Code	Actuator	Action	Air Fail Position	Control	Structure	Body Material	Sealing Material	Ball Material	Connection	DN	PN
LPA11-	1 Pneumatic	D Double-acting	1 Normally Open	A On-off	5 One-piece	A CF3M	P PTFE	A CF3M	1 Flange		
	2 Pneumatic & Handwheel	S Single-acting	2 Normally Closed	B Control	6 Two-pieces	B CF8M	Q TFM1600	B CF8M	0 Others		
	3 Electric DC24V	0 Others	3 Flexible	C Intelligent	7 Three-piece	C CF8	T EK	C CF8			
	4 Electric AC220V		4 Held	0 Others	0 Others	D WCB	W PEEK	I CF3			
	5 Electric AC380V		0 Others			I CF3	2 PE	L CE3MN			
	7 Handle					L CE3MN	5 TFM4215	2 Ti			
	8 Turbine					2 Ti	0 Others	3 Gr			
	0 Others					5 WCC		0 Others			
						0 Others					

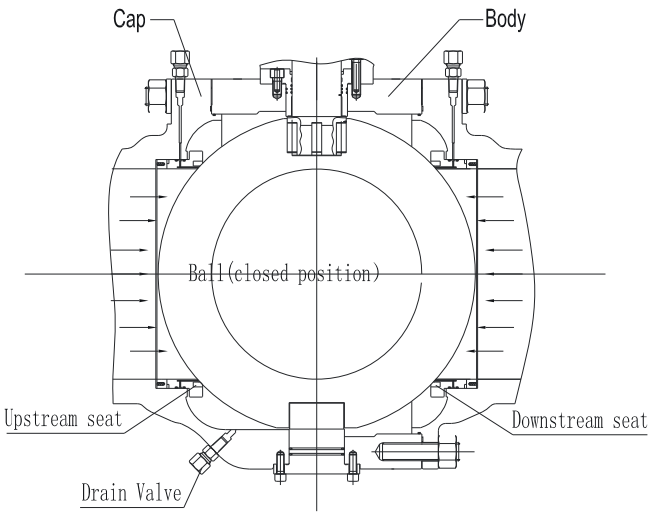
USAGE

The trunnion ball valve is used to cut off or connect the media in various pipelines of Class150～Class2500. The valves made of different materials are suitable for various media such as water, steam, oil, liquefied gas, natural gas,coal gas, nitric acid, oxidizer, urea and etc. The driving modes include manual operation, worm and worm gear transmission, pneumatic operation and electric operation. The connection ends can be flange or butt welding.

DESIGN STRUCTURAL FEATURES

1. Double Block And Bleed (DBB)

When the valve is closed and the middle cavity is emptied through the discharge valve, the upstream and downstream seats will independently block the fluid at the inlet and outlet to realize double block function. Another function of the discharge device is that the valve seat can be checked if there is any leakage during the test. In addition, the deposits inside the body can be washed and discharged through the discharge device to reduce damage to the seat by impurities in the medium.



Double Block And Bleed Function

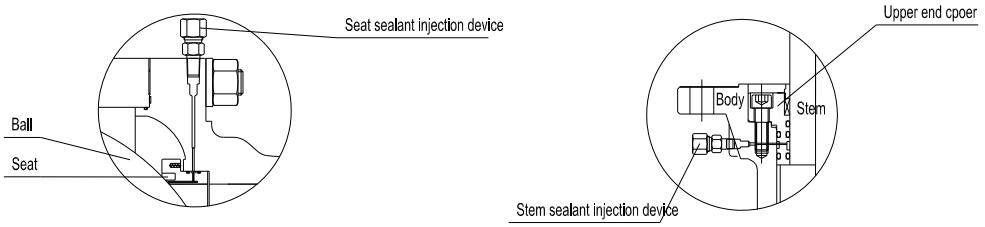
2. Low Operating Torque

The trunnion pipeline ball valve adopts trunnion ball structure and floating valve seat, so as to achieve lower torque under operating pressure. It uses self-lubricating PTFE and metal sliding bearing to reduce the friction coefficient to the lowest in conjunction with the high intensity and high fineness stem.

3. Emergency Sealing Device

The ball valves with the diameter more than or equal to 6"(DN150) are all designed with sealant injection device on stem and seat.When the seat ring or stem O ring is damaged due to accident, the corresponding sealant can be injected by the sealant injection device to avoid medium leakage on seat ring and stem.If necessary, the auxiliary sealing system can be used for washing and lubricating the seat to maintain its cleanliness.

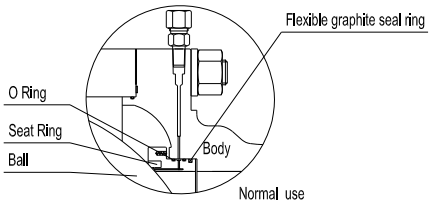
Sealant Injection Device

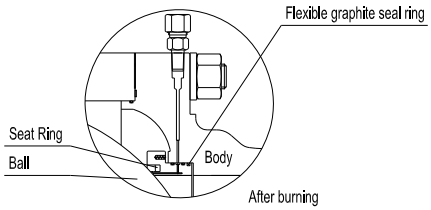


4. Fire-safe design structure

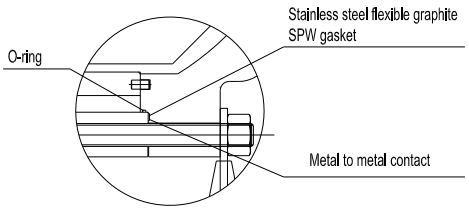
Fire during the use of valve, the seat ring, stem O ring and middle flange O ring made of PIFE, rubber or other non-metal materials will be decomposed or damaged under high temperature. Under pressure of the medium, the ball valve will push the seat reatainer rapidly towards the ball to make the metal seal ring contact the ball and form the auxiliary metal to metal sealing structure, which can effectively control valve leakage. The fireproof structure design of trunnnion pipeline ball valve conforms to requirements in API 607, API 6FA, BS6755 and other standards.

Fire-safe design structure of seat

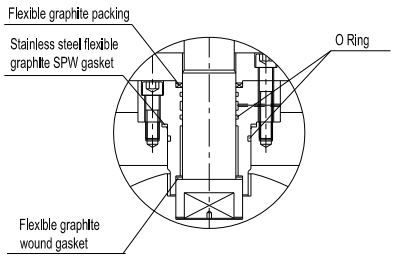




Fire-safe design structure of middle flange



Fire-safe design structure of stem



5. Anti-static design structucture

The ball valve is provided with the anti-static structure and adopts ths static electricity discharge device to directly form a static channel between the ball and body or form a static channel between the ball and body through the stem, so as to discharge the static electricity produced due to friction during theopening and closing of ball and seat through the pipeline, avoiding fire or explosion that may be caused by static spark and ensuring system safety.

6. Reliable seat sealing design structure

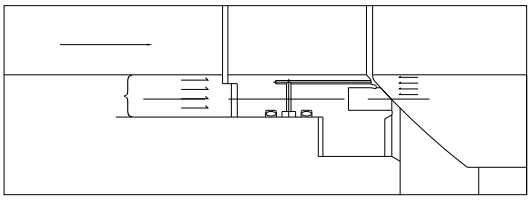
The seat sealing is realized through two floating seat retainers. They can float axially to block the fluid, including ball sealing and body sealing. The low pressure sealing of valve seat is realized by spring pre-tightening. In addition, the piston effect of valve seat is designed reasonably, which realizes high pressure sealing by the pressure of the medium itself. The following two kinds of ball sealing can be realized.

7. Single Sealing(automatic Pressure Relief In Middle Cavity Of Vavle

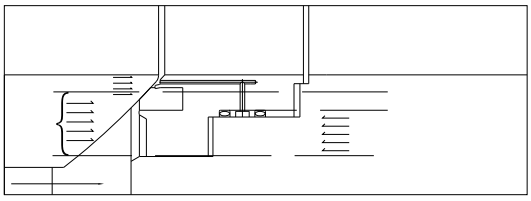
Generally, the single sealing structure is used, that is, there is only the upstream sealing. As the independent spring loaded upstream and downstream sealing seats are used, the over-pressure inside valve cavity can overcome the pre-tightening effect of the spring, so as to make the seat release from the ball and realize automatic pressure relief towards the downstream part.

The upstream side: When the seat moves axially along the valve, the pressure P exerted on the upstream part(inlet) produces a reverse force on A1. As A2 is higher than A1, A2-A1=B1,The force on B1 will push the seat to the ball and realize tight sealing of the upstream part.

The downstream side: Once the pressure pb inside the valve cavity increases, the force exerted on A3 is higher than that on A4. As A3-A4=B2, The pressure differential on B2 will overcome the spring force to make the seat release from the ball and realize pressure realif of valve cavity to the downstream part. Afterwards, the seat and ball will be sealed again under the spring action.



A2>A1

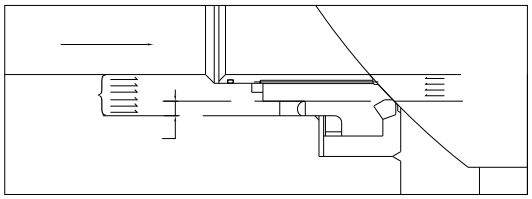


A3>A4

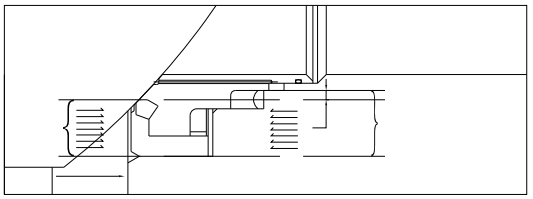
8. Double Sealing (double piston affect)

The trunnion pipeline ball valve can be designed with the double sealing structure before and after the ball for some special service conditions and user requirements. It has double piston effect. Under normal condition, the valve generally adopts primary sealing. When the primary seat sealing is damaged and causes leakage,
the secondary seat can play the function of sealing and enhance the sealing reliability. The seat adopts the combined structure.The primary seal is metal to metal seal.The secondary seal is fluorine rubber O ring that can ensure the ball valve can reach the bubble level sealing.When the pressure differential is very low, the sealing seat will press the ball through the spring action to realize primary sealing. When the pressure differential rises,the sealing force of seat and body will increase accordingly so as to tightly seal the seat and ball and ensure good sealing performance.
Primary sealing: Upstream. When the pressure differential is lower or there is no pressure differential, the floating seat will move axially along the valve under the spring action and push the seat towards the ball to keep tight sealing. When the pipeline pressure P increases, the force exerted on the area A2 of valve seat is higher than the force exerted on the area A1, A2-A1＝B1. Therefore, the force on B1 will push the seat towards the ball and realize tight sealing of the upstream part.

Secondary sealing: Downstream. When the pressure differential is lower or there is no pressure differential, the floating seat will move axially along the valve under the spring action and push the seat towards the ball to keep tight sealing. When the valve cavity pressure P increases,the force exerted on the area A4 of valve seat is higher than the force exerted on the area A3, A4-A3＝B1. Therefore, the force on B1 will push the seat towards the ball and realize tight sealing of the upstream part.



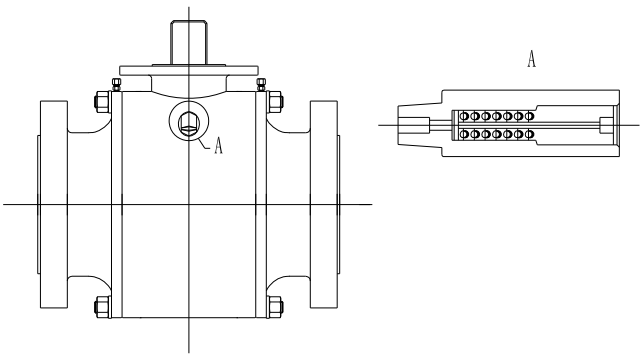
A2＞A1



A3＞A4

9. Safety Relief Device

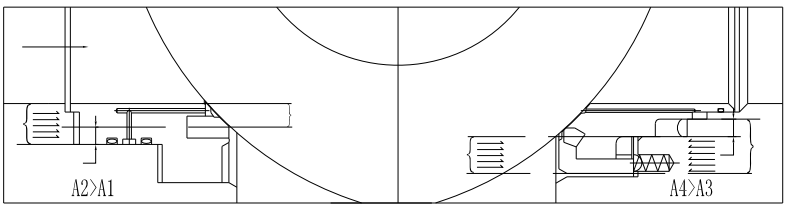
As the ball valve is designed with the advanced primary and secondary sealing that has double piston effect, and the middle cavity cannot realize automatic pressure relief, the safety relief valve must be installed on the body in order to prevent the danger of over-pressure damage inside the valve cavity that may occur due to thermal expansion of medium. The connection of the safety relief valve is generally NPT1/2. Another point to be noted is that the medium of the safety rel- ief valve is directly discharged into the atmosphere. In case direct discharging into the atmosphere is not allowed, we suggest that the ball valve with a special structure of automatic pressure relief towards upper stream should be used. Refer to the following for details. Please indicate it in the order if you do not need the safety relief valve or if you would like to use the ball valve with the special structure of automatic pressure relief towards upper stream.



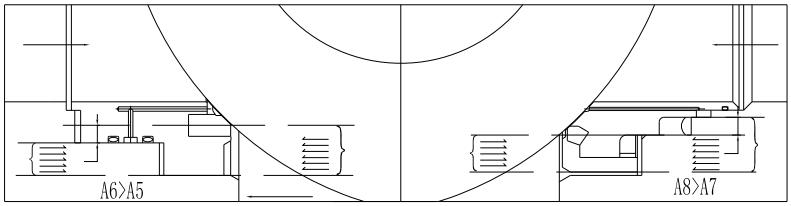
10. Secial Structure Of Automatic Pressure Relief Towards Upper Stream

As the ball valve is designed with the advanced primary and secondary sealing that has double piston effect, and the middle cavity cannot realize automatic pressure relief, the ball valve with the special structure is recommended to meet the requirement of automatic pressure relief and ensure no pollution to the environment. In the structure, the upper stream adopts primary sealing and the lower stream adopts primary and secondary sealing. When the ball valve is closed,the pressure in the valve cavity can realize automatic pressure relief to the upper stream, so as to avoid the danger caused by cavity pressure. When the primary seat is damaged and leaks, the secondary seat can also play the function of sealing. But special attention shall be paid to the flow direction of the ball valve. During the installation, note the upstream and downstream directions. Refer to the following drawings for sealing principle of the valve with the special structure.

Principle drawing of ball valve upstream and downstream sealing

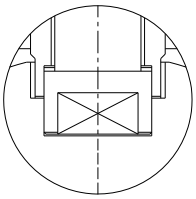


Principle drawing of ball valve cavity pressure relief to the upper steam and of downstream sealing



11. Blow-out Proof Stem

The stem adopts the blow-out proof strucrure. The stem is designed with the footstep at its bottom so that with the positioning of upper cover and screw, the stem will not be blown out by the medium even in case of abnormal pressure rise in the valve cavity.



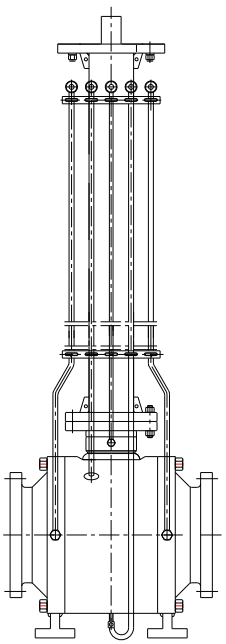
Blow-out proof stem

12. Corrosion Resistance and Sulfide Stress Resistance

Certain corrosion allowance is left for the body wall thickness. The carbon steel stem, fixed shaft, ball, seat and seat ring are subjected to chemical nickel plating according to ASTM B733 and B656. In addition, various corrosion resistant materials are available for users to select. According to customer repuirements, the valve materials can be selected according to NACE MR 01 75/ISO 15156 or NACE MR 0103, and strict quality control and quality inspection should be carried out during the manufacturing so as to fully meet the requirements in the standards and meet the service conditions in sulfurization environment.

13. Extented Stem design for underground application

As for the embedded valves, the extension stem can be supplied if ground operation is needed. The extension stem is composed of stem, sealant injection valve, and drainage valve that can be extended to the top for the convenience of operation.
Users should indicate the extension stem requirements and length when placing orders. For ball valves driven through electric, pneumatic and pneumatic-hydraulic operations, the extension stem length should be from the centre of pipeline to top flange.

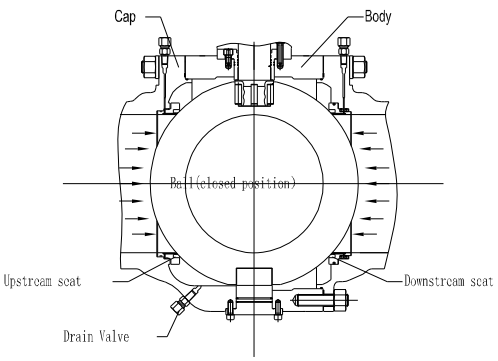


Schematic diagram of extension stem

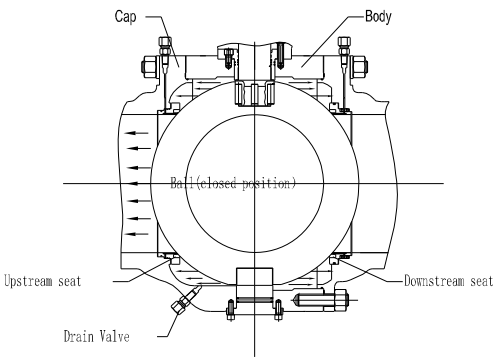
14. Double isolation and bleed valve (DIB design)

There are two type of DIG design ball valves, one type is double bi-directional seats(DIB-1), and the other type is single bi-direction seat plus unidirectional seat (it have direction mark on the valves, DIB-2), With two sealing surfaces, each sealing faces resist to a source of pressure in the closed position, through bleeder valve chamber between the sealing faces.
For DIB-1: Both seats are Bi-directional sealing, Each seat should be tested Bi-directionally;
For DIB-2: One is unidirectional sealing seat, and the other is Bi-directional sealing seat, so there is a direction marked on the body for this type of ball valve; The Bi-directional sealing seat need be tested Bi-directionally. As to the unidirectional sealing seat. It should be tested unidirectionally (Add pressure to valve chamber and upstream, examine leakage status of downstream valve seat)

DIB-2

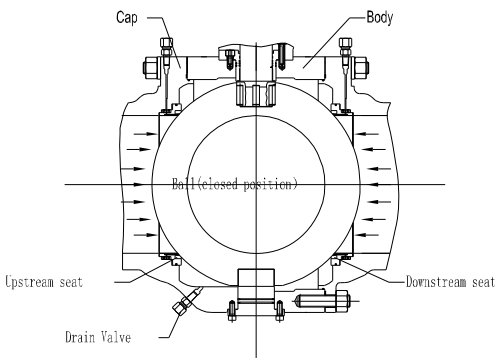


Pressure imposed from both end (DIB 2)

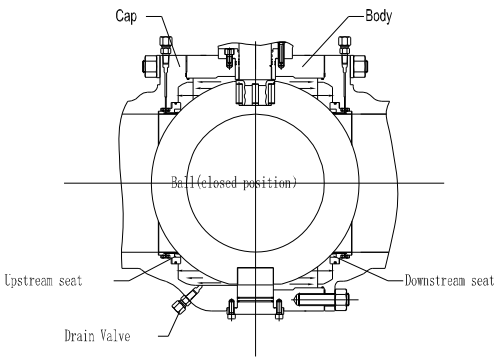


Pressure imposed from cavity(DIB 2)

DIB-1



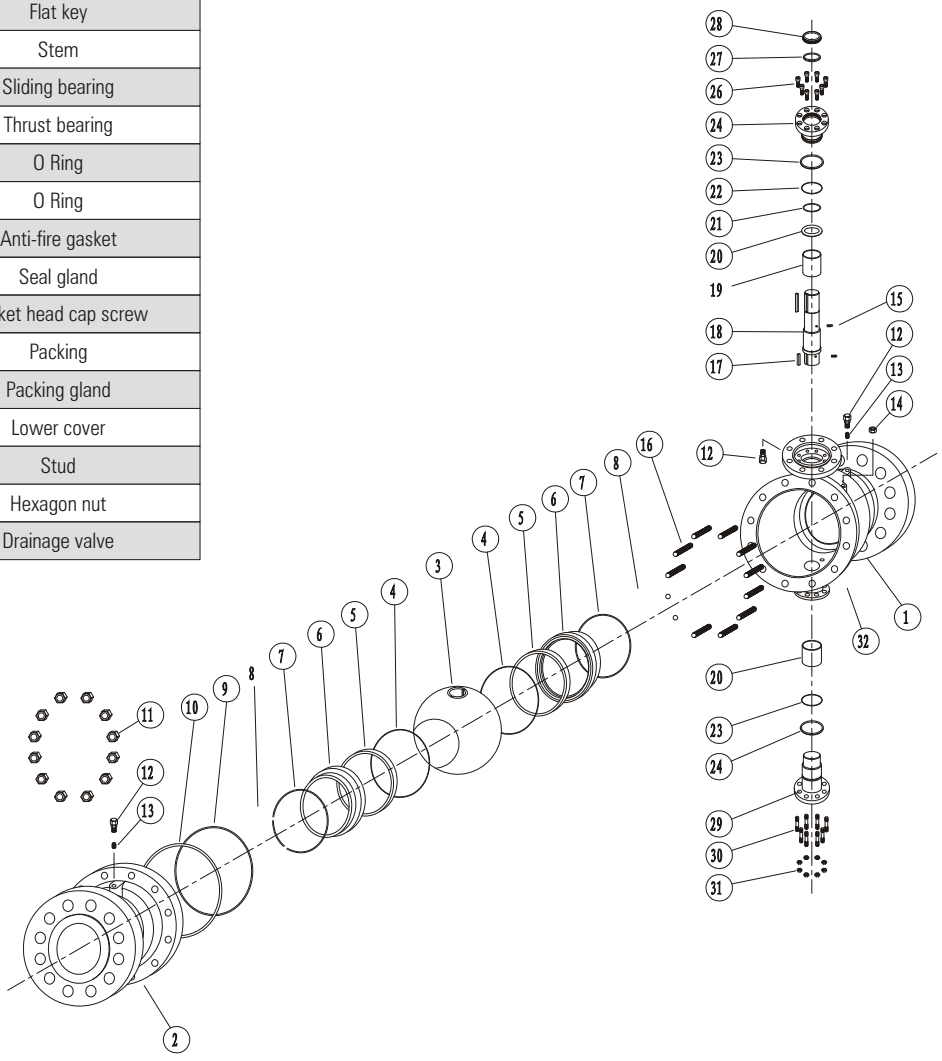
Pressure imposed from both end (DIB-1)



Pressure imposed from cavity(DIB-1)

CAST TRUNNION BALL VALVE (Splited body, side-entry)

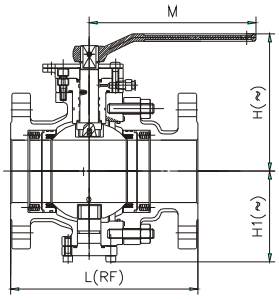
1	Body
2	Bonnet
3	Ball
4	Anti-fire packing
5	Seat
6	Seat support ring
7	O Ring
8	Spring
9	O Ring
10	Anti-fire gasket
11	Hexagon nut
12	Sealant injection valve
13	Check valve
14	Air release valve
15	Anti-static device
16	Stud
17	Flat key
18	Stem
19	Sliding bearing
20	Thrust bearing
21	O Ring
22	O Ring
23	Anti-fire gasket
24	Seal gland
25	Socket head cap screw
26	Packing
27	Packing gland
28	Lower cover
29	Stud
30	Hexagon nut
31	Drainage valve



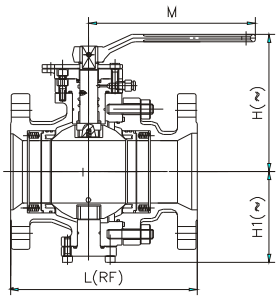
CAST TRUNNION BALL VALVE

Part Materials And Main Parameters

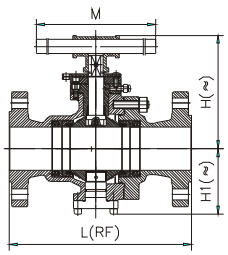
Nominal diameter(in)			NPS 2～48				
Nominal pressure(Class)			Class150～Class900				
Materials of parts	No	Part Name	Material				
			Carbon Steel	Stainless Steel			
	1	Body	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M	ASTM A351 CF3	ASTM A351 CF3M
	2	Bonnet	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M	ASTM A351 CF3	ASTM A351 CF3M
	3	Ball	ASTM A105 • ENP	ASTM A182 304	ASTM A182316	ASTM A182 304L	ASTM A182 316L
	4	Anti-fire packing	Graphite	Graphite	Graphite	Graphite	Graphite
	5	Seat	PTFE/NYLON/PEEK/PPL	PTFE/NYLON/PEEK/PPL	PTFE/NYLON/PEEK/PPL	PTFE/NYLON/PEEK/PPL	PTFE/NYLON/PEEK/PPL
	6	Seat support ring	ASTM A105 • ENP	ASTM A182 304	ASTM A182 316	ASTM A182 304L	ASTM A182 316L
	7	O Ring	VITON	VITON	VITON	VITON	VITON
	8	Spring	17-7PH	17-7PH	17-7PH	17-7PH	17-7PH
	9	O Ring	VITON	VITON	VITON	VITON	VITON
	10	Anti-fire gasket	SST+Graphite	SST+Graphite	SST+Graphite	SST+Graphite	SST+Graphite
	11	Hexagon nut	A194 2HM	A194-8	A194 -8M	A194-8	A194-8M
	12	Sealant injection valve	Combined parts	Combined parts	Combined parts	Combined parts	Combined parts
	13	Check valve	Combined parts	Combined parts	Combined parts	Combined parts	Combined parts
	14	Air release valve	Combined parts	Combined parts	Combined parts	Combined parts	Combined parts
	15	Anti-static device	Combined parts	Combined parts	Combined parts	Combined parts	Combined parts
	16	Stud	A193 B7M	A320 B8	A320 B8M	A320 B8	A320 B8M
	17	Flat key	ANSI 1045	ANSI 1045	ANSI 1045	ANSI 1045	ANSI 1045
	18	Stem	ASTM A182 F6a	ASTM A182 304	ASTM A182 316	ASTM A182 304L	ASTM A182 316L
	19	Sliding bearing	Metal+PTFE	Metal+PTFE	Metal+PTFE	Metal+PTFE	Metal+PTFE
	20	Thrust bearing	PTFE	PTFE	PTFE	PTFE	PTFE
	21	O Ring	VITON	VITON	VITON	VITON	VITON
	22	O Ring	VITON	VITON	VITON	VITON	VITON
	23	Anti-fire gasket	SST+Graphite	SST+Graphite	SST+Graphite	SST+Graphite	SST+Graphite
	24	Seal gland	ASTM A105 • ENP	ASTM A182 304	ASTM A182316	ASTM A182304L	ASTM A182316L
	25	Socket head cap screw	A193 B7M	A320 B8	A320 B8M	A320 B8	A320 B8M
	26	Packing	Graphite	Graphite	Graphite	Graphite	Graphite
	27	Packing gland	ASTM A182 F6a	ASTM A182 F6a	ASTM A182 F6a	ASTM A182 F6a	ASTM A182 F6a
	28	Lower cover	ASTM A105 • ENP	ASTM A182 304	ASTM A182316	ASTM A182304L	ASTM A182316L
	29	Stud	A193 B7M	A320 B8	A320 B8M	A320 B8	A320 B8M
	30	Hexagon nut	A194 2HM	A194-8	A194 -8M	A194-8	A194-8M
	31	Drainage valve	Combined parts	Combined parts	Combined parts	Combined parts	Combined parts
Applicable service conditions		Applicable media	Water, steam, oil, gas, liquefied gas,natural gas,etc.	Nitric Acid	Nitric Acid	Strong Oxidizer	Urea
		Applicable temperature	≤120℃ (PTFE)、≤80℃ (NYLON)、≤250℃ (PEEK)、≤250℃ (PPL)				
Design and manufacturing			API 608、API 6D				
Face-to-face dimensions			ASME B16.10、API 6D				
Type of connection			Flange	ASME B16.5/ASME B16.47		Butt welding	ASME B16.25
Pressure test			API 598、API 6D				
Transmission mode			Manual, worm and worm gear transmission, pneumatic, electric				



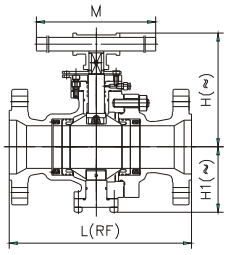
Class: 150Lb-300Lb
Bore: Full bore



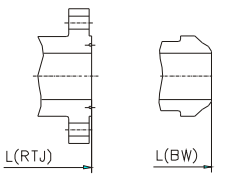
Class: 150Lb-300Lb
Bore: Reduced bore



Class: 600Lb-900Lb
Bore: Full bore

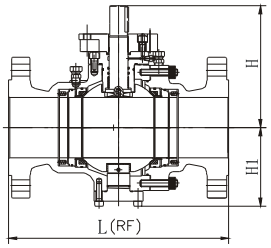


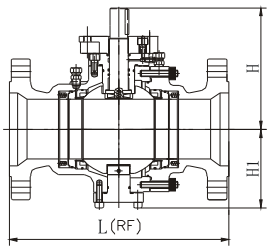
Class: 600Lb-900Lb
Bore: Reduced bore

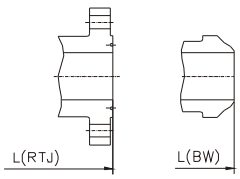


Pressure rating	Norminal Diameter	Flanged		Butt welding	H	H1	M	Weight (kg)
Class	NPS	L(RF)	L(RTJ)	L(BW)				
150	2"	178	191	216	168	83	250	10
	3" X 2" Ⓡ	203	216	283	168	83	250	11.7
	2½"	191	203	241	175	102	300	14
	3" X 2½" Ⓖ	203	216	283	175	102	300	15
	4" X 2½" Ⓡ	229	241	305	175	102	300	16.7
	3"	203	216	283	186	117	350	22
	4" X 3" Ⓖ	229	241	305	186	117	350	25
	6" X 3" Ⓡ	394	406	457	186	117	350	31.3
	4"	229	241	305	225	141	450	35
	6" X 4" Ⓖ	394	406	457	225	141	450	42.5
	8" X 4" Ⓡ	457	470	521	225	141	450	51.5
300	2"	216	232	216	168	95	250	15
	3" X 2" Ⓡ	283	298	283	168	95	250	20
	2½"	241	257	241	175	107	300	24
	3" X 2½" Ⓖ	283	298	283	175	107	300	28
	4" X 2½" Ⓡ	305	321	305	175	107	300	34
	3"	283	298	283	186	122	350	30
	4" X 3" Ⓖ	305	321	305	186	122	350	44
	6" X 3" Ⓡ	403	419	403	186	122	350	52
	4"	305	321	305	225	148	450	55
	6" X 4" Ⓖ	403	419	403	225	148	450	65
	8" X 4" Ⓡ	502	518	521	225	148	450	82
600	2"	292	295	292	195	100	500	33
	3" X 2" Ⓡ	356	359	356	195	100	500	37
	2½"	330	333	330	220	115	600	47
	3" X 2½" Ⓖ	356	359	356	220	115	600	48.8
	4" X 2½" Ⓡ	432	435	432	220	115	600	57.5
	3"	356	359	356	247	126	700	58
	4" X 3" Ⓖ	432	435	432	247	126	700	72
	6" X 3" Ⓡ	559	562	559	247	126	700	97.8
	4"	432	435	432	275	154	900	83
	6" X 4" Ⓖ	559	562	559	275	154	900	102.8
	8" X 4" Ⓡ	660	664	660	275	154	900	109.6
900	2"	368	371	368	217	118.5	500	39
	3" X 2" Ⓡ	381	384	381	217	118.5	500	44
	2½"	491	422	419	241	133	600	55
	3" X 2½" Ⓖ	381	384	381	241	133	600	58
	4" X 2½" Ⓡ	457	460	457	241	133	600	62.1
	3"	381	384	381	259	141	900	68
	4" X 3" Ⓖ	457	460	457	259	141	900	82
	6" X 3" Ⓡ	610	613	610	259	141	900	106.1
	4"	457	460	457	297	167	1000	98
	6" X 4" Ⓖ	610	613	610	297	167	1000	127
	8" X 4" Ⓡ	737	740	737	297	167	1000	171.1

Ⓖ Regular bore; Ⓡ Reduece bore.
The weight information is only for RF End Ball Valve

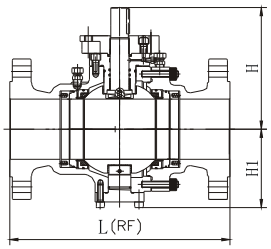


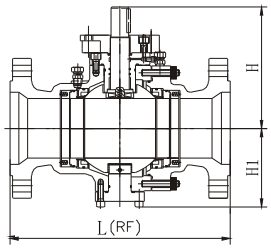


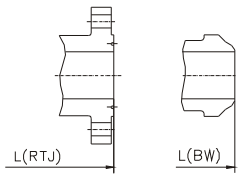


Pressure rating	Norminal Diameter	Flanged		Butt welding	H	H1	Weight (kg)
Class	NPS	L(RF)	L(RTJ)	L(BW)			
150	6"	394	406	457	280	193	74
	8" X 6" Ⓖ	457	470	521	280	193	83
	10" X 6" Ⓡ	533	546	559	280	193	95.2
	8"	457	470	521	345	217	111
	10" X 8" Ⓖ	533	546	559	345	217	123.4
	12" X 8" Ⓡ	610	622	635	345	217	142
	10"	533	546	559	395	270	217
	12" X 10"Ⓖ	610	622	635	395	270	235
	14" X 10"Ⓡ	686	699	762	395	270	253
	16" X 10"Ⓡ	762	775	838	395	270	277
	12"	610	622	635	527	323	385
	14" X 12"Ⓖ	686	699	762	527	323	402
	16" X 12"Ⓖ	762	775	838	527	323	426
	18" X 12"Ⓡ	864	876	914	527	323	450
	14"	686	699	762	570	355	457
	16" X 14"Ⓖ	762	775	838	570	355	481
	18" X 14"Ⓖ	864	876	914	570	355	505
	20" X 14"Ⓡ	914	927	991	570	355	536
	16"	762	775	838	498	398	723
	18" X 16"	864	876	914	498	398	765
	20" X 16"	914	927	991	498	398	832
300	6"	403	419	403	285	201	90
	8" X 6" Ⓖ	502	518	521	285	201	107
	10" X 6" Ⓡ	568	584	559	285	201	127
	8"	502	518	521	345	232	201
	10" X 8" Ⓖ	568	584	559	345	232	222
	12" X 8" Ⓡ	648	664	635	345	232	252
	10"	568	584	559	451	283	350
	12" X 10"Ⓖ	648	664	635	451	283	381
	14" X 10"Ⓡ	762	778	762	451	283	420
	16" X 10"Ⓡ	838	854	838	451	283	461
	12"	648	664	635	570	335	510
	14" X 12"Ⓖ	762	778	762	570	335	547
	16" X 12"Ⓖ	838	854	838	570	335	592
	18" X 12"Ⓡ	914	930	914	570	335	638
	14"	762	778	762	600	360	720
	16" X 14"Ⓖ	838	854	838	600	360	760
	18" X 14"Ⓖ	914	930	914	600	360	808
	20" X 14"Ⓡ	991	1010	991	600	360	884
	16"	838	854	838	638	398	1167
	18" X 16"	914	930	914	638	398	1257
	20" X 16"	991	1010	991	638	398	1365

Ⓖ Regular bore; Ⓡ Reduece bore.
The weight information is only for RF End Ball Valve





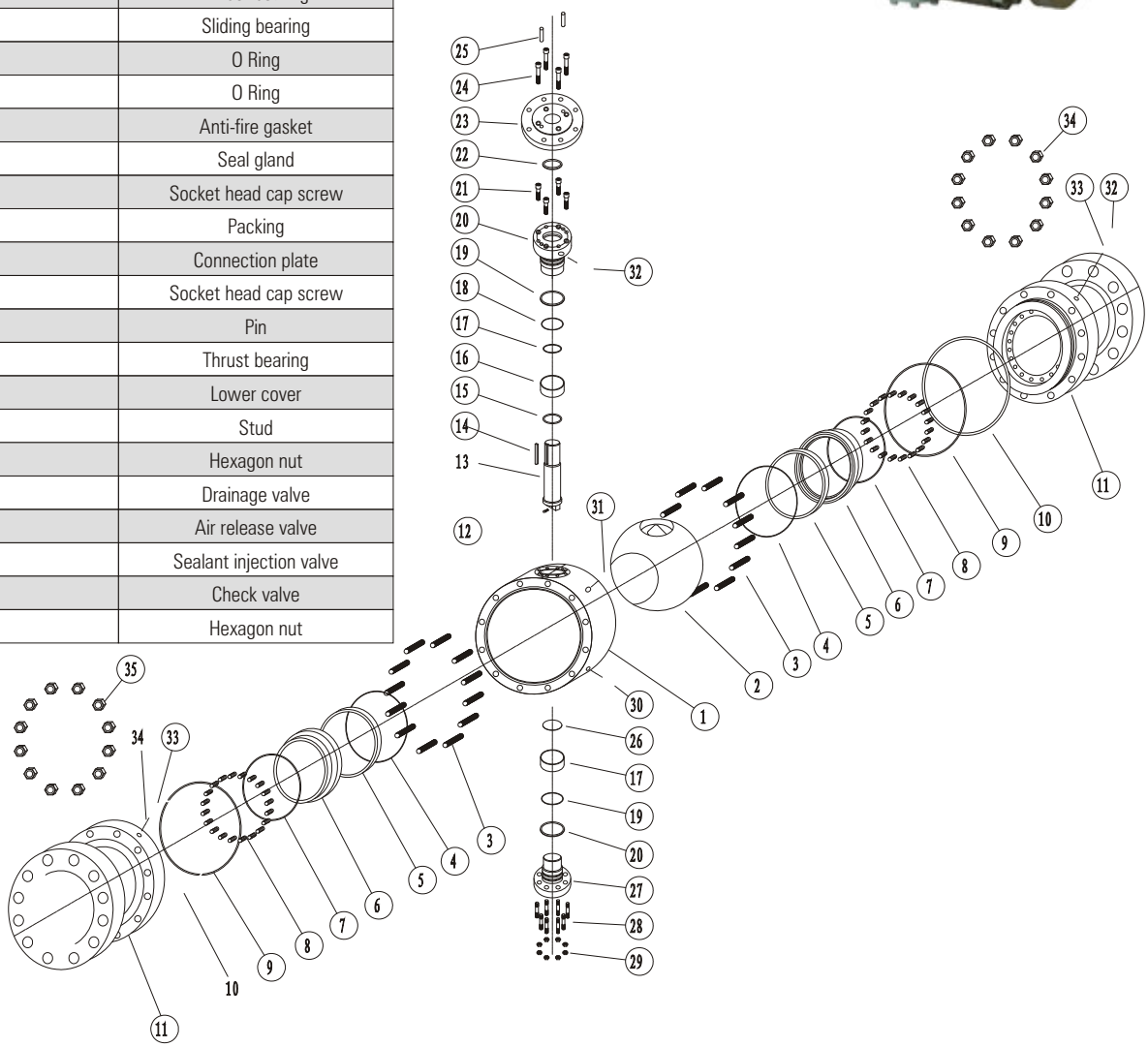


Pressure rating	Norminal Diameter	Flanged		Butt welding	H	H1	Weight (kg)
Class	NPS	L(RF)	L(RTJ)	L(BW)			
600	6"	559	562	559	305	198	174
	8" X 6" Ⓖ	660	664	660	305	198	198
	10" X 6" Ⓡ	787	791	787	305	198	244
	8"	660	664	660	365	252	339
	10" X 8" Ⓖ	787	791	787	365	252	386
	12" X 8" Ⓡ	838	841	838	365	252	420
	10"	787	791	787	484	299	515
	12" X 10" Ⓖ	838	841	838	484	299	545
	14" X 10" Ⓡ	889	892	889	484	299	576
	16" X 10" Ⓡ	991	994	991	484	299	648
	12"	838	841	838	580	343	960
	14" X 12" Ⓖ	889	892	889	580	343	992
	16" X 12" Ⓖ	991	994	991	580	343	1072
	18" X 12" Ⓡ	1092	1095	1092	580	343	1142
	14"	889	892	889	608	377	1250
	16" X 14" Ⓖ	991	994	991	608	377	1328
	18" X 14" Ⓖ	1092	1095	1092	608	377	1405
	20" X 14" Ⓡ	1194	1200	1194	608	377	1513
	16"	991	994	994	663	416	1415
	18" X 16"	1092	1095	1092	663	416	1615
	20" X 16"	1194	1200	1194	663	416	1692
900	6"	610	613	610	360	250	220
	8" X 6" Ⓖ	737	740	737	360	250	263
	10" X 6" Ⓡ	838	841	838	360	250	316
	8"	737	740	737	394	280	500
	10" X 8" Ⓖ	838	841	838	394	280	551
	12" X 8" Ⓡ	965	968	965	394	280	620
	10"	838	841	838	502	325	942
	12" X 10" Ⓖ	965	968	965	502	325	1010
	14" X 10" Ⓡ	1029	1038	1029	502	325	1054
	16" X 10" Ⓡ	1130	1140	1130	502	325	1143
	12"	965	968	965	592	380	1200
	14" X 12" Ⓖ	1029	1038	1029	592	380	1310
	16" X 12" Ⓖ	1130	1140	1130	592	380	1420
	18" X 12" Ⓡ	1219	1232	1219	592	380	1550
	14"	1029	1038	1029	675	395	1655
	16" X 14" Ⓖ	1130	1140	1130	675	395	1855
	18" X 14" Ⓖ	1219	1232	1219	675	395	-
	20" X 14" Ⓡ	1321	1334	1321	675	395	-
	16"	1130	1140	1130	762	426	1903
	18" X 16"	1219	1232	1219	762	426	2030
	20" X 16"	1321	1334	1321	762	426	2374
1500	6"	705	711	705	365	211	380
	8" X 6" Ⓖ	832	841	832	365	211	485
	10" X 6" Ⓡ	991	1000	991	365	211	635
	8"	832	841	832	475	274	750
	10" X 8" Ⓖ	991	1000	991	475	274	956
	12" X 8" Ⓡ	1130	1146	1130	475	274	1056
	10"	991	1000	991	578	310	1165
	12" X 10" Ⓖ	1130	1146	1130	578	310	1267
	14" X 10" Ⓡ	1257	1276	1257	578	310	1465
	16" X 10" Ⓡ	1387	1407	1384	578	310	1592
	12"	1130	1146	1130	696	485	1625
	14" X 12" Ⓖ	1257	1276	1257	696	485	1825
	16" X 12" Ⓖ	1384	1407	1384	696	485	1900
	14" Ⓡ	1257	1276	1257	761	510	1980
	16" X 14"	1384	1407	1384	761	510	2280

Ⓖ Regular bore; Ⓡ Reduece bore.
The weight information is only for RF End Ball Valve

FORGED TRUNNION BALL VALVE (Splited body, side-entry)

1	Body
2	Ball
3	Stud
4	Anti-fire packing
5	Seat
6	Support ring
7	O Ring
8	Spring
9	O Ring
10	Anti-fire gasket
11	Bonnet
12	Anti-static device
13	Stem
14	Flat key
15	Thrust bearing
16	Sliding bearing
17	O Ring
18	O Ring
19	Anti-fire gasket
20	Seal gland
21	Socket head cap screw
22	Packing
23	Connection plate
24	Socket head cap screw
25	Pin
26	Thrust bearing
27	Lower cover
28	Stud
29	Hexagon nut
30	Drainage valve
31	Air release valve
32	Sealant injection valve
33	Check valve
34	Hexagon nut



FORGED TRUNNION BALL VALVE

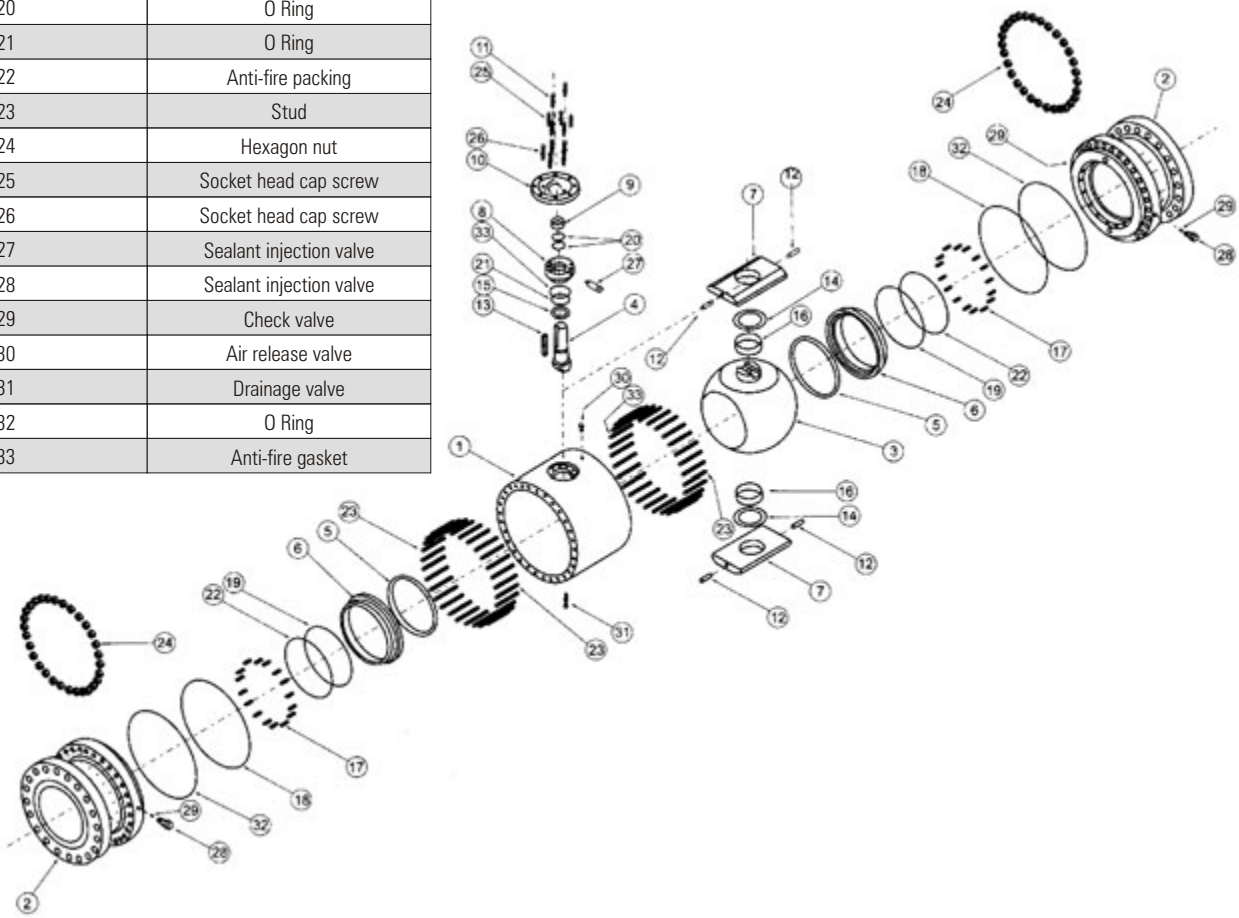
Part Materials And Main Parameters

Nominal diameter(in)			NPS 2～48				
Nominal pressure(Class)			Class150～Class900				
Materials of parts	No	Part Name	Material				
			Carbon Steel	Stainless Steel			
	1	Body	ASTM A105	ASTM A182 304	ASTM A182316	ASTM A182 304L	ASTM A182 316L
	2	Ball	ASTM A105 • ENP	ASTM A182 304	ASTM A182316	ASTM A182 304L	ASTM A182 316L
	3	Stud	A193 B7M	A320 B8	A320 B8M	A320 B8	A320 B8M
	4	Anti-fire packing	Graphite	Graphite	Graphite	Graphite	Graphite
	5	Seat	PTFE/NYLON/PEEK/PPL	PTFE/NYLON/PEEK/PPL	PTFE/NYLON/PEEK/PPL	PTFE/NYLON/PEEK/PPL	PTFE/NYLON/PEEK/PPL
	6	Support ring	ASTM A105 • ENP	ASTM A182 304	ASTM A182 316	ASTM A182 304L	ASTM A182 316L
	7	O Ring	VITON	VITON	VITON	VITON	VITON
	8	Spring	17-7PH	17-7PH	17-7PH	17-7PH	17-7PH
	9	O Ring	VITON	VITON	VITON	VITON	VITON
	10	Anti-fire gasket	SST+Graphite	SST+Graphite	SST+Graphite	SST+Graphite	SST+Graphite
	11	Bonnet	ASTM A105	ASTM A182 304	ASTM A182 316	ASTM A182 304L	ASTM A182 316L
	12	Anti-static device	Combined parts	Combined parts	Combined parts	Combined parts	Combined parts
	13	Stem	ASTM A182 F6a	ASTM A182 304	ASTM A182 316	ASTM A182 304L	ASTM A182 316L
	14	Flat key	ANSI 1045	ANSI 1045	ANSI 1045	ANSI 1045	ANSI 1045
	15	Thrust bearing	Metal+PTFE	Metal+PTFE	Metal+PTFE	Metal+PTFE	Metal+PTFE
	16	Sliding bearing	PTFE	PTFE	PTFE	PTFE	PTFE
	17	O Ring	VITON	VITON	VITON	VITON	VITON
	18	O Ring	VITON	VITON	VITON	VITON	VITON
	19	Anti-fire gasket	SST+Graphite	SST+Graphite	SST+Graphite	SST+Graphite	SST+Graphite
	20	Seal gland	ASTM A105 • ENP	ASTM A182 304	ASTM A182 316	ASTM A182 304L	ASTM A182 316L
	21	Socket head cap screw	A193 B7M	A320 B8	A320 B8M	A320 B8	A320 B8M
	22	Packing	Graphite	Graphite	Graphite	Graphite	Graphite
	23	Connection plate	ASTM A105	ASTM A182 304	ASTM A182316	ASTM A182304L	ASTM A182316L
	24	Socket head cap screw	A193 B7M	A320 B8	A320 B8M	A320 B8	A320 B8M
	25	Pin	ANSI 1035	ANSI 1035	ANSI 1035	ANSI 1035	ANSI 1035
	26	Thrust bearing	Metal+PTFE	Metal+PTFE	Metal+PTFE	Metal+PTFE	Metal+PTFE
	27	Lower cover	ASTM A105 • ENP	ASTM A182 304	ASTM A182316	ASTM A182 304L	ASTM A182 316L
	28	Stud	A193 B7M	A320 B8	A320 B8M	A320 B8	A320 B8M
	29	Hexagon nut	A194 2HM	A194-8	A194 -8M	A194-8	A194-8M
	30	Drainage valve	Combined parts	Combined parts	Combined parts	Combined parts	Combined parts
	31	Air release valve	Combined parts	Combined parts	Combined parts	Combined parts	Combined parts
	32	Sealant injection valve	Combined parts	Combined parts	Combined parts	Combined parts	Combined parts
	33	Check valve	Combined parts	Combined parts	Combined parts	Combined parts	Combined parts
	34	Hexagon nut	A194 2HM	A194-8	A194 -8 M	A194-8	A194-8 M
Applicable service conditions		Applicable media	Water, steam, oil, gas, liquefied gas,natural gas,etc.	Nitric Acid	Nitric Acid	Strong Oxidizer	Urea
		Applicable temperature	≤120℃ (PTFE)、≤80℃ (NYLON)、≤250℃ (PEEK)、≤250℃ (PPL)				
Design and manufacturing			API 608、API 6D				
Face-to-face dimensions			ASME B16.10、API 6D				
Type of connection			Flange	ASME B16.5/ASME B16.47		Butt welding	ASME B16.25
Pressure test			API 598、API 6D				
Transmission mode			Manual, worm and worm gear transmission, pneumatic, electric				

FORGED TRUNNION BALL VALVE (Splited body, side-entry)

1	Body
2	Bonnet
3	Ball
4	Stem
5	Seat
6	Seat ring
7	Bearing holder
8	Seal gland
9	Packing
10	Connection plate
11	Pin
12	Pin
13	Flat key
14	Thrust bearing
15	Thrust bearing
16	Sliding bearing
17	Spring
18	O Ring
19	O Ring
20	O Ring
21	O Ring
22	Anti-fire packing
23	Stud
24	Hexagon nut
25	Socket head cap screw
26	Socket head cap screw
27	Sealant injection valve
28	Sealant injection valve
29	Check valve
30	Air release valve
31	Drainage valve
32	O Ring
33	Anti-fire gasket

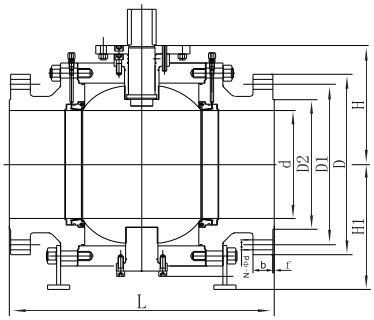
Internal supporting board structure



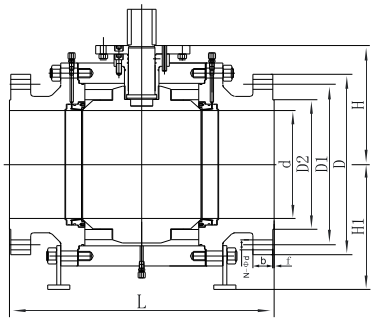
FORGED TRUNNION BALL VALVE

Part Materials And Main Parameters

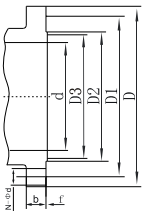
Nominal diameter(in)			NPS 2～48				
Nominal pressure(Class)			Class150～Class2500				
	No	Part Name	Material				
			Carbon Steel	Stainless Steel			
Materials of parts	1	Body	ASTM A105	ASTM A182 304	ASTM A182 316	ASTM A182 304L	ASTM A182 316L
	2	Bonnet	ASTM A105	ASTM A182 304	ASTM A182 316	ASTM A182 304L	ASTM A182 316L
	3	Ball	ASTM A105 • ENP	ASTM A182 304	ASTM A182 316	ASTM A182 304L	ASTM A182 316L
	4	Stem	ASTM A182 F6a	ASTM A182 304	ASTM A182 316	ASTM A182 304L	ASTM A182 316L
	5	Seat	PTFE/NYOLN/PEEK/PPL	PTFE/NYOLN/PEEK/PPL	PTFE/NYOLN/PEEK/PPL	PTFE/NYOLN/PEEK/PPL	PTFE/NYOLN/PEEK/PPL
	6	Seat ring	ASTM A105 • ENP	ASTM A182 304	ASTM A182 316	ASTM A182 304L	ASTM A182 316L
	7	Bearing holder	ASTM A105 • ENP	ASTM A182 304	ASTM A182 316	ASTM A182 304L	ASTM A182 316L
	8	Seal gland	ASTM A105 • ENP	ASTM A182 304	ASTM A182 316	ASTM A182 304L	ASTM A182 316L
	9	Packing	Graphite	Graphite	Graphite	Graphite	Graphite
	10	Connection plate	ASTM A105	ASTM A182 304	ASTM A182 316	ASTM A182 304L	ASTM A182 316L
	11	Pin	ANSI 1035	ANSI 1035	ANSI 1035	ANSI 1035	ANSI 1035
	12	Pin	ANSI 1035	ANSI 1035	ANSI 1035	ANSI 1035	ANSI 1035
	13	Flat key	ANSI 1045	ANSI 1045	ANSI 1045	ANSI 1045	ANSI 1045
	14	Thrust bearing	PTFE	PTFE	PTFE	PTFE	PTFE
	15	Thrust bearing	PTFE	PTFE	PTFE	PTFE	PTFE
	16	Sliding bearing	Metal+PTFE	Metal+PTFE	Metal+PTFE	Metal+PTFE	Metal+PTFE
	17	Spring	17-7PH	17-7PH	17-7PH	17-7PH	17-7PH
	18	O Ring	VITON	VITON	VITON	VITON	VITON
	19	O Ring	VITON	VITON	VITON	VITON	VITON
	20	O Ring	VITON	VITON	VITON	VITON	VITON
	21	O Ring	VITON	VITON	VITON	VITON	VITON
	22	Anti-fire packing	Graphite	Graphite	Graphite	Graphite	Graphite
	23	Stud	A193 B7M	A320 B8	A320 B8M	A320 B8	A320 B8M
	24	Hexagon nut	A194 2HM	A194-8	A194 -8M	A194-8	A194-8M
	25	Socket head cap screw	A193 B7M	A320 B8	A320 B8M	A320 B8	A320 B8M
	26	Socket head cap screw	Combined parts	Combined parts	Combined parts	Combined parts	Combined parts
	27	Sealant injection valve	A193 B7M	A320 B8	A320 B8M	A320 B8	A320 B8M
	28	Sealant injection valve	Combined parts	Combined parts	Combined parts	Combined parts	Combined parts
	29	Check valve	Combined parts	Combined parts	Combined parts	Combined parts	Combined parts
	30	Air release valve	Combined parts	Combined parts	Combined parts	Combined parts	Combined parts
	31	Drainage valve	Combined parts	Combined parts	Combined parts	Combined parts	Combined parts
	32	O Ring	VITON	VITON	VITON	VITON	VITON
	33	Anti-fire gasket	SST+Graphite	SST+Graphite	SST+Graphite	SST+Graphite	SST+Graphite
Applicable service conditions		Applicable media	Water, steam, oil, gas, liquefied gas,natural gas,etc.	Nitric Acid	Nitric Acid	Strong Oxidizer	Urea
		Applicable temperature	≤120℃ (PTFE)、≤80℃ (NYLON)、≤250℃ (PEEK)、≤250℃ (PPL)				
Design and manufacturing			API 608、API 6D				
Face-to-face dimensions			ASME B16.10、API 6D				
Type of connection			Flange	ASME B16.5/ASME B16.47		Butt welding	ASME B16.25
Pressure test			API 598、API 6D				
Transmission mode			Manual, worm and worm gear transmission, pneumatic, electric				



Extfernal supporting structure



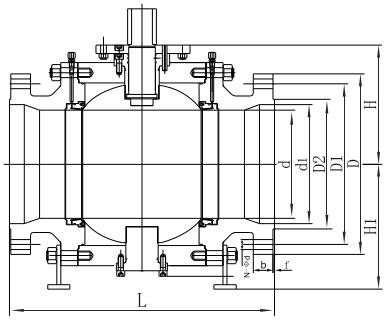
Internal supporting structure



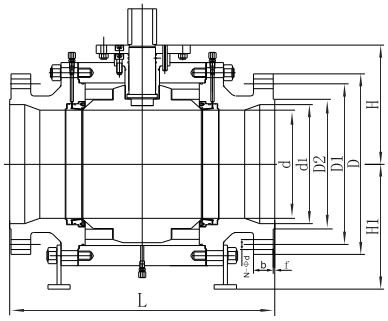
Pressure rating	Norminal Diameter		d	Flanged		Butt welding	Raised face flange							General		Support board		Weight(kg)	
Class	NPS	DN		L(RF)	L(RTJ)	L(BW)	D	D1	D2	D3	f	b	N- Φ d	H	H1	H	H1	General	Support board
150	2"	50	50	178	191	216	150	120.5	92	-	2	14.5	4- Φ 19	93	88	-	-	19	-
	3"	80	75	203	216	283	190	152.5	127	-	2	17.5	4- Φ 19	118.5	117	-	-	28	-
	4"	100	100	229	241	305	230	190.5	157	-	2	22.5	8- Φ 19	143.5	137	-	-	50	-
	6"	150	150	394	406	457	280	241.5	216	-	2	24	8- Φ 22	208	178.5	-	-	160	-
	8"	200	201	457	470	521	345	298.5	270	-	2	27	8- Φ 22	248	222	248	235	270	284
	10"	250	252	533	546	559	405	362	324	-	2	29	12- Φ 25	294	265	294	288	415	436
	12"	300	303	610	622	635	485	432	381	-	2	30.5	12- Φ 25	344.5	308.5	345	330	660	693
	14"	350	334	686	699	762	535	476	413	-	2	33.5	12- Φ 29	377	334	377	360	890	935
	16"	400	385	762	775	838	595	540	470	-	2	35	16- Φ 29	418	375	418	400	1080	1134
	18"	450	436	864	876	914	635	578	533	-	2	38.5	16- Φ 32	463	410	463	435	1480	1554
	20"	500	487	914	927	991	700	635	584	-	2	41.5	20- Φ 32	502	458	502	484	1970	2069
	24"	600	589	1067	1080	1143	815	749.5	692	-	2	46.5	20- Φ 35	586	534	586	568	3000	3150
	26"	650	633	1143	-	1245	870	806.5	749	-	2	68	24- Φ 35	626	582	626	594	3612	3793
	28"	700	684	1245	-	1346	927	864	800	-	2	71	28- Φ 35	644	605	644	658	4402	4622
	30"	750	735	1295	-	1397	984	914.5	857	-	2	75	28- Φ 35	720	672	720	677	5112	5368
	32"	800	779	1372	-	1524	1060	978	914	-	2	81	28- Φ 41	742	704	742	746	6667	7000
	36"	900	874	1524	-	1727	1168	1086	1022	-	2	90	32- Φ 41	839	796	839	791	8627	9058
	40"	1000	976	1753	-	-	1289	1200	1124	-	2	90	36- Φ 41	913.5	866	913.5	863	12313	12929
	42"	1050	1020	1855	-	-	1346	1257	1194	-	2	97	36- Φ 41	943	881	943	937	14000	14700
	48"	1200	1166	2134	-	-	1511	1422	1359	-	2	108	44- Φ 41	1097	1016	1097	1066	21470	22544
	56"	1400	1360	2489	-	-	1746	1651	1575	-	2	124	48- Φ 48	1302	1186	1302	1253	33431	35103
300	2"	50	50	216	232	216	165	127	92	-	2	21	8- Φ 19	93	88	-	-	22	-
	3"	80	75	283	298	283	210	168.5	127	-	2	27	8- Φ 22	118.5	117	-	-	38	-
	4"	100	100	305	321	305	255	200	157	-	2	30.5	8- Φ 22	143.5	137	-	-	60	-
	6"	150	150	403	419	457	320	270	216	-	2	35	12- Φ 22	208	178.5	-	-	180	189
	8"	200	201	502	518	521	380	330	270	-	2	40	12- Φ 25	248	222	248	235	295	310
	10"	250	252	568	584	559	445	387.5	324	-	2	46.5	16- Φ 29	294	265	294	288	450	473
	12"	300	303	648	664	635	520	451	381	-	2	49.5	16- Φ 32	344.5	308.5	345	330	700	735
	14"	350	334	762	778	762	585	514.5	413	-	2	52.5	20- Φ 32	377	334	377	360	1160	1218
	16"	400	385	838	854	838	650	571.5	470	-	2	56	20- Φ 35	423	380	423	345	1340	1407
	18"	450	436	914	930	914	710	628.5	533	-	2	59	24- Φ 35	463	410	463	431	1610	1691
	20"	500	487	991	1010	991	775	686	584	-	2	62	24- Φ 35	502	458	502	474	2200	2310
	24"	600	589	1143	1165	1143	915	813	692	-	2	68.5	24- Φ 41	592	549	592	561	3460	3633
	26"	650	633	1245	-	1245	972	876.5	749	-	2	79	28- Φ 45	633	590	633	601	4017	4218
	28"	700	684	1346	-	1346	1035	940	800	-	2	86	28- Φ 45	680	737	680	736	4974	5223
	30"	750	735	1397	-	1397	1092	997	857	-	2	92	28- Φ 48	730	682	730	681	5681	5965
	32"	800	779	1524	-	1524	1149	1054	914	-	2	98	28- Φ 51	765	720	765	716	6837	7179
	36"	900	874	1727	-	1727	1270	1168	1022	-	2	105	32- Φ 54	847	804	847	798	8700	9135
	40"	1000	976	1956	-	-	1238	1156	1086	-	2	114	32- Φ 45	921	877	921	871	12299	12914
	42"	1050	1020	2083	-	-	1289	1206.5	1137	-	2	119	32- Φ 45	936	900	936	890	14379	15098
	48"	1200	1166	2170	-	-	1476	1372	1302	-	2	134	32- Φ 51	1093	1052	1093	1040	21482	22556
	56"	1400	1360	2743	-	-	1708	1600	1518	-	2	154	28- Φ 60	1263	1216	1263	1203	34066	35769

Δ Please consult the factory:

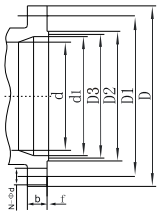
Note: The weight valve is only for flanged valve. Please consult our factory for higher nominal diameter or weight. Any modification to size H,H1 and weight will not be notified otherwise.



External supporting structure

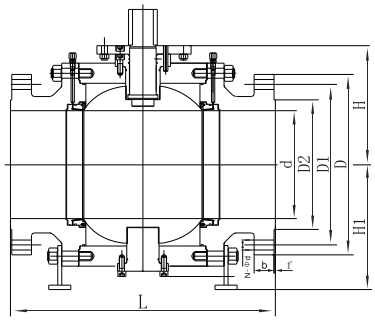


Internal supporting structure

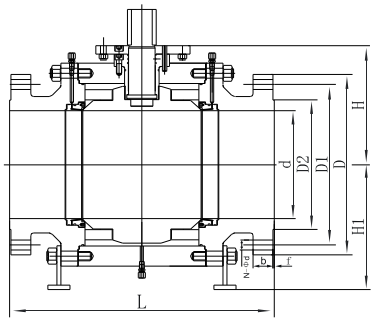


Pressure rating	Norminal Diameter		d	d1	Flanged		Butt welding	Raised face flange							General		Support board		Weight(kg)	
Class	NPS	DN			L(RF)	L(RTJ)	L(BW)	D	D1	D2	D3	f	b	N- ϕ d	H	H1	H	H1	General	Support board
150	3" X 2"	80	50	75	203	216	283	190	152.5	127	-	2	17.5	4- ϕ 19	93	88	-	-	28	-
	4" X 3"	100	75	100	229	241	305	230	190.5	157	-	2	22.5	8- ϕ 19	118.5	117	-	-	45	-
	6" X 4"	150	100	150	394	406	457	280	241.5	216	-	2	24	8- ϕ 22	143.5	137	-	-	95	-
	8" X 6"	200	150	201	457	470	521	345	298.5	270	-	2	27	8- ϕ 22	208	178.5	-	-	170	179
	10" X 8"	250	201	252	533	546	559	405	362	324	-	2	29	12- ϕ 25	248	222	248	235	313	329
	12" X 10"	300	252	303	610	622	635	485	432	381	-	2	30.5	12- ϕ 25	294	265	294	288	470	494
	14" X 10"	350	252	334	686	699	762	535	476	413	-	2	33.5	12- ϕ 29	294	265	294	288	521	580
	14" X 12"	350	303	334	686	699	762	535	476	413	-	2	33.5	12- ϕ 29	344.5	308.5	345	330	760	840
	16" X 12"	400	303	385	762	775	838	595	540	470	-	2	35	16- ϕ 29	344.5	308.5	345	330	834	920
	16" X 14"	400	334	385	762	775	838	595	540	470	-	2	35	16- ϕ 29	377	334	377	360	930	1020
	18" X 16"	450	385	436	864	876	914	635	578	533	-	2	38.5	16- ϕ 32	418	375	418	400	1120	1210
	20" X 16"	500	385	487	914	927	991	700	635	584	-	2	41.5	20- ϕ 32	418	375	418	400	1480	1570
	20" x 18"	500	436	487	914	927	991	700	635	584	-	2	41.5	20- ϕ 32	463	410	463	431	1620	1710
	24" X 20"	600	487	589	1067	1080	1143	815	749.5	692	-	2	46.5	20- ϕ 35	502	458	502	484	2270	2384
	30" X 24"	750	589	735	1295	-	1397	984	914.5	857	-	2	75	28- ϕ 35	586	534	586	568	3730	3917
	36" X 30"	900	735	874	1524	-	1727	1168	1086	1022	-	2	90	32- ϕ 41	720	672	720	677	6740	7077
300	3" X 2"	80	50	75	283	298	283	210	168.5	127	-	2	27	8- ϕ 22	93	88	-	-	42	-
	4" X 3"	100	75	100	305	321	305	255	200	157	-	2	30.5	8- ϕ 22	118.5	117	-	-	62	-
	6" X 4"	150	100	150	403	419	457	320	270	216	-	2	35	12- ϕ 22	143.5	137	-	-	115	120.8
	8" X 6"	200	150	201	502	518	521	380	330	270	-	2	40	12- ϕ 25	208	178.5	-	-	196	206
	10" X 8"	250	201	252	568	584	559	445	387.5	324	-	2	46.5	16- ϕ 29	248	222	248	235	350	368
	12" X 10"	300	252	303	648	664	635	520	451	381	-	2	49.5	16- ϕ 32	294	265	294	288	552	580
	14" X 10"	350	252	334	762	778	762	585	514.5	413	-	2	52.5	20- ϕ 32	294	265	294	288	644	684
	14" X 12"	350	303	334	762	778	762	585	514.5	413	-	2	52.5	20- ϕ 32	344.5	308.5	345	330	780	860
	16" X 12"	400	303	385	838	854	838	650	571.5	470	-	2	56	20- ϕ 35	344.5	308.5	345	330	908	988
	16" X 14"	400	334	385	838	854	838	650	571.5	470	-	2	56	20- ϕ 35	377	334	377	360	1105	1180
	18" X 16"	450	385	436	914	930	914	710	628.5	533	-	2	59	24- ϕ 35	423	380	423	345	1500	1575
	20" X 16"	500	385	487	991	1010	991	775	686	584	-	2	62	24- ϕ 35	423	380	423	345	1600	1700
	20" x 18"	500	487	436	991	1010	991	775	686	584	-	2	62	24- ϕ 35	463	410	463	431	1910	2053
	24" X 20"	600	487	589	1143	1165	1143	915	813	692	-	2	68.5	24- ϕ 41	502	458	502	474	2940	3087
	30" X 24"	750	589	735	1397	-	1397	1092	997	857	-	2	92	28- ϕ 48	592	549	592	561	4430	4652
	36" X 30"	900	735	874	1727	-	1727	1270	1168	1022	-	2	105	32- ϕ 54	730	682	730	681	7520	7896

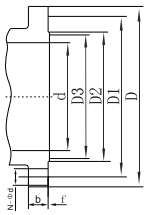
△ Please consult the factory:
Note: The weight valve is only for flanged valve. Please consult our factory for higher nominal diameter or weight. Any modification to size H,H1 and weight will not be notified otherwise.



Extfernal supporting structure



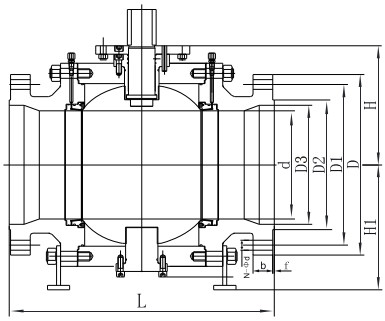
Internal supporting structure



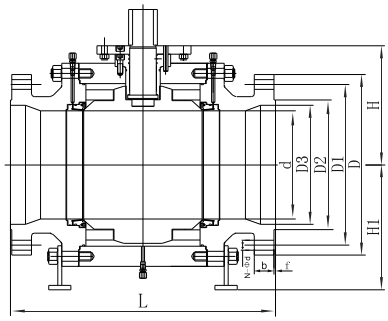
Pressure rating	Norminal Diameter		d	Flanged		Butt welding	Raised face flange							General		Support board		Weight(kg)	
Class	NPS	DN		L(RF)	L(RTJ)	L(BW)	D	D1	D2	D3	f	b	N-Φd	H	H1	H	H1	General	Support board
600	2"	50	50	292	295	292	165	127	92	-	7	26	8-Φ19	107	91.5	-	-	38	-
	3"	80	75	356	359	356	210	168.5	127	-	7	32	8-Φ22	140	119	-	-	65	-
	4"	100	100	432	435	432	275	216	157	-	7	38.5	8-Φ25	164	150	-	-	118	-
	6"	150	150	559	562	559	355	292	216	-	7	48	12-Φ29	222	192.5	224	208	250	263
	8"	200	201	660	664	660	420	349	270	-	7	56	12-Φ32	271	235	272	248	430	452
	10"	250	252	787	791	787	510	432	324	-	7	64	16-Φ35	317.5	280	318	303	680	714
	12"	300	303	838	841	838	560	489	381	-	7	67	20-Φ35	360	320	355	341	985	1034
	14"	350	334	889	892	889	605	527	413	-	7	70	20-Φ39	390	350	390	370	1287	1351
	16"	400	385	991	994	991	685	603	470	-	7	77	20-Φ41	440	395	400	415	1640	1722
	18"	450	436	1092	1095	1092	745	654	533	-	7	83	20-Φ44	485	439	485	460	2268	2381
	20"	500	487	1194	1200	1194	815	724	584	-	7	89	24-Φ44	533	490	533	510	2830	2972
	24"	600	589	1397	1407	1397	940	838	692	-	7	102	24-Φ51	616	573	616	595	4400	4620
	26"	650	633	1448	-	1448	1016	914.5	749	-	7	108	28-Φ51	643.5	612	643.5	635	5455	5728
	28"	700	684	1549	-	1549	1073	965	800	-	7	112	28-Φ54	665	670	665	692	7610	7991
	30"	750	735	1651	-	1651	1130	1022	857	-	7	114	28-Φ54	753	710	753	742	8420	8841
	32"	800	779	1778	-	1778	1194	1079.5	914	-	7	118	28-Φ54	768	780	768	804	9230	9692
	36"	900	874	2083	-	2083	1314	1194	1022	-	7	124	28-Φ67	861	840	861	865	13000	13650
900	2"	50	50	368	371	368	215	165	124	95.25	7.92	38.5	8-Φ25	126.5	105	-	-	57	-
	3"	80	75	381	384	381	240	190.5	156	123.83	7.92	38.5	8-Φ25	150	130	-	-	87	-
	4"	100	100	457	460	457	290	235	181	149.23	7.92	45	8-Φ32	172.5	158	-	-	193	-
	6"	150	150	610	613	610	380	317.5	241	211.12	7.92	56	12-Φ32	230	197	235	210	340	357
	8"	200	201	737	740	737	470	393.5	308	269.88	7.92	64	12-Φ39	285	250	290	255	570	598.5
	10"	250	252	838	841	838	545	470	362	323.85	7.92	70	16-Φ39	330	294	330	316	912	957.6
	12"	300	303	965	968	965	610	533.5	419	381	7.92	79.5	20-Φ39	366	334	366	351	1325	1391
	14"	350	322	1029	1038	1029	640	559	467	419.1	11.13	86	20-Φ42	415	368	415	376	1620	1701
	16"	400	373	1130	1140	1130	705	616	524	469.9	11.13	89	20-Φ45	452	408	452	421	1990	2090
	18"	450	423	1219	1232	1219	785	686	594	533.4	12.7	102	20-Φ51	501	461	501	463	2611	2742
	20"	500	471	1321	1334	1321	855	749.5	648	584.2	12.7	108	20-Φ54	544	506	544	505	3880	4074
	24"	600	570	1549	1568	1549	1040	901.5	772	692.15	15.88	140	20-Φ67	657	616	657	608	6296	6611
	26"	650	617	1651	-	1651	1086	952.5	749	-	7	124	20-Φ73	700	635	700	625	7280	8050
	28"	700	665	1753	-	1753	1168	1022	800	-	7	143	20-Φ79	727	685	727	673	9166	9624
	30"	750	712	1880	-	1880	1232	1086	857	-	7	149	20-Φ79	760	722	760	706	11277	11841
	32"	800	760	2032	-	2032	1314	1156	914	-	7	159	20-Φ86	795	755	795	734	12300	12915
	36"	900	855	2286	-	2286	1461	1289	1022	-	7	172	20-Φ92	886	846	886	822	17500	18375

△ Please consult the factory:

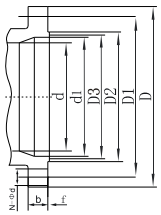
Note: The weight valve is only for flanged valve. Please consult our factory for higher nominal diameter or weight. Any modification to size H,H1 and weight will not be notified otherwise.



External supporting structure



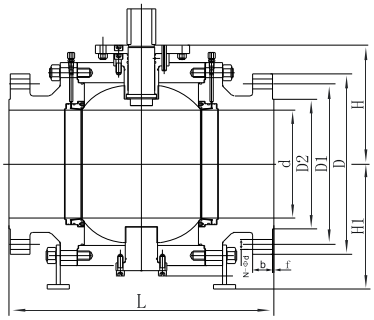
Internal supporting structure



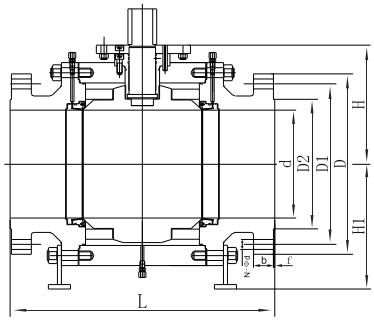
Pressure rating	Norminal Diameter		d	d1	Flanged		Butt welding	Raised face flange							General		Support board		Weight(kg)	
Class	NPS	DN			L(RF)	L(RTJ)	L(BW)	D	D1	D2	D3	f	b	N- Φ d	H	H1	H	H1	General	Support board
600	3" X 2"	80	50	75	356	359	356	210	168.5	127	-	7	32	8- Φ 22	107	91.5	-	-	44	-
	4" X 3"	100	75	100	432	435	432	275	216	157	-	7	38.5	8- Φ 25	140	119	-	-	85	-
	6" X 4"	150	100	150	559	562	559	355	292	216	-	7	48	12- Φ 29	167	150	-	-	169	177
	8" X 6"	200	150	201	660	664	660	420	349	270	-	7	56	12- Φ 32	222	192.5	224	208	280	294
	10" X 8"	250	201	252	787	791	787	510	432	324	-	7	64	16- Φ 35	271	235	272	248	520	546
	12" X 10"	300	252	303	838	841	838	560	489	381	-	7	67	20- Φ 35	317.5	280	318	303	790	830
	14" X 10"	350	252	334	889	892	889	605	527	413	-	7	70	20- Φ 39	317.5	280	318	303	960	1050
	14" X 12"	350	303	334	889	892	889	605	527	413	-	7	70	20- Φ 39	360	320	355	341	1070	1180
	16" X 12"	400	303	385	991	994	991	685	603	470	-	7	77	20- Φ 41	360	320	355	341	1250	1370
	16" X 14"	400	334	385	991	994	991	685	603	470	-	7	77	20- Φ 41	390	350	390	370	1367	1490
	18" X 16"	450	385	436	1092	1095	1092	745	654	533	-	7	83	20- Φ 44	440	395	400	415	1840	1932
	20" X 16"	500	385	487	1194	1200	1194	815	724	584	-	7	89	24- Φ 44	440	395	400	415	2177	2340
	20" x 18"	500	436	487	1194	1200	1194	815	724	584	-	7	89	24- Φ 44	485	439	485	460	2390	2540
	24" X 20"	600	487	589	1397	1407	1397	940	838	692	-	7	102	24- Φ 51	533	490	533	510	3560	3738
	30" X 24"	750	589	735	1651	-	1651	1130	1022	857	-	7	114	28- Φ 54	616	573	616	595	5200	5460
	36" X 30"	900	735	874	2083	-	2083	1314	1194	1022	-	7	124	28- Φ 67	753	710	753	690	9900	10395
900	3" X 2"	80	50	75	381	384	381	240	190.5	156	123.83	7.92	38.5	8- Φ 25	126.5	105			56	
	4" X 3"	100	75	100	457	460	457	290	235	181	149.23	7.92	45	8- Φ 32	150	130	-	-	97	-
	6" X 4"	150	100	150	610	613	610	380	317.5	241	211.12	7.92	56	12- Φ 32	172.5	158	-	-	220	231
	8" X 6"	200	150	201	737	740	737	470	393.5	308	269.88	7.92	64	12- Φ 39	230	197	235	210	436	458
	10" X 8"	250	201	252	838	841	838	545	470	362	323.85	7.92	70	16- Φ 39	285	250	290	255	650	683
	12" X 10"	300	252	303	965	968	965	610	533.5	419	381	7.92	79.5	20- Φ 39	330	294	330	316	1050	1103
	14" X 10"	350	252	322	1029	1038	1029	640	559	467	419.1	11.13	86	20- Φ 42	330	294	330	316	1230	1390
	14" X 12"	350	303	322	1029	1038	1029	640	559	467	419.1	11.13	86	20- Φ 42	366	334	366	351	1435	1565
	16" X 12"	400	303	373	1130	1140	1130	705	616	524	469.9	11.13	89	20- Φ 45	366	334	366	351	1700	1820
	16" X 14"	400	322	373	1130	1140	1130	705	616	524	469.9	11.13	89	20- Φ 45	415	368	415	376	1820	2080
	18" X 16"	450	373	423	1219	1232	1219	785	686	594	533.4	12.7	102	20- Φ 51	452	408	452	421	2550	2678
	20" X 16"	500	373	471	1321	1334	1321	855	749.5	648	584.2	12.7	108	20- Φ 54	452	408	452	421	2630	2765
	20" x 18"	500	373	471	1321	1334	1321	855	749.5	648	584.2	12.7	108	20- Φ 54	501	461	501	463	3630	3900
	24" X 20"	600	471	570	1549	1568	1549	1040	901.5	772	692.15	15.88	140	20- Φ 67	544	506	544	505	5030	5282
	30" X 24"	750	570	712	1880	-	1880	1232	1086	857	-	7	149	20- Φ 79	657	616	657	608	8730	9167
	36" X 30"	900	712	855	2286	-	2286	1461	1289	1022	-	7	172	20- Φ 92	760	722	760	706	15385	16154

△ Please consult the factory:

Note: The weight valve is only for flanged valve. Please consult our factory for higher nominal diameter or weight. Any modification to size H,H1 and weight will not be notified otherwise.



Extfernal supporting structure



Internal supporting structure

Pressure rating	Norminal Diameter		d	Flanged		Butt welding	Raised face flange							General		Support board		Weight(kg)	
Class	NPS	DN		L(RF)	L(RTJ)	L(BW)	D	D1	D2	D3	f	b	N- Φ d	H	H1	H	H1	General	Support board
1500	2"	50	50	368	371	368	215	165	124	95.25	7.92	38.5	8- Φ 25	126.5	105	-	-	57	-
	3"	80	75	470	473	470	265	203.2	168	136.53	7.92	48	8- Φ 32	166	149	-	-	168	-
	4"	100	100	546	549	546	310	241.3	194	161.93	7.92	54	8- Φ 35	219	178	-	-	230	-
	6"	150	144	705	711	705	395	317.5	248	211.14	9.53	83	12- Φ 39	268	227	-	-	685	-
	8"	200	192	832	841	832	485	393.7	318	269.88	11.13	92	12- Φ 45	303	267	305	270	993	1043
	10"	250	239	991	1000	991	585	482.6	371	323.85	11.13	108	12- Φ 51	358	323	358	336	1781	1870
	12"	300	287	1130	1146	1130	675	571.5	438	381	14.27	124	16- Φ 54	414	381	414	395	2280	2394
	14"	350	315	1257	1276	1257	750	635	489	419.1	15.88	134	16- Φ 60	471	432	471	441	3000	3150
	16"	400	360	1384	1407	1384	825	704.8	546	469.9	17.48	146.5	16- Φ 67	498	453	498	456	3816	4007
	18"	450	406	1537	1559	-	915	774.7	613	533.4	17.48	162	16- Φ 73	570	530	570	535	6195	6505
	20"	500	454	1664	1686	-	985	831.8	673	584.2	17.48	178	16- Φ 79	611	569	611	561	9075	9529
2500	2"	50	42	451	454	451	235	171.4	133	101.6	7.92	51	8- Φ 29	149	123	-	-	140	-
	3"	80	62	578	584	578	305	228.6	168	127	9.53	67	8- Φ 35	215	171	-	-	216	-
	4"	100	87	673	683	673	355	273	203	157.18	11.13	76.5	8- Φ 42	245	206	-	-	328	-
	6"	150	131	914	927	914	485	368.3	279	228.6	12.7	108	8- Φ 54	306	263	306	265	1030	1082
	8"	200	179	1022	1038	1022	550	438.2	340	279.4	14.27	127	12- Φ 54	361	330	361	336	1570	1649
	10"	250	223	1270	1292	1270	675	539.8	425	342.9	17.48	166	12- Φ 67	426	388	426	394	2550	2678
	12"	300	265	1422	1445	1422	760	619.1	495	406.4	17.48	185	16- Φ 74	479	440	479	446	3872	4066

Δ Please consult the factory:
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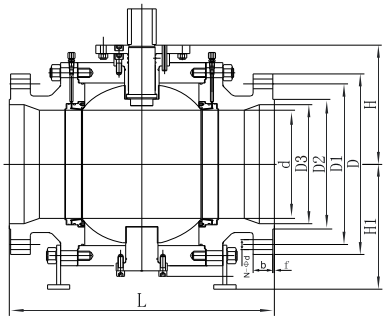
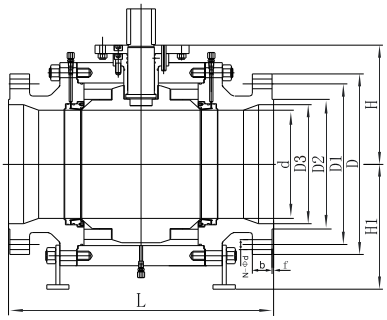


External supporting structure



Internal supporting structure

Pressure rating	Norminal Diameter		d	d1	Flanged		Butt welding	Raised face flange							General		Support board		Weight(kg)	
Class	NPS	DN			L(RF)	L(RTJ)	L(BW)	D	D1	D2	D3	f	b	N-Φd	H	H1	H	H1	General	Support board
1500	3" X 2"	80	50	75	470	473	470	265	203.2	168	136.53	7.92	38.5	8-Φ32	126.5	105	-	-	71	-
	4" X 3"	100	74	100	546	549	546	310	241.3	194	161.93	7.92	54	8-Φ35	166	149	-	-	195	205
	6" X 4"	150	100	144	705	711	705	395	317.5	248	211.14	9.53	83	12-Φ39	219	178	-	-	270	284
	8" X 6"	200	144	192	832	841	832	485	393.7	318	269.88	11.13	92	12-Φ45	268	227	-	-	586	615
	10" X 8"	250	192	239	991	1000	991	585	482.6	371	323.85	11.13	108	12-Φ51	303	267	305	270	1010	1061
	12" X 10"	300	239	287	1130	1146	1130	675	571.5	438	381	14.27	124	16-Φ54	358	323	358	336	1760	1848
	14" X 10"	350	239	315	1257	1276	1257	750	635	489	419.1	15.88	134	16-Φ60	358	323	358	336	2010	2238
	14" X 12"	350	287	315	1257	1276	1257	750	635	489	419.1	15.88	134	16-Φ60	414	381	414	395	2680	2940
	16" X 12"	400	287	360	1384	1407	1384	825	704.8	546	469.9	17.48	146.5	16-Φ67	414	381	414	395	2860	3180
	16" X 14"	400	315	360	1384	1407	1384	825	704.8	546	469.9	17.48	146.5	16-Φ67	471	432	471	441	3530	3850
	18" X 16"	450	360	406	1537	1559	-	915	774.7	613	533.4	17.48	162	16-Φ73	498	453	498	456	5030	5282
	20" X 16"	500	360	454	1664	1686	-	985	831.8	673	584.2	17.48	178	16-Φ79	498	453	498	456	-	-
	20" x 18"	500	406	454	1664	1686	-	985	831.8	673	584.2	17.48	178	16-Φ79	570	530	570	535	5380	5790
2500	3" X 2"	80	42	62	578	584	578	305	228.6	168	127	9.53	67	8-Φ35	149	123	-	-	157	165
	4" X 3"	100	62	87	673	683	673	355	273	203	157.18	11.13	76.5	8-Φ42	215	171	-	-	260	273
	6" X 4"	150	87	131	914	927	914	485	368.3	279	228.6	12.7	108	8-Φ54	245	206	-	-	548	575
	8" X 6"	200	131	179	1022	1038	1022	550	438.2	340	279.4	14.27	127	12-Φ54	306	263	306	265	1100	1155
	10" X 8"	250	179	223	1270	1292	1270	675	539.8	425	342.9	17.48	166	12-Φ67	361	330	361	336	1890	1985
	12" X 10"	300	223	265	1422	1445	1422	760	619.1	495	406.4	17.48	185	12-Φ74	426	388	426	394	2850	2993

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