

JFS

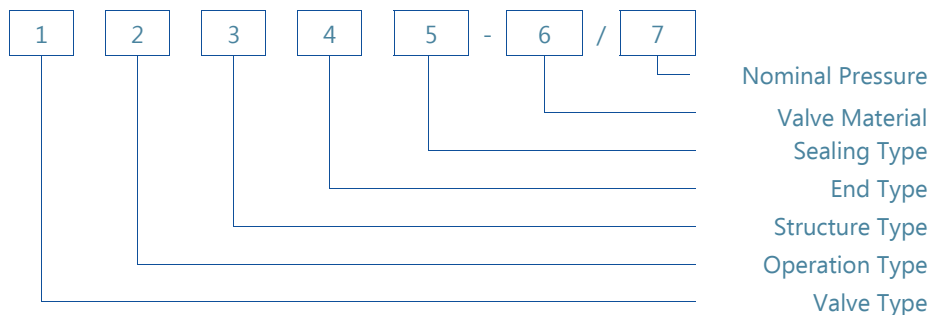
BEIJING JOINT FLOW SYSTEM CO.



BALL VALVE



ORDERING GUIDE



1. Valve Type

Type	Ball Valve
Code	4

2. Operation Type

Type	Bare Shaft	Manual	Electric Actuator	Pneumatic	Hydraulic
Code	1	2	3	4	5

*Manual operation includes Hand-lever and Worm-wheel.

3. Structure Type

Structure	Trunnion Ball Valve	Floating Ball Valve	Eccentric Semi-ball Valve
Code	1	2	3

4. End Type

Type	Flange	Thread	Socket Weld	Butt Weld
Code	1	2	3	4

5. Sealing Type

Type	Soft Sealing	Metal Sealing
Code	1	2

6. Valve Material

Parts	Cast Iron	Ductile Iron	Carbon (Cast) Steel	Forged Steel	Alloy Steel	Stainless Steel	Copper Alloy
Body	B1	B2	B3	B4	B5	B6	B7
Disc	D1	D2	D3	D4	D5	D6	D7
Stem	S1	S2	S3	S4	S5	S6	S7

*More material specifications are available on request.

7. Nominal Pressure

PN	1.0(MPa)	1.6(MPa)	2.0(MPa)	2.5(MPa)	4.0(MPa)	125(lb)	150(lb)	300(lb)	600(lb)
Code	10	16	20	25	40	125	150	300	600

*More pressure specifications are available on request.

TRUNNION BALL VALVE

FEATURE

- Anti-static design
- Full port ensures large capacity and reduces the risk of clogging when handling solids or slurries.
- Reliable sealing & Fire safe structure: special design of auxiliary metal to metal or graphite seal is provided to effectively prevent both internal and external leakage of the valve, maybe caused by the non-metal material parts such as seat sealing ring of PTFE, O-ring of stem and sealing gasket of body and bonnet being damaged due to high pressure, according to the requirement of API 607, API 6Fa and BS6755
- Blowout proof stem: The stem with special design of lower-thick and upper-thin, which is positioned by the upper end cap and screw, being guaranteed not to be blown-out by the medium even if at abnormal risen pressure in the cavity.
- Easy operation: ball is supported by the upper bearings and lower trunnion to reduce friction, which can avoid excessive torque caused by the huge seal load when inlet pressure pushing ball and seat.
- Auto pressure-relief: when an abnormal pressure rise occurs in the middle cavity of the valve due to rising temperature, the seat will come off the ball and automatically discharge pressure to ensure the system safety.
- Stem bearing reduces side thrust effect on packing and prevents stem wobbling.
- Ball and seats lapped for optimum performance and tight shutoff.



STANDARD

Design and Manufacture	API 608/API 6D/BS 5351/ASME B16.34/MSS-SP-72
Inspection and Testing	API 598/API 6D/BS 5146
Face to Face Dimension	ASME B16.10/API 6D
Flange Dimension	ASME B16.5/ASME B16.47

*More standard specifications are available on request.

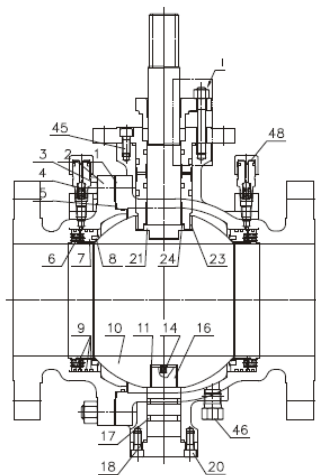
TEST DATA

Nominal Diameter DN (mm)	2"-56"					
Nominal Pressure PN (MPa)	150lb	300lb	600lb	900lb	1500lb	2500lb
Hydraulic Shell Test Pressure (MPa)	3.0	7.5	16.5	55.5	39.0	63.0
Hydraulic Seal Test Pressure (MPa)	2.2	5.5	12.1	16.5	28.6	46.2

*More test specifications are available on request.

TRUNNION BALL VALVE

PARTS LIST & MATERIAL

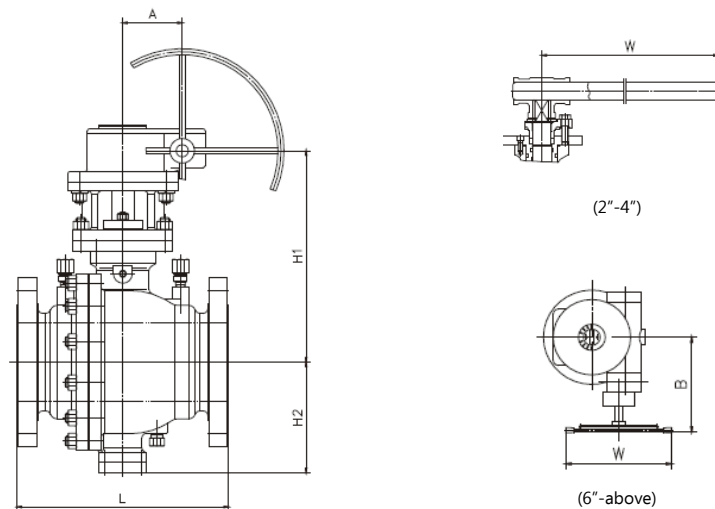


Item	Parts Name	Material
1	Body	Carbon Steel/Forged Steel/Stainless Steel/Alloy Steel
2	Bonnet	Carbon Steel/Forged Steel/Stainless Steel/Alloy Steel
3	Nut	Alloy Steel/Stainless Steel
4	Bolt	Alloy Steel/Stainless Steel
5	Gasket	Stainless Steel + Graphite
5	O-ring	VTION
6	Spring	Inconel-750
7	Seat Ring	Carbon Steel/Cast Steel/Stainless Steel
8	Sealing Ring	RPTFE/NYLON
9	O-ring	VTION
10	Ball	Carbon Steel/Forged Steel/Stainless Steel/Alloy Steel
11	Bearing	Stainless Steel + PTFE
16	Lower Stem	Carbon Steel/Forged Steel/Stainless Steel/Alloy Steel
20	Screw	Alloy Steel/Stainless Steel
21	Upper Stem	Carbon Steel/Forged Steel/Stainless Steel/Alloy Steel
28	Bearing Bushing	Carbon Steel/Cast Steel/Stainless Steel
30	Packing	Graphite
31	Packing Gland	Carbon Steel/Cast Steel/Stainless Steel

*More material specifications are available on request.

TRUNNION BALL VALVE

DIMENSION (2-piece body / 150-300 lb)



DN	NPS	150 Lb				300 Lb			
		L	H ₁ ≈	H ₂ ≈	W≈	L	H ₁ ≈	H ₂ ≈	W≈
50	2"	178	168	83	250	216	168	95	250
80	3"	203	186	117	350	283	186	122	350
100	4"	229	225	141	450	305	225	148	450
150	6"	394	280	193	300	403	285	201	300
200	8"	457	345	217	300	502	345	232	400
250	10"	533	395	270	300	568	451	283	400
300	12"	610	527	323	300	648	570	335	400
350	14"	686	570	355	400	762	600	360	450
400	16"	762	498	398	450	838	638	398	500

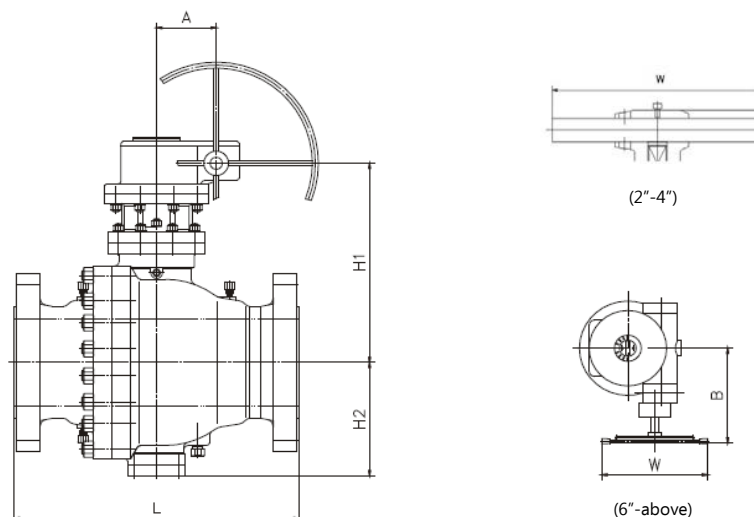
*Face to face dimensions (L) herein are according to ASME B16.10.

*Flange dimensions refer to Catalogue of Accessory: Series 8 – Flange.

*More dimension specifications are available on request.

TRUNNION BALL VALVE

DIMENSION (2-piece body / 600-900 lb)



DN	NPS	600 Lb				900 Lb			
		L	H ₁ ≈	H ₂ ≈	W≈	L	H ₁ ≈	H ₂ ≈	W≈
50	2"	292	195	100	500	368	217	118.5	500
80	3"	356	247	126	700	381	259	141	900
100	4"	432	275	154	900	457	297	167	1000
150	6"	559	305	198	300	610	360	250	400
200	8"	660	365	252	400	737	394	280	450
250	10"	787	484	299	450	838	502	325	500
300	12"	838	580	343	500	965	592	380	500
350	14"	889	608	377	500	1029	675	395	500
400	16"	991	663	416	500	1130	762	462	550

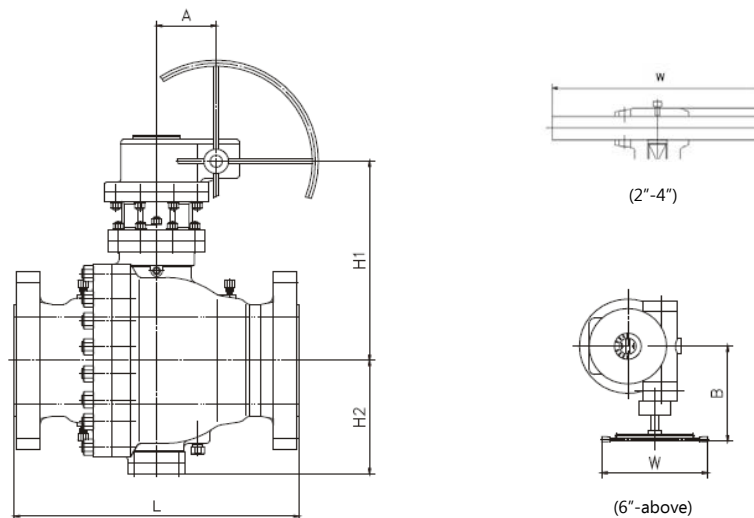
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*Flange dimensions refer to Catalogue of Accessory: Series 8 – Flange.

*More dimension specifications are available on request.

TRUNNION BALL VALVE

DIMENSION (2-piece body / 1500-2500 lb)



DN	NPS	1500 Lb				2500 Lb			
		L	H ₁ ≈	H ₂ ≈	W≈	L	H ₁ ≈	H ₂ ≈	W≈
50	2"	368	237	122	800	451	240	129	1000
80	3"	470	269	163	1000	578	300	159	1000
100	4"	546	297	173	1000	673	350	204	1000
150	6"	705	365	211	400	914	385	250	450
200	8"	832	475	274	450	1022	502	340	500
250	10"	991	578	310	500	1270	600	411	500
300	12"	1130	696	485	500	1422	715	498	550
350	14"	1257	761	510	550	-	-	-	-

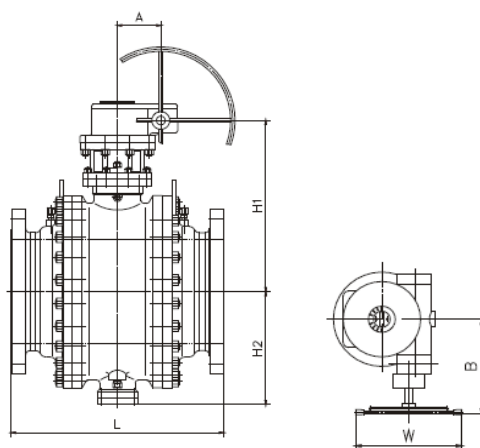
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*More dimension specifications are available on request.

TRUNNION BALL VALVE

DIMENSION (3-piece body / Cast steel / 150-300 lb)



DN	NPS	150 Lb				300 Lb			
		L	H ₁ ≈	H ₂ ≈	W≈	L	H ₁ ≈	H ₂ ≈	W≈
400	16"	762	498	398	450	838	538	398	500
450	18"	864	640	437	500	914	625	437	500
500	20"	914	700	467	550	991	712	477	500
550	22"	991	735	499	550	1092	799	495	550
600	24"	1067	820	551	550	1143	826	585	550
650	26"	1143	892	624	550	1245	862	630	550
700	28"	1245	901	632	550	1346	893	683	550
750	30"	1295	962	715	762	1397	968	715	762
800	32"	1372	1045	755	812	1524	1008	785	812
850	34"	1473	1095	785	812	1626	1073	836	914
900	36"	1524	1117	836	914	1727	1100	875	914
1000	40"	1753	1285	900	914	1956	1245	923	914
1050	42"	1855	1330	935	914	2083	1345	958	914
1200	48"	2134	1434	1050	914	2170	1490	1108	914
1400	56"	2489	1476	1306	1016	-	-	-	-

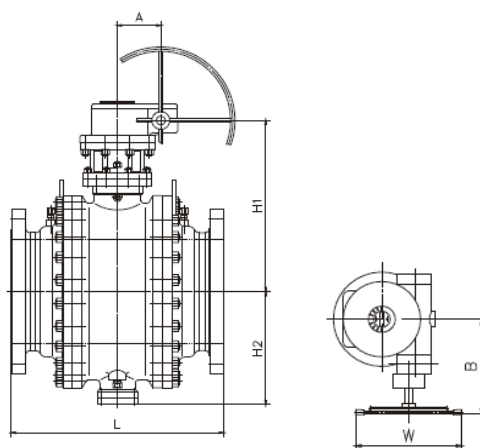
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*Flange dimensions refer to Catalogue of Accessory: Series 8 – Flange.

*More dimension specifications are available on request.

TRUNNION BALL VALVE

DIMENSION (3-piece body / Cast steel / 600-900 lb)



DN	NPS	600 Lb				900 Lb			
		L	H ₁ ≈	H ₂ ≈	W≈	L	H ₁ ≈	H ₂ ≈	W≈
400	16"	991	643	416	500	1130	727	406	550
450	18"	1092	723	455	500	1219	785	418	550
500	20"	1194	823	522	550	1321	839	561	550
600	24"	1397	866	615	812	1549	853	634	812
650	26"	1448	924	630	812	1651	909	725	914
700	28"	1549	956	700	812	1753	980	765	914
750	30"	1651	1038	726	914	1880	1095	810	914
800	32"	1778	1218	788	914	2032	1270	840	914
850	34"	1930	1230	815	914	2159	1310	860	914
900	36"	2083	1269	875	914	2286	1445	893	914
1000	40"	2337	1342	945	914	-	-	-	-
1050	42"	2437	1520	989	1016	-	-	-	-
1200	48"	2540	1520	989	1016	-	-	-	-
1400	56"	2540	1655	1120	1016	-	-	-	-

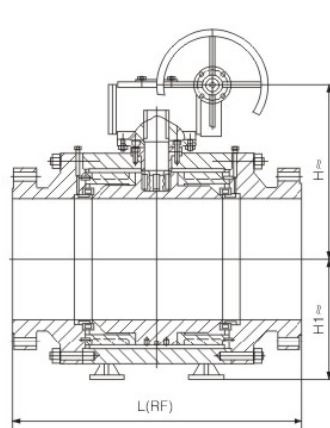
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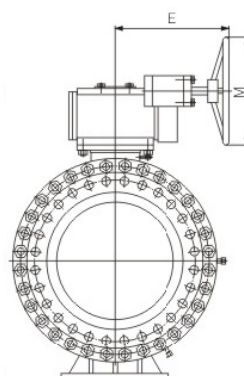
*More dimension specifications are available on request.

TRUNNION BALL VALVE

DIMENSION (3-piece body / Forged steel / 150-300 lb)



(2"-4")



(6"-above)

DN	NPS	150 Lb				300 Lb			
		L	H≈	H1≈	M≈	L	H≈	H1≈	M≈
50	2"	178	168	83	250	216	168	95	250
80	3"	203	202	117	350	283	222	122	350
100	4"	229	228	141	450	305	238	148	450
150	6"	394	305	225	300	403	285	201	300
200	8"	457	395	257	300	502	342	232	300
250	10"	533	395	257	300	568	390	283	400
300	12"	610	428	323	300	648	435	335	400
350	14"	686	465	355	400	762	467	360	450
400	16"	762	564	437	500	838	538	398	500
500	20"	914	577	453	500	991	712	477	500
550	22"	991	635	499	500	1092	799	495	550
600	24"	1067	817	592	500	1143	826	585	550
650	26"	1143	892	624	550	1245	862	630	550
700	28"	1245	942	702	812	1346	893	683	550
750	30"	1295	962	715	812	1397	968	715	550
800	32"	1372	1045	755	812	1524	1008	805	812
850	34"	1473	1095	785	812	1626	1073	875	914
900	36"	1524	1117	836	914	1727	1100	923	914
1000	40"	1753	1285	900	914	1956	1245	923	914
1050	42"	1855	1330	935	914	2083	1345	959	914
1200	48"	2134	1434	1050	914	2170	1490	1108	914
1400	56"	2489	1476	1306	1016	-	-	-	-

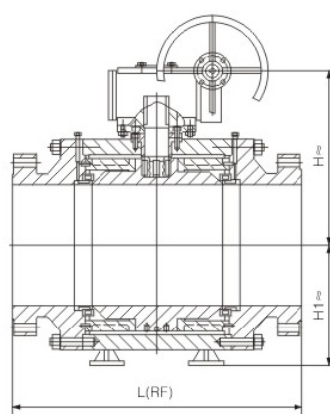
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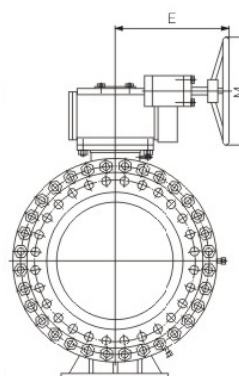
*More dimension specifications are available on request.

TRUNNION BALL VALVE

DIMENSION (3-piece body / Forged steel / 600-900 lb)



(2"-4")



(6"-above)

DN	NPS	600 Lb				900 Lb			
		L	H≈	H1≈	M≈	L	H≈	H1≈	M≈
50	2"	292	195	100	500	368	217	118.5	500
80	3"	356	247	126	700	381	259	141	900
100	4"	432	275	154	900	457	297	167	1000
150	6"	559	305	198	300	610	360	250	400
200	8"	660	365	252	400	737	394	280	450
250	10"	787	400	299	400	838	502	325	500
300	12"	838	449	343	400	965	572	380	500
350	14"	889	507	377	450	1029	675	395	500
400	16"	991	543	416	450	1130	762	462	550
500	20"	1194	623	455	500	1321	820	561	550
600	24"	1397	866	615	812	1549	853	634	812
650	26"	1448	924	630	812	1651	909	725	914
700	28"	1549	956	700	812	1753	980	765	914
750	30"	1651	1038	726	914	1880	1095	810	914
800	32"	1778	1218	788	914	2032	1270	840	914
850	34"	1930	1230	815	914	2159	1310	860	914
900	36"	2083	1269	875	914	2286	1445	893	914
1000	40"	2337	1342	945	914	-	-	-	-
1050	42"	2437	1520	989	1016	-	-	-	-
1200	48"	2540	1655	1120	1016	-	-	-	-

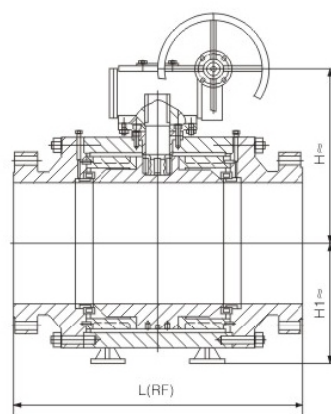
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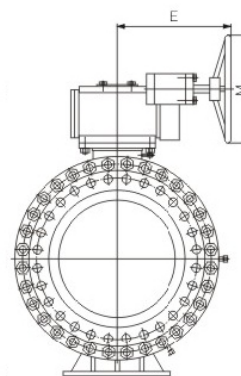
*More dimension specifications are available on request.

TRUNNION BALL VALVE

DIMENSION (3-piece body / Forged steel / 1500-2500 lb)



(2"-4")



(6"-above)

DN	NPS	1500 Lb				2500 Lb			
		L	H ₁ ≈	H ₂ ≈	M≈	L	H ₁ ≈	H ₂ ≈	M≈
50	2"	368	237	122	800	451	240	129	1000
80	3"	470	269	163	1000	578	300	159	1000
100	4"	546	297	173	1000	673	350	204	1000
150	6"	705	305	211	400	914	345	340	500
200	8"	832	365	274	450	1022	402	411	500
250	10"	991	440	310	500	1270	500	250	450
300	12"	1130	596	485	500	1422	650	250	450
350	14"	1257	661	510	550	-	-	-	-
400	16"	1384	700	540	550	-	-	-	-
500	20"	1664	880	635	914	-	-	-	-
600	24"	2043	1285	720	914	-	-	-	-

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*Flange dimensions refer to Catalogue of Accessory: Series 8 – Flange.

*More dimension specifications are available on request.