

SOFT SEAL BALL VALVE



**TIANJIN FREYA AUTOMATION
TECHNOLOGY CO., LTD.**

Tell: 022-27901003

Mail: tjfreya@tj-bnd.com

Web: www.tj-bnd.com

Add: Industrial Park, Zhongbei Town, Xiqing District, Tianjin

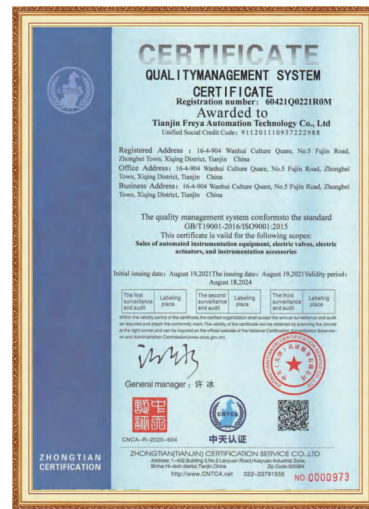
**TIANJIN FREYA AUTOMATION
TECHNOLOGY CO., LTD.**

Company profile-----	1/1
Qualifications-----	2/2
Features & benefits of ball valve-----	3/3
Ball valves-----	4/4
GB ball valve-----	5/13
All welded ball valve-----	14/19
ANSI ball valve-----	20/20
ANSI turbine ball valve-----	21/22
ANSI trunnion mounted ball valve-----	23/24
ANSI forged ball valve-----	25/26
ANSI trunnion mounted forged ball valve-----	27/28
PTFE ball valve-----	29/30
Pneumautic plastic ball valve-----	31/32

SOFT SEAL BALL VALVE

Founded in 2014, Freya specializes in fluid control products and services such as valves, actuators, electric valve actuators, and electric valves. It focuses on the process industry and has long been committed to providing services to process industries such as power, steel, building materials, and water treatment to provide professional fluid control solutions. Based on the actual working conditions, through necessary on-site surveying and technical explanations, we provide customers with safe, economical and environmental-ly friendly selection and design, supply in strict accordance with contract requirements and guide installation and debugging, and hand over for use if standards are met. Thanks to the trust of the vast number of users, through long-term and large-scale on-site services, and the effective accumulation of technical experience, the company has an accurate understanding of the real needs and pain points of users and the market, as well as expectations for equipment manufacturers.

The company based on its own patent R & D and production of intelligent electric actuators, reliable, durable, easy to use, cost-effective and guaranteed service. Being close to users, providing full-process services, cover-all services, repair and maintenance value-added services, and escorting users' production are our differentiating advantages. Freya intelligent electric actuator and electric valve actuator provide a two-year warranty and lifetime free after-sales service after installation and commissioning. Technical quality and commercial credit are the two foundations on which the company relies to survive and drive the development of the company. Users feel reassured, worry-free and happy, which are the only criteria to evaluate the effectiveness of our work and demonstrate the value of our existence.



Ball Valves are available in one-piece, two-piece and three-piece constructions. In these valves, line pressure forces the floating ball against the downstream seat to effect bubble-tight sealing.

Blowout Proof Stem

The side-entry stem of ball valves has a shoulder that bears against a matching shoulder in the body to make it blowout proof - the higher the line pressure, the better the sealing to atmosphere.

High Integrity Stem Sealing

Sealing to atmosphere is further enhanced by stem thrust seals and stem packing rings. To compensate for wear and thermal expansions, belleville springs are used.

Actuator Mounting Flange

Single-piece and two-piece ball valves are provided with an integral actuator mounting flange conforming to ISO 5211. Please note that full bore valves in sizes DN 15 to DN 25 would be supplied with mounting arrangement as per manufacturing standard.

Mirror-finished Solid Stainless Steel Balls

To obtain bubble-tight sealing and lower operating torques, mirror-finished SS balls are used as a standard. The solid construction of the balls guarantees higher structural strength.

Seats with Pressure-relieving Slots

Seats with fine grain structure are used to ensure better strength and longer life. Pressure-relieving slots are a unique feature of ball valves. The slots relieve upstream pressure when the valve is in closed position and prevent seat damage.

Main features

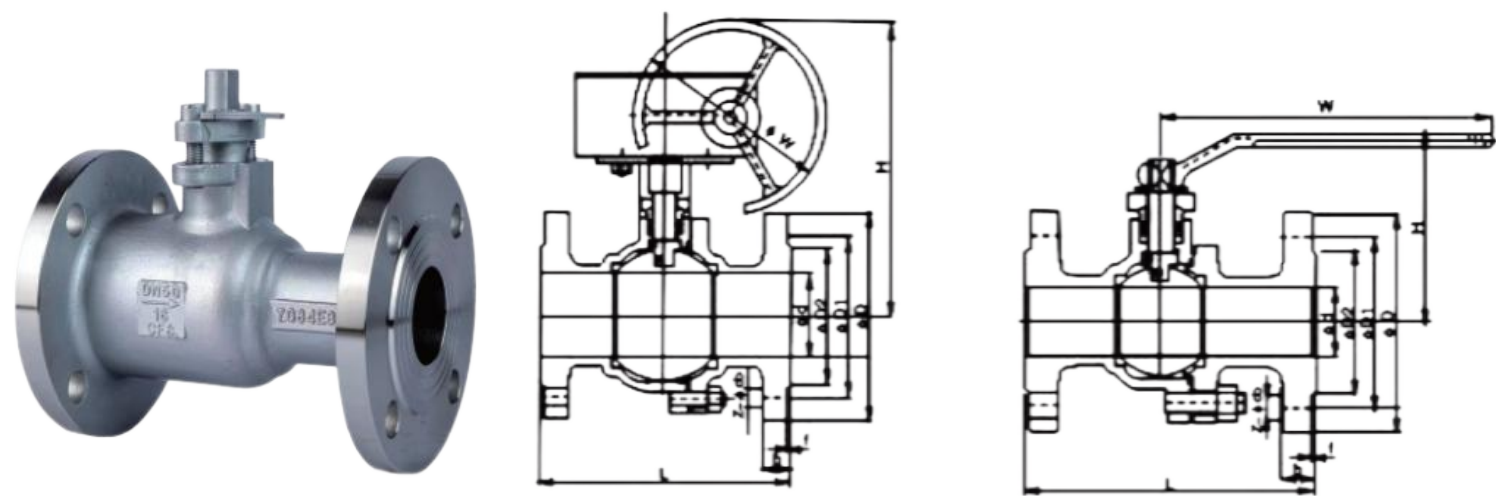
- Full bore, floating/trunnion mounted ball valve
- Middle flange bolt connection
- Blowout proof stem
- API structure improvement
- Opening and closing positioning mechanism
- Turbine operation option
- Standard flange ends
- Butt welding ends

Product specification

Product specification	Design	Face to Face	Flange Ends	Test & Check	Marking	Supply
	GB/T 12237 JB/T 7745	GB/T 12221 JB/T 7745	JB/T 79	GB/T 26480	GB/T 12220	JB/T 7928
	API 608 API 6D	ASME B16.10 API 6D	ASME B16.5	API 598 API 6D	MSS SP-25 API 6D	API 608 API 6D

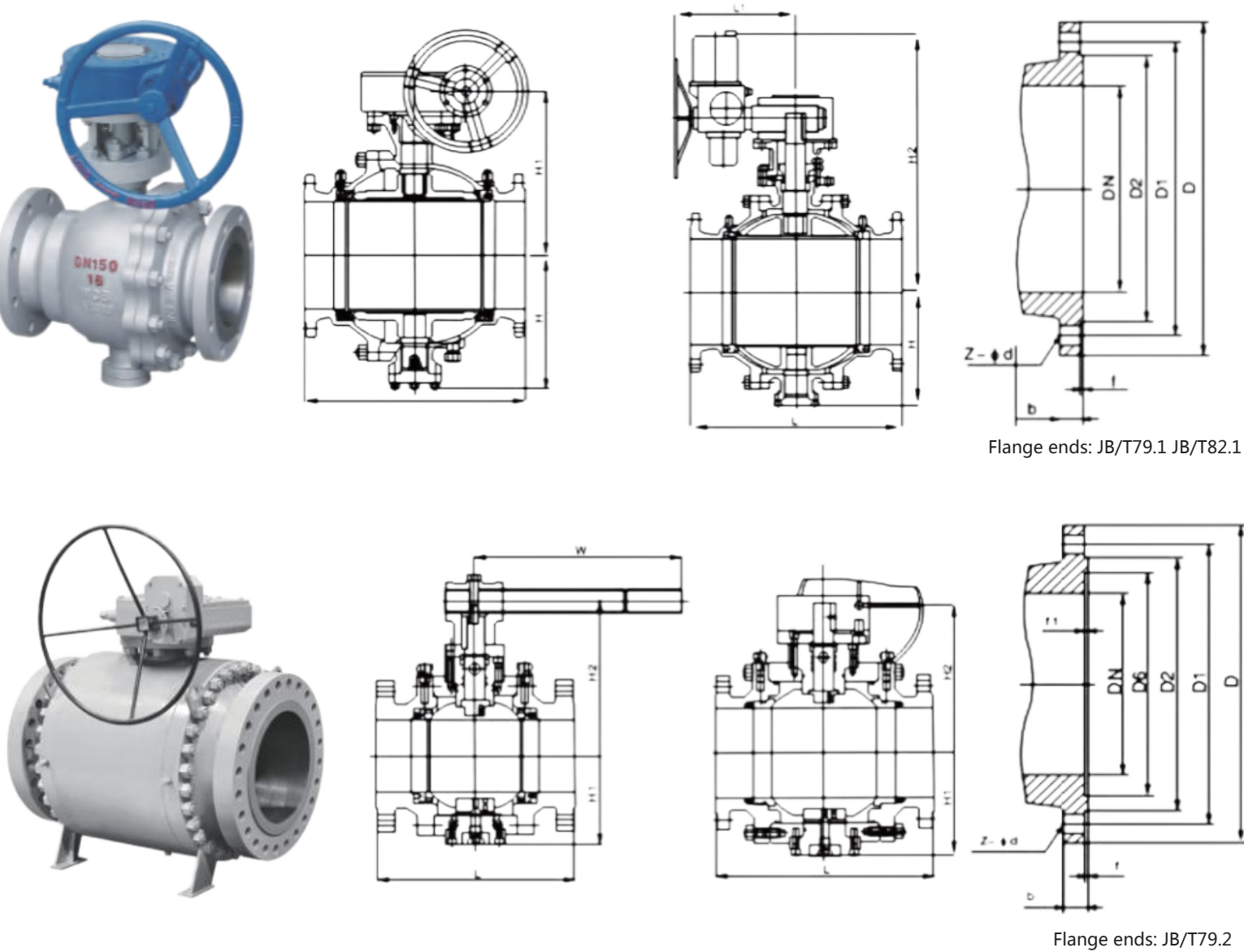
Main parts material

Parts name	Parts material					
	JB/T 7298			API 608/API 6D		
Body/Bonnet	WCB	A105	ZG1Cr18Ni9Ti	WCB	A105	CF8M
Ball	20Cr13	20Cr13	1Cr18Ni9Ti	A105/ENP	A105/ENP	A182-F316
Stem	20Cr13	20Cr13	1Cr18Ni9Ti	A182-F6a	A182-F6a	A182-F316
Seat	A105		1Cr18Ni9Ti	A105+ENP		A182-F316
Sealing ring	PTFE		R.PTFE	PTFE		R.PTFE
Packing	PTFE+FPM			ZG1Cr18Ni9Ti		
Gasket	18-8 Flexible Graphite PTFE+FPM					
Bolt	35	35	1Cr18Ni9Ti	A193-B7	A193-B7	A193-B8M
Temperature	-29~150℃	-40~121℃		-29~121℃	-40~121℃	
Media	Water, oil, steam		Nitrc acid	Water, oil, steam		Nitrc acid



PN MPa	DN mm	L		D	D1	D2	b	f	Z-φd
		Series 1	Series 2						
1.6	15	130	102	95	65	45	14	2	4-14
	20	140	117	105	75	55	14		4-14
	25	150	127	115	85	65	14		4-14
	32	165	140	135	100	78	16		4-18
	40	180	165	145	110	85	16	3	4-18
	50	200	178	160	125	100	16		4-18
	65	220	190	180	145	120	18		4-18
	80	250	203	195	160	135	20		8-18
	100	280	305	215	180	155	20		8-18
	125	320	356	245	210	185	22		8-18
	150	360	394	280	240	210	24		8-23
	200	400	457	335	295	265	26		12-23
	250	450		405	355	320	30		12-25
	300	610		460	410	375	30	4	12-25
2.5	15	130	140	95	65	45	16	2	4-14
	20	140	152	105	75	55	16		4-14
	25	150	165	115	85	65	16		4-14
	32	165	180		100	78	18		4-18
	40	180	190	145	110	85	18	3	4-18
	50	200	216	160	125	100	20		4-18
	65	220	241	180	145	120	22		8-18
	80	250	283	195	160	135	22		8-18
	100	280	305	230	190	160	24		8-23
	125	320	381	270	220	188	28		8-25
	150	360	403	300	250	218	30		8-25
	200	400		360	310	278	34		12-25
	250	450		425	370	332	36		12-30
	300	610		485	430	390	40		16-30

PN MPa	DN mm	L	D	D1	D2	D6	b	f	Z-φd
4.0	15	130	95	65	45	40	16	2/4	4-14
	20	140	105	75	55	51	16	2/4	4-14
	25	150	115	85	65	58	16	2/4	4-14
	32	180	135	100	78	66	18	2/4	4-18
	40	200	145	110	85	76	18	3/4	4-18
	50	220	160	125	100	88	20	3/4	4-18
	65	250	180	145	120	110	22	3/4	8-18
	80	280	195	160	135	121	22	3/4	8-18
	100	320	230	190	160	150	24	3/4.5	8-23
	125	400	270	220	188	176	28	3/4.5	8-25
	150	400	300	250	218	204	30	3/4.5	8-25
6.4	200	502	375	320	282	260	38	3/4.5	12-30
	15	140	105	75	55	40	18	2/4	4-14
	20	152	125	90	68	51	20	2/4	4-18
	25	165	135	100	78	58	22	2/4	4-18
	32	178	150	110	82	66	24	2/4	4-23
	40	190	165	125	95	76	24	3/4	4-23
	50	216	175	135	105	88	26	3/4	4-23
	65	241	200	160	130	110	28	3/4	8-23
	80	283	210	178	140	121	30	3/4	8-23
	100	305	250	200	168	150	32	3/4.5	8-25
	125	381	295	240	202	176	36	3/4.5	8-34
	150	403	340	280	240	204	38	3/4.5	12-34



Technical requirements

- 1. Design and manufacture : GB/T12237
- 2. Face to face : GB/T12221
- 3. Flange ends : JB/T79.1, JB/T79.2-94, JB/T82.1
- 4. Testing and checking : GB/T26480

Steel Pipe Flange JB/T82.1

1.0MPa

DN mm	L		d1		D	D1	D2	f	b	Z-φd	Bolts
	RF	BW	Full bore	Reducing							
15	108	140	15	-	95	65	45	2	12	4-14	4-M12
20	117	152	20	-	105	75	55		14	4-14	4-M12
25	127	165	25	-	115	85	65		14	4-14	4-M12
32	140	178	32	-	135	100	78		16	4-18	4-M16
40	165	190	40	-	145	110	85	3	16	4-18	4-M16
50	178	216	50	-	160	125	100		16	4-18	4-M16
65	190	241	65	-	180	145	120		18	4-18	4-M16
80	203	283	80	65	195	160	135		20	4-18	4-M16
100	229	305	100	80	215	180	155		20	8-18	8-M16
125	356	381	125	100	245	210	185		22	8-18	8-M16
150	394	457	150	125	280	240	210		22	8-23	8-M20
200	457	521	200	150	335	295	265	4	22	8-23	12-M20
250	533	559	250	200	390	350	320		24	12-23	12-M22
300	610	635	300	250	440	400	368		26	12-23	12-M22
350	686	762	350	300	500	460	428		26	12-23	16-M22
400	762	838	400	350	565	515	482		26	12-25	16-M24
450	864	914	450	350	615	565	532		26	12-25	20-M24
500	914	991	500	400	670	620	585		28	12-25	20-M24

GB BALL VALVE

Steel Pipe Flange JB/T82.1

1.6MPa

DN mm	L		d1		D	D1	D2	f	b	Z-φd	Bolts
	RF	BW	Full bore	Reducing							
15	108	140	15	-	95	65	45	2	14	4-14	4-M12
20	117	152	20	-	105	75	55		14	4-14	4-M12
25	127	165	25	-	115	85	65		14	4-14	4-M12
32	140	178	32	-	135	100	78		16	4-18	4-M16
40	165	190	40	-	145	110	85	3	16	4-18	4-M16
50	178	216	50	-	160	125	100		16	4-18	4-M16
65	190	241	65	-	180	145	120		18	4-18	4-M16
80	203	283	80	65	195	160	135		20	8-18	8-M16
100	229	305	100	80	215	180	155		20	8-18	8-M16
125	356	381	125	100	245	210	185		22	8-18	8-M16
150	394	457	150	125	280	240	210		24	8-23	8-M20
200	457	521	200	150	335	295	265		26	12-23	12-M20
250	533	559	250	200	405	355	320	4	30	12-25	12-M22
300	610	635	300	250	460	410	375		30	12-25	12-M22
350	686	762	350	300	520	470	435		34	16-25	16-M22
400	762	838	400	350	580	525	485		36	16-30	16-M27
450	864	914	450	350	640	585	545		40	20-30	20-M27
500	914	991	500	400	705	650	608		44	20-34	20-M30
600	1067	1143	600	500	840	770	718		48	20-41	20-M36
700	1245	1346	700	600	910	840	788	5	50	24-41	20-M36
800					1020	950	898		52	24-41	20-M36

GB BALL VALVE

Steel Pipe Flange JB/T79.1

2.5MPa

DN mm	L		d1		D	D1	D2	f	b	Z-φd	Bolts
	RF	BW	Full bore	Reducing							
15	140	140	15	-	95	65	45	2	16	4-14	4-M12
20	152	152	20	-	105	75	55		16	4-14	4-M12
25	165	165	25	-	115	85	65		16	4-14	4-M12
32	178	178	32	-	135	100	78		18	4-18	4-M16
40	190	190	40	-	145	110	85	3	18	4-18	4-M16
50	216	216	50	-	160	125	100		20	4-18	4-M16
65	241	241	65	-	180	145	120		22	8-18	8-M16
80	283	283	80	65	195	160	135		22	8-18	8-M16
100	305	305	100	80	230	190	160		24	8-23	8-M20
125	381	381	125	100	270	220	188		28	8-25	8-M22
150	403	457	150	125	300	250	218		30	8-25	8-M22
200	502	521	200	150	360	310	278		34	12-25	12-M22
250	568	559	250	200	425	370	332	4	36	12-30	12-M27
300	648	638	300	250	485	430	390		40	16-30	16-M27
350	762	762	350	300	550	490	448		44	16-34	16-M30
400	838	838	400	350	610	550	505		48	16-34	16-M30
450	914	914	450	400	660	600	555		50	20-34	20-M30
500	991	991	500	450	730	660	610		52	20-41	20-M36
600	1143	1143	600	500	840	770	718		56	20-41	20-M36
700	1346	1346	700	600	955	875	815	5	60	24-48	24-M42
800					1070	990	930		64	24-48	24-M42

GB BALL VALVE

Steel Pipe Flange JB/T79.2

4.0MPa

DN mm	L		d1		D	D1	D2	D6	f	b	Z-φd	Bolts
	RF	BW	Full bore	Reducing								
15	140	140	15	-	95	65	45	40	2/4	16	4-14	4-M12
20	152	152	20	-	105	75	55	51		16	4-14	4-M12
25	165	165	25	-	115	85	65	58		16	4-14	4-M12
32	178	178	32	-	135	100	78	66		18	4-18	4-M16
40	190	190	40	-	145	110	85	76	3/4	18	4-18	4-M16
50	216	216	50	-	160	125	100	88		20	4-18	4-M16
65	241	241	65	-	180	145	120	110		22	8-18	8-M16
80	283	283	80	65	195	160	135	121		22	8-18	8-M16
100	305	305	100	80	230	190	160	150	3/4.5	24	8-23	8-M20
125	381	381	125	100	270	220	188	176		28	8-25	8-M22
150	403	457	150	125	300	250	218	204		30	8-25	8-M22
200	502	521	200	150	375	320	282	260	3/4.5	38	12-30	12-M27
250	568	559	250	200	445	385	345	313		42	12-34	12-M30
300	648	638	300	250	510	450	408	364	4/4.5	46	16-34	16-M30
350	762	762	350	300	570	510	465	422	4/5	52	16-34	16-M30
400	838	838	400	350	655	585	535	474		58	16-41	16-M30
450	914	914	450	400	680	610	560	524		60	20-41	20-M36
500	991	991	500	450	755	670	612	576		62	20-48	20-M42
600	1143	1143	600	500	890	795	730	678	5/6	62	20-54	20-M48
700	1346	1346	700	600	955	900	835	768		68	24-54	24-M48
800					1135	1030	960	876		76	24-58	24-M52

GB BALL VALVE

Steel Pipe Flange JB/T79.2

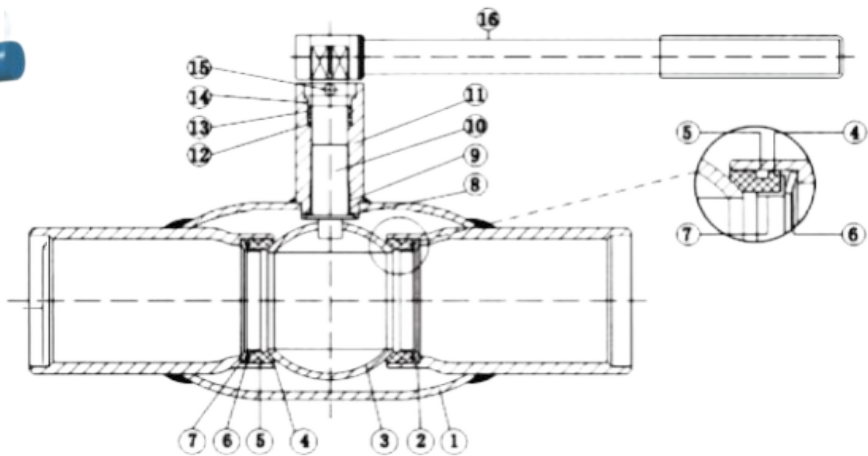
6.4MPa

DN mm	L		d1		D	D1	D2	D6	f	b	Z-φd	Bolts
	RF	BW	Full bore	Reducing								
15	140	140	15	-	95	65	45	40	2/4	16	4-14	4-M12
20	152	152	20	-	105	75	55	51		16	4-14	4-M12
25	165	165	25	-	115	85	65	58		16	4-14	4-M12
32	178	178	32	-	135	100	78	66		18	4-18	4-M16
40	190	190	40	-	145	110	85	76	3/4	18	4-18	4-M16
50	216	216	50	-	160	125	100	88		20	4-18	4-M16
65	241	241	65	-	180	145	120	110		22	8-18	8-M16
80	283	283	80	65	195	160	135	121		22	8-18	8-M16
100	305	305	100	80	230	190	160	150	3/4.5	24	8-23	8-M20
125	381	381	125	100	270	220	188	176		28	8-25	8-M22
150	403	457	150	125	300	250	218	204		30	8-25	8-M22
200	502	521	200	150	375	320	282	260	3/4.5	38	12-30	12-M27
250	568	559	250	200	445	385	345	313		42	12-34	12-M30
300	648	638	300	250	510	450	408	364	4/4.5	46	16-34	16-M30
350	762	762	350	300	570	510	465	422	4/5	52	16-34	16-M30
400	838	838	400	350	655	585	535	474		58	16-41	16-M30
450	914	914	450	400	680	610	560	524		60	20-41	20-M36
500	991	991	500	450	755	670	612	576		62	20-48	20-M42
600	1143	1143	600	500	890	795	730	678	5/6	62	20-54	20-M48
700	1346	1346	700	600	955	900	835	768		68	24-54	24-M48
800					1135	1030	960	876		76	24-58	24-M52

Steel Pipe Flange JB/T79.2

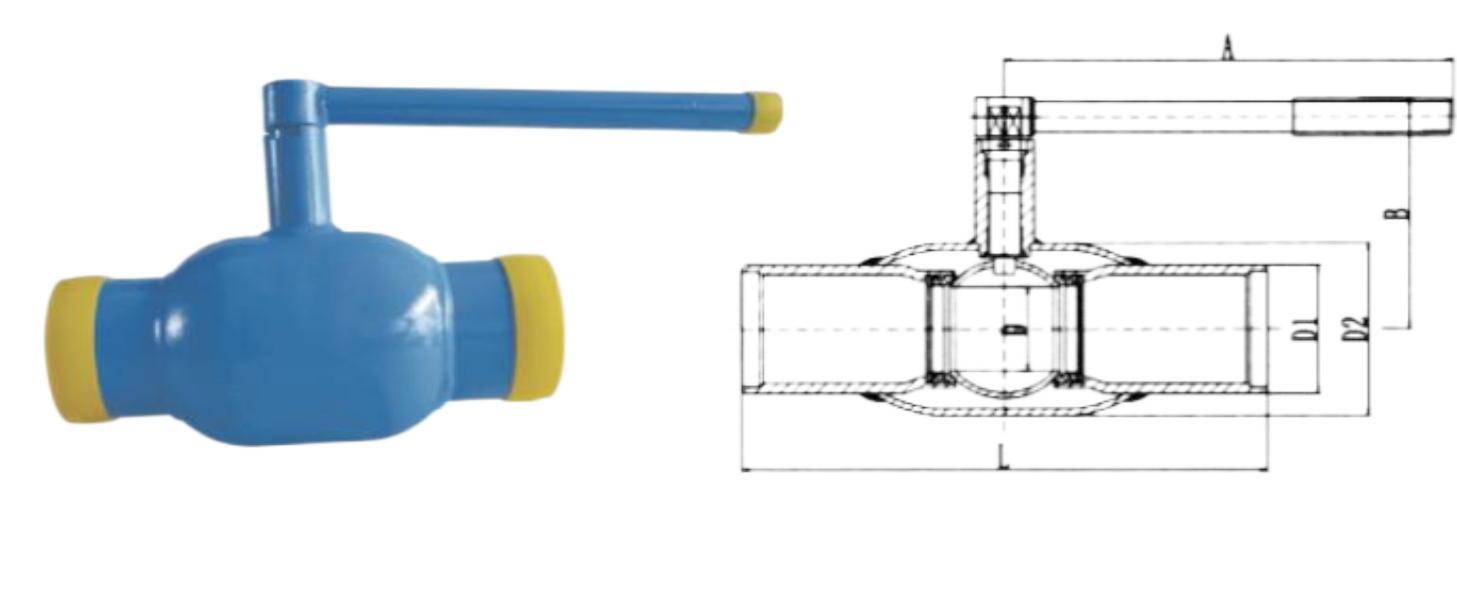
10.0MPa

DN mm	L		d1		D	D1	D2	D6	f/f1	b	Z-φd	Bolts
	RF	BW	Full bore	Reducing								
15	165	165	15	-	105	75	55	40	2/4	16	4-14	4-M12
20	190	190	20	-	125	90	68	51		16	4-18	4-M16
25	216	216	25	-	135	100	78	58		16	4-18	4-M16
32	229	229	32	-	150	110	82	66		18	4-23	4-M20
40	241	241	40	-	165	125	92	76	3/4	18	4-28	4-M20
50	292	292	50	40	195	145	112	88		20	8-25	4-M22
65	330	330	65	50	220	170	138	110		22	8-25	8-M22
80	356	356	80	65	230	180	148	121		22	8-30	8-M22
100	432	432	100	80	265	210	172	150	3/4.5	24	8-25	8-M27
125	508	508	125	100	310	250	210	176		28	8-34	8-M30
150	559	559	150	125	350	290	250	204		30	12-34	12-M30
200	660	660	200	150	430	360	312	260	3/4.5	38	12-41	12-M36
250	787	787	250	200	500	430	382	313		42	12-41	12-M36
300	838	838	300	250	585	500	442	364	4/4.5	46	16-48	16-M422
350	889	889	350	300	655	560	498	422	4/5	52	16-54	16-M48
400	991	991	400	350	715	620	558	474		58	16-54	16-M48



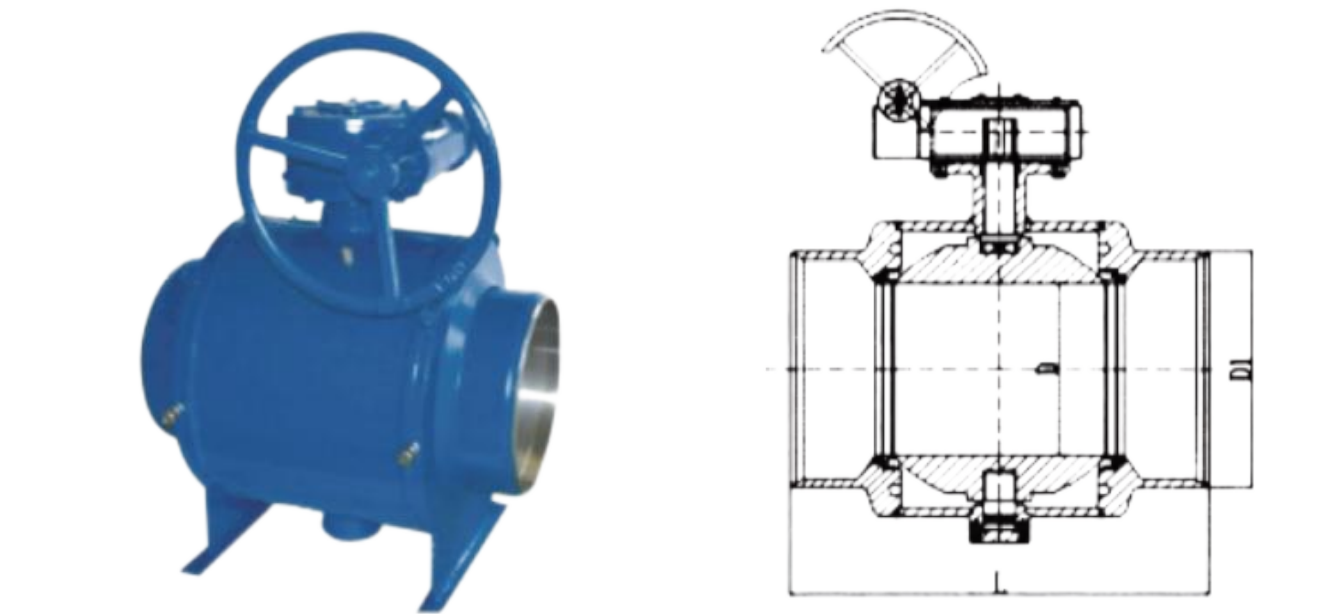
Parts name	Parts material
1-Body	Steel ST37.8
2-End piece	Steel ST37.8
3-Ball	SS304
4-Seat	PTFE+C
5-O-ring	VITON
6-Disc spring	Inconel
7-Metal pad	SS304
8-Sealing gasket	PTFE+C
9-Sliding bearing	PTFE+SPCB
10-Stem	2Cr13
11-Stem bushing	ST37.8
12-Sealing gasket	2PTFE+C
13-O-ring	VITON
14-Gland	A276-410
15-Locating pin	2Cr13
16-Handle	ST37.8

Standard all welded ball valve



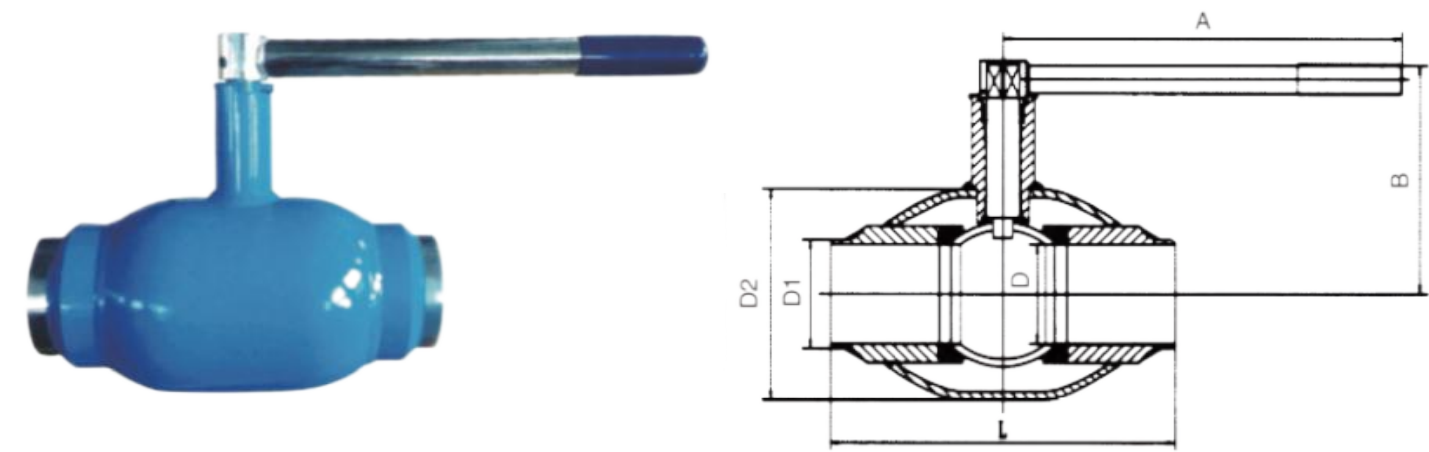
DN mm	A	B	L	D	D1	D2
15	129	64	210	15	22	42
20	129	64	230	15	28	42
25	159	76	230	20	34	48
32	159	85	260	25	42	60
40	230	95	300	32	48	76
50	230	100	300	40	57	89
65	300	159	300	50	76	114
80	300	170	300	65	89	140
100	450	192	325	80	108	185
125	450	208	325	100	133	216
150	450	241	350	125	159	219

Standard turbine all welded ball valve



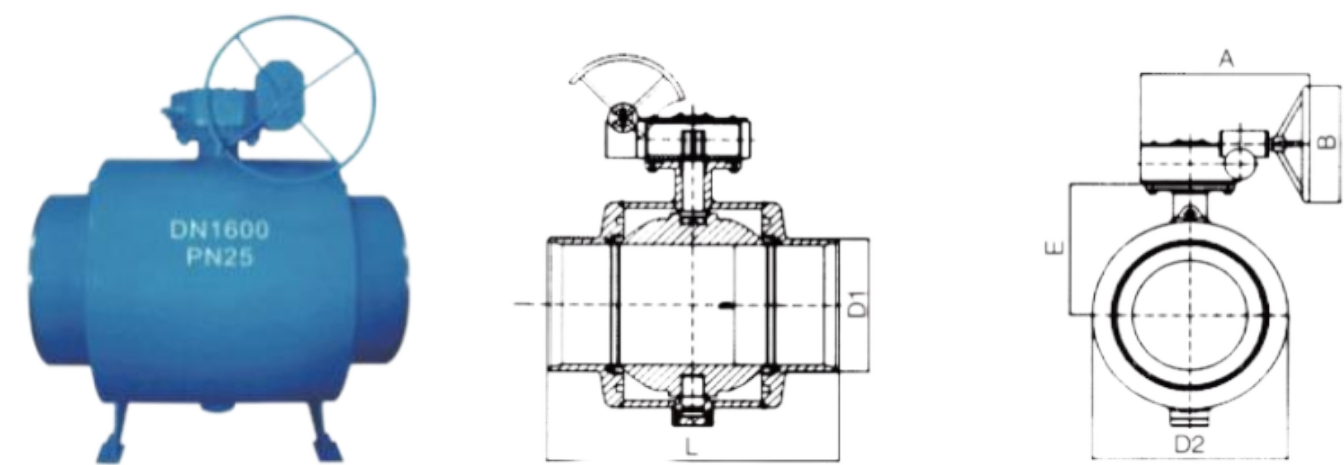
DN mm	A	B	L	D	D1	D2	E
200	243	400	400	150	219	267	315
250	252	500	530	200	274	356	346
300	236	500	560	250	324	457	402
350	331	600	650	300	377	508	491
400	331	600	760	337	426	559	479
450	331	600	842	337	480	559	479
500	360	700	910	387	530	680	540
600	413	800	1065	489	630	812	662
700	433	900	1346	591	720	1016	790
800	433	900	1524	686	820	1095	860
900	433	900	1727	781	920	1237	913
1000	433	900	1900	874	1020	1385	965
1100	550	900	2000	976	1120	1600	970
1200	550	900	2100	1020	1220	1700	975
1400	550	900	2300	1262	1420	2100	990

Full bore all welded ball valve



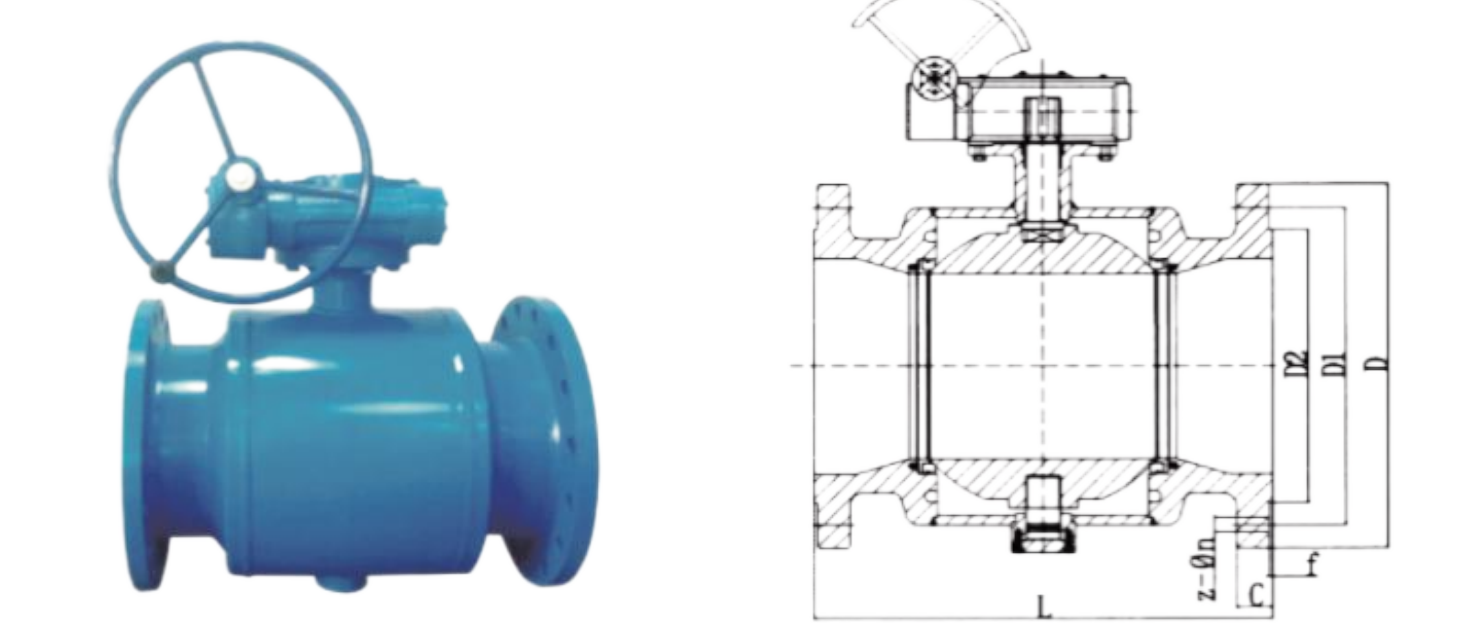
DN mm	A	B	L	D	D1	D2
15	129	90	210	15	22	43
20	159	103	230	20	28	48
25	159	107	260	25	34	60
32	230	120	260	32	42	76
40	230	126	300	40	48	89
50	300	177	300	50	57	114
65	300	186	300	65	76	140
80	400	210	300	80	89	185
100	400	214	325	100	108	216
125	450	220	350	125	133	219
150	450	280	400	150	159	355

Full bore turbine all welded ball valve



DN mm	A	B	L	D	D1	D2	E
200	252	500	530	200	219	356	345
250	236	500	550	250	274	457	402
300	331	600	650	300	324	508	491
350	331	600	762	337	377	559	479
400	360	700	840	387	426	680	540
500	413	800	1010	489	530	813	662
600	433	900	1140	591	630	1016	790
700	433	900	1346	686	720	1130	860
800	433	900	1524	781	820	1245	913
900	433	900	1727	874	920	1385	965
1000	550	900	1900	976	1020	1576	970
1100	550	900	2000	1020	1120	1700	975
1200	550	900	2100	1166	1220	2100	980
1400	550	900	2300	1360	1420	2281	990

Flange all welded ball valve



DN mm	L	D	D1	D2	φn	Z	f	C
15	130	95	22	45	14	4	2	16
20	150	105	28	55	14	4	2	16
25	160	115	34	65	14	4	2	16
32	180	135	42	78	18	4	2	18
40	200	145	48	85	18	4	3	18
50	230	160	57	100	18	4	3	20
65	270	180	76	120	18	8	3	22
80	280	195	89	135	18	8	3	22
100	300	230	108	160	23	8	3	24
125	325	270	133	188	25	8	3	28
150	350	300	159	218	25	8	3	30
200	400	360	219	278	25	12	3	34
250	530	426	274	332	30	12	3	36
300	550	485	324	390	30	16	4	40
350	650	550	377	448	34	16	4	44
400	760	610	426	505	34	16	4	48
500	914	730	530	610	41	20	4	52
600	1067	840	630	718	41	20	5	56
700	1346	955	720	815	48	24	5	60
800	1524	1070	820	930	48	24	5	64
900	1727	1180	920	1025	54	28	5	66
1000	1900	1305	1020	1140	58	38	5	68
1200	2100	1525	1220	1350	58	32	5	72
1400	2300	1420	1420	1560	65	36	5	78

Main features

- Full bore, floating/trunnion mounted ball valve
- Middle flange bolt connection
- Blowout proof stem
- Fire durable and anti static safety
- API structure improvement
- Opening and closing positioning mechanism
- Turbine operation option
- Standard flange ends



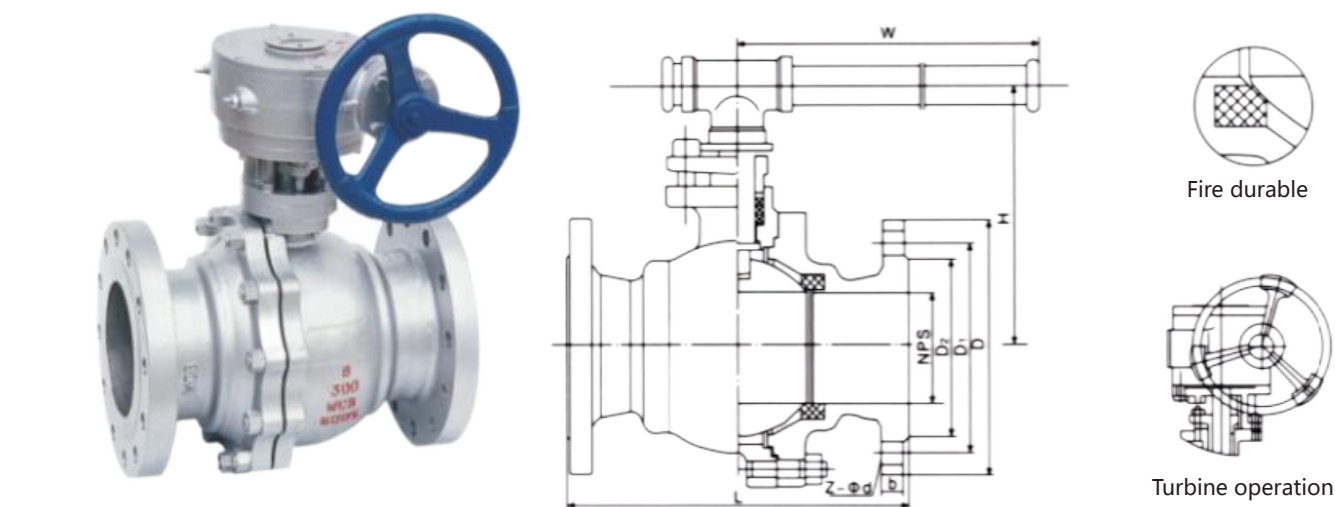
Product specification

Product specification	Design	Face to Face	Flange Ends	Test & Check	Marking	Supply
	API 608	ASME B16.10	ASME B16.5	API 598	MSS SP-25	API 608
	API 6D	API 6D	ASME B16.5	API 6D	API 6D	API 6D

Main parts material

Parts name	Parts material						
Body/Bonnet	A216-WCB	A105	A352-LCB	A351-CF8	A351-CF8M	A351-CF3	A351-CF3M
Ball	A182-F304	A182-F304	A182-F304	A182-F304	A182-F316	A182-F304L	A182-F316L
Stem	A182-F6a	A182-F6a	A182-F6a	A182-F304	A182-F316	A182-F304L	A182-F316L
Seat	A105			A182-F304	A182-F316	A182-F304L	A182-F316L
Sealing ring	PTFE			E.PTFE			
Packing	PTFE+FPM			PTFE+FPM			
Gasket	18-8 Flexible Graphite PTFE+FPM						
Bolt	A193-B8			A193-B8M			
Temperature	-29~121℃	-40~121℃		-40~121℃		-40~121℃	
Media	Water, oil, steam			Nitrc acid		Acetic acid	

ANSI TURBINE BALL VALVE



Class 150LB

Model	NPS in	DN mm	L	D	D1	D2	b	Z-φd	H	W	Weight Kg
Q41F-150LB Q41F-150LBP	1/2"	15	108	89	60.3	34.9	11.2	4-15.8	55	130	2.3
	3/4"	20	117	98	69.8	42.9	12.7	4-15.8	55	130	3
	1"	25	127	108	79.4	50.8	14.3	4-15.8	70	160	4.5
	1-1/4"	32	140	117	88.9	63.5	15.7	4-15.8	75	160	5.5
	1-1/2"	40	165	127	98.4	73	17.5	4-15.8	90	200	7
Q341F-150LB Q341F-150LBP	2"	50	178	152	120.6	92.1	19.1	4-19	104	350	9.5
	2-1/2"	65	191	178	139.7	104.8	22.3	4-19	153	400	15
Q641F-150LB Q641F-150LBP	3"	80	203	190	152.4	127	23.9	4-19	187	500	19
	4"	100	229	229	190.5	157.2	23.9	8-19	206	500	33
Q941F-150LB Q941F-150LBP	5"	125	355	229	215.9	185.7	23.9	8-22.2	244	600	58
	6"	150	394	279	241.3	215.9	25.4	8-22.2	252	600	93
	8"	200	457	343	298.4	269.9	28.5	8-22.2	283	800	160
	10"	250	533	406	362	323.8	30.2	12-25.4	345	800	200

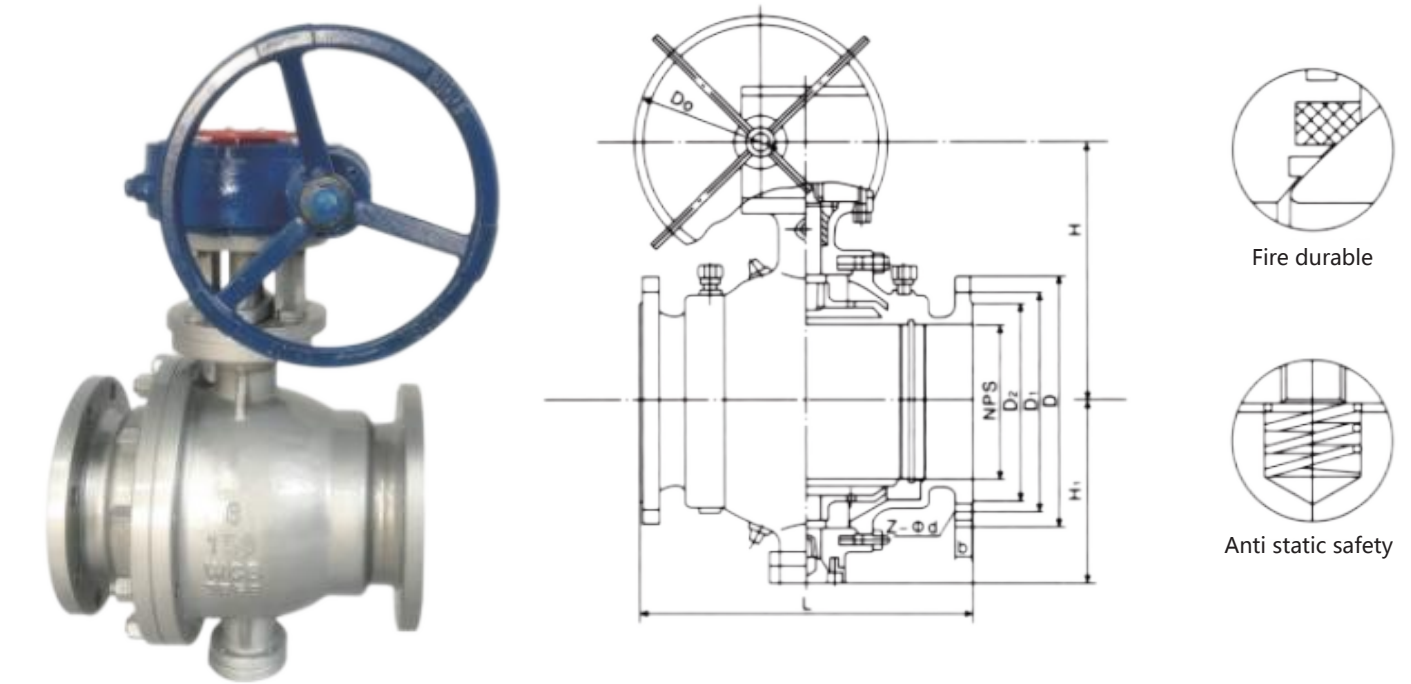
ANSI BTURBINE ALL VALVE

Class 300LB

Model	NPS in	DN mm	L	D	D1	D2	b	Z-φd	H	W	Weight Kg
Q41F-300LB Q41F-300LBP	1/2"	15	140	95	66.7	34.9	14.2	4-15.8	55	130	2.5
	3/4"	20	152	117	82.6	42.9	15.7	4-19	55	130	3.5
	1"	25	165	124	88.9	50.8	17.5	4-19	70	160	5.5
	1-1/4"	32	178	133	98.4	63.5	19	4-19	75	160	8
	1-1/2"	40	190	156	114.3	73	20.6	8-19	90	200	10.5
Q341F-300LB Q341F-300LBP	2"	50	216	165	127	92.1	22.4	8-22.2	104	350	14.5
	2-1/2"	65	241	190	149.2	104.8	25.4	8-22.2	153	400	23.5
Q641F-300LB Q641F-300LBP	3"	80	283	210	168.3	127	28.4	8-22.2	187	500	30
	4"	100	305	254	200	157.2	31.8	8-22.2	206	500	55
Q941F-300LB Q941F-300LBP	5"	125	381	279	235	185.7	35	12-22.2	244	600	81
	6"	150	403	318	269.9	215.9	36.6	12-22.2	252	600	118
	8"	200	502	381	330.2	269.9	41.1	12-25.4	283	800	200
	10"	250	568	444	387.4	323.8	47.6	16-28.5	345	800	250

Class 600LB

Model	NPS in	DN mm	L	D	D1	D2	b	Z-φd	H	W	Weight Kg
Q41F-600LB Q41F-600LBP	1/2"	15	165	95	66.7	34.9	14.2	4-15.8	70	-	3.8
	3/4"	20	190	117	82.6	42.9	15.7	4-19	70	-	5.1
	1"	25	216	124	88.9	50.8	17.5	4-19	75	-	7.2
	1-1/4"	32	229	133	98.4	63.5	19	4-19	80	-	10.5
	1-1/2"	40	241	156	114.3	73	20.6	4-22.2	98	-	17.6
Q341F-600LB Q341F-600LBP	2"	50	292	165	127	92.1	22.4	8-19	155	400	20
	2-1/2"	65	330	190	149.2	104.8	25.4	8-22.2	205	400	32
Q641F-600LB Q641F-600LBP	3"	80	356	210	168.3	127	28.4	8-22.2	238	600	41
	4"	100	632	273	215.9	157.2	31.8	8-25.4	276	600	70
Q941F-600LB Q941F-600LBP	5"	125	508	330	266.7	185.7	35	8-28.5	305	600	110
	6"	150	559	356	292.1	215.9	36.6	12-28.5	322	800	150
	8"	200	660	419	349.2	269.9	41.1	12-31.8	356	800	200
	10"	250	787	508	431.8	323.8	47.6	16-35	400	800	280



Class 150LB

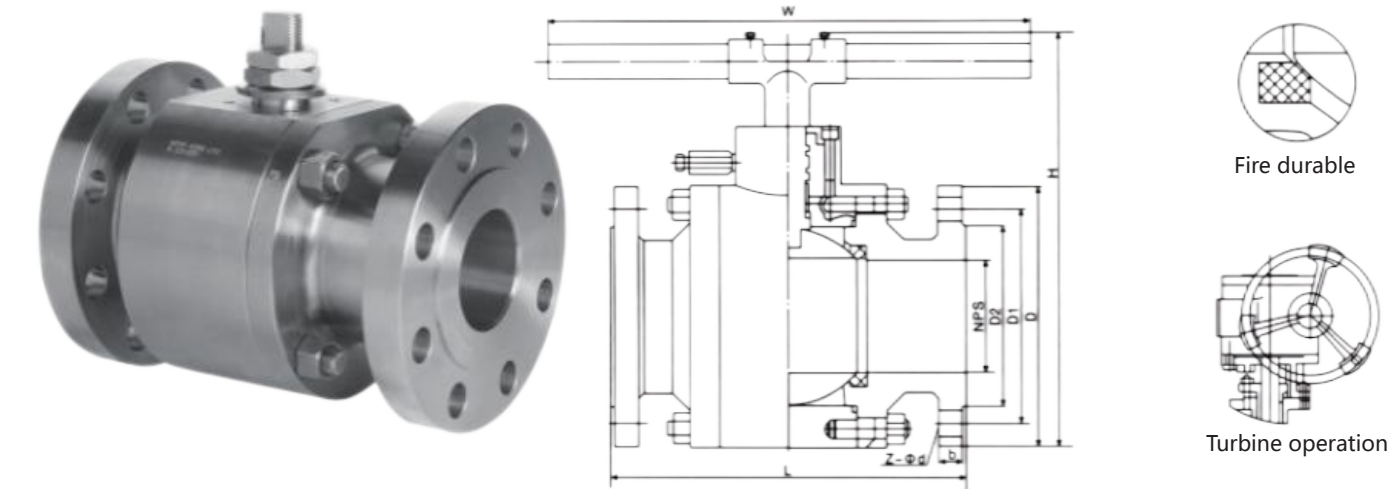
Model	NPS in	DN mm	L	D	D1	D2	b	Z-φd	H	H1	D0	Weight Kg
Q47F-150LB Q47F-150LBP	2"	50	178	152	120.6	92.1	19.1	4-19	177	120	-	15
	2-1/2"	65	191	178	139.7	104.8	22.3	4-19	190	140	-	19
	3"	80	203	190	152.4	127	23.9	4-19	210	150	-	27
	4"	100	229	229	190.5	157.2	23.9	8-19	235	172	-	38
	5"	125	356	229	215.9	185.7	23.9	8-22.2	350	195	-	58
Q347F-150LB Q347F-150LBP	6"	150	394	279	241.3	215.9	25.4	8-22.2	530	250	-	81
Q647F-150LB Q647F-150LBP	8"	200	457	343	298.4	269.9	28.5	8-22.2	620	290	600	140
Q947F-150LB Q947F-150LBP	10"	250	533	406	362	323.8	30.2	12-25.4	650	320	600	160
	12"	300	610	483	431.8	381	31.8	12-25.4	780	360	600	205
	14"	350	686	533	476.2	412.8	35	12-28.5	790	395	800	260
	16"	400	762	597	539.8	469.9	36.6	16-28.5	920	435	800	390
	18"	450	864	635	577	533.4	39.7	16-31.8	970	490	800	510
	20"	500	914	689	635	584.2	42.9	20-31.8	1100	530	800	750
	24"	600	1067	813	749.3	692.2	47.7	20-35	1150	590	800	1200

Class 300LB

Model	NPS in	DN mm	L	D	D1	D2	b	Z-φd	H	H1	D0	Weight Kg
Q47F-300LB Q47F-300LBP	2"	50	216	165	127	92.1	22.4	8-22.2	177	120	-	20
	2-1/2"	65	241	190	149.2	104.8	25.4	8-22.2	190	140	-	25
	3"	80	283	210	168.3	127	28.4	8-22.2	210	150	-	30
	4"	100	305	254	200	157.2	31.8	8-22.2	235	172	-	40
	5"	125	381	279	235	185.7	35	12-22.25	350	195	-	65
Q347F-300LB Q347F-300LBP	6"	150	403	318	269.9	215.9	36.6	12-22.2	530	250	-	85
Q647F-300LB Q647F-300LBP	8"	200	502	381	330.2	269.9	41.1	12-25.4	620	290	-	100
Q947F-300LB Q947F-300LBP	10"	250	568	444	387.4	323.8	47.6	16-28.5	650	320	600	182
	12"	300	648	521	450.8	381	50.8	16-31.8	780	360	600	212
	14"	350	762	584	514.4	412.8	53.8	20-31.6	790	395	600	288
	16"	400	838	648	571.5	469.9	57.2	20-35	920	435	800	468
	18"	450	914	713	628.6	533.4	60.5	24-35	970	490	800	587
	20"	500	991	775	685.8	584.2	63.5	24-35	1100	530	800	863
	24"	600	1143	914	812.8	692.2	69.9	24-41.1	1150	590	800	1396

Class 600LB

Model	NPS in	DN mm	L	D	D1	D2	b	Z-φd	H	H1	D0	Weight Kg
Q47F-600LB Q47F-600LBP	2"	50	292	165	127	92.1	25.4	8-19	177	120	-	26
	2-1/2"	65	330	190	149.2	104.8	28.4	8-22.2	190	140	-	36
	3"	80	356	210	168.3	127	31.85	8-22.2	210	150	-	56
	4"	100	432	273	215.9	157.2	38.14	8-25.4	235	172	-	81
	5"	125	508	330	266.7	185.7	44.5	8-28.5	350	195	-	120
Q347F-600LB Q347F-600LBP	6"	150	559	356	292.1	215.9	47.8	12-28.5	530	250	-	142
Q647F-600LB Q647F-600LBP	8"	200	660	419	349.2	269.9	55.6	12-31.8	620	290	-	287
Q947F-600LB Q947F-600LBP	10"	250	787	508	431.8	323.8	63.5	16-35	650	320	600	540
	12"	300	838	559	489	381	66.5	20-35	780	360	600	780
	14"	350	889	603	527	412.8	69.9	20-38.1	790	395	600	1000
	16"	400	991	686	603.2	469.9	76.2	20-41.1	920	435	800	1300
	18"	450	1092	743	654	533.4	82.6	20-44.5	970	490	800	1700
	20"	500	1194	813	723.9	584.2	88.9	24-44.5	1100	530	800	2100
	24"	600	1397	940	838.2	692.2	101.6	24-50.8	1150	590	800	3400



Class 150LB

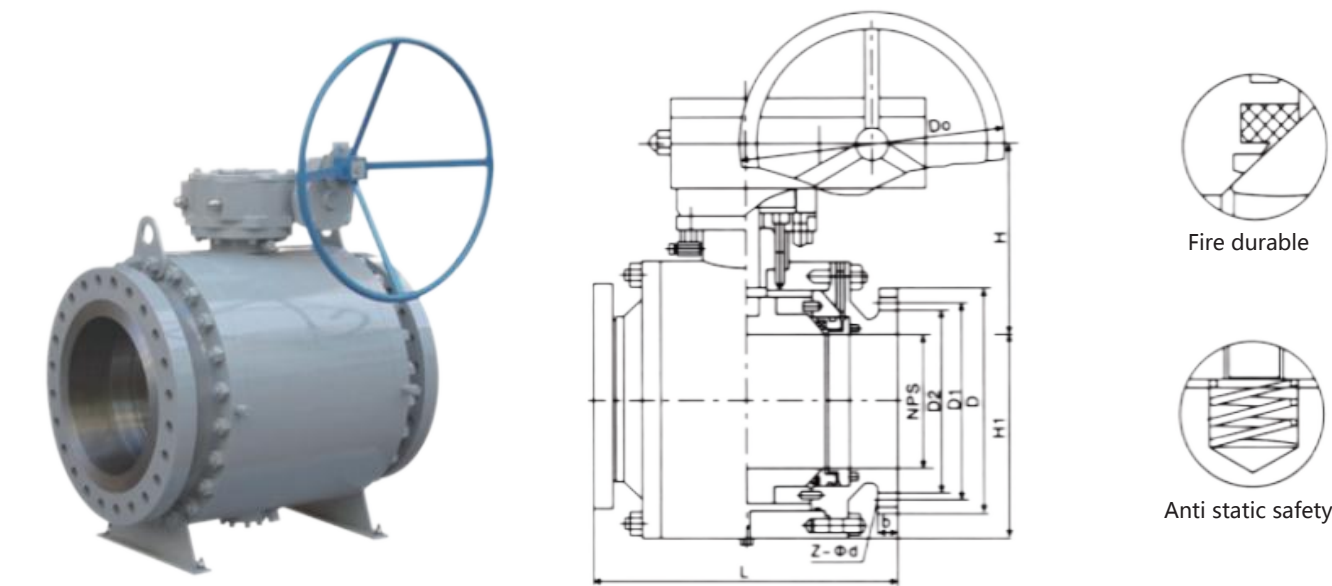
Model	NPS in	DN mm	L	D	D1	D2	b	Z-φd	H	W	Weight Kg
CQ41F-150LB CQ41F-150LBP	1/2"	15	108	89	60.3	34.9	11.2	4-15.8	59	130	2.3
	3/4"	20	117	98	69.8	42.9	12.7	4-15.8	63	130	3
	1"	25	127	108	79.4	50.8	14.3	4-15.8	75	160	4.5
CQ341F-150LB CQ341F-150LBP	1-1/4"	32	140	117	88.9	63.58	15.7	4-15.8	95	160	7
	1-1/2"	40	165	127	98.4	73	17.5	4-15.8	107	160	9.5
	2"	50	178	152	120.6	92.1	19.1	4-19	155	200	28
CQ641F-150LB CQ641F-150LBP	2-1/2"	65	191	178	139.7	104.8	22.36	4-19	164	200	39
	3"	80	203	190	152.4	127	23.9	4-19	182	200	50
	4"	100	229	229	190.5	157.2	23.9	8-19	226	300	70
CQ941F-150LB CQ941F-150LBP	5"	125	355	229	215.9	185.7	23.9	8-22.2	230	300	150
	6"	150	394	279	241.3	215.9	25.4	8-22.2	250	500	210
	8"	200	457	343	298.4	269.9	28.5	8-22.2	280	500	280
	10"	250	533	406	362	323.8	30.2	12-25.4	320	600	400

Class 300LB

Model	NPS in	DN mm	L	D	D1	D2	b	Z-φd	H	W	Weight Kg
CQ41F-300LB CQ41F-300LBP	1/2"	15	140	95	66.7	34.9	14.2	4-15.8	59	130	2.5
	3/4"	20	152	117	82.6	42.9	15.7	4-19	63	130	3.5
	1"	25	165	124	88.9	50.8	17.5	4-19	75	160	5.5
CQ341F-300LB CQ341F-300LBP	1-1/4"	32	178	133	98.4	63.5	19	4-19	95	160	10.5
	1-1/2"	40	190	156	114.3	73	20.6	8-19	107	160	14.5
	2"	50	216	165	127	92.1	22.4	8-22.2	155	200	28
CQ641F-300LB CQ641F-300LBP	2-1/2"	65	241	190	149.2	104.8	25.4	8-22.2	164	200	39
	3"	80	283	210	168.3	127	28.4	8-22.2	182	200	50
	4"	100	305	254	200	157.2	31.8	8-22.2	226	300	70
CQ941F-300LB CQ941F-300LBP	5"	125	381	279	235	185.7	35	12-22.2	230	300	150
	6"	150	403	318	269.9	215.9	36.6	12-22.2	250	500	210
	8"	200	502	381	330.2	269.9	41.1	12-25.4	280	500	250
	10"	250	568	444	387.4	323.8	47.6	16-28.5	320	600	400

Class 600LB

Model	NPS in	DN mm	L	D	D1	D2	b	Z-φd	H	W	Weight Kg
CQ41F-600LB CQ41F-600LBP	1/2"	15	165	95	66.7	34.9	14.2	4-15.8	59	130	7.5
	3/4"	20	190	117	82.6	42.9	15.7	4-19	63	130	10.5
	1"	25	216	124	88.9	50.8	17.5	4-19	75	160	14.5
CQ341F-600LB Q341F-600LBP	1-1/4"	32	229	133	98.4	63.5	20.6	4-19	95	160	18.5
	1-1/2"	40	241	156	114.3	73	22.4	4-22.2	107	200	25
	2"	50	292	165	127	92.1	25.4	8-19	162	200	30
CQ641F-600LB CQ641F-600LBP	2-1/2"	65	330	190	149.2	104.8	28.4	8-22.2	205	300	45
	3"	80	356	210	168.3	127	31.8	8-22.2	226	300	60
	4"	100	632	273	215.9	157.2	38.1	8-25.4	240	500	115
CQ941F-600LB CQ941F-600LBP	5"	125	508	330	266.7	185.7	44.5	8-28.5	305	500	200
	6"	150	559	356	292.1	215.9	47.8	12-28.5	353	600	250
	8"	200	660	419	349.2	269.9	55.6	12-31.8	460	600	330
	10"	250	787	508	431.8	323.8	63.5	16-35	550	800	480



Class 150LB

Model	NPS in	DN mm	L	D	D1	D2	b	Z-φd	H	H1	D0	Weight Kg
CQ47F-150LB Q47F-150LBP	2"	50	178	152	120.6	92.1	19.1	4-19	160	85	-	28
	2-1/2"	65	191	178	139.7	104.8	22.3	4-19	170	95	-	32
	3"	80	203	190	152.4	127	23.9	4-19	200	110	-	44
	4"	100	229	229	190.5	157.2	23.9	8-19	210	120	-	86
CQ347F-150LB CQ347F-150LBP	5"	125	356	229	215.9	185.7	23.9	8-22.2	350	175	-	155
	6"	150	394	279	241.3	215.9	25.4	8-22.2	530	190	-	203
CQ647F-150LB CQ647F-150LBP	8"	200	457	343	298.4	269.9	28.5	8-22.2	575	230	600	273
	10"	250	533	406	362	323.8	30.2	12-25.4	585	260	600	450
CQ947F-150LB CQ947F-150LBP	12"	300	610	483	431.8	381	31.8	12-25.4	730	300	600	583
	14"	350	686	533	476.2	412.8	35	12-28.5	860	350	800	750
	16"	400	762	597	539.8	469.9	36.6	16-28.5	935	395	800	1190
	18"	450	864	635	577	533.4	39.7	16-31.8	975	440	800	2100
	20"	500	914	689	635	584.2	42.9	20-31.8	1060	480	800	3100
	24"	600	1067	813	749.3	692.2	47.7	20-35	1170	591	800	3980

Class 300LB

Model	NPS in	DN mm	L	D	D1	D2	b	Z-φd	H	H1	D0	Weight Kg
CQ47F-300LB CQ47F-300LBP	2"	50	216	165	127	92.1	22.4	8-22.2	160	85	-	30
	2-1/2"	65	241	190	149.2	104.8	25.4	8-22.2	170	95	-	40
	3"	80	283	210	168.3	127	28.4	8-22.2	200	110	-	52
	4"	100	305	254	200	157.2	31.8	8-22.2	210	120	-	97
CQ347F-300LB CQ347F-300LBP	5"	125	381	279	235	185.7	35	12-22.25	350	175	600	158
	6"	150	403	318	269.9	215.9	36.6	12-22.2	530	190	600	204
CQ647F-300LB CQ647F-300LBP	8"	200	502	381	330.2	269.9	41.1	12-25.4	575	230	600	322
	10"	250	568	444	387.4	323.8	47.6	16-28.5	585	260	600	535
CQ947F-300LB CQ947F-300LBP	12"	300	648	521	450.8	381	50.8	16-31.8	730	300	800	775
	14"	350	762	584	514.4	412.8	53.8	20-31.6	860	350	800	1210
	16"	400	838	648	571.5	469.9	57.2	20-35	935	395	800	2300
	18"	450	914	713	628.6	533.4	60.5	24-35	975	440	800	3400
	20"	500	991	775	685.8	584.2	63.5	24-35	1060	480	800	4208
	24"	600	1143	914	812.8	692.2	69.9	24-41.1	1170	591	800	5080

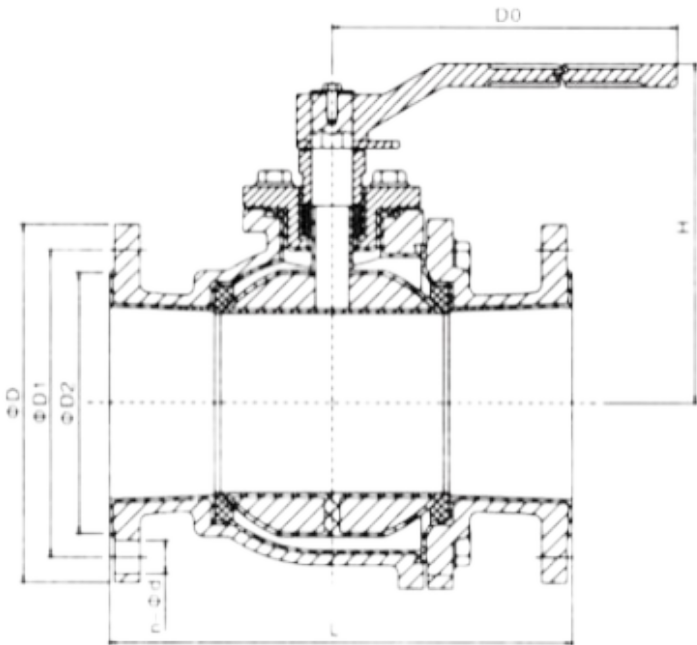
Class 600LB

Model	NPS in	DN mm	L	D	D1	D2	b	Z-φd	H	H1	D0	Weight Kg
CQ47F-600LB CQ47F-600LBP	2"	50	292	165	127	92.1	25.4	8-19	160	85	-	30
	2-1/2"	65	330	190	149.2	104.8	28.4	8-22.2	170	95	-	40
	3"	80	356	210	168.3	127	31.85	8-22.2	200	110	-	52
	4"	100	432	273	215.9	157.2	38.14	8-25.4	210	120	-	97
CQ347F-600LB CQ347F-600LBP	5"	125	508	330	266.7	185.7	44.5	8-28.5	350	175	600	158
	6"	150	559	356	292.1	215.9	47.8	12-28.5	530	190	600	204
CQ647F-600LB CQ647F-600LBP	8"	200	660	419	349.2	269.9	55.6	12-31.8	575	230	600	322
	10"	250	787	508	431.8	323.8	63.5	16-35	585	260	600	535
CQ947F-600LB CQ947F-600LBP	12"	300	838	559	489	381	66.5	20-35	730	300	800	775
	14"	350	889	603	527	412.8	69.9	20-38.1	860	350	800	1210
	16"	400	991	686	603.2	469.9	76.2	20-41.1	935	395	800	2300
	18"	450	1092	743	654	533.4	82.6	20-44.5	975	440	800	3400
	20"	500	1194	813	723.9	584.2	88.9	24-44.5	1060	480	800	4208
	24"	600	1397	940	838.2	692.2	101.6	24-50.8	1170	591	800	5080



Standards:

Design and Manufacture: GB12239
Fact to Face: GB12221
Flange Ends: HG20592
Test & Check: GB/T13927



Product specification

Model	PN MPa	Test pressure MPa		Suitable media	Suitable temperature
		Shell test	Sealing test		
Q41J/F46-1.0	1.0	1.5	1.1	Various concentrations of highly corrosive media such ashydrochloric acid, sulfuric acid, hydrofluoric acid, nitric acid, organic acids, strong bases, and strong oxidants, except for molten alkali metals, trifluoroethyl chloride, and elemental fluorine	-30°C~+150°C
Q41J/F46-1.6	1.6	2.4	1.76		

Main parts material

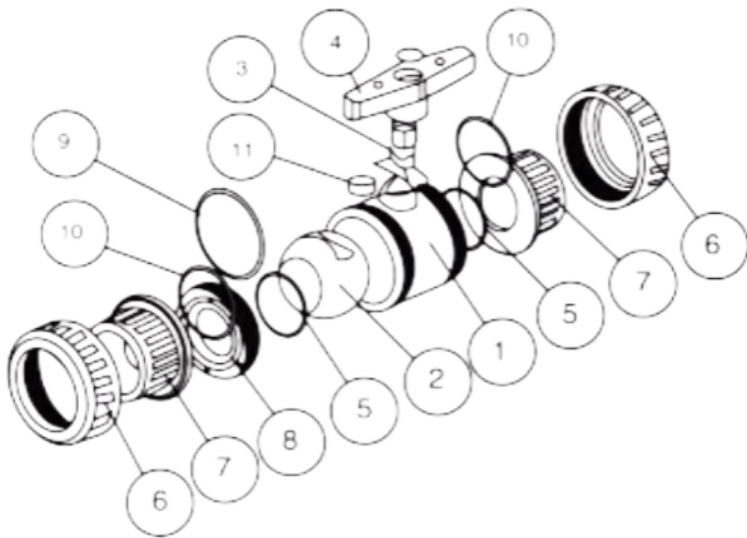
Parts name	Ductile iron Q	Cast steel C	Stainless steel P	Stainless steel R	Ultra low carbon stainless steel PL	Ultra low carbon stainless steel RL
Body/Bonnet	QT450-10	WCB	CF8	CF8M	CF3	CF3M
Ball	WCB	WCB	CF8	CF8M	CF3	CF3M
Stem	FEP(F46) PCEFE(F3) PTFE(F4) PFA PO					
Seat	HT250	WCB	CF8	CF8M	CF3	CF3M
Fastener	PTFE(F4)					
Packing	34	34	1Cr17Ni2	1Cr17Ni2	1Cr18Ni2	1Cr18Ni2
Packing gland	5	45	0Cr18Ni9	0Cr18Ni9	0Cr18Ni9	0Cr18Ni9
Yoke	WCC	WCC	WCC	WCC	WCC	WCC

PN1.6 MPa

NPS in	DN mm	L	D	D1	D2	f	b	Z-φd	D0	H	Weight Kg
1/2"	15	135	95	65	45	2	14	4-14	120	80	3
3/4"	20	140	105	75	55	2	16	4-14	140	90	3.9
1"	25	150	115	85	65	2	16	4-14	160	100	4.5
1-1/4"	32	165	135	100	78	2	18	4-18	160	110	6.5
1-1/2"	40	180	145	110	85	3	18	4-18	200	120	8
2"	50	200	160	125	100	3	20	4-18	250	135	11
2-1/2"	65	220	180	145	120	3	20	4-18	300	145	15.5
3"	80	250	195	160	135	3	22	8-18	350	185	19
4"	100	280	215	180	155	3	24	8-18	240	195	26
5"	125	320	245	210	185	3	26	8-18	500	210	44
6"	150	360	280	240	210	3	28	8-23	200	450	70
8"	200	400	335	295	265	3	30	12-23	240	490	110
10"	250	530	405	355	320	3	32	12-25	240	550	220
12"	300	610	460	410	375	4	34	12-25	280	600	280
14"	350	680	520	470	435	4	38	16-25	320	675	410

PN2.5 MPa

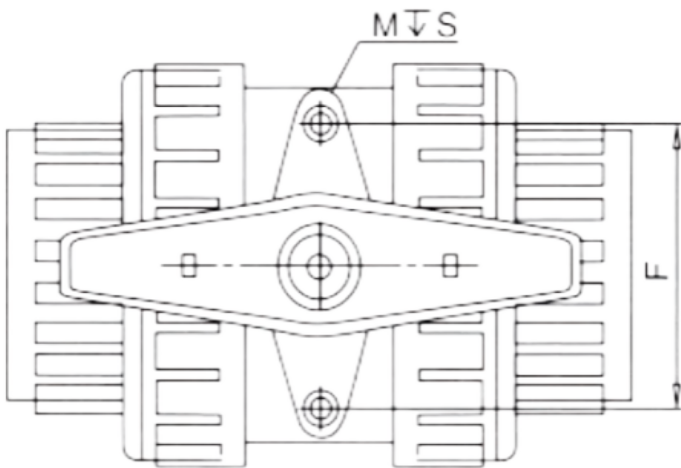
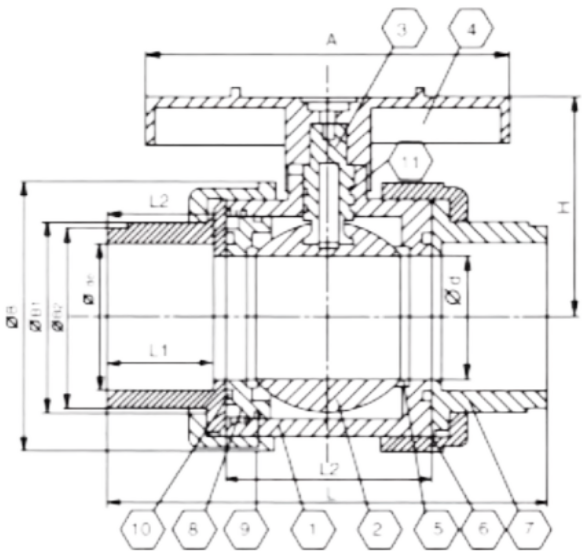
NPS in	DN mm	L	D	D1	D2	f	b	Z-φd	D0	H	Weight Kg
1/2"	15	135	95	65	45	2	16	4-14	120	80	3
3/4"	20	140	105	75	55	2	16	4-14	140	90	3.9
1"	25	150	115	85	65	2	16	4-14	160	100	4.5
1-1/4"	32	165	135	100	78	2	18	4-18	160	110	6.5
1-1/2"	40	180	145	110	85	3	18	4-18	200	120	8
2"	50	200	160	125	100	3	20	4-18	250	135	11
2-1/2"	65	220	180	145	120	3	22	8-18	300	145	15.5
3"	80	250	195	160	135	3	22	8-18	300	185	19
4"	100	280	230	190	160	3	24	8-23	200	195	33
5"	125	320	270	220	188	3	28	8-25	200	210	58
6"	150	360	300	250	218	3	30	8-25	200	450	93
8"	200	400	360	310	278	3	34	12-25	240	490	155
10"	250	530	425	370	332	3	36	12-30	280	555	245
12"	300	610	485	430	390	4	40	12-30	320	605	320
14"	350	680	550	490	448	4	44	16-34	320	685	450



Ultra-low torque, beautiful, high strength, corrosion resistance, long life
Full flow, PTFE seal, low torque;
The valve seat can be adjusted with a handle;
The valve is still intact in the middle after the union is released and can be replaced;
Provide products with embedded copper nuts on the platform;
Convenient for installing actuators.

Nominal diameter	DN150-DN100(1/2-4"
Nominal pressure	10kg/cm²
Material	PVC, CPVC, PPG, FRPP, PPH
Standard	GB, DIN, ANSI, JIS

Parts name	Parts material
1-Body	PVC, CPVC,PPG, PPH, ABS
2-Ball	PVC, CPVC,PPG, PPH, ABS
3-Stem	PVC, CPVC,PPG, PPH, ABS
4-Handle	ABS
5-Seat	PTFE
6-Locking nut	PVC, CPVC,PPG, PPH, ABS
7-End piece	PVC, CPVC,PPG, PPH, ABS
8-Sealing yoke	PVC, CPVC,PPG, PPH, ABS
9-O-ring	EPDM, PPM
10-O-ring	EPDM, PPM
11-O-ring	EPDM, PPM



NPS in	DN mm	d	NID/de	L1	L2	L	H	A	B	B1	B2	MxS	F
1/2"	15	15	20	21	47	99	50	72	54	34	32	3x7	30
3/4"	20	20	25	25	54	117	61	78	62	40	37	6x8	33
1"	25	25	32	29	62	132	68	85	72	47	45	6x11	40
1-1/4"	32	30	40	29	69	142	80	88	84	57	55	8x11	47
1-1/2"	40	38	50	31	80	158	89	108	95	64	61	8x11	52
2"	50	48	63	38	85	176	103	133	116	77	75	8x15	70
2-1/2"	65	65	75	58	124	256	128	220	147	97	90	10x15	95
3"	80	76	90	64	124	266	135	220	164	116	112	10x15	120
4"	100	100	100	90	139	337	163	250	204	137	131	12x20	150