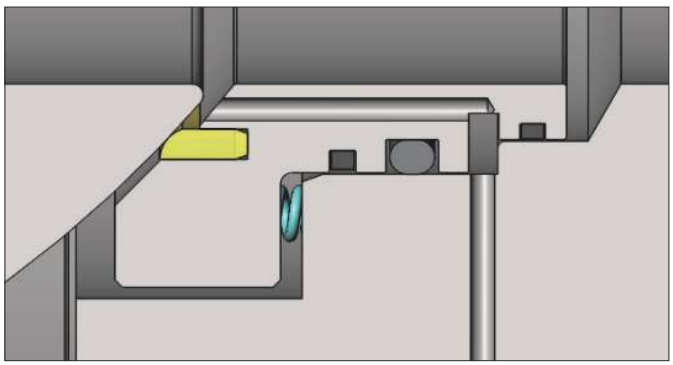
The ball valves are designed with a secondary metal-to-metal seal. After a fire the fire-safe seals energize the seat assembly to seal. For floating valves. Ball is pushed to keep touch with fire-safe lip. For trunnion mounted ball valve, seat is pushed to keep touch with ball by line pressure with spring force.

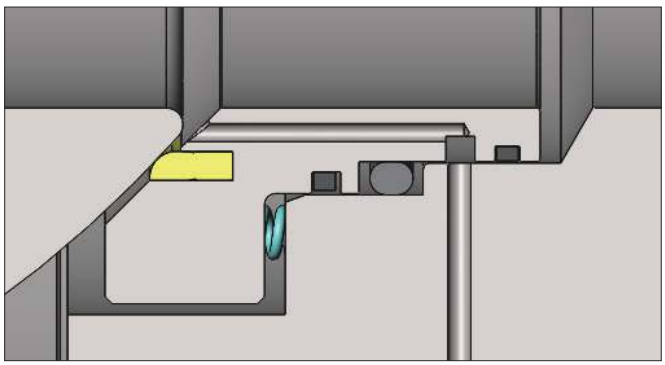




DBB & DIB design:

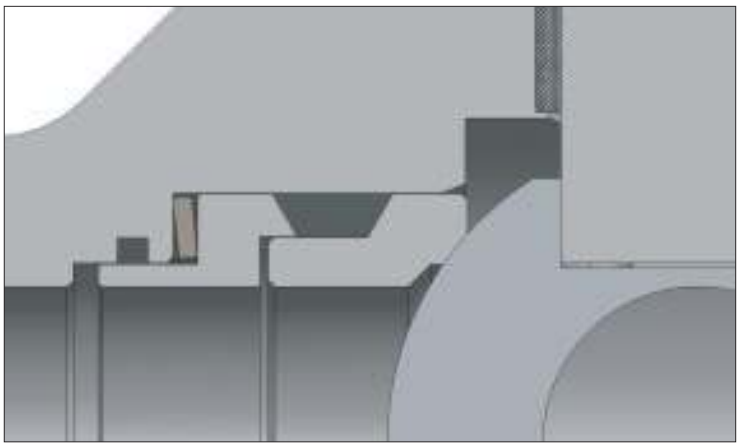
Per request DBB, DIB-I or DIB-II seat design is available based on work conditions.





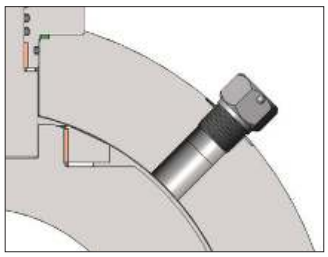
Metal to metal seated design:

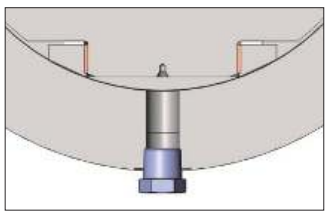
Metal-seated ball/seats and high performance graphite sets are available in complex conditions such as high temperature, high pressure and particle medium etc.

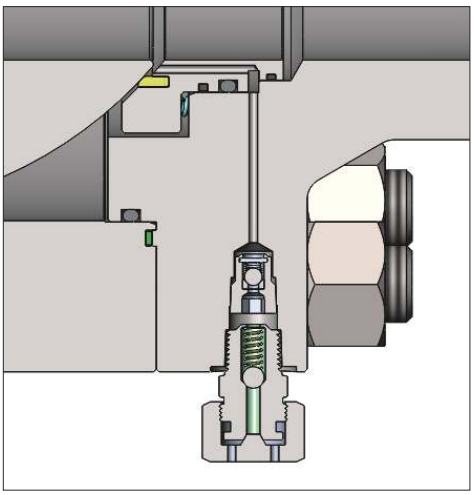


Vent / Drain / Emergen injection grease:

Drain and vent are standard feature in ball valve to ensure pressure relief and cavity drain, Sealant injection systems located on the stem and seat can be utilized in case of emergencies. A second internal check valve provides back up to the fitting.







BALL VALVE

- Trunnion Mounted Ball Valve P8-P10
- Floating Ball Valve P11-P12
- Fully Welded Ball Valve P13-P14
- Cryogenic Ball Valve P15-P16
- DBB Valve P17-P18
- Date Sheets P19-P28
- Pressure-TemperatureCurve Chart P29-P30

Trunnion Mounted Ball Valve

Pressure Rating:

Class 150-300-600-900-1500-2500

Design Standard:

API 6D

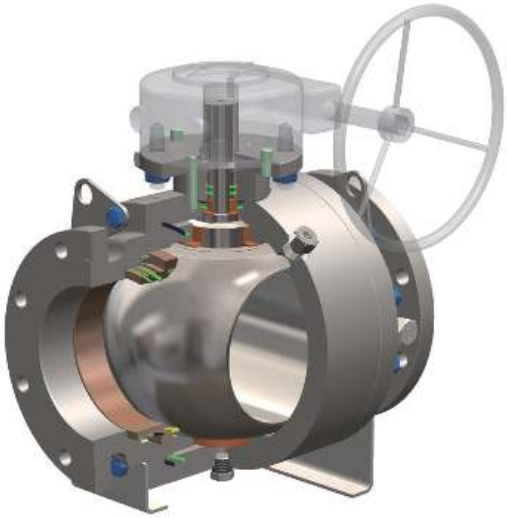
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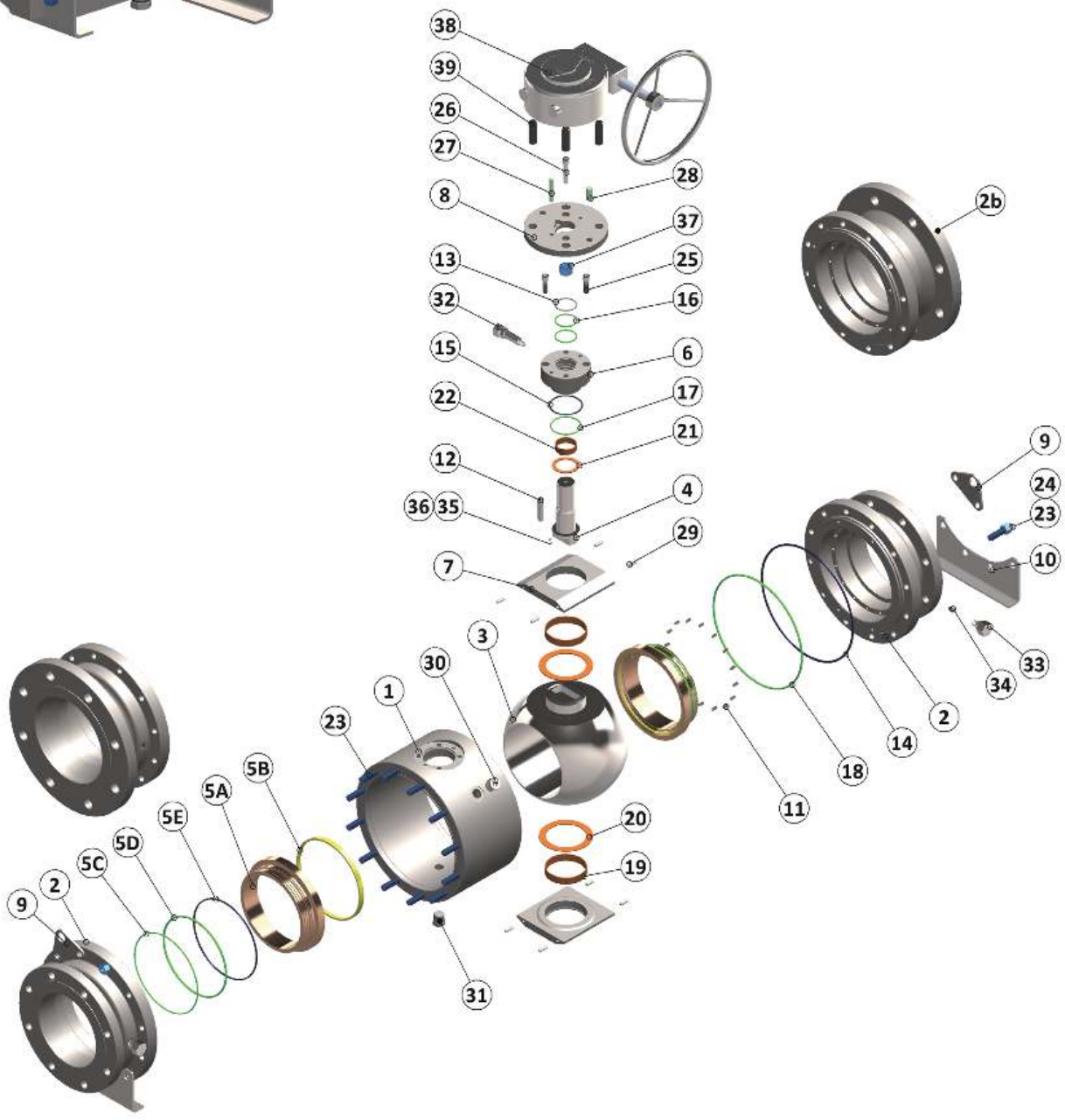
NPS 60''

Design Structure:

Side Entry / Top Entry, Soft Seat / Metal Seat / O-ring Seal / Lipseal, DBB, DIB-1, DIB-2, Casting Steel / Forged Steel






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5E
5D
5C
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19
31

Material Sheet

ITEM	PART	CLASS	STANDARD (NACE)	LOW TEMP (NACE)	STAINLESS STEEL (NACE)
1	Body	All	A105	A350 LF2	A182 Gr.316
2	End adapter	All	A105	A350 LF2	A182 Gr.316
2b	Reduced Bore Adapter	All	A105	A350 LF2	A182 Gr.316
3	Ball	150 ~ 900	A105 + ENP	A350 LF2 + ENP	A182 Gr.316
		1500 ~ 2500	4130 / 4140 + ENP	4130/4140 + ENP	A564 Type 630
4	Stem	150 ~ 900	4130 / 4140 + ENP	4130/4140 + ENP	A182 Gr.316
		1500 ~ 2500	4130 / 4140 + ENP	4130/4140 + ENP	A564 Type 630
5A	Seat Ring	150 ~ 2500	A105 + ENP	A350 LF2 + ENP	A182 Gr.316
5B	Seat Insert	150 ~ 300	Filled PTFE	Filled PTFE	Filled PTFE
		600 ~ 2500	Nylon / Devlon / PEEK	Nylon / Devlon / PEEK	Nylon / Devlon / PEEK
5C	O-ring	All	HNBR / FKM	HNBR / FKM	HNBR / FKM
5D	O-ring	All	HNBR / FKM	HNBR / FKM	HNBR / FKM
5E	Seat Fire Safe Seal	All	Graphite	Graphite	Graphite
6	Body Cover	All	A105	A350 LF2	A182 Gr.316
7	Plate Trunnion	All	4130/4140 + ENP	4130/4140 + ENP	A182 Gr.316
8	Gland Plate	All	A105	A350 LF2	A182 Gr.316
9	Lifting Lug	All	Carbon Steel	Carbon Steel	Stainless Steel
10	Support Feet	All	Carbon Steel	Carbon Steel	Stainless Steel
11	Seat Spring	All	Inconel X750	Inconel X750	Inconel X750
12	Key	All	Carbon Steel	LT Carbon Steel	Stainless Steel
13	Stem Packing	All	Graphite	Graphite	Graphite
14	Body Fire Safe Seal	All	316SS + Graphite	316SS + Graphite	316SS + Graphite
15	Gland Fire Safe Seal	All	316SS + Graphite	316SS + Graphite	316SS + Graphite
16	Stem O-Ring	All	HNBR / FKM	HNBR / FKM	HNBR / FKM
17	Gland O-Ring	All	HNBR / FKM	HNBR / FKM	HNBR / FKM
18	Body O-Ring	All	HNBR / FKM	HNBR / FKM	HNBR / FKM
19	DU Bearing	All	SS + Filled PTFE	SS + Filled PTFE	SS + Filled PTFE
20	DU Thrust Bearing	All	SS + Filled PTFE	SS + Filled PTFE	SS + Filled PTFE
21	Stem Thrust Bearing	All	SS + Filled PTFE	SS + Filled PTFE	SS + Filled PTFE
22	Stem DU Bearing	All	SS + Filled PTFE	SS + Filled PTFE	SS + Filled PTFE
23	Body Studs	All	A193 Gr.B7M	A320 Gr.L7M	A193 Gr.B8M Class2
24	Body Nuts	All	A194 Gr.2HM	A194 Gr.7M	A194 Gr.8M
25	Gland Bolt	All	A193 Gr.B7M	A320 Gr.L7M	A193 Gr.B8M Class2
26	Gland Plate Bolt	All	A193 Gr.B7M	A320 Gr.L7M	A193 Gr.B8M Class2
27	Parallel Pins	All	AISI 1045	AISI 1045	Stainless Steel
28	Parallel Pins	All	AISI 1045	AISI 1045	Stainless Steel
29	Parallel Pins	All	A276 Gr.316	A276 Gr.316	A276 Gr.316
30	Vent Valves	All	A276 Gr.316	A276 Gr.316	A276 Gr.316
31	Plug	All	A276 Gr.316	A276 Gr.316	A276 Gr.316
32	Stem Injection Fitting	All	A105+Zn (Main Material)	A276 Gr.316	A276 Gr.316
33	Seat Injection Fitting	All	A105+Zn (Main Material)	A276 Gr.316	A276 Gr.316
34	Seat Check Valve	All	A276 Gr.316	A276 Gr.316	A276 Gr.316
35	Anti-Static Ball	All	316 S.S.	316 S.S.	316 S.S.
36	Anti-Static Spring	All	316 S.S.	316 S.S.	316 S.S.
37	Gear Nuts	All	A194 Gr.2HM	A194 Gr.7M	A194 Gr.8M
38	Gear Box	All	A216 Gr.WCB	A216 Gr.WCB	A216 Gr.WCB
39	Gear Bolts	All	A193 Gr.B7M	A320 Gr.L7M	A193 Gr.B8M

API 6D

Floating Ball Valve

Pressure Rating:

Class 150-300-600-900-1500-2500

Design Standard:

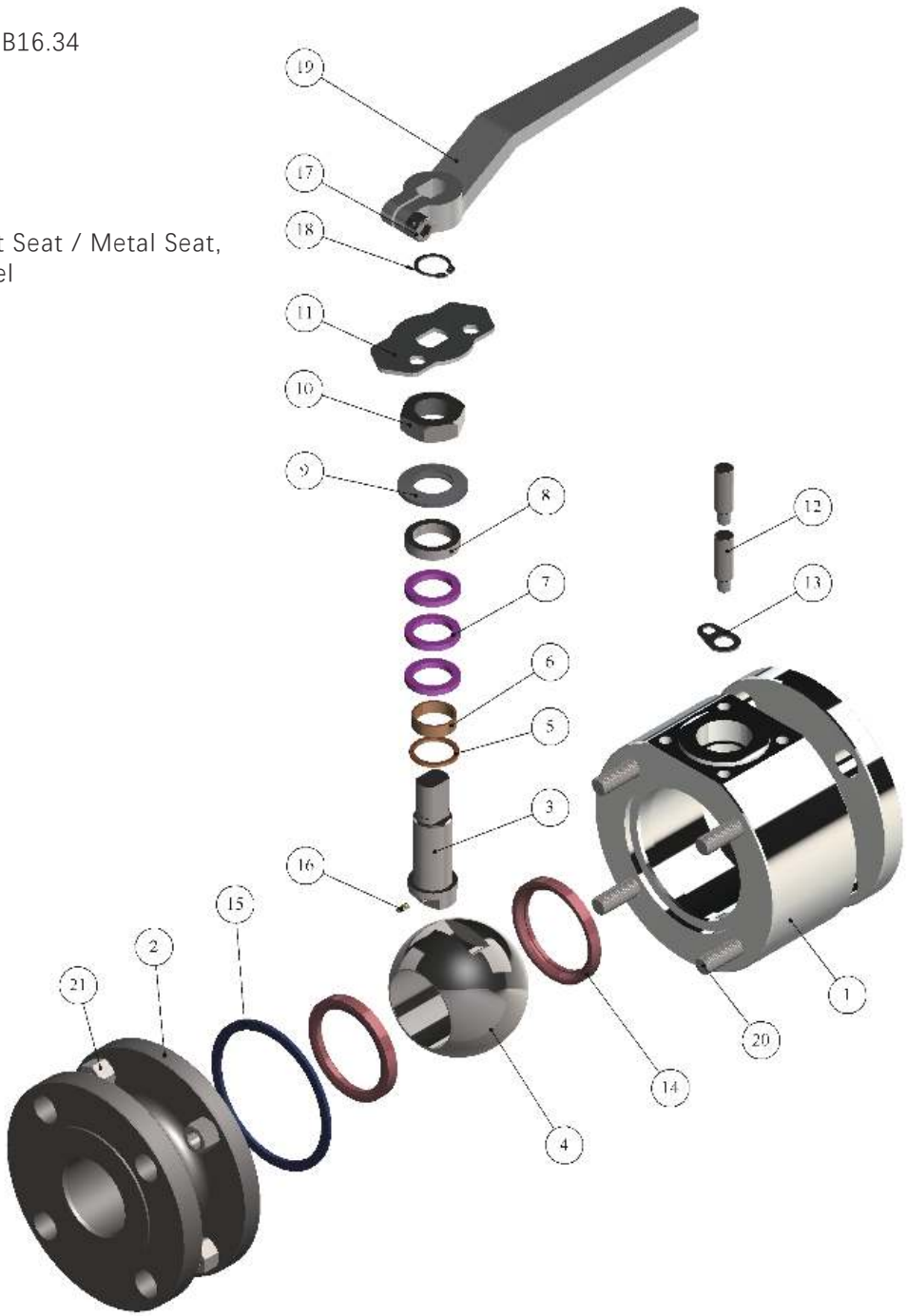
ISO 17292, API 608, ASME B16.34

Maxsize:

NPS 10''

Design Structure:

Side Entry / Top Entry, Soft Seat / Metal Seat,
Casting Steel / Forged Steel





Material Sheet

ITEM	PART	STANDARD	LOW TEMP (NACE)	STAINLESS STEEL (NACE)
1	Body	A105	A350 LF2	A182 Gr.316
2	End Adapter	A105	A350 LF2	A182 Gr.316
3	Stem	A182 Gr.316	A182 Gr.316	A182 Gr.316
4	Ball	A182 Gr.316	A182 Gr.316	A182 Gr.316
5	Stem Thrust Bearing	RPTFE	RPTFE	RPTFE
6	Stem Bearing	RPTFE	RPTFE	RPTFE
7	Stem Packing	Graphite	Graphite	Graphite
8	Gland	ASTM A276 GR.410	ASTM A276 GR.410	ASTM A276 GR.316
9	Disc Spring	AISI 1566	AISI 1566	17-7PH
10	Stem Nuts	A194 Gr.2HM	A194 Gr.7M	A194 Gr.8M
11	Location Plate	C.S. + Zn	C.S. + Zn	Stainless Steel
12	Location Pin	Stainless Steel	Stainless Steel	Stainless Steel
13	Lockplate	C.S. + Zn	C.S. + Zn	Stainless Steel
14	Seat	RPTFE	RPTFE	RPTFE
15	Body Fire Safe Seal	316SS + Graphite	316SS + Graphite	316SS + Graphite
16	Anti-static Fitting	316 S.S.	316 S.S.	316 S.S.
17	Handle Screw	C.S.	C.S.	C.S.
18	Retaining Ring	AISI 1566	AISI 1566	AISI 1566
19	Handle	C.S.	C.S.	C.S.
20	Body Studs	A193 Gr.B7M	A320 Gr.L7M	A193 Gr.B8M Class2
21	Body Nuts	A194 Gr.2HM	A194 Gr.7M	A194 Gr.8M

Fully Welded Ball Valve

Pressure Rating:

Class 150-300-600-900-1500

Design Standard:

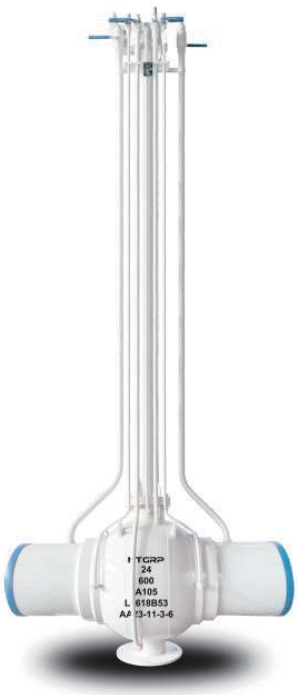
API 6D

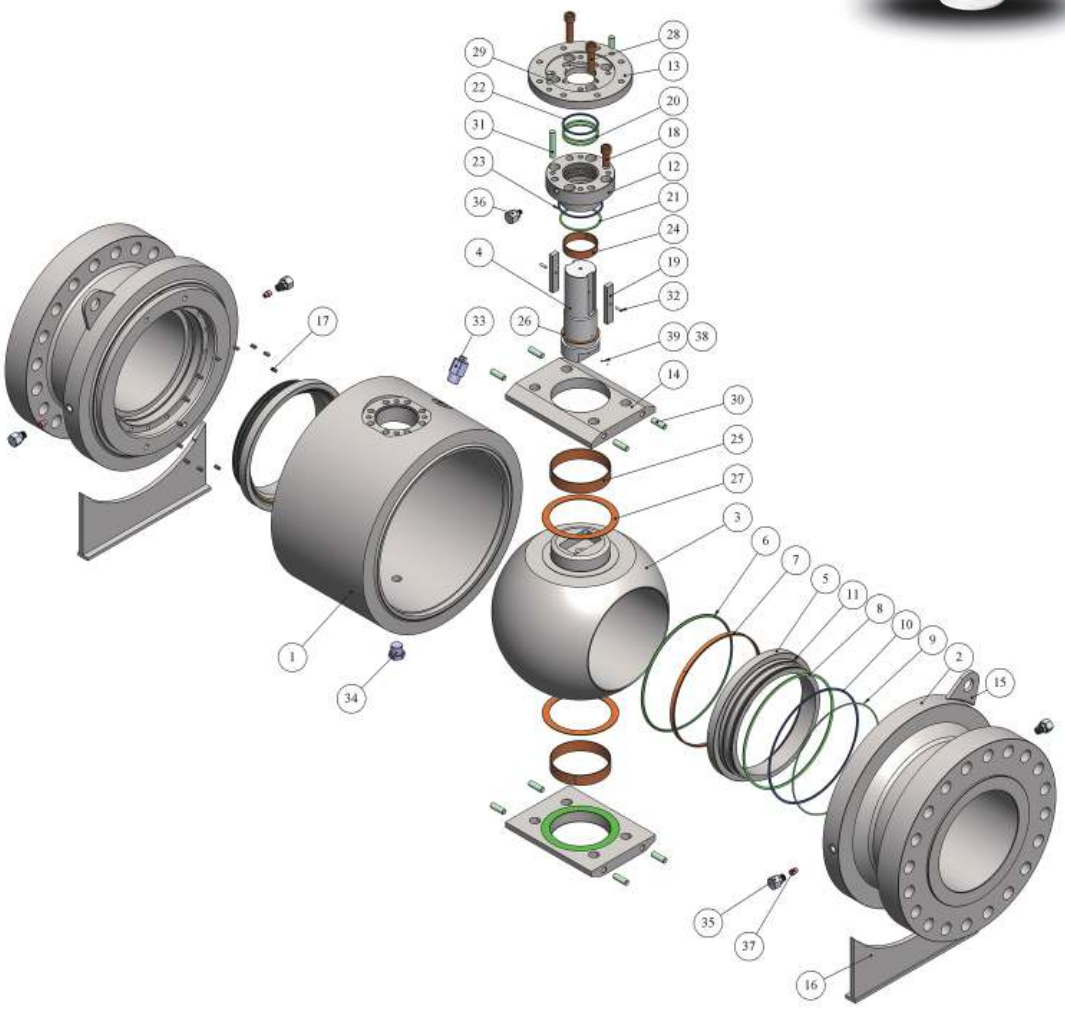
Maxsize:

NPS 48''

Design Structure:

Fully welded body, Side Entry,
Soft Seat / Metal Seat, O-rings,
Buried installation





Material Sheet

ITEM	PART	STANDARD (NACE)	LOW TEMP (NACE)	STAINLESS (NACE)
1	Body	A105	A350 LF2	A182 Gr.316
2	End Adapter	A105	A350 LF2	A182 Gr.316
3	Ball	A105 + ENP	A350 LF2 + ENP	A182 Gr.316 / 17-4PH
4	Stem	4130/4140 + ENP	4130/4140 + ENP	A182 Gr.316
5	Seat	A105 + ENP	A350 LF2 + ENP	A182 Gr.316
6	Triangle Sealing Ring	HNBR / FKM	HNBR / FKM	HNBR / FKM
7	Seat Insert Ring	Nylon / Devlon / PEEK	Nylon / Devlon / PEEK	Nylon / Devlon / PEEK
8	Seat O-ring	HNBR / FKM	HNBR / FKM	HNBR / FKM
9	Seat O-ring	HNBR / FKM	HNBR / FKM	HNBR / FKM
10	Back Up Ring	PTFE	PTFE	PTFE
11	Seat Fire Safe Seal	Graphite	Graphite	Graphite
12	Body Cover	A105	A350 LF2	A182 Gr.316
13	Gland Plate	A105	A350 LF2	A182 Gr.316
14	Trunnion	A105	A350 LF2	A182 Gr.316
15	Lifting Lug	Carbon Steel	Carbon Steel	Stainless Steel
16	Support Feet	Carbon Steel	Carbon Steel	Stainless Steel
17	Seat Spring	Inconel X750	Inconel X750	Inconel X750
18	Gland Studs	A193 Gr.B7M	A320 Gr.L7M	A193 Gr.B8M
19	Key	Carbon Steel	LT Carbon Steel	Stainless Steel
20	Stem O-Ring	HNBR / FKM	HNBR / FKM	HNBR / FKM
21	Gland O-Ring	HNBR / FKM	HNBR / FKM	HNBR / FKM
22	Stem Packing	Graphite	Graphite	Graphite
23	Gland Fire Safe Seal	316SS + Graphite	316SS + Graphite	316SS + Graphite
24	Stem DU Bearing	CS + Filled PTFE	SS + Filled PTFE	SS + Filled PTFE
25	DU Bearing	CS + Filled PTFE	SS + Filled PTFE	SS + Filled PTFE
26	Stem Thrust Bearing	CS + Filled PTFE	SS + Filled PTFE	SS + Filled PTFE
27	DU Thrust Bearing	CS + Filled PTFE	SS + Filled PTFE	SS + Filled PTFE
28	Gland Plate Bolt	A193 Gr.B7M	A320 Gr.L7M	A193 Gr.B8M
29	Parallel Pins	AISI 1045	AISI 1045	Stainless Steel
30	Parallel Pins	A276 Gr.316	A276 Gr.316	A276 Gr.316
31	Parallel Pins	AISI 1045	AISI 1045	Stainless Steel
32	Spring Pin	AISI 1566	AISI 1566	AISI 1566
33	Vent Valves	A276 Gr.316	A276 Gr.316	A276 Gr.316
34	Plug	A276 Gr.316	A276 Gr.316	A276 Gr.316
35	Seat Injection Fitting	A105+Zn (Main Material)	A276 Gr.316	A276 Gr.316
36	Stem Injection Fitting	A105+Zn (Main Material)	A276 Gr.316	A276 Gr.316
37	Seat-Check Valves	A276 Gr.316	A276 Gr.316	A276 Gr.316
38	Anti-Static Ball	316 S.S.	316 S.S.	316 S.S.
39	Anti-Static Spring	316 S.S.	316 S.S.	316 S.S.

Cryogenic Ball Valve



Pressure Rating:

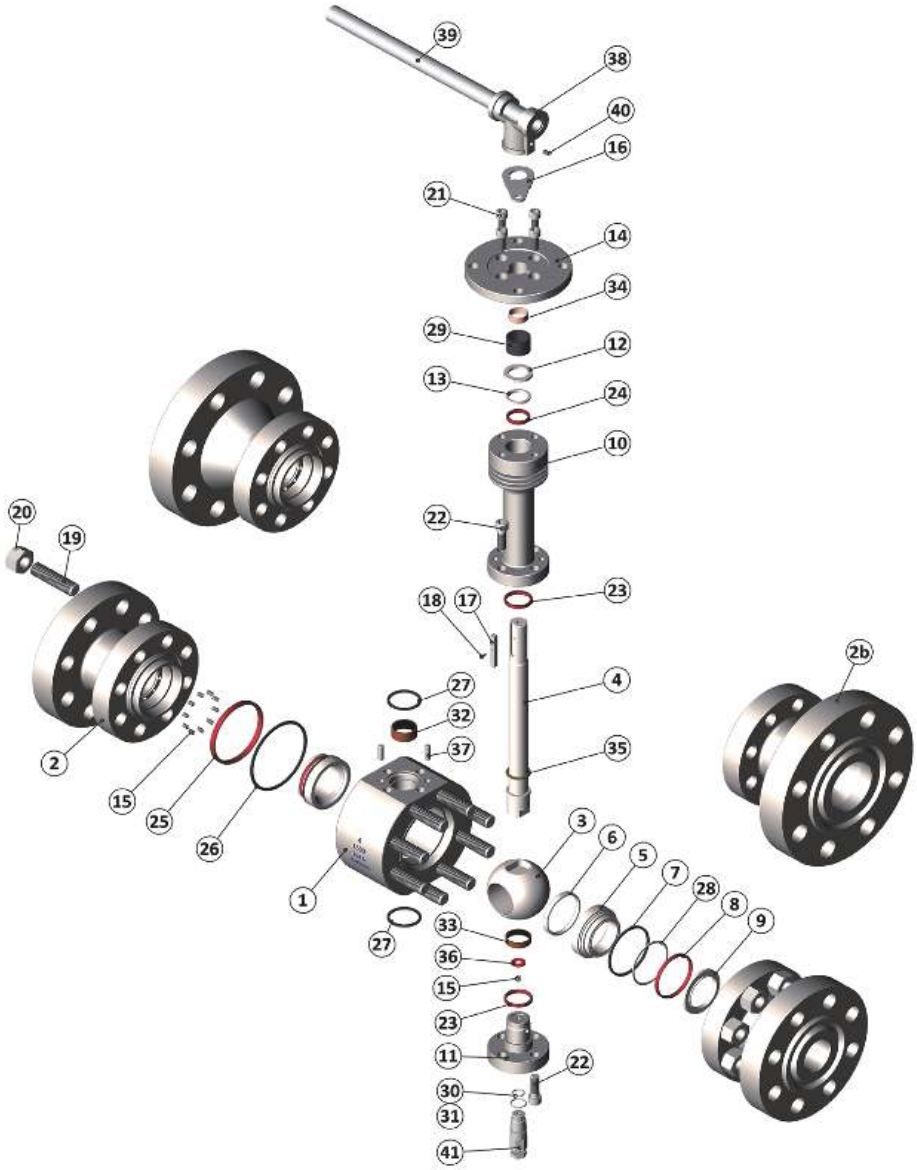
Class 150-300-600-900-1500

Maxsize:

NPS 24''

Design Structure:

-196℃~-50℃, Side Entry/ Top Entry,
Soft Seat, Forged Steel



Material Sheet

ITME	PART	STAINLESS STEEL -100℃ (NACE)	STAINLESS STEEL -196℃ (NACE)
1	Body	A182 Gr.316	A182 Gr.316
2	End Adapter	A182 Gr.316	A182 Gr.316
2b	Reduce Bore Adapter	A182 Gr.316	A182 Gr.316
3	Ball	A182 Gr.316	A182 Gr.316
4	Stem	A182 Gr.316	A182 Gr.316
5	Seat Ring	A182 Gr.316	A182 Gr.316
6	Seat	PCTFE	PCTFE
7	Firesafe Gasket	Graphite	Graphite
8	Seat Lip Seal	316 S.S. + RPTFE	Elgiloy + RPTFE
9	Seat Plate	A182 Gr.316	A182 Gr.316
10	Bonnet	A182 Gr.316	A182 Gr.316
11	Trunnion	A182 Gr.316	A182 Gr.316
12	Stop Ring	A182 Gr.316	A182 Gr.316
13	GLand Ring	A182 Gr.316	A182 Gr.316
14	Gland Plate	A182 Gr.316	A182 Gr.316
15	Spring	Inconel X750	Inconel X750
16	Locking Plate	Stainless Steel	Stainless Steel
17	Key	Stainless Steel	Stainless Steel
18	Spring Pin	AISI 1566	AISI 1566
19	Body Studs	A193 Gr.B8M Class2	A193 Gr.B8M Class2
20	Body Nuts	A194 Gr.8M	A194 Gr.8M
21	Gland Bolts	A193 Gr.B8M Class2	A193 Gr.B8M Class2
22	Gland Bolts	A193 Gr.B8M Class2	A193 Gr.B8M Class2
23	Trunnion Lip-Seal	316SS + RPTFE	Elgiloy + RPTFE
24	Stem Lip-Seal	316SS + RPTFE	Elgiloy + RPTFE
25	Body Lip-Seal	316SS + RPTFE	Elgiloy + RPTFE
26	Body Fire Safe Gasket	316SS + Graphite	316SS + Graphite
27	Trunnion Fire-safe Gasket	316SS + Graphite	316SS + Graphite
28	Lip Seal Back Up Ring	RPTFE	RPTFE
29	Stem Packing	Graphite	Graphite
30	Seal Ring	PTFE	PTFE
31	Seal Ring	PTFE	PTFE
32	Stem Bearing	SS + Filled PTFE	SS + Filled PTFE
33	Trunnion Bearing	SS + Filled PTFE	SS + Filled PTFE
34	Stem Bearing	SS + Filled PTFE	SS + Filled PTFE
35	Stem Thrust Bearing	PCTFE	PCTFE
36	Ball Thrust Bearing	PCTFE	PCTFE
37	Parallel Pins	A276 Gr.316	A276 Gr.316
38	Handle Guide	A216 Gr.WCB + Zn	A216 Gr.WCB + Zn
39	Pipe	C.S. + Zn	C.S. + Zn
40	Handle Screw	Stainless Steel	Stainless Steel
41	Vent Valve	A276 Gr.316	A276 Gr.316

DBB Double Ball Valve



Pressure Rating:

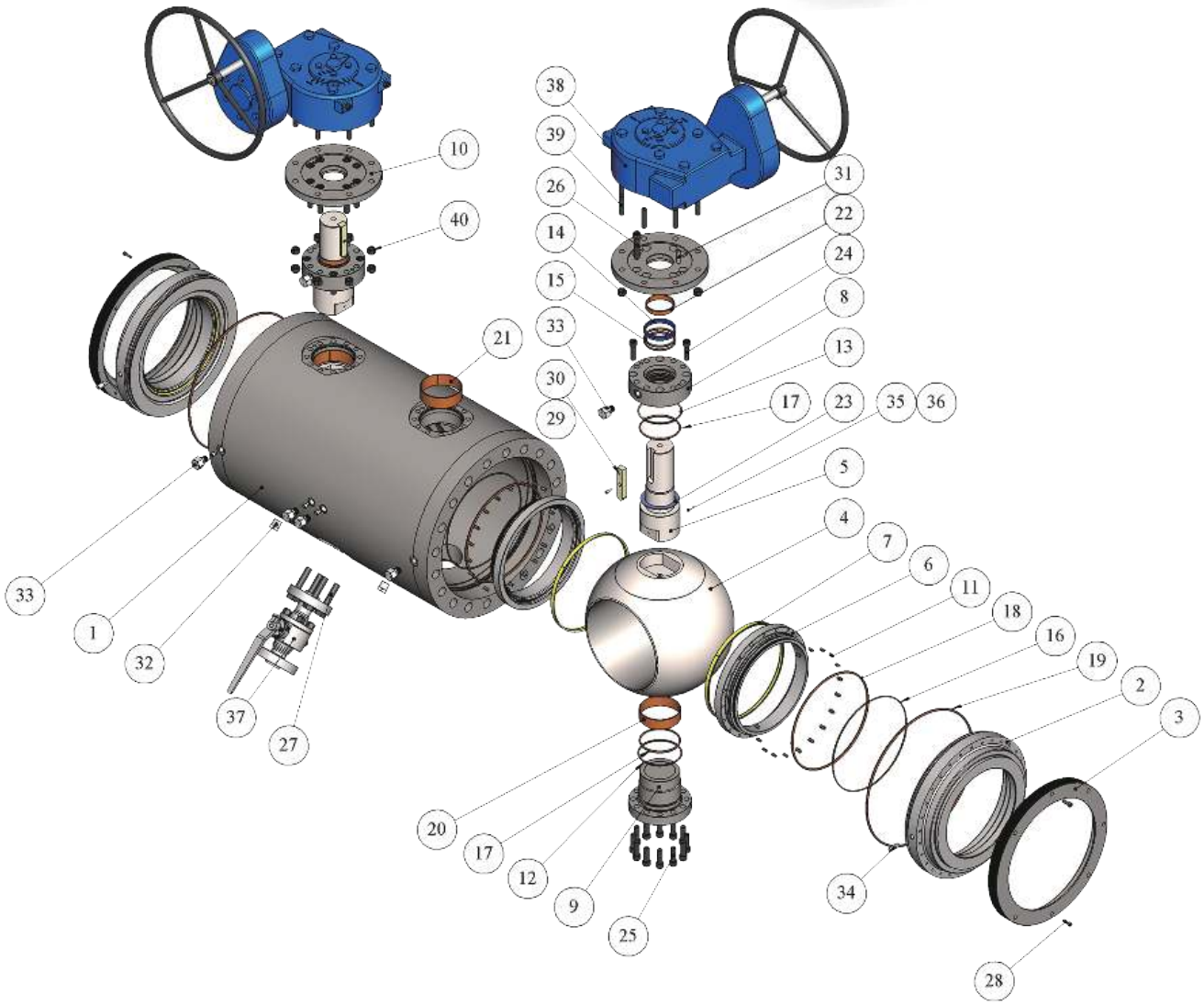
Class 150-300-600-900-1500-2500

Maxsize:

NPS 24''

Design Structure:

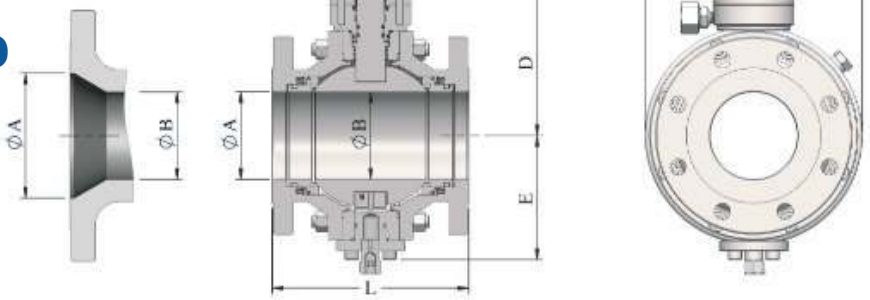
Double ball, compact design,
DBB



Material Sheet

ITEM	PART	STANDARD(NACE)	LOW TEMP (NACE)	STAINLESS STEEL (NACE)
1	Body	A105	A350 LF2	A182 Gr.316
2	End Adapter	A105	A350 LF2	A182 Gr.316
3	Ring	A105	A350 LF2	A182 Gr.316
4	Ball	A105 + ENP	A350 LF2 + ENP	A182 Gr.316
5	Stem	4130/4140 + ENP	4130/4140 + ENP	A182 Gr.316
6	Seat Ring	A105+ENP	A350 LF2+ENP	A182 Gr.316
7	Seat Insert Ring	Nylon / Devlon / PEEK	Nylon / Devlon / PEEK	Nylon / Devlon / PEEK
8	Body Cover	A105	A350 LF2	A182 Gr.316
9	Trunnion	A105	A350 LF2	A182 Gr.316
10	Gland Plate	A105	A350 LF2	A182 Gr.316
11	Seat Spring	Inconel X750	Inconel X750	Inconel X750
12	Fire Safe Seal Gasket	316SS + Graphite	316SS + Graphite	316SS + Graphite
13	Gland Fire Safe Seal	316SS + Graphite	316SS + Graphite	316SS + Graphite
14	Stem Packing	Graphite	Graphite	Graphite
15	Stem O-Ring	HNBR / FKM	HNBR / FKM	HNBR / FKM
16	O-Ring	HNBR / FKM	HNBR / FKM	HNBR / FKM
17	Trunnion O-Ring	HNBR / FKM	HNBR / FKM	HNBR / FKM
18	Seat O-Ring	HNBR / FKM	HNBR / FKM	HNBR / FKM
19	Body O-Ring	HNBR / FKM	HNBR / FKM	HNBR / FKM
20	DU Bearing	SS + Filled PTFE	SS + Filled PTFE	SS + Filled PTFE
21	DU Bearing	SS + Filled PTFE	SS + Filled PTFE	SS + Filled PTFE
22	Stem Bearing	SS + Filled PTFE	SS + Filled PTFE	SS + Filled PTFE
23	Stem Thrust Bearing	SS + Filled PTFE	SS + Filled PTFE	SS + Filled PTFE
24	Gland Bolts	A193 Gr.B7M	A320 Gr.L7M	A193 Gr.B8M
25	Body Bolts	A193 Gr.B7M	A320 Gr.L7M	A193 Gr.B8M
26	Gland Plate Bolts	A193 Gr.B7M	A320 Gr.L7M	A193 Gr.B8M
27	External Blind Flange Studs	A193 Gr.B7M	A320 Gr.L7M	A193 Gr.B8M
28	Screws	A193 Gr.B7M	A320 Gr.L7M	A193 Gr.B8M
29	Screws	A193 Gr.B7M	A320 Gr.L7M	A193 Gr.B8M
30	Key	Carbon Steel	LT Carbon Steel	Stainless Steel
31	Parallel Pins	AISI 1045	AISI 1045	Stainless Steel
32	Plug	A276 Gr.316	A276 Gr.316	A276 Gr.316
33	Injection Fitting	A105+Zn (Main Material)	A276 Gr.316	A276 Gr.316
34	Seat Check Valves	A276 Gr.316	A276 Gr.316	A276 Gr.316
35	Anti-Static Ball	316 S.S.	316 S.S.	316 S.S.
36	Anti-Static Spring	316 S.S.	316 S.S.	316 S.S.
37	Floating Ball Valves	A105 / 316 S.S	LF2 / 316 S.S	316 S.S.
38	Gear Nuts	A194 Gr.2HM	A194 Gr.7M	A194 Gr.8M
39	Gear Box	A216 Gr.WCB	A216 Gr.WCB	A216 Gr.WCB
40	Gear Bolts	A193 Gr.B7M	A320 Gr.L7M	A193 Gr.B8M

TRUNNION MOUNTED BALL VALVES-SIZES 4" AND BELOW

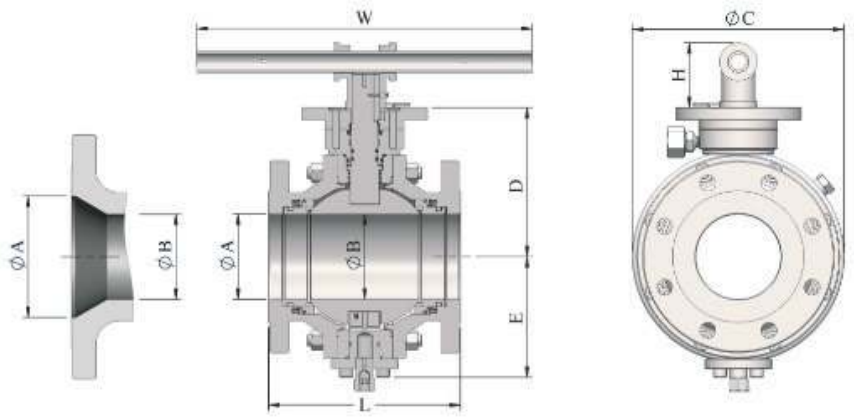


ASME CLASS 150

SIZE in/mm	A	B	L-WE	L-RF	L-RTJ	C	D	E	H	W	V	X	Y	WEIGHT lb/kg
1 1/2	1.50	1.50	7.50	6.50	7	5.98	4.72	3.54	1.57	13.0	/	/	/	31
40	38	38	191	165	178	152	120	90	40	300	/	/	/	14
2x1-1/2	1.93	1.50	8.50	7	7.50	5.98	4.72	3.54	1.57	13.0	/	/	/	44
50x40	49	38	216	178	191	152	120	90	40	300	/	/	/	20
2	1.93	1.93	8.50	7	7.50	6.30	5.0	3.86	1.57	14.0	/	/	/	51
50	49	49	216	178	191	160	127	98	40	356	/	/	/	23
3x2	2.91	1.93	11.13	8	8.50	8.43	5.0	3.86	1.57	14.0	/	/	/	66
80x50	74	49	283	203	216	214	127	98	40	356	/	/	/	30
3	2.91	2.91	11.13	8	8.50	8.43	6.22	4.88	1.57	16.0	/	/	/	95
80	74	74	283	203	216	214	158	124	40	406	/	/	/	43
4x3	3.94	2.91	12	9.02	9.50	10.0	6.22	4.88	1.57	16.0	/	/	/	123
100x80	100	74	305	229	241	254	158	124	40	406	/	/	/	56
4	3.94	3.94	12	9.02	9.50	10.0	7.0	5.67	1.57	18.1	/	/	/	161
100	100	100	305	229	241	254	178	144	40	560	/	/	/	73
6x4	5.91	3.94	18	15.50	16.00	10.94	7.0	5.67	1.57	18.1	/	/	/	170
150x100	150	100	457	394	406	279	178	144	40	560	/	/	/	77

ASME CLASS 300

SIZE in/mm	A	B	L-WE	L-RF	L-RTJ	C	D	E	H	W	V	X	Y	WEIGHT lb/kg
1 1/2	1.50	1.50	7.50	7.50	8	6.30	4.72	3.54	1.57	15	/	/	/	40
40	38	38	191	191	203	160	120	90	40	382	/	/	/	18
2x1-1/2	1.93	1.50	8.50	8.50	9.13	6.50	4.72	3.54	1.57	15	/	/	/	55
50x40	49	38	216	216	232	165	120	90	40	382	/	/	/	25
2	1.93	1.93	8.50	8.50	9.13	6.50	5.0	3.86	1.57	17	/	/	/	59
50	49	49	216	216	232	165	127	98	40	432	/	/	/	27
3x2	2.91	1.93	11.13	11.13	11.75	7.52	5.0	3.86	1.57	17	/	/	/	75
80x50	74	49	283	283	298	191	127	98	40	432	/	/	/	34
3	2.91	2.91	11.13	11.13	11.75	8.66	6.22	4.88	1.57	22.2	/	/	/	119
80	74	74	283	283	298	220	158	124	40	560	/	/	/	54
4x3	3.94	2.91	12	12	12.63	9.02	6.22	4.88	1.57	22.2	/	/	/	132
100x80	100	74	305	305	321	229	158	124	40	560	/	/	/	60
4	3.94	3.94	12	12	12.63	10.0	7.0	5.67	1.57	24	/	/	/	196
100	100	100	305	305	321	254	178	144	40	700	/	/	/	89
6x4	5.91	3.94	18	15.88	16.5	12.52	7.0	5.67	1.57	24	/	/	/	223
150x100	150	100	457	403	419	318	178	144	40	700	/	/	/	101



TRUNNION MOUNTED BALL VALVES-SIZES 4" AND BELOW

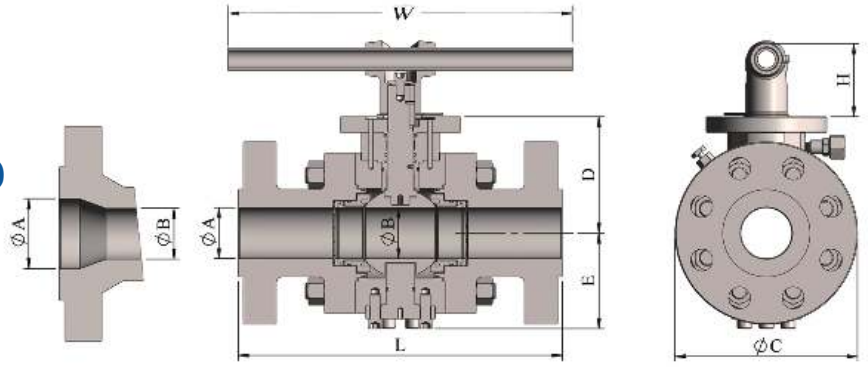
ASME CLASS 600

SIZE in/mm	A	B	L-WE	L-RF	L-RTJ	C	D	E	H	W	V	X	Y	WEIGHT lb/kg
1 1/2	1.50	1.50	9.50	9.50	9.50	6.50	5.79	4.33	1.57	19.0	/	/	/	46
40	38	38	241	241	241	165	147	110	40	482	/	/	/	21
2x1-1/2	1.93	1.5	11.5	11.5	11.63	6.69	5.79	4.33	1.57	19.0	/	/	/	55
50x40	49	38	292	292	295	170	147	110	40	482	/	/	/	25
2	1.93	1.93	11.5	11.5	11.63	6.69	5.91	4.33	1.57	23.0	/	/	/	62
50	49	49	292	292	295	170	150	110	40	584	/	/	/	28
3x2	2.91	1.93	14.0	14.0	14.13	8.66	5.91	4.33	1.57	23.0	/	/	/	86
80x50	74	49	356	356	359	220	150	110	40	584	/	/	/	39
3	2.91	2.91	14.0	14.0	14.13	8.66	6.81	5.20	2.17	28.0	/	/	/	130
80	74	74	356	356	359	220	173	132	55	712	/	/	/	59
4x3	3.94	2.91	17	17	17.13	10.39	6.81	5.20	2.17	28.0	/	/	/	168
100x80	100	74	432	432	435	264	173	132	55	712	/	/	/	76
4	3.94	3.94	17	17	17.13	10.39	7.72	6.30	2.17	34.0	16.0	2.17	10.0	249
100	100	100	432	432	435	264	196	160	55	864	406	55	254	113
6x4	5.91	3.94	22.0	22.0	22.13	14.0	7.72	6.30	2.17	34.0	16.0	2.17	10.0	335
150x100	150	100	559	559	562	356	196	160	55	864	406	55	254	152

ASME CLASS 900

SIZE in/mm	A	B	L-WE	L-RF	L-RTJ	C	D	E	H	W	V	X	Y	WEIGHT lb/kg
1 1/2	1.50	1.50	12.0	12.0	12.0	6.50	5.79	4.33	1.57	24.0	/	/	/	68
40	38	38	305	305	305	165	147	110	40	610	/	/	/	31
2x1-1/2	1.93	1.50	14.49	14.49	14.61	8.50	5.79	4.33	1.57	24.0	/	/	/	95
50x40	49	38	368	368	371	216	147	110	40	610	/	/	/	43
2	1.93	1.93	14.49	14.49	14.61	8.50	6.06	4.41	1.57	29.0	/	/	/	130
50	49	49	368	368	371	216	154	112	40	736	/	/	/	59
3x2	2.91	1.93	15.0	15.0	15.12	9.49	6.06	4.41	1.57	29.0	/	/	/	143
80x50	74	49	381	381	384	241	154	112	40	736	/	/	/	65
3	2.91	2.91	15.0	15.0	15.12	9.49	7.17	5.59	2.17	30.0	/	/	/	187
80	74	74	381	381	384	241	182	142	55	762	/	/	/	85
4x3	3.94	2.91	18.0	18.0	18.11	11.5	7.17	5.59	2.17	30.0	/	/	/	240
100x80	100	74	457	457	460	292	182	142	55	762	/	/	/	109
4	3.94	3.94	18.0	18.0	18.11	11.5	8.07	6.69	2.17	36.0	16.0	2.17	10.0	390
100	100	100	457	457	460	292	205	170	55	914	406	55	254	177
6x4	5.91	3.94	24.02	24.02	24.13	15.0	8.07	6.69	2.17	36.0	16.0	2.17	10.0	489
150x100	150	100	610	610	613	381	205	170	55	914	406	55	254	222

TRUNNION MOUNTED BALL VALVES-SIZES 4" AND BELOW

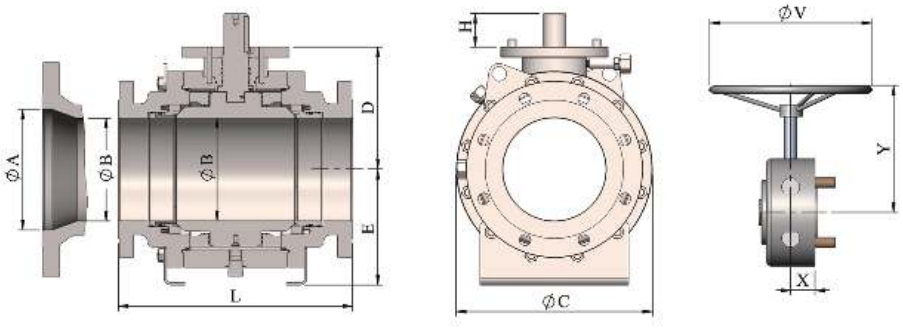


ASME CLASS 1500

SIZE in/mm	A	B	L-WE	L-RF	L-RTJ	C	D	E	H	W	V	X	Y	WEIGHT lb/kg
1 1/2	1.50	1.50	12.0	12.0	12	6.50	5.79	4.33	1.57	24	/	/	/	68
40	38	38	305	305	305	165	147	110	40	710	/	/	/	31
2x1-1/2	1.93	1.50	14.49	14.49	14.61	8.5	5.79	4.33	1.57	24	/	/	/	95
50x40	49	38	368	368	371	216	147	110	40	710	/	/	/	43
2	1.93	1.93	14.49	14.49	14.61	8.5	6.06	4.41	1.57	29	/	/	/	130
50	49	49	368	368	371	216	154	112	40	736	/	/	/	59
3x2	2.91	1.93	18.5	18.5	18.62	10.43	6.06	4.41	1.57	29.0	/	/	/	168
80x50	74	49	470	470	473	265	154	112	40	736	/	/	/	76
3	2.91	2.91	18.5	18.5	18.62	10.43	7.87	6.38	2.17	37.0	/	/	/	240
80	74	74	470	470	473	265	200	162	55	946	/	/	/	109
4x3	3.94	2.91	21.5	21.5	21.61	12.24	7.87	6.38	2.17	37.0	/	/	/	311
100x80	100	74	546	546	549	311	200	162	55	946	/	/	/	141
4	3.94	3.94	21.5	21.5	21.61	12.24	8.50	7.48	2.17	43.0	16.0	2.17	10.0	399
100	100	100	546	546	549	311	216	190	55	1092	406	55	254	181
6x4	5.67	3.94	27.76	27.76	27.99	15.55	8.50	7.48	2.17	43.0	16.0	2.17	10.0	628
150x100	144	100	705	705	711	395	216	190	55	1092	406	55	254	285

ASME CLASS 2500

SIZE in/mm	A	B	L-WE	L-RF	L-RTJ	C	D	E	H	W	V	X	Y	WEIGHT lb/kg
1 1/2	1.50	1.50	14.49	14.49	14.61	8.07	6.26	4.72	1.57	29	/	/		130
40	38	38	368	368	371	205	159	120	40	736	/	/		59
2x1-1/2	1.65	1.50	17.76	17.76	17.87	9.25	6.26	4.72	1.57	29.0	/	/		143
50x40	42	38	451	451	451	235	159	120	40	736	/	/		65
2	1.65	1.65	17.76	17.76	17.87	9.25	6.54	5.12	2.17	35.5	16	/		194
50	42	42	451	451	451	235	166	130	55	902	406	/		88
3x2	2.44	1.65	22.76	22.76	22.99	12.01	6.54	5.12	2.17	35.5	16.0	/	/	341
80x50	62	42	578	578	584	305	166	130	55	902	406	/	/	155
3	2.44	2.44	22.76	22.76	22.99	12.01	8.39	7.01	2.36	45.5	16.0	/	/	411
80	62	62	578	578	584	305	213	178	60	1156	406	/	/	187
4x3	3.43	2.44	26.5	26.5	26.89	16.34	8.39	7.01	2.36	45.5	16.0	/	/	581
100x80	87	62	673	673	683	415	213	178	60	1156	406	/	/	264
4	3.43	3.43	26.5	26.5	26.89	16.34	11.10	10.08	3.15	n/a	20.0	3.15	12.0	836
100	87	87	673	673	683	415	282	256	80	n/a	508	80	305	380
6x4	5.16	3.43	35.98	35.98	36.5	19.09	11.10	10.08	3.15	n/a	20.0	3.15	12.0	1122
150x100	131	87	914	914	927	485	282	256	80	n/a	508	80	305	510

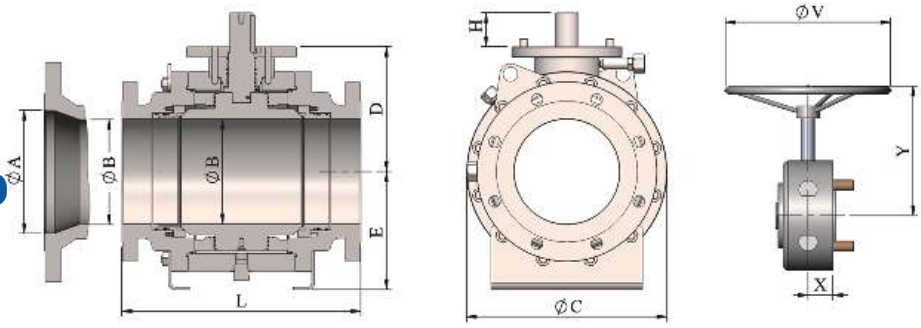


TRUNNION MOUNTED BALL VALVES-SIZES 6" AND ABOVE

ASME CLASS 150

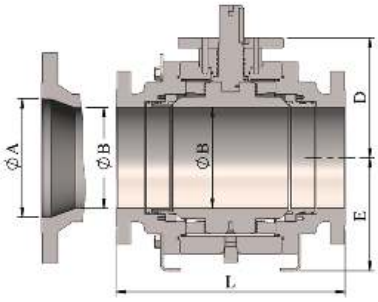
SIZE in/mm	A	B	L-WE	L-RF	L-RTJ	C	D	E	H	W	V	X	Y	WEIGHT lb/kg
6	5.91	5.91	18	15.50	16.00	12.44	8.27	8.58	2.36	31.0	16.0	2.36	8.75	391
150	150	150	457	394	406	316	210	218	60	788	406	60	292	177
8	7.91	7.91	20.5	18	18.5	15.08	9.45	10.08	2.56	36.0	16.0	2.56	8.75	560
200	201	201	521	457	470	383	240	256	65	914	406	65	292	254
10	9.92	9.92	22	21	21.5	18.90	11.57	11.65	3.15	/	20.0	3.15	8.75	927
250	252	252	559	533	546	480	294	296	80	/	508	80	292	420
12	11.93	11.93	25	24	24.5	22.44	13.78	14.37	3.54	/	24.0	3.54	16.5	1450
300	303	303	635	610	622	570	350	365	90	/	610	90	419	658
14	13.15	13.15	30	27	27.5	24.61	14.88	15.43	3.94	/	24.0	3.94	16.5	1800
350	334	334	762	686	699	625	378	392	100	/	610	100	419	816
16	15.16	15.16	33	30	30.5	27.95	16.73	17.13	4.72	/	28.0	4.72	16.5	2570
400	385	385	838	762	775	710	425	435	120	/	711	120	419	1166
18	17.17	17.17	36	34	34.5	30.12	17.91	18.31	4.72	/	28.0	4.72	16.5	3020
450	436	436	914	864	876	765	455	465	120	/	711	120	419	1370
20	19.17	19.17	39	36	36.5	32.87	19.88	23.11	4.72	/	28.0	4.72	22.0	4050
500	487	487	991	914	927	835	505	587	120	/	711	120	559	1837
22	21.18	21.18	(*)	(*)	(*)	36.26	21.14	24.80	4.72	/	28.0	4.72	22.0	5020
550	538	538	(*)	(*)	(*)	921	537	630	120	/	711	120	559	2277
24	23.19	23.19	45	42	42.5	38.90	22.52	26.38	7.09	/	28.0	7.09	22.0	6818
600	589	589	1143	1067	1080	988	572	670	180	/	711	180	559	3099
26	24.92	24.92	49	45	(*)	41.73	24.49	28.27	7.09	/	28.0	7.09	22.0	8107
650	633	633	1245	1143	(*)	1060	622	718	180	/	711	180	559	3685
28	26.93	26.93	53	49	(*)	44.76	25.87	29.65	7.09	/	30.0	7.09	23.5	9878
700	684	684	1346	1245	(*)	1137	657	753	180	/	762	180	597	4490
30	28.94	28.94	55	51	(*)	49.02	27.52	31.73	8.07	/	30.0	8.07	23.5	11473
750	735	735	1397	1295	(*)	1245	699	806	205	/	762	205	597	5215
32	30.67	30.67	60	54	(*)	50.98	29.02	33.27	8.07	/	30.0	8.07	23.5	14960
800	779	779	1524	1372	(*)	1295	737	845	205	/	762	205	597	6800
34	32.68	32.68	64	58	(*)	53.39	30.87	34.37	8.07	/	30.0	8.07	23.5	17160
850	830	830	1626	1473	(*)	1356	784	873	205	/	762	205	597	7800
36	34.41	34.41	68	60	(*)	56.73	32.36	35.75	8.07	/	30.0	8.07	23.5	19360
900	874	874	1727	1524	(*)	1441	822	908	205	/	762	205	597	8800
40	38.43	38.43	(*)	(*)	(*)	63.90	35.63	39.37	8.07	/	32.0	8.07	23.5	27632
1000	976	976	(*)	(*)	(*)	1623	905	1000	205	/	812	205	597	12560
42	40.16	40.16	(*)	(*)	(*)	69.72	38.11	40.75	8.07	/	32.0	8.07	23.5	31416
1050	1020	1020	(*)	(*)	(*)	1771	968	1035	205	/	812	205	597	14280
48	45.91	45.91	(*)	(*)	(*)	77.52	44.37	46.38	8.07	/	32.0	8.07	25.0	48180
1200	1166	1166	(*)	(*)	(*)	1969	1127	1178	205	/	812	205	635	21900
54	51.65	51.65	(*)	(*)	(*)	84.61	46.73	47.87	9.65	/	32.0	9.65	25.0	68565
1350	1312	1312	(*)	(*)	(*)	2149	1187	1216	245	/	812	245	635	31060
56	53.56	53.56	(*)	(*)	(*)	89.76	50.39	52.01	9.65	/	32.0	9.65	25.0	75275
1400	1360	1360	(*)	(*)	(*)	2280	1280	1321	245	/	812	245	635	34100

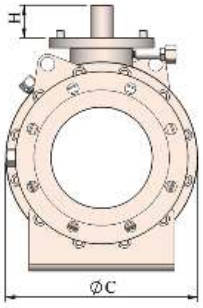
TRUNNION MOUNTED BALL VALVES-SIZES 6" AND ABOVE

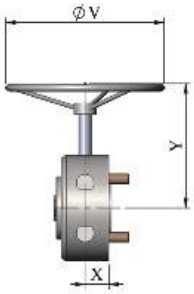


ASME CLASS 300

SIZE in/mm	A	B	L-WE	L-RF	L-RTJ	C	D	E	H	W	V	X	Y	WEIGHT lb/kg
6	5.91	5.91	18	15.9	16.5	12.44	8.27	8.58	2.36	31.8	16	2.36	8.75	408
150	150	150	457	403	419	316	210	218	60	806	406	60	292	185
8	7.91	7.91	20.5	19.8	20.4	15.08	9.45	10.08	2.56	39.6	16	2.56	8.75	622
200	201	201	521	502	518	383	240	256	65	1004	406	65	292	282
10	9.92	9.92	22	22.4	23	18.9	11.57	11.65	3.15	/	20	3.15	8.75	1100
250	252	252	559	568	584	480	294	296	80	/	508	80	292	500
12	11.93	11.93	25	25.5	26.1	22.44	13.78	14.37	3.54	/	24	3.54	16.5	1613
300	303	303	635	648	664	570	350	365	90	/	610	90	419	733
14	13.15	13.15	30	30	30.6	24.61	14.88	15.43	3.94	/	24	3.94	16.5	2264
350	334	334	762	762	778	625	378	392	100	/	610	100	419	1029
16	15.16	15.16	33	33	33.6	27.95	16.73	17.13	4.72	/	28	4.72	16.5	3120
400	385	385	838	838	854	710	425	435	120	/	711	120	419	1418
18	17.17	17.17	36	36	36.6	30.12	17.91	18.31	4.72	/	28	4.72	16.5	3502
450	436	436	914	914	930	765	455	465	120	/	711	120	419	1592
20	19.17	19.17	39	39	39.8	33.27	19.88	23.11	4.72	/	28	4.72	22	4829
500	487	487	991	991	1010	845	505	587	120	/	711	120	559	2195
22	21.18	21.18	43	43	43.9	36.61	21.14	24.8	4.72	/	28	4.72	22	6134
550	538	538	1092	1092	1114	930	537	630	120	/	711	120	559	2788
24	23.19	23.19	45	45	45.9	39.25	22.52	26.38	7.09	/	28	7.09	22	7612
600	589	589	1143	1143	1165	997	572	670	180	/	711	180	559	3460
26	24.92	24.92	49	49	50	42.13	24.49	28.27	7.09	/	28	7.09	22	10252
650	633	633	1245	1245	1270	1070	622	718	180	/	711	180	559	4660
28	26.93	26.93	53	53	54	45.24	25.87	29.65	7.09	/	30	7.09	23.5	12694
700	684	684	1346	1346	1372	1149	657	753	180	/	762	180	597	5770
30	28.94	28.94	55	55	56	49.13	27.52	31.73	8.07	/	30	8.07	23.5	14498
750	735	735	1397	1397	1422	1248	699	806	205	/	762	205	597	6590
32	30.67	30.67	60	60	61.1	51.5	29.02	33.27	8.07	/	30	8.07	23.5	17450
800	779	779	1524	1524	1553	1308	737	845	205	/	762	205	597	7932
34	32.68	32.68	64	64	65.1	53.9	30.87	34.37	8.07	/	30	8.07	23.5	19888
850	830	830	1626	1626	1654	1369	784	873	205	/	762	205	597	9040
36	34.41	34.41	68	68	69.1	57.36	32.36	35.75	8.07	/	30	8.07	23.5	22205
900	874	874	1727	1727	1756	1457	822	908	205	/	762	205	597	10093
40	38.43	38.43	(*)	(*)	(*)	64.49	35.63	39.37	8.07	/	32	8.07	23.5	30305
1000	976	976	(*)	(*)	(*)	1638	905	1000	205	/	812	205	597	13775
42	40.16	40.16	(*)	(*)	(*)	72.05	38.11	40.75	8.07	/	32	8.07	23.5	35431
1050	1020	1020	(*)	(*)	(*)	1830	968	1035	205	/	812	205	597	16105
48	45.91	45.91	(*)	(*)	(*)	78.27	44.37	46.38	8.07	/	32	8.07	25	52932
1200	1166	1166	(*)	(*)	(*)	1988	1127	1178	205	/	812	205	635	24060
54	51.65	51.65	(*)	(*)	(*)	86.42	46.73	47.87	9.65	/	32	9.65	25	75403
1350	1312	1312	(*)	(*)	(*)	2195	1187	1216	245	/	812	245	635	34158
56	53.56	53.56	(*)	(*)	(*)	90.75	50.39	52.01	9.65	/	32	9.65	25	83941
1400	1360	1360	(*)	(*)	(*)	2305	1280	1321	245	/	812	245	635	38155





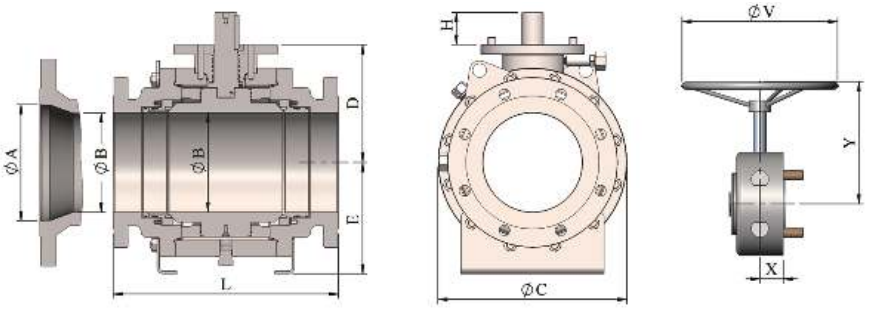


TRUNNION MOUNTED BALL VALVES-SIZES 6" AND ABOVE

ASME CLASS 600

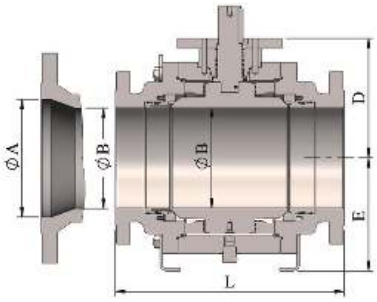
SIZE in/mm	A	B	L-WE	L-RF	L-RTJ	C	D	E	H	W	V	X	Y	WEIGHT lb/kg
6	5.91	5.91	22	22	22.13	14.02	9.13	8.66	2.56	44	16	2.56	8.75	563
150	150	150	559	559	562	356	232	220	65	1118	406	65	292	255
8	7.91	7.91	26	26	26.13	16.73	10.83	10.63	2.56	/	20	2.56	8.75	984
200	201	201	660	660	664	425	275	270	65	/	508	65	292	446
10	9.92	9.92	31	31	31.13	20	12.91	12.4	3.54	/	20	3.54	8.75	1630
250	252	252	787	787	790	508	328	315	90	/	508	90	292	739
12	11.93	11.93	33	33	33.13	23.78	14.49	15.2	3.94	/	24	3.94	16.5	2270
300	303	303	838	838	841	604	368	386	100	/	610	100	419	1030
14	13.15	13.15	35	35	35.12	25.2	15.24	14.8	3.94	/	24	3.94	16.5	2790
350	334	334	889	889	892	640	387	376	100	/	610	100	419	1266
16	15.16	15.16	39	39	39.12	29.13	17.32	17.52	4.53	/	28	4.53	16.5	3350
400	385	385	991	991	994	740	440	445	115	/	711	115	419	1520
18	17.17	17.17	43	43	43.12	30.98	18.7	18.7	5.51	/	28	5.51	16.5	4690
450	436	436	1092	1092	1095	787	475	475	140	/	711	140	419	2127
20	19.17	19.17	47	47	47.25	33.9	19.37	23.62	7.09	/	30	7.09	22	6340
500	487	487	1194	1194	1200	861	492	600	180	/	762	180	559	2876
22	21.18	21.18	51	51	51.38	37.36	21.14	25.59	7.09	/	30	7.09	22	7870
550	538	538	1295	1295	1305	949	537	650	180	/	762	180	559	3570
24	23.19	23.19	55	55	55.38	42.2	24.06	27.13	7.28	/	32	7.28	22	9430
600	589	589	1397	1397	1407	1072	611	689	185	/	812	185	559	4277
26	24.92	24.92	57	57	57.5	42.99	24.49	28.74	8.07	/	32	8.07	22	11970
650	633	633	1448	1448	1461	1092	622	730	205	/	812	205	559	5430
28	26.93	26.93	61	61	61.5	46.18	25.87	30.51	8.07	/	32	8.07	23.5	13690
700	684	684	1549	1549	1562	1173	657	775	205	/	812	205	597	6210
30	28.94	28.94	65	65	65.5	50.12	27.52	32.64	9.65	/	32	9.65	23.5	16420
750	735	735	1651	1651	1664	1273	699	829	245	/	812	245	597	7448
32	30.67	30.67	70	70	70.63	52.52	29.02	34.25	9.65	/	32	9.65	23.5	18670
800	779	779	1778	1778	1794	1334	737	870	245	/	812	245	597	8469
34	32.68	32.68	76	76	76.63	55	30.87	35.39	9.65	/	32	9.65	23.5	22830
850	830	830	1930	1930	1946	1397	784	899	245	/	812	245	597	10356
36	34.41	34.41	82	82	82.63	58.5	32.36	36.81	9.65	/	36	9.65	23.5	26630
900	874	874	2083	2083	2099	1486	822	935	245	/	914	245	597	12079
40	38.43	38.43	(*)	(*)	(*)	65.87	35.63	40.51	9.65	/	36	9.65	23.5	33990
1000	976	976	(*)	(*)	(*)	1673	905	1029	245	/	914	245	597	15418
42	40.16	40.16	(*)	(*)	(*)	69.49	38.11	42.01	9.65	/	36	9.65	23.5	40070
1050	1020	1020	(*)	(*)	(*)	1765	968	1067	245	/	914	245	597	18175
48	45.91	45.91	85.88	85.88	(*)	79.88	44.37	47.87	9.65	/	36	9.65	25	55680
1200	1166	1166	2181	2181	(*)	2029	1127	1216	245	/	914	245	635	25256
54	51.65	51.65	(*)	(*)	(*)	89.57	46.85	50.63	9.65	/	36	9.65	25	79757
1350	1312	1312	(*)	(*)	(*)	2275	1190	1286	245	/	914	245	635	36130
56	53.56	53.56	(*)	(*)	(*)	92.64	50.39	54.37	11.02	/	36	11.02	25	85250
1400	1360	1360	(*)	(*)	(*)	2353	1280	1381	280	/	914	280	635	38669

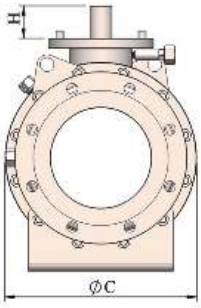
TRUNNION MOUNTED BALL VALVES-SIZES 6" AND ABOVE

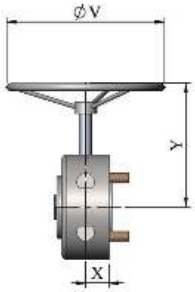


ASME CLASS 900

SIZE in/mm	A	B	L-WE	L-RF	L-RTJ	C	D	E	H	W	V	X	Y	WEIGHT lb/kg
6	5.91	5.91	24	24	24.12	15.00	9.45	9.65	2.56	/	16.0	2.56	8.75	720
150	150	150	610	610	613	381	240	245	65	/	406	65	292	327
8	7.91	7.91	29	29	29.12	18.5	15.08	13.58	3.54	/	20.0	3.54	16.5	1276
200	201	201	737	737	740	470	383	300	90	/	508	90	419	580
10	9.92	9.92	33	33	33.12	21.65	13.78	14.80	3.74	/	20.0	3.74	16.5	2110
250	252	252	838	838	841	550	350	345	95	/	508	95	419	957
12	11.93	11.93	38	38	38.12	24.02	14.80	18.11	4.72	/	24.0	4.72	16.5	2930
300	303	303	965	965	968	610	376	376	120	/	610	120	419	1329
14	12.68	12.68	40.5	40.5	40.88	27.56	16.46	18.31	4.72	/	24.0	4.72	16.5	3610
350	322	322	1029	1029	1038	700	418	460	120	/	610	120	419	1637
16	14.69	14.69	44.5	44.5	44.88	30.98	18.62	20.87	5.71	/	28.0	5.71	16.5	4360
400	373	373	1130	1130	1140	787	473	465	145	/	711	145	419	1978
18	16.65	16.65	48	48	48.5	33.50	19.13	20.28	5.71	/	28.0	5.71	16.5	6100
450	423	423	1219	1219	1232	851	486	530	145	/	711	145	419	2767
20	18.54	18.54	52	52	52.5	37.40	21.85	25.59	5.71	/	30	5.71	22.0	8240
500	471	471	1321	1321	1334	950	555	515	145	/	762	145	559	3738
22	20.55	20.55	(*)	(*)	(*)	40.51	22.05	25.59	8.11	/	30.0	8.11	22.0	10220
550	522	522	(*)	(*)	(*)	1029	560	650	206	/	762	206	559	4636
24	22.44	22.44	61	61	61.75	43.74	24.37	27.52	9.65	/	32.0	9.65	22.0	12250
600	570	570	1549	1549	1568	1111	619	699	245	/	812	245	559	5557
26	24.29	24.29	(*)	(*)	(*)	47.24	26.26	29.88	9.65	/	32.0	9.65	22.0	15540
650	617	617	(*)	(*)	(*)	1200	667	759	245	/	812	245	559	7049
28	26.18	26.18	(*)	(*)	(*)	50.75	27.87	31.89	9.65	/	32.0	9.65	23.5	17790
700	665	665	(*)	(*)	(*)	1289	708	810	245	/	812	245	597	8069
30	28.03	28.03	(*)	(*)	(*)	53.39	29.65	32.76	9.65	/	32.0	9.65	23.5	21340
750	712	712	(*)	(*)	(*)	1356	753	832	245	/	812	245	597	9680
32	29.92	29.92	(*)	(*)	(*)	57.52	31.89	35.87	9.65	/	32.0	9.65	23.5	24250
800	760	760	(*)	(*)	(*)	1461	810	911	245	/	812 2	245	597	11000
34	31.81	31.81	(*)	(*)	(*)	60.98	33.39	37.76	9.65	/	32.0	9.65	23.5	29690
850	808	808	(*)	(*)	(*)	1549	848	959	245	/	812	245	597	13467
36	33.66	33.66	(*)	(*)	(*)	64.37	34.76	40.12	10.83	/	36.0	10.83	23.5	34610
900	855	855	(*)	(*)	(*)	1635	883	1019	275	/	914	275	597	15699
40	37.64	37.64	(*)	(*)	(*)	71.26	38.27	44.09	10.83	/	36.0	10.83	25.0	44170
1000	956	956	(*)	(*)	(*)	1810	972	1120	275	/	914	275	635	20035
42	39.61	39.61	(*)	(*)	(*)	74.33	41.73	47.24	10.83	/	36.0	10.83 3	25.0	52070
1050	1006	1006	(*)	(*)	(*)	1888	1060	1200	275	/	914	275	635	23619
48	45.24	45.24	(*)	(*)	(*)	81.5	43.74	50.39	10.83	/	36.0	10.83	25.0	72370
1200	1149	1149	(*)	(*)	(*)	2070	1111	1280	275	/	914	275	635	32826







TRUNNION MOUNTED BALL VALVES-SIZES 6" AND ABOVE

ASME CLASS 1500

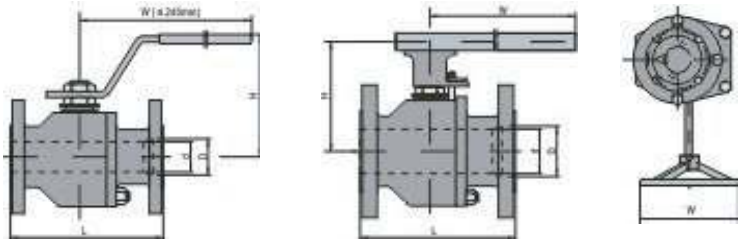
SIZE in/mm	A	B	L-WE	L-RF	L-RTJ	C	D	E	H	W	V	X	Y	WEIGHT lb/kg
6	5.67	5.67	27.76	27.76	27.99	16.89	10.98	12.64	3.74	/	24.0	3.74	13.8	1056
150	144	144	705	705	711	429	279	321	95	/	610	95	350	480
8	7.56	7.56	32.76	32.76	33.11	20.51	13.23	16.54	3.78	/	28.0	3.78	16.5	1804
200	192	192	832	832	841	521	336	322	96	/	711	96	419	820
10	9.41	9.41	39.02	39.02	39.37	25.75	15.39	16.54	4.53	/	28.0	4.53	16.5	3300
250	239	239	991	991	1000	654	391	420	115	/	711	115	419	1500
12	11.30	11.30	44.49	44.49	45.11	27.17	16.77	20.28	5.17	/	28.0	5.71	16.5	4950
300	287	287	1130	1130	1146	690	426	420	145	/	711	145	419	2250
14	12.40	12.40	49.49	49.49	50.24	34.25	19.25	20.35	5.91	/	30.0	5.91	22.0	6270
350	315	315	1257	1257	1276	870	489	515	150	/	762	150	559	2850
16	14.17	14.17	54.49	54.49	55.39	34.84	19.57	27.56	5.91	/	30.0	5.91	22.0	8954
400	360	360	1384	1384	1407	885	497	517	150	/	762	150	559	4070
18	16	16	60.51	60.51	61.38	42.87	23.27	29.88	7.87	/	32.0	7.87	22.0	13629
450	406	406	1537	1537	1559	1089	591	700	200	/	812	200	559	6195
20	17.88	17.88	65.51	65.51	66.38	46.38	28.50	35.04	9.65	/	32.0	9.65	25.0	19965
500	454	454	1664	1664	1686	1178	724	759	245	/	812	245	635	9075
24	21.50	21.50	*	*	77.64	55.87	32.01	35.04	9.65	/	32.0	9.65	25.0	31416
600	546	546	*	*	1972	1419	813	890	245	/	812	245	635	14280

ASME CLASS 2500

SIZE in/mm	A	B	L-WE	L-RF	L-RTJ	C	D	E	H	W	V	X	Y	WEIGHT lb/kg
6	5.16	5.16	35.98	35.98	36.50	19.02	13.39	13.46	3.74	/	28.0	3.74	16.5	2116
150	131	131	914	914	927	483	340	342	95	/	711	95	419	952
8	7.05	7.05	40.24	40.24	40.87	24.80	16.30	17.13	4.33	/	28.0	4.33	16.5	3905
200	179	179	1022	1022	1038	630	414	395	110	/	711	110	419	1769
10	8.78	8.78	50.00	50.00	50.87	31.10	18.27	19.65	5.51	/	30.0	5.51	22.0	5715
250	223	223	1270	1270	1292	790	464	435	140	/	762	140	559	2589
12	10.43	10.43	55.98	55.98	56.89	34.25	20.51	0.00	5.51	/	32.0	5.51	22.0	7837
300	265	265	1422	1422	1445	870	521	499	140	/	812	140	559	3550

WEIGHT OF REDUCED BORE BALL VALVES

CLASS 150		CLASS 300		CLASS 600		CLASS 900		CLASS 1500		CLASS 2500	
SIZE in/mm	WEIGHT lb/kg	SIZE in/mm	WEIGHT lb/kg	SIZE in/mm	WEIGHT lb/kg	SIZE in/mm	WEIGHT lb/kg	SIZE in/mm	WEIGHT lb/kg	SIZE in/mm	WEIGHT lb/kg
8x6	407	8x6	481.8	8x6	642	8x6	968	8x6	1245	8x6	2530
200x150	185	200x150	219	200x150	292	200x150	440	200x150	566	200x150	1150
10x8	640	10x8	642.4	10x8	1210	10x8	1518	10x8	2248	10x8	4620
250x200	291	250x200	292	250x200	550	250x200	690	250x200	1022	250x200	2100
12x10	1016	12x10	1306.8	12x10	1784	12x10	2541	12x10	3872	12x10	7260
300x250	462	300x250	594	300x250	811	300x250	1155	300x250	1760	300x250	3300
14x10	1140	14x10	1414.6	14x10	2006	14x10	2728	14x10	4719	14x10	9017
350x250	518	350x250	643	350x250	912	350x250	1240	350x250	2145	350x250	4085
14x12	1342	14x12	1795.2	14x12	2519	14x12	3597	14x12	5500	14x12	10143
350x300	610	350x300	816	350x300	1145	350x300	1635	350x300	2500	350x300	4595
16x12	1536	16x12	2123	16x12	2966	16x12	3806	16x12	6160	16x12	12117
400x300	698	400x300	965	400x300	1348	400x300	1730	400x300	2800	400x300	5489
16x14	1804	16x14	2475	16x14	2383	16x14	3740	16x14	7139		
400x350	820	400x350	1125	400x350	1083	400x350	1700	400x350	3245		
18x14	2332	18x14	3504.6	18x14	3696	18x14	5368	18x14	10934		
450x350	1060	450x350	1593	450x350	1680	450x350	2440	450x350	4970		
20x16	2420	20x16	3658.6	20x16	4587	20x16	6325	20x16	11297		
500x400	1100	500x400	1663	500x400	2085	500x400	2875	500x400	5135		
24x20	4334	24x20	5854.2	24x20	7146	24x20	11880	24x20	23925		
600x500	1970	600x500	2661	600x500	3248	600x500	5400	600x500	10875		
30x24	7150	30x24	9864.8	30x24	12690	30x24	19140	30x24	36821		
750x600	3250	750x600	4484	750x600	5768	750x600	8700	750x600	16680		



FLOATING BALL VALVES

Full Bore — **Class 150**

SIZE	d	L	H	W	WEIGHT
in	mm	mm	mm	mm	Kg
1/2	13	108	85	160	2.8
3/4	19	117	93	160	3.7
1	25	127	112	180	5.3
1-1/2	38	165	125	240	8.3
2	51	178	126	350	11.2
2-1/2	64	191	139	400	18.4
3	76	203	164	400	23
4	102	229	185	450	39.3
6	152	394	270	*300	90
8	203	457	360	*400	140
10	254	533	410	*400	230

Reduced Bore — **Class 150**

SIZE	d	D	L	H	W	WEIGHT
in	mm	mm	mm	mm	mm	Kg
3/4*1/2	13	19	117	85	160	3.5
1*3/4	19	25	127	93	160	5.0
1-1/2*1	25	38	165	112	180	7.5
2*1-1/2	38	51	178	25	240	10
2-1/2*2	51	64	191	126	350	16
3*2	51	76	203	126	350	21
4"3	76	102	229	164	400	35
6*4	102	152	267	185	450	73
8*6	152	203	292	270	*300	120
10*8	203	254	330	360	*400	200

* Gear Operated

Full Bore Class 300

SIZE	d	L	H	W	WEIGHT
in	mm	mm	mm	mm	Kg
1/2	13	140	85	160	3.0
3/4	19	152	93	160	4.0
1	25	165	112	180	6.6
1-1/2	38	191	125	240	12.9
2	51	216	126	400	18.9
2-1/2	64	241	139	400	28
3	76	283	164	450	39
4	102	305	185	500	60
6	152	403	270	*300	130
8	203	502	360	*400	195
10	254	568	410	*400	290

Reduced Bore Class 300

SIZE	d	D	L	H	W	WEIGHT
in	mm	mm	mm	mm	mm	Kg
3/4*1/2	13	19	152	85	160	3.7
13/4	19	25	165	93	160	5.8
1-1/2*1	25	38	191	112	180	10.5
2*1-1/2	38	51	216	125	240	16.1
2-1/2*2	51	64	241	126	400	24.5
3*2	51	76	283	126	400	34.7
4*3	76	102	305	164	450	53
6*4	102	152	403	185	500	100
8*6	152	203	419	270	*300	170
10*8	203	254	457	360	*400	250

* Gear Operated

Full Bore Class 600

SIZE	d	L	H	W	WEIGHT
in	mm	mm	mm	mm	Kg
1/2	13	165	85	160	3.5
3/4	19	191	93	180	5.0
1	25	216	112	240	7.5
1-1/2	38	241	125	350	15
2	51	292	130	400	23
3	76	356	178	500	48
4	102	432	190	700	80

Reduced Bore Class 600

SIZE	d	D	L	H	W	WEIGHT
in	mm	mm	mm	mm	mm	Kg
3/4*1/2	13	19	191	85	160	4.0
1*3/4	19	25	216	93	180	5.5
1-1/2*1	25	38	241	112	240	10.5
2*1-1/2	38	51	292	125	350	20
3*2	51	76	356	130	400	29
4*3	76	102	432	178	500	59
6*4	102	152	559	190	700	95

Full Bore Class 900

SIZE	D	L	H	W	WEIGHT
in	mm	mm	mm	mm	Kg
1/2	13	216	85	160	5
3/4	19	229	93	180	8
1	25	254	112	240	10
1-1/2	38	305	128	400	20
2	51	368	132	450	25
3	76	381	182	600	50

Reduced Bore Class 900

SIZE	d	D	L	H	W	WEIGHT
in	mm	mm	mm	mm	mm	Kg
3/4*1/2	13	19	229	85	160	7.0
1*3/4	19	25	254	93	180	9.5
1-1/2*1	25	38	305	112	240	16.5
2*1-1/2	38	51	368	128	400	23
3*2	51	76	381	132	450	42
4*3	76	102	457	182	600	65

Full Bore Class 1500

SIZE	d	L	H	W	WEIGHT
in	mm	mm	mm	mm	Kg
1/2	3	216	85	160	5
3/4	19	229	93	180	8
1	25	254	112	240	10
1-1/2	38	305	128	400	20
2	51	368	132	450	30

Reduced Bore Class 1500

SIZE	d	D	L	H	W	WEIGHT
in	mm	mm	mm	mm	mm	Kg
3/4*1/2	13	19	229	85	160	7.0
13/4	19	25	254	93	180	9.5
1-1/2*1	25	38	305	112	240	16.5
2*1-1/2	38	51	368	128	400	23
3*2	51	76	470	132	450	50

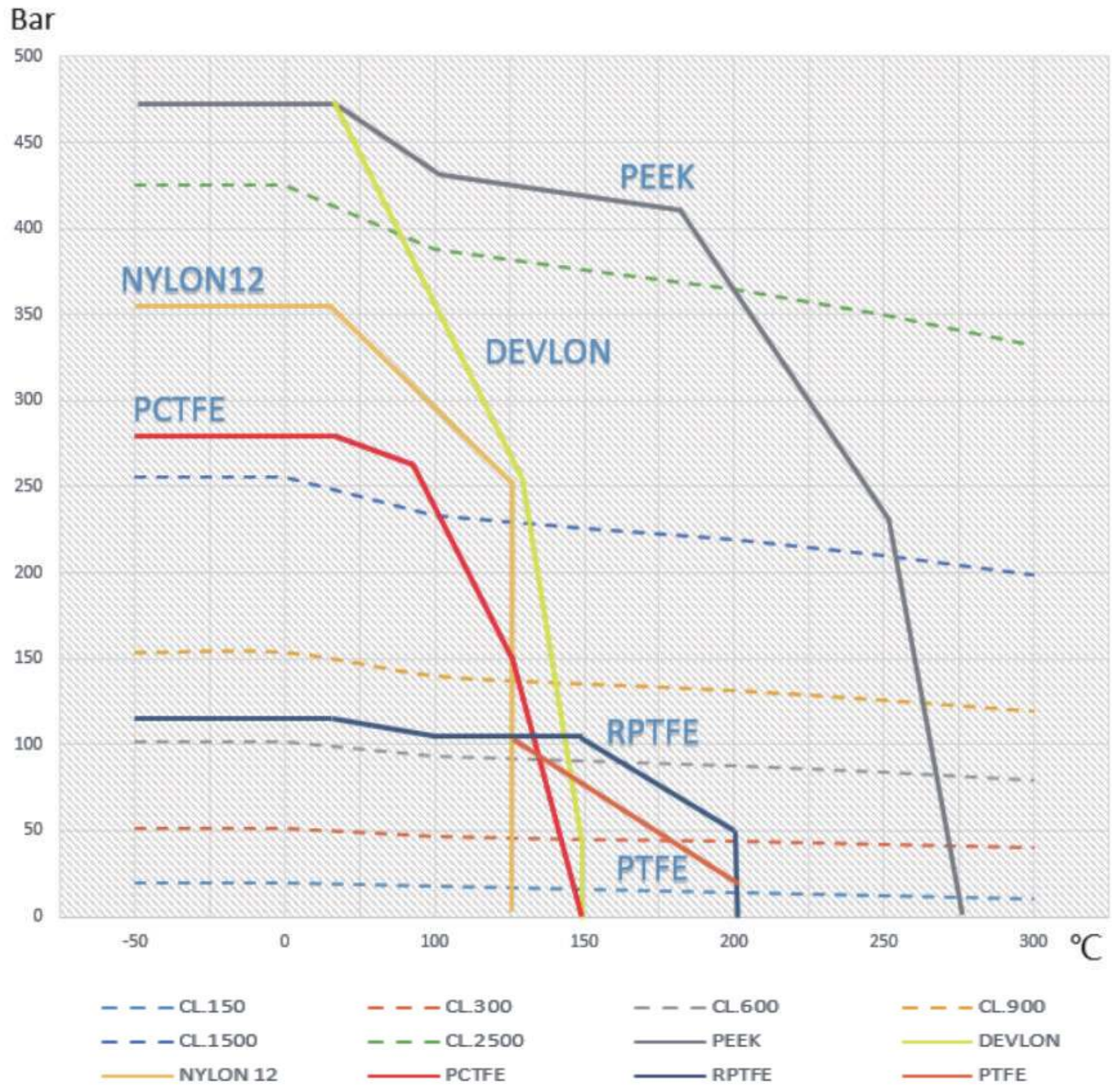
Full Bore Class 2500

SIZE	d	L	H	W	WEIGHT
in	mm	mm	mm	mm	Kg
1/2	13	264	93	180	7.5
3/4	19	273	96	240	12
1	25	308	117	350	15
1-1/2	38	384	132	450	30
2	44	451	138	550	37.5

Reduced Bore Class 2500

SIZE	d	D	L	H	W	WEIGHT
in	mm	mm	mm	mm	mm	Kg
3/4*1/2	13	19	3	93	180	11
13/4	19	25	308	96	240	14
1-1/2*1	25	38	384	117	350	25
2*1-1/2	38	44	451	132	450	35
3*2	44	64	578	138	550	60

Pressure Temperature Curve Chart



Notes: 1. Body materials shown in the table per ASME B16.34 Group 1.1.
2. For materials not shown in this table, please contact engineering department.
3. Other materials can be provided according to customers requirements.

Torque of floating ball valve

caliber	150LB		300LB		600LB		900LB		1500LB		2500LB	
	N.m	Ft-Lbs	N.m	Ft-Lbs	N.m	Ft-Lbs	N.m	Ft-Lbs	N.m	Ft-Lbs	N.m	Ft-Lbs
0.5	8	5.9	12	8.86	18	13.29	22	16.24	35	25.83	60	44.29
0.75	12	8.86	18	13.29	20	14.76	45	33.21	60	44.29	100	73.81
1	15	11.07	18	13.29	27	19.93	80	59.05	150	110.72	190	140.24
1.5	35	25.83	45	33.21	60	44.29	120	88.57	175	129.17		
2	55	40.6	70	51.67	110	81.19	350	258.34	410	302.62		
3	110	81.19	140	103.33	250	184.53	440	324.76				
4	180	132.86	230	169.76	440	324.76						
6	480	354.29	920	679.05								
8	850	627.39	1900	1402.39								
10	1800	1328.58	4000	2952.4								

Notes:
1. The torque is based on rated pressure at ambient temperature, 150-300 RPTFE, 600-1500 NYLON, 2500 PEEK.
2. It is recommended to select a safety factor of 1.3-1.5 for actuator.
3. It is recommended to select a safety factor of 2-3 for torque in cryogenic conditions.
4. The actual torque is related to the medium and material, please contact engineering department for more information.

Torque of trunnion mounted ball valve

caliber	150LB		300LB		600LB		900LB		1500LB		2500LB	
	N.m	Ft-Lbs	N.m	Ft-Lbs	N.m	Ft-Lbs	N.m	Ft-Lbs	N.m	Ft-Lbs	N.m	Ft-Lbs
1.5	56	41.33	65	47.98	80	59.05	140	103.33	240	177.14	458	338.05
2	70	51.67	90	66.43	150	110.72	200	147.62	320	236.19	750	553.58
3	85		140	103.33	295	217.74	425	313.69	580	428.10	1200	885.72
4	170	125.48	295	217.74	480	354.29	750	553.58	1050	775.01	1900	1402.39
6	500	369.05	980	723.34	1450	1070.25	1950	1439.30	3050	2251.21	5500	4059.55
8	1030	760.24	1760	1299.06	2180	1609.06	3800	2804.78	5650	4170.27	8500	6273.85
10	1410	1040.72	2020	1490.96	3050	2251.21	5000	3690.50	8400	6200.04	13500	9964.35
12	1880	1387.63	3545	2616.56	4300	3173.83	9000	6642.90	12500	9226.25		
14	2705	1996.56	4587	3385.66	5700	4207.17	11500	8488.15	15500	11440.55		
16	4035	2978.23	6394	4719.41	8900	6569.09	16000	11809.60	22000	16238.20		
18	4730	3491.21	7660	5653.85	13500	9964.35	24000	17714.40				
20	5840	4310.50	10960	8089.58	16000	11809.60	26700	19707.27				
24	9455	6978.74	17100	12621.51	21450	15832.25	34000	25095.40				
28	16500	12178.65	24000	17714.40	29000	21404.90						
30	18070	13337.47	29000	21404.90	34000	25095.40						
32	23500	17345.35	35000	25833.50	40000	29524.00						
34	26000	33952.60	39000	28785.90	46000	33952.60						
36	29500	37938.34	43000	31738.30	51400	37938.34						
38	32000	41702.65	47520	35074.51	56500	41702.65						
40	35580	45762.20	51050	37680.01	62000	45762.20						
42	38000	49600.32	55000	40595.50	67200	49600.32						
48	42000	54619.40	59000	43547.90	74000	54619.40						
54	46500	60155.15	63250	46684.83	81500	60155.15						
56	50040	66429.00	68700	50707.47	90000	66429.00						
60	55000	72333.80	75000	55357.50	98000	72333.80						

Notes:
1. The torque is based on rated pressure at ambient temperature.
2. It is recommended to select a safety factor of 1.3-1.5 for actuator.
3. It is recommended to select a safety factor of 2-3 for torque in cryogenic conditions.
4. The actual torque is related to the medium and material, please contact engineering department for more information.

REV. 2020-A

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